

EXHIBIT 16

INFORMATION FROM OTHER DEER POPULATION CONTROL ORGANIZATIONS

c: Commission (ARC)
Order
Kelley
BMR

History of Whitetail Management Associates

Whitetail Management Associates is an urban deer management program that was created by a group of Pennsylvania archery hunters who had the vision to realize there would be a need of culling the deer herd in urban environments where conventional hunting practices would prove either unsafe or unacceptable to the non hunting public.

Back in the early 1990's there was growing concern from local landowners who resided in Fox Chapel, a small town located a few miles south of Pittsburgh Pa. These concerned landowners expressed their desires to their local government officials in order to gain support to create some sort of deer management program. The problems they were experiencing was extensive flora damage to their property and driving concerns resulting in many deer- car collisions. A small group of local archery hunters attended one of their local council meetings. Their mission was to propose a deer management program that would operate under the Pennsylvania Game laws at no cost to the local municipalities or the general public. They also would aid in servicing the local food bank and, ease the fear to residents by ensuring the hunters would carry one million dollars of liability insurance. They also added stricter hunting regulations, higher safety standards in order to help ease the fears for the non-hunting public.

The efforts from this group of archery hunters help produce one of Pittsburgh first deer management programs even though the local police department took control . WMA was not the chosen group to help control the deer problems at Fox Chapel but their rules and ideas were accepted and used by the local Chief of Police. The Fox Chapel program folded when the Chief retired. The rules and regulations created for WMA were once again set-aside in a cardboard box waiting to be dusted of if ever needed.

In 1995 Bethel Park was he next community that contacted both WMA, and the Fox Chapel police chief to gain knowledge on how their community could create some sort of deer management program within their borders but, also including property owned by the County. WMA and a local archery shop that helped Fox Chapel police manage their deer herd attended Bethel's local Council meeting. The local archery group from Fox Chapel attended the meeting with a plan of charging the Borough 50 dollars for each deer they would harvest. WMA went to the meeting with a program that was not only cost free to the local community but it also afforded the community with insured hunters (1 million liability) per hunter. WMA also offered that every third deer that was harvested would be processed and donated to local food banks in the area and each participating hunter would pay the cost. After several meetings and extensive safety discussions to coordinate local property, and also still gain access to County owned property the existence of WMA as a deer management tool was successfully created. In 1996 WMA was officially formed as a deer management tool to help control over populated deer herds.

WMA is proud of the fact that they have never had any safety related problems to date with any of its members or the local public. WMA is also proud of the fact that in the past 9 years of hunting, the program has grown from one local municipality to 6 local municipalities, 5 County Parks and 2 Country Clubs. As the 2004 season came to an end, WMA year to date harvested 2,075 doe and 105 bucks, and donated over 14 ton of processed edible deer meat to local food banks and some known heart patients that can only eat venison.



DATE: September 5, 2004
TO: Clarence Hopson, & Andrew Baechle
ATTENTION: Program Results / YTD
FROM: Joseph McCluskey Jr.

1996-7 South Park:----- 86 doe and 5 bucks
1997-8 South Park and North Park:----- 183 doe and 7 bucks
1998-9 South Park and North Park:----- 234 doe and 11 bucks
1999-0 South Park and North Park:----- 207 doe and 8 bucks
2000-1 South Park, North Park and Settlers Cabin --187 doe and 14 bucks
2001-2 South Park, North Park and Settlers Cabin---219 doe and 9 bucks
2002-3 Boyce, Settlers and North Park: ----- 288 doe and 14 bucks
2003-4 Boyce, Settlers, North Park, Ridge Haven:-- 270 doe and 15 bucks
2004-5 Boyce, Settlers, North Park, Ridge Haven, -- 401 doe and 24 bucks

Yearly totals since the beginning of an archery deer management program in Allegheny County Parks. WMA has harvested a total 2,075 doe and 105 bucks. Over 14 ton of edible venison has been donated to the needy and the homeless. WMA also offers venison to high-risk heart patients that should only eat low fat meat. Each member of WMA has paid for the processing of this meat. Each year WMA members have donated their time to open and feed the homeless on New Years day at the Rainbow Kitchen in Homestead, this is done in conjunction with some UBP members. WMA members have also donated their time to scour each park and spend the greater part of one day before each hunting season cleaning up at least one bag of garbage per member before hunting season begins.

There have been no reportable incidents or injuries since the program began in 1996 and very few complaints coming from local residents. So far all complaints that have been made were a simple matter of education, or made by someone who opposes hunting as a means of controlling the deer population. No parks users have complained or have ever taken exception to the hunting activity in and around their Parks. Most when noticing have given the hunter a thumbs up approval. Neither entrails nor any evidence of hunting is left in the woods and each hunter is responsible for there area. Local archers are encouraged to participate and can gain information be either going to our web site or by contacting **Joe McCluskey @ 412-292-0723**.

Any questions please visit our Web site @ www.anglefire.com/ego/wmanorth

Bylaws, Rules and Regulations of



Whitetail Management Associates

TABLE OF CONTENTS

Article:

- I Name
- II Purpose
- III Membership
- IV Member Activation
- V Dues Structure
- VI Officers and Directors
- VII Duties of Officers and Directors
- VIII Committees
- IX Membership Rules and Regulations

ARTICLE I - NAME

The name of the organization shall be "**Whitetail Management Associates**", and shall hereafter be referred to as the "Association".

ARTICLE II - PURPOSE

Whitetail Management Associates is formed to help local landowners, governments and municipalities deal with whitetail deer overpopulation problems in a safe, natural, humane manner; to educate the general public about ethical bowhunting practices; to further the positive image of bowhunting to the non-hunting public, and to treat our wild resources with the respect and compassion they deserve.

ARTICLE III - MEMBERSHIP

Please review these Bylaws and Rules carefully to determine if you are interested in making application.

Membership in the Association is by invitation of the Board of Directors. It is a privilege, not an entitlement nor a right. **Application does not guarantee acceptance.** Due to the unique nature of the Association's activities, not everyone is suited for membership, nor is everyone who applies chosen.

Members are retained on an "at will" basis, meaning that membership is for no specific length. Both members and the Association retain the right to terminate a relationship at any time, for any reason.

When selecting new members, the Association must weigh a multitude of factors in determining the suitability of a particular applicant. Ethics, attitude, and personal goals are of great importance to the continued success of the Association and the advancement of our stated purpose. As such, these factors weigh heavily in the membership selection process.

The Association further expects members to devote the majority of their available hunting time to the program. If an applicant wishes to hunt other private areas he is strongly discouraged from applying for membership. No active member can participate in more than one sponsored deer management program.

The Association reserves the right to not renew the membership privileges of any member who, in the opinion of the Association, and based upon information provided by the particular member's Group Leader, is not acting in accordance with the stated purpose, rules, and intentions of the organization.

Section 1 - Membership Classes

- a) The Regular Membership of the Association shall be composed of adults age 18 and over who have successfully completed the application requirements, are interested in wildlife conservation, the image of the hunting and shooting sports, and who have a sincere desire to help remediate whitetail deer overpopulation problems in suburban areas.
- b) The Junior Membership of the Association shall be composed of young adults age 12-18 who have successfully completed the application requirements, are interested in wildlife conservation, the image of the hunting and shooting sports, and who have a sincere desire to help remediate whitetail deer overpopulation problems in suburban areas. Junior members must be sponsored for membership by a regular member. A junior member shall automatically enter the regular membership upon his/her 18th birthday, provided all dues are paid in full.

Section 2 - Requirements for Application

Applicants for both the regular and junior class must meet the following minimum requirements to be eligible to apply for membership in the Association:

- a) Applicants must have successfully completed a **National Bowhunter Education Foundation (NBEF)** safety course prior to hunting season.
- b) Applicants must have harvested a minimum of 3 big game animals with bow and arrow.
- c) Applicants must pass a shooting proficiency test before being accepted.

Section 3 - Requirements for Membership

Applicants who meet the above minimum application requirements must successfully:

- a) Complete a proficiency test as outlined below.
 - Three arrows fitted with the archer's hunting broadheads shall be shot at three (3) 3-D deer targets set at random distances, the maximum distance being 20 yards. Field points are not permitted. Expandable or mechanical broadheads must have a minimum of 7/8" cutting surface in fixed closed position at all times in accordance with Pennsylvania Laws.
 - Shots must be placed in the "kill zone". IBO scoring methods are not applicable. Shooting results will be recorded by an Association delegate and will not be made public to the applicant or any individual other than the Directors.
- b) Complete an interview with an Association representative.
- c) Successfully complete a criminal background check and game law violation check. *Any applicant convicted under the provisions of the Pennsylvania Game Law shall be considered ineligible for membership in the Association. The Association and Officials of the applicable municipality(s) reserve the right to accept or reject any applicant for any reason.*

Section 3a - membership application and dues

Applicants selected for membership shall also complete the following:

- a) New members are required to complete in full an application and registration form.
- b) New members are required to read and sign a release form.
- c) Annual dues of each member shall be paid in full by June 1st of the calendar year. Any member not paying their dues by June 1st shall be considered delinquent in membership for the calendar year and shall be dropped from the membership rolls.
- d) Members must possess a Pennsylvania hunting license and archery stamp no later than August 1st.
- e) Members must possess a minimum of four (4ea) area 2b antlerless deer permits no later than October 1st.

Section 4 – Suspension and/or Expulsion of Members

Any member (excluding President) may be suspended from the Association by the President or Program Director. Said member may be expelled from the Association by a unanimous vote of the Executive Directors. The member charged with suspension or expulsion, accompanied by any witnesses, has the right to be present to defend him/herself against any charges at a meeting of the Executive Directors.

ARTICLE IV - MEMBER ACTIVATION AND PLACEMENT

Because of the unique nature of the Associations activities, as well as the Associations desire to provide opportunity to as many applicants as possible, the following procedures shall be followed when determining member recruitment, activation, and placement.

Section 1 - Recruitment, Activation, and Placement.

- a) Members will be permitted only to select the general geographic area of interest (i.e. north, south, etc.). If a member belongs to more than one deer management type program and a lottery is in effect for that area, those members will be chosen first for the lottery list to help minimize the hunter effect.
- b) Active member selection from the new members roster shall be by lottery.
- c) Member placement in specific hunting areas is by the appropriate Program Director.
- d) The Association will open the rolls for new membership on an annual basis. One third of our current members actively participating in Association activities will enter a lottery drawing along with new entries. The hunting roster needed will be drawn from this list. In a year when the Association has a surplus of reserve, or "inactive" members, the Association will place these previously qualified members ahead of the hunters who hunted last season and are on the lottery list.

Section 2 - Special Conditions Related to Public Properties.

When Association members are placed on publicly held properties, the following additional conditions shall be enforced:

- a) Members who devote substantial time and effort to the program, as detailed by logbooks and Group Leader reports, will be retained automatically for the upcoming hunting season. A maximum of 50% of these members shall be retained and automatically placed in active hunting areas. These selections will be made by the appropriate Program Director. **Individual harvest rates will not play a role in this selection.**
- b) The remaining members, grouped according to chosen municipality, will be placed in a lottery with new or inactive applicants. The remaining 50% of members to fill available hunting locations will be selected at random from this lottery.

ARTICLE V - DUES STRUCTURE

The Association dues structure for all members shall be as follows:

- a) Regular members shall be required to pay annual dues of \$70.00.
- b) Junior members shall be required to pay annual dues of none.

The President reserves the right, at any time, to alter the annual membership dues as may be required to ensure the proper operation of the Association.

Because the Association may not have active hunting areas for all qualified members at all times, **any members not actively hunting will be exempt from the dues requirements until they are assigned hunting areas.** These members will be permitted to begin hunting immediately after notification, or when specifically instructed, and will have 10 days from date of notification of activation to pay dues or they will be removed from active participation and return to "inactive" status.

ARTICLE VI - OFFICERS AND DIRECTORS

Because of the purpose and somewhat unique parameters that we are required to operate under, the Association shall be operated under the direction of a President, Vice President and one or more Program Directors as determined by the President.

ARTICLE VII - DUTIES OF OFFICERS

Section 1 - Duties of the President

The President shall oversee and coordinate the day-to-day operations and activities of the Association. The President shall have the power to expend the necessary money for regular Association operations and expenses normally incurred in Association functions.

He shall be the main point of contact for media relations as they relate to the Association. He shall be the main point of contact for municipal inquiries concerning the Association.

Section 5 - Duties of the Program Directors

The position of Program Director is one of great importance as related to both image and efficiency. The Program Director shall act as the primary point of contact for the day-to-day operations within a specific municipality. As such, the Program Director must realize the importance of a positive, upbeat, professional attitude when dealing with municipal leaders. There shall be one (1) Program Director for each municipality, and he shall be appointed by the President

The Program Director shall maintain a working relationship with the municipality personnel assigned to assist with the program. Other duties shall include obtaining maps of the areas to be hunted, establishing suitable hunting areas, determining the number of hunters required, assigning hunters to their areas, scheduling meetings and work details for members in his program, overseeing all day-to-day activities in the municipality as they relate to the Association's program, attend all municipal meetings as required, and addressing any concerns or questions that municipal leaders may have.

The Program Director is required to have hunting area maps approved by municipal leaders and the President before releasing them to members. The Program Director shall be responsible for appointing Group Leaders to monitor hunter groups no larger than five (5) members per group. The Program Director shall, at his discretion and with the approval of the President and Vice President, be permitted to assume responsibility for the hunters in his area and reduce the number of Group Leaders required. He shall also give the President a detailed verbal report each week as to activities in his area.

Section 6 - Duties of the Group Leaders

The President and their respective Program Directors shall appoint the Group Leaders.

The Group Leaders shall be responsible for overseeing the actions of the members in their assigned areas. They shall be responsible for disseminating information to their assigned members in an expedient manner, shall be authorized to relocate members within their area as they see fit, and shall maintain an ongoing dialogue with these members. They shall address their assigned members concerns, and if required consult with their Program Director concerning problems. The Group Leaders shall see that their assigned members are acting in accordance with Association rules, and are responsible for reporting any infractions to the President. They shall also report all hunter relocations to their Program Director.

The Group Leaders shall keep their Program Directors well informed of actions and developments in their respective areas through weekly verbal communications.

ARTICLE VIII - COMMITTEES

Each committee shall consist of a Chairman and two (2) or more committee members. Committee members shall be selected by the Committee Chairmen, or if required, appointed by the President and Board of Directors as indicated in Article VIII, Sections 1 and 2. Committee Chairmen shall have the authority to chair and direct the committee, and shall make all presentations and recommendations of their respective committee to the President.

Committee Chairman shall not have the authority to set policy as related to their committee interests, nor are they empowered to represent the Association in any manner to any persons, agencies, municipalities, or other interests except in the stated capacity and function of their committee purposes.

Section 1 - The Sportsmen Liaison Committee

The Sportsmen Liaison Committee shall be responsible for developing an effective, sensitive method of introducing the Association's purpose and philosophies to sportsmen's organizations local to any municipalities taking part in the Association program. It shall be the responsibility of the committee to

SECTION 3 - RULES, REGULATIONS, AND CONDITIONS

- a) Obey all Pennsylvania Game Laws.
- b) You are a representative of the Association and the sport of bowhunting. As such, treat everyone you meet with courtesy and respect. At some point you *will* encounter someone who opposes your presence. **DO NOT ENGAGE IN ARGUMENTS OR BECOME ABUSIVE**, even if verbally assaulted. Leave the area immediately, contact your Group Leader or an Executive Director and inform him of the incident.
- c) If you are stopped or checked by a police officer while hunting, entering, or exiting the woods you are required to notify your Program Director **AND** or Presidnet of the incident as soon as possible.
- d) **ALL MEMBERS:** An antlered deer may be harvested only after at least one antlerless deer has been harvested. Keep in mind that the purpose of the program is game management, not trophy hunting.
- e) Unless otherwise instructed, Association members are permitted to harvest whitetail deer **only**.
- f) All hunters are required by the Association to keep an accurate, up-to-date log of all time spent afield. The log must include at a minimum dates, game harvested, and time of harvest. The logbooks will be collected at the end of each archery season by the member's Group Leader, and will be returned before commencement of the next season.
- g) All hunting shall take place from elevated tree stands. Tree stands shall be of the non-damaging type, and shall be placed a minimum of 12 feet above the base of the tree that the stand is placed in.
- h) All portable "hang-on" tree stands left in the woods must have at least the lowest eight feet of climbing aid removed from the tree when not in use. If using climbing sticks, remove the lower sections. If using tie-on tree steps, remove the lower steps. This is to ensure that children, etc. are not able to climb and fall from the stand or steps.
- i) Stalking and/or still hunting is not permitted at any time. Shooting from the ground is not permitted at any time.
- j) Permanent tree stands are not permitted.
- k) Screw in tree steps are not permitted.
- l) *Under no circumstances are* animals permitted to be field dressed in the woods, each park will have an assigned location for field dressing. All entrails, viscera, skin, etc. must be immediately collected and placed in a disposable garbage bag. Under no circumstances are "gut piles" or their remnants permitted to be left in the woods.
- m) Harvested deer must be checked in at the designated location the same day they are harvested. After completing the log in form, dispose of the entrails in the designated location.
- n) Harvested animals may not be visible during transport in the municipality or anywhere within Allegheny County Park boundaries.
- o) Each participant shall be assigned one hunt area. You are required to remain in your assigned area at all times. You may hunt another person's area only with their permission *and* the approval of your Group Leader.
- p) All arrows used during the hunt must carry a unique identification code assigned to each specific hunter by the Association. Marking shall be accomplished by means of an indelible marker on at least one vane or the shaft.
- q) All archers are required to wear a safety belt at all times while hunting. *This includes ascent and descent. Be smart, not a statistic!*
- r) Use of a flashlight or some form of illuminating device when entering or exiting the woods in the dark is required.
- s) Blaze orange must be worn and/or displayed in accordance with Pennsylvania Game Laws.

determine which sportsmen's clubs are local to said municipalities, and it shall be the responsibility of the committee to initiate and maintain communication with these organizations.

The committee shall establish and maintain a positive dialogue with these sportsmen's organizations, and shall visit each club a minimum of once each year with the purpose of performing a presentation about the Association for the club's members, and answering any questions about the Association that may arise.

The committee shall also be responsible for notifying these sportsmen's organizations of upcoming testing sessions a minimum of 45 days in advance. The committee chairman shall receive appropriate written information and flyers concerning the testing session from the Secretary.

ARTICLE IX - MEMBERSHIP RULES AND REGULATIONS

The following Rules and Regulations are designed to ensure the safety of the residents in areas being hunted, as well as to maximize the projected harvest. They are NOT meant to be all-inclusive of what constitutes proper conduct and behavior by our membership, but are offered to express the philosophy of the Association. As a member of WMA you are expected to view these Rules and Regulations in the spirit intended, and are expected to act in the best interests of the Association at all times.

Read the following Rules carefully; they detail the procedures that all members must follow. Members are expected to conform to all Regulations. All Rules and Regulations must be strictly adhered to.

**FAILURE TO COMPLY WITH ANY OR ALL STATED REGULATIONS
WILL RESULT IN THE IMMEDIATE SUSPENSION OF HUNTING
PRIVILEGES.**

The President in conjunction with involved municipalities develops the following Rules and Regulations. In order to maintain the integrity and purpose of the Association, these Rules and Regulations may only be modified by the President and/or the municipal representatives.

SECTION 1 - REQUIRED PAPERS, PERMITS, AND IDENTIFICATION

The Association prior to the commencement of the hunt will furnish any required permits or authorization papers to the archer. The archer must return these papers to the Association at the conclusion of the hunt or face the loss of future membership privileges.

- a) All archers shall be required to carry some form of personal identification as required by the PA State Game Laws.
- b) All archers shall, at all time, display in a separate back tag holder the permit issued by the Association and validated by the municipality. This registration tag shall be displayed in the same manner as the archer's hunting license(s). Any permit not properly validated by the municipality shall be considered void.

SECTION 2 - PARKING

- a) Only vehicles registered in accordance with Association requirements shall be permitted to be used during any hunt and must display their parking permit in view.
- b) When required by the Association or the municipality, all vehicles shall display a WMA identification placard while the occupant is scouting or hunting. The Association will provide placards. All placards must be returned at the conclusion of the hunt; members not returning parking placards will face possible loss of future membership privileges.
- c) Parking shall be permitted at designated areas only.

- t) No member shall be permitted to remove, damage, alter or destroy any belongings occurring on any landowner's property. This includes but is not limited to foliage, crops and plantings.
- u) Successful archers are encouraged to donate at least every third deer harvested to the Hunters Sharing The Harvest program. The Association has made arrangements with a processor for this and will pay the costs of processing and storage.
- v) All wounded animals must be tracked to a successful conclusion. If the animal moves to private property, you are required to notify the local police department and your Group Leader before tracking the animal any further.
- w) If you shoot an animal and are unable to locate it, notify your Group Leader immediately.
- x) **If you shoot an animal and the animal moves to or dies in a conspicuous area such as a field, grove, or roadway:**
 - If the animal is dead, remove it immediately from the area and contact your Program Director immediately.
 - If the animal is **not** dead, extreme discretion is required. If non-hunters, bystanders or park users are in the area, do not attempt to "finish off" the animal. Leave immediately and contact both the county police AND your Program Director. If you are certain that there is no one in the immediate area, dispatch the animal and remove it immediately. Notify your Program Director of the incident.
 - In either instance, if your Program Director is not available immediately notify the Vice President or the President of the incident.
- y) All arrows must be accounted for. Members are required to notify their Group Leader of all lost, missing or unrecovered arrows.
- z) All members are required to report any violations of the game law or Association rules and regulations to your Group Leader. This includes violations or trespassing by individuals other than Association members.
- aa) Occasionally hunters are approached by the media looking for comments or photo opportunities. Members are not authorized or permitted to represent the Association to any media outlet in any manner. Refer all parties with questions and comments to the President.
- bb) Do not litter.

WHITE BUFFALO, INC.

26 Davison Road Moodus, CT 06469



Phone: 860-873-2782 Fax: 860-873-2785

18 January 2007

Steven M. Feller
Municipal Manager
Mt. Lebanon Municipality
710 Washington Road
Pittsburgh, PA 15228-2018

1/19/07
C. Commission - (AZ)
Kelly
[Signature]

Dear Mr. Feller,

I read an article in the Post-Gazette recently that summaries your organizational efforts to implement a deer management program. I am the president of a nonprofit wildlife management and research organization that provides deer management services. I understand that USDA-WS has been assisting you in evaluating your deer management options. I would simply like to make you aware of our availability and interest in providing a proposal. I am sure that my colleagues at WS can attest to our expertise and professionalism. The project appeared to be large enough where a municipality would be interested in receiving competitive proposals and bids.

In addition, I have extensive experience in the wildlife infertility discipline (see my enclosed CV and Business Portfolio) and would be glad to objectively review the relative feasibility and costs affiliated with an immunocontraceptive research program.

Thank you in advance for your time.

Best Regards,

[Signature]

Tony DeNicola, Ph.D.
President

Encls.

www.whitebuffaloinc.org wbuffaloinc@aol.com

a nonprofit organization

CURRICULUM VITAE

Anthony J. DeNicola

26 Davison Road
Moodus, CT 06469
(860) 873-2782

Education

- 1996 Ph.D. Purdue University (GPA: 4.0/4.0)
 Thesis: "Control of reproduction in overabundant white-tailed deer
 populations"
- 1990 M.E.S. Yale University School of Forestry (GPA: 3.5/4.0)
- 1988 B.S. Trinity College, Hartford, Connecticut (GPA: 3.3/4.0)
- 1986-87 Visiting student, University of Vermont (GPA: 3.2/4.0)

Experience

- 2003-present Adjunct Faculty Member, Rutgers University
- 1999-present Certified Wildlife Biologist, The Wildlife Society
- 1998-present Research Associate, University of Illinois
- 1997-present Research Associate, Denver Zoological Foundation
- 1995-present President, White Buffalo, Inc.
- 1995-present Visiting Faculty Member, Trinity College
- 1997-2003 Research Affiliate, Yale University
- 1992-96 Research Assistant, Purdue University
- 1994 Guest Lecturer, Wildlife Ecology
- 1994 Guest Lecturer, Mammalogy
- 1989-90 Wildlife Module Instructor, Yale School of Forestry
- 1989-present Nuisance Wildlife Control Operator, State of Connecticut
- 1987-89 Research Assistant, Connecticut Agricultural Experiment Station

Honors and Awards

- 1995 The Honor Society of Agriculture, Gamma Sigma Delta
- 1994 Best Paper Award, Indiana Chapter of The Wildlife Society
- 1988 J. Wendell Burger Prize, Trinity College award for outstanding
 achievement/performance in biology

Research Support

- 2005-2008 E. I. du Pont de Nemours and Co., Newark, Delaware, "Experimental control of an enclosed suburban population of white-tailed deer using sharpshooting followed by GonaCon™ immunocontraceptive treatments", \$108,000, Principal investigator
- 2005-2008 Giralda Farms, Madison, New Jersey, "Efficacy evaluation of GonaCon™ immunocontraceptive vaccine for white-tailed deer: A FDA pivotal field study", \$190,000, Principal investigator
- 2004-2006 Princeton Township, NJ, "Experimental control of a suburban population of white-tailed deer using SpayVac® ", \$120,000, Principal investigator
- 2001-2006 Cleveland Metroparks, Cleveland, Ohio, "Experimental control of an urban population of white-tailed deer using contraception ", \$542,150, Principal investigator
- 2004-2007 E. I. du Pont de Nemours and Co., Bridgeport, Connecticut, "Evaluation of alternative PZP immunocontraceptive formulations in female white-tailed deer", \$110,000, Principal investigator
- 2000-2003 E. I. du Pont de Nemours and Co., Bridgeport, Connecticut, "Evaluation of alternative PZP immunocontraceptive formulations in female white-tailed deer", \$63,860, Principal investigator
- 1999-2000 E. I. du Pont de Nemours and Co., Bridgeport, Connecticut, "Experimental control of an enclosed suburban population of white-tailed deer using contraception", \$29,268, Principal investigator
- 1999-2000 Center for Disease Control, "Control of the tick, Ixodes scapularis Say, on white-tailed deer at an urban Lyme disease focus", \$20,960, Co-principal investigator
- 1999-2000 United States Department of Agriculture, "Control of the tick, Ixodes scapularis Say, on white-tailed deer at a suburban Lyme disease focus", \$30,000, Co-principal investigator
- 1998-1999 Center for Disease Control, "Control of the tick, Ixodes scapularis Say, on white-tailed deer at an urban Lyme disease focus", \$20,600, Co-principal investigator

- 1998-1999 United States Department of Agriculture, "Control of the tick, Ixodes scapularis Say, on white-tailed deer at a suburban Lyme disease focus", \$50,000, Co-principal investigator
- 1997-1998 Center for Disease Control, "Control of the tick, Ixodes scapularis Say, on white-tailed deer at an urban Lyme disease focus", \$20,000, Co-principal investigator
- 1997-1998 United States Department of Agriculture, "Control of the tick, Ixodes scapularis Say, on white-tailed deer at a suburban Lyme disease focus", \$46,000, Co-principal investigator
- 1995-1999 E. I. du Pont de Nemours and Co., Bridgeport, Connecticut, "Evaluating adjuvants and effects of long-term contraception on female white-tailed deer", \$248,888, Co-principal investigator
- 1993-1996 Northern Indiana Public Service Company, "Efficacy of chemical contraception on female white-tailed deer", \$51,236, Co-principal investigator

Society Affiliations

National Animal Damage Control Association
 The Society of Conservation Biology
 The Wildlife Society

Research Interest

Behavioral /Ecological approaches to wildlife damage control
 Control of introduced vertebrate species
 Wildlife reproductive control

Oral Presentations

- 2006 Texas State University
- 2004 Rutgers Animal Science Department Seminar Series
- 2003 The Wildlife Society 10th Annual Conference
- 2001 Northeast Fish and Wildlife Conference
- 2000 Joint Midwest and Northeast Deer Technical Committee Meeting
 Eastern Wildlife Damage Management Conference
- 1999 Northeast Deer Technical Committee Meeting
 Coe College Biology Seminar and Issues Discussion

- 1998 The Wildlife Society 5th Annual Conference
Connecticut Nuisance Wildlife Control Operator's Euthanasia Training Course
- 1997 Southeast Deer Study Group Meeting
Northeast Fish and Wildlife Conference
Midwest Fish and Wildlife Conference
- 1996 Northeast Fish and Wildlife Conference
The Wildlife Society 3rd Annual Conference
- 1994 Indiana Chapter of The Wildlife Society
American Society of Mammalogists, 75th Anniversary Meeting
Sycamore Audubon Society
Indiana Department of Natural Resources, Deer Advisory Committee
- 1993 Midwest Fish and Wildlife Conference
- 1992 Northeast Deer Technical Committee Meeting

Manuscripts In Print

- Bertrand, M. R., A. J. DeNicola, S. R. Beissinger, and R. K. Swihart. 1996. Effects of parturition on home-ranges and social affiliations of female white-tailed deer. *Journal of Wildlife Management* 60:899-909.
- Daniels, T. J., R. C. Falco, E. E. McHugh, J. Vellozzi, T. Boccia, A. J. DeNicola, J. M. Pound, J. A. Miller, J. E. George, and D. Fish. 2006. Acaricidal treatment of white-tailed deer to control *Ixodes scapularis* (Acari: Ixodidae) in a New York Lyme disease-endemic community. *Journal of Medical Entomology*
- DeNicola, A. J. 2007. Demographics of non-hunted white-tailed populations in suburban areas. *Human-Wildlife Conflicts* In review.
- DeNicola, A. J., D. J. Kesler, and R. K. Swihart. 1997. Dose determination and efficacy of remotely delivered norgestomet implants on contraception in white-tailed deer. *Zoo Biology* 16:31-37.
- DeNicola, A. J., D. J. Kesler, and R. K. Swihart. 1997. Remotely delivered prostaglandin F_{2α} implants terminate pregnancy in white-tailed deer. *Wildlife Society Bulletin* 25:527-531.
- DeNicola, A. J., and R. K. Swihart. 1997. Capture-induced stress in white-tailed deer. *Wildlife Society Bulletin* 25:500-503.
- DeNicola, A. J., R. K. Swihart, J. Skvarla, and Y. DeWoody. 2006. Mark-sight estimation of deer abundance: considerations for allocating sampling effort. *Wildlife Biology* In review.

- DeNicola, A. J., R. K. Swihart, and S. R. Beissinger. 1992. Testing secondary metabolites of plants as deer repellents. *Transactions of the Northeast Section of the Wildlife Society* 48:120-125.
- DeNicola, A. J., R. K. Swihart, and D. J. Kesler. 1996. The effect of remotely delivered gonadotropin formulations on reproductive function of white-tailed deer. *Drug Development and Industrial Pharmacy* 22:847-850.
- DeNicola, A. J., K. C. VerCauteren, P. D. Curtis and S. E. Hynstrom. 2000. *Managing White-tailed deer in Suburban Environments: A Technical Guide*. Cornell Cooperative Extension, Cornell University. 52pp.
- DeNicola, A. J., S. J. Weber, C. A. Bridges, and J. L. Stokes. 1997. Nontraditional techniques for management of overabundant deer populations. *Wildlife Society Bulletin* 25:496-499.
- DeNicola, A. J., and S. C. Williams. 2007. Sharpshooting suburban white-tailed deer reduces deer-vehicle collisions. *Human-Wildlife Conflicts* In review.
- Kenny, D. E., A. J. DeNicola, S. Amgalanbaatar, Z. Namshir, G. Wingard, R. R. Ramey II, T. Tuya, and R. P. Reading. 2006. Three field capture techniques for free-ranging argali sheep (*Ovis ammon*) in Mongolia. *Wildlife Biology* In review.
- Kenny, D. E., and A. J. DeNicola. 2006. Survey results for remote delivery systems and darts utilized by U.S. zoological parks and aquariums. *Journal of Zoo and Wildlife Medicine* In review.
- Kesler, D. J., D. T. Bechtol, and A. J. DeNicola. 1998. Administration of pharmaceuticals and vaccines via remote delivery in biodegradable, needle-less implants. *Large Animal Practice*.
- Kilpatrick, H. J., A. J. DeNicola, and M. E. Ellingwood. 1996. Comparison of standard and transmitter-equipped darts for capturing white-tailed deer. *Wildlife Society Bulletin* 24:306-310.
- Kilpatrick, H. J., S. M. Spohr, and A. J. DeNicola. 1997. Darting urban deer: techniques and technology. *Wildlife Society Bulletin* 25:542-545.
- Magnarelli, L. A., A. J. DeNicola, K. C. Stafford III, and J. F. Anderson. 1995. Borrelia burgdorferi in an urban environment: white-tailed deer with infected ticks and antibodies. *Journal of Clinical Microbiology* 33:541-544.
- O'Donnell, M. A., and A. J. DeNicola. 2006. Den site selection of lactating female raccoons following removal and exclusion from suburban residences. *Wildlife Society Bulletin* 34:366-370.

- Reading, R. P., S. Amgalanbaatar, D. Kenny, Yo. Onon, Z. Namshir, and A. DeNicola. 2003. Argali ecology in Ikh Nartiin Chuluu Nature Reserve: Preliminary Findings. *Mongolian Journal of Biological Sciences* 1:3-14.
- Reading, R. P., S. Amgalanbaatar, G. J. Wingard, D. Kenny, and A. DeNicola. 2005. Ecology of argali in Ikh Nartiin Chuluu, Dornogobi Aimag. *Erforschung Biologischer Ressourcen der Mongolei (Halle/Saale)* 9:77-89.
- Sage, J. L., N. H. McCoy, and A. J. DeNicola. 2006. Is immunocontraception a cost-effective tool to reduce suburban deer conflicts. *Journal of Wildlife Management*. In review.
- Stafford, K. C., III, A. J. DeNicola, and L. A. Magnarelli. 1996. Presence of *Ixodiphagus hookeri* (Hymenoptera: Encyrtidae) in two Connecticut populations of *Ixodes scapularis* (Acari: Ixodidae). *Journal of Medical Entomology* 33:183-188.
- Stafford, K. C., III, A. J. DeNicola, J. M. Pound, J. A. Miller, and J. E. George. 2006. Topical treatment of white-tailed deer with an acaricide for the control of *Ixodes scapularis* (Acari: Ixodidae) in a Connecticut Lyme borreliosis hyperendemic community. *Journal of Medical Entomology*.
- Stafford, K. C., III, A. J. DeNicola, and H. J. Kilpatrick. 2003. Reduced abundance of *Ixodes scapularis* (Acari: Ixodidae) and the tick parasitoid *Ixodiphagus hookeri* (Hymenoptera: Encyrtidae) with reduction of white-tailed deer. *Journal of Medical Entomology* 40:642-652.
- Swihart, R. K., and A. J. DeNicola. 1995. Modeling the impacts of contraceptives on populations of white-tailed deer. Pages 151-163 in J. McAninch, ed. *Urban deer - a manageable resource?* North Central Chapter of The Wildlife Society.
- Swihart, R. K., and A. J. DeNicola. 1997. Public involvement, science, management, and the overabundance of deer: Can we avoid a hostage crisis? *Wildlife Society Bulletin* 25:382-387.
- Swihart, R. K., P. M. Picone, A. J. DeNicola, and L. Cornicelli. 1995. Ecology of urban and suburban white-tailed deer. Pages 35-44 in J. McAninch, ed. *Urban deer - a manageable resource?* North Central Chapter of The Wildlife Society.
- Swihart, R. K., H.P. Weeks, Jr., A.L. Easter-Pilcher, and A. J. DeNicola. 1998. Nutritional condition and fertility of white-tailed deer (*Odocoileus virginianus*) from areas with contrasting histories of hunting. *Canadian Journal of Zoology* 76:1932-1941.
- Williams S. C., and A. J. DeNicola. 2001. Spatial movements in response to baiting female white-tailed deer. *Proceedings of the Ninth Wildlife Damage Management Conference*. State College, Pennsylvania.
- Williams S. C., and A. J. DeNicola. 2005. Home range increase of lactating female white-tailed deer following herd reduction. *Northeast Wildlife* 57:29-38.

WHITE BUFFALO, INC.

WHITE BUFFALO, INC. is a 501 (c)(3) nonprofit wildlife management and research organization dedicated to conserving native species and ecosystems through damage and population control. We also sponsor, support, and conduct scientific research and educational efforts to improve the understanding of natural resources for the purpose of conservation. Our approach is unique, in that we generate funding for conservation research by providing management alternatives in non-traditional settings.

CONTACT INFORMATION

26 Davison Road
Moodus, CT 06469

860-873-2782 (Office)
860-790-0224 (Cell)
860-873-2785 (Fax)

www.whitebuffaloinc.org
wbuffaloinc@aol.com

Dr. Anthony J. DeNicola, Co-founder and President, received his Ph.D. from Purdue University in wildlife ecology. His dissertation was entitled "Control of reproduction in overabundant white-tailed deer populations". In addition to being certified as a wildlife biologist by the Wildlife Society, he holds research affiliate positions with Yale University, University of Illinois, Trinity College of Hartford, and the Denver Zoological Society. Dr. DeNicola has 30+ publications in reputable scientific journals and has presented at numerous professional conferences.

Deborah Cuddy, Co-founder and Secretary, received her Masters in the Studies of Environmental Law from Vermont Law School. She has 11+ years of field experience managing and assisting in research projects and reduction programs. Ms. Cuddy also is responsible for the majority of the administrative component of our organization including the writing and distribution of our quarterly report and the web site design.

Ryan Rodts, Wildlife population control specialist, received his Bachelor's degree from Purdue University in wildlife management. Prior to coming to WBI he spent 3 years on Santa Catalina Island working on a feral goat and pig eradication program. Ryan has been with WBI for 7 years and his field experience also contributes to the success of all our programs.

Talmadge Robinson, Wildlife population control specialist, received his Bachelor's degree from University of Georgia in 2003. Tal had been working with USDA's Wildlife Services in Georgia before joining WBI in the fall of 2005.

POPULATION REDUCTION PROGRAMS

We have a 100% success rate for deer reduction programs. To date, WHITE BUFFALO, INC. personnel have removed over 7500 deer. As a result of these programs more than 165,000 pounds of venison have been donated to various food shelters.

Burnsville, Minnesota (38 square miles):

November 2001 - 21 deer harvested in 2 days
November 2002 - 67 deer harvested in 7 days
January 2003 - 24 deer harvested in 7 days
March 2004 - 36 deer harvested in 4 days

Crystal Airport, Minnesota:

October 2000 - 11 deer were removed regional airport, over 2 days,
to eliminate the chance of deer strikes on the runway

Dune Acres, Indiana (1 square mile):

February 1998 – 50 deer harvested over 5 days

Eden Prairie, Minnesota (36 square miles):

November 1997 - 160 deer harvested over 15 days
November 1998 - 124 deer harvested over 11 days
November 1999 - 125 deer harvested over 8 days
November 2001 - 125 deer harvested over 7 days
November 2002 - 154 deer harvested over 14 days
March 2004 - 135 deer harvested over 11 days
November 2004 – 115 deer harvested over 8 days
November/December 2005 – 115 deer harvested over 14 days

Edina, Minnesota:

December 1999 - 40 deer harvested in 1 day
November 2001 - 30 deer harvested over 3 days
November 2002 - 26 deer harvested over 4 days

George Reserve (University of Michigan), Pinckney, Michigan (2 square miles enclosed):

March 2001 - 103 deer harvested over 3 days for tuberculosis testing of an enclosed research population

Greenwich, Connecticut: (Pilot program - 3 town-owned parcels)

March 2005 – 80 deer harvested over 4 days

Iowa City, Iowa (6 square mile area):

January 2000 - 360 deer harvested over 10 days
December/January 2001 - 340 deer harvested over 21 days
December 2001 - 250 deer harvested over 18 days
November 2003 – 200 deer harvested over 14 days
February 2005 – 154 deer harvested over 9 days
January/February 2006 – 150 deer harvested over 11 days

Long Island, New Hampshire (2 square mile peninsula):
November 1996 - 90 deer harvested over 3 days

Monhegan Island, Maine (1 square mile):
April 1997 - 52 deer harvested over 3 days
April 1998 & March 1999 - remaining 27 deer harvested *

* Successful eradication of all deer on the island

Northern Indiana Public Service Company, Wheatfield, Indiana:
March 1996 - 100 deer harvested over 4 days from a 2500 acre enclosed facility *
* Population estimated at 130 deer prior to reduction.

Peaks Island, Maine (1 square mile):
February/March 2000 - 223 deer harvested over 8 days *
* Population was estimated at 240 before reduction.

Princeton Township, New Jersey:
February/March 2001 - 322 deer harvested over 15 days
January/February 2002 - 303 deer harvested over 27 days
February/March 2003 - 280 deer harvested over 21 days
January/February 2004 - 276 deer harvested over 27 days
January 2005 - 124 deer harvested over 13 days
February 2006 - 150 deer harvested over 15 days

Ramsey County, Minnesota (Maplewood, St. Paul):
November/December 2005: 200 deer harvested over 12 days

Roanoke, Virginia:
January 2005 - 109 deer harvested over 7 days

Solon, Ohio:
March 2005 - 602 deer harvested over 37 days.
January/March 2006 - 400 deer harvested over 40 days

Wissahickon Valley - Philadelphia, Pennsylvania:
March 1999 - 43 deer harvested over 2 days

CAPTURE PROGRAMS

We are experienced and fully equipped to provide capture services (i.e., drop-nets, rocket-nets, darting equipment). Using various techniques, WHITE BUFFALO, INC. personnel have captured over 1000 deer.

Bedford and Lewisboro, New York: USDA-ARS 4 Poster Lyme Disease Research*

May 1998 - 8 deer captured using darting techniques over 3 days

October 1998 - 12 deer captured using darting techniques over 3 days

Oct. /November 1999 - 40 deer captured using darting techniques over 8 days

* All deer captured were checked for number and distribution of ticks.

Bluff Point/Mumford Cove, Groton, Connecticut: Urban white-tailed deer habitat use and home range study - We volunteered our service and equipment to assist in capturing white-tailed deer as part of a state-conducted research project. Deer were captured using darting equipment (Winter 1995-96).

Bridgeport, Connecticut: We captured 18 deer using a combination of drop nets and darting techniques to apply an experimental Amitraz-impregnated collar to control ticks as part of a CDC Lyme disease research project (March 1999).

Carlisle, Massachusetts: We captured 27 deer using darting techniques and applied radio transmitter collars as part of a state organized research project to assess mortality rates of suburban deer populations in eastern Massachusetts (March 1999).

Connecticut College Arboretum: We removed deer completely to prevent damage to native plant collections and research plots. We inspected and repaired the perimeter fence to ensure it was deer-proof. We then captured the 3 remaining deer enclosed in the 100-acre arboretum using darting techniques. Deer were released outside the fence on Connecticut College property (January 1996).

George Reserve, Pinckney, Michigan: We captured 25 deer over 3 days using darting techniques for a doctoral research project (University of Michigan). In addition, we trained a doctoral student and technician in deer capture and handling techniques (November 1997).

Lake Gaillard Reservoir, Connecticut: Connecticut Agricultural Experiment Station
November 2000 - 35 deer were captured, tagged, and radio-collared for a research project.

Old Lyme, Connecticut: USDA-ARS 4 Poster Lyme Disease Research

April 1999 - 11 deer captured using darting techniques to apply radio-transmitter collars and to assess the number and distribution of ticks.

Towson, Maryland: USDA-ARS 4 Poster Lyme Disease Research

November 1998 - 11 deer captured using darting techniques over 3 days to assess the number and distribution of ticks.

RESEARCH

We are committed to further understanding causes and solutions to wildlife/human conflicts. We will continue to assess alternative management techniques for a variety of species.

Fertility Control Research

“Efficacy evaluation of GonaCon™ immunocontraceptive vaccine for white-tailed deer: a FDA pivotal field study”, Giralda Farms, Madison, N.J.: This study is to be conducted as a requirement of the FDA authorization process for a New Animal Drug. The primary objective is to verify the magnitude and duration of a single shot of GonaCon™ on female white-tailed deer. To date 50 does have been captured and treated. (July 2005 – 2009)

“Cost-effectiveness of maintaining an enclosed deer population using anti-fertility agents after an initial population reduction using sharpshooting techniques”, Duke Farms, Hillsborough, N.J.: A research project to assess the utility of combining fertility control methods with lethal management options within a 2700 acre privately owned facility. To date 40 deer have been captured and xx harvested. (November 2004 – present).

“Experimental control of a suburban population of white-tailed deer using immunocontraception”, Princeton Township, New Jersey: A research project to assess the practicality and feasibility of reducing, then maintaining the local deer population, within a 3-mile² area of town, at approximately 40/deer/mile² using SpayVac. To date, 105 does have been captured and treated. The first year’s funding was provided by White Buffalo, Inc. (March 2003 – present).

“Experimental control of an urban population of white-tailed deer using contraception”, Cleveland, Ohio: A research project to assess the feasibility and practicality of using a contraceptive agent to reduce herd size in the Ohio and Erie Canal Reservation. Over 300 deer captured. Funding provided by the Cleveland Metroparks (March 2001 - present).

“Evaluation of alternative PZP immunocontraceptive formulations in female white-tailed deer”, Bridgeport Connecticut: A research project to determine the relative efficacy and longevity of various formulations of the PZP vaccine (June 2000 - present).

“Experimental control of an enclosed suburban population of white-tailed deer using contraception”, Bridgeport Connecticut: Designed and implemented a research protocol to assess the feasibility and practicality of using a contraceptive agent to maintain herd size (June 1999 - June 2000).

Lyme Disease Research

"Control of the tick, Ixodes scapularis Say, on white-tailed deer at a suburban Lyme disease focus", Old Lyme, Connecticut: A collaborative effort between White Buffalo, Inc., the Connecticut Agricultural Experiment Station, Yale University, and the United States Department of Agriculture-Agricultural Research Service to evaluate a four-poster feeder system to control deer ticks on free-ranging white-tailed deer in a suburban community. Funding provided by the United States Department of Agriculture (USDA). (August 1997 - July 2002).

"Control of the tick, Ixodes scapularis Say, on white-tailed deer at an urban Lyme disease focus", Bridgeport, Connecticut: A collaborative effort between White Buffalo, Inc. and the Connecticut Agricultural Experiment Station to evaluate an experimental Amitraz-impregnated collar to control ticks on an enclosed white-tailed deer population. Funding provided by the Center for Disease Control (March 1999 - February 2000).

"Control of the tick, Ixodes scapularis Say, on white-tailed deer at an urban Lyme disease focus", Bridgeport, Connecticut: A collaborative effort between White Buffalo, Inc. and the Connecticut Agricultural Experiment Station to evaluate a four-poster feeder system to control deer ticks on an enclosed white-tailed deer population. Funding provided by the Center for Disease Control (CDC) (May 1997 - February 1999).

Other Research

"Infant survival and den site selection of female raccoons following removal and exclusion from residences", Hartford County, Connecticut: A research project designed to assess the management implications of on-site release of female raccoons during the infant-rearing season (April 1998 - 2000).

Purdue University: White-tailed deer herd health assessment research project - We coordinated and conducted deer harvest and capture operations and data collection to assess morphological and physiological parameters as indicators of individual deer condition. These data were then used to assess herd health of deer in hunted versus unhunted areas in Indiana. Research sites included Brown County State Park, Crane Naval Surface Warfare Center, Pigeon River State Fish and Wildlife Area, and Pokagon State Park (March 1996).

INTERNATIONAL RESEARCH/MANAGEMENT PROJECTS

Mongolia: Assisted the Denver Zoological Society and the Mongolian Academy of Sciences in capturing threatened Argali Sheep. The intent of the research is to study Argali ecology and to determine feasibility of repopulating areas where numbers have declined. Argali were remotely captured with darting equipment and drive nets, and radio-collars were attached (September 2002, April 2003, September 2003, 2004, and 2006).

Bhutan: Consulted for the Bhutan Ministry of Agriculture and the Bhutan Trust Fund to assess techniques and equipment used for wild pig control. Designed a research program including a lethal component to be implemented in Fall 2003. (May 2003, October 2003).

Galapagos National Park, Ecuador: Participated in an international workshop to design a program for the eradication of feral goats on Isabela Island (9-18 September 1997).

MISCELLANEOUS MANAGEMENT PROJECTS

Santa, Cruz, California: Assisted in an island wide feral pig eradication program. Pigs were removed using trapping, as well as ground and aerial hunting techniques (May – July 2005).

Santa, Cruz, California: Implemented in an island wide turkey control program. Turkeys were removed using trapping, as well as ground and aerial hunting techniques (Nov – Dec 2006).

Catalina Island, California: Participated in an island wide feral pig and goat eradication program. Feral goats were captured from the ground and from a helicopter using a net gun and dart rifle to serve as judas goats. Pigs were live-trapped followed by euthanasia. Feral goats and pigs were removed using ground-hunting techniques during the day and at night (June - September 1998).

Sikorsky Airport, Stratford, Connecticut: We captured and removed 48 geese, which were creating a bird air strike hazard, from the airport grounds. We also trained airport personnel to properly haze and/or dispatch other bird species creating air strike hazards. All control and dispersal efforts were authorized by the USFWS and USDA-WS. All carcasses were processed and donated to a local food shelter (June 1997).

POPULATION ASSESSMENTS

WHITE BUFFALO, INC. can conduct estimates of population size using helicopter snow counts, spotlight surveys, or mark/re-sight techniques.

Bedford and Lewisboro, New York: We conducted helicopter snow counts to determine deer densities in study sites as part of the USDA-ARS 4-poster Lyme disease research project (February 2001/February 2000/March 1999).

Dune Acres, Indiana: We conducted a white-tailed deer population estimate using spotlighting techniques and consulted with the community regarding the feasibility of implementing a white-tailed deer population reduction program (December 1996).

Kingston, Rhode Island: We conducted helicopter snow counts to determine deer densities in study sites as part of the USDA-ARS 4-poster Lyme disease research project (January 2001/February 1999).

New Canaan, Connecticut: We conducted a white-tailed deer population estimate using helicopter snow counts to determine deer densities throughout the community (February 2001).

Old Lyme and Old Saybrook, Connecticut: We conducted helicopter snow counts to determine deer densities in study sites as part of the USDA-ARS 4-poster Lyme disease research project (February 1999).

Princeton Township, New Jersey: A helicopter snow count was conducted to determine deer densities throughout the community (December 2002).

Town and Country, Missouri: We conducted a white-tailed deer population estimate using spotlighting techniques. We also provided an assessment of deer management options for potential implementation in the community (February 1997).

Westport and Weston, Connecticut: We conducted helicopter snow counts to determine deer densities in 2 communities as part of a CDC Lyme disease research project (February 2000).

CONSULTATIONS and TRAINING

Initial consultations are conducted to provide site-specific cost and feasibility assessments for all management/research options. In addition, a comprehensive report can be prepared that details all organizational aspects (social, legal, and technical) necessary for implementation of any management technique.

- ◆ Milburn, NJ – August 2005
- ◆ Bryn Gwyled, Pennsylvania – April 2005
- ◆ Lake Metroparks, Concord Township, Ohio - March 2004
- ◆ Columbia Heights, Minnesota – November 2003
- ◆ Summit County Metroparks, Akron Ohio – July 2003
- ◆ Roanoke, Virginia – March 2003
- ◆ Bald Head Island, Wilmington, North Carolina – December 2002
- ◆ Ramsey County, Minnesota – November 2002
- ◆ Hamilton County Parks, Cincinnati, Ohio – July 2002
- ◆ Five Rivers Metroparks, Dayton Ohio – July 2002
- ◆ Biltmore Forest, North Carolina – May 2001 and July 2002
- ◆ Armand Bayou Nature Center, Houston, Texas - October 2000
- ◆ Maryland National Capital Park and Planning Commission - July 2000
- ◆ Barton Creek, Texas - June 2000
- ◆ Lakeway, Texas - June 2000
- ◆ Silver Springs, Maryland - February 2000
- ◆ Marinette, Wisconsin - January 2000
- ◆ George Reserve, Pinckney, Michigan - November 1999
- ◆ Goddard Space Flight Center, NASA, Greenbelt, Maryland - November 1999
- ◆ Iowa City, Iowa - August 1999
- ◆ Massachusetts Water Resource Authority, Weston, Massachusetts - June 1999
- ◆ Peaks Island, Maine - June 1999
- ◆ Detroit Metroparks, Michigan - December 1998
- ◆ Princeton, New Jersey - September 1998
- ◆ Reeves-Reed Arboretum, Summit, New Jersey - September 1998
- ◆ Amherst, New York - May 1998
- ◆ Fairmount Park, Philadelphia, Pennsylvania - May 1998
- ◆ Kinnelon, New Jersey - February 1998
- ◆ Edina, Minnesota - December 1997
- ◆ Gaithersburg, Maryland - November 1997
- ◆ Darien, Connecticut - October 1997
- ◆ Block Island, Rhode Island - August 1997
- ◆ Groton Long Point, Connecticut - August 1996

Maryland National Park and Planning Commission, Maryland: Designed a deer population reduction program using sharpshooting techniques for the Park Commission. Trained park personnel in field methods including shot selection and proper shooting techniques (October 2000/January 2001).

Cleveland Metroparks, Cleveland, Ohio: Designed a deer population reduction program using sharpshooting techniques for the Cleveland Metroparks. Trained park rangers in field methods including shot selection and proper shooting techniques (December 1998/January 1999).

Metroparks Serving Summit County, Akron, Ohio: Designed a deer population reduction program using sharpshooting techniques for the Metroparks serving Summit County. Trained park rangers in field methods including shot selection and proper shooting techniques (November 2003/February 2004).

EDUCATIONAL EFFORTS

- ◆ Spoke at 3 lectures for the "Connections Committee" of Cedar Rapids, Iowa. Discussed urban deer management, and the development and application of fertility control. October 2004.
- ◆ Presented data from the on-going fertility control research project in Princeton, N.J. to the Northeast Deer Technical Committee. (September 2004).
- ◆ Guest lecturer at Rutgers University, Animal Sciences Department Seminar Series. Presented "*The Future of Fertility Control in White-tailed Deer Management*". February 2004.
- ◆ Presented at the 10th Annual Wildlife Society Conference held in Burlington, Vermont September 2003.
- ◆ Spoke at a public forum to discuss the use of immunocontraception as a method of white-tailed deer population management. Princeton Township, NJ. March 2003.
- ◆ Guest lecturer at Yale School of Forestry and Environmental Studies. Discussed the social, biological, technical, and political issues involved when managing wildlife populations. New Haven, Connecticut. April 2001.
- ◆ Presented data from the 3-year urban raccoon study entitled "*Den site selection and movement patterns of female raccoons following removal and exclusion from residences*", conducted in Hartford County, CT, at the Northeast Fish and Wildlife Conference held in Saratoga Springs, NY. April 2001.
- ◆ Presented data from the 3-year urban raccoon study entitled "*Den site selection and movement patterns of female raccoons following removal and exclusion from residences*", conducted in Hartford County, CT, at the Eastern Wildlife Damage Conference held at the University of Pennsylvania. October 2000.
- ◆ Presented "*The Art and Science of Sharpshooting: one professional's perspective after five years*" at the joint Mid-west and Northeast Deer Technical Meeting held in Alpena, Michigan. August 2000.
- ◆ Spoke at a town meeting to discuss deer biology and management. Alternative deer management options and techniques were presented and discussed. Westport, Connecticut. May 2000.
- ◆ Guest lecturer at Yale School of Forestry and Environmental Studies. Discussed the social, biological, technical, and political issues involved when managing wildlife populations. New Haven, Connecticut. April 2000.
- ◆ Participated in a Coe College Biology Seminar and Issues Discussion regarding the technical and social aspects of deer management. Cedar Rapids, Iowa. November 1999.
- ◆ Presented data from the Monhegan Island, Maine eradication program at the Northeast Deer Technical Committee Meeting in Greenville, Maine. September 1999.

- ◆ Guest lecturer at Yale School of Forestry and Environmental Studies. Discussed the social, biological and political issues involved when managing wildlife populations. New Haven, Connecticut. April 1999.
- ◆ Taught the wildlife euthanasia portion of the Connecticut Nuisance Wildlife Control Operator's training course. Focused on approved euthanasia techniques for use on nuisance wildlife. Burlington, Connecticut. October 1998.
- ◆ Supervised 2 Yale University graduate students during internships with White Buffalo Inc. Activities included contraceptive delivery, home range assessment using radio-telemetry equipment, and capture techniques. In addition, 11 deer were captured, radio-collared, and movements monitored as part of the USDA-ARS 4-poster research project in Old Lyme, Connecticut. September 1998 – June 2000.
- ◆ Presented data from Long Island, New Hampshire, Eden Prairie, Minnesota, and Monhegan Island, Maine reduction programs at the 5th Annual Wildlife Society Conference held in Buffalo, New York. September 1998.
- ◆ Participated in the "Status and Future of Wildlife Fertility Control" Workshop and Panel Discussion at the 5th Annual Wildlife Society Conference held in Buffalo, New York September 1998.
- ◆ Guest lecturer at Yale School of Forestry and Environmental Studies. Discussed the social, biological and political issues involved when managing wildlife populations. New Haven, Connecticut. April 1998.
- ◆ Presented at the annual National Nuisance Wildlife Control Operator's Conference. Discussed the social and political issues surrounding white-tailed deer population control. Bridgeport, New Jersey. February 1998.
- ◆ Presented data from Long Island, New Hampshire, and Monhegan Island, Maine deer reduction programs at the Midwest Fish and Wildlife Conference held in Milwaukee, Wisconsin. December 1997.
- ◆ Presented data from Long Island, New Hampshire deer reduction program at the Northeast Fish and Wildlife Conference held in Framingham, Massachusetts. April 1997.
- ◆ Presented data from Long Island, New Hampshire reduction program at the Southeast Deer Study Group Meeting held in Charleston, South Carolina. March 1997.
- ◆ Visited the 6th grade class at the Bennett Middle School, Manchester, Connecticut to discuss deer biology and management. Alternative deer management options and techniques were presented and discussed. Spring 1996
- ◆ One day field session with a science class from the Hyde Leadership School, New Haven, Connecticut. Students were taught basic ecological and wildlife management principles followed by field demonstrations. Fall 1995.

REFERENCES

Population Reduction Programs

Eden Prairie, Minnesota

Stuart Fox, Manager of Parks and Natural Resources - (952) 949-8445
City of Eden Prairie
8080 Mitchell Road
Eden Prairie, MN 55344-2230

Sgt. James DeMann - (952) 949-6200
Eden Prairie Police Department
8080 Mitchell Road
Eden Prairie, MN 55344-2230

Edina, Minnesota

Vince Cockriel, Park Maintenance Supervisor - (612) 826-0305
City of Edina
4801 West 50th Street
Edina, Minnesota 55424-1394

Iowa City, Iowa

Steve Atkins, City Administrator - (319) 356-5010
City of Iowa City
Civic Center
410 East Washington Street
Iowa City, Iowa 52240

Metroparks Serving Summit County

Mike Johnson, Chief of Natural Resources – (330) 865-8046
Metroparks Serving Summit County
975 Treaty Line Road
Akron, Ohio 44313

Long Island, New Hampshire

Steve Weber, Chief of Wildlife - (603) 271-2461
New Hampshire Fish and Game Department
2 Hazen Drive
Concord, NH 03301

Captain Jeff M. Gray - (603) 271-3127
New Hampshire Fish and Game Department - Law Enforcement Division
2 Hazen Drive
Concord, NH 03301

Monhegan Island, Maine

Gerald Lavigne, State Deer Biologist - (207) 941-4477
Maine Department Inland Fisheries and Wildlife
650 Main Street
Bangor, ME 04401-5654

Peaks Island, Maine

Larry Mead - (207) 874-8688
City of Portland
City Hall
389 Congress Street
Portland, ME 04101

Gerald Lavigne, State Deer Biologist - (207) 941-4477
Maine Department Inland Fisheries and Wildlife
650 Main Street
Bangor, ME 04401-5654

Princeton Township, New Jersey

Mayor Phyllis Marchand - (609) 924-5176
Municipal Complex
400 Witherspoon Street
Princeton, NJ 08540

Lt. Robert Buchanan - (609) 921-2100
Princeton Township Police
1 Valley Road
Princeton, NJ 08540

Susan Predl, Wildlife Biologist – 908-735-7040
NJ Division of Fish, Game & Wildlife
Northern District Office
26 Rte 173 West
Hampton, NJ 08827

Solon, Ohio

Dave Hromco, Assistant Public Works Director – (440) 248-1155
City Hall
34200 Bainbridge Road
Solon, OH 44139

Chief Wayne E. Godzich – (440) 248-2932
City of Solon Police Department
33000 Solon Road
Solon, OH 44139

Fertility Control Research

Cleveland Metroparks, Cleveland, Ohio

Thomas Stanley, Chief of Natural Resources - (216) 635-3240
Cleveland Metroparks
4101 Fulton Parkway
Cleveland, OH 44144

Duke Farms Foundation, Hillsborough, New Jersey

Gene Huntington, Park & Farm Manager – (908) 243-3645
Duke Farms
80 Route 206 South
Hillsborough, NJ 08844

Giralda Farms, Madison, New Jersey

Lorraine Suarez, Vice-President-General Manager – (973) 635-0303 ext 105
GRC Management Corp.
14 Fairmount Ave.
Chatham, NJ 07928

Princeton Township, New Jersey

Mayor Phyllis Marchand - (609) 924-5176
Municipal Complex
400 Witherspoon Street
Princeton, NJ 08540

Capture Programs

Bedford, New York

Dr. Thomas Daniels - (914) 273-3078
Louis Calder Ecology Center, Fordham University
53 Whipoorwill Road
Armonk, NY 10504

Bluff Point/Mumford Cove, Groton, Connecticut

Howard Kilpatrick, State Deer Biologist - (860) 642-6528
Franklin Wildlife Management Area
391 Route 32
North Franklin, CT 06423

Carlisle, Massachusetts

John E. McDonald, Jr., Ph.D - (413) 253-8675
Wildlife Research Specialist
Division of Federal Aid
US Fish & Wildlife Service--Region 5
300 Westgate Center Drive
Hadley, MA 01035

Other Wildlife Management and Research

Lyme Disease Research, Bridgeport and Old Lyme, Connecticut

Dr. Kirby C. Stafford III - (203) 974-8485
The Connecticut Agricultural Experiment Station
123 Huntington Street - Box 106
New Haven, CT 06504

Purdue University - White-tailed deer herd-health assessment research project

Dr. Robert K. Swihart - (765) 494-3566
1159 Forestry Building - Room 102
Purdue University
West Lafayette, IN 47907

Dr. Harmon P. Weeks - (765) 494-3567
1159 Forestry Building
Purdue University
West Lafayette, IN 47907

SHARPSHOOTING PROTOCOL

Subsequent to a decision by the landowner/s and the state wildlife management agency to implement a controlled deer reduction using White Buffalo, Inc. the following procedures are used:

- 1) Prior to initiating any field activities the target area/s and surrounding properties are thoroughly surveyed using topographic maps and aerial photographs followed by field confirmation. By knowing the location of every occupied structure and areas of human use we are better able to work safely, discretely, and efficiently;
- 2) Bait sites are selected with the involvement of the landowner/s and the cooperating state agency. Each site is selected based on safety concerns and deer activity;
- 3) We conduct field operations during hours of lowest human activity. In addition, during the removal operation we search intensively for people and non-target animals to avoid mishaps;
- 4) Deer of all ages and sexes are harvested, however, adult does are prioritized. Deer are shot from a vehicle with a rifle during the night with the aid of spotlights. Some deer are shot over bait from a tree stand with a rifle during the day or at night. Night-vision equipment and suppressed firearms (only in states where they are legal to possess) are used to expedite field procedures and to ensure discrete operations;
- 5) During suburban deer reductions there will be continuous open communication between community members, municipality officials, and White Buffalo, Inc. to keep people well informed regarding field activities to avoid conflicts;
- 6) All deer carcasses are transported and dressed with the highest degree of discretion;
- 7) When desired, we are willing to be responsible for the disposal of all by-products and transport of deer carcasses to a USDA inspected facility for processing and subsequent donation to the needy.

The following are reasons why White Buffalo, Inc. is on the leading edge of urban deer management:

- 1) We have the best available equipment with numerous hours of hands-on use to ensure precise shot placement. This results in safe use of equipment and humane treatment of target animals;
- 2) We have spent the last 10 years committed to improving both technology and techniques to maximize safety and efficiency for the management of white-tailed deer (i.e., ballistics testing, bullet development, baiting techniques, adaptation of other technologies for use in deer management, including night vision scopes and suppressors);

- 3) We have thoroughly tested and selected bullets, in addition to having developed specialized bullets. As a result of our extensive testing, we have found that no bullet fragments with significant size or inertia exit the target animal;
- 4) We have extensive experience in both killing (>7500 deer) and capturing deer (>1000 deer) in a variety of human occupied environments without incident. We have used our discretion in the selection of shooting sites with complete satisfaction of both state officials and property owners;
- 5) We collect all pertinent data related to herd health, advancements in management techniques, and other aspects of each removal program which will be included in scientific journals, professional conferences, or written reports submitted to the landowner and cooperating state agency.

In conclusion, although safety is the primary issue to be considered when implementing a sharpshoot to reduce deer numbers, with the above precautionary measures and the expertise of White Buffalo, Inc., it need not be a concern.

BOARD OF DIRECTORS

Mr. Gary Aurora

26 Peck Lane, Hamden, CT 06514
Telephone: (203) 230-2768 Email: gmaurora@yahoo.com

Gary is currently employed by the New Haven Board of Education as a teacher at the Hyde Leadership School. He is certified to teach Social Studies (grades 7-12) and has done so for 7 years. He has served as Dean of Students for 3 years. In addition, Mr. Aurora has coached 4 varsity level sport teams over the last 10 years. He received a BA from Colgate in Political Science and his JD from Quinnipiac School of Law. Gary also has obtained a 6th Year Certificate in Educational Leadership from Southern Connecticut State University (SCSU), and is certified in school administration. He has conducted diversity workshops for the Anti-Defamation League and been a guest speaker in an Anti-Bias course held at SCSU the last 6 semesters. Gary also is licensed by the State of Connecticut as a foster and adoptive parent.

Mr. Eric Grant, Esq.

YAMIN & GRANT, LLC, 182 Grand Street, Suite 417, Waterbury, CT 06702
Telephone: (203) 574-5175 Email: egrant@yamingrant.com

Eric received his BA in Economics from Trinity College, and graduated from New York University, School of Law, cum laude in 1993. Mr Grant worked for both Cummings and Lockwood and LeBoeuf, Lamb, Greene & MacRae, before establishing Yamin and Grant, located in Waterbury, CT. Attorney Grant focuses his practice on complex civil litigation in state and federal courts. He represents publicly and privately held companies in various industries, including manufacturing of industrial and consumer products, insurance, reinsurance, construction, commercial real estate, aerospace, tobacco, trash to energy, automobile dealerships, healthcare, banking and investment banking. Eric has litigated cases involving business torts, mergers and acquisitions, employment discrimination claims, breaches of restrictive covenants, executive compensation, factoring transactions, copyrights, trademarks, trade secrets, construction projects, medical malpractice and personal injuries. In addition, his practice includes the use of alternative dispute resolution procedures, including arbitration, mediation and formal settlement negotiations when such procedures are contractually required or in the interests of his clients. Eric also serves as counsel to White Buffalo, Inc., and assisted in the process of obtaining its tax-exempt status as a public charity.

Robert Swihart, Ph.D.

Department of Forestry and Natural Resources, Purdue University, West Lafayette, IN 47907
Telephone: (763) 494-3566 Email: rswihart@purdue.edu

Rob conducted undergraduate work at Butler University and Purdue University, obtaining a B.S. in Wildlife Science from Purdue in 1979. He graduated from Minnesota with a M.S. in Wildlife in 1981 and then moved to the University of Kansas to work on a Ph.D. as an Honors Fellow. He received his Ph.D. in Ecology in 1985. In 1986 Rob accepted a position as a research ecologist with the Connecticut Agricultural Experiment Station, where he investigated nonlethal methods for managing crop damage by wildlife in commercial nurseries and orchards. Since joining the faculty at Purdue in 1991, Rob and his students have conducted numerous studies examining the impact of agriculture and habitat loss/fragmentation on vertebrates. Rob has published over 100 manuscripts in scientific journals. Effective July 1, 2004 he will take on the responsibility of Interim Dean of the School Forestry and Natural Resources at Purdue.

