

GEORGIA'S URBAN DEER MANAGEMENT PLAN

Supplement to

Georgia's Deer Management Plan
2005-2014

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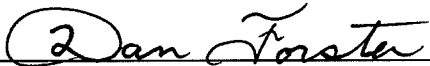
**Georgia Department of Natural Resources
Wildlife Resources Division
Game Management Section**

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Supplement to

Georgia's Deer Management Plan
2005-2014

Department of Natural Resources
Wildlife Resources Division



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Dear Fellow Georgians,

Georgia is blessed with a healthy white-tailed deer population that provides diverse recreational opportunities and generates significant economic vitality. However, Georgia's white-tailed deer herd can present a variety of management challenges as we strive to maintain a sustainable deer population within appropriate biological, ecological, and sociological limits. Properly managing this important resource is critical.

Hunting is the primary tool for managing white-tailed deer and has been used safely and successfully in Georgia for more than four decades. In fact, regulated deer hunting has successfully reduced the statewide deer population from 1.4 million deer in the 1990s to close to 1 million today. This reduction has achieved the objective of decreasing and stabilizing the deer population across much of the state as identified in the Georgia Deer Management Plan 2005-2014. Additionally, this success is consistent with the Department's goal of maintaining a deer population that is sustainable, statewide and regionally, and within habitat and social tolerances. Despite this statewide success, the urban interface presents unique challenges to effectively manage deer through regulated hunting.

Georgia has experienced unprecedented human population growth and this growth is estimated to continue at more than 160,000 people per year. This human population growth has transformed a once rural landscape and contributed to a variety of deer-human conflicts. These conflicts are more a function of rapid human population growth, especially human density, than functions of deer population. Indeed, deer densities in many urban areas are well within biologically and ecologically appropriate limits; however, increasing human densities often result in varying social tolerances towards deer, human-deer conflicts, and deer management.

This plan incorporated extensive public input and was developed by an 18-member stakeholder committee representing common interests in managing white-tailed deer in urban settings. The plan focuses on encouraging the use of regulated hunting as the primary method for addressing the conflicts associated with deer in urban areas, identifies barriers that are believed to impede deer management in urban settings, and recommends strategies to perforate these barriers. Although actions to initiate these strategies are directed toward the Department of Natural Resources, successfully addressing management of white-tailed deer in our urban regions requires cooperation among state and local governments, citizens, and private organizations. The Department looks forward to collaborating with local governments, public officials, citizens, and organizations to develop problem-solving partnerships to address the issues related to managing deer in the urban interface.

Sincerely,

Chris Clark

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LIST OF ACRONYMS

ACCG	Association of County Commissioners of Georgia
DVC	Deer Vehicle Collisions
DNR	Georgia Department of Natural Resources
GDOT	Georgia Department of Transportation
GMA	Georgia Municipal Association
GRPA	Georgia Recreation Property Act
OCGA	Official Code of Georgia Annotated
QDMA	Quality Deer Management Association
RMS	Responsive Management Survey
USDA-WS	U. S. Department of Agriculture-Wildlife Services
WRD	Wildlife Resources Division

The Department of Natural Resources, Wildlife Resources Division (WRD) is charged by State law with the management and conservation of Georgia's wildlife resources for present and future generations. The white-tailed deer (*Odocoileus virginianus*) is a tremendous resource in Georgia offering diverse recreational opportunities. As a result, the economic value of hunting in Georgia is estimated at more than \$1.1 billion, generates more than \$82 million in estimated state and local tax revenues, and provides more than 14,000 jobs. However, Georgia's deer herd presents significant management challenges such as agricultural damage, property damage, and human safety concerns.

Management of Georgia's white-tailed deer population has become more challenging and controversial as humans and deer populations have increased. Over the past 35 years, Georgia's human population has increased from 4.8 million to more than 9.3 million while the deer population has increased from 198,000 to 1 million. Deer hunter numbers have not kept pace with human population growth. Deer hunter numbers have decreased from a peak in 1991 of about 349,000 to 292,000 in 2008. However, deer hunter success has increased steadily resulting in harvest levels sufficient to stabilize the deer herd across much of the state. Georgia's deer population growth rate has not been constant throughout the state and deer-human conflicts occur where the local deer population exceeds the biological or social carrying capacity. WRD strives to maintain a statewide deer population that is biologically, economically, and recreationally sustainable. Sustainability requires that deer numbers be maintained in balance with habitat capacity and social tolerances.

In an effort to broaden the scope of deer population management, better fulfill its statutory mandate, and become a more responsive agency, WRD initiated a planning process to address the needs at a statewide and local level for managing Georgia's urban deer population.

The Planning Process

From a statewide perspective, Georgia's deer herd has been essentially stable for nearly a decade. The current estimate of 1 million deer statewide is a reduction from an estimated high of 1.4 million in the early 1990s. Despite this success, actions taken to date by WRD to address deer-human conflicts in developed areas have not been integrated into a comprehensive strategy. As such, issues surrounding urban deer populations in Georgia became a key conservation issue in *Georgia's Deer Management Plan 2005-2014*. The plan specifically states that a planning process is necessary to develop strategies for managing urban deer populations through hunting. In an effort to address this action item and the issues surrounding the urban deer population, WRD determined that it was essential to initiate an urban deer management planning process. This process focused specifically on urban deer population management issues and was designed as an abbreviated version of the successful model established by *Georgia's Deer Management Plan 2005-2014*. Public participation was accomplished by creating the Urban Deer Advisory Committee (hereinafter, Committee) and through considering the extensive public input provided in the development of *Georgia's Deer Management Plan 2005-2014*. The Committee was created through invitations sent to individuals and organizations sharing a common interest in managing white-tailed deer in the urban landscape. To this end, WRD established an organization and agency-based 18-member stakeholder group referred to as the Urban Deer Advisory Committee (Appendix I). Representatives included: animal control agencies, conservation organizations, county governments, federal and state agencies, insurance industry interests, legislators, municipal governments, and public safety interests.

For the purposes of this plan, urban areas are defined as those counties with a human density of at least 500 people per square mile of land (Appendix II). This demographic calculation was used because land area is static and provides a common base for human and deer habitation and should focus efforts in areas where rural landscapes and deer habitat are being replaced with subdivisions, shopping centers, and development infrastructure. However, this definition does not preclude the consideration or use of urban deer management tools outside of urban areas.

INTRODUCTION

The white-tailed deer in Georgia is a readily recognized wildlife species that provides diverse recreational opportunities (e.g., hunting, wildlife photography, wildlife viewing) and is of significant economic value. Indeed, expenditures in Georgia for hunting, fishing, and wildlife-associated recreation exceed \$3.5 billion dollars annually. These expenditures if expressed as a percent of Georgia’s travel and tourism expenditures (\$16.6 billion) would represent an addition of almost 25% of those dollars.

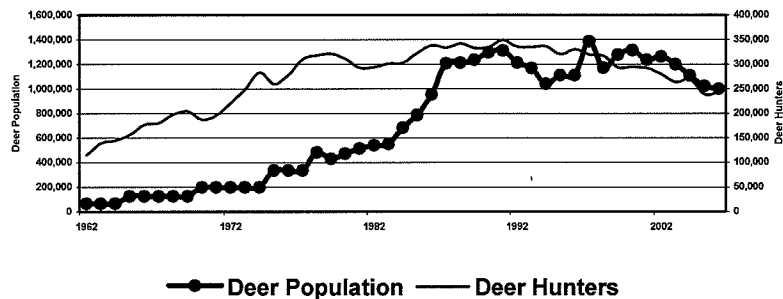
White-tailed deer can be found from rural farmlands and forests to urban parks and suburbs. Despite the fact that the white-tailed deer is a valued resource, considerable controversy surrounds its management. In fact, one of the most challenging issues facing many state wildlife agencies, including WRD, is the management of deer in urban areas. WRD’s deer management efforts are designed to balance the state’s deer population with its habitat for the health of deer herd and other wildlife, provide sustainable deer populations for recreational pursuits, and allow for compatibility between deer populations and human land-use practices.

Historically, deer were eliminated from most of the state during the 19th Century. By the 20th Century, widespread wildlife conservation efforts led to the reintroduction of many species, including white-tailed deer. White-tailed deer now thrive throughout Georgia and have become one of the greatest

success stories in wildlife conservation. As deer populations grew from 1950 to 1980, interest in deer hunting increased (Figure 1). By the early 1990s the deer population peaked at 1.4 million statewide. Concomitantly, the number of deer hunters

peaked at approximately 350,000. However, increased hunter interest did not lead to an immediate decrease in the deer population. With high deer densities and a rapidly growing human population, the volume of negative deer-human interactions steadily rose. A combination of expanding either-sex days and a willingness of hunters to harvest female deer began to stabilize the population at a more acceptable level in 2004. Currently the statewide deer population remains stable at approximately 1 million. However, local areas of overabundance do exist.

Table 1. Deer Population and Deer Hunters From 1962-2006



Management of Georgia's deer population is achieved primarily through regulated hunting. Up to the present, the primary tools for regulating deer harvest have been season length, either-sex days (days on which female deer may be harvested), and bag limit. Over the past decades, the season length has been extended to maximize opportunity within biological and statutory frameworks. Presently, Georgia has one of the longest deer seasons in the nation encompassing more than 130 days. Throughout the 1980s and 1990s, the bag limit has been increased from two (2) to twelve (12) and either-sex days have been liberalized across much of Georgia. Presently, hunters may take deer of either sex the entire season throughout most of Georgia. This long season, combined with a flexible bag limit, has facilitated a reduction in the statewide deer population. However, the most recent increases in bag limit (2002) and either-sex days have not resulted in a significant increase in the deer harvest supporting that neither the current bag limit or season length are factors limiting additional deer hunter harvest. As such, further efforts to expand the season length or increase the bag limit are unlikely to result in significant additional deer harvest.

While regulated hunting is the most effective and economical tool available to manage deer populations, the growth of Georgia's human population and associated development have transformed a once rural landscape. These transformations primarily consist of replacing rural land uses (e.g., forestry and agriculture) with shopping centers, subdivisions, parks, and greenspace. Despite these land use changes, deer have adapted well and still occur in and around these areas. Concomitant with this land use change, a complexity of factors has limited the application of traditional hunting. These limitations include loss of hunter access, firearms ordinances, and social concerns. With the loss of hunting as the primary mechanism to manage deer population growth, deer populations can become locally overabundant exceeding social, biological, or ecological carrying capacities. Social carrying capacity is the point at which the number of deer-human conflicts becomes unacceptable to a majority of the community. This includes, but is not limited to, deer-vehicle collisions, property damage, damage to landscaping, agricultural damage, or aggressive behavior toward pets or humans. Biological carrying capacity is reached when the health of a deer population is compromised by a lack of resources resulting in malnutrition, excessive parasitism, and overall poor health. This juncture can be reached before visible effects become apparent (i.e., deer may appear healthy). Generally, this results from chronic over-browsing of local habitat by an overabundant deer population. Ecological carrying capacity is realized when deer browsing negatively impacts local plant communities and other wildlife (e.g., songbirds, small mammals, etc.) that depend on such habitat. Ecological carrying capacity may be surpassed long before the symptoms of reaching biological carrying capacity are apparent.

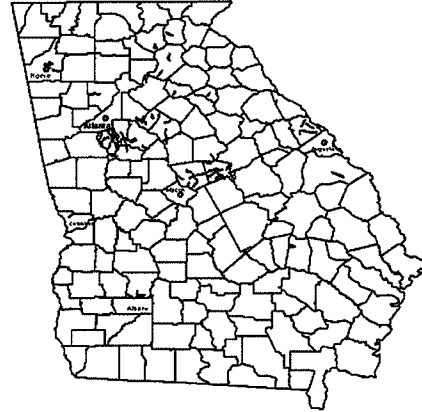
One of the more widely publicized and observable issues associated with abundant deer populations in urban areas is deer-vehicle collisions. According to the Insurance Institute for Highway Safety, an estimated 1.5-million deer-vehicle collisions (DVC) occur annually in the United States, causing more than 150 fatalities and \$1.1 billion in property damage. DVC often lead to expensive repairs and, tragically, to some loss of human life thereby elevating the need for management of urban deer populations in Georgia.

There is no single agency in Georgia that has a complete annual DVC count. The Georgia Department of Transportation (GDOT) keeps some records, as do some county Governments. A minimum reliable estimate of DVC can be produced using insurance industry data. WRD annually receives data from the insurance industry to calculate DVC estimates for

the entire state using vehicle registration statistics from the Georgia Department of Revenue, Motor Vehicle Division.

Metropolitan counties tend to have the highest overall projected DVC. An analysis of high collision state route 5-mile road segments indicates “hot spots”, of which most are associated with metropolitan commuter corridors (see map). Recent estimates of Georgia DVC indicate a minimum yearly average of 45,000 DVC for the last 3 years. Statewide, this has remained relatively constant despite the increasing number of registered vehicles on Georgia’s roads. In 2004 there were 6.56 million registered vehicles in Georgia; in 2006 that number had increased to 7.08 million. These statistics indicate that DVC rates (collisions/vehicle) have slightly decreased. However, Georgia still ranks fourth nationally in the number of DVC. Efforts to minimize DVC require sustained management of deer in urban areas, and must include educating drivers on the awareness of deer in these areas and defensive driving strategies.

Location of State Highway 5-mile Segments with 10 or more Deer-Vehicle Collisions in 2007



Data Provided by GDOT
Map produced by GA DNR

The white-tailed deer is an economically valuable and socially desirable natural resource. However, stakeholders (including responsible agencies, landowners, and citizens) should strive to reduce or maintain deer densities below biologically, ecologically, and sociologically acceptable levels to successfully address the challenges associated with urban deer populations. Traditional strategies that manage for deer are not compatible with urban deer management objectives.

URBAN DEER MANAGEMENT

The Committee strongly encourages DNR, local governments, private landowners, homeowners and homeowners’ associations to use regulated hunting methods to manage deer in urban settings. Further, the Committee supports the use of regulated hunting as the primary method for managing deer and human-deer conflicts in such areas. According to the Responsive Management Survey (RMS) conducted in 2004 as a component of the Georgia Deer Management Plan process, most Georgians support the use of regulated hunting to manage deer populations (82%). Furthermore, most Georgians support the use of hunting to manage deer populations in urban areas, and on parks and recreational lands traditionally closed to hunting. Therefore, it is DNR’s intent to encourage and support the use of regulated hunting as the primary tool for managing urban deer populations and minimizing associated conflicts.

Successful management of white-tailed deer requires a sustained effort. Deer-human conflicts in urban areas do not develop overnight and are not readily solved. There is no one-time fix to resolving deer-human conflicts. Confronting these conflicts requires that public officials and citizens accept responsibility in their communities. Additionally, public officials and residents must make a long-term commitment to effectively apply available deer management tools. These tools may include lethal and non-lethal methods. Lethal methods are further segregated into regulated hunting and non-hunting lethal methods. Non-hunting lethal methods include: targeted population reduction by trained wildlife professionals, capture and

kill, and predator reintroduction. Non-hunting non-lethal methods include habitat modification, repellents, exclusion, contraception, and trap and relocate. These methods were explored and discussed by the Committee and are presented in the section, "Alternatives to Hunting."

The use of regulated hunting to effectively and efficiently manage urban deer populations is not groundbreaking. Recently, in fact, regulated hunting has been used successfully in Georgia on several State Parks and by local governments to resolve the challenges associated with urban deer populations. DNR's Parks, Recreation, and Historic Sites Division provides access to hunters through managed hunts on Bobby Brown, Fort Yargo, F. D. Roosevelt, Hard Labor Creek, Mistletoe, Richard B. Russell and other State Parks in its effort to responsibly manage deer populations. Interestingly, Ft. Yargo State Park is located entirely within the city limits of Winder, Georgia. Despite initial misperceptions and apprehension, these hunts have proven safe and effective. In fact, after years of ecological degradation on the park and significant DVC on boundary highways, the deer population has been reduced to an acceptable and sustainable level, the ecological integrity of the park is recovering, and DVC have been greatly reduced (see Appendix III). Additionally, several local governments have utilized regulated hunting to effectively and responsibly manage deer populations on the lands they manage. Two successful examples include Clayton County Water Authority Facility and the Covington/Newton County Land Application Facility (see Appendix IV and V, respectively).

Regulated Hunting

In its discussions, the Committee identified and discussed several issues it believes must be addressed to facilitate the use of regulated hunting to effectively manage deer populations. These include hunter access, landowner liability, firearms ordinances, and public perceptions. Hunter access is critical. If hunters cannot gain access to hunt private and public lands, effective deer management likely is not possible. Perceptions of landowner liability and general perceptions of, or a lack of knowledge of, hunting, hunters, and deer ecology can affect hunter access. Further, broad firearms ordinances are statutory in nature and represent a tangible barrier that impedes effective deer management in urban areas. In addressing these issues and consistent with the goal of promoting the use of regulated hunting to manage deer in urban areas, the Committee focused on recommendations to increase and encourage opportunities for regulated hunting.

Legal liability has been identified as a major concern among landowners when considering whether to grant access to hunters. In fact, according to the RMS, most Georgia landowners (78%) indicated that legal liability is a major concern when considering whether to allow hunting. As a result of this perception, legal liability is a reason some landowners have stopped allowing hunting access to their property. This is an important issue of concern with the increasing need for sound deer management and hunting access.

In an effort to encourage landowners to make their lands available to the public for recreational purposes, including hunting and fishing, the Georgia Recreation Property Act (GRPA; OCGA §§51-3-20 through 51-3-26) explicitly shields landowners from civil liability for injuries to persons who use their land for recreational purposes without charge unless the landowner willfully or maliciously fails to guard against or warn of a dangerous condition, use, structure, or activity. Landowners will not be liable unless they violate this standard of care. Georgia Courts have interpreted this standard of care as the "duty of slight care", which is lower than that of ordinary care. The GRPA does not grant *total immunity* from liability to landowners

who allow public recreation on their land. Rather, the GRPA offers a *limitation* on the duty of care owed by the landowner to recreational users.

Georgia law (OCGA 27-3-1) further extends this same protection to landowners, lessees of land, or lessees of hunting or fishing rights who give permission to another to hunt or fish on their property with or without charge.

According to a recent study by Ron Kaiser and Dr. Brett A. Wright and published in the Journal of Soil and Water Conservation (2002), 637 recreational landowner liability cases have reached the Appellate Courts nationwide. Of these, 307 involved public agencies and 330 involved private landowners. Kaiser and Wright analyzed these cases by state and recreational activity. They grouped recreational activities into 13 categories, including hunting. According to these data, there were 23 cases (5 against public agencies and 18 against private landowners) between 1965 and 2001 in Georgia. Interestingly, there were no recreational injury cases involving hunting. In more than 35 years, there have been no successful Appellate court cases for liability claims against landowners involving hunting activities in Georgia. Accordingly, it appears that Georgia's recreation liability statutes with respect to hunting activities are among the strongest in the nation. Thus, the perception of landowner liability appears to be greater than the actual liability risks.

Contrary to popular belief, county and municipal governments are not authorized to regulate hunting. Georgia law (OCGA §27-3-1) is specific regarding the authority to regulate hunting with authority given solely to the Department of Natural Resources Board. Local ordinances that regulate hunting (e.g., include language so broad as to prohibit the lawful discharge of firearms, that deliberately prohibit hunting, or extend beyond firearms to include archery equipment) are contrary to the authority provided for in OCGA §27-3-1. While provisions exist in OCGA §27-3-1 allowing political subdivisions to reasonably limit the discharge of firearms for the explicit purpose of "public safety", this allowance is limited unequivocally to the discharge of firearms. It does not include allowances for prohibitions on discharging archery equipment.

Ordinances prohibiting the discharge of firearms for public safety purposes vary widely and often have the unintended consequence of limiting the effectiveness of regulated hunting. As a result, the probability of DVC increase, presenting a tangible public safety issue. Additionally, damage to landscaping is estimated to cost Georgians \$26,000,000 annually. Addressing this regulatory issue likely requires political subdivisions to revisit their ordinance language and amend their ordinances. These amendments should focus more on irresponsible use of firearms while relaxing restrictions for lawful purposes (e.g., hunting) as opposed to enacting broad prohibitions on discharge of firearms based upon obscure perceptions. Interestingly, according to the RMS, a majority (52%) of Georgians feels that municipalities that pass firearms ordinances, thereby preventing deer hunting, should be required to mitigate deer damage.

Inadvertent impacts on deer management are not the only concern. Broad ordinances prohibiting the discharge of firearms affect the flexibility for private citizens to lawfully protect their persons and property from nuisance wildlife. Firearms, particularly small caliber and air rifles, are important tools homeowners and landowners can lawfully use in controlling certain wildlife species (e.g., squirrels, raccoons, coyotes) that create nuisance situations resulting in property damage. Additionally, the likelihood of wildlife diseases (e.g., rabies, tick diseases, ascarid roundworms, and fecal contamination) communicable to humans can become a considerable public health concern. As counties develop, the probability of these and other

wildlife conflicts increase. When firearms ordinances are broad and indiscriminant, the use of the effective tools available to citizens and landowners for managing such problems are unduly restricted or lost.

Recommendations:

The Committee developed action items to facilitate and encourage regulated hunting as the primary tool for managing urban deer populations. These action items will be considered for implementation by WRD. The Committee recognizes attributes in common and unique to public and private lands. Therefore, public and private lands were considered individually where appropriate.

Public lands identified by the Committee include, but are not limited to: state-owned properties (including State Parks and GDOT holdings), local government lands, university holdings, and camps (FFA, 4H, etc.). Private lands include, but are not limited to: homeowners' association holdings, land trusts, resorts, golf clubs, tracts held by developers and other real estate investment entities, utility company holdings, industrial parks, and private school campuses (K-12 and college).

To encourage and facilitate the use of regulated hunting as the primary tool for managing urban deer populations, the Committee provided the following recommended action items for DNR's consideration.

Public & Private Lands

- Work with appropriate organizations to develop and distribute information for use by local governments, homeowner's associations, and public schools on the need for sound deer management that incorporates regulated hunting as the primary management tool for addressing local deer issues.
- Explore opportunities for modifying existing laws or regulations that can facilitate hunter access and the harvest of deer in urban areas.
- Support legislation that would remove the statewide antler restriction requirements from the buck bag limit for deer harvested in urban areas.
- Encourage and promote venison donation.
- In collaboration with ACCG and GMA, develop a reasonable and uniform model discharge of firearms ordinance that promotes the safe and reasonable use of firearms while maintaining the flexibility needed to manage wildlife conflicts and advocate the adoption of this ordinance by local governments to address firearms discharge issues.
- With QDMA and ACCG, modify and distribute "Living with White-tailed Deer" educational video to local governments and schools citing specific successful case studies of urban deer management in Georgia.
- Work with the General Assembly, and other appropriate agencies, to study tax policies and develop tax strategies that facilitate venison donation to qualified non-profit organizations.

- In cooperation with the Department of Education, seek opportunities to incorporate segments of the Hunter Education course into the Georgia Performance Standards.
- Expand opportunities for youth shooting programs (e.g., GASP) and outdoor adventure days into urban areas.
- Develop public education/marketing campaign that conveys to the general public that safety and sportsmanship are a priority and are taught in the required Hunter Education course.
- Provide information on liability protection in Georgia to local governments, landowners, hunters, homeowners, and others.
- In partnership with ACCG and GMA, assist local governments with the development of ordinances prohibiting the feeding of wildlife (excluding birdfeeders) and encourage their adoption.
- In partnership with ACCG, GMA, and other appropriate government agencies, identify tracts of undeveloped property that may contribute to human-deer conflicts and develop strategies for such properties that encourage hunter access and regulated hunting to address deer management on such properties.

Public Lands

- Provide information to the General Assembly to justify passage of a joint resolution acknowledging the need to address urban deer population management on publicly owned lands.
- Coordinate with ACCG, GMA, and Georgia Recreation and Parks Association to highlight and publicly acknowledge successful management of deer populations through regulated hunting on publicly owned properties in urban and developing areas.

Private Lands

- Encourage marketing of deer population management through nontraditional outlets (e.g., websites, utility bills, HOA newsletters, etc.) as an opportunity to serve the community, make a contribution to public safety, and responsibly manage deer herds.
- Develop an online mechanism for landowners and hunters to facilitate hunting access on lands in urban areas.
- Develop an urban deer conservation program that recognizes (e.g., signs for posting property, day at the Capitol, advertisements in media outlets, etc.) participating landowners who allow hunting on their land.
- Develop and provide for landowners information relating to providing access and hunting opportunities on their property.

- Facilitate development of an urban deer hunter proficiency course.
- Develop and maintain a list of qualified groups and organizations willing to assist with urban deer management where hunting is the primary tool.
- Develop and provide for landowners a brochure covering: how to establish a customized hunting program on their property, safety and responsibility, liability, deer population management primer, public health concerns, benefits, and requisite hunter credentials and qualifications.
- Encourage General Assembly to investigate tax policies that provide an incentive to landowners who offer public hunting access.
- Encourage insurance companies to discount policies for landowners opening land to public hunting.
- Develop language for landowner signage/handouts that indicate hunting is occurring on this property and permission is required for access.
- Develop a guide for hunters on how to gain permission to hunt on private lands in an urban environment.

Alternatives to Hunting

The Committee recognizes the need for an integrated approach to urban deer management and that there are circumstances that may preclude hunting as a viable management tool. However, a comprehensive deer management plan requires the implementation of several management practices to be used in conjunction with hunting. Alternatives may include: habitat modification, exclusion, repellents, trap and relocate, contraception, targeted population reduction by trained wildlife professionals, capture and kill, and predator reintroduction.

The Committee considered habitat modification, exclusion, repellents, trap and relocate, and contraception as alternatives to hunting. Habitat modification is defined in this document as the reduction or elimination of available food, cover, and travel corridors. Habitat modification can reduce the attractiveness of an area to deer; however, it may prove ineffective at high deer densities. Herd reduction prior to the implementation of any habitat modification techniques may enhance effectiveness. Habitat modification is a cost effective, long-term solution, but may not be aesthetically pleasant, may negatively affect other wildlife species, and may affect property values.

Exclusion can be considered for an entire community or an individual landowner. Fencing options include baited single-strand electric, electric polytape, high tensile electric, and woven wire. Fencing options vary widely with respect to initial cost and long-term maintenance. Permanent fencing may be preferable due to significantly lower maintenance than temporary fencing. With fencing, confinement of deer may occur; it is unlawful to confine deer on acreages less than 640 acres. Thus, WRD should be contacted to avoid unlawful actions.

Utilization of visual, auditory and olfactory repellents only should be considered when deer damage is localized (i.e., individual homeowner's landscaping or garden), a short-term

concern, or other more effective options are not possible. Repellents should be expected to only reduce deer damage and are most effective at low deer densities. Factors further affecting the effectiveness of repellents include availability of more attractive food sources, ability of deer to become desensitized to the repellent, and climatic conditions. Reapplication and rotation of various repellents is necessary. Repellents are readily available and typically do not impact landscape aesthetics. Although repellents may be made at home, the most effective products are available commercially, but can be cost prohibitive. Repellents are not long-term solutions.

Trapping and relocating deer fails to address the central issue in deer overabundance — population management. This action involves capturing deer alive and relocating them to more rural areas. It requires significant financial and logistical resource costing \$261-567 per deer. Suitable relocation sites are unavailable or already populated with sufficient deer numbers. This method essentially relocates a problem or creates a problem where none previously existed. Additionally, the success rate of relocation is very slim. Susceptibility of deer to traumatic injury and death should be considered. In fact, experiments with live capture and relocation have led to high initial mortality (up to 85%) in relocated deer. **It is currently illegal to trap and relocate deer in Georgia** and this method is not supported by professional wildlife organizations such as The Wildlife Society.

No fertility control agents are federally approved for management of wildlife populations in the United States at this time. However, a gonadatropin-releasing hormone immunocontraceptive vaccine called GonaCon™ is under consideration for approval by the United States Environmental Protection Agency as a registered pesticide and approval is anticipated for Restricted Use. Contraception methods such as pregnancy prevention and termination are not effective for reducing free-ranging deer populations because there is no immediate reduction in deer numbers. Contraception methods are labor intensive, alter deer physiology, may result in unintended reproductive or developmental effects, create unknown public health concerns with regard to human consumption of venison, and are expensive. Research reveals an estimated cost of \$1,000 per deer to adequately treat a deer herd with immunocontraceptives.

Targeted population reduction by trained wildlife professionals, capture and kill, and predator reintroduction are non-hunting lethal actions. Targeted population reduction by trained wildlife professionals is a systematic lethal reduction of deer numbers by trained wildlife professionals. This is the only lethal alternative to hunting recommended by the Committee.

All methods for capture and kill are cost prohibitive and labor intensive. Many of the issues related to trapping and relocation apply.

Predator reintroduction involves restoring native predators such as bobcats, black bears, eastern gray wolves, and eastern mountain lions. The reintroduction of predators in Georgia's urban areas is not a viable option. The lack of a suitable habitat for the predators, mobility of the predators, close proximity to humans, and potential for predators to kill non-target species make this method unsuitable.

After thoughtful consideration and discussion, the Committee decided that the following non-hunting options should be available when hunting is precluded as a viable option: habitat modification, exclusion, repellents, and targeted population reduction by trained wildlife professionals. However, the Committee emphasized that regulated hunting should be the foremost lethal control method. In consideration of non-hunting tools, the Committee provided the following recommended action items for DNR's consideration.

- Targeted population reduction by trained wildlife professionals will only be used as a viable alternative where hunting is not feasible.
- Maintain current system for lethal removal of deer in developed areas (i.e., airport authority employees may be permitted for lethal removal from airports, WRD and USDA-Wildlife Services professional may lethally remove deer from developed areas when it is consistent with the sound principles of wildlife management).
- Collaborate with conservation partners to develop a comprehensive guide for habitat modification that includes a deer-resistant plant list.
- Continue to coordinate with other natural resource agencies to ensure that accurate and consistent information on exclusion and repellents is being disseminated.
- Develop legislation authorizing DNR to regulate the administration of any chemical substance (e.g., contraceptives, fertility control, etc.) to wildlife and recommend General Assembly pass such legislation due to public safety/health concerns.
- Trap and relocate, contraception, capture and kill, and predator reintroduction are neither feasible or suitable for Georgia and should not be tools employed to address urban deer management.
- Educate public as to ineffectiveness and other potential issues with trap and relocate, contraception, capture and kill, and predator reintroduction methods.

APPENDIX I

URBAN DEER ADVISORY COMMITTEE MEMBERSHIP

David Colmans
Georgia Insurance Information Service

The Honorable Sean Jerguson
State Representative, District 22

Norm Cressman
Georgia Department of Transportation

Doug Lowry
Athens-Clarke County Commission

Reggie Dickey
Georgia Hunting & Fishing Federation

Mike Mengak
Warnell School of Forestry & Natural
Resources, University of Georgia

Glenn Dowling
Georgia Wildlife Federation

Brian Murphy
Quality Deer Management Association

Linda Fulmer
Georgia Animal Control Association

Sid Roberts
Georgia Sheriffs Association

Jimmy Gisi
Georgia Recreation and Parks Association

Alton Powell
Chattahoochee Sportsmen

Chuck Gregory
Georgia State Parks & Historic Sites

Mike Stewart
Association of County Commissioners of
Georgia

Doug Hall
USDA – Wildlife Services

Ron Storie
Suburban Whitetail Mgmt of N. Georgia, Inc.

The Honorable Steve Henson
State Senator, District 41

Marsh Webb
The Garden Club of Georgia

APPENDIX II

Counties defined as Urban Areas based on a threshold of 500 people per square mile of land area 2006, 2010, and 2015.

<u>2006</u>	<u>2010*</u>	<u>2015*</u>
Bibb	Bibb	Bibb
Chatham	Chatham	Chatham
Clarke	Cherokee	Cherokee
Clayton	Clarke	Clarke
Cobb	Clayton	Clayton
DeKalb	Cobb	Cobb
Douglas	DeKalb	DeKalb
Fayette	Douglas	Douglas
Forsyth	Fayette	Fayette
Fulton	Forsyth	Forsyth
Gwinnett	Fulton	Fulton
Henry	Gwinnett	Gwinnett
Muscogee	Hall	Hall
Richmond	Henry	Henry
Rockdale	Muscogee	Muscogee
	Richmond	Newton
	Rockdale	Paulding
		Richmond
		Rockdale

* Population estimates used were taken from Office of Planning and Budget population projections.

APPENDIX III

Managed Deer Hunts at Fort Yargo State Park, Winder Georgia

Ft. Yargo State Park is a 1,814-acre (1,554 acres of forest and a 260-acre lake) park located within the city limits of Winder, Georgia. The park is surrounded by residential and commercial developments and bordered by State Routes (SR) 81 and 11 (west and east boundary, respectively). The unmanaged deer population was degrading the park ecosystem and contributing to dangerous deer-vehicle collisions on SR 81 and 11.

A habitat evaluation conducted prior to initiating deer management revealed chronic over browsing of vegetation from ground level to 4 feet above ground level throughout the park. Additionally, a visible area spotlight survey was conducted and the deer density was estimated at 81-89 deer per square mile. Deer densities were greater than three times the ecologically acceptable level for habitat in this part of the state.

In its effort to responsibly manage the deer population on Fort Yargo State Park, DNR proposed a regulation establishing two quota firearms hunts to the Board of Natural Resources. DNR worked cooperatively with the City of Winder in developing the proposal, which allows the use of firearms in the Winder city limits. Subsequently, the Winder City Council supported, by unanimous vote, the use of firearms for deer hunting within the boundaries of Fort Yargo State Park. The Board of Natural Resources adopted the proposed regulations in May of 2006. Hunting regulations consisted of two quota hunts - November and January – with a quota limit of 65 hunters. Additionally, each hunter is required to pay a \$30.00 park hunting fee, a \$3.00 ParkPass fee, and attend an orientation meeting the night prior to the hunt. All harvested deer must be checked-out at the designated deer checking station. Biological data are recorded for each harvested deer.

The first hunt occurred in November 2006. Since then, annual deer harvest has averaged 100 deer, annual hunter participation has averaged 48 hunters (a density of 32 acres per hunter), and there have been no protests or public objections to the hunts. The hunts have been revenue neutral.

Park employees believe that there are fewer deer on the property, areas of previous vegetation damage are recovering and that overall ecological integrity of the park is improving. Staff feels management of the deer herd through regulated hunting has improved overall deer health and greatly reduced overbrowsing. Additionally, a 57% reduction in deer-vehicle collisions on SR 81 and 11 occurred in the year following the 2006 hunt.

Park staff considers the managed hunts as a long-term management tool to manage the deer population, address the issues associated with deer in an urban venue, and to facilitate an overall management goal of conserving the Park's natural beauty and ecological integrity.

APPENDIX IV

Managed Deer Hunts at a Clayton County Water Authority Facility

The E.L. Huie Facility is an approximate 4,000-acre wastewater land application facility in southern Clayton County near the city of Lovejoy. The Clayton County Water Authority (CCWA) owns and operates the facility. The facility is mostly forested with loblolly pine being the predominant overstory species.

The purpose of the facility is to allow nutrient uptake (primarily, nitrogen and phosphorous) in treated wastewater through direct land application by an extensive irrigation system. The DNR, Environmental Protection Division annually permits the facility.

In 1996, the CCWA Board of Directors (hereafter, Board) authorized deer management at the Huie Facility through hunting in an effort to reduce habitat damage by an overabundant deer herd. By state regulation, only archery equipment is allowed for deer hunting in Clayton County. Hunts were planned to be open to the public on a lottery system basis. Most available slots were reserved for Clayton County and Henry County residents, though nonresident CCWA Board member guests and some nonresident "standby" hunters are allowed.

Hunt applications are submitted in the summer preceding deer hunting season. Applications are available through the CCWA website or at the Huie Facility. A random drawing is held, and selected hunters are assigned designated hunt areas. Hunters are notified of selection results by mail.

Each selected hunter is required to pay a hunt fee before hunting, or risk losing his spot. In 2007 this fee was \$20 or \$30 per hunt weekend depending on the hunter's county of residence. Guest hunt fees and CCWA employee hunt fees are based on a different structure that confers season long hunting access.

Hunts are scheduled for Friday afternoon and all day Saturday and Sunday on select weekends during the fall deer season. Hunters must check-in and check-out upon entering and leaving the Huie facility. All harvested deer must be checked-out at a designated deer checking station. Biological data are recorded for each harvested deer.

Since 1996, the annual deer harvest from the Huie facility has ranged from 100-200 deer. CCWA personnel who administer the hunts have found that the most practical, efficiently managed number of hunters for each hunt is 134-150. Most designated hunt areas range in size from 4-7 acres, but other areas for season guests and CCWA employees contain more acreage.

CCWA personnel feel that the deer herd has been reduced since the hunts began in 1996 and is now at a biologically acceptable level. Prior to initiation of deer management by CCWA, biologist estimates from survey techniques indicated a deer density of about 100 deer per square mile. CCWA personnel acknowledge that the deer herd has been reduced and much of the natural habitat at the Huie Facility is recovering, benefiting multiple wildlife species, due to a reduction in deer over-browsing. However, to maintain the deer population at the current level, the hunts are planned to continue in future years. CCWA personnel have received many positive comments from local residents who appreciate the additional public hunting opportunity that is allowed through regulated hunting at CCWA.

APPENDIX V

Deer Management at Covington/Newton County Land Application Facility

Since 2001, the Covington/Newton County Water and Sewer Authority has used managed hunts to control the deer population at the City of Covington/Newton County Water and Sewerage Authority Land Application Facility (LAF). The LAF is an approximate 1,200-acre area located about 2 miles south of Covington. The mostly forested area is used to spray treated wastewater for excessive nutrient uptake/removal in the Upper Ocmulgee River Basin as permitted by the Environmental Protection Division.

Prior to implementing deer hunts in 2001, LAF employees recognized indications of a burgeoning deer population on the area. Though LAF has been in operation since the late 1980's, Newton County has experienced a tremendous influx of people and associated housing/commercial development in the last 10-years, consistently ranking as one of the fastest growing counties in Georgia and the nation. Along with this growth has come the loss of traditional hunting access on properties surrounding LAF.

LAF employees with assistance from WRD documented several cases of epizootic hemorrhagic disease in deer in the summer of 2000. Evidence of ecological degradation through excessive deer browsing on vegetation within LAF was apparent. Additionally, complaints from the public about DVCs along an adjacent county road (Flat Shoals Rd.) and state highway (Hwy 36) were becoming more common.

Covington city officials met with a WRD wildlife biologist in spring of 2001 to discuss the deer situation and develop long-term solutions. After several options were discussed, all agreed upon using managed deer hunts as the solution. Before hunt plans were finalized, samples from 5 deer were collected by USDA-WS and were shipped for toxicology testing at the University of Pennsylvania. Tests came back negative for excessive heavy metals in muscle and organ tissues.

City and county officials, in consultation with LAF employees and the WRD formulated a series of archery deer hunts to occur during the regular deer season. A hunt application process was put in place for Newton County residents in mid-summer of 2001. Applicants were randomly selected for several designated units on the LAF property. Successful applicants were required to pay a \$25 administrative fee.

Hunts were held every other week on Friday afternoon and all day Saturday throughout most of the deer season (hunt schedule was later amended in subsequent years to provide ½ day Thursday, and all day Friday and Saturday hunts). Mandatory check-in/check-out is required upon entering and leaving the LAF property. Hunters are required to check out all harvested deer and biological data is recorded. Incentives are provided to hunters to harvest female deer in order to best manage the LAF deer herd. These incentives are: hunters who harvest a doe are entered into a raffle for a deer stand and are automatically guaranteed an opportunity to hunt the following season.

Hunts have continued every fall since 2001 with an average annual harvest of 30 to 40 deer. LAF employees believe that there are fewer deer on the property, less vegetation damage now than prior to implementation of hunts, and that the ecological integrity of the habitat is improving. Additionally, LAF employees feel that poaching and other illegal activities have decreased. The hunts have been revenue neutral with any costs of employee overtime pay being

offset by revenue acquired through hunter registration fees. Hunter participation has been high, especially through the use of a hunter “stand-by” list.

Overall, LAF personnel believe that the hunts have been a positive experience by helping manage the deer herd on the facility while providing recreational opportunities to Newton County residents. To the knowledge of LAF employees, no protests or other public objection to the managed hunts has occurred. The managed deer hunts are planned to continue for the foreseeable future.



SONNY PERDUE
GOVERNOR

CHRIS CLARK
COMMISSIONER

February 16, 2010

Dear Urban Deer Advisory Committee Member:

Thank you for your public service in developing Georgia's Urban Deer Management Plan (hereinafter referred to as 'Plan'). Your contribution to this public planning effort and continued support for the Plan is greatly appreciated. The Plan contemplates many issues unique to managing deer in urban areas and provides recommendations specific to these issues for the Department of Natural Resources (DNR) to consider and serves as a supplement to Georgia's overarching Deer Management Plan adopted in May 2005.

As you may be aware, some controversy has been generated relating to two recommendations in the Plan. The purpose of this letter is to clarify certain aspects of the Plan: 1) targeted population reduction by trained wildlife professionals, and 2) local governments prohibiting the feeding of wildlife. This letter will be incorporated into the plan to clarify DNR's approach with respect to these recommendations should action be taken.

Regarding the recommendation, "Targeted population reduction by trained wildlife professionals will only be used as a viable alternative where hunting is not feasible," the urban deer plan committee contemplated the existence of high-density urban neighborhoods or gated communities with communal greenspace where deer cause considerable damage to landscaping and the landowner(s) or land management entity may not approve hunting as a removal method, but would agree to targeted removal by trained professionals with the United States Department of Agriculture, Wildlife Services (USDA-WS). In these instances, the landowner determines the feasibility, DNR evaluates the need and, if appropriate, provides USDA-WS contact information to the landowner. This is the approach that DNR has followed for many years. DNR considers 'trained wildlife professionals' to be current employees of USDA-WS or the Wildlife Resources Division with demonstrated proficiency in handling firearms in the type situations presented during herd reduction projects. As such, it is not DNR's intent to allow commercial pest control or private nuisance wildlife control businesses to perform these activities.

Regarding the recommendation, "In partnership with ACCG and GMA, assist local governments with the development of ordinances prohibiting the feeding of wildlife (excluding birdfeeders) and encourage their adoption," it is important to recognize that the Plan provides recommended strategies for addressing the unique management challenges and issues associated with deer in urban/suburban settings. Thus, 'wildlife feeding' is regarded in the context of deer. The feeding of deer can enhance

reproductive rates, encourage deer to concentrate in specific areas, make the deer more tolerant of people and contribute to a variety other issues. To this end, the Committee contemplated the need for local governments to balance their ordinances to manage human behaviors that contribute to human-deer conflicts in urban/suburban settings. For example, when warranted, in urban/suburban areas local ordinances regulating the feeding of deer may be an appropriate tool to facilitate reducing the problems associated with deer in urban/suburban areas.

With concern to "...encourage their adoption", DNR's role is to serve as a source of technical information to assist local elected officials in making informed decisions. As such, DNR does not have an active role in approving such ordinances; those rights are reserved for elected members of local governing bodies. DNR would not support ordinances that we believe would adversely impact the ability of hunters to legally and ethically hunt.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Clark". The signature is written in a cursive style with a large, looping initial "C".

Chris Clark
Commissioner

A handwritten signature in black ink, appearing to read "Dan Forster". The signature is written in a cursive style with a large, looping initial "D".

Dan Forster
Director, Wildlife Resources Division

CC/DF:lc

cc: Urban Deer Plan