REPORT OF THE DEPARTMENT OF GAME AND INLAND FISHERIES

A Study Report on the Effects of Removing the Prohibition Against Hunting Over Bait in Virginia

Senator Ryan T. McDougle, Chair, Senate Rules Committee
Senator Frank M. Ruff, Jr., Patron, SJR 79 (2014)

COMMONWEALTH OF VIRGINIA
RICHMOND
November 1, 2014

COMMONWEALTH of VIRGINIA
Department of Game and Inland Fisheries

Molly J. Ward
Secretary of Natural Resources

Robert W. Duncan
Executive Director

TO: The Honorable Ryan T. McDougle and The Honorable Frank M. Ruff, Jr.

Following the 2014 General Assembly, the subject matter of Senate Joint Resolution 79 was referred to the Department for study at the direction of the Senate Rules Committee, with direction that a report be returned to you. SJR 79 directed the Department of Game and Inland Fisheries to "study the effects of a removal of the prohibition against hunting over bait." In addition, SJR 79 requested that the Department, "study those states that allow baiting, focusing on an investigation of the policies of North Carolina and the experience of the North Carolina Wildlife Resources Commission."

We have the pleasure of submitting herewith the report on the Effects of Removing the Prohibition Against Hunting Over Bait in Virginia.

Respectfully submitted,

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Virginia Department of Game and Inland Fisheries

cc: Susan Clarke Scharr, Clerk of the Senate

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REPORT OF

SENATE JOINT RESOLUTION 79 (2014)

A Study Report on the Effects of Removing the Prohibition Against Hunting Over Bait in Virginia

BUREAU OF WILDLIFE RESOURCES
VIRGINIA DEPARTMENT OF GAME AND INLAND FISHERIES

EXECUTIVE SUMMARY

Senate Joint Resolution 79 (SJR 79), referred for study by the Senate Rules Committee following the 2014 General Assembly, directed the Department of Game and Inland Fisheries to "study the effects of a removal of the prohibition against hunting over bait." SJR 79 also requested that the Department "study those states that allow baiting, focusing on an investigation of the policies of North Carolina and the experience of the North Carolina Wildlife Resources Commission." Lastly, the resolution asserts that hunting over bait creates positive economic value in the Commonwealth; enhances hunting opportunities for Virginia hunters; is an integral part of a sound wildlife management strategy; and is a traditional hunting practice and has been permitted in Virginia in the past. These statements are individually addressed in detail within this report.

As the agency with the responsibility for managing Virginia's wildlife resources, the Department does have biological and sociological concerns with hunting over bait. These include negative impacts on target and non-target wildlife populations and habitat, changes in animal behavior, sportsmanship and fair chase concerns, and disease transmission risks.

Population Impacts

Artificial food (feed and/or bait) can substantially elevate animal condition, leading to increased survival and/or reproduction. This can dramatically increase the size and density of targeted species populations (e.g., bears, deer, etc.) above the natural carrying capacity of the habitat. Artificial food can also attract and increase populations of non-target species (e.g., raccoons, skunks, opossums, foxes, etc.) and/or nuisance species (e.g., feral hogs, coyotes, etc.).

Habitat Impacts

Overabundant wildlife populations, especially deer, can cause significant habitat damage by over-browsing native vegetation. This habitat damage can negatively affect other wildlife species including songbirds and small mammals, have negative effects on forest structure and diversity, and facilitate the success of invasive plants in forests.

Animal Behavior Impacts

Baiting alters natural animal behavior making them less "wild." Bait also alters natural animal movement patterns and distribution on the landscape; increases intra- and interspecific competition; and increases conflicts between wildlife and people, habituation, and human safety issues. Baiting significantly increases direct and indirect contact, competition, and aggression between target and non-target species at bait sites.

Sportsmanship/Fair Chase Concerns

A majority of hunters and nonhunters nationwide oppose hunting over bait because they think it is unfair and violates the principle of "fair chase" hunting. Baiting pits hunters against one another from a philosophical standpoint and can create conflicts between hunters and between landowners. At least 36 state laws in Virginia pertaining to hunting and trapping incorporate important sportsmanship/ethical standards.

Disease

Baiting consistently attracts and repeatedly congregates wildlife at the same location and thus has been implicated as a significant factor affecting inter- and intraspecific disease transmission. Baiting increases the risk of disease introduction, amplification, and spillover into other wildlife species, domestic livestock, and humans. Brucellosis, bovine tuberculosis, and chronic wasting disease are diseases that have been diagnosed in North American wildlife populations and have cost affected states hundreds of millions of dollars in direct costs over the past decade. Disease ramifications of baiting are long-lasting and potentially devastating, thus preventing the creation of environments that foster and amplify disease transmission is imperative.

Conclusion and Recommendation

Hunting over bait is controversial and divisive among hunters, it is opposed by the general public, and it has significant negative biological and social implications for Virginia's wildlife resources, wildlife habitats, hunting heritage, and citizens. It is therefore the recommendation of the department that the 78 year old ban on hunting over bait in the Commonwealth be maintained.

PREFACE

We wish to recognize the Department staff of the SJR79 study committee who contributed their time and expertise to this effort. The members of the committee were:

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We also wish to thank David Sawyer, Evin Stanford, and Colleen Olfenbuttel with the North Carolina Wildlife Resources Commission for providing the North Carolina data used in this report.

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INTRODUCTION

Baiting is the act of intentionally placing any food or food product, including mineral supplements or salt, to manipulate the behavior of wild species for the purpose of attracting wildlife to a specific location to enhance the opportunity to harvest (definition adapted from TWS 2006). Simply put, the purpose of baiting is to attract the animal or bird to the shooter. Food plots planted within accepted agricultural standards are not considered bait or baiting, nor are decoys, scents, or chemical attractants.

Although any wild animal or bird that is hunted could in theory be hunted over bait, most North American hunters generally associate hunting over bait with two wildlife species: black bears and white-tailed deer. Note that migratory game birds and waterfowl cannot be hunted over bait by Federal law dating back to 1935 (see Federal Code, Title 50, Part 20.21(i)). Therefore, even if state restrictions on baiting were removed for these species, federal law would still prohibit the practice.

Nationally, hunting of black bear is prohibited in 22 states or parts thereof and some form of hunting bear over bait is allowed in 11 states or parts thereof (Figure 1, NCWRC 2010). Black bear hunting over bait is prohibited in Virginia.

Figure 1. Black bear hunting over bait map.

Hunting white-tailed deer over bait is prohibited in 25 states or parts thereof and some form of hunting deer over bait is allowed in 22 states or parts thereof (Figure 2). In the southeast, deer hunting over bait is prohibited in Alabama, Georgia's northern deer zone, Mississippi, Virginia, and Tennessee. In the last decade, several states have prohibited or restricted the hunting of deer over bait including Connecticut, Illinois, Michigan, New Hampshire, Wisconsin, and Wyoming (ADCNR 2011). Deer hunting over bait is prohibited in Virginia.

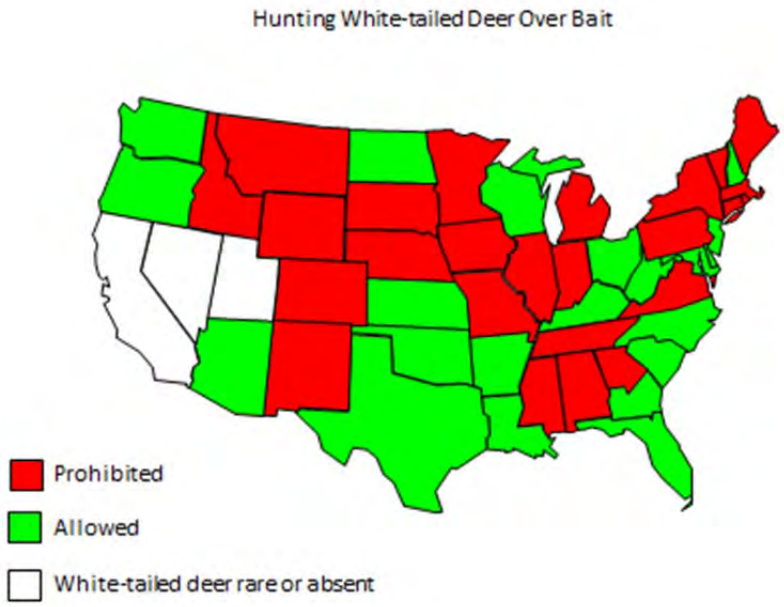

Figure 2. White-tailed deer hunting over bait map.

Baiting has a different purpose than supplemental feeding. Supplemental feeding is the intentional provision of any food or food product purposefully placed seasonally or year round for the purpose of enhancing individual and population characteristics such as body mass, growth rates, antler size, survival, and reproduction (definition adapted from TWS 2006). Although the objectives of supplemental feeding and baiting are different, both activities ultimately lead to large amounts of artificial food being introduced into the natural environment and wildlife habitat(s) (i.e., both result in corn on the ground). In almost all cases, the negative biological consequences of baiting and feeding are essentially identical. The potential negative biological consequences of baiting (and feeding) include negative effects on target and non-target species population dynamics, behavior, and amplified disease transmission via increased direct and indirect contact with potentially diseased individuals.

The ultimate example of legal baiting practices that impact biological processes can be found in Texas, where an estimated 300 million pounds of shelled corn are provided to deer annually, primarily through feeders as a form of bait during the hunting season (TAMU extension). In another example, a South Carolina Department of Natural Resources report noted that survey results from one of their private land deer management programs documented feed/bait provided in the form of shell corn averaged a rate of 10,600 pounds per square mile annually or 342 pounds per square mile per week, or 43 pounds per square mile per day. Survey respondents reported over 30,000 bait sites or one bait site per 116 acres. Extrapolating the survey results to the entire Coastal Plain region resulted in an estimated 80,000 bait sites and 2.33 million bushels of corn (SC 2013).

IMPACTS OF BAITING

As the agency with responsibility for managing Virginia's wildlife resources, the Department has biological and social reasons for recommending against the legalization of hunting over bait. Considerations include impacts on populations, habitat(s), law enforcement concerns, animal behavior, sportsmanship and fair chase, and disease.

POPULATION IMPACTS

Artificial feeding through baiting typically improves the target animal's physical condition. From a physiological perspective, animals respond to improved nutrition by increases in body condition, most notably increasing fat deposition (Williamson 2000). In deer, this artificially improved condition enhances survival and/or reproduction, which can dramatically increase deer populations (Verme 1965, Ozoga and Verme 1982, Kammermeyer and Thackson 1995, Murphy and Coates 1996, McCullough 1997, Lewis and Rongstad 1998, Osborne and Jenks 1998, Ruth et al. 1990, Schmitz 1990, Simmons and Ruth 1990, Simmons et al. 1991). Not surprisingly, Rogers et al. (1974) reported that supplemental feeding also had a positive effect on condition and reproduction in black bears.

While on the surface these might be viewed as positive impacts, their true consequences are not desirable. Under natural conditions, population numbers are primarily determined by habitat quantity and quality. Artificial food alters the natural balance between wildlife populations and their habitat, eventually leading to exceedance of the habitat's carrying capacity.

Baiting can also have a significant effect on the distribution and population levels of non-target and/or nuisance species. Bait provided for bear or deer will attract livestock, turkey, squirrels, rabbits, raccoons, coyotes, feral hogs, opossums, skunks, foxes, and numerous species of small mammals and songbirds (Rollins 1996). This can result in significantly increased direct and indirect contact, competition, and aggression between target and non-target wildlife species at bait sites. Finally, baiting also attracts predators (Miller and Leopold 1992). Cooper and Ginnett (2000) reported that baiting of deer may artificially increase or concentrate local populations of turkey and quail nest predators including raccoons, opossums, foxes, etc. and that these concentrated nest predators could affect local turkey and quail nest success. Clark (1996) suggested that increased nutrition through feeding by predators on artificial food sources could lead to increased productivity and survival and ultimately increased predator populations on the landscape. Animals attracted to feeding or bait sites may be more susceptible to predation, particularly young animals.

HABITAT IMPACTS

Baiting commonly leads to overabundant populations that disrupt the natural balance between wildlife populations and their habitats. As mentioned in the discussion of population impacts, these overabundant populations exceed the natural carrying capacity of the habitat and can cause significant habitat damage. In the case of deer, Doman and Rasmussen (1944) reported "feeding serves to concentrate deer in small areas year after year where animals do serious and possibly irreparable damage to native forage species, which in turn further reduces the carrying capacity of the range and makes deer increasingly dependent upon supplements." Since that time, numerous authors have noted that artificial supplementation caused deer population overabundance which in turn led to significant habitat damage caused by over-browsing of native vegetation (Schmitz 1990, Murden and Risenhoover 1996, Doenier et al 1997, Waller and Alverson 1997, Williamson 2000, Cooper et al. 2002). Habitat damage related

to overabundant deer populations not only affects deer and deer habitat, but it can also negatively affect other species of wildlife, including songbirds and/or small mammals (Casey and Hein 1983, DeCalesta 1994, McShea and Rappole 1997). Overabundant deer herds can also have very significant negative effects on the forest structure and diversity (Marquis 1981, Tilghman 1989) and facilitate the success of invasive plants in forest ecosystems (Knight et al. 2009). Lastly, as noted by Dunkley and Cattet (2003), if seeds or other plant materials are provided in food or bait, there is an increased likelihood of invasion by detrimental exotic plant species.

In addition to increased habitat damage, feeding or baiting deer frequently alters people's perceptions about what constitutes healthy, balanced wildlife habitats. For those who feed deer, deer "habitat" comes in 50-pound bags. These distorted perceptions can undermine efforts to preserve, protect, or enhance natural habitats for all wildlife. As noted by Williamson (2000) there is no substitute for healthy natural wildlife habitats.

LAW ENFORCEMENT CONCERNS

As noted in the population section of this report, bait provided for deer (or bears) will attract numerous non-target species including turkeys, squirrels, rabbits, raccoons, coyotes, feral hogs, opossums, skunks, foxes, waterfowl, etc. (Rollins 1996). Legal hunting of deer over bait would very likely predispose these other species attracted to the bait site(s), like bears and turkeys, to increased illegal harvest.

Use of bait could also facilitate illegal activities such as shooting at night over bait. A Michigan DNR deer baiting issue review paper indicated that shooting deer at night over bait was perceived by Michigan DNR law enforcement to be a widespread problem and was probably more common than spotlighting deer from vehicles. The report also noted that it was difficult to catch these violators, because most "lighted" bait piles occur primarily on private land. Lastly, the Michigan report noted that a more widespread problem with baiting was the illegal off-road use of vehicles to transport and distribute bait on public lands (Whitcomb 1999a).

ANIMAL BEHAVIOR IMPACTS

The most detrimental effects of baiting to wildlife are due to the loss of animal "wildness" and the ease at which conditional training occurs when animals come to localized bait sites. With impacts to target and non-target species alike, the behavioral effects of artificial baiting situations throughout North America can be categorized by:

1. Disruption of animal movement patterns and spatial distribution.
2. Increased intra- and interspecific competition.
3. Increased conflicts between wildlife and people, habituation, and human safety issues.

Bait negatively affects the behavior of both deer and bear, two of Virginia's most highly valued species (Dunkley and Cattet 2003, Inslerman 2006). Deer and bear have a strong tendency to adapt to areas of human presence. These species habituate to using human provided food sources, will readily use feeders and bait piles, and will wait near and visit feed/bait sites when they hear the familiar sound of a feeder deploying, a vehicle delivering the food, or at the time of day when food is delivered (Ozoga and Verme 1982, Henke 1997, Kozicky 1997, Linhart et al. 1997, Kilpatrick and Spohr 2000, Smith 2001, Manning and Baltzer 2011). This significantly alters deer and bear behavior and movement patterns, can create a dependency on the non-naturally occurring food, and increases habituation to people (Hamilton 1978, Garshelis and Pelton 1980, Pelton 1982, Peek 1984, Thompson and Henderson 1998). This clearly is not in the best interest of wildlife and contradicts keystone values of wildlife management in Virginia.

Disruption of animal movement patterns and spatial distribution

Home ranges of wildlife are, in the simplest terms, determined by the capability of an area to provide an animal's needs, incorporating factors such as age, sex, season, and population density. Animals can move large distances and alter travel patterns to take advantage of pockets of available food, including feed/bait sites, as seen when natural food shortages occur (Garshelis and Pelton 1981, Rogers 1987, Pelton 1989, Carlock 1993, Feresterer et al. 2001). In the presence of plentiful natural foods or bait/non-natural food, animal home ranges collapse, movements are less extensive, travel patterns altered, and animals congregate in higher densities (Pelton 1982, Vanderhoof and Jacobson 1990, Garner 2001, Beckman and Berger 2003, Dobey et al. 2005). These changes in behavior are seen in animals of all sexes and ages. Daily or seasonal animal movements can be disrupted and spatial distribution of animals can be altered so that population density is significantly increased in the vicinity of a food source (Rongstad and McCabe 1984, Boutin, 1990, Paquet 1991, Easton 1993, DeNicola et al. 1997, Linhart et al. 1997, Fersterer et al., 2001, Kilpatrick and Stober 2002, Tarr and Perkins 2002, Brown and Cooper 2006). Deer and bears are easily conditioned to congregate and regularly visit supplemental foods or bait placed in their environment and will stay near areas with high food availability (Vanderhoof and Jacobson 1990, Henke 1997, Garner 2001, Brongo et. al. 2005).

Providing food for one animal can affect movements, home ranges and behaviors of others, and species may change activity times throughout the course of the day (Pelton 1982, Kane 1989, Higgins 1997, Burhans et al. 2000, Bridges et. al 2004, Dobey et al. 2005). In some cases, feeding may change dispersal patterns of animals, causing starvation in unnaturally inflated populations, creating feed dependent populations, or resulting in higher hunting mortality (Ozoga and Verme 1982, Pekins and Tarr 1997, Lewis and Rongstad 1998, Williamson 2000, Gray et al 2004, Robbins et al. 2004). Providing food can also attract high densities of animals into close proximity of residential areas, agricultural areas or near major highways, further increasing the risk of property damage, vehicle collisions, and human-wildlife conflicts (Williamson 2000, Beckman and Berger 2003, Dunkley and Cattet 2003, Inslerman 2006). Damage by deer and bears in Virginia to personal property, crops, ornamentals, bee hives/yards, fruit trees and livestock is already costly and a source of great public frustration. Adding an additional component of more human-attributed food sources on the landscape in addition to the current ongoing expansion of human populations into wildlife habitats could likely result in more negative interactions.

Increased intra-and interspecific competition

Providing food for (or baiting) deer and bears and the subsequent behavioral shifts this activity causes has been demonstrated to affect numerous biological processes, often resulting in unintended consequences. Concentrated activities at food and bait sites can result in undesirable effects, including concentration of predators and attracting and changing home ranges of non-target species. (McShea and Rappole 1997, Cooper and Ginnett 2000, Gray et al. 2004, Guthrey et al. 2004, Dobey et al. 2005). At feed or bait sites, social interactions of wildlife such as deer and bears vary by quantity and quality of food offered, the spatial distribution of foods, and the density and social status of the animals present. When limited amounts of food are provided in a patchy distribution, as in baiting scenarios, the unnatural crowding results in negative interactions, injuries or mortality from aggression (within same species or with other species including humans). This increased competition can affect individual survival as well as population level survival and reproduction (Ozoga 1972, LeCount 1982, Ozoga and Verme 1982, Barrette and Vandal 1986, Beckman and Boutin 1990, Schmitz 1990, Schwartz and Franzmann

1991, Easton 1993, Grenier et. al. 1999, Williamson 2000, Tarr and Perkins 2002, Berger 2003, Dunkley and Cattet 2003, Inslerman 2006).

Increased conflicts between wildlife and people and human safety issues

A cornerstone of wildlife management in Virginia is to keep wildlife wild. Food provisioning activities coupled with repetitive neutral or positive human reinforcement will alter the normal human avoidance behavior of many wildlife species, including deer and bear. This can further lead to habituation and loss of "wildness" where animals can become aggressive towards people and may seek out other human food sources and increase the potential for conflicts with humans (Eager and Pelton 1979, Pelton 1982, Williamson 2000, Herrero 2002, 2009, Beckman and Berger 2003, Beckmann et al. 2004, Dobey et al. 2005).

Human safety issues resulting from habituated or food-conditioned animals manifest in many forms, especially with bears. Importantly, baiting and/or feeding wildlife acclimates animals to people, which creates the perception of "nuisance animals". Societal tolerance, positive values, and ultimately cultural carrying capacity for wildlife are diminished once a species is thought of as a nuisance. While in some cases animals habituated to feeding sites may ignore the presence of people (which is problematic in itself), there are numerous records of deliberately or inadvertently fed, food-conditioned bears behaving in a threatening manner or displaying aggressiveness. These can be associated with injuries to or attacks on people (LeCount 1982, McCullough 1982, Schwartz and Franzmann 1991, Weaver 1999, Williamson 2000, Yellowstone Park Foundation 2008, Herrero 2009). Food-conditioned bears can be more dangerous and are more likely to be killed in defense of life or property (Herrero 2002). Bears are notorious for taking advantage of careless human storage of food, of unsecured trash, and bait or food put out for other species. Feeding or baiting bears, even remotely, can increase their chance of becoming food-conditioned and habituated to people, due to the fact that human scent will remain at the bait sites even after the person has left (Gray et al. 2004). Once bears become habituated or food conditioned there is no way to make them unlearn this behavior. They will not revert to more wild behaviors (Poulin et al. 2003).

It is a common convention that eliminating feeding activities would effectively reduce habituation and subsequent conflict issues (DeNicola et al. 2000, Pelton 1982). For example, all the black bears euthanized by the Department for public safety reasons over the past decade have been human habituated and /or food conditioned animals. For these reasons, the Department has had a strong statewide, year round bear anti-feeding regulation in place since 2003 (and a public land ban since 1999). Purposely placed non-naturally occurring food (i.e. bait) cannot be distributed on the landscape for any other species in Virginia (deer, turkey, songbirds, coyotes, etc.) without attracting and subsequently impacting bears.

Keeping Virginia's wildlife "wild" is of paramount importance. Baiting changes deer and bear behavior as well as other wildlife species, causing decreased avoidance or "wildness"; artificially concentrates wildlife on the landscape; increases competitive and aggressive behavior within a species; attracts and concentrates non-target species on the landscape; increases the opportunity for aggressive behavior(s) between non-target species and target species; and is counterproductive to responsible wildlife management.

SPORTSMANSHIP AND FAIR CHASE

Ethics, which in the case of hunting may be referred to as sportsmanship, are the defining difference between feeding a wild animal and baiting it in order to kill it. Ethics are the "rules of behavior based on ideas about what is morally good and bad" (Merriam-Webster 2014). "Fundamental to ethical hunting is the idea of fair chase" (Posewitz 1994:57). A majority of hunters and nonhunters nationwide oppose hunting over bait because they think the practice is unfair (RM 2008). This increases polarization among sportsmen who would otherwise be natural allies and erodes the image of hunting (SC 2013). Ethical hunting practices are prescribed by both tradition and law, neither of which support hunting over bait in Virginia.

Purview of Law and Regulation

Some may argue that wildlife management policy should be based solely upon science, and that ethical concerns should not be taken into account. However, societal ethics are frequently enshrined in laws, including those regulating public use of wildlife and other natural resources (Beck et al. 1994). The concepts of sportsmanship and fair chase have been included in wildlife laws and regulations historically. In Virginia, the Board of Game and Inland Fisheries and the General Assembly have for nearly 100 years intentionally incorporated important ethical standards in game laws. At least 36 state laws pertaining to terrestrial game species in Virginia, including 13 statutes and 23 regulations, contain provisions that are based largely on ethics or sportsmanship considerations (Appendix B). In addition to hunting over bait (§ 29.1-521), some other notable prohibitions include hunting at night (§ 29.1-520), hunting from a vehicle (§ 29.1-521), hunting deer within an enclosure (§ 29.1-525.1.), failure to retrieve game (wanton waste) (4VAC15-40-250), trapping bears (4VAC15-50-100), and crippling an animal to continue the chase (4VAC15-40-284). Since concern for fair chase in many existing game laws is a provision with little biological significance, managers would be hypocritical to discount ethics in future decisions (Beck et al. 1994).

Not a Virginia Tradition

Hunting laws and sportsmanship concepts vary among states and areas within states, and what is an acceptable hunting practice in one area may not be acceptable in another (Posewitz 1994, VDGIF 2007, SC 2013). Thus, the purpose of this report is not to disparage hunting practices allowed in other states that are unacceptable in Virginia.

Senate Joint Resolution 79 states that "baiting is a traditional hunting practice" in Virginia, and notes that baiting "has been permitted in Virginia in the *past*" (italics added). Hunting over bait was prohibited by law in Virginia for turkeys in 1922 followed by all other game species in 1936 (Appendix C), and in 1935 for migratory birds (see Federal Code, Title 50, Part 20.21(i)). Since traditions are ways "of thinking, behaving, or doing something that has been used by the people in a particular group, family, society, etc., for a long time" (Merriam-Webster 2014), hunting over bait can hardly be considered a tradition in Virginia if it has not been legally sanctioned in over three generations.

Jeopardy to the Public Trust

State wildlife agencies regulate hunting over bait as part of their responsibility as trustee of a public resource. A basic tenet of the North American Model of Wildlife Conservation is the Public Trust Doctrine, which establishes the state as the trustee over public resources that cannot

be privately owned, including wildlife (TWS 2006). Baiting conflicts with this Public Trust Doctrine by leading to a perception that the person attracting the animal owns it, and also because baiting jeopardizes public access to wildlife by attracting wild animals onto baited private land from unbaited adjacent private lands and sometimes from adjacent public lands (Williamson 2000, Dunkley and Cattet 2003, Ermer et al. 2005, TWS 2006). Further, if the use of bait reduces the wildness of game animals, it may narrow the distinction between wild and domestic animals and compromise the public trust (Brown and Cooper 2006, TWS 2006). As wild animals become dependent on food provided by humans, the principles of animal husbandry replace those of wildlife management (Dunkley and Cattet 2003).

Violation of Fair Chase

The principle expectation of "fair chase" hunting is that the animal pursued can easily evade the hunter: the hunter "occasionally succeed[s] while animals generally avoid being taken" (Posewitz 1994:57), the hunter "does not [have] an improper advantage over such animals," (Boone and Crockett 2014), and the hunter finds the taking of prey as acceptably uncertain and difficult (Peyton 1998). When in doubt about whether a hunting practice is ethical or not, "*advantage must be given to the animal being hunted*" (Posewitz 1994:61).

Hunting over bait violates commonly-held notions of fair chase (Peyton 1998, RM 2008). Feeding and baiting tend to reduce the "wariness or wildness" of game animals, thus reducing the sporting value and element of fair chase from hunting (Williamson 2000, Ermer et al. 2005). Baiting also tends to encourage an "instant gratification" outlook to hunting while discouraging the development of traditional hunting skills (Williamson 2000, Brown and Cooper 2006, SC 2013). Just as supplemental feeding can be seen as a quick fix for bad habitat, baiting can be seen as a substitute for learning how to scout for game, identify animal sign, or understand animal behavior (Williamson 2000, SC 2013). Because most game animals can become easily habituated to the consistent placement of food, baiting attracts game to the hunter, and "the roles become reversed as the deer hunts the hunter" (SC 2013). Hunting over bait - like hunting within a high fence - can be seen as reducing a "hunter" to simply a "shooter" (Brown and Cooper 2006).

Opposed by the Public

Although legal hunting in general is supported by 83% of Virginians and 78% of Americans, only 26% of Virginians and 27% of Americans supports hunting over bait (Duda and Jones 2008, RM 2008, RM 2014). The three hunting practices with the largest majority of Virginians and Americans opposing them are hunting using high-tech gear, hunting in a high-fence preserve, and hunting over bait (RM 2008, RM 2014). Sixty-eight (68%) of Virginians and 59% of Americans oppose hunting over bait (RM 2008, RM 2014). Importantly, a majority of American hunters also oppose these three methods (RM 2008). Two-thirds of Virginia hunters oppose hunting over bait (RM 2014).

The main reason given by hunters and nonhunters alike for opposing hunting over bait is that it goes against the principles of fair chase and animal welfare (Williamson 2000, RM 2008, RM 2014). One of the main reasons for public opposition to baiting bears has been a perceived lack of fair chase (Beck et al. 1994). The question of whether bait should be a legal method of take for black bear has been the topic of ballot initiatives in 7 states since 1994. Voters in Colorado, Massachusetts, Washington, and Oregon have approved bans on bear baiting, while voters in Idaho, Michigan, and Maine have rejected attempts to ban bear baiting (Gore 2003, TWS 2006).

Additional evidence for hunter opposition to baiting in Virginia comes from several prominent sportsmen's organizations. Members of the Virginia Deer Hunters Association surveyed in 2013 disapproved of hunting deer over bait, with 57% who opposed and 23% who supported (VDHA 2014). The memberships and/or governing boards of the following five organizations voted during 2014 to oppose hunting over bait in Virginia: Western Virginia Deer Hunters Association, Virginia Bear Hunters Association, National Wild Turkey Federation (Virginia Chapter and National organization), Virginia Waterfowlers' Association, and Virginia Bowhunters Association. In addition, our committee received letters of opposition to hunting over bait from the Virginia Hunting Dog Alliance and the national office of the Quality Deer Management Association (there is no state chapter of QDMA in Virginia, currently). Lastly, the Virginia Deer Management Plan (VDGIF 2007) and the Virginia Bear Management Plan (VDGIF 2012), both of which were developed with substantial involvement of key stakeholders and the general public, provide explicit direction for VDGIF to maintain the prohibition on hunting deer and bear over bait.

Surveys in a number of other states have indicated that public opposition to hunting over bait is widespread (Table 1; Peyton and Grise 1995; RM 2004, 2005, 2007; Ryan et al. 2009). The primary reason given for opposition in most cases was the lack of fair chase associated with baiting (Peyton and Grise 1995; RM 2004, 2005, 2007; Ryan et al. 2009).

Table 1. Public opinion about hunting over bait in other states.

Location	Game Species	Group Surveyed	% Oppose	% Support	Citation/Year
Connecticut	Deer	Urban homeowners		39	Kilpatrick et al. 2007
Georgia	Deer	General public	59	29	RM 2004
		Landowners	54	38	
		Hunters	49	45	
Maryland	Deer	General public	63	24	RM 2007
		Hunters	36	54	
Michigan	Deer	Nonhunters (excluding anti-hunters)	58	33	Peyton and Grise 1995
	Bear	Nonhunters (excluding anti-hunters)	63		
Mississippi	Deer	General public	58	28	RM 2005
		Hunters	55	43	
		Nonhunters	60	24	
Pennsylvania	Deer	Hunters	71		WECT6 2007
West Virginia	Bear	General public	82	15-16	Ryan et al. 2009

Recipe for Hunter/Landowner Conflicts

Although hunters generally show more support for baiting than other groups, they can be strongly polarized over the issue (Table 1). In addition to pitting hunters against one another from a philosophical standpoint, baiting can create conflicts in the field between hunters and between landowners (SC 2013). Antagonism between bear hunters who use bait and those who use dogs is well documented in Maine (ElHamzaoui et al. 1994) and Michigan (Peyton 1989).

Legal baiting for one species (e.g., deer) can also create illegal baiting situations for other species (e.g. migratory birds, turkeys) that may cause conflict between local user groups (SC 2013).

"Baiting wars" can occur between landowners and between hunters due to a sense of unfair partitioning of game populations (Ermer et al. 2005, SC 2013). In coastal South Carolina, as more hunters and landowners have started to use bait, other hunters and landowners have felt compelled to bait in order to keep "their" deer from being attracted to someone else's bait (SC 2013). In Wisconsin, many hunters that were once opposed to baiting have felt compelled to bait because of others baiting in the area (Ermer et al. 2005). "Self-defense" baiting not only occurs between adjoining private hunt clubs but also between private and public land hunters, where baiting policies may be different (Holbrook 1992). In some areas, baiting is used to attract game from public lands to private lands (TWS 2012). Public lands that do not permit hunting over bait can be adversely affected by baiting on adjacent private lands (Dunkley and Cattet 2003).

Potential impacts to public land resources, hunters, or other users could occur anywhere along the 14,000 linear miles of boundary between public lands and private lands in Virginia. It is important to note that the George Washington and Jefferson National Forest - the largest public landholder in Virginia - recently submitted a letter to VDGIF in support of maintaining the current prohibition on hunting over bait on public lands.

Impediment to Hunter Image and Agency Effectiveness

Fair chase issues, like baiting, draw the attention of those who oppose hunting (Peyton 1998). Arguments that hunters are only interested in "the kill" would be supported by legalized baiting (Holbrook 1992). This sentiment can influence policies that impact wildlife management and hunting beyond the specific issue at hand (Gore 2003, Peyton 2000, TWS 2006). This concerns ethical hunters, who are increasingly distancing themselves from unfair hunting practices and demanding that wildlife management agencies address fair chase issues so that society can view hunting more positively (Peterson 2004, Peyton 2000).

Public support and positive agency image are essential for effective wildlife management (Peyton 1998). Although agencies cannot manage strictly by the barometer of public opinion, a "pluralistic democracy does not provide refuge from the need for a hunting ethic shared with nonhunters….[a] hunting ethic logically must be consistent and intuitively appealing to the moderate majority." (Peterson 2004: 311). Nonhunters' perceptions of potentially unethical hunting practices can create a poor image of those who participate in or allow such practices, eroding the credibility of hunters and the agency responsible for wildlife conservation and management programs (Holbrook 1992, Peterson 2004, Peyton 1998, SC 2013). Although hunters and wildlife professionals should work together to determine what hunting practices are and are not acceptable, it is also important to work with nonhunters to determine what elements are important to them. Practices that are clearly unfair or inhumane should be eliminated (Organ et al. 1998).

Hunting over bait is one of the most disliked hunting practices in the United States, and it is opposed primarily because the public thinks it is unethical and violates the principle of fair chase (RM 2008). The unpopularity of baiting invites criticism by nonhunters, impeding support for hunting and wildlife management (Peyton 1998). More than three times as many respondents to a recent Virginia survey said changing the law to allow hunting over bait would have a negative effect, than a positive effect, on the credibility of the Virginia Department of Game and Inland Fisheries (RM 2014). State wildlife agencies would be irresponsible to ignore the negative impacts of baiting on agency credibility and their Public Trust authority (Peyton 1998, TWS 2006, Williamson 2000).

DISEASE

Bait consistently attracts and repeatedly congregates wildlife at the same location. This results in significantly increased contact rates within familial groups, unrelated groups, and between individuals of different species (Totton et al. 2002, Blanchong et al. 2006, Campbell et al. 2013), and enhanced indirect contact (i.e., contact with feed contaminated with saliva, urine, feces, nasal discharge, etc. excreted previously by a different individual). Concentrations of wildlife around bait sites have been implicated as significant factors affecting inter- and intra-specific pathogen transmission via amplified direct and indirect contact (Miller et al. 2003, Hines et al. 2007, Thompson et al. 2008) due to the steady stream of individuals visiting a bait site over time. Additionally, artificial congregation of wildlife has been reported to induce stress responses in individual animals, leading to reduced immune function and increased disease susceptibility (Forristal et al. 2012). While some infectious diseases are very species-specific and are thus far reported to only affect wildlife (e.g., chronic wasting disease), others exhibit a wide host range and are known to infect livestock and/or humans (e.g., brucellosis, tuberculosis, rabies, etc.). These multi-host pathogens that spill-back from wildlife to livestock may not only cause illness in domestic livestock, but may also potentially lead to significant economic losses to producers due to decreased production or trade and testing restrictions imposed secondary to the diagnosis of a restricted pathogen in a state. Baiting and supplemental feeding are culturally entrenched practices in many regions of the United States, including Michigan (Rudolph et al. 2006, Figure 3) and the Greater Yellowstone Ecosystem (Smith 2001), and the perpetuation of bovine tuberculosis in the white-tailed deer population of northeastern Michigan and brucellosis in the elk herd of the Greater Yellowstone Area are directly related to artificial feeding practices. Each disease has cost state and federal government agencies tens of millions of dollars, and they continue to be diagnosed in both domestic livestock and wildlife due to persistent baiting and supplemental feeding practices.

Photos Courtesy of Michigan DNR, David Kenyon

Figure 3. White-tailed deer pathways to established bait piles in northeastern Michigan.

Disease Introduction Risks

Feed that is not suitable for massive consumption by some wildlife species or feed that is contaminated with infectious particles may cause disease in either the target or non-target wildlife that visit a bait site. Oftentimes, feed that is not approved for consumption by livestock is sold as “wildlife feed” due to a lack of regulatory oversight for wildlife products (Schweitzer et al. 2001). Rejected livestock feed may be wet or moldy, which can lead to production of

fungal toxins known as mycotoxins. Aflatoxins, produced by the fungi *Aspergillus flavus* and *A. parasiticus*, are among the most toxic mycotoxins and are common contaminants of corn, cereal, and oil seeds. Fischer et al. (1995) reported that 51% of shelled corn samples collected from bait piles throughout North Carolina and South Carolina tested positive for aflatoxin, with levels ranging from trace to 750 parts per billion. Similarly, 10% (3/31) of corn samples labeled as wildlife feed and collected from Georgia tested positive for aflatoxin; the level of aflatoxin in one sample was within the range found to negatively affect wild turkey poults (Quist et al. 2000, Schweitzer et al. 2001). Variable susceptibility to aflatoxicosis is affected by species, age, and individual variation (Pier 1992); a mortality event in Louisiana in 1999 involving more than 10,000 geese and lasting nearly four months was eventually attributed to aflatoxicosis (Cornish and Nettles 1999).

Feed that is not able to be properly digested by the baited animal's gastrointestinal tract, feed that is poor in nutritional quality, or spoiled food that has become toxic may all lead to severe morbidity or mortality. Unwittingly, many people bait wildlife with large amounts of grains or corn, which oftentimes leads to "grain overload" in ruminants. Wild ruminants, such as elk and white-tailed deer, can die from ingestion of highly digestible, low-fiber feed, such as grains, lentils, bread, or corn, due to fatal disruption of the body's acid-base balance (Wobeser and Runge 1975). Individuals that survive the immediate effects of "carbohydrate overload" often die in the following days to weeks.

Disease Amplification Risks

When wildlife is artificially congregated around a bait site, disease transmission is augmented because of increased contact between healthy individuals and diseased animals or their infectious excretions (Miller et al. 2003, Hines et al. 2007, Thompson et al. 2008). Chronic wasting disease (CWD) is a cervid (deer) disease that is suspected to be transmitted laterally via direct contact with infectious cervids (Miller et al. 1998), indirectly through environments contaminated with infectious particles excreted by diseased individuals (Williams and Young 1992, Miller et al. 2000) or as a result of inhalation of aerosolized infectious particles (Denkers et al. 2013). Conditions that facilitate high animal densities have been reported to increase the rate of CWD transmission (Miller et al. 2000), and prions have been shown to remain infectious in the environment for at least two years (Miller et al. 2004); therefore, it can be concluded that bait piles may affect disease dynamics for years after they have been removed. The termination of baiting and feeding is considered a first and necessary step to limit the transmission and spread of CWD (Lischka et al. 2010, Appendix D).

Up until the early 1990's, CWD was thought to be a disease that only occurred in captive and/or free-ranging deer in a fairly well defined "endemic" area of northeastern Colorado and southeastern Wyoming, but CWD was established in the captive elk industry by the mid- to late 1990's. Since that time, CWD has spread across the North America landscape and is now found in 22 states and several Canadian provinces (Figure 4).

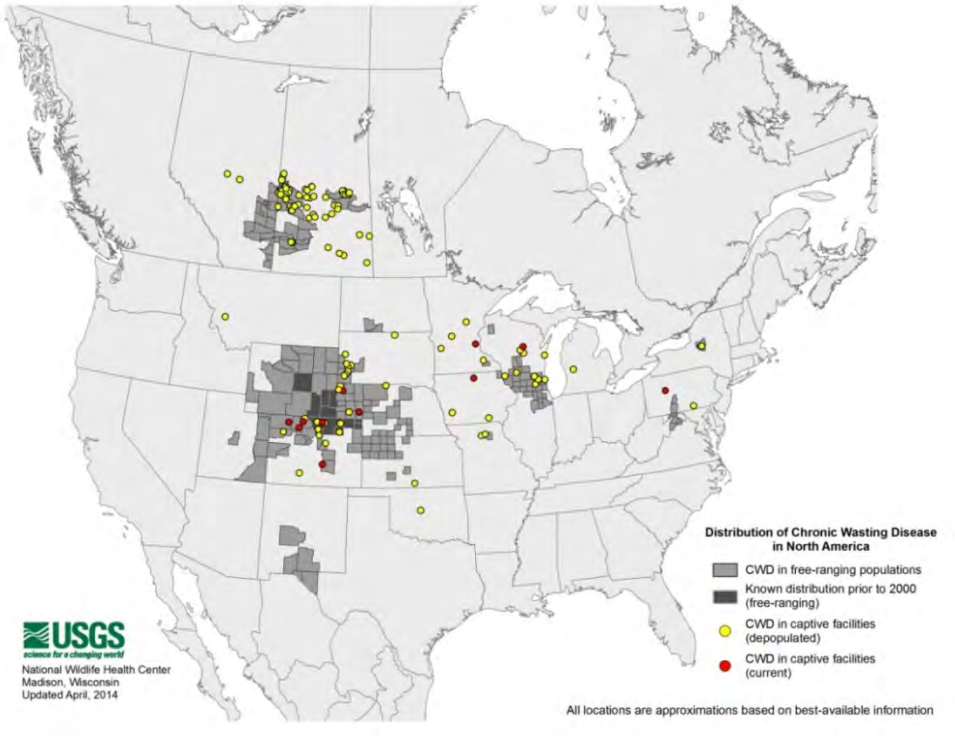

Figure 4. Chronic wasting disease in North America. (Map: National Wildlife Health Center)

From a nationwide white-tailed deer management perspective, likely the biggest CWD development occurred in 2002, when CWD was found for the first time in wild free-ranging white-tailed deer east of the Mississippi River in Wisconsin. Since 2002, CWD has been found in captive or wild free-ranging deer in at least 11 states east of the Mississippi River, including Maryland, Pennsylvania, Virginia, and West Virginia (Table 2). Chronic wasting disease can be very costly from a natural resource agency perspective. Since CWD was found in Wisconsin in 2002, the Wisconsin Department of Natural Resources estimates that they have spent over $49 million dollars on CWD management (Tamara Ryan, pers. communication).

Table 2. States east of or bordering the Mississippi River where CWD has been found in white-tailed deer since 2002.

Captive Deer			Wild Deer		
State	**Year**	**Species**	**State**	**Year**	**Species**
Wisconsin	2002	White-tailed deer	Wisconsin	2002	White-tailed deer
New York	2005	White-tailed deer	Illinois	2002	White-tailed deer
Minnesota	2006	White-tailed deer	New York	2005	White-tailed deer
Michigan	2008	White-tailed deer	West Virginia	2005	White-tailed deer
Missouri	2010	White-tailed deer	Virginia	2009	White-tailed deer
Iowa	2012	White-tailed deer	Minnesota	2010	White-tailed deer
Pennsylvania	2012	White-tailed deer	Maryland	2010	White-tailed deer
			Missouri	2011	White-tailed deer
			Pennsylvania	2012	White-tailed deer
			Iowa	2014	White-tailed deer

CWD was first diagnosed in Virginia in 2009, and, thus far, seven wild white-tailed deer have been positively diagnosed in the Commonwealth. An additional 162 deer have tested positive in nearby West Virginia, and two more positive deer have been found in Maryland, just north of the Virginia/West Virginia CWD core affected area. Beginning in 2012, CWD was diagnosed in multiple captive and free-ranging white-tailed deer in two separate areas of Pennsylvania. CWD is now established in the captive white-tailed deer industry and the spread of CWD within CWD positive states and into new states is expected to continue for the foreseeable future. The impact of CWD on wild cervid populations is unknown at this time, but research in Colorado suggests that the combination of high infection prevalence, low survival among infected individuals, and the potential for sustained epizootics lasting over 30 to 50 years could dramatically reduce infected mule deer populations (Miller et al. 2000, Miller et al. 2008), thus CWD is considered one of the greatest potential threats to the long-term stability of the Virginia white-tailed deer population.

Disease Spillover Risks

Disease spillover is defined as transmission of an infectious agent from a reservoir species, which is able to maintain the infection amongst themselves in the absence of disease transmission from any other species, into a new population of susceptible individuals. In Wyoming, approximately 23,000 elk are baited to and fed every winter at 23 elk feeding grounds (Smith 2001). Elk are a reservoir for brucellosis (Godfroid 2006), an infectious disease caused by the bacterium *Brucella abortus*, and the congregation of elk at the feeding stations coincides with the time of peak transmission of brucellosis (Roffe et al. 2004, Cross et al. 2007); elk aggregations created by supplemental feeding facilitate intra-specific disease transmission and helps to both sustain infection in the elk population and keep infection levels high (Godfroid 2002, Cross et al. 2007). Transmission of the bacterium from elk to cattle has been reported (Beja-Pereira et al. 2009), and in 2004 Wyoming lost its "Brucellosis-Free" status due to transmission of the bacterium from elk to cattle. The disease continues to be diagnosed in cattle in the Greater Yellowstone Area because of transmission from infected wildlife.

Bovine tuberculosis, caused by infection with the bacterium *Mycobacterium bovis*, was first diagnosed in the white-tailed deer population of northeastern Michigan in 1975 but was not determined to be self-sustaining in the population until the late 1990's (Schmitt et al. 1997). To date, 205,860 white-tailed deer have been sampled for tuberculosis, and 748 (0.36%) have tested positive (Schmitt, pers. communication). The disease has spilled over from the white-tailed deer reservoir population into domestic cattle; in the first nine years after tuberculosis was diagnosed in Michigan, the Michigan Department of Agriculture (MDA) spent $50.5 million on tuberculosis-related costs, including tuberculosis testing in cattle and wildlife, depopulation of infected cattle herds, regulatory compliance, and disease transmission investigations (MDA, MDR, Michigan Department of Community Health 2007). By 2010, 49 cattle farms had tested positive for tuberculosis in seven counties, and 43 of the herds (88%) were depopulated (Okafor et al. 2012). The average number of cattle per tuberculosis-positive dairy and beef herd was 147 and 84, respectively (Okarfor et al. 2012). In total, the state of Michigan spent approximately $200 million on bovine tuberculosis eradication efforts between 1994 and 2010 (Okafor et al. 2011).

Mycobacterium bovis has a very broad host range, and surveillance in the tuberculosis area of Michigan from 1996 to 2003 determined that 4.8% of sampled coyotes (18/375), 2.4% (8/333) of sampled raccoons, 3.3% (7/214) of sampled black bears, 7.0% (4/57) of sampled bobcats, 10% (3/29) of sampled red foxes, 0.5% (2/379) of sampled opossums were infected (O'Brien et al. 2006). In total, over 1,500 carnivores have been tested since 1996

(Schmitt, personal communication). Additionally, 6 out of 3,157 sampled elk (0.19%) have been found to be infected with *M. bovis* (Schmitt, pers comm). It is estimated that the Michigan Department of Natural Resources (MDR) spent approximately $23 million on tuberculosis-related activities between 1994 and 2011 (O'Brien et al. 2011), and the continued presence of bovine tuberculosis in the white-tailed deer population of northeastern Michigan is believed to be a direct result of artificial feeding and baiting (Blanchong et al. 2006; O'Brien et al. 2006). Congregation of white-tailed deer at feed sites increases the spread of the bacterium from infected deer to healthy individuals via aerosolization of the bacterium and consumption of feedstuff contaminated by infected saliva or nasal discharge (Miller et al. 2003; Schmitt et al. 1997). While the prevalence of infection in deer has decreased since the 1990's, bovine tuberculosis is still circulating in the wild white-tailed deer population of Michigan, and supplemental feeding and baiting is believed to be a critical factor in the continued persistence of the disease (O'Brien et al. 2006).

Public Health Risks

Concentrations of wildlife are a breeding ground for amplified disease transmission (Miller et al. 2003, Hines et al. 2007, Thompson et al. 2008), which then leads to potential human health risk from pathogens able to be passed from wildlife to humans (e.g., zoonotic diseases). In northeastern Michigan, two hunters have been diagnosed with the same strain of bovine tuberculosis circulating in the white-tailed deer population (Wilkins et al., 2008), and undulant fever caused by infection with *Brucella abortus* has been diagnosed in two Montana hunters who had contact with infected elk (Zanto 2005). Baiting also leads to the aggregation of non-target species, such as raccoons, skunks, and other high-risk rabies rector species, which may lead to a localized rabies epizootic. Rabies epizootics are usually attributable to an environmental alteration that serves to increase numbers and densities of regional wildlife hosts (Bengis et al. 2004), such as artificial feeding. Baiting therefore not only poses a significant threat to the health of wildlife populations, but also has the potential to negatively affect human health.

It is evident that baiting and other artificial feeding methods have the potential to not only jeopardize the health and well-being of wildlife populations, but also have the capacity to impose high costs on state and federal governments for disease management expenditures, as well as public health risks. Disease ramifications of baiting are long-lasting and potentially devastating, thus preventing the creation of environments that foster and amplify disease transmission is imperative.

NORTH CAROLINA BAITING POLICIES AND EXPERIENCES

SJR 79 also requested that the Department study those states (noted throughout previous sections) that allow baiting, "focusing on an investigation of the policies of North Carolina and the experience of the North Carolina Wildlife Resources Commission". The following is a summary of the North Carolina Baiting Policies and Experiences.

Deer hunting over bait is legal statewide in North Carolina and has been legal for decades (Scott Osborn, personal communication). In response to a request from VDGIF, North Carolina Wildlife Resources deer management staff provided data that included a 2006 hunter survey in which 66% of North Carolina deer hunters reported that they deer hunted over bait (Palmer 2009). Thirty-four percent of North Carolina deer hunters did not use bait while deer hunting in 2006.

Data were not available to compare success rates between those using bait and those that did not use bait in North Carolina in 2006. Data are available, however, to compare total deer kill levels statewide, deer kill per unit area statistics by physiographic province (Coastal Plain, Piedmont, and Mountain), and deer hunter success rates between North Carolina and Virginia.

Both North Carolina and Virginia have mandatory statewide deer check in systems and have had these checking systems in place for decades. The total statewide deer kill for North Carolina and Virginia is shown in Figure 5. Both states have demonstrated a significant increasing trend in their total statewide deer kill over the past 40 to 70 years.

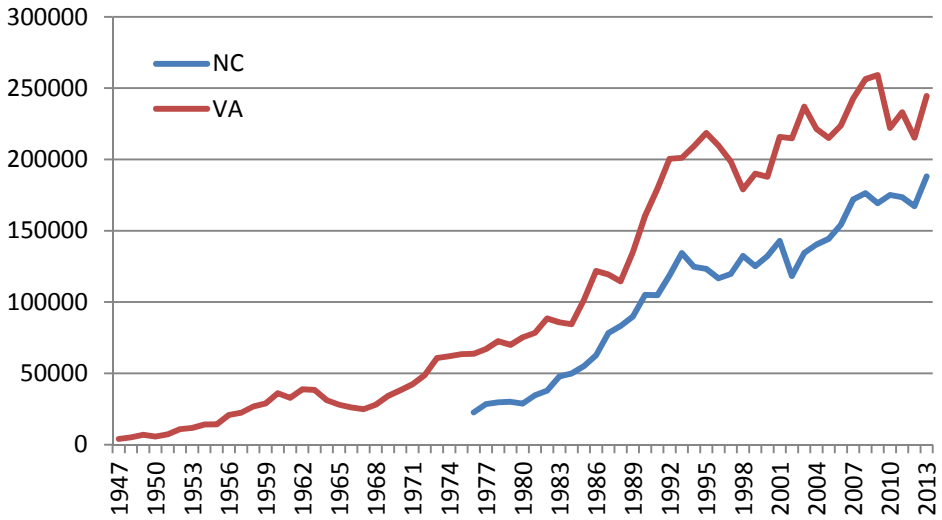

Figure 5. Minimum total reported deer kill North Carolina and Virginia, 1976-2013.

Both states' deer kill data represents the absolute minimum deer kill. It should be noted, however, that comparing total deer kill levels is a very poor way to compare the deer kill between states or areas within a state. A more objective method is to compare the deer kill per unit area (e.g., per square mile) by physiographic province or total land area. Data comparing the North Carolina and Virginia deer kill by square mile by physiographic region and total land area over the past decade are shown in Table 3 and Figure 6.

Table 3. Deer kill per unit area statistics, North Carolina and Virginia, by physiographic region and total area, 2004-2013.

	Coastal Plain		Piedmont		Mountain		Total	
	NC	VA	NC	VA	NC	VA	NC	VA
2004	3.1	5.9	3.2	5.6	1.8	5.5	2.9	5.6
2005	3.1	6.2	3.3	5.6	1.9	4.8	3.0	5.4
2006	3.3	6.6	3.6	5.8	2.1	5.0	3.2	5.7
2007	3.7	7.2	4.1	6.1	2.1	5.5	3.5	6.1
2008	3.9	7.9	4.0	6.5	2.2	5.6	3.6	6.5
2009	3.5	7.9	4.1	6.8	2.3	5.5	3.5	6.5
2010	3.7	7.7	4.3	5.8	2.1	4.1	3.6	5.6
2011	3.6	7.5	4.3	6.2	2.3	4.5	3.6	5.9
2012	3.4	6.4	4.3	5.8	1.9	4.4	3.4	5.4
2013	3.7	7.1	5.0	6.6	2.3	5.1	3.9	6.2

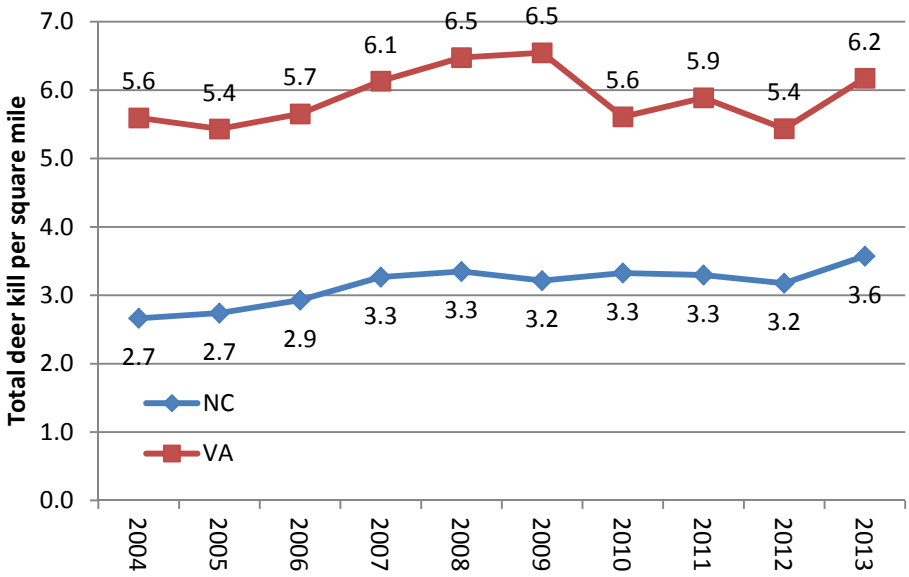

Figure 6. Deer kill per square mile of total land area, North Carolina and Virginia, 2004-2013.

Deer hunter success rates for North Carolina and Virginia are shown in Figure 7. Both states calculate this statistic from random annual or periodic hunter surveys and both states define a successful hunter as any deer hunter who kills one or more deer per season.

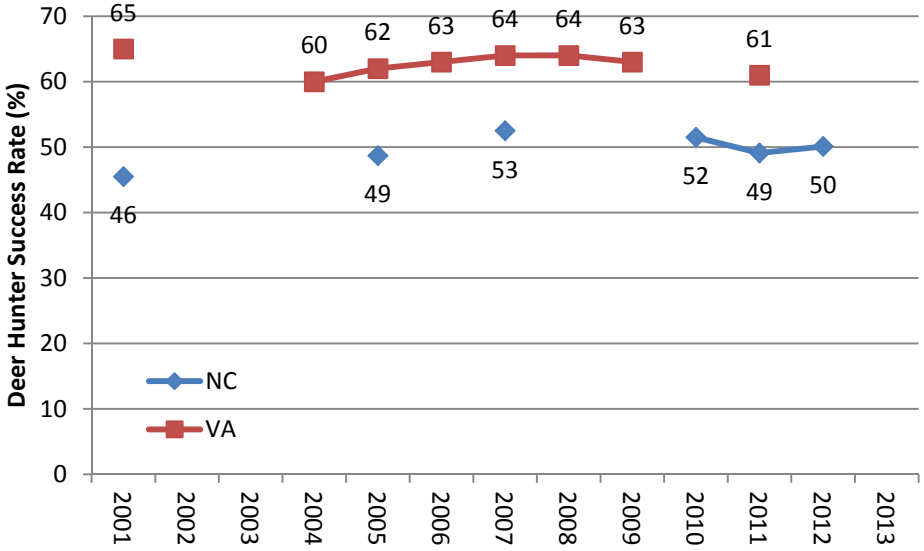

Figure 7. Deer hunter success rates, North Carolina and Virginia.

Readers are strongly advised to be careful in comparing deer kill and hunter success statistics between states, like North Carolina and Virginia. Higher deer kill numbers, deer kill per unit areas statistics, and deer hunter success rates documented in Virginia could be and are likely due to different hunter pressure, different reporting rates, different deer population numbers/densities, and different deer seasons and regulations, etc. No inferences can or should be made with regard to how deer hunting over bait (allowed in North Carolina and prohibited in Virginia) may or may not impact these data.

RESPONSES TO *WHEREAS* STATEMENTS IN SENATE JOINT RESOLUTION NUMBER 79

Within the resolution language statements were made that hunting over bait creates positive economic value in the Commonwealth; enhances hunting opportunities for Virginia hunters; is an integral part of a sound wildlife management strategy; and is a traditional hunting practice and has been permitted in Virginia in the past. These statements are individually addressed in detail in the following sections.

WHEREAS, baiting wild birds or wild animals while hunting creates positive economic value in the Commonwealth through spending on bait, supplies, and services

Data on the economic values of hunting over bait are lacking. Positive examples found in a literature review include:

- The net value of feeding and baiting was estimated at over $50 million dollars annually in Michigan in 1991, when hunters were reported to have used over 13 million bushels of bait for deer (Winterstein 1992).
- In Michigan, Whitcomb (1999b) reported that a representative of the Michigan Farm Bureau reported that feeding and baiting generated a minimum value to Michigan farmers of about 15 million dollars and 2-3 times that amount for retailers in 1995.
- Based on a 2006 survey, the South Carolina Department of Natural Resources reported that survey respondents from South Carolina's Coastal Plain, where hunting over bait was legal, reported to have provided more than 40.8 million pounds (728,621 bushels) of bait with a total value of approximately $5.8 million at $8 bushel. Extrapolating the survey results to an entire region resulted in a total value of approximately $18.6 million dollars. In the Coastal Plain of South Carolina an average of 1,200 pounds of corn was provided for each deer reported killed. At $8 a bushel, this translated into an estimated $170 per deer killed over bait (SC 2013).

However data on the potential negative economic values of hunting over bait include:

- In Michigan between 1994 and 2010 the state of Michigan spent approximately $200 million on bovine tuberculosis eradication efforts.
- In Wisconsin since 2002 the Wisconsin DNR has spent over 49 million dollars on CWD.

WHEREAS, baiting enhances hunting opportunities for Virginia hunters

It is a long and commonly held belief that use of bait increases deer hunter success; however, the majority of evidence does not necessarily support this assumption. References found in a literature review that reported increased hunter efficiency while deer hunting over bait include Synatzske (1981) for gun deer hunters in Texas, Winterstein (1992) for archery deer hunters in Michigan, Frawley (2000 and 2002) for archery deer hunters in Michigan, and Kilpatrick et al. (2010) for archery deer hunters in Connecticut. References found in the literature that reported no increase in hunter efficiency while deer hunting over bait include Langeau et al. (1985) in Michigan, Winterstein (1992) for gun deer hunters in Michigan, Wisconsin Bureau of Wildlife Management (1993) for gun hunters in Wisconsin, Whitcomb (1999a) for deer hunters in Michigan, Frawley (2000 and 2002) for gun deer hunters in Michigan, Ruth and Shipes (2005) for deer hunters in South Carolina, Pennsylvania Game Commission (2010) for deer hunters in urban deer management units in Pennsylvania,

Responsive Management (2012) for deer hunters in Georgia, and South Carolina DNR (2013) for deer hunters in South Carolina.

Van Deelan et al. (2006) found in Wisconsin that increasing hunting opportunity was more effective in increasing the deer kill than bait. Several authors have noted that younger animals are most susceptible to being seen and killed over bait during legal hunting hours and/or that bait increases the nocturnal activity and use of bait in older experienced animals (Synatzske 1981, Jacobson and Darrow 1992, SC 2013). Interestingly, Ruth and Shipes (2005) in South Carolina suggested that baiting may be negatively affecting deer harvest rates in the Coastal Plain of South Carolina.

In conclusion, there is no clear evidence to support the belief that the use of bait increases the total deer kill or deer hunter success rates.

WHEREAS, baiting is an integral part of a sound wildlife management strategy

The assertion that baiting is an integral part of a sound wildlife management strategy is disputed by wildlife managers. As noted by Williamson (2000) most jurisdictions would not allow feeding of deer if feeding issues were determined by professional wildlife managers. A very similar argument could also be made for deer hunting over bait.

In 2013, the Department's deer management staff conducted a survey of state deer management coordinators from 37 states regarding supplemental feeding of white-tailed deer and white-tailed deer hunting with bait (DGIF unpublished data). Thirty-five states responded (95%). Thirty states allowed supplemental feeding of deer (16 with restrictions) and five states did not allow any deer feeding. Feeding deer was overwhelming opposed and/or discouraged by agencies and their deer management staff(s). Not a single state agency or deer management staff that responded indicated that they "supported" the supplemental feeding of white-tailed deer. Of the 35 states that responded, 16 reported that they did not allow deer hunting over bait and 19 reported that deer hunting over bait was allowed. In addition to noting whether or not deer hunting over bait was allowed, the respondents were also asked to characterize their Department's and their respective deer management staff's opinion on deer hunting over bait.

Not surprisingly, among the 16 states that did not allow deer hunting over bait, respondents overwhelmingly indicated their Department's attitude was best described as "opposed" to deer hunting over bait and also overwhelmingly indicated that their deer management staff's position was best described as "generally opposed" to deer hunting over bait.

Survey responses for the 19 states that allowed deer hunting over bait were more revealing. Over half indicated that their Department's position on deer hunting over bait could best be described as "opposed" to or generally discouraged deer hunting over bait. Only 1 of the 19 states that allowed deer hunting over bait indicated that their Department's position on deer hunting over bait was best described as "supporting" deer hunting over bait. When asked to characterize their deer management staff's opinion on deer hunting with bait, the majority indicated that their deer management staff were "generally opposed" to deer hunting over bait, and only 2 of 19 states that allow deer hunting over bait indicated that their deer management staff "supported" deer hunting with bait.

These survey results clearly indicate that white-tailed deer hunting over bait is not considered a sound wildlife management strategy by most state wildlife agencies and most professional state white-tailed deer managers. A strong case can be made that most states would not allow deer hunting over bait if the hunting over bait issue was determined by the professional wildlife staff.

WHEREAS, baiting is a traditional hunting practice and has been permitted in Virginia in the past

Few outdoor activities are as steeped in tradition as hunting. As noted in the introduction of this report, deer hunting over bait is legal in about half of the continental United States. A unique aspect of hunting traditions is that they can vary widely between regions, between states, and even within states. As the Senate Joint Resolution 79 noted, hunting over bait is an allowable hunting practice in some states and has been permitted in Virginia in the past. What was not noted is that hunting over bait has been made illegal by the Code of Virginia (Appendix E, http://law.lis.virginia.gov/vacode/title29.1/chapter5/section29.1-521/) since 1922 (Appendix C). As described above, nor does the practice enjoy the support of the majority of hunters or the nonhunting population.

Hunting over bait is not a traditional hunting practice in the Commonwealth of Virginia and has not been a legal hunting practice for over 78 years.

SUMMARY

One of the most common questions or comments made by hunting over bait proponents in Virginia is, "*If hunting over bait is so bad and dangerous, then why do most of the states adjoining Virginia allow it?"* The evidence suggests that these allowances are contrary to biological and sociological considerations and largely contrary to the opinions of wildlife management professionals in those states.

As was noted in a previous section of this report, in a white-tailed deer hunting over bait survey conducted by the Department's deer management staff in 2013 (DGIF unpublished data) over half of the 19 states that allowed deer hunting over bait indicated that their department's position on deer hunting over bait could best be described as "opposed to" or "generally discouraged" deer hunting over bait, and only 1 of 19 states that allowed deer hunting over bait indicated that their Department's position was best described as "supporting" hunting over bait. When asked to characterize their deer management staff's opinion on deer hunting with bait, the majority (58%) indicated that their deer management staff were "generally opposed" to deer hunting over bait and only two out of the 19 of the states that allow deer hunting over bait indicated that their deer management staff "supported" deer hunting with bait.

These survey results clearly indicate that nearly all states which allow deer hunting over bait are not doing it at the request of or with the support of their professional wildlife staff. Not surprisingly, wildlife managers from states with a strong baiting culture have warned that other states should resist allowing baiting where it is not currently permitted and end the practice where it is currently practiced (VanDeelen et al. 2006).

Hunting over bait is not supported by the majority of hunters, and is one of the most disliked hunting practices in the United States by the nonhunting public. It is viewed as unethical and violates the principle of fair chase. Legalizing this activity in Virginia could diminish support for the hunting sport and undercut the effectiveness of this important wildlife management tool.

In a March 2003 letter (Davidson and Fischer 2003) to member state wildlife agencies, Southeastern Cooperative Wildlife Disease Study Director John Fischer and Deputy Director William Davidson identified four highly artificial management activities that have, *"…demonstrated on one or more occasions to be the root cause or a significant contributing factor in disease problems involving wild cervids……The activities identified as being "highly artificial" include: 1) translocation of captive cervids, including both native and exotics, 2) supplemental feeding of deer, 3) use of bait during hunting, and 4) construction of and hunting within fenced enclosures*." In a later document entitled *Disease risks associated with baiting of*

white-tailed deer, Fischer and Davidson (2006) wrote, "*prevention is the only truly effective method to manage diseases in wildlife populations.*"

With the support of the Board of Game and Inland Fisheries and the Virginia General Assembly, the Virginia Department of Game and Inland Fisheries has worked diligently to address the four highly artificial practices identified above. In comparison to many other states, Virginia has made substantial strides to protect its wildlife resources from the introduction of novel and potentially devastating diseases.

CONCLUSION AND RECOMMENDATION

In conclusion, hunting over bait is controversial and divisive among hunters, it is opposed by the general public and national and Virginia professional and conservation organizations (Appendix F), and it has significant negative biological and social implications for Virginia's wildlife resources, wildlife habitats, hunting heritage, and citizens. It is therefore the recommendation of the department that the 78 year old ban on hunting over bait in the Commonwealth be maintained.

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Appendix A. Senate Joint Resolution No. 79

COMMONWEALTH OF VIRGINIA

SUSAN CLARKE SCHAAR
CLERK OF THE SENATE
P.O. BOX 396
RICHMOND, VIRGINIA 23218

SENATE

March 13, 2014

Robert W. Duncan, Director
Department of Game and Inland Fisheries
4010 W. Broad Street, 1st Floor
Richmond, VA 23230

Dear Mr. Duncan:

This is to inform you that, pursuant to Rule 20 (o) of the Rules of the Senate of Virginia, the Senate Committee on Rules has referred the subject matter contained in SJR 79 to the Department of Game and Inland Fisheries for study. It is requested that the appropriate committee chair and bill patron receive a written report, with a copy to this office, by November 1, 2014.

With kind regards, I am

Sincerely yours,

Susan Clarke Schaar

SCS:dhl

cc: Sen. John S. Edwards, Chair, Senate Committee on Rules
Sen. Frank M. Ruff, Jr., Patron of SJR 79
Cheryl Jackson, Division of Legislative Services
Brenda Edwards, Division of Legislative Services

SENATE JOINT RESOLUTION NO. 79

Offered January 8, 2014

Requesting the Department of Game and Inland Fisheries to study the effects of a removal of the prohibition against hunting over bait. Report.

Patron-- Ruff (By Request)

Referred to Committee on Rules

WHEREAS, baiting wild birds or wild animals while hunting creates positive economic value in the Commonwealth through spending on bait, supplies, and services; and

WHEREAS, baiting enhances hunting opportunities for Virginia hunters; and

WHEREAS, baiting is an integral part of a sound wildlife management strategy; and

WHEREAS, baiting is a traditional hunting practice and has been permitted in Virginia in the past; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Department of Game and Inland Fisheries be requested to study the effects of a removal of the prohibition against hunting over bait. Baiting is permitted in many other parts of the country, and recent experience in one or more of those states may provide instructive lessons for Virginia wildlife management practice.

In conducting its study, the Department of Game and Inland Fisheries shall study those states that allow baiting, focusing on an investigation of the policies of North Carolina and the experience of the North Carolina Wildlife Resources Commission.

All agencies of the Commonwealth shall provide assistance to the Department of Game and Inland Fisheries for this study, upon request.

The Department of Game and Inland Fisheries shall complete its meetings by November 30, 2014, and shall submit to the Governor and the General Assembly an executive summary and a report of its findings and recommendations for publication as a House or Senate document. The executive summary and report shall be submitted as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports no later than the first day of the 2015 Regular Session of the General Assembly and shall be posted on the General Assembly's website.

Appendix B. Virginia statutes and regulations containing provisions that are based largely on ethics, fair chase, and sportsmanship.

- Hunting over bait (§ 29.1-521)
- Hunting at night (§ 29.1-520)
- Hunting adjacent to a fire (§ 29.1-521)
- Hunting from a vehicle (§ 29.1-521)
- Failure to check traps daily (§ 29.1-521)
- Killing of deer with lights (§ 29.1-523)
- Hunting deer at night with sights (§ 29.1-523.1)
- Killing deer in the water (§ 29.1-516)
- Hunting deer from watercraft (§ 29.1-549.)
- Deer hunting enclosures prohibited (§ 29.1-525.1.)
- Computer-assisted remote hunting (§ 29.1-530.3)
- Types of weapons for hunting (e.g., . no spears or machine guns) (§ 29.1-519)
- Use of tracking dogs (§ 29.1-516.1)
- Drugged or explosive arrows (4VAC15-40-20)
- Recorded calls for most game (4VAC15-40-30)
- Live animals as decoys (4VAC15-40-40)
- Poisoning wildlife (4VAC15-40-50)
- Visiting submerged traps (4VAC15-40-195)
- Certain leghold traps (4VAC15-40-210)
- Deadfall traps (4VAC15-40-220)
- Failure to retrieve game (wanton waste) (4VAC15-40-250)
- Chasing or hunting with dogs from baited site (4VAC15-40-283)
- Crippling animal to continue the chase (4VAC15-40-284)
- Dislodging treed animal to continue the chase (4VAC15-40-284)
- Use of radio telemetry to aid in the chase (4VAC15-40-284)
- Killing bears under 100 lbs. (4VAC15-50-50)
- Killing female bear with cubs (4VAC15-50-60)
- Bow specifications for killing bear, deer, or turkey (4VAC15-50-70, 4VAC15-90-70, 4VAC15-240-60)
- Muzzleloader specification for killing bear or deer (4VAC15-50-71, 4VAC15-90-80)
- Trapping bears (4VAC15-50-100)
- Timing of deer seasons to avoid fawning period (4VAC15-90-10, 4VAC15-90-70)
- Fences that impede deer ingress and egress (4VAC15-90-291)
- Possession of axes, saws, or tree-climbing devices during raccoon chase season (4VAC15-210-10)
- Size rifle for hunting deer or bear (.23 caliber) (4VAC15-270-10)
- Confinement of animals on fur farms (4VAC15-280-50)
- Holding animals for exhibit (4VAC15-290-60)

Appendix C. History of baiting laws in Virginia.

A. The first law in Virginia prohibiting hunting over bait was a 1922 Act (Chapter 11 of the 1922 Acts of Assembly) making it unlawful to bait wild turkeys for the purposes of hunting or killing them. It was Senate Bill 78 (1922), introduced on 1/18/22 by Senators Hening, Woodson, Goode, Loth, and Miller. After it passed the General Assembly, this law was placed in the 1923 General Laws of Virginia at section 3357F, it was reclassified (and amended) in the 1924 Code of Virginia, section 3356.

B. The 1922 law was followed by a law prohibiting hunting over bait for all game species. This is the baiting law as we know it today. It was first passed in 1936 (Chapter 389 of the 1936 Acts of Assembly; House Bill 137 introduced by Delegate E. Blackburn Moore). After passage it was placed in the Code of Virginia, section 3305(36)(d). When the 1950 Code of Virginia was compiled, the baiting provision was included in section 29-143(d). When Title 29 was recodified into Title 29.1 in 1987, it was moved to section 29.1-521(A)(4), which is where it is found today. As of 2014, this prohibition on hunting all game species over bait in Virginia has been the law of the Commonwealth for 78 continuous years.

Appendix D. Chronic Wasting Disease and the Science in support of the Ban on Baiting and Feeding Deer.

Chronic Wasting Disease and the Science in support of the Ban on Baiting and Feeding Deer.

Timothy R. Van Deelen Ph.D. Wisconsin DNR Research

Summary
Reliable science provides support for a ban of baiting and feeding of white-tailed deer to reduce disease risks for Chronic Wasting Disease (CWD). Peer-reviewed research papers published in reputable scientific journals indicate the following:

- **Deer can get CWD by ingesting something contaminated with the disease prion**
- **CWD prions may be shed in feces and saliva**
- **Disease course and symptoms indicate high potential for transmission where deer are concentrated**
- **Evidence from captive situations indicates that deer can get CWD from highly contaminated environments**
- **Baiting and Feeding causes unnatural concentration of deer**
- **Reduction of contact through a ban on baiting and feeding is likely very important to eradicating or containing a CWD outbreak**
- **Baiting and feeding continues to put Wisconsin's deer herd at risk to other serious diseases**

In addition, experts in CWD, wildlife disease and deer nutrition support bans on baiting and feeding as part of a comprehensive strategy to prevent and/or manage CWD. Under a baiting and feeding ban, disease outbreaks are more likely to be smaller in scale and more apt to be contained or eliminated. With the long CWD incubation period and other factors that make discovery of a new outbreak difficult, an outbreak that is already widespread when detected because of baiting and feeding may not be able to be contained or eliminated. This document provides details and explicit links to the supporting science.

Chronic Wasting Disease and the Science behind the Ban on Baiting and Feeding Deer.

Some critics claim that there is no scientific support for the judgment that resulted in the ban. **This is simply untrue.** In this document, I review some of the scientific evidence in support of the baiting and feeding ban. The science in support of the ban on baiting and feeding is strong and comes from a number of diverse scientific sub-disciplines (veterinary medicine, wildlife ecology, biochemistry, physiology, etc.). Consequently, there is no single comprehensive study or paper that, by itself, demonstrates the CWD-related effects of baiting and feeding of wild deer (good or bad). Evaluating the science relative to baiting and feeding requires integration of scientific evidence from several different sub-disciplines.

The **quality of scientific evidence** is an issue for some critics who claim that other science or other experts fail to support the ban. It is also an issue in trying to reach an objective scientific judgment. In keeping with established scientific practice, I consider articles published in reputable, peer-reviewed, scientific literature to be of the highest quality. Peer-review insures that articles have been rigorously evaluated and endorsed by qualified specialists. A secondary level of scientific rigor is the unpublished opinion or unpublished research of recognized experts

working on the topic of interest. An example of this would be the opinion or unpublished research on CWD transmission from investigators who have established their expertise through peer-reviewed publication on other CWD-related topics. A very distant third level of quality is the unpublished opinion of recognized experts working on distantly related topics. Again, scientific expertise is demonstrated by frequent publication in reputable peer-reviewed scientific journals.

The following is a partial list of scientific evidence that suggests that baiting and feeding of wild deer elevates the risk of CWD transmission. This list focuses almost entirely on disease risks posed by CWD **although other diseases (e.g. Bovine Tuberculosis) may pose even greater risks** and there are many other reasons (e.g. ecological, social, nutritional) why baiting and feeding deer is inappropriate management. This list is intended to be explicit in its links to peer-reviewed science. Complete literature citations are included at the end of the document for readers who want to read the original scientific articles.

- **CWD is transmitted laterally (live diseased deer infect other deer)**

Researchers who have studied CWD epidemics in both captive and free-ranging deer populations have determined that CWD is both contagious and self-sustaining (meaning that new infections occur fast enough for CWD to persist or increase over time despite the more rapid deaths of the diseased individuals; Miller et al. 1998, 2000) experimental data, and epidemiological models fit to observed prevalences in freeliving deer (Miller et al. 2000, Gross and Miller 2001, M. W. Miller unpublished in Williams et al. 2002). These studies suggest that observed prevalences and rates of spread of CWD in real populations could not occur without lateral transmission. For example, maternal transmission (doe to fawn) if it occurs, is rare and cannot explain most cases where epidemiologic data are available(Miller et al. 1998, 2000). Similarly, indirect lateral transmisson (e.g. from a contaminated environment) may require unusually high levels of contamination (see below; Williams et al. 2002). Nonetheless, emerging research from Colorado suggests that indirect lateral transmission from environmental contamination appears to play a role in sustained and recurrent epidemics (Miller 2002).

- **Deer can get CWD by ingesting something contaminated with the disease prion**

Six mule deer fawns were fed a daily dose of 2g (0.07 ounces) of brain tissue from CWD-positive mule deer in a tightly controlled experiment for 5 days. Another three were fed the same doses using brain tissue from CWD-negative mule deer. All deer were held separately in indoor pens that had never before held deer. The fawns were then killed and necropsied at specific intervals 10 to 80 days post-inoculation. At 42 days and later post inoculation, all fawns dosed with CWD-positive tissue tested positive for CWD prions in lymph tissues associated with their digestive tracts (Sigurdson et al. 1999). Other transmissible spongiform encephalopathies (TSEs; Kuru, transmissible mink encephalopathy, bovine spongiform encephalopathy[BSE]) appear to be transmitted through ingestion of prion-infected tissue as well (Weissmann et al. 2002). Due to the human health crisis associated with eating BSE-infected beef in Europe, many other researchers working with TSEs, including CWD (Sigurdson et al 1999, 2001), have traced the movements of infectious prions of orally-infected animals through the lymph tissue embedded in the intestinal lining, into nervous tissues associated with the digestive tract (e.g. Maignien et al 1999, Beekes and McBride 2000, Heggebo et al. 2000, Huang et al. 2002) and eventually to the brain via the nervous system (Sigurdson et al. 2001, Weissmann et al. 2002). Experimental studies using hamsters have shown that prions can infect through minor wounds in the skin (Taylor et al.

1996) and that infection through minor wounds on the tongue was more efficient than infection from ingestion (Bartz et al. 2003). These studies not only demonstrate that an oral route of infection is possible, but are beginning to provide specific details about the pathways involved in the movement of infectious prions into the central nervous system and other organs (Weissmann et al. 2002).

- **CWD prions may be shed in feces and saliva**

Following oral exposure, prions associated with many TSEs (Maignien et al 1999, Huang et al. 2002) including CWD (Sigurdson et al. 1999; Miller and Williams 2002 and Spraker et al. 2002 cited in Williams et al. 2002) both accumulate and replicate in the lymph tissues associated with the gastrointestinal tract - particularly in lymph tissues in contact with the mucosa lining the inside of the intestines (e.g. Peyer's patches, Weismann et al. 2002). In infected deer, CWD prions also accumulate in the pancreas and various other glands of the endocrine system (Sigurdson et al 2001). Experiments with hamsters demonstrated that infectious prions can travel from the brain to the tongue along tongue-associated cranial nerves (Bartz et al. 2003). During digestion, the liver, pancreas, intestinal mucosa, and other glands secrete chemicals needed for digestion (Robbins 1983) and cells lining the inner surface of the intestine continuously die and slough off providing potential physical mechanisms for prion shedding into the intestines (others are likely). This is evidence that infectious prions are likely shed in the feces and saliva (Sigurdson et al. 1999).

- **Disease course and symptoms indicate high potential for transmission where deer are concentrated**

Appearance of CWD symptoms in an infected deer lags initial exposure by a variable time period on the order of roughly12-24 months or more ([E. S. Williams and M. W. Miller unpublished; E. S. Williams, M. W. Miller, and T. J. Kreeger unpublished] cited in Williams et al. 2002). Once clinical symptoms are observed, deer enter a symptomatic phase that may last on average 1-4 months before they invariably die (Williams et al. 2002). Symptoms are initially subtle but eventually include behaviors likely to contaminate a site with bodily fluids (e.g. excess urination, excess salivation including drooling and slobbering, and uncontrollable regurgitation, Williams et al. 2002). Deposition of feces increases with concentration of deer activity. This is both obvious and intuitive and pellet group counts have been used as an index of deer density since the 1940's (Bennet et al. 1940). During winter, northern deer defecate about 22 times a day (Rogers 1987). At least one study (Shaked et al. 2001) has reported detection of an altered form of the infectious prion in the urine of hamsters, cattle, and humans with TSEs. This altered form, while not as virulent, produced sub-clinical prion infections following experimental inoculation. Shedding of infectious prions is likely progressive during the course of disease from infection to death (Williams et al. 2002). Replication and presence of infectious prions in gut-associated lymph tissue early in the incubation (Sigurdson et al. 1999, Weismann et al. 2002) and epidemiological modeling (M. W. Miller unpublished cited in Williams et al. 2002) suggest that shedding precedes the onset of symptoms in both elk and mule deer.

In this regard, Garner (2001) documented a particularly alarming behavior among deer using frozen feed piles. Deer used the heat from their mouths and nostrils to thaw and dislodge food such that frozen feed piles were dented with burrows made from deer noses. He reported that "Throughout the winter multiple numbers of deer were observed working in and around the same feed piles. I suspect that each deer that feeds this way at a frozen feed pile

leaves much of its own saliva and nasal droppings in the field pile at which its working"(Garner 2001, p. 46).

- **Evidence from captive situations indicates that deer can get CWD from highly contaminated environments.**

In addition to direct lateral transmission, researchers suspect that deer can be infected indirectly from contaminated environments. Contaminated pastures "appear to have served as sources in some CWD epidemics although these observations are anecdotal and not yet corroborated by controlled studies" (Miller et al 1998, [M. W. Miller unpublished and E. S. Williams, W. E. Cook, and T. J. Kreeger unpublished] cited in Williams et al 2002). The potential for transmission from the environment is a function of the degree of contamination and the resistance of disease prions to chemical breakdown (Williams et al 2001, 2002). Consequently, the highest prevalences recorded for CWD outbreaks have been in captive situations (Williams and Young 1980, Williams et al. 2002) where because of abnormal concentration, indirect and direct transmission likely occur together (Williams et al. 2002). At high concentration, the persistence of the CWD prion in contaminated environments, may be a serious obstacle to disease eradication (Williams et al. 2002).

- **Baiting and Feeding causes unnatural concentration of deer**

People use baiting and feeding to concentrate deer for enhanced hunter opportunity or viewing. In northern deer, seasonal concentration in deeryards is a well-known phenomenon (Blouch 1984). However, the potential for close animal-to-animal contact over a feed pile is fundamentally different than the contact yarded deer experience while foraging on natural food. In deeryards, deer eat a variety of woody browse plants and arboreal lichens (Blouch 1984) scattered across a large area. In terms of biomass and nutrition, the best source of browse and lichens may be litter-fall rather than live plant material growing in the understory (Ditchkoff and Servello 1998). Food sources in deer yards (litter and understory plants) are widely distributed over a large area and they are not replaced. Moreover, browse is typically held aloft on the plant stem such that fecal contamination is less likely. Foraging by wintering deer is an optimization process. Energy gains associated with eating need to be balanced against energy costs associated with travel and exposure (Moen 1976). Yarded deer with little or no access to supplemental food maintain relatively large overlapping home ranges (e.g. 110 acres in Minnesota [Nelson and Mech 1981], 480 acres in Michigan [Van Deelen 1995], 318 acres in Quebec [Lesage et al. 2000]) suggesting that foraging widely on a diffuse food source is normal. Garner (2001) monitored 160 radio-collared deer for 2 fall/winter periods in northern Michigan and documented their behavior over feeding sites using both telemetry and direct observations. He demonstrated that, relative to natural forage, supplemental feeding caused reduced home range sizes, increased overlap of home ranges in space and time and dramatic concentrations of activity around feeding sites.

- **Reduction of contact through a ban on baiting and feeding is likely very important to eradicating or containing a CWD outbreak.**

Epidemiological models fit to real-world data on CWD outbreaks in mule deer predict that local extinction of infected deer populations is likely (Gross and Miller 2001). The predicted outcomes of these models are highly sensitive to input estimates of the amount of contact between infected and susceptible deer meaning that small reductions in contact rates can dramatically reduce the rate at which prevalence changes during an epidemic (Gross and Miller 2001). Garner (2001) demonstrated that baiting and feeding was associated with deer concentration, extensive face-to-face contacts, and increasing overlap of deer home ranges.

White-tailed deer have contacts from social and grooming behaviors apart from contact over baiting and feeding sites (Marchinton and Hirth 1984) but social groups of whitetails tend to be small during most of the year (4-6 individuals, Hawkins and Klimstra 1970). Whitetail physiology and behavior are adapted to selective foraging on nutritious plants (Putman 1988). Moreover, social groups tend to exclude one another by using different areas or by using shared areas at different times (Mathews 1989, Porter et al. 1991). Concentration of deer activity over feeding sites increase both direct and indirect contact between groups by increasing home range and core area overlap and by increasing the amount of time that unrelated deer feed in close proximity to each other (Garner 2001).

Eliminating these contacts has added significance because CWD is a uniquely difficult disease to manage and study. There is no treatment and no vaccine. Moreover CWD is difficult to track in a population because of long incubation periods, subtle early clinical signs, a resistant infectious agent, potential for environmental contamination and incomplete understanding of transmission mechanisms. These characteristics make prevention critically important (Williams et al. 2002).

- **Baiting and feeding continues to put Wisconsin's deer herd at risk to other serious diseases**

CWD is not the only infectious disease that threatens Wisconsin's deer herd. One, Bovine Tuberculosis (TB) warrants special attention because the link to baiting and feeding is clear. TB is an infectious bacterial disease that is spread from animal to animal through inhalation of infectious aerosols or ingestion of other infectious body fluids (e.g. saliva). TB bacteria can live outside of an animal for as long as 16 weeks on a frozen feed pile (Whipple and Palmer 2000 cited in Garner 2001) and Garner (2001) demonstrated that supplemental food increased close contact among wild deer through a number of mechanisms. Garner (2001) also demonstrated extensive home range overlap between a TB-positive deer and 15 other radiocollared deer in northern Michigan. Recent epidemiological research suggests that baiting and feeding of deer enabled the TB outbreak in Michigan to persist and spread and that declines in TB prevalence were associated with a ban on baiting and feeding (O'Brien et al. 2002). Current attention is focused on the CWD outbreak in southwestern Wisconsin. However, should CWD or other infectious disease show up elsewhere, baiting and feeding are likely to facilitate or enhance an epidemic. TB has been confirmed on 6 captive game farms in Wisconsin and the presence of over 800 captive cervid farms statewide suggests that the disease risks associated with baiting and feeding are not confined to the known CWD-infected area of southern Wisconsin.

- **What do the experts say relative to artificial feeding and CWD and disease transmission?**

A discussion of CWD in a review of the scientific literature on captive deer done for The Wildlife Society (Professional society for wildlife biologists, managers, and researchers; publisher of 3 premier peerreviewed scientific journals on wildlife ecology and management)...

"Concentration of deer and elk in captivity or in the wild by artificial feeding may increase the likelihood of transmission between individuals." (DeMarais et al. 2002, p. 6).

In a review of the technical literature on CWD by the top CWD specialists in the world...

"Concentrating deer and elk in captivity or by artificial feed probably increases the likelihood of direct and indirect transmission between individuals. Transmission via contact between susceptible and infectious individuals probably requires more than just transient exposure.

Thus, minimal fence-line exposure does not pose excessive risk of transmission; however, prolonged fence-line contact increases the possibility of transmission" (Williams et al. 2002, p.557).

In a peer-reviewed paper on the epidemiology of Bovine TB by the team of veterinarians, epidemiologists, and wildlife researchers working to contain the outbreak in Michigan...
"Previous qualitative examinations of the origins of tested deer already suggested that TB positive animals were more likely to come from the core area. Our new analysis quantifies that risk. The high risk associated with the core coincides with an area of historically prevalent and intensive baiting and supplemental feeding of deer - practices that were likely crucial to the establishment of self-sustaining TB in the deer population" (O'Brein et al. 2002 and citations within).

In oral presentations given to the Texas chapter of the Society of Range Management (Oct. 6 2000) and to the Southeaster Deer Study Group (Feb. 19 2001) by Dr. Robert D. Brown, Professor and Head of the Department of Wildlife and Fisheries Sciences at Texas A&M University, Internationally recognized expert on deer and deer nutrition...
"One of the major points of this paper is the concern over transmission of disease. It amazes me that we have not done more studies in Texas on disease transmission at food plots and deer feeders, whether they be for supplementing the deer or for baiting. We know that in 1994 tuberculosis (TB) was first detected in wild deer in Michigan. It is now in a 5-county area, and has spread to carnivores and dairy herds"... "In Wyoming and around Yellowstone Park, brucellosis is wide spread among cattle, elk, and bison, the latter two species being concentrated on feeding grounds in the winter. Likewise, Chronic Wasting Disease (CWD) has now been observed in free-ranging elk and mule deer in several western states. Since CWD is passed animal to animal, concentrations caused by supplemental feeding is believed to increase the spread of the disease" (Brown Unpublished).

In a report issued by a panel of internationally recognized wildlife disease experts who reviewed Colorado's CWD management program...
"Regulations preventing...feeding and baiting of cervids should be continued" (Peterson et al. 2002).

In a comprehensive review of the ecological and human social effects of artificial feeding and baiting of
wildlife prepared by the Canadian Cooperative Wildlife Health Centre, Department of Veterinary Pathology, University of Saskatchewan...
"Significant ecological effects of providing food to wildlife have been documented through observation and experimentation at the individual, population, and community levels. The increased potential for disease transmission and outbreak is perhaps of greatest and immediate concern; recent outbreaks of bovine tuberculosis and chronic wasting disease in Canada and the United States giving credence to this point. Nevertheless, even if disease is prevented, other significant ecological concerns exist" (Dunkley and Cattet 2003, p. 22).

Review and Acknowledgments

To insure that this document accurately reflects the scientific knowledge of prion disease, CWD, and deer biology, this document was reviewed by the following specialists (position and expertise follows each name). I thank them for their time.

- Judd Aiken Ph.D. (Professor of animal health and biomedical sciences, UW-Madison; prion diseases)
- Valerius Geist Ph.D (Professor Emeritus, Department of Environmental Science, University of Calgary;
- ecology behavior and management of deer)
- Julia Langenberg DVM (Wildlife Veterinarian, Wisconsin DNR; CWD, wildlife diseases)
- Nohra Mateus-Pinilla DVM, Ph.D. (Research Epidemiologist, Illinois Natural History Survey, University
- of Illinois; wildlife diseases, epidemiology)
- Nancy Mathews Ph.D. (Assoc. Professor of wildlife ecology, UW-Madison; deer ecology and behavior)
- Keith McCaffery M.S. (Deer specialist, Wisconsin DNR, retired; deer ecology and management)
- Robert Rolley Ph.D. (Population Ecologist, Wisconsin DNR; population dynamics, deer management)

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Appendix E. Code of Virginia §29.1-521.

§ 29.1-521. Unlawful to hunt, trap, possess, sell or transport wild birds and wild animals except as permitted; exception; penalty.

A. The following shall be unlawful:

1. To hunt or kill any wild bird or wild animal, including any nuisance species, with a gun, firearm or other weapon, or to hunt or kill any deer or bear with a gun, firearm, or other weapon with the aid or assistance of dogs, on Sunday. The provision of this subdivision that prohibits the hunting or killing of any wild bird or wild animal, including nuisance species, on Sunday shall not apply to (i) raccoons, which may be hunted until 2:00 a.m. on Sunday mornings; (ii) any person who hunts or kills waterfowl, subject to geographical limitations established by the Director and except within 200 yards of a place of worship or any accessory structure thereof; or (iii) any landowner or member of his family or any person with written permission from the landowner who hunts or kills any wild bird or wild animal, including any nuisance species, on the landowner's property, except within 200 yards of a place of worship or any accessory structure thereof. However, a person lawfully carrying a gun, firearm or other weapon on Sunday in an area that could be used for hunting shall not be presumed to be hunting on Sunday, absent evidence to the contrary.

2. To destroy or molest the nest, eggs, dens or young of any wild bird or wild animal, except nuisance species, at any time without a permit as required by law.

3. To hunt or attempt to kill or trap any species of wild bird or wild animal after having obtained the daily bag or season limit during such day or season. However, any properly licensed person, or a person exempt from having to obtain a license, who has obtained such daily bag or season limit while hunting may assist others who are hunting game by calling game, retrieving game, handling dogs, or conducting drives if the weapon in his possession is an unloaded firearm, a bow without a nocked arrow or an unloaded crossbow. Any properly licensed person, or person exempt from having to obtain a license, who has obtained such season limit prior to commencement of the hunt may assist others who are hunting game by calling game, retrieving game, handling dogs, or conducting drives, provided he does not have a firearm, bow or crossbow in his possession.

4. To knowingly occupy any baited blind or other baited place for the purpose of taking or attempting to take any wild bird or wild animal or to put out bait or salt for any wild bird or wild animal for the purpose of taking or killing them. There shall be a rebuttable presumption that a person charged with violating this subdivision knows that he is occupying a baited blind or other baited place for the purpose of taking or attempting to take any wild bird or wild animal. However, this shall not apply to baiting nuisance species of animals and birds, or to baiting traps for the purpose of taking fur-bearing animals that may be lawfully trapped.

5. To kill or capture any wild bird or wild animal adjacent to any area while a field or forest fire is in progress.

6. To shoot or attempt to take any wild bird or wild animal from an automobile or other vehicle, except as provided in § 29.1-521.3.
7. To set a trap of any kind on the lands or waters of another without attaching to the trap: (i) the name and address of the trapper; or (ii) an identification number issued by the Department.

8. To set a trap where it would be likely to injure persons, dogs, stock, or fowl.

9. To fail to visit all traps once each day and remove all animals caught, and immediately report to the landowner as to stock, dogs or fowl that are caught and the date. However, the Director or his designee may authorize employees of federal, state, and local government agencies, and persons holding a valid

Commercial Nuisance Animal Permit issued by the Department, to visit conibear-style body-gripping traps that are completely submerged at least once every 72 hours and the Board may adopt regulations permitting trappers to visit traps less frequently under specified conditions.

10. To hunt, trap, take, capture, kill, attempt to take, capture or kill, possess, deliver for transportation, transport, cause to be transported, by any means whatever, receive for transportation or export, or import, at any time or in any manner, any wild bird or wild animal or the carcass or any part thereof, except as specifically permitted by law and only by the manner or means and within the numbers stated. However, the provisions of this section shall not be construed to prohibit the (i) use or transportation of legally taken turkey carcasses, or portions thereof, for the purposes of making or selling turkey callers, (ii) the manufacture or sale of implements, including, but not limited to, tools or utensils, made from legally harvested deer skeletal parts, including antlers, or (iii) the possession of shed antlers.

11. To offer for sale, sell, offer to purchase, or purchase, at any time or in any manner, any wild bird or wild animal or the carcass or any part thereof, except as specifically permitted by law, including, but not limited to, subsection D of § 29.1-553. However, any nonprofit organization exempt from taxation under § 501(c)(3) of the Internal Revenue Code, which is (i) organized to provide wild game as food to the hungry and (ii) authorized by the Department to possess, transport and distribute donated or unclaimed meat to the hungry, may pay a processing fee in order to obtain such meat. Such fees shall not exceed the actual cost for processing the meat. In addition, any nonprofit organization exempt from taxation under § 501(c)(3) of the Internal Revenue Code, that is (a) organized to support wildlife habitat conservation and (b) approved by the Department, shall be allowed to offer wildlife mounts that have undergone the taxidermy process for sale in conjunction with fundraising activities. A violation of this subdivision shall be punishable as provided in § 29.1-553.

B. Notwithstanding any other provision of this article, any American Indian, who produces verification that he is an enrolled member of a tribe recognized by the Commonwealth, another state or the U.S. government, may possess, offer for sale or sell to another American Indian, or offer to purchase or purchase from another American Indian, parts of legally obtained fur-bearing animals, nonmigratory game birds, and game animals, except bear. Such legally obtained parts shall include antlers, hooves, feathers, claws and bones.
"Verification" as used in this section shall include, but is not limited to, (i) showing a valid tribal identification card, (ii) confirmation through a central tribal registry, (iii) a letter from a tribal chief or council, or (iv) certification from a tribal office that the person is an enrolled member of the tribe.

C. A violation of subdivisions A 1 through 10 shall be punishable as a Class 3 misdemeanor.

Code 1950, § 29-143; 1962, c. 469; 1974, c. 302; 1979, c. 264; 1987, c. 488; 1988, c. 175; 1989, c. 421; 1990, c. 237; 1994, cc. 244, 436; 1997, c. 249; 1998, c. 415; 2000, c. 13; 2001, cc. 26, 60; 2004, c. 862; 2005, cc. 170, 533, 534; 2006, cc. 20, 215; 2008, cc. 160, 161; 2010, c. 10; 2014, cc. 152, 482.

Appendix F. Virginia Department of Game and Inland Fisheries- Ad Hoc Baiting Committee Letter Solicitation

As part of drafting this report, the Committee surveyed the conservation community within or closely involved within Virginia that may be impacted by the removal of the prohibition of hunting over bait and asked if any of these organizations would like to express an opinion (pro or con) regarding hunting over bait in Virginia. At the time of this report, a number of national and Virginia conservation and professional organizations sent letters expressing opinions regarding hunting over bait in Virginia. None of the organizations were supportive of the removal of the prohibition against hunting over bait. The responding organizations responded (letters begin on next page):

Responding Organizations:

- American Association of Wildlife Veterinarians
- National Wild Turkey Federation
- Quality Deer Management Association
- Southeastern Cooperative Wildlife Disease Study
- The Wildlife Society
- The Wildlife Society- Virginia Chapter
- United States Forest Service- George Washington and Jefferson National Forests
- Virginia Bear Hunters Association
- Virginia Bowhunters Association
- Virginia Department of Agriculture and Consumer Services
- Virginia Department of Health
- Virginia Deer Hunters Association
- Virginia Hunting Dog Alliance
- Virginia Waterfowlers' Association
- Wildlife Center of Virginia
- Western Virginia Deer Hunters' Association

AMERICAN ASSOCIATION OF WILDLIFE VETERINARIANS

October 3, 2014

Ben Lewis
Hunting Over Bait in Virginia Committee
Virginia Department of Game and Inland Fisheries
Charles City, VA 23030

Dear Mr. Lewis and members of the Hunting Over Bait in Virginia Committee:

We appreciate the opportunity to express our support for the Virginia Department of Game and Inland Fisheries' (VDGIF) prohibition on hunting over bait. As an organization comprised of state, federal, and non-government wildlife veterinarians, we encourage the recognition of disease syndromes, risks, and mitigating issues to prevent the introduction or establishment of diseases in wildlife populations.

Supplemental feeding of wildlife directly enhances and acts as a driver of disease transmission due to amplified direct or indirect contact between infected and healthy animals. Research indicates that many wildlife diseases endemic to large geographic regions may never be eradicated from reservoir wildlife populations unless supplemental feeding is discontinued. Examples include brucellosis in the Wyoming elk and bovine tuberculosis in white-tailed deer of northeastern Michigan. Both diseases cost state and federal agencies millions in hunter dollars and general funds for surveillance and eradication efforts, yet the diseases persist in wildlife reservoirs due to continued supplemental and artificial feeding practices. In addition to spilling over into nearby cattle herds and resulting in export restrictions, production losses, and the culling of thousands of potentially exposed cattle, both diseases are zoonotic presenting a risk to the public, hunters and livestock owners.

Congregating wildlife at artificial feed or bait sites has proven to have long-lasting and detrimental effects on the health and well-being of these populations. Once a disease becomes established in a wildlife population, it has proven nearly impossible to eradicate. Baiting leads to repeated and unnatural congregation of wildlife and increases the unmitigated risk of transmission and establishment of diseases in free-ranging wild animals and associated domestic species. The American Association of Wildlife Veterinarians fully supports VDGIF's prohibition on hunting over bait.

Thank you again for the opportunity to comment this important issue.

Sincerely,

Peregrine Wolff, DVM
President of the American Association of Wildlife Veterinarians

Aloysius Heil 8075 Sperryville Pike Culpeper, VA 22701
E-mail: alwinheil5@gmail.com
Phone: (540) 727 8533

To
Mr. Ben Lewis VDGIF
Hunting over Bait Committee
3801 John Tyler Memorial Highway
Charles City, VA 23030

24-SEP-2014

Dear Mr. Lewis,

My name is Aloysius Heil, I live in Culpeper Virginia, and I hunt bear with dogs.
Today I am writing to express my opposition to hunting over bait.

1.Baiting is NOT a traditional hunting practice. In the current DGIF Hunting and Trapping regulations it says "It is unlawful to occupy any baited blind or baited place for the purpose of taking any wild game bird or animal or put out bait or salt for the purpose of taking or killing any wild bird or animal Etc."
For years the DGIF biologists whom we pay to manage our wildlife for its best interest and welfare, which in turn makes it in our own best interest, has said baiting is harmful.
2.Baiting is NOT sound wildlife management. Baiting spreads disease. It encourages an unnatural congregation of animals in a small area which promotes the spread of contagious diseases. When one kid in a class gets the flu you can bet more will also.
Baiting is a law enforcement nightmare. How can a law be enforced that may say one animal may be hunted over bait and another animal that smells the same food source can't come to that bait. How could you legally put corn out for deer, for example, and keep bears and turkeys from coming to it when that species may be illegal to bait?
Baiting lessons animals fear of humans. We all know who suffers the consequences when artificial feed supplements bring formerly wild animals into human/animal conflicts from losing their inherent caution of humans. Enough animals are already killed with the "kill permits" issued because of landowner and homeowner complaints. For years one of the pet phrases from DGIF has been ***"A fed bear is a dead bear".***
3. Baiting is NOT of positive economic value. Many people, myself and many thousands of other Virginia hunters and citizens included, view that killing game over artificial food supplies is not good for hunting's reputation. With the DGIF striving desperately to recruit new hunters this is not the proper image needing to be put on display. "Other states do it" is no more of a valid reason for Virginia passing a baiting law than a teenager saying "Gee mom all my friends are doing it." North Carolina has a baiting law that is causing them a multitude of problems.
When baiting is causing people to view a part of hunting unfavorably they will not participate, neither in state hunters or hunters from out of state.
When the healthy wildlife population we enjoy now is no longer available you can bet hunter participation will decline drastically. Baiting can easily cause over harvesting, especially when coupled with the lengthy hunting seasons Virginia now offers.
Also you can bet this bill will not be accepted by the National Forrest Service to allow baiting on their land. Once again the same battle will come up between people hunting on private land and those that do not have access to private land and must use the National Forrest.
In closing I respectfully ask that baiting not be passed out of committee. It is not a valid use of sportsmen's money nor does it benefit Virginia's wildlife.

Regards,

Aloysius Heil

NWTF
VIRGINIA

October 3, 2014

Mr. Ben Lewis
VDGIF Hunting Over Bait Committee
3801 John Tyler Memorial Highway
Charles City, VA 23030

Mr. Lewis,

I am the President of the Virginia State Chapter of the National Wild Turkey Federation (VANWTF). The VANWTF has over 6000 members and 53 local chapters throughout Virginia. We support conservation of the wild turkey and preservation of the hunting heritage.

The VANWTF Board, which includes VANWTF officers and the local chapter presidents, met on September 21st. We discussed baiting and arrived at a position we could agree to unanimously. Our position, in relation to Senate Joint Resolution No, 79, is as follows: **Based on current biological data and the potential adverse effects on wild turkey populations, the Virginia State Chapter of the NWTF does not endorse baiting.**

Rick Layser
148 Troxel Gap Road
Middlebrook, VA24459
540-490-0350
rglayser@gmail.com

The University of Georgia

DEPARTMENT OF POPULATION HEALTH
College of Veterinary Medicine
Southeastern Cooperative Wildlife Disease Study

October 3, 2014

Mr. Benjamin Lewis
VDGIF Hunting Over Bait Committee
3801 John Tyler Memorial Hwy.
Charles City, VA 23030

Dear Mr. Lewis:

This letter is in response to your request for information and an opinion regarding hunting wild birds and wild mammals over bait. Baiting of wildlife is a complex issue involving many potentially complicating and competing factors; however, I will confine my comments to the area of wildlife health.

I have served for 14 years as the Director of the Southeastern Cooperative Wildlife Disease Study (SCWDS) at the University of Georgia's College of Veterinary Medicine and worked as a researcher here for eight years prior to becoming Director in 2000. The SCWDS was founded in 1957 by the Southeastern Association of Fish and Wildlife Agencies as the first regional diagnostic and research laboratory established specifically for investigating wildlife diseases. Today, SCWDS provides wildlife health services to fish and wildlife management agencies in 18 states, and to the U.S. Departments of Agriculture and the Interior; conducts research on disease issues involving wildlife; and provides education and training to agencies and individuals working in the fields of wildlife management, animal agriculture, and human health. SCWDS is regionally, nationally, and internationally recognized as an authoritative source on wildlife health information and adheres strictly to science-based assessments of wildlife disease issues.

Baiting increases risks for multiple diseases in white-tailed deer and other wildlife. As a highly experienced, professional, wildlife health organization, SCWDS strongly opposes wildlife baiting. Our opposition is based on the following facts: Artificial feeding during hunting season (baiting) or out of season increases disease risk factors, including unnatural congregation and close contact between animals, physiological stress, and contamination of feed with disease agents shed by wild and domestic animals. Collectively, these altered risks dramatically increase disease transmission opportunities when compared to natural settings. A wildlife baiting station is comparable to a day care center, where young children share infectious disease agents and then bring them home to share with their family and friends. In addition to enhancing disease transmission among animals, bait can be the source of non-infectious disease agents, such as fungal toxins, that threaten the health of deer, wild turkeys, and other wild animals consuming contaminated bait.

The disease risks associated with wildlife baiting are not theoretical; they are real and current examples are readily available. Providing artificial feed through baiting and/or supplemental feeding is regarded as the primary contributing factor in two of the most intractable and expensive animal disease problems in the United States today, and they are not going away anytime soon. Baiting and/or feeding were scientifically demonstrated to be critical in establishing and maintaining two important cattle diseases that had been all but eradicated in this country: bovine tuberculosis (TB) in Michigan deer and bovine brucellosis in Yellowstone elk and bison. Extensive baiting/artificial feeding increased transmission, allowing TB and brucellosis to be maintained in wildlife populations in the U.S. for the first time. These diseases can infect wild and domestic animals and humans, with enormous impacts on livestock producers, hunters, and the state and federal agencies responsible for wildlife resources, animal agriculture, and public health. Bovine TB has been confirmed in more than 50 cattle herds and two humans in MI, statewide Accredited-Free TB status has been lost, and every year TB costs producers, as well as state and federal taxpayers, millions of dollars. The total

cost is more than $150,000,000 since 1995, and it continues to climb as TB is detected in new cattle herds. Idaho, Montana, and Wyoming lost their Class Free Brucellosis status since 2004 after cattle herds were infected through contact with elk and regained it only after enormous and ongoing costs to the industry and taxpayers. The persistence of bovine TB in wild deer in a portion of Michigan and of brucellosis in wild elk in the Greater Yellowstone Area will undoubtedly continue to be a costly problem; a problem that very likely could have been prevented.

Available data indicate that risk of transmission of chronic wasting disease (CWD), which is an immense potential threat to wild deer and elk in many parts of the country, also is enhanced by baiting/feeding. The disease agent that causes CWD can be transmitted from animal to animal, and is shed in saliva, feces, and urine by infected animals into the environment where it persists and remains infectious for several years. Chronic wasting disease was first diagnosed in West Virginia in 2005, and has been found in wild deer in an adjacent area of Virginia every year since 2009**.** Baiting has the real potential to facilitate CWD transmission by bringing animals to sites where they can become infected via contact with other animals or by consumption of contaminated bait. In many states, baiting is not allowed if CWD or another significant disease is detected in the state or adjacent areas. However, reactive policies such as these often are too little too late.

Providing artificial feed in bait presents other health risks for wildlife, in addition to enhancing transmission of infectious agents. Aflatoxin production by fungus begins on grain in the field and continues after grains are placed in the environment as bait. Aflatoxins represent a health threat when large volumes of affected grains are made available to wildlife. SCWDS research found half of the corn piles used as bait in North and South Carolina had aflatoxin levels in excess of FDA allowable levels for animal feeds. Aflatoxins are extremely potent toxins with many deleterious effects in wild and domestic birds and mammals, and in humans.

In summary, the above examples, as well as the regular emergence of new diseases in wild animals, all illustrate the unpredictability of health issues that can arise in wildlife and the need to protect Virginia's wildlife, domestic animals, and people by maintaining the prohibition of wildlife baiting. These examples also strongly support our steadfast conviction that prevention is the only truly effective method to manage diseases in wildlife populations. Adhering to proactive, preventive policies, rather than relying on reactive approaches after the detection of a disease, offers the only acceptable pathway to success. Trying to "play catch-up" with a disease after its establishment in a wildlife population carries no guarantee of success; however, it can be guaranteed that attempting to manage an established wildlife disease will be a very costly and long-term endeavor.

If you have any questions or would like additional information, please do not hesitate to contact me.

Sincerely,

John R. Fischer, DVM, PhD
Director and Professor

JRF:com

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THE WILDLIFE SOCIETY

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3 October 2014

Benjamin Lewis
VDGIF Hunting Over Bait Committee
3801 John Tyler Memorial Hwy.
Charles City, VA 23030
benjamin.lewis@dgif.virginia.gov

RE: Comments for the Committee's Senate Joint Resolution No. 79 Report

Dear Committee Member Lewis:

Thank you for providing The Wildlife Society the opportunity to comment on the ongoing examination by your committee into the potential effects of allowing hunting over bait in Virginia.

The Wildlife Society, founded in 1937, is a non-profit scientific and educational organization of nearly 10,000 wildlife professionals, dedicated to excellence in wildlife stewardship through science and education. Our mission is to inspire, empower, and enable wildlife professionals to sustain wildlife populations and habitats through science-based management and conservation.

The use of hunting over bait can have substantial ecological, biological, and social impacts. We believe policy decisions regarding the management of wildlife populations should be science-based, and offer the following insights into the wildlife science related hunting over bait:

- Wildlife baiting can increase hunter success, especially among bow hunters (Kilpatrick 2010; Langenau 1985). Baiting as a method to enhance hunting opportunities is a part of human history. From our earliest days, hunters would put feed out for wildlife to improve their harvest of food and fur.

- The risk of infectious disease is increased by prolonged exposure to other individuals concentrated by baiting practices. This can contribute to the spread of wildlife diseases such as chronic wasting disease (CWD) and bovine tuberculosis in ungulates (Thompson 2010; Ramsey 2014; Bollinger 2004). The spread of CWD is a particular concern for the Commonwealth of Virginia, as multiple cases of the disease have been confirmed in the state since 2009.

- Non-target species are also directly affected by wildlife baiting. Extra food provided by baiting can attract migratory birds, game birds, small mammals, and other wildlife not targeted by the bait (Gray 2004, Turner 2008). Crowding, as with target species, increases disease risk, stress, and habitat damage and disrupts natural ecological interactions.

Baiting, if conducted over longer periods of time and/or in large quantities can have ecological and biological impacts that are similar to supplemental feeding programs. Anthropogenic food resources, such as those provided through supplemental feeding or long-term baiting practices can have these implications:

- Artificially provided food resources can lead to higher densities and smaller home ranges of wildlife than would occur naturally (Boutin 1990). Wildlife may concentrate around anthropogenic food resources, which is the base cause for many secondary problems.

- In black bears, anthropogenic food sources can reduce home range sizes which can result in heavily skewed sex ratios towards males and changes in female reproductive success (Beckman and Berger 2003).

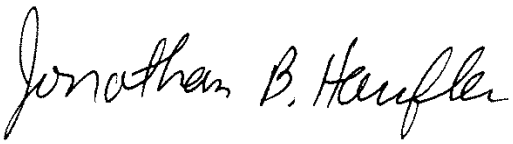
- Habitat damage from trampling and overgrazing can be caused by higher densities of animals (Doman 1944; Murden 1993), which can have negative implications for the larger ecosystem when occurring over an extended period of time.

- Wildlife can become habituated to anthropogenic food sources. Wildlife may come to rely on anthropogenic sources of food, returning to human dominated landscapes more often. This can lead to increases in potentially harmful human-wildlife conflicts, including automobile and property damage (Hristienko 2007). Black bears have a strong tendency to adapt to the presence of people, increasing the chance for harmful human-bear interaction (McCullough 1982). Once bears are food-conditioned, it is very rare for them to revert to wild behavior and incidences of nuisance behavior can rise (McCullough 1982, Hristienko 2007).

- Attention and resources from other science-based wildlife habitat management activities may be diverted to enforce, regulate, and manage the ecological repercussions of anthropogenic food resources (Williams 2002, Horan 2005, McCullough 1982).

We trust the committee will fully consider the science-based impacts hunting over bait could potentially have on Virginia's wildlife resources. If you have any further questions, please contact Keith Norris, Assistant Director of Government Affairs at keith.norris@wildlife.org or (301)897-9770 x309.

Sincerely,



Jon Haufler, President
The Wildlife Society

Further Information: *Baiting and Supplemental Feeding of Game Wildlife Species*. 2006. The Wildlife Society, Technical Review 06-1.
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USDA United States Department of Agriculture | Forest Service | George Washington and Jefferson National Forests | 5162 Valleypointe Parkway Roanoke, VA 24019-3050 540/265-5100

File Code: 2610
Date: September 29, 2014

Mr. Ben Lewis
VDGIF Hunting Over Bait Committee
3801 John Tyler Memorial Highway
Charles City, VA 23030Charles City, VA 23030

Dear Mr. Lewis:

Thank you for requesting comment from the George Washington and Jefferson National Forests regarding Virginia Senate Joint Resolution No.79. This resolution commissioned the Virginia Department of Fisheries (VDGIF) to prepare a report that studies the effects of removal of a prohibition on hunting over bait.

For a multitude of biological and social reasons we are opposed to the removal of this ban on public land. As in several southern states, where baiting is allowed on private land, baiting remains prohibited on public lands. For specific information regarding the background to our response, please contact Carol Croy in our Roanoke office.

Thank you for the opportunity to comment. We are avid supporters of the privilege to hunt and fish on National Forest Lands and remain a dedicated partner to the VDGIF.

Sincerely,

/s/ H. Thomas Speaks, Jr.
H. THOMAS SPEAKS, JR.
Forest Supervisor

QUALITY DEER MANAGEMENT ASSOCIATION

P.O. Box 160 • 170 Whitetail Way • Bogart, GA 30622
PHONE: 800.209.3337 • FAX: 706.353.0223 • www.QDMA.com

3 September 2014

Mr. Ben Lewis
VDGIF Hunting Over Bait Committee
3801 John Tyler Memorial Hwy.
Charles City, VA 23030

Dear Mr. Lewis,

On behalf of the Quality Deer Management Association (QDMA) I am writing to provide input on Senate Joint Resolution (SJR) 79 which would legalize baiting for deer. The QDMA is a national nonprofit wildlife conservation organization dedicated to ensuring the future of white-tailed deer, wildlife habitat and our hunting heritage. The QDMA has over 55,000 members nationwide, and our membership includes hunters, landowners and natural resource professionals.

Listed below are several of our concerns about the legalization of baiting in Virginia.

Ethical Concerns:

- A key distinction between humans and other animals is our ethics – the standards by which we reduce animals like deer, to the basic elements of life – food and clothing. This is especially true among American hunters, who for decades have fought for ethical standards known as Fair Chase. Because of this, it is not considered ethical to shoot wild ducks, wild turkeys or doves over bait. As such, why legalize this practice for deer – the most prized and economically important game animal in Virginia?

Disease Concerns:

- Baiting has the potential to spread disease among deer as has been shown in other states known to have chronic wasting disease (CWD) and bovine tuberculosis (TB). Virginia has confirmed the presence of CWD and should do everything possible to contain its spread.

Social Concerns:

- The vast majority of the hunting and non-hunting public objects to hunting over bait. In fact, a recent national survey revealed that 73% of Americans oppose hunting deer over bait.
- Legalization of baiting has been shown to create both “offensive” and “defensive” baiting situations among neighboring hunters, thus increasing conflicts.

Biological Concerns:

- Baiting can alter deer behavior patterns, increasing movement and feeding activity at night rather than during the day. Research has clearly shown that deer harvest does not increase with legalized baiting.
- Experience in other states suggests a 4 to 8-fold increase in the amount of artificial food on the landscape following legalization of baiting.
- Ample evidence confirms that predators key in on feed sites to ambush deer – which could exacerbate fawn mortality rates.
- Baiting has been shown to increase reproduction and spread of nuisance animals such as feral hogs and raccoons.
- Baiting has been linked to habitat damage around bait sites – as anyone who has raised cattle can appreciate (beaten down, eroded trails to feed sites, etc).

This resolution is not good for hunting, wildlife management, or wildlife conservation. Baiting is simply not needed or justified and it is not worth placing the resource at increased risk while further alienating non-hunters from the already shrinking base of Virginia hunters. For all these reasons, I strongly urge you to oppose SJR 79. Thank you for your attention to this matter and your commitment to Virginia's natural resources.

Respectfully,

Kip Adams

Kip Adams
Director of Education and Outreach

Virginia Chapter of The Wildlife Society

Chartered October 15, 1982

Radford University
Box 6931, Biology Department
Radford, VA 24142

28 September 2014

Virginia Department of Game and Inland Fisheries
Attn: Ben Lewis, Hunting Over Bait in Virginia Committee
4016 West Broad Street
Richmond, VA 23230

Dear members of the Hunting Over Bait in Virginia Committee:

On behalf of the Virginia Chapter of The Wildlife Society, the principal organization representing wildlife professionals across the Commonwealth, our Executive Board would like to comment upon the Department's internal Hunting Over Bait in Virginia Committee and the Committee's Senate Joint Resolution No. 79 (SJR79) report.

We are pleased that the Virginia Department of Game and Inland Fisheries has taken a proactive stance in recent years in limiting the feeding of bear and deer. However, with the SJR79 report under consideration, we suggest that the regulations appropriately strengthen and supplement existing regulations that prohibit hunting over bait, and we hope that the continued ban would demonstrate the agency's long-standing commitment to sound wildlife management.

The Wildlife Society, an international association of over 10,000 wildlife professionals and students dedicated to excellence in wildlife stewardship through science and education, published a position statement in 2007 on "Baiting and Feeding of Game Wildlife Species," which can be accessed on-line at http://joomla.wildlife.org/documents/positionstatements/42-Baiting%20and%20Feeding.pdf. Concerns enumerated in the position statement regarding the feeding of game species – applicable to some nongame species as well – include: increasing wild animal densities and concentrations above natural levels, leading to elevated risks for disease transmission, habitat damage, and social competition; increasing wild animal habituation to humans (and humans to wildlife), diminishing wild behavior, and increasing the potential for negative human-wildlife interactions; and, redirecting emphasis away from natural habitat management and toward a more artificial form of wildlife management.

You will notice on the last page of the enclosed position statement that one of the specific recommendations of The Wildlife Society is to "Encourage fish and wildlife agencies, wherever

possible, to phase-out supplemental feeding of wild ungulate populations, both in-house and by the general public, and to manage populations at levels that are compatible with the long-term carrying capacity of the habitat." Feeding deer is unnecessary. Most deer managers agree that the incremental gains in body and antler mass achieved through supplemental feeding of deer are more than offset by problematic increases in native habitat damage, risk for disease transmission, tameness of deer, and conflicts with humans.

Further, bait is not needed to achieve success with effectively placed trail cameras. A study conducted by Virginia Tech on Amelia Springs Hunt Club showed that deer populations could be estimated successfully using trail cameras without bait.

It is the position of the Virginia Chapter of The Wildlife Society that artificial feeding of deer, bear, wild turkey, feral hogs, raccoons, coyotes, foxes, opossums, and waterfowl by the general public is an activity that is often harmful to the long-term health of wildlife populations, agricultural resources, property, and human health and safety. Therefore, hunting over bait should not be considered a viable hunting method in the Commonwealth.

We appreciate the opportunity to provide comments on this proposed action, SJR79. Once again, we would like to commend the Department for taking a strong stance on potentially unpopular initiatives that, nonetheless, are important to the health of wildlife and habitats as well as for human coexistence with wildlife. Please do not hesitate to contact me at kpowers4@radford.edu if the Virginia Chapter of The Wildlife Society can provide further assistance.

Sincerely,

Karen Powers
President

Cc:
Andy Rosenberger, Past-president
Todd Frederickson, Treasurer
Tamara Johnstone-Yellin, Secretary
VATWS Conservation Review Committee:
- Galon Hall
- Scott Klopfer
- Mark Ford
- Steve Tanguay
- Katherina Gieder
- Susan Jewell
- Mike Manning
- Mike Anderson

Virginia Bowhunters Association
Robert M Pecora, President
11211 Hume Road
Hume, Virginia 22639

October 8, 2014

W. Matt Knox
Deer Project Coordinator
1132 Thomas Jefferson Road
Forest, Va. 24551

Dear Matt,

At your request, the Virginia Bowhunters Association, at its quarterly meeting in September, discussed the issue of hunting over bait in Virginia. The delegates present voted to oppose hunting over bait at this time.

We had a lengthily discussion over this issue and many points of views were expressed. The main reason expressed against hunting over bait was the possibility of spreading CWD within a heard of deer sharing the bait. Other concerns of sportsmanship, ethics, and fair chase were discussed. The sale of bait and food products at many of the large stores, such as Walmart, was also brought to our attention as well as the possible benefit of hunting over bait for other species then deer.

At any event, after this discussion, a vote was taken of the delegates, which represent many local archery clubs throughout the state, to oppose hunting over bait at this time. We do feel that more discussion is needed on this issue to explore all the various aspects of this issue.

Sincerely submitted,

Robert Pecora, President

David Steger, President
7931 Newport Rd
Catawba, VA 24070
540-384-6506

Richard Sprinkle, Vice President
630 Prease Rd
Buchanan, VA 24066
540-254-2578

VIRGINIA
BEAR HUNTERS
ASSOCIATION

Angie Guthrie-Ponton, Secretary
7362 Little Mountain Rd
New Castle, VA 24127
540-864-5250

Wayne Ball, Treasurer
P. O. Box 630
Raven, VA 24639
276-964-5961

September 22, 2014

Ben Lewis
VDGIF Hunting Over Bait Committee
3801 John Tyler Memorial Hwy
Charles City, VA 23030

Dear Mr. Lewis and members of the Committee:

I am writing on behalf of the Virginia Bear Hunters Association (VBHA) to express our opposition to the removal of the prohibition of hunting over bait. After SJR79 was introduced in the 2014 Virginia Assembly session, we had discussions at two of our VBHA membership meetings regarding hunting over bait. In both meetings the members in attendance voted unanimously to oppose the legalization of hunting over bait. The VBHA Executive Board subsequently discussed the issue, and also voted unanimously to oppose it.

There are several reasons bear hound hunters oppose baiting:

1. We have seen the results of the current option for feeding deer up until the first of September. These "deer feeders" not only feed deer, but all wildlife including turkeys, bears, raccoons, crows, etc. This fashioned food source causes wildlife to congregate and to lose their fear of humans. I guess that is the point! Specifically speaking of bears, once they find a food source, they never forget it and will check that location at every opportunity. That is not conducive to "keeping bears wild," and in our opinion, this artificial feeding of bears has lured them out of their natural habitat where they are then apt to be labeled "nuisance" bears when foraging around humans and neighborhoods. These feeders have also taught bears to eat corn, and then when they find a farmer's cornfield, they are too often killed just for being a bear.
2. Since the removal of the prohibition of hunting over bait would apply only to private property, it would create another unfair advantage for the elite hunters who either own or can afford to lease private property. The average working man, probably the majority of Virginians who buy hunting licenses will not be allowed to participate.
3. Bear hound hunters are.....hunters! We love the pursuit. Hunting over bait, in our opinion, amounts to shooting a sitting duck and is more slaughter than hunting.
4. We trust the VDGIF game biologists to manage wildlife populations, and we do not entrust politicians with that task. If there are too many animals in a particular area, VDGIF should liberalize hunting opportunities by adding more time for all hunters.
5. Should a resolution requested by a constituent of one Senator with no additional patrons, referred to the Senate Rules where it was passed by indefinitely, be given the standing to take our biologists away from their work to "study" an issue they have always steadfastly opposed? How is this influence perceived by the hunting community? How would the legitimacy of killing wildlife attracted by their most basic instinct be perceived by Virginia citizens?
6. With the extra hunting days granted by the removal of the prohibition of hunting on Sundays, we think game populations should be reassessed after several years. Introducing another new option like hunting over bait would skew the population estimates and our wildlife could be over-harvested in a few seasons.
7. Hunting over bait would be the first, albeit a giant step toward the commercialization of hunting in Virginia. The tradition of hunting for recreation and sustenance would be replaced by the practice of purchasing a slaughter of our tremendous natural resource.

We appreciate the opportunity to provide our feedback on the issue of hunting over bait in Virginia.

Sincerely,

David A. Steger

David A. Steger, President
Virginia Bear Hunters Association

VIRGINIA

BEAR HUNTERS ASSOCIATION

I oppose baiting of deer, bear or turkeys and other wildlife. Wildlife that congregates around a pile of corn or bait barrel is far more likely to contract and spread disease. Chronic Wasting Disease is a clear and present danger to Virginia's deer herd. In many parts of the country baiting may be appropriate due to local custom and the necessity caused by the geography. In Virginia, baiting has historically not been deemed appropriate by the public, or necessary to manage wildlife populations or provide fair chase hunting opportunities. We believe the move to allow baiting will only lead to the commercialization of hunting opportunities that will drive the average hunter off the land. Even now some individuals are charging $5,000 or more to kill a trophy animal in Virginia. Baiting makes guaranteed hunts possible and will drive up the price of leasing land as the greed takes over and Virginia's hunting opportunities are marketed to rich urban hunters.

As animals are drawn to bait sites the shooters often assume that they have ownership of the animals. The Northern American model of wildlife management, introduced at the beginning of the 20th Century, rejected the concept of private ownership and commercial exploitation of wildlife in favor of government management on behalf of all the people. The first sportsmen's conservation organization Boone & Crockett explains it simply:

> The North American Model of Wildlife Conservation is anchored by a Supreme Court decision that decreed that wildlife belongs to the people, and not government, corporations or individuals. It further directs how this natural resource is to be used and managed under sustainable guidelines for the betterment of wildlife and people. It is the reason why we still have abundant, wildlife populations in the U.S. and Canada and the opportunity to freely hunt, fish or enjoy this wildlife each in our own way.

FAIR CHASE STATEMENT

FAIR CHASE, *as defined by the Boone and Crockett Club, is the ethical, sportsmanlike, and lawful pursuit and taking of any free-ranging wild, native North American big game animal in a manner that does not give the hunter an improper advantage over such animals.*

1.Baiting is NOT a traditional hunting practice. In this years DGIF Hunting and Trapping regulations it says"It is unlawful to occupy any baited blind or baited place for the purpose of taking any wild game bird or animal or put out bait or salt for the purpose of taking or killing any wild bird or animal Etc."-page 22

For years the DGIF biologists whom we pay to manage our wildlife for it's best interest and welfare, which in turn makes it in our own best interest, has said baiting is harmful.

2.Baiting is NOT sound wildlife management. Baiting spreads disease. It encourages an unnatural congregation of animals in a small area which promotes the spread of contagious diseases. When one kid in a class gets the flu you can bet more will also.

Baiting is a law enforcement nightmare. How can a law be enforced that may say one animal may be hunted over bait and another animal that smells the same food source can't come to that bait. How could you legally put corn out for deer, for example, and keep bears and turkeys from coming to it when that species may be illegal to bait?

Baiting lessons animals fear of humans. We all know who suffers the consequences when artificial feed supplements bring formerly wild animals into human/animal conflicts from losing their inherent caution of humans. Enough animals are already killed with the "kill permits" issued because of landowner and homeowner complaints. For years one of the pet phrases from DGIF has been ***"A fed bear is a dead bear".***

3. Baiting is NOT of positive economic value. Many people, myself and many thousands of other Virginia hunters and citizens included, view that killing game over artificial food supplies is not good for hunting's reputation. With the DGIF striving desperately to recruit new hunters this is not the proper image needing to be put on display. "Other states do it" is no more of a valid reason for Virginia passing a baiting law than a teenager saying "Gee mom all my friends are doing it." North Carolina has a baiting law that is causing them a multitude of problems.

When baiting is causing people to view a part of hunting unfavorably they will not participate, neither instate hunters or hunters from out of state.

When the healthy wildlife population we enjoy now is no longer available you can bet hunter participation will decline drastically. Baiting can easily cause overharvesting, especially when coupled with the lengthy hunting seasons Virginia now offers.

Also you can bet this bill will not be accepted by the National Forrest Service to allow baiting on their land. Once again the same battle will come up between people hunting on private land and those that do not have access to private land and must use the National Forrest.

In closing I respectfully ask that baiting not be passed out of committee. It is not a valid use of sportsmen's money nor does it benefit Virginia's wildlife.

Regards,

Richard Sprinkle

VP, VBHA

COMMONWEALTH of VIRGINIA

Department of Agriculture and Consumer Services
Division of Animal & Food Industry Services
P.O. Box 1163, Richmond, Virginia 23218
Phone: 804/692-0601 • Fax: 804/371-2380 • Hearing Impaired: 800/828-1120
www.vdacs.virginia.gov

Sandra J. Adams
Commissioner

September 30, 2014

Mr. Ben Lewis
VDGIF Hunting Over Bait Committee
3801 John Tyler Memorial Highway
Charles City, VA 23030

Dear Mr. Lewis:

I am writing on behalf of the Virginia Department of Agriculture and Consumer Services to ask the Virginia Department of Game and Inland Fisheries *Hunting Over Bait Committee* to fully consider the potential negative consequences to the livestock industry from the baiting of wildlife. The baiting and feeding of wildlife creates unnatural areas of concentration and comingling of wildlife, which increases the opportunity for the wildlife to spread diseases of concern to both livestock and other wildlife. Since it is likely that the baiting will occur on or near livestock production facilities, the opportunity for exposure is increased. Please include information in the report that you are preparing in response to Senate Joint Resolution No. 79 about the concerns that wildlife feeding areas may affect the incidence of livestock diseases including some diseases that could impact the access of Virginia livestock to domestic and international markets.

Sincerely,

Dr. Richard L. Wilkes
State Veterinarian and Director
Division of Animal and Food Industry Services

cc: Sandra J. Adams, VDACS Commissioner
Charles Green, VDACS Deputy Commissioner
Dr. Megan Kirchgessner, State Wildlife Veterinarian, VDGIF

COMMONWEALTH of VIRGINIA

Department of Health

MARISSA J. LEVINE, MD, MPH, FAAFP
STATE HEALTH COMMISSIONER

PO BOX 2448
RICHMOND, VA 23218

TTY 7-1-1 OR
1-800-828-1120

October 1, 2014

Benjamin Lewis
VDGIF Hunting Over Bait Committee
3801 John Tyler Memorial Highway
Charles City, Virginia 23030

SUBJECT: Hunting Over Bait in Virginia Committee request for comment

Dear Mr. Lewis:

Thank you for contacting the Virginia Department of Health (VDH) in regard to the Department of Game and Inland Fishers (DGIF)'s internal Hunting Over Bait in Virginia Committee and the Committee's Senate Joint Resolution No. 79 report. I understand that the Committee is currently drafting its report and, as part of that process, the Committee is soliciting comments from the outdoor recreation conservation community and related organizations within Virginia that may be impacted by hunting over bait.

VDH defers to DGIF's expertise associated with baiting as it relates to wildlife management and conservation. From a public health perspective, however, baiting may tend to create an abnormal concentration of animals, including non-target species, which may also increase the disease burden and the speed with which diseases are transmitted in an area. Since a subset of infectious diseases that affect wild animals can also infect people, an abnormal concentration of wildlife species may then increase the likelihood that disease will spread within animal populations, and potentially to human populations, resulting in a potential negative public health impact.

Thank you again for your interest in the VDH's comments in this regard. If you have any questions, please feel free to contact Dr. Julia Murphy, State Public Health Veterinarian, (804) 864-8113.

Sincerely,

David H. Trump, MD, MPH, MPA
Chief Deputy Commissioner for
Public Health and Preparedness

c: Marissa J. Levine, MD, MPH, FAAFP

VIRGINIA DEER HUNTERS ASSOCIATION, INC.
P. O. Box 34746 • Richmond, Va. 23234-0746

October 8, 2014
VDGIF Hunting over Bait Committee
Ben Lewis
3801 John Tyler Memorial Hwy
Charles City, VA 23030

Dear Ben,

On behalf of the VDHA Executive Board of Directors, our organization makes reference to the 2013 survey of our membership related to hunting over bait. The question was asked, "Do you support or oppose deer hunting over bait?" Our members answered with 29% supporting; 20% does not matter and 57% opposed.

Hopefully this information will be helpful for drafting the report for SJR79. If you have any other questions please feel free to contact me.

Regards,

Denny Quaiff

Denny Quaiff,
Executive Director

P.O. Box 657
Powhatan, Virginia 23139

September 25, 2014

Ben Lewis
VDGIF Hunting over Bait Committee
3801 John Tyler Memorial Hwy.
Charles City, Virginia 23630

Dear Mr. Lewis:

The Virginia Hunting Dog Alliance opposes any effort to legalize hunting over bait in Virginia. Our leadership realizes that competition among hunters for use of our God given natural resources often involves differing views and interests. This is increasingly true as people not familiar with Virginia traditions move here from other areas. The balance that has been struck between various hunting interests has allowed a wide range of methods and weapons to be used for lawful hunting. It is our belief that the ban on the use of bait for hunting has served the Commonwealth and her citizens well. We strongly oppose the use of bait for hunting because we believe it will cause a negative reaction from the non-hunting public who make up over 95% of Virginia's population, lead to increased hunter conflicts and serve as a convector of diseases that threaten wildlife and domestic livestock.

Thank you for the opportunity to express the opposition of our organization, which represents more than 80,000 hunters.

Sincerely,

H. Kirby Burch
Vice Chairman

"Preserving our hunting heritage, protecting waterfowl, involving itself in contemporary issues, passing on a legacy of responsibilities and ethics by involving youth, educating sportsmen, and enhancing the public perception of the modern water fowler in the Commonwealth of Virginia."

October 1, 2014

Ben Lewis
VDGIF Waterfowl Project Leader
Hunting Over Bait in Virginia Committee Member

Dear Mr. Ben Lewis;

The board of officers and executive director of the Virginia Waterfowlers' Association (VAWFA) discuss and voted on the language of Senate Joint Resolution No. 79. By unanimous vote the members of the executive board do not support baitng. The Virginia Waterfowlers' Association executive board members have concerns of the possible conflicts with existing federal and state regulations. Per Federal statute, **Title 50, Code of Federal Regulations, Part 20,** the practice of baiting is prohibited. The law prohibits hunting if bait is present that could lure or attract birds "to, on, or over areas where hunters are attempting to take the migratory game birds.

Other concerns of the board were the possibility of usage and practice of baiting to willfully and intentionally impede the lawful hunting or trapping of wild birds or wild animals. In 2010, due to incidents, the Virginia General Assembly updated Virginia statute, 29.1-521

Statute, 29.1-521.1

A. It is unlawful to willfully and intentionally impede the lawful hunting or trapping of wild birds or wild animals.

B. It is unlawful for any person or his agent to knowingly and intentionally facilitate or attempt to cause a violation of subdivision A 4 of § 29.1-521 by putting out bait or salt for any wildlife in any place used or occupied by hunters to hunt wild birds or wild animals.

Another concern was, it would be impossible to prevent migratory game birds from accessing bait intended for other wild animals. Per federal and state agencies biology staff members, the placement of bait is detrimental for migratory game birds. The Migratory Bird Treaty Act prohibits hunting migratory game birds on or over a baited area and the area remains off limits to hunting for 10 days after all salt, grain, or other feed has been completely removed. The criminal charge of placement of the bait can result in imprisonment of up to one year, and/or up to $100,000 in fines.

As stated by the Office of Law Enforcement of the US Fish and Wildlife Service;

Problem Areas

- Feeding Waterfowl and Other Wildlife, Many people feed waterfowl for the pleasure of bird watching. It is illegal to hunt waterfowl in an area where such feeding has occurred that could lure or attract migratory game birds to, on, or over any area where hunters are attempting to take them. The 10-day rule applies to such areas, and any salt, grain, or feed must be gone 10 days before hunting. The use of sand and shell grit is not prohibited.

- In some areas, it is a legal hunting practice to place grain to attract some State-protected game species (i.e., white-tailed deer). But these areas would be illegal for waterfowl hunting, and the 10-day rule would apply.

On the behalf of the members of the executive board, I hope this letter will provide your committee positive input.

With regards,

Todd Cocker

Todd Cocker
Virginia Waterfowlers' Association
Executive Director
Goosesmacker@aol.com

Lewis, Benjamin (DGIF)

From: Ed Clark <EClark@wildlifecenter.org>
Sent: Tuesday, September 30, 2014 2:47 PM
To: Lewis, Benjamin (DGIF)
Cc: Sajecki, Jaime (DGIF)
Subject: Hunting over bait position

Dear Ben,

I understand that the General Assembly has instructed the Department of Game and Inland Fisheries to examine the issue of allowing the use of bait in the hunting of various game species here in Virginia, and to report back to the legislature. While I confess that the General Assembly never ceases to amaze me with some of the unusual resolutions and legislation put forward, this one is truly over the top.

Without equivocation, the Wildlife Center of Virginia is opposed to allowing game species to be baited for the purposes of harvest. I cannot even refer to the practice as hunting, since there is no skill or *fair chase* involved. The habituation of wildlife to artificial food sources can be advantageous and entertaining—within limits--from a non-consumptive wildlife-viewing perspective. Millions of Virginians enjoy feeding birds in backyards across the Commonwealth. But, when the animals lured in with food are then shot, it violates everything I believe about outdoor ethics. There are numerous of the so-called hunting programs on television that portray "*the hunter*" sitting in a blind or a tree stand, waiting for a deer or a bear to come in to a pile of food. It is beyond me how anyone could feel any sort of satisfaction or pride at having taken an animal in such a manner. The use of bait changes the sport from *hunting*, to merely *killing*. Having spent more than 50 years enjoying an ethical and truly sporting form of hunting, the practice of bait animals to the gun or bow is repugnant to me.

In a more practical sense, since bait advocates are typically speaking of the harvest of black bear when bait is used, the habituation of bears to human food sources is potentially dangerous, not only to the bear, but to the public. Whether it is apples or corn or some other sort of unnatural food source, bears can quickly develop a preference for such foods, over the acorns and other naturally occurring foods for which they must actively work. I would predict a noticeable increase in damage complaints in areas where baiting was done. The old adage, "*A fed bear is a dead bear*" applies doubly in this scenario. Some bears would be killed when visiting bait piles. Others would killed when visiting local farms, orchards, gardens, or nearby residential areas, to indulge their acquired tastes for human-supplied sustenance. It is a problem we can avoid by simply continuing our ban on the use of bait piles.

Another reason for the Wildlife Center to oppose baiting is that it tends to artificially concentrate animals, thus increasing the risk that disease or parasites could be transmitted. With the emergence of diseases like CWD, rabies, and others, the creation of bait piles will draw a wide variety of species, and force them to interact, thus increasing the likelihood of the spread of such wildlife health threats. Thus, the bait piles are not just life-threatening to the animals harvested, but potentially to entire populations in a baited area.

I sincerely hope that the Department stand fast on this issue and recommend that the current prohibition on the baiting of game species remain in effect. That is our recommendation to you and your colleagues.

Thanks for considering our point of view.

Sincerely,

Ed Clark

Edward E. Clark, Jr., President
Wildlife Center of Virginia
PO Box 1557
Waynesboro, VA 22980-1414
(O) 540/942-9453
(C) 703/627-9453
www.wildlifecenter.org

Lewis, Benjamin (DGIF)

From: Alvin Estep <aestep@rockingham.k12.va.us>
Sent: Monday, September 29, 2014 12:04 PM
To: Lewis, Benjamin (DGIF)
Cc: Lafon, Nelson (DGIF)
Subject: hunting over bait

Benjamin:

At our Sept. 27th meeting of the W.V.D.H.A. we discussed the topic of hunting over bait and took a vote it was unanimous not to allow hunting over bait if you have any other questions please let me know

Alvin B.Estep
Transportation Supervisor
Rockingham County Schools