

**CONSERVATION AND HUNTING:  
TILL DEATH DO THEY PART?  
A LEGAL ETHNOGRAPHY OF DEER MANAGEMENT**

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*“Our hunters [are] conservationists, first and foremost.”*  
---Gordon Batcheller, Chief Wildlife Biologist<sup>1</sup>

I.	INTRODUCTION .....	144
II.	SPORT HUNTING IN THE MODERN UNITED STATES .....	145
III.	FINANCIAL CODEPENDENCY .....	149
IV.	THE PUBLIC TRUST DOCTRINE .....	153
V.	MANAGING WHITE-TAILED DEER .....	158
	<i>A. Causes for Increase</i> .....	158
	<i>B. Impacts and Responses</i> .....	161
VI.	DEER MANAGEMENT .....	163
VII.	HUNTING LAWS .....	172
VIII.	DEER MANAGEMENT PERMITS (DMPS) .....	178
IX.	CONFLICTS OF LAW .....	180
X.	DEER DAMAGE (NUISANCE) PERMITS .....	183
	<i>A. Deer Management Assistance Program Permits</i> <i>(DMAPs)</i> .....	184
	<i>B. Deer Damage Permits (DDPs)</i> .....	186
XI.	CONCLUSION .....	189

Claims that hunters are exemplar conservationists would likely come as a surprise to many. Hunters, after all, *kill* animals. Isn't there a better way to appreciate wildlife than to kill and consume it? Yet there is no mistake: wildlife managers frequently make the claim that hunters, in the United States at least, are in fact some of the greatest conservationists. This article explores the complex historical and contemporary entanglements between hunting and wildlife conservation in the United States from a regulatory perspective. Such entanglements are multifaceted: hunting provides substantial financial support for conservation and

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1. Telephone Interview with Gordon Batcheller, Chief Wildlife Biologist, Bureau of Wildlife, New York State Dep't of Env'l Conservation (Aug. 8, 2014); In-person Interview with Gordon Batcheller, Buffalo, NY (Aug. 8, 2014). [Hereinafter Interview with Gordon Batcheller (Aug. 8, 2014)].

hunters are the state's primary tools for managing "big game" populations. Additionally, many wildlife officials are themselves hunters, and wildlife management programs are often geared toward the interests of hunters. Statutes, regulations, and governmental policies have been set in place that both reflect and reinforce this intimate relationship. This article draws on seven in-depth, semi-structured interviews, mainly with government wildlife managers, as well as on my own participatory observations accompanying a wildlife manager on a hunting trip, to trace the interconnections between hunting and conservation and the detailed regulatory regimes that have emerged around them. The management of the white-tailed deer in New York State will serve as a case study for these explorations of how American wildlife officials think about, and practice, their work of governing wildlife hunting.

## I. INTRODUCTION

Claims that hunters are exemplar conservationists would likely come as a surprise to many. Hunters, after all, *kill* animals. Isn't there a better way to appreciate wildlife than to kill and consume it? Yet there is no mistake: wildlife managers frequently make the claim that hunters, in the United States at least, are in fact some of the greatest conservationists.<sup>2</sup> In the words of one ethnographer: "[H]unters are described as the vanguard of conservation, true environmentalists, bound by a code of honor that respects property, the nobility of wild animals, and the safety of other hunters and non-hunters alike."<sup>3</sup>

Many scholarly texts exist that examine various aspects of hunting, and its ethical aspects in particular.<sup>4</sup> This article diverges from those texts in that it does not focus on ethical questions, at least not explicitly. Instead, I explore the complex historical and contemporary entanglements between hunting and wildlife conservation from a regulatory standpoint. Such entanglements, I

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2. "Regulated hunting is the foundation of the North American Model of Wildlife Conservation." James R. Heffelfinger, Valerius Geist & William Wishart, *The Role of Hunting in North American Wildlife Conservation*, 70(3) INT'L J. ENVTL. STUDIES 399, 399 (2013).

3. JAN E. DIZARD, GOING WILD: HUNTING, ANIMAL RIGHTS, AND THE CONTESTED MEANING OF NATURE 98–99 (1999).

4. See, e.g., Robert W. Loftin, *The Morality of Hunting*, 6 ENVTL. ETHICS 241 (1984); Ann S. Causey, *On the Morality of Hunting*, 11 ENVTL. ETHICS 327 (1989); Marc Bekoff & Dale Jamieson, *Sport Hunting as an Instinct: Another Evolutionary "Just-So-Story?"*, 13 ENVTL. ETHICS 59 (1991); MATT CARTMILL, A VIEW TO A DEATH IN THE MORNING: HUNTING AND NATURE THROUGH HISTORY (1993); TED KERASOTE, BLOODTIES: NATURE, CULTURE, AND THE HUNT (1994); JAMES A. SWAN, IN DEFENSE OF HUNTING (1995); Jordan Curnutt, *How to Argue for and against Sport Hunting*, 27(2) J. SOC. PHIL. 65 (1996).

will show here, are multifaceted: hunting provides substantial financial support for conservation and hunters are the primary tools for managing populations of “big game”—namely, large nonhuman animals targeted for recreational hunting. Additionally, many wildlife officials are themselves hunters, and wildlife management programs are often geared toward the interests of hunters. Statutes, regulations, and governmental policies have been set in place that both reflect and reinforce this intimate relationship. This article studies these regulatory norms closely in order to discern how American wildlife officials think about, and practice, their work of governing wildlife hunting.

While there is rich academic literature, especially in anthropology, on hunting practices,<sup>5</sup> little attention has been paid to the hunting of wild animals for sport and recreation,<sup>6</sup> and even less attention—if any—has been paid to this practice from the perspective of wildlife managers. This article draws on seven in-depth, semi-structured interviews, mainly with government wildlife managers, as well as on my own observations of hunting as I accompanied a hunter/wildlife manager, to trace the interconnections between hunting and conservation and the detailed regulatory regimes that have emerged to govern them. The management of the white-tailed deer (*Odocoileus virginianus*) in New York State will serve as a case study for these explorations.

## II. SPORT HUNTING IN THE MODERN UNITED STATES

The expansion of the railroad in nineteenth century United States brought about rapid population declines in a variety of species.<sup>7</sup> Two striking examples of this decline are the American bison and the passenger pigeon, at the time the most abundant vertebrates in North America.<sup>8</sup> The passenger pigeon became extinct in 1916; the bison was on the brink of extirpation.

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5. The literature on hunting in anthropology is vast and largely focuses on non-Western societies. See, e.g., *MAN THE HUNTER* (Richard B. Lee & Irven Devore, eds. 1968); *THE OXFORD HANDBOOK OF THE ARCHAEOLOGY AND ANTHROPOLOGY OF HUNTER-GATHERERS* (Vicki Cummings, Peter Jordan, & Marek Zvelebil, eds. 2014).

6. Although there are notable exceptions, see, e.g., JAN E. DIZARD, *GOING WILD: HUNTING, ANIMAL RIGHTS, AND THE CONTESTED MEANING OF NATURE* (1999); JAN E. DIZARD, *MORAL STAKES: HUNTERS AND HUNTING IN CONTEMPORARY AMERICA* (2003); MARC A. BOGLIOLI, *ILLEGITIMATE KILLERS: THE SYMBOLIC ECOLOGY AND CULTURAL POLITICS OF COYOTE-HUNTING TOURNAMENTS IN ADDISON COUNTY, VERMONT*, 34(2), *ANTHROPOLOGY AND HUMANISM*, 203–218 (2009); MARC A. BOGLIOLI, *A MATTER OF LIFE AND DEATH: HUNTING IN CONTEMPORARY VERMONT* (2009).

7. DIZARD, *supra* note 3, at 18.

8. JIM POSEWITZ, *BEYOND FAIR CHASE: THE ETHIC AND TRADITION OF HUNTING* 11–12 (Globe Pequot Press 1994).

According to Jim Posewitz—who founded “Orion–The Hunter’s Institute” after a career in conservation—the dramatic decline of the herds and flocks that once darkened the landscape led to an “awful loneliness.”<sup>9</sup> In reaction, a small but powerful group of environmentally concerned hunters began advocating for legislation that would limit commercial hunting to allow wildlife to recover.<sup>10</sup> New government agencies were established at the same time to administer these early laws.

In 1911, the New York Department of Conservation was established for the purpose of fish and wildlife management. In 1970, the State legislature combined this and other State environmental programs into a single department: the Department of Environmental Conservation (hereinafter, the DEC).<sup>11</sup> Since then, the DEC has undertaken diverse projects, including the development of a New York State endangered species list, the restoration of bald eagles throughout New York, and the establishment of an integrated solid waste management plan.<sup>12</sup> The roots of New York State conservation legislation go back to 1885, when the State appointed “game protectors”—the first officers to enforce state game laws and also New York’s first statewide law enforcement professionals, predating the State’s police force by twenty seven years.<sup>13</sup>

Gordon Batcheller is chief wildlife biologist for the Division of Fish, Wildlife, and Marine Resources of the DEC. Batcheller recounts: “120 years ago in the United States, wildlife populations were in very bad shape . . . . Vast landscapes of forest cover were removed, and we lost, or nearly lost, several important wildlife species. White-tailed deer were at very low numbers, wild turkey were at very low numbers, black bear were at very low numbers—that was the situation.”<sup>14</sup> Later, the President of the United States, Teddy Roosevelt, himself a hunter, advocated legal changes for the protection of wildlife species.<sup>15</sup> Batcheller summarizes: “When wildlife populations were really facing extirpation, hunters were the ones who went to the legislatures . . . and said ‘We’ve got to

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9. *Id.* at 12.

10. DIZARD, *supra* note 3, at 18.; Thomas L. Altherr, *The American Hunter-Naturalist and the Development of the Code of Sportsmanship*, 5(1) J. SPORT HIS. 7, 7 (1978).

11. Environmental Conservation Law, 1970 N.Y. Sess. Laws 185 (McKinney). N.Y. DEP’T ENVTL. CONSERVATION, HISTORY OF DEC, <http://www.dec.ny.gov/about/9677.html> (last visited Oct. 3, 2014).

12. N.Y. DEP’T ENVTL. CONSERVATION, HISTORY OF DEC AND HIGHLIGHTS OF ENVIRONMENTAL MILESTONES, [http://www.dec.ny.gov/docs/administration\\_pdf/dectimeline.pdf](http://www.dec.ny.gov/docs/administration_pdf/dectimeline.pdf) (last visited Oct. 3, 2014).

13. N.Y. DEP’T ENVTL. CONSERVATION, HISTORY OF DEC, *supra* note 11.

14. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

15. *Id.*

close these seasons, we've got to protect these birds and mammals."<sup>16</sup>

Clubs formed by early hunters championed an ethic of recreational hunting often referred to as "the Code of the Sportsman."<sup>17</sup> Historian Thomas Altherr describes: "The hunter-naturalists viewed hunting as the best mode of environmental perception, the truest appreciation and apprehension of nature's ways and meanings."<sup>18</sup> These elite hunter-conservationists were critical of both commercial hunting (which they referred to as "pot-hunting") and unrestrained sport hunting ("hunter-slobs").<sup>19</sup> Sportsmen's clubs were also central instigators of wildlife conservation as a field of scientific study. Scientific census and strategies for the management of "game" populations were developed to allow huntable wildlife to flourish for the use of humans in a form of "resource managerialism" that some have referred to as "environmentality"—the use of environmental knowledge/power to exercise control over populations and to produce environmentally-minded subjects (in the Foucauldian sense).<sup>20</sup> Only later would wildlife science concern itself also with non-game wildlife. Contemporary state wildlife officials and wildlife management practices are thus the direct descendants of the legacy of early hunter-conservationists and the science of population management that they helped promote. "Regulated hunting and trapping have been cornerstones of wildlife management in the United States since the advent of wildlife conservation," write two prominent zoologists along these lines.<sup>21</sup>

Anthropologist Garry Marvin argues that sport hunting is "a complex and serious ritual activity."<sup>22</sup> He explains that whereas the hunter for food does all in his or her power "to minimize the

16. *Id.*

17. *Id.*; Altherr, *supra* note 10, at 7.

18. Altherr, *supra* note 10, at 7.

19. *Id.*

20. TIMOTHY W. LUKE, *On Environmentality: Geo-Power and Eco Knowledge in the Discourses of Contemporary Environmentalism*, 31 *CULTURAL CRITIQUE* 57–81, 70–71 (1995). See also ARUN AGRAWAL, *ENVIRONMENTALITY: TECHNOLOGIES OF GOVERNMENT AND THE MAKING OF SUBJECTS* (2006).

21. Robert M. Muth & Wesley V. Jamison, *On the Destiny of Deer Camps and Duck Blinds: The Rise of the animal Rights Movement and the Future of Wildlife Conservation*, 28(4) *WILDLIFE SOC'Y BULLETIN* 841, 841–851 (2000). According to these authors: "When viewed in its most comprehensive form . . . [this model] came to include regulated use by hunters and trappers based on sportsmanship and fair chase; funding support provided through license fees, duck stamps, and excise taxes on hunting and fishing equipment; acquisition and rehabilitation of important habitat; intensive management based on professional training and scientific research; species introduction and restoration through stocking and trap-and-transfer programs; protection of species perceived to be in danger of becoming extinct; and enforcement of wildlife laws and regulations." *Id.* at 843.

22. Garry Marvin, *Wild Killing: Contesting the Animal in Hunting*, in *ANIMAL STUDIES GROUP, KILLING ANIMALS* 10, 19 (1996).

nature of . . . the contest in order to obtain meat in the most efficient and effective way possible,” the sport hunter intentionally seeks out and elaborates this contest. “Rules, regulations, and restrictions are imposed and willingly followed to create the challenges that are fundamental for hunting to be a sporting activity,” he adds.<sup>23</sup> The sportsmen’s movement was especially influenced by the rules of “fair chase.”<sup>24</sup> According to Posewitz, “This concept addresses the balance between hunters and hunted, which allows hunters to occasionally succeed while animals generally avoid being taken.”<sup>25</sup>

Hunting norms differ across place and time. For example, although baiting restrictions can be interpreted as ensuring that the balance is not tipped in favor of the hunter,<sup>26</sup> their implementation is not even across the board. “It’s cultural,” explains Paul Curtis, an associate professor in the Department of Natural Resources at Cornell University, regarding the differences between hunting norms in various states.<sup>27</sup> For example, “Most of the northeastern states don’t allow baiting, [while] in the southeast most states do.”<sup>28</sup> According to the national bow hunting organization the Pope and Young Club:

[t]he term ‘Fair Chase’ shall not include the taking of animals under the following conditions:

1. Helpless in a trap, deep snow or water, or on ice.
2. From any power vehicle or power boat.
3. By “jacklighting” or shining at night.
4. By the use of any tranquilizers or poisons.
5. While inside escape-proof fenced enclosures.
6. By the use of any power vehicle or power boats for herding or driving animals, including use of aircraft to land alongside or to communicate with or direct a hunter on the ground . . . .<sup>29</sup>

Heavily influenced by the sportsmen’s movement, New York State’s hunting laws have similarly deemed it illegal to kill a deer

23. *Id.*

24. John F. Organ et al., *Fair Chase and Humane Treatment: Balancing the Ethics of Hunting and Trapping*, in TRANSACTIONS OF THE 63RD NORTH AMERICAN WILDLIFE AND NATURAL RESOURCES CONFERENCE 528, 528 (K. G. Wadsworth 3d. ed. 1998).

25. POSEWITZ, *supra* note 8, at 57.

26. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

27. Interview with Paul Curtis, Associate Professor, Dep’t of Natural Res., Cornell Univ., Ithaca, N.Y. (Feb. 03, 2014). [Hereinafter Interview with Paul Curtis].

28. *Id.* In New York, it is illegal to hunt over bait. N.Y. ENVTL. CONSERV. LAW § 11-0901(4)(b)(7) (McKinney 2005 & Supp. 2014).

29. POPE & YOUNG CLUB, THE RULES OF FAIR CHASE, <http://www.pope-young.org/fairchase/default.asp> (last visited Oct. 4, 2014).

in water,<sup>30</sup> from a motor vehicle,<sup>31</sup> with the use of a “jacklight,”<sup>32</sup> or with the use of tranquilizers or poisons.<sup>33</sup> Shortened hunting seasons and the imposition of “bag limits” (explained below) are additional manifestations of the fair chase ethic, not only in the sense that they restrict the number of hunted deer and confine their killing to when they are theoretically least vulnerable, but by democratizing deer access between hunters.<sup>34</sup>

Anthropologist Matt Cartmill explains that:

Hunting in the modern world is not to be understood as a practical means of latching onto some cheap protein. It is intelligible only as symbolic behavior, like a game or religious ceremony. . . . A successful hunt ends in the killing of an animal, but it must be a special sort of animal that is killed in a specific way for a particular reason.<sup>35</sup>

Marvin further elaborates on the definition of sport hunting: “The animal must be free to escape, there must be direct physical violence, it must be premeditated, and it must be at the hunter’s initiative.”<sup>36</sup> As hunting technologies and weapons (the latter referred to by wildlife managers as “implements”) have become more effective, sport hunters have had to impose voluntary restrictions on their ability to hunt in order to give the animal a chance to escape and “not to make the hunted and the hunter excessively unequal, as if going beyond a certain limit in that relationship would annihilate the essential character of the hunt, transforming it into pure slaughter and destruction.”<sup>37</sup>

### III. FINANCIAL CODEPENDENCY

Hunting fees provide a large portion of the funding for wildlife conservation and habitat protection at both the state and the federal levels, enabling the conservation of both game (hunnable) animals, such as deer and turkey, and non-hunted wildlife. “There’d be very little money to do wildlife conservation without

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30. N.Y. ENVTL. CONSERV. LAW § 11-0901(4)(a) (McKinney 2005 & Supp. 2014).

31. N.Y. ENVTL. CONSERV. LAW § 11-0901(1) (McKinney 2005 & Supp. 2014).

32. N.Y. ENVTL. CONSERV. LAW § 11-0901(4)(b)(2) (McKinney 2005 & Supp. 2014).

33. See N.Y. ENVTL. CONSERV. LAW § 11-0901(3)(f) (McKinney 2005 & Supp. 2014).

34. Scott M. McCorquodale, *Cultural Contexts of Recreational Hunting and Native Subsistence and Ceremonial Hunting: Their Significance for Wildlife Management*, 25(2) WILDLIFE SOC’Y BULLETIN 569, 569 (1997).

35. CARTMILL, *supra* note 4, at 29.

36. Marvin, *supra* note 22, at 20.

37. *Id.* (quoting JOSE ORTEGA Y GASSET, LA CAZA Y LOS TOROS 410 (1968)).

the support of the hunting community,”<sup>38</sup> notes Batcheller of the DEC, an avid hunter himself. And yet, he adds, “The wildlife conservation work that we do is much more than managing hunting or benefiting hunters. We do a lot of work with a wide variety of species that are not hunted.”<sup>39</sup>

The financial links between hunting and conservation were established through a range of laws enacted in the 1930s that tax hunting equipment such as firearms and that charge license fees to grant hunters permission to kill (“take” or “harvest,” in the language of wildlife managers) wild animals. Additionally, millions of dollars are spent annually on habitat protection and restoration by private hunting organizations across the United States.<sup>40</sup>

In the 1930s President Franklin Roosevelt signed two laws that have since served as the cornerstone of wildlife funding: the Migratory Bird Hunting and Conservation Stamp Act, commonly referred to as the Duck Stamp Act,<sup>41</sup> and the Federal Aid in Wildlife Restoration Act of 1937, also called the Pittman–Robertson Act.<sup>42</sup> Initially, the Migratory Bird Conservation Act of 1929<sup>43</sup> authorized purchase of wetlands for waterfowl populations to rebound.<sup>44</sup> In 1934, the Duck Stamp Act newly required the purchase of federally issued stamps to hunt waterfowl.<sup>45</sup> Revenues from these purchases are deposited in the Migratory Bird Conservation Fund.<sup>46</sup> This way, the Duck Stamp Act funded the purchase, by the Secretary of the Treasury, of migratory bird refuges, and of wetlands in particular. National wildlife refuges have been imperative for the protection of waterfowl.

In 1937, President Roosevelt signed into law the Pittman–Robertson Act. This Act funneled the revenue from the existing tax on firearms to a separate Federal Aid to Wildlife Restoration Fund<sup>47</sup> administered by the Secretary of the Interior.<sup>48</sup> Today, the

38. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

39. *Id.*

40. DUCKS UNLIMITED, DUCKS UNLIMITED CONSERVATION INITIATIVES, <http://www.ducks.org/conservation/conservation-initiatives/conservation-initiatives?poe=hometxt> (last visited Dec. 15, 2014); ROCKY MOUNTAIN ELK FOUNDATION, LAND PROTECTION, <http://www.rmef.org/Conservation/HowWeConserve/LandProtection.aspx> (last visited Dec. 15, 2015).

41. Migratory Bird Hunting and Conservation Stamp Act, 16 U.S.C. §§ 718–18j (2012).

42. Federal Aid in Wildlife Restoration Act (Pittman-Robertson Act), 16 U.S.C. § 669 et seq. (2012).

43. 16 U.S.C. § 715 et seq. (2012).

44. U.S. FISH & WILDLIFE SERV., DIGEST OF FEDERAL RESOURCE LAWS OF INTEREST TO THE U.S. FISH AND WILDLIFE SERVICE: MIGRATORY BIRD CONSERVATION ACT, <https://www.fws.gov/laws/lawsdigest/MIGBIRD.HTML> (last visited Aug. 28, 2014).

45. Migratory Bird Hunting and Conservation Stamp Act, *supra* note 41.

46. U.S. FISH & WILDLIFE SERV., DIGEST OF FEDERAL RESOURCE LAWS OF INTEREST TO THE U.S. FISH AND WILDLIFE SERVICE: MIGRATORY BIRD HUNTING AND CONSERVATION STAMP ACT, <http://www.fws.gov/laws/lawsdigest/mighunt.html> (last visited Aug. 15, 2014).

47. 16 U.S.C. § 669b (2012).



taxes directed into this fund include a 10 percent tax on pistols and revolvers,<sup>49</sup> an 11 percent tax on bows, archery equipment,<sup>50</sup> and long arms,<sup>51</sup> and an inflation adjusted tax on arrow shafts, standing at 48 cents per shaft in 2014.<sup>52</sup> Half of the funding allocated to each state is based on the size of its territory in proportion to that of all the states, and the other half is based on the number of paid hunting license holders in each state in proportion to the total number of the paid hunting license holders in the United States.<sup>53</sup> A similar law, albeit with a more narrow focus, exists for fishermen buying fishing gear.<sup>54</sup> States may use Pittman–Robertson funds to pay for up to 75 percent of the costs of state wildlife projects.<sup>55</sup> The Pittman–Robertson tax applies to all firearms, not only those used for hunting. It follows that a certain percentage of wildlife conservation funding can be traced back to firearms purchased for other reasons than hunting, including target shooting and personal protection. In recent years, fear of impending stricter gun control laws, especially in the aftermath of mass shootings, has resulted in an increase in firearm purchases, pushing the annual Pittman–Robertson funds to new levels.<sup>56</sup>

The dependency of conservation funding on firearm purchases is not without problems. First, it significantly relies on purchases of firearms that will never be used for hunting by individuals who are not necessarily aware of, and who do not necessarily support, hunting. Second, a large percentage of individuals who only participate in non-hunting outdoor activities, e.g. hiking and bird

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48. 16 U.S.C. § 669 (2012).

49. 26 U.S.C. § 4181 (2012).

50. 26 U.S.C. § 4161 (2012).

51. 26 U.S.C. § 4181 (2012).

52. 26 U.S.C. § 4161 (2012).

53. 16 U.S.C. § 669c (2012).

54. U.S. FISH & WILDLIFE SERV., DIGEST OF FEDERAL RESOURCE LAWS OF INTEREST TO THE U.S. FISH AND WILDLIFE SERVICE: FEDERAL AID IN SPORT FISH RESTORATION ACT, <http://www.fws.gov/laws/lawsdigest/FASPORT.HTML> (last visited Aug. 15, 2014).

55. U.S. FISH & WILDLIFE SERV., DIGEST OF FEDERAL RESOURCE LAWS OF INTEREST TO THE U.S. FISH AND WILDLIFE SERVICE: FEDERAL AID IN WILDLIFE RESTORATION ACT, <http://www.fws.gov/laws/lawsdigest/FAWILD.HTML> (last visited Aug. 15, 2014); NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, MANAGEMENT PLAN FOR WHITE-TAILED DEER IN NEW YORK STATE, 2012-2016, 11 (2011) *available at* [http://www.dec.ny.gov/docs/wildlife\\_pdf/deerplan2012.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/deerplan2012.pdf) [hereinafter DEC DEER MANAGEMENT PLAN].

56. The total Pittman–Robertson funds increased from under 350 million dollars in the fiscal year before President Obama’s election to almost 500 million dollars in 2009. *See* M. LYNNE CORN & JANE G. GRAVELLE, CONG. RESEARCH SERV., R42992, GUNS, EXCISE TAXES, AND WILDLIFE RESTORATION, at 2 (2013). In 2014, the funds reached an all-time high of 740.9 million dollars (not including an additional 20 million dollars resulting from sequestered funds being returned). *See* Press Release, Sally Jewell, U.S. Fish & Wildlife Serv., Secretary Jewell Announces \$1.1 Billion to State Wildlife Agencies from Excise Taxes on Anglers, Hunters, and Boaters (Mar. 26, 2014), *available at* <http://www.fws.gov/southeast/news/2014/026.html>.

watching, reap the benefits of Pittman-Robertson funded projects without making the financial contributions that hunters do.<sup>57</sup>

While wildlife conservation expenditures vary from state to state, hunter derived funds make up a significant portion of these expenditures in every state. In Texas, for example, 97 percent of the State's wildlife conservation funding is attributable to hunters—either directly, by hunting licenses, stamps, and fees, or indirectly through Pittman-Robertson funding.<sup>58</sup> Maryland received about 90 percent of the revenue spent on wildlife programs from these same two sources.<sup>59</sup> Commenting on the significance of the Pittman-Robertson funds in New York State, Gordon Batcheller says that they are used to “fund much of the wildlife conservation work we do—and not just related to game species. For example, in New York we restored the bald eagle actually with monies ultimately raised through the sale of firearms and ammunition.”<sup>60</sup> “That’s what funds our conservation,” explains Jay Boulanger, formerly the coordinator of Cornell University’s Integrated Deer Research and Management Program.<sup>61</sup>

In New York State, hunting, fishing, and trapping license sales generate 47 million dollars annually.<sup>62</sup> This money is deposited into the Conservation Fund and allocated in accordance with the Environmental Conservation Law for the care, management, protection and enlargement of fish and game resources.<sup>63</sup> Expenditures from the Conservation Fund must be related to fish and wildlife resources. Although some are exclusively committed

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57. According to Paul Curtis, the few attempts by conservation organizations to obtain dedicated federal funding for non-game wildlife have failed. *See, e.g.*, Conservation and Reinvestment Act, H.R. 701, 106th Cong. (1999). Additionally, he says, “several states have tax check-offs for non-game funding, but those bring in very little money. Missouri Department of Conservation is one of the few states that have a dedicated tax that provides funding for non-game wildlife.” E-mail from Paul Curtis, Assoc. Professor, Dep’t of Natural Res., at Cornell University, to Irus Braverman (Oct. 14, 2014, 16:08 EDT) (on file with author).

58. *News from the Prairie Chicken Front*, *Adopt-a-Prarie Chicken Newsletter* (Tex. Parks & Wildlife Dep’t). (Summer 2011), available at [http://www.tpwd.state.tx.us/publications/pwdpubs/media/pwd\\_br\\_w7000\\_0039d\\_06\\_11.pdf](http://www.tpwd.state.tx.us/publications/pwdpubs/media/pwd_br_w7000_0039d_06_11.pdf).

59. Md. Dep’t of Natural Res., Wildlife and Heritage Service, <http://www.dnr.state.md.us/wildlife/wlfunding.asp> (last visited Oct. 3, 2014). But these funds only make up about 10 percent of Montana’s Fish, Wildlife, and Parks Department budget. LEGISLATIVE ENVTL. QUALITY COUNCIL, PITTMAN-ROBERTSON FUNDING (2013), available at <http://leg.mt.gov/content/Publications/Environmental/2014-pittman-robertson-brochure.pdf>.

60. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

61. Interview with Jay Boulanger, Coordinator, Integrated Deer Research and Mgmt. Program, Cornell Univ., in Ithaca New York (Dec. 20, 2013) [Hereinafter Interview with Jay Boulanger]; Participatory observation of hunting, Ithaca, N.Y. (Jan. 30, 2014).

62. *Feb. 4th, 2013 Joint Legislative Public Hearing on 2013–2014 Executive Budget “Environmental Conservation”* (2013) (statement of Jason Kemper, Chairman, NYS Conservation Fund Advisory Bd. on Balance in the Conservation Fund) available at [http://www.dec.ny.gov/docs/wildlife\\_pdf/cfabintestfeb413.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/cfabintestfeb413.pdf).

63. N.Y. STATE FIN. LAW § 83(a)(1) (McKinney 2014).

to providing hunting opportunities, many expenditures of the Conservation Fund aid in promoting conservation more broadly.<sup>64</sup> Such expenditures include salaries for environmental conservation law enforcement officers, fish and wildlife population management programs, and habitat management and improvement programs.<sup>65</sup> In recent years, expenditures from the Conservation Fund have comprised nearly 60 percent of the total expenditures by the DEC's Division of Fish, Wildlife and Marine Resources.<sup>66</sup>

While there is significant flexibility in how states spend Pittman-Robertson funds, some strings are attached. For example, a state must prepare specific proposals for federal grants and match at least 25 percent of the Pittman-Robertson funds.<sup>67</sup> Otherwise, states have complete discretion in crafting their grant proposals and are not required to show that they primarily benefit hunting.<sup>68</sup> Ultimately, conservationists and hunters exist in a codependent relationship: while state conservation agencies depend on hunting for their funding, hunters must rely on state permission to hunt because, in the United States, animals in the wild are typically "owned" by the various states.

#### IV. THE PUBLIC TRUST DOCTRINE

The public trust doctrine is the legal foundation for state ownership of certain natural resources, including wildlife, in the United States. This doctrine has origins in Roman law, which declared in 533 C.E.: "[b]y natural law, these things are common property of all: air, running water, the sea, and with it the shores

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64. DIV. STATE & GOV'T ACCOUNTABILITY, N.Y. OFFICE OF THE STATE COMPTROLLER, CONSERVATION FUND – SOURCES AND USES OF FUNDS: DEP'T OF ENV'T'L CONSERVATION, S. 134 (2013), available at <http://osc.state.ny.us/audits/allaudits/093014/12s134.pdf>.

65. *Id.* at 9.

66. CONSERVATION FUND ADVISORY BOARD, STATE OF NEW YORK, ANNUAL REPORT TO THE COMMISSIONER, SPORTSMEN AND SPORTSWOMEN, FOR THE PERIOD APR 1, 2010 TO MAR 31, 2011, at 18 (2012), available at [http://www.dec.ny.gov/docs/wildlife\\_pdf/cfabannrept11.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/cfabannrept11.pdf).

67. 16 U.S.C. § 669c(d)(3) (2012).

68. 16 U.S.C. § 669c(d). The states receive their allocation of Pittman-Robertson funds as 75 percent pro-rata reimbursement for actual expenditures. Hence, a provision of the Fiscal Year 2011–12 New York State Budget that merely allowed for a diversion of committed funds (and no actual diversion occurred) would have prevented New York from receiving the funds had it not been amended. *See* Part BB §§12, 12-a, 13 Ch. 58, 2011 N.Y. Sess. Laws 239 (McKinney). In addition to the funding of state wildlife conservation from Pittman-Robertson allocations, the revenue from hunting license sales is often used to cover the state's 25 percent matching requirement. *See* U.S. FISH & WILDLIFE SERV., SE. REGION, FEDERAL AID DIVISION – THE PITTMAN-ROBERTSON FEDERAL AID IN WILDLIFE RESTORATION ACT, <http://www.fws.gov/southeast/federalaid/pittmanrobertson.html> (last updated Jan. 21, 2010).

of the sea.”<sup>69</sup> The English common law modified this principle to assign ownership of common property to the king as a trustee for the benefit of the people.<sup>70</sup> Following the Revolutionary War, United States courts established that the public trust transferred from being vested in the king to being vested in the people of the various states, through their elected representatives.<sup>71</sup> Beginning with *Arnold v. Mundy*<sup>72</sup> and continuing to this day, state courts have typically invoked the public trust doctrine to preserve public access to waterways for the purpose of fishing and navigation.<sup>73</sup>

The common interpretation of the public trust doctrine by United States courts has been that wildlife is the property of the people and is held in trust by the state through its wildlife agencies, which in turn allocate hunting licenses to members of the public.<sup>74</sup> In 1842, the Supreme Court ruled along these lines that

69. J. INST. 2.1.1-6 (J.B. Moyle ed. & trans., Oxford at the Clarendon Press 4th ed. 1906) (c. 533 C.E.)

70. THE WILDLIFE SOC'Y, THE PUBLIC TRUST DOCTRINE: IMPLICATION FOR WILDLIFE MANAGEMENT AND CONSERVATION IN THE UNITED STATES AND CANADA 11 (2010).

71. THE WILDLIFE SOC'Y, THE PUBLIC TRUST DOCTRINE: IMPLICATION FOR WILDLIFE MANAGEMENT AND CONSERVATION IN THE UNITED STATES AND CANADA 12 (2010); *Arnold v. Mundy*, 6 N.J.L. 1, 13 (1821).

72. *Arnold*, 6 N.J.L. at 1.

73. Erin Ryan, *Public Trust and Distrust: The Theoretical Implications of the Public Trust Doctrine for Natural Resource Management*, 31 ENVTL. L., 477, 481–82 (2001).

74. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1. Over time, successive court cases complicated the public trust doctrine. For example, in *Geer v. State of Connecticut* (1896), the Court ruled that: “The ownership of the wild game within the limits of a state, so far as it is capable of ownership, is in the state for the benefit of all its people in common” (161 U.S. 519, 16 S. Ct. 600, 601, 40 L. Ed. 793 (1896)). In 1904, the New York Court of Appeals ruled: “The game and the fish within the boundaries of the state belong to the people in their unorganized capacity, and may be taken by any citizen, without fee or license, at any time during the open season. It is to the interest of the state that neither should be wasted or destroyed, and that both should be carefully protected, especially during the breeding season. Without protection the fish and game will soon disappear, and the people thus be deprived of an important source of food supply, as well as a delightful recreation which promotes health and prolongs life. The protection of game falls within the legitimate exercise of the police power, because it is directly connected with the public welfare, which is promoted by the preservation and injured by the destruction of so useful an article of food, free at the proper time to all the people of the state. Laws passed for this purpose do not interfere with private property, for there is no property in living wild animals, and only as the law permits their capture is there property in wild animals after they are caught or killed.” *People v. Bootman*, 180 N.Y. 1, 8, 72 N.E. 505, 507 (1904). These decisions established a legitimate state interest in wildlife conservation and in regulating the killing of wildlife. Importantly, ideas of private property have interacted with the public trust doctrine in complicated ways. In *McConico v. Singleton*, 1818 WL 787 (S.C. 1818), the Constitutional Court of Appeals of South Carolina ruled: “the owner of the soil, while his lands are unenclosed, cannot prohibit the exercise of it [hunting] to others,” but in *Herrin v. Sutherland*, 241 P. 328, 332 (Mont. 1925), the Supreme Court of Montana ruled: “the exclusive right of *hunting* on land owned by a private owner is in the owner of the land.” Finally, the Supreme Court of South Carolina declared that the landowner’s right to hunt and fish on his property is subject to reasonable government regulations, as fish and game are owned by the state. *Rice Hope Plantation v. South Carolina Pub. Serv. Auth.*, 59 S.E.2d 132, 142 (S.C. 1950).

wildlife belonged to the people.<sup>75</sup> In our interview, U.S. Forest Service botanist Tom Rawinski offered similarly that: “We are a blessed country in that it was soon established that wildlife would be in the public trust. . . . This is counter to many countries in Europe many years ago where the wildlife belonged to the king or aristocracy.”<sup>76</sup>

In 1970, law professor Joseph Sax criticized the traditional interpretation of the public trust doctrine by American courts and legislators. He argued, firstly, that it should be applied to a broader range of natural resources than just navigable waters and the seashore.<sup>77</sup> For this doctrine to be effective, he continued, it must respond to contemporary concerns, the general public must understand that it describes a legal right, and it must be enforceable against the government.<sup>78</sup> Its enforceability against the government is what, according to Sax, distinguishes the public trust doctrine from state ownership—although they are often mistakenly conflated with one another when applied to wildlife.<sup>79</sup> If one were to apply the public trust doctrine, as Sax conceives it, to wildlife, it would not just authorize the states to regulate hunting, which is a manifestation of the state’s police powers that exist independent of the trust doctrine; it would additionally authorize the courts to enforce the state’s *affirmative* duty to manage its wildlife for the benefit of current and future generations, for hunters and non-hunters alike.<sup>80</sup> Specifically, Sax argues that expanding the public trust’s restricted scope would result in a major change in laws related to natural resources, which could include hunting laws.<sup>81</sup>

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75. *Martin v. Waddell’s Lessee*, 41 U.S. 367, 367 (1842).

76. Telephone Interview with Tom Rawinski, Botanist, Forest Health Protection Program, Northeastern Area State and Private Forestry, United States Forest Service (July 31, 2014). [Hereinafter Interview with Tom Rawinski].

77. Joseph Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970). See also Ryan, *supra* note 73.

78. *Id.* at 474.

79. See generally Michael C. Blumm & Lucus Ritchie, *The Pioneer Spirit and the Public Trust: The American Rule of Capture and State Ownership of Wildlife*, 25 ENVTL. L. 713 (2005).

80. *Id.*

81. See Sax, *supra* note 77, at 555–56. For instance, a central premise of the public trust doctrine is unfettered and equal access to the resource held in trust by all citizens. This, however, stands in conflict with the funding model described above, whereby one group (hunters, fisherman, etc.) pays a disproportionate share for the conservation of wildlife, while others (bird watchers, for example) may have access to this resource without being required to pay. Daniel J. Decker et al., *Public Trust Doctrine and Stakeholder Engagement* 12 (Mar. 6, 2014) (unpublished manuscript) (on file with author). At the same time, wildlife management agencies are often viewed as catering to the concerns of hunters, instead of pursuing conservation goals more generally. *Id.* The model that currently informs the funding and function of wildlife management agencies might make sense from a public finance perspective, as hunters, in exchange for contributing a disproportionately large share of funding, receive a similarly disproportionate amount of influence in regards to

However, United States courts have generally hesitated to apply the public trust doctrine in an expansive manner. Instead, the responsibility for managing wildlife through statutes and regulations that have a basis in constitutional or legislative law has been left to the states.<sup>82</sup> In *Owsicheck v. Alaska*,<sup>83</sup> for example, the Alaska Supreme Court relied on the common use clause in the Constitution of Alaska,<sup>84</sup> rather than exclusively on common law principles,<sup>85</sup> to rule that public trust principles guarantee public access to fish and wildlife. Similarly, California's Supreme Court decided that the State's public trust duties regarding birds and wildlife are derived from statute.<sup>86</sup>

Although they differ from state to state, contemporary environmental statutes typically include a wildlife ownership clause. For example, New York State's Environmental Conservation Law establishes that: "The State of New York owns all fish, game, wildlife, shellfish, crustacean and protected insects in the state, except those legally acquired and held in private ownership."<sup>87</sup> The statute clarifies that the goal of the state ownership is management: "The general purpose of powers affecting fish and wildlife, granted to the department by the Fish and Wildlife Law, is to vest in the department, to the extent of the powers so granted, the efficient management of the fish and wildlife resources of the state."<sup>88</sup> In other words, the state owns non-private wildlife in order to efficiently manage it for the benefit of its people.<sup>89</sup>

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shaping state conservation policies. However, this model could also be perceived as a breach of the trust relationship between the state and its residents. This "user pays/payer benefits" model conflicts with the basic idea behind the public trust doctrine that all citizens have equal access and equal obligations in regards to natural resources held in trust by the state. *See id.*; *see also, generally*, Sax, *supra* note 77; Ryan, *supra* note 73.

82. THE WILDLIFE SOC'Y & THE BOONE AND CROCKETT CLUB, THE NORTH AMERICAN MODEL OF WILDLIFE CONSERVATION, TECHNICAL REVIEW 12-04, at 14 (2012).

83. *Owsicheck v. Alaska*, 763 P.2d 488, 49-96 (Alaska 1988).

84. "Wherever occurring in their natural state, fish, wildlife, and waters are reserved to the people for common use." ALASKA CONST. art. VIII, § 3.

85. *Owsicheck*, 763 P.2d at 495; *see also* THE WILDLIFE SOC'Y, THE PUBLIC TRUST DOCTRINE: IMPLICATION FOR WILDLIFE MANAGEMENT AND CONSERVATION IN THE UNITED STATES AND CANADA 23 (2010).

86. *Envtl. Prot. Info. Ctr. v. Cal. Dept. of Forestry & Fire Prot.*, 44 Cal. 4th 459 (2008); *see also* THE WILDLIFE SOC'Y, THE PUBLIC TRUST DOCTRINE: IMPLICATION FOR WILDLIFE MANAGEMENT AND CONSERVATION IN THE UNITED STATES AND CANADA 23 (2010).

87. N.Y. ENVTL. CONSERV. LAW § 11-0105 (McKinney 2005).

88. N.Y. ENVTL. CONSERV. LAW § 11-0303(1) (McKinney 2005 & Supp. 2014).

89. "[Ownership] is a trick[y] concept," Batcheller comments in our e-mail communication. "The State owns wildlife when wildlife is in the wild. But when lawfully possessed (e.g., after a hunting excursion), the carcass is owned by the hunter, if duly licensed." E-mail from Gordon Batcheller, Chief Wildlife Biologist, Bureau of Wildlife, New York State Department of Environmental Conservation, to Irus Braverman (Oct. 17, 2014, 13:52 EDT) (on file with author). [Hereinafter E-mail from Gordon Batcheller]

The State decides which wild animals, and how many, may be killed, and grants permission to kill accordingly. At the same time, wild animals who are not viewed as scarce or valuable are typically killable without the need for permits or licenses. Elsewhere, I described how New York State Environmental Conservation Law classifies animals as either “protected” or “unprotected.”<sup>90</sup> This law declares, “[n]o person shall, at any time of the year, pursue, take, wound or kill [them] in any manner, number or quantity, except as permitted by . . . , except as permitted by . . . law.”<sup>91</sup> Unprotected animals, meaning *all* animals *except* those that state law deems protected, are thus left outside of the law, in a state of exception that renders them subject to extermination.<sup>92</sup> At the same time, state law declares that “[p]rotected wildlife’ means wild game, protected wild birds [etc.]”<sup>93</sup> Protected wildlife may also mean “non-game” animals that are not hunted, but are still protected. In New York this includes reptiles and amphibians.<sup>94</sup>

Without laws that permit killing under certain circumstances, hunting would be illegal. Hunting laws should therefore not be viewed as restrictions on the right to kill deer (and other game animals). Instead, hunting represents an affirmative permit by the state to infringe upon state property (here, wild game animals), provided strict adherence to detailed regulations of who may hunt and what, when, where, and how they may do so. Alongside the historical and economic entanglements of conservation and hunting, hunting is also utilized as the government’s primary population management tool. One of the clearest examples of this is the management of white-tailed deer in New York State.

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90. Irus Braverman, *Animal Mobilegality: The Regulation of Animal Movement in the American City*, 5(1) HUMANIMALIA 104, 109 (2013).

91. *Id.* (quoting N.Y. ENVTL. CONSERV. LAW § 11-0107 (McKinney 2005 & Supp. 2014)). But according to Curtis, nearly all fish, wildlife, reptiles, and amphibians in NYS are protected by law; only a small list of unprotected wildlife exist. This list includes house sparrows, unbanded pigeons, European starlings, red squirrels, black and Norway rats, and house mice. “Even species like coyotes and woodchucks are protected in NYS,” says Curtis. E-mail from Paul Curtis, *supra* note 57.

92. According to Batcheller: “Generally, the animals that are not protected by law are quite abundant, and not at risk of extirpation. An example would be wild mice (not house mice).” E-mail from Gordon Batcheller, *supra* note 89. For a critical discussion of this human property to make live and let die through legal protections *see* Braverman, *supra* note 90, at 10. English scholar and philosopher Cary Wolfe draws on Giorgio Agamben’s HOMO SACER: SOVEREIGN POWER AND BARE LIFE (1998) and on Jacque Derrida’s THE BEAST AND THE SOVEREIGN (2009) to contemplate the role of law in producing what Agamben calls the state of exception. *See* CARY WOLFE, BEFORE THE LAW: HUMANS AND OTHER ANIMALS IN A BIOPOLITICAL FRAME (2012).

93. N.Y. ENVTL. CONSERV. LAW § 11-0103(6)(c) (McKinney 2005 & Supp. 2014).

94. *Id.* at § 11-0103(6)(e)(5).

## V. MANAGING WHITE-TAILED DEER

*“People ask: What’s the most dangerous animal in North America? [I’d say that] it’s the white-tailed deer, by far.”*

---Paul Curtis, Cornell University, interview<sup>95</sup>

Contrary to *Bambi’s* image as cute and harmless, wildlife managers see the increase in deer populations in many areas as a cause for serious concern. Batcheller explains: “we spend a significant amount of time and effort on deer management because of the enormous economic, social, political, [and] ecological significance of the deer herd.”<sup>96</sup> This management is immensely complex. Rawinski tells me that the DEC is “feeling the pressure from all sides . . . the animal welfare folks . . . the hunters . . . the average citizens complaining about Lyme disease . . . the farmers, and there are the forest woodlot owners who say ‘We can’t grow baby trees anymore.’ It’s a really complex issue.”<sup>97</sup>

## A. Causes for Increase

An estimated<sup>98</sup> one million individual deer lived in New York State in 2014, a vast increase in comparison to one hundred, or even fifty, years ago.<sup>99</sup> Several causes are behind this dramatic rise

95. Interview with Paul Curtis, *supra* note 27.

96. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

97. Interview with Tom Rawinski, *supra* note 76.

98. Estimating the exact number of the deer herd in New York is far from an easy task. According to Boulanger: “[I]t’s truly the bane of a wildlife biologist, it’s so difficult to get accurate numbers of wild animal populations out there.” Interview with Jay Boulanger, *supra* note 61. Wildlife biologists have used various methods to estimate deer numbers: flyovers and infrared samplings (which can result in under-counting), spotlighting and counting (which are unreliable), and bait and camera surveillance (but deer may not come to the bait). As a result, the primary means for estimating the number of living deer populations in most areas is by counting their deaths through hunting. Hunters are required to inform the state conservation agency about the deer they have killed that year, including information about factors such as sex and antlered or non-antlered individuals. This information is then used to perform a population assessment. Interview with Paul Curtis, *supra* note 27. Because hunting is prohibited in suburban areas, the number of deer in these areas is largely unknown. When such estimates were performed, for instance in Tompkins County, the population density of deer was recorded at 120 to 140 per square mile, compared to statewide densities of about 20 to 30 per square mile. By contrast, deer populations at the Adirondacks were estimated at fewer than 5 deer per square mile. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

99. Pre-contact, the deer had relatively low densities, with the exception of areas artificially burned by indigenous groups that created shorter vegetation that deer thrived on. DEC DEER MANAGEMENT PLAN, *supra* note 55, at 10. With European settlement, deer populations initially increased with the clearing of land for agriculture. By the mid-1800s, however, extensive hunting and more widespread agricultural conversion caused a precipitous decline and by the 1880s, deer were absent from most of the state except the central Adirondack Mountains. With the creation of the New York State Fisheries, Game



in deer numbers.<sup>100</sup> Along with an increase in legal protections, the northeastern United States has been experiencing a net increase in forest cover, as abandoned farmlands and other areas are reforested.<sup>101</sup> This forest regrowth has helped the deer populations rebound. In the words of Steve Joule, Regional Wildlife Manager of Region 7 of the DEC: “most people think that like the rainforest, our trees here in New York State are declining by the minute. [But] it’s just the opposite: we now have more forested areas than we did 100 years ago, and depending on how far back you want to go, probably . . . more than we had 200, 300 years ago. [A]nd you add on top of that that human beings are now scattered within this forested habitat. [Well], how do you manage now?”<sup>102</sup>

In his book *Nature Wars*, Jim Sterba argues that successful conservation efforts and suburban sprawl have accelerated the conflict between humans and wild animals.<sup>103</sup> Often, this conflict occurs in what Sterba calls the “urban forest.”<sup>104</sup> Tree canopies cover about 27 percent of what the Census Bureau defines as urban areas, with the largest percentages being in the northeast.<sup>105</sup> In this urban forest, Sterba writes, “many wild creatures... have all the comforts of a forest—and more.”<sup>106</sup> As far as the deer are concerned, urban forests offer distinct advantages in comparison to rural forests: in the urban forest, deer are far less likely to be eaten, and at the same time have increased access to food.

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and Forest Commission in 1895 (the predecessor of New York’s DEC), hunting limitations and protections caused a rebound in deer populations. *Id.*

100. *Id.* at 11. Deer can live up to 14 years in the wild, although in hunted populations their life spans are much shorter. *See generally* Interview with Jay Boulanger, *supra* note 61 (typically, a female doe will produce two to three fawns a year. Hence, in the absence of predation, deer populations will grow rapidly).

101. *Id.*

102. Telephone interview with Steven Joule, Regional Wildlife Manager, Region 7, New York State Department of Environmental Conservation (Aug. 5, 2014). [Hereinafter Interview with Steven Joule].

103. *See* JIM STERBA, 90, *NATURE WARS: THE INCREDIBLE STORY OF HOW WILDLIFE COMEBACKS TURNED BACKYARDS INTO BATTLEFIELDS* (2012). Because of conservation and sprawl in suburban areas in the eastern United States, it is not uncommon to have 60 or even 100 white-tailed deer per square mile. Meanwhile, in the rural forests, 10 to 15 deer per mile is usually considered ideal by deer biologists, and 45 deer per square mile almost always signals overpopulation. *Id.* at 106–08. In the late 1980s, a population density of up to 50 deer per mile threatened the ability of the Quabbin Reservoir in western Massachusetts to continue supplying clean drinking water to 2.5 million people in and around Boston. The herd had eliminated much of the underbrush and ground vegetation necessary to prevent erosion and hold and filter the rainwater that replenished the reservoir. Following an intense public debate, a controlled hunt resulted in the killing of 576 deer over 9 days.

104. *Id.* at 51.

105. *Id.*

106. *Id.*

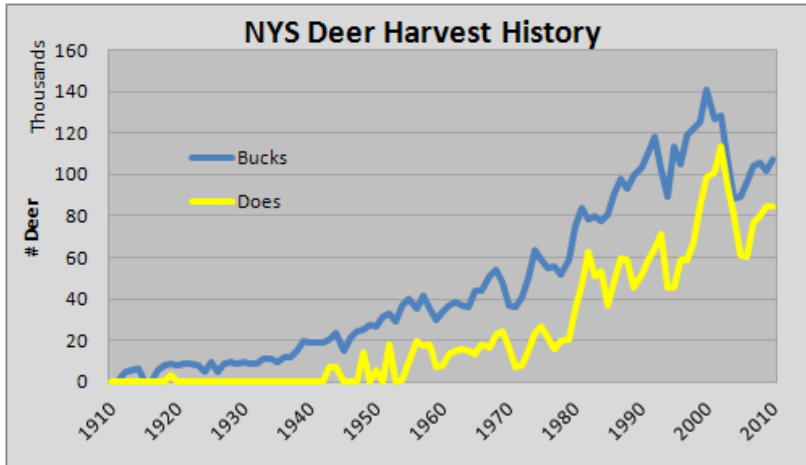


Figure 1: The harvest (i.e., hunt) of deer over time in New York State shows an approximate index of the rapid growth of the population.<sup>107</sup>

Alongside the reforestation of the northeast, deer expansion has been aided by the disappearance of this animal’s historical predators—wolves and mountain lions—as well as by the decline in hunting by humans. Steve Joule explains, “[H]unting tradition isn’t as integral to a lot of communities as it had been decades ago. It’s thought of as just a barbaric way of managing or even a barbaric way of behaving. Rather than it being a revered tradition, it’s got a very negative connotation to it now.”<sup>108</sup> As a result of these changing perceptions toward hunting, over the past century many communities banned such practices. Tom Rawinski refers to this process as “eco-environmental gentrification”: “these natural areas became gentrified [and protected]—for the dog walkers, the horseback riders, the nature walkers,”<sup>109</sup> but not for the deer hunters, he explains.

In addition to the ecological and cultural reasons, hunting has also been precluded in densely populated areas for safety reasons. One of the most pronounced manifestations of such safety concerns regarding deer hunting in New York is the 500-foot rule. This rule requires that firearms (and until recently, bows) not be discharged within 500 feet of a residential dwelling without the owner’s

107. DEC Deer Management Plan, *supra* note 55, at 11.

108. Interview with Steven Joule, *supra* note 102.

109. Interview with Tom Rawinski, *supra* note 76.

permission.<sup>110</sup> Even without anti-hunting ordinances, hunting is thus almost always prohibited in New York's towns and cities.<sup>111</sup>

Other reasons for the significant increases in deer numbers include milder winters associated with climate change and stricter leash laws for dogs in suburbia, as well as the proliferation of ornamental plants. Indeed, gardens throughout suburbia offer what one biologist called a "smorgasbord" for deer.<sup>112</sup> Boulanger explains: "We have a buffet for them now in suburbia. They have an unlimited food source and they can eat all the browse and nutrition they want because people plant ornamental plants. We humans have created the perfect habitat for deer."<sup>113</sup> Predator-free and thick with nutritious browse, suburban areas have become havens for deer populations, which have in certain instances increased in numbers to 100 to 125 deer per square mile.<sup>114</sup> In Syracuse, New York, free bulb planting programs have exacerbated the problem. "Basically you're buying deer candy," Joule tells me. "And then when the deer show up to eat that candy, you get very angry."<sup>115</sup> Rawinski exclaims along these lines: "We are dealing with this sudden bounty of wildlife that has recolonized within our midst."<sup>116</sup> As I shall discuss later, the challenge for wildlife managers has not been to simply reduce deer populations, but also to balance their populations among their various sites of occurrence.

### *B. Impacts and Responses*

At least four central concerns have arisen in light of the recent proliferation of deer populations. The first concern regards property damage. In 2002, New York farmers estimated crop damage by deer at approximately 59 million dollars.<sup>117</sup> Deer are also suspected vectors for Lyme disease. There are 7,000 new confirmed cases of Lyme disease per year in New York State. According to Paul Curtis, this is only the "tip of the iceberg," as not

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110. *Id.*

111. The 500-foot rule has lent itself to elaborate modes of resistance. For example, in the Village of Cayuga Heights in Tompkins County, New York, animal rights advocates have strategically traced and influenced households in order to preempt any hunting in the Village and to sabotage culling decisions by the Village Council. Interview with Diana Riesman, Trustee, Village of Cayuga Heights, Ithaca, New York (Nov. 24, 2013).

112. Interview with Paul Curtis, *supra* note 27.

113. Interview with Jay Boulanger, *supra* note 61.

114. *Id.*

115. Interview with Steven Joule, *supra* note 102. Parks and other natural areas in suburban/urban areas also present significant cover for deer. *Id.*

116. Interview with Tom Rawinski, *supra* note 76.

117. DEC DEER MANAGEMENT PLAN, *supra* note 55, at 22.

all cases are documented.<sup>118</sup> In Tompkins County, an area with high numbers of deer, a 1,000 percent increase in Lyme disease has been recorded since 2007.<sup>119</sup> Automobile accidents that involve deer present a third deer related risk, this time to both deer and humans. Curtis explains: “Deer kill more people than any other wildlife species in North America. Around 200 people die in deer/vehicle crashes per year.”<sup>120</sup> Deer-vehicle collisions also cost more than one billion dollars in property damages annually.<sup>121</sup>

A fourth set of deer impacts is ecological. Tom Rawinski, botanist with the Forest Health Program of the U.S. Forest Service, tells me that he first became interested in the burgeoning numbers of deer in the northeast because, “I soon recognized that invasive plants . . . were symptoms of a larger problem, and the larger problem was that the deer were shifting the balance within the forest. They were eating the native plants that could otherwise outcompete the invasives.”<sup>122</sup> Similarly, Gordon Batcheller suggests that:

As we drive our New York highways and look out to the adjacent forest lands, things look normal; they're forested. But a forest ecologist looking closer with that botanical lens might see that there are vast areas of New York where there's no regeneration of forest species. . . . So for forest ecologists, high deer numbers are causing grave concern about forest habitat health and the associated species diversity that comes with a very diverse forest ecosystem.<sup>123</sup>

The economic, public health and safety, and ecological concerns help explain why state wildlife agencies have been managing deer herds so intensely. In the words of Gordon Batcheller:

It turns out that the white-tailed deer is a major and significant species for a number of reasons. . . . Those high densities [of deer] are where there are a lot of people [and so] those impacts can cause a lot of social concerns, political concerns, [and] economic concerns. So that's one factor. The other factor is

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118. Interview with Paul Curtis, *supra* note 27.

119. Interview with Jay Boulanger, *supra* note 61.

120. Interview with Paul Curtis, *supra* note 27.

121. William F Allan & Joann K. Wells, *Characteristics of Vehicle-Animal Crashes in Which Vehicle Occupants Are Killed*, 6 No. 1 Traffic Injury Prevention 56, 56 (2005).

122. Interview with Tom Rawinski, *supra* note 76. (invasive plants, he explains, are more likely to be resistant to deer grazing).

123. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

that the white-tailed deer is one of the most beloved species in the state of New York.<sup>124</sup>

Jeremy Hurst, a certified wildlife biologist at the DEC's Division of Fish, Wildlife, and Marine Resources, describes his view on deer management:

Basically, we're charged with managing deer populations for the public, for the citizens of New York. And we do that in consideration of a variety of things. First, for the intrinsic value that deer have as a natural resource; and second, for the threat that deer can cause to human health and safety, to property damage, and also to ecological damage.<sup>125</sup>

## VI. DEER MANAGEMENT

To maintain a balanced deer population in New York State, the DEC must first identify the threshold at which deer threaten ecosystem health, cause excessive property damage, or create undue risks to human health and safety.<sup>126</sup> Conservation management requires juggling different and at times competing interests and threats, which manifest differently in different regions and at different times. As a result, wildlife biologists have found themselves managing deer to reduce their numbers in some parts of the state, to stabilize the populations in others, and to increase their numbers in yet a third set of locations. This focus on numbers by wildlife managers has translated into practices of reducing births and/or on increasing deaths.<sup>127</sup> While managers could also theoretically impact deer numbers by increasing emigration—i.e., by translocating deer to other areas—this is usually viewed as a problematic solution as it merely transfers the problem elsewhere.<sup>128</sup>

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124. *Id.*

125. Telephone interview with Jeremy Hurst, Certified Wildlife Biologist, Division of Fish, Wildlife, and Marine Resources, New York State Department of Environmental Conservation (Aug. 08, 2014). [Hereinafter Interview with Jeremy Hurst]

126. See DEC DEER MANAGEMENT PLAN, *supra* note 55, at 22–25.

127. Basic wildlife biology texts teach that populations can grow by births and by immigration from other populations, and can decrease by deaths and emigration, per this formula:  $P = (B + I) - (D + E)$ . In other words, population growth is equal to births and immigrations (the factors that increase populations) minus deaths and emigrations (the factors that decrease population). See, e.g., *Population Growth – An Introduction*, APPALACHIAN STATE U., <http://www.appstate.edu/~neufeldhs/bio1102/lectures/lecture18.htm> (last visited Oct. 4, 2014).

128. Interview with Paul Curtis, *supra* note 27.



Figure 2: Tagged deer visiting a bait site in the Village of Cayuga Heights. Cornell University's wildlife managers draw the deer to the bait, and infrared-triggered cameras take their pictures. The management team analyzes each photo and enters the numbers for tagged and untagged deer into a computer program in order to obtain population estimates. Deer with white ear tags are females who have been captured and surgically sterilized. Courtesy of Paul Curtis, Cornell University's Integrated Deer Research and Management Program, January 18, 2014.

In addition to killing through hunting and culling, which I will discuss shortly, attempts to control deer numbers include fertility control through contraception as well as surgical sterilization.<sup>129</sup> The DEC notes:

Fertility control is often suggested or advocated by individuals and organizations as a humane and cost-effective way to control deer populations or to reduce damages or conflicts associated with deer, especially in urban-suburban areas [where hunting is not practical]. However, based on considerable research . . . this strategy has not proven to be a viable, standalone option for managing free-ranging deer populations.<sup>130</sup>

129. DEC DEER MANAGEMENT PLAN, *supra* note 55, at 50.

130. *Id.* at 49.

According to the DEC, to be effective fertility solutions must be combined with lethal methods.<sup>131</sup> The two available contraceptives are GonaCon and Porcine Zona Pellucida (PZP).<sup>132</sup> The initial cost of contraception is approximately 500 dollars per deer, which can increase to two or three thousand dollars per deer as a higher proportion of the herd is treated.<sup>133</sup> Both contraceptives require regular booster shots. According to Curtis: “Deer need to be boosted, preferably once every year, but at least every other year. Could you imagine doing that with hundreds of free-ranging [deer]?”<sup>134</sup> At Irondequoit in New York State, contraception failed precisely for this reason, and the community eventually opted to “cull” its deer population.<sup>135</sup>

Culling, however, comes with its own baggage. The decision to cull often stirs passionate debates.<sup>136</sup> For example, the planned cull of approximately 3,000 deer on Long Island in 2014 was met with considerable controversy.<sup>137</sup> Boulanger explains:

Long Island [is] a wealthy community, and they’ve had it. They know that . . . [a sharpshooter] is the most effective and the cheapest way to solve the problem, it just is. And the meat gets donated to the needy. But again, we’re talking about the slaughter of thousands of animals by gun in suburban landscapes, [so] you can understand why this would make some people really upset.<sup>138</sup>

Active opposition to the Long Island cull made it much less productive than wildlife managers had hoped. Due to a combination of poor weather, legal obstacles, and human obstruction, “only” 192 deer were eventually culled. According to official reports by the United States Department of Agriculture,

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131. *Id.*

132. The PZP vaccine creates a protein layer around the does’ ovum that precludes fertilization. *See Id.*, at 50–51; Interview with Paul Curtis, *supra* note 27.

133. DEC DEER MANAGEMENT PLAN, *supra* note 55, at 51.

134. Interview with Paul Curtis, *supra* note 27.

135. *Id.*

136. See, e.g., Al Cambronne, *Can’t See the Forest for the Deer: to Cull or not to Cull? That is the Question Towns Increasingly Face*, WALL ST. J. ONLINE, <http://online.wsj.com/news/articles/SB10001424052702304704504579429583302400534> (last updated Mar. 11, 2014).

137. Interview with Jay Boulanger, *supra* note 61; N. R. Kleinfeld, *Outcry in Eastern Long Island Over a Plan to Cull Deer*, N.Y. TIMES, Dec. 18, 2013, available at <http://www.nytimes.com/2013/12/19/nyregion/outcry-in-eastern-long-island-over-a-plan-to-cull-deer.html>.

138. Interview with Jay Boulanger, *supra* note 61.

which funded the cull, “direct interference from individuals opposed to this project” occurred multiple times.<sup>139</sup> A more comprehensive culling plan has been executed in Amherst, New York since 2003.<sup>140</sup>

Surgical sterilization is often perceived as more effective for managing deer populations than repeated immunizations, as it requires a single capture and release.<sup>141</sup> But surgical sterilization, too, has its challenges. The estimated cost of this procedure is as high as 1,200 dollars per deer.<sup>142</sup> Furthermore, it involves trapping and surgical operation, to which animal rights groups usually oppose. The Integrated Deer Research and Management Program has been working this way with deer herds around Cornell University’s campus.<sup>143</sup> They have captured and then surgically sterilized over 90 percent of the female deer in the core area,<sup>144</sup> pairing these efforts with a hunting program responsible for the death of more than 600 deer in the last few years.

The complexities of the legal norms that govern sterilization and hunting in densely inhabited areas are exhibited in the following excerpt from my interview with Paul Curtis:

Paul Curtis (hereinafter, PC): There are lots of laws and ordinances. I only know the tip of the iceberg—the ones I have to deal with. For example, the only way we could get a high enough proportion of deer sterilized in Cayuga Heights in the last two years was Tony [director of White Buffalo, a private sharpshooting company] riding in a police car at 4am, when everybody’s asleep, just darting away. . . . His dart rifle is different from mine. Mine’s powder charged, so it’s considered a firearm, his is a CO<sub>2</sub> gas cartridge and shoots at a lower velocity. So under New York State law it’s not considered a firearm, he can shoot from a vehicle and doesn’t have to meet the 500 feet discharge rule.

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139. Joseph Pinciario, *With \$225K to Spend, USDA Cull Kills 192 Deer*, THE SUFFOLK TIMES, Aug. 27, 2014, available at <http://suffolktimes.timesreview.com/2014/08/51598/fewer-than-200-deer-killed-in-225k-cull-that-didnt-work/>.

140. Interview with Paul Curtis, *supra* note 27; Jessica L. Finch, *Number of Deer/Vehicle Accidents Increase for First Time Since 2003*, THE AMHERST BEE, Mar. 19, 2008, available at [http://www.amherstbee.com/news/2009-01-14/front\\_page/002.html](http://www.amherstbee.com/news/2009-01-14/front_page/002.html).

141. Interview with Paul Curtis, *supra* note 27.

142. DEC DEER MANAGEMENT PLAN, *supra* note 55, at 51.

143. *Id.*

144. Interview with Jay Boulanger, *supra* note 61.



Author (hereinafter, IB): But this is only from a police vehicle.

PC: Only from a police vehicle.

IB: But police could shoot from a police vehicle –

PC: Police can shoot anytime.

IB: Anytime.

PC: Or if they find a deer on the highway that has been wounded, they can shoot to dispatch [it] anytime. [But] if I'm hunting and have a firearm in my vehicle and see an injured deer on the side of the highway, I can't kill it. I can't shoot that deer to put it out of its misery, because I can't shoot from a car, from the highway. A police officer can.

IB: You can't shoot at all, or you can't shoot from the car?

PC: I can't shoot from the car, it's illegal to have a loaded weapon in the car, and even if I go outside the car and load my gun, I couldn't shoot it from the highway, it's illegal to shoot from the highway.

IB: From a highway. And if it were not from a highway?

PC: If it were in a field somewhere and there were no houses within 500 feet—the 500-foot rule still applies.

IB: Right.

PC: Then I could dispatch the animal, if I had a license and could legally shoot it.

Despite the intense sterilization efforts, Cornell's deer population has remained stable at approximately 100 deer, rather than declining as hoped.<sup>145</sup> This, Cornell's deer managers explain,

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145. N.Y. Dep't of Env'tl. Conservation, *Permit to Take or Harass Nuisance or Destructive Wildlife*, Permit No. 7-13-7935, *infra* app. C, at 5 (2013).

is why lethal methods are unavoidable; it is also why they had proceeded to request deer damage permits from the DEC.



Figure 3: Anesthesiologist Jordyn Boesch prepares a female deer for a sterilization surgery at Cornell University's Hospital for Animals. The deer are monitored through the entire surgical procedure and recovery. Photo by Paul Curtis, Jan 23, 2008.

Still, fertility control is favored by many animal rights and welfare advocates for ethical reasons. Boulanger explains: "even though sterilization hasn't been proven scientifically, people are still willing to spend a lot of money to try it."<sup>146</sup> Curtis criticizes this tendency: "They say: 'Well, this could be an alternative.' Well, it's not," he tells me.<sup>147</sup> There is "a ton of political pressure from animal rights activists out there [who say] that we can do deer contraception," Curtis adds.<sup>148</sup> Boulanger comments sarcastically that while many might "think that sterilization is the savior, it's the best thing to do—I remind people that . . . it's not really non-lethal control because I rely on you nice people to hit the deer with your cars and kill them."<sup>149</sup> "The scary thing for me," Boulanger continues, "is that people put so much weight [on] sterilization as a sole technique. If we're using sterilization *and* hunting combined [with] nuisance [permits] and we're still flat-lining or we can't

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146. Interview with Jay Boulanger, *supra* note 61.

147. Interview with Paul Curtis, *supra* note 27.

148. Interview with Jay Boulanger, *supra* note 61.

149. *Id.*

reduce [the deer] fast enough, then what hope do we have of sterilization or immuno-contraception [controlling them]?"<sup>150</sup>

Alongside killing deer and controlling their fertility, certain communities trap and transfer deer from overpopulated areas to less abundant ones. Steve Joule of the DEC explains that this comes at a high cost for the individual deer and is also quite problematic from an ecological standpoint.<sup>151</sup> In his words: "[I]f [the deer] lives more than a week, it's probably going to get hit by a car [when trying to find its] way home." Joule notes, accordingly, that the average mortality rate of translocated deer is "about 50 percent within the first several weeks . . . [and] then maybe 10 percent survival, if that, over the long term." "So . . . is this really a humane thing to do?" he asks rhetorically. "It's certainly not an effective thing to do, and it's not practical, with the cost of it," he adds.<sup>152</sup>

At present, the act of relocating deer is illegal in New York State, except under a special permit for scientific purposes.<sup>153</sup> Boulanger further explains: "it's really an uphill battle, it's a tough nut to crack and no one to date has come up with a real sure-fire way to alleviate an overabundance of deer except [by] culling . . . We know that's the most inexpensive and the most effective [strategy], and it works plain and simple, but it's *extremely* controversial."<sup>154</sup> Joule says, similarly, "by and large, lethal removal is the only method for reducing the impacts caused by deer." He adds: "I wish there was a magical pixie dust that we could . . . throw out and sprinkle over these suburban communities that would control the population, but it doesn't exist. Regulated hunting is really the only effective method for deer population [management] right now."<sup>155</sup> As Joule's statement suggests, state government agencies use hunters as the primary tool for controlling deer population.

But why does the government need hunters? Why not have government officials kill the deer themselves, or hire private sharpshooters to do this work for them? The answer to this question is complex and involves historical, economic, moral, and

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150. *Id.*

151. Gordon Batcheller of the DEC comments in response: "I am not aware of any cases of this in NY. Elsewhere? I haven't personally heard of this. Many individuals advocate for this, but we haven't allowed it." E-mail from Gordon Batcheller, *supra* note 89.

152. Interview with Steven Joule, *supra* note 102.

153. P. Bishop, J. Glidden, M. Lowery & D. Riehlman, *A Citizen's Guide to the Management of White-tailed Deer in Urban and Suburban New York* (New York State Department of Environmental Conservation), [http://www.dec.ny.gov/docs/wildlife\\_pdf/ctguide07.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/ctguide07.pdf) (last visited Dec 15, 2014), 5–6.

154. Interview with Jay Boulanger, *supra* note 61.

155. Interview with Steven Joule, *supra* note 102.

cultural dimensions. Practically, with only one hundred wildlife technicians and biologists in New York State, state officials are not equipped for the task of killing hundreds of thousands of deer per year. In a certain sense, then, the roughly 3/4 million hunters in New York are deputized by the state to reduce deer numbers, with the added benefit that they pay for the right to provide this labor for the state.

More importantly, perhaps, the answer to the question I posed is that hunting is still more culturally accepted than culling.<sup>156</sup> This requires some explanation. Hunting is perceived in some quarters in a romantic light, as the (only) natural way for humans to kill animals—not unlike predation in the animal world. Ann Causey suggests along these lines, that “the will to hunt, the desire to hunt, lies deep. It is . . . inherent in man.”<sup>157</sup> Hence, she continues, “the urge to kill may be viewed as an original, essential human trait . . . it is impossible to believe that education alone can obliterate desire that has been developed and reinforced over millions of years.”<sup>158</sup> Echoed by some of the wildlife managers interviewed for this project,<sup>159</sup> this view has been contested in the scholarship that compares and contrasts human hunting and animal predation. In the words of anthropologist Garry Marvin: “Human hunting is a set of cultural rather than natural practices.”<sup>160</sup> Anthropologist Tim Ingold suggests, similarly, that whereas “the essence of hunting lies in the prior intention that motivates the search for game, the essence of predation lies in the behavioral events of pursuit and capture, sparked off by the presence, in the immediate environment, of [a] target animal or its signs.”<sup>161</sup> Accordingly, some have suggested another avenue for controlling deer populations: to reintroduce the deer’s natural predators (namely, wolves or mountain lions) into the region so that they may serve as the natural balancers of deer populations. Boulanger remarks in response: “I love to joke with the audience that although I’d love nothing more than to unleash wolves and mountain lions. . . in Cayuga Heights, some stakeholders might find that scary.”<sup>162</sup> Again, in the eyes of wildlife managers,

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156. Interview with Jay Boulanger, *supra* note 61.

157. Causey, *supra* note 4, at 339

158. *Id.*

159. For example, Gordon Batcheller explains that what draws him to recreational hunting is the predatory relationship with the animal. Interview with Gordon Batcheller (Aug. 27, 2014), *supra* note 1.

160. Marvin, *supra* note 22, at 22.

161. TIM INGOLD, *THE APPROPRIATION OF NATURE: ESSAYS ON HUMAN ECOLOGY AND SOCIAL RELATIONS* 91 (1987). See also Paul Veatch Moriarty and Mark Woods, *Hunting ≠ Predation*, 18 ENVTL. ETHICS 391, 405 (1997).

162. Interview with Jay Boulanger, *supra* note 61.

recreational hunters are the primary agents for inducing deer mortality.

But rather than use recreational hunters, certain communities have made the decision to hire private sharpshooting companies (such as the White Buffalo) to perform what these companies refer to as “deer removal.” This removal is typically performed by baiting and then bolting the deer—the standard veterinarian-approved practice of ending animal lives in the livestock industry. “It’s very controversial,” Boulanger notes. “So I think . . . people are more accepting of [hunting], even though the techniques might not be as humane as standard [veterinary practices].”<sup>163</sup> On the other hand, certain hunters are young or may be inexperienced, what Boulanger calls “weekend warriors.” “[They don’t] hunt very much. . . so the question is [whether] that is as humane as something that’s more standardized [like private sharp shooting].”<sup>164</sup> Boulanger asks in this context: “What’s more palatable to the public? Is hunting [more] palatable because it’s been around a long time and people have romantic notions of what hunting is, versus large-scale culling [by sharpshooters]?”<sup>165</sup>

It is important to notice the terminological distinction between “harvesting” deer through hunting and their “removal” or “culling” through professional acts of shooting. Although their end result is often the same—the killing of wild deer—these two forms of killing involve a different set of rituals, performances, and regulations. As the authors of *Killing Animals* argue: “Killing an animal is rarely simply a matter of animal death. It is surrounded by a host of attitudes, ideas, perceptions, and assumptions.”<sup>166</sup> In the same book collection, anthropologist Garry Marvin distinguishes between three types of animal killing: cold, hot, and passionate. Unlike the unemotional and removed killing executed by the professional (“cold death”), sport and leisure hunting is passionate. “The hunter commits himself or herself intensely and fully to the visceral and emotional pleasures of hunting. This is not utilitarian work but a passionate pursuit in which the animal is sacrificed.”<sup>167</sup>

Despite the intensifying role of sharpshooters, 90 percent of deer killing is still carried out by hunters.<sup>168</sup> According to the DEC, hunting is still “the primary tool [for managing] deer

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163. *Id.*

164. *Id.*

165. *Id.*

166. ANIMAL STUDIES GROUP, *KILLING ANIMALS* 4 (2006).

167. Marvin, *supra* note 22, at 25.

168. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

populations,”<sup>169</sup> and “deer harvest through regulated hunting remains the most effective and equitable tool for managing deer populations across the state.”<sup>170</sup> In fact, the DEC encourages landowners wishing to help reduce deer numbers to “[c]onsider providing access to some hunters.”<sup>171</sup> Although declining in the mid-twentieth century, deer hunting has lately rebounded, with seasons broadening and large portions of the state opening to this practice.<sup>172</sup> An estimated 250,000 deer are killed annually in New York State through hunting. Vehicle collisions, a second mortality factor, are responsible for the death of another 100,000 deer every year.<sup>173</sup>

## VII. HUNTING LAWS

Hunting is regulated through a legal matrix of permitting and licensing systems, territorial configurations, and temporal distinctions. Jeremy Hurst explains: “[T]he layers of laws and regulations... make deer management complex. . . . [A]nd really, decisions for effective management become more of a social issue than a biological issue.”<sup>174</sup> Hunting regulations in the United States date back to the early colonial period. A 1705 law prohibited the killing of deer except between August and January, constituting an early version of what is known today as a “hunting season.”<sup>175</sup> In the nineteenth century, the decline in deer populations and the pressures by sportsmen’s groups resulted in laws that shortened the hunting season (in 1886), that imposed “bag limits” (also in 1886)—namely, a limit on the number of deer who can be taken per hunter—and that outlawed certain modes of hunting, such as hounding (in 1897).<sup>176</sup> By the turn of the twentieth century, most of the regulatory tools that exist in today’s hunting laws were already in place.

Current legal regimes regulate deer killing both through hunting laws, which refer to this form of killing as “harvesting,” and through nuisance laws, which refer to it as “culling.” The vast majority of deer killing occurs through hunting.<sup>177</sup> To hunt

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169. DEC DEER MANAGEMENT PLAN, *supra* note 55, at 19.

170. *Id.* at 17.

171. N.Y. DEP’T ENVTL. CONSERVATION, LANDOWNER’S GUIDE FOR MANAGING DEER, <http://www.dec.ny.gov/animals/7199.html> (last visited Oct. 3, 2014).

172. *Id.*

173. Interview with Jeremy Hurst, *supra* note 125.

174. *Id.*

175. C.W. Severinghaus & C.P. Brown, *History of the White-tailed Deer in New York*, 3(2) N.Y. Fish & Game J. 129, 140 (1956).

176. *Id.* at 140, 146.

177. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

deer in New York State, hunters must participate in a hunter education course that focuses on gun safety and hunter ethics, after which they must obtain a hunting license, and then they may further obtain various hunting privileges (licenses and privileges, jointly, will be referred to hereinafter as “permits”).<sup>178</sup> Each hunting permit allows an individual to hunt on certain dates with certain weapons (“implements”) and is accompanied by a tag that prescribes the type of deer that can be taken. A hunter can purchase three standard permits in New York: regular, bow-hunting, and combined muzzleloader/crossbow.<sup>179</sup> Notably, each state has enacted its own variation on this process. For example, “bag limit” regulations vary widely by state, and even within states. So while Alabama allows residents to harvest one antlerless deer per day plus a total of three antlered deer,<sup>180</sup> New York’s bag limits are more restrictive: a typical New York hunter will be entitled to harvest between one and five deer during a variety of hunting seasons from the end of September through the end of December.<sup>181</sup>

The concept of seasons—namely, specific windows in time when certain animals can be killed using certain implements—is central to the paradigm of regulated hunting. While permits are issued by local licensing agents such as town halls and sporting goods stores, the season dates are set by state law or regulation.<sup>182</sup> For the purpose of scheduling hunting seasons, New York State is divided into Northern and Southern Zones. In the Southern Zone, generally the area south of the Adirondack State Park, the regular hunting season begins in mid-November and lasts three weeks.<sup>183</sup> During this time, a hunter may harvest an antlered deer using any legal hunting implement.<sup>184</sup> In most areas, an individual can use a bow, muzzleloader, handgun,

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178. In New York, a hunting license allows the purchaser to hunt white-tailed deer during the regular season, and hunting privileges allow hunters to hunt during other seasons. A hunting license is required before any additional privileges may be purchased, even if the hunter does not wish to hunt during the regular season. See N.Y. ENVTL. CONSERV. LAW § 11-0701 (McKinney 2005 & Supp. 2014); Interview with Tom Rawinski, *supra* note 76; Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

179. See N.Y. ENVTL. CONSERV. LAW § 11-0701 (McKinney 2005 & Supp. 2014).

180. Provided a third deer cannot be taken unless at least one of the antlered deer taken had at least four points, each longer than one inch, on one side. ALA ADMIN CODE r. 220-2-.01 (2014). This means that an Alabama hunter could harvest 121 deer over the 118-day season that runs from Oct. 15 to Feb. 10. Besides the bag limit of one antlered deer per day, Alabama laws do not limit when hunters may take antlered deer.

181. See N.Y. ENVTL. CONSERV. LAW § 11-0907 (McKinney 2005 & Supp. 2014).

182. Interview with Steven Joule, *supra* note 102; N.Y. ENVTL. CONSERV. LAW § 11-0907.

183. DEC DEER MANAGEMENT PLAN, *supra* note 55, at 37.

184. See N.Y. ENVTL. CONSERV. LAW § 11-0907(2) (McKinney 2005 & Supp. 2014).

shotgun, or rifle.<sup>185</sup> In areas of dense human populations, rifles are often not permitted.<sup>186</sup> Both the bow hunting permit and the crossbow/muzzleloader permit allow a hunter to hunt in bifurcated seasons and take either an antlered or an antlerless deer.<sup>187</sup> Still in the Southern Zone, the early bow hunting season begins about seven weeks before the regular season, on October 1, and ends on the first day of the regular season. An overlapping crossbow season occurs during the last 14 days of the early bow hunting season. After the regular season, there is a late bow hunting and a concurrent combined crossbow/muzzle loading season. Despite the additional time for these other seasons, 75 percent of the deer are killed during the three-week regular season. In the Southern Zone, the hunting seasons end by early January.<sup>188</sup>

The Northern Zone follows a similar pattern, with minor variations such as a shorter crossbow season and an additional early muzzle loading season. Hunting in the Northern Zone ends in mid-December.<sup>189</sup> Hunting seasons are thus temporal and spatial legal constructs that have been shaped over many years and influenced by both conservation goals and hunter interest groups. As a result, contemporary hunting seasons both promote and frustrate conservation efforts.

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185. *Id.*

186. *See id.*

187. *Id.*; N.Y. COMP. CODES R. & REGS. tit. 6, § 1.11(d) (2014).

188. Interview with Jeremy Hurst, *supra* note 125.

189. DEC DEER MANAGEMENT PLAN, *supra* note 55, at 38. In addition to the regular seasons, an experimental “Deer Management Focus Area” season—a three-week season to take antlerless deer—was enacted to reduce the burgeoning deer population in Tompkins County, NY, from Jan. 12 through Jan. 31. If successful, this experimental program may expand to other areas. Interview with Jay Boulanger, *supra* note 61; Interview with Paul Curtis, *supra* note 27.



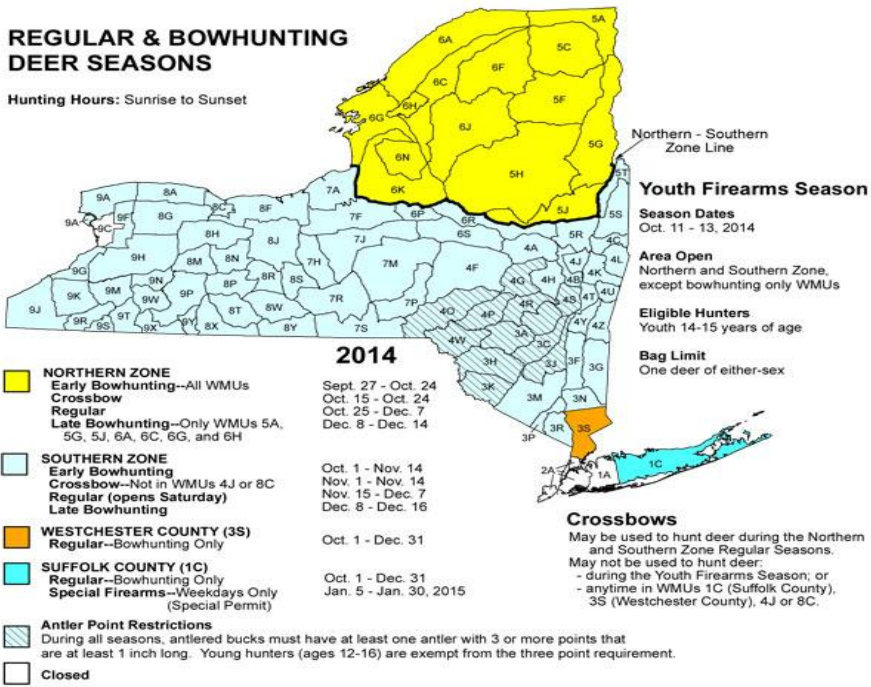


Figure 4

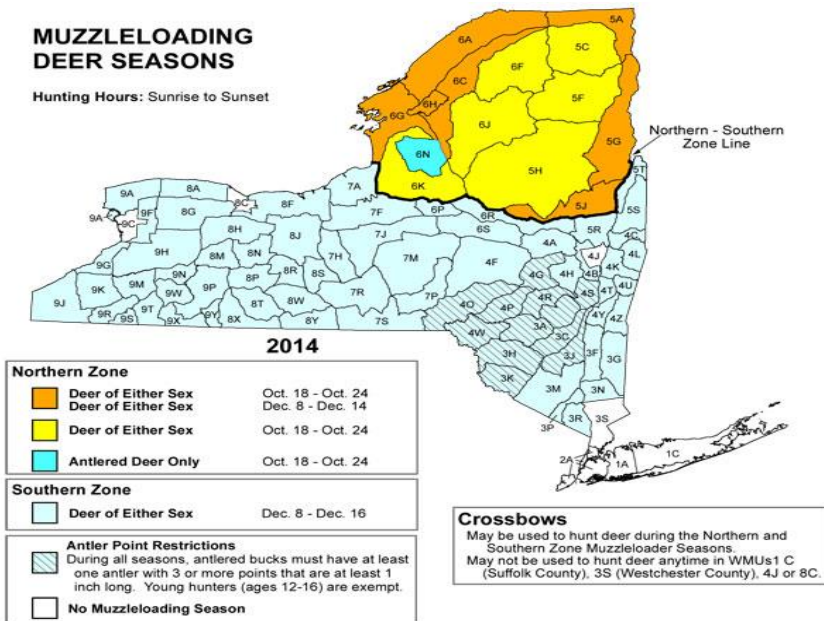


Figure 5

Figures 4 and 5 show maps of hunting zones, units, and implements, providing a visual aid for hunters to decipher the complex hunting regulations. The areas identified in the maps (e.g., 1A, 3J, 9H) are Wildlife Management Units (WMU). After identifying the relevant season and WMU, the hunter can trace the specific dates of that season as well as particular antler point restrictions.<sup>190</sup>

In line with fair chase principles, hunting seasons are meant to avoid the period when does give birth and raise young fawns, as well as those times in which deer are in unusual concentrations and thus particularly vulnerable.<sup>191</sup> In Boulanger's words: "The hunting season occurs at a time of year when the fawns are able to leave their mother and survive on their own . . . to make it more ethical . . . [instead of] having a fawn die on its own if you were to shoot [the mother] in the summer."<sup>192</sup> Tom Rawinski explains: "no one, no human, would ever be convinced that it is ethically proper to shoot a female mother deer at that critical time of the year when [the fawns are] young."<sup>193</sup> The ethical rationales behind the temporal definitions of the deer hunting seasons are thus closely intertwined with deer biology. The regular season in mid-November does not start until after the commencement of deer breeding,<sup>194</sup> which allows bucks time to impregnate does so that the next generation of deer can come into existence before does from the older generation are killed. Impregnated does can be shot during the season, however, and so the protection of the next generation is not absolute.

There are also other considerations beyond the biological ones. Hurst notes:

If we were to start with a blank slate and say we wanted to manage deer and the only consideration we were interested in was whether or not we can increase or decrease population towards our objective, and didn't have any social considerations in the midst, our seasons would probably look very different. But they've evolved this way because the reality is we work with hunters and they have their interests and their traditions.<sup>195</sup>

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190. Figures 4 and 5 adapted from N.Y. DEP'T ENVTL. CONSERVATION, DEER AND BEAR HUNTING SEASONS, <http://www.dec.ny.gov/outdoor/28605.html> (last visited Oct. 12, 2014).

191. Interview with Jeremy Hurst, *supra* note 125.

192. Interview with Jay Boulanger, *supra* note 61.

193. Interview with Tom Rawinski, *supra* note 76.

194. Interview with Jeremy Hurst, *supra* note 125.

195. *Id.*

Hurst summarizes: “The seasons’ lengths [and] the timing of the seasons are a result of management needs, tradition, [and] biological considerations...[T]here’s also the overlying issue of hunter tradition.”<sup>196</sup>

The regulation of deer antler length permitted for hunting introduces an additional complexity to hunting laws. Until recently, in New York State any deer with one antler longer than three inches could be “harvested” as an antlered deer,<sup>197</sup> while deer with smaller antlers were considered antlerless.<sup>198</sup> In an effort to increase the population of older bucks with more prize-worthy antlers (valued by some sport hunters), in certain regions the DEC has defined an antlered deer as having at least one antler with three points, each point longer than one inch.<sup>199</sup> Despite this heavy emphasis on taking antlered deer, the state management of deer populations is mostly performed through the regulation of doe, not buck, harvesting. “It’s the taking of does, the female deer, that allows us to manage deer populations to healthy levels,” Batcheller notes.<sup>200</sup> The reason, again, is largely biological: a small amount of bucks, if properly distributed across the landscape, can theoretically impregnate all the does; by contrast, each doe has a limited capacity for reproduction each year. The most effective way of reducing deer populations, then, is to control or kill does. Each time a doe is killed, the reproductive potential of the population diminishes incrementally. Hence, in areas where the deer population is perceived to be too high, wildlife managers encourage hunters to take additional does. According to Hurst, deer management in New York is conducted “primarily through harvest of antlerless deer: adult does and fawns. ... We can increase or decrease the harvest of antlerless deer as needed in order to allow the population in a certain area to increase or decrease.”<sup>201</sup>

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196. *Id.*

197. N.Y. ENVTL. CONSERV. LAW § 11-0914 (McKinney 2005 & Supp. 2014).

198. N.Y. ENVTL. CONSERV. LAW § 11-0907(1) (McKinney 2005 & Supp. 2014).

199. N.Y. COMP. CODES R. & REGS. tit. 6, § 1.27 (2012). This new definition of antlered deer left unchanged the prior definition of antlerless deer as any deer without an antler of at least three inches. Consequently, in this region, any deer with an antler greater than three inches, but having less than one antler with at least three points, all at least one inch, can neither be legally harvested as antlered nor as an antlerless deer.

200. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

201. Interview with Jeremy Hurst, *supra* note 125.

## VIII. DEER MANAGEMENT PERMITS (DMPs)

In addition to regular hunting permits, hunters can also choose to participate in a lottery for deer management permits (“DMPs”).<sup>202</sup> Unlike the seasonal tags, which may be used anywhere in New York and only at certain times, DMPs can only be used in particular areas, known as wildlife management units (“WMUs”) and in any hunting season.<sup>203</sup> New York State is divided into 92 WMUs, each one with its own regulation and management apparatus.<sup>204</sup> “It would be inappropriate for us to simply attempt one broad brush approach for management on a state-wide scale,” Hurst tells me. “Deer populations vary too dramatically throughout the state, and so we would be under-managing in some areas and over-managing in others and would not be responsive to local conditions,” he explains.<sup>205</sup> The regulations also change over time. “[It is] an adaptive framework,” Hurst later notes. “[S]o as populations change and as habitats change and as circumstances for management change, we can respond by modifying the boundaries as needed.”<sup>206</sup>

The chance of being awarded a DMP varies, depending on the DEC’s target in the particular WMU and the agency’s expectation of how many hunters will participate in the lottery. According to the DEC, the formula is “actually quite simple,” but “the process of determining several of the variables in the equation is complex.”<sup>207</sup> Generally, the DEC seeks to identify “removal rates” for each WMU that would produce a stable deer population, “allowing for neither growth nor reduction.”<sup>208</sup> Such a stability-level removal rate is unique to each WMU. Once the DEC identifies a stability-level removal rate, it relates the current population level to the

202. *Id.*; Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

203. N.Y. COMP. CODES R. & REGS. tit. 6, § 1.20 (2009).

204. Interview with Jeremy Hurst, *supra* note 125.

205. *Id.*

206. *Id.*

207. N.Y. DEP’T ENVTL. CONSERVATION, DMP AVAILABILITY AND PROBABILITY OF SELECTION, <http://www.dec.ny.gov/outdoor/30409.html> (last visited Oct. 4, 2014). The DEC sets the target number of DMPs in a WMU by following the formula:

Step 1. Projected Buck Take X Removal Rate\* = Total # of Adult Does to be Harvested

Step 2. Total # of Adult Does to be Harvested - # Adult Does Taken by Muzzleloader Hunters and Archers and on DMAP tags = Necessary Adult Doe DMP Take

Step 3. Necessary Adult Doe DMP Take ÷ Proportion of Adult Does in DMP Take\*\* = Total Desired DMP Take

Step 4. Total Desired DMP Take ÷ Success Rate of DMPs = Total # of DMPs to Issue

\* Desired ratio of adult female to adult male deer in harvest

\*\*This accounts for fawns in the DMP take.

N.Y. DEP’T ENVTL. CONSERVATION, UNDERSTANDING DMPs: QUOTA SETTING AND PERMIT SELECTION, <http://www.dec.ny.gov/outdoor/47743.html> (last visited Oct. 4, 2014).

208. N.Y. DEP’T ENVTL. CONSERVATION, UNDERSTANDING DMPs: QUOTA SETTING AND PERMIT SELECTION, <http://www.dec.ny.gov/outdoor/47743.html> (last visited Oct. 4, 2014).

desired level: if the population is greater than the desired level, the DEC prescribes a greater-than-stability-level removal rate—and vice versa.<sup>209</sup> Because the DEC prefers to minimize dramatic fluctuations in populations, the prescribed removal rate may not be equal to the stability-level removal rate, depending on the prior rate.<sup>210</sup>

By restricting or expanding DMPs in the various WMUs, New York State is thus able to adjust the actual deer population to numbers that are more in line with its desired population level. When the number of DMPs awarded for a particular WMU ends up being significantly less than the DEC's target number, bonus DMPs are issued free of charge to hunters who have a proven track record of harvesting antlerless deer.<sup>211</sup> Gordon Batcheller details how DMP tags work in the context of WMUs:

[WMUs] are legal boundaries. [S]o . . . if I have a deer tag for one area, I can only use it in that area, I can't go to another area, so it's controlled that way. . . [W]hen I have a doe tag it actually has [the number of the WMU] that indicates where I can use it. [E]very permit has a unique number, which is a link to the hunter's name. . . and the permits have your name on it, so you can't . . . give [them] to other hunters. You have to put the tag on the animal, and then you have to report the taking to us so we can keep track of [the] permits. *[The tags] are sort of a chain of custody to keep all the deer hunting lawful from A to Z.* It starts with the license and ends with tagging a deer, so we know the deer was taken by someone lawfully licensed to do so. [The tag] is attached to the ear or to the antlers of the deer. So basically, it stays with the deer until the deer is cut up and put into a freezer. At that point it can be discarded. But before you discard it, you have to report the take [to us], so that we have all that information that was on the tag, [and this] goes into our computer and becomes the final report.<sup>212</sup>

Despite the intense attention to and the heightened regulation of hunting, the practices detailed in the above quote rarely end up

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209. *Id.*

210. *Id.*

211. NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, BONUS DMPs, <http://www.dec.ny.gov/outdoor/10001.html> (last visited Oct. 4, 2014).

212. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1. (emphasis added).

balancing deer population numbers. Wildlife biologists estimate that in New York, an average 40 percent of the adult doe population must be killed annually to stop the population from increasing.<sup>213</sup> In many areas, hunters would need to kill up to five does to balance the population, but DEC survey shows that most kill only one or two. Boulanger notes, “We know from . . . wildlife sociological research . . . that hunters will only take between, depending on the study, 1.6 and 1.9 deer per year, even given unlimited opportunities.”<sup>214</sup> He explains that hunters are “busy with work and family life and to get a deer is a lot of work—you have to tag it, gut it, [and] drag it out of the woods. . . [I]t takes hours to butcher it [if you do it yourself].”<sup>215</sup> New York practically provides an unlimited permit supply for does in some areas, Hurst tells me along these lines, but there is “not enough interest amongst the hunters to take enough antlerless deer to affect the change.”<sup>216</sup>

Hunters’ reluctance toward hunting does is partially rooted in the sport hunting tradition. Although the restrictions on hunting occurred at a time when deer numbers were low, many hunters still refrain from hunting does even under conditions of abundance. Curtis explains that “culturally, hunters are very resistant to change.”<sup>217</sup> “It doesn’t matter if we have deer all over the place,” he says, “they still won’t shoot a doe.”<sup>218</sup> These traditions have in many instances been encoded into law, and as such have become even more difficult to alter. Until 2001, for example, Pennsylvania still permitted the shooting of does for only three days in the entire hunting season.<sup>219</sup> Currently, however, Pennsylvania, like New York, provides significant opportunities for doe hunting.<sup>220</sup>

## IX. CONFLICTS OF LAW

Hunting norms often conflict with each other and with conservation regulations, demonstrating that the close relationship between conservation and hunting is not without its tensions and ambiguities. Such conflicts play out on different scales: between the government agency and the legislature, between hunters and the agency, between different jurisdictions,

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213. Interview with Steven Joule, *supra* note 102.

214. Interview with Jay Boulanger, *supra* note 61.

215. *Id.*

216. Interview with Jeremy Hurst, *supra* note 125.

217. Interview with Paul Curtis, *supra* note 27.

218. *Id.*

219. *Id.*

220. *See* 58 Pa. Code. § 139.4 (2014).

et cetera. For example, certain groups and individuals within the hunting community have been known to push for laws or policies that conflict with the conservation agency's goals. Batcheller explains: "we have to really lower the deer numbers so that they stop impacting forest regeneration. And when you do that, hunters go out and—you know what?—they don't see deer. So we get complaints from deer hunters who don't see enough deer because we're trying to manage these areas and restore these ecosystems."<sup>221</sup> As mentioned earlier, another site of conflict has emerged around the ethics of taking does for the efficient management of deer populations. While this is a no-brainer for wildlife managers, doe killing is contentious among hunters and can conflict with the customs of certain hunters. Batcheller explains that "you still run across people who either personally don't shoot does or [who] teach others that it's a bad idea."<sup>222</sup>

Another topic in which existing conservation management laws conflict with hunting norms is the regulation of antlers. Certain local ordinances aim to reduce the harvest of younger bucks.<sup>223</sup> Joule explains that:

Several groups wanted the DEC to manage and make it mandatory that you have to pass up certain size animals and can only harvest certain other size animals. Well, that works from a recreational standpoint, [but] it has nothing to do with management, so it wasn't really something that was necessary to do. And there's always other stakeholders—safety concerns, crop damage, and a whole bunch of other stakeholders—whose impacts from deer are a little bit more important than the size of a buck's antlers, so [this] was never anything that was implemented by the state.

As a result, hunters proceeded to lobby their local legislators, who in turn "made antler restrictions mandatory in certain wildlife management [units]."<sup>224</sup> In this case, the hunters' needs conflicted with management objectives as well as with the interests of other hunters who do not hunt for trophies.

To take another example, historical restrictions have kept New York State from issuing hunting permits for does in the

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221. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

222. *Id.*

223. Interview with Steven Joule, *supra* note 102.

224. *Id.*

Adirondack Mountains.<sup>225</sup> As a result, “the population is *much* more difficult to maintain at levels we’d like to maintain,” says Joule.<sup>226</sup> Long Island further exemplifies how conflicts of law may be dictated by certain interest groups, thereby contradicting the State’s conservation management efforts. For example, deer hunting (even by bow) is strictly forbidden in Long Island’s Nassau County, and in Suffolk County special hunting permits from town clerks must be obtained. The DEC deems these unique Long Island regulations “a complex and onerous system of laws and regulations governing deer hunting.”<sup>227</sup> In such cases, Joule tells me, state law is dictated by very influential groups. “[I]t’s not the experts that are consulted, it’s the legislators [who] make the decision[s],” he laments.<sup>228</sup> Hurst further explains that “there’s a complex relationship between how we use hunters to manage deer populations at the large scale, and to a large degree [at] the small scale, too. We have a matrix of authorities.”<sup>229</sup> But at times, “there is some tension between the authority that we have and the authority that we do not have. [T]here are tools that we could use to manage deer more effectively, that we [can’t use] because the legislature says no.”<sup>230</sup>

Crossbows are another example for how legal norms can conflict with and restrict conservation management by state agencies. Until recently, New York State prohibited hunting with crossbows. This, despite the DEC’s preference toward allowing crossbow hunting, especially in urban and suburban areas, because it is relatively low risk and can be used close to human settlements where there are also high deer numbers. Crossbows are favored by the DEC also because they require less physical exertion than a regular bow and can enlist a wider variety of hunters.<sup>231</sup> Hurst explains: “The crossbow doesn’t require the hunter to draw the bow and hold it drawn and, in fact, you can draw the bow and cock the crossbow . . . so it makes hunting a lot easier for younger or smaller-framed hunters or women, or for elderly or disabled hunters.”<sup>232</sup> In 2014, crossbows were permitted in large parts of New York’s rural and suburban areas.<sup>233</sup> Still, in

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225. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1; Interview with Jeremy Hurst, *supra* note 125; N.Y. ENVTL. CONSERV. LAW § 11–0913(1)(a) (McKinney 2005 & Supp. 2014).

226. Interview with Steven Joule, *supra* note 102.

227. DEC DEER MANAGEMENT PLAN, *supra* note 55.

228. Interview with Steven Joule, *supra* note 102.

229. Interview with Jeremy Hurst, *supra* note 125.

230. *Id.*

231. *Id.*

232. *Id.*

233. *Id.*; N.Y. ENVTL. CONSERV. LAW § 11–0907(2).



certain areas of the State such as Long Island, crossbows are prohibited despite the DEC's stated position.<sup>234</sup>

#### X. DEER DAMAGE (NUISANCE) PERMITS

Alongside hunting permits, deer are also controlled through deer damage (nuisance) permits. In such cases, rather than directly utilizing hunters to achieve target deer populations, the DEC allows private landowners to utilize hunters to implement their own site-specific deer management.<sup>235</sup> While hunting is responsible for the death of over 200,000 deer every year, deer damage (nuisance) permits only account for thousands of deer deaths.<sup>236</sup> According to Joule: "There's no comparison . . . the number of deer permitted in regulated hunting is many, many, many times of a nuisance permit."<sup>237</sup> Although these permits are marginal in terms of statewide numbers, they provide targeted population control in sites where deer are perceived to be a nuisance.

Indeed, the DEC is authorized by statute to grant a permit to "take any wildlife at any time whenever it becomes a nuisance, [when it is] destructive to private or public property or [when it is] a threat to public health or welfare."<sup>238</sup> The DEC states: "One of the principal philosophies guiding DEC is that the public shall not be caused to suffer inordinately from the damaging effects of, and conflicts arising from, resident wildlife."<sup>239</sup>

There are two types of deer damage, or nuisance, permits in New York: the deer management assistance program (DMAP) permits and deer damage permits (DDP).<sup>240</sup> Both are managed by the DEC and utilized by landowners to control deer populations. Additionally, both are utilized in areas that are perceived as having too many deer who are "causing ecological or agricultural damage."<sup>241</sup> But whereas DMAPs are used during hunting seasons,

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234. See DEC DEER MANAGEMENT PLAN, *supra* note 55, at 36, 53–54.

235. N.Y. COMP. CODES R. & REGS. tit. 6, § 1.30 (2014).

236. Interview with Gordon Batcheller (Aug. 08, 2014), *supra* note 1.

237. Interview with Steven Joule, *supra* note 102.

238. N.Y. ENVTL. CONSERV. LAW § 11–0521 (McKinney 2005 & Supp. 2014).

239. DEC DEER MANAGEMENT PLAN, *supra* note 55, at 22. Deer damage (nuisance) permits are issued when individual deer are considered "nuisance wildlife," "damaging wildlife," or "nuisance/damaging wildlife." "Nuisance wildlife" is a deer (or other wild animal) "that may cause property damage, is perceived as a threat to human health or safety, or is persistent and perceived as an annoyance," while damaging wildlife is: "A wild animal that damages property," such as by eating ornamental plants. See N.Y. Dep't Envtl. Conservation, *Permit to Take or Harass Nuisance or Destructive Wildlife*, *infra* app. A, at 1. See N.Y. Dep't Envtl. Conservation, *Remove or "Take" Nuisance Animals Legally*, <http://www.dec.ny.gov/animals/81531.html> (last visited May03, 2015).

240. N.Y. COMP. CODES R. & REGS. tit. 6, § 1.30 (2014).

241. Interview with Jay Boulanger, *supra* note 61.

DDPs are used off-season. Many other states utilize similar programs.<sup>242</sup>

*A. Deer Management Assistance  
Program Permits (DMAPs)*

Under DMAPs, a landowner<sup>243</sup> must establish that hunting has failed to regulate the relevant population. These permits are issued for antlerless deer (does and fawns) or for deer with antlers less than three inches long.<sup>244</sup> The actual taking of the deer may be performed by landowners or hunters by invitation only. A municipality or institution may also apply for a DMAP permit if it has a documented deer problem and the DEC has approved its plan for deer management.<sup>245</sup>

Whereas DMAP tags can be used in any open deer-hunting season,<sup>246</sup> hunters must also possess the appropriate seasonal license to take a deer pursuant to a DMAP tag.<sup>247</sup> A hunter is limited to two DMAP tags per year.<sup>248</sup> The effectiveness of DMAP tags depends both on the number of hunters who are permitted and willing to hunt antlerless deer and on the number of landowners' who are willing to invite hunters into their land (DMAP tags cannot be sold).<sup>249</sup> Alongside their obvious goal of controlling deer populations, DMAP permits thus also serve to expand hunting opportunities in New York. According to the DEC, "landowners no longer provide the level of open access they once did. DMAP offers an avenue for landowners to meet deer

242. *See, e.g.*, 58 Pa. Code §§147.671–676 (2014)

243. To be eligible for a DMAP permit, applicant(s) must own or control land in New York that meets one of the following criteria:

1. Agricultural land that was damaged by deer where the damage has been documented or can be documented by the DEC; or

2. Land where deer damage to significant natural communities has been documented or can be documented by the DEC; or

3. Contiguous land totaling 100 or more acres where forest regeneration is negatively impacted by deer. This negative impact must be identified in an existing forest and/or land management plan; or

4. Contiguous land totaling 1,000 or more acres where a deer management plan specifically designed for the property has been submitted to and approved by the appropriate regional office of the Department.

N.Y. DEP'T ENVTL. CONSERVATION, DEER MANAGEMENT ASSISTANCE PROGRAM, <http://www.dec.ny.gov/animals/33973.html> (last visited Mar. 20, 2015).

244. An applicant can apply for unlimited tags. However, forest management [(3) in *id.*] and deer management [(4) in *id.*] are typically limited to receiving 1 tag per 50 acres of land under the permit. N.Y. COMP. CODES R. & REGS. tit. 6, § 1.30(h) (2014).

245. N.Y. COMP. CODES R. & REGS. tit. 6, § 1.30(f) (2014).


246. N.Y. COMP. CODES R. & REGS. tit. 6, § 1.30(c) (2014).

247. N.Y. COMP. CODES R. & REGS. tit. 6, § 1.30(d) (2014).

248. N.Y. COMP. CODES R. & REGS. tit. 6, § 1.30(h)(4) (2014).

249. N.Y. COMP. CODES R. & REGS. tit. 6, § 1.30(h)(5) (2014).

management needs on their property, while providing an incentive to give licensed hunters access to deer and deer hunting.”<sup>250</sup>



New York State Department of Environmental Conservation  
Division of Fish, Wildlife and Marine Resources

**Deer Management Assistance Program**  
Application - No Fee  
Postmark Deadline - September 1

OFFICE USE ONLY		
REG	YEAR	ID NUMBER
NEW <input type="checkbox"/> RENEWAL <input type="checkbox"/>		

**Check One:**  New Application     Renewal without Changes     Renewal with Changes

APPLICANT INFORMATION		Telephone # Home ( )	Name (Person representing Landowner - if different)	Telephone # Home ( )
Name (Landowner # 1, club, cooperative or municipality)				
Address		Telephone # Work ( )	Address	Telephone # Work ( )
City/State/Zip Code		City/State/Zip Code		

APPLICATION CATEGORY (Check one)	<input type="checkbox"/> Agricultural	<input type="checkbox"/> Municipality	<input type="checkbox"/> Significant Natural Communities	<input type="checkbox"/> Forest Regeneration	<input type="checkbox"/> Custom Deer Management
Minimum Acreage	0	0	0	100	1000
Management Plan Required	No	Yes	Yes	Yes	Yes

When required, the applicant must attach a written deer management plan stating their deer management objectives and why they cannot be met through the use of existing deer seasons and deer management permits.

LAND AREA/LOCATION INFORMATION				
County(s)	Town(s)	WMU(s)	Farm Service Agency or Tax Map ID Number	Total Acres

Totals and Types of Acreage:		
CROPS	FOREST/WOODS/BRUSH	OTHER
_____ acres _____ type	_____ acres _____ type	_____ acres _____ type
_____ acres _____ type	_____ acres _____ type	_____ acres _____ type

REASON FOR DMAP	
IF AGRICULTURAL: Nature and extent of problem: _____ _____	
Methods which have been used to control problem: _____ _____	
Status of problem in recent years: <input type="checkbox"/> Improved <input type="checkbox"/> Same <input type="checkbox"/> Worse	

RECENT HUNTING AND DEER TAKE																																					
Number of hunters who hunted the area last year: _____																																					
Number of deer taken off the lands during the past three deer seasons? <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Year</th> <th>Bucks</th> <th>Antlerless Deer</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>	Year	Bucks	Antlerless Deer	Total	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	Have nuisance deer tags or DMAP tags been requested or issued recently? <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Year</th> <th>Nuisance</th> <th>DMAP</th> <th># of tags</th> <th># deer taken</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>	Year	Nuisance	DMAP	# of tags	# deer taken	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
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Figure 6: DMAP application (First Page).<sup>251</sup>

250. N.Y. DEPT ENVTL. CONSERVATION, DEER MANAGEMENT ASSISTANCE PERMIT, <http://www.dec.ny.gov/animals/33973.html> (last visited Oct. 4, 2014). Additionally, landowners with at least 1,000 contiguous acres can obtain DMAP permits to improve hunting opportunities on their land. Landowners may receive up to one DMAP tag per fifty acres subject to the plan (up to 20 tags for minimum 1,000 acres). Yet each landowner can only utilize two DMAP tags herself. N.Y. COMP. CODES R. & REGS. tit. 6, § 1.30(h) (2014).

### B. Deer Damage Permits (DDPs)

Unlike DMAPs, DDPs are typically used outside of the hunting season; also, they are usually granted to control small and isolated populations.<sup>252</sup> The DEC issues DDPs when deer become “a nuisance, destructive to public or private property or a threat to public health or welfare.”<sup>253</sup> Specifically, DDPs are issued when deer cause “damage to agricultural crops, ornamental plants, or gardens, as well as health and safety concerns such as on airport grounds.”<sup>254</sup> Even under the DDP permits, however, firearms cannot be used within 500 feet of a “dwelling, farm, or occupied structure,” nor from a motor vehicle, across a public highway, and within 500 feet of a church, school, playground, or occupied factory.<sup>255</sup>

Specific conditions for each DDP permit may apply. For example, the Cayuga Heights permit states that: “Deer carcasses must be made available to venison donation programs” and prohibits the use of chemical agents.<sup>256</sup> Joule explains about this type of permit that, “There’s no real legal definition [of nuisance]. The guideline that we’ve gone by is that if there’s visible damage in the eyes of the person who is claiming the damage, then a nuisance permit [can be] issued.”<sup>257</sup> DDP permits are very specific. Joule tells me that if bucks are rubbing antlers on Christmas trees and damaging them, a permit may be issued to take bucks in that area.<sup>258</sup> DDPs are sometimes at odds with local laws. If hunting is prohibited by local ordinances, those will override the DDP permits.

Unlike the various licenses, privileges, and tags, and unlike DMAPs, actions taken pursuant to DDPs are not considered recreational hunting and are thus not governed by hunting statutes nor by traditional fair chase norms. Batcheller explains that, “they’re actually not hunting, they’re killing a deer under a completely different legal authority, [which is called culling].”<sup>259</sup>

251. N.Y. Dep’t Env’tl. Conservation, *Deer Management Assistance Program Application*, [http://www.dec.ny.gov/docs/wildlife\\_pdf/dmapapp.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/dmapapp.pdf) (last visited Oct. 4, 2014).

252. Interview with Steven Joule, *supra* note 102.

253. N.Y. ENVTL. CONSERV. LAW § 11–0521 (McKinney 2005 & Supp. 2014).

254. N.Y. Dep’t Env’tl. Conservation, *Permit to Take or Harass Nuisance or Destructive Wildlife*, *infra* app. A, at 1.

255. Div. Fish, Wildlife & Marine Res., N.Y. Dep’t Env’tl. Conservation, *Permit to Take or Harass Nuisance or Destructive Wildlife, Permit Number 2558*, *infra* app. B, at 1 (Nov. 15, 2011).

256. *Id.* at 2.

257. Interview with Steven Joule, *supra* note 102.

258. *Id.*

259. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

This difference in terminology is not only a formality; rather, it signals the deep cultural and legal significance associated with the human killing of animals under different circumstances and conditions. Unlike instances in which certain species are fixed into specific legal and cultural categories—such as “endangered,” “farm,” or “pest”—deer increasingly travel between the categories: the very same deer can be defined at one moment as a wild animal and, as such, as subject to hunting, and at the next moment as a nuisance and thus as subject to culling.<sup>260</sup>

Further reflective of the distinction between hunting and culling, DDPs (typically perceived as culling permits) often permit killing tactics that are prohibited in traditional sport hunting ethics, including the use of bait, night hunting, spotlights, types of rifles prohibited for deer hunting, et cetera.<sup>261</sup> Joule explains, accordingly, that “nuisance permits are not considered hunting. [They are] done outside of the hunting season . . . [and] on a very local scale. . . [T]hings that you couldn’t do during regulated hunting [seasons] . . . don’t necessarily apply with nuisance permits.”<sup>262</sup> DDPs also permit killing deer by using sedation coupled with lethal injection, as well as stunning with a penetrating captive bolt, followed by exsanguinations.<sup>263</sup> Such lethal methods are more commonly associated with criminal executions and slaughterhouses, respectively. Arguably, this change in killing method signifies the different classificatory status of deer in two managerial discourses: whereas the hunting discourse configures the deer as a wild and protected animal, in the discourse of nuisance the same animal is categorized somewhere between “pest” and “wild.”

Garry Marvin’s work reflects on the category of “pest,” and his insights are partially applicable to nuisance animals. In his words, “humans regard [pests] as transgressive animals and often, more strongly, as enemies that provoke emotional reactions ranging from annoyance or anger to repulsion and disgust . . . They are destructive when they kill and eat domestic livestock or eat crops, and they are polluting when they are simply present in places where humans think they ought not to be. . . The means of killing should be efficient and effective, but it is the

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260. See also Braverman, *supra* note 90, where I discuss the fluidity and fixity of animals between and within different legal categories.

261. N.Y. Dep’t Env’tl. Conservation, *Permit to Take or Harass Nuisance or Destructive Wildlife*, *infra* app. A, *supra* 239 at 1; Div. Fish, Wildlife & Marine Res., N.Y. Dep’t Env’tl. Conservation, *Permit to Take or Harass Nuisance or Destructive Wildlife, Permit Number 7-13-7935*, *infra* app. C, *supra* 145 (2013).

262. Interview with Steven Joule, *supra* note 102.

263. N.Y. Dep’t Env’tl. Conservation, *Permit to Take or Harass Nuisance or Destructive Wildlife*, *infra* app. A, *supra* 239 at 1.

actual death, in and of itself, of the animal that is wished for or desired.”<sup>264</sup> Next, Marvin points to the radically different significance of killing in sport hunting: “There is certainly the hope and an intention to kill an animal, but how that animal is found and how it is killed is far more important than the mere fact that it is killed.”<sup>265</sup>

Of the different types of permits for killing deer, DDPs are thus the furthest removed from hunting. The single goal of DDPs is the control of deer populations, as opposed to DMAPs’ dual goals of population control and expanded hunting opportunities. This is also one of the reasons why DDPs “generally are not available during an open deer hunting season.”<sup>266</sup> Rawinski explains that hunters “have paid the state for the privilege of harvesting one of their [animals], [so] the feeling is that they shouldn’t have to compete with a group that is out culling the deer.”<sup>267</sup>

Given that bait, spotlights, and otherwise prohibited hunting implements are permitted for DDP permits, such permits are likely to be the most effective way to address specific deer nuisance problems. Despite this, the DEC does not make it a secret that their preferred method for managing deer populations is through recreational hunting activities supplemented with DMPs or DMAPs.<sup>268</sup> According to the DEC, “[s]uccessful management hinges on hunters being allowed adequate access so that they may take sufficient numbers of antlerless deer, most importantly adult does.”<sup>269</sup> As stated earlier, one of the guiding principles of the DEC is that the public shall not be caused to suffer from the damaging effects of resident wildlife.<sup>270</sup> The DEC prefers to achieve this objective in such a manner that also provides hunting opportunities.

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264. Marvin, *supra* note 22, at 18. *See also* HOON SONG, PIGEON TROUBLE: BESTIARY POLITICS IN A DEINDUSTRIALIZED AMERICA (2010) (discusses Labor Day Pigeon Shoots—large communal fests in rural Pennsylvania—and their transformation from community events to sensational demonstrations of killing, which have in turn changed the status of pigeons from a wholesome food to pests).

265. Marvin, *supra* note 22, at 19.

266. N.Y. DEP’T ENVTL. CONSERVATION, LANDOWNER’S GUIDE FOR MANAGING DEER, <http://www.dec.ny.gov/animals/7199.html#DMAP> (last visited Oct. 4, 2014).

267. Interview with Tom Rawinski, *supra* note 76. Additionally, unlike DMAP permits, the DEC may limit the methods utilized by DDPs to non-lethal harassment of deer. N.Y. DEP’T ENVTL. CONSERVATION, LANDOWNER’S GUIDE FOR MANAGING DEER, <http://www.dec.ny.gov/animals/7199.html#DMAP> (last visited Oct. 4, 2014).

268. N.Y. DEP’T ENVTL. CONSERVATION, LANDOWNER’S GUIDE FOR MANAGING DEER, <http://www.dec.ny.gov/animals/7199.html#DMAP> (last visited Oct. 4, 2014).

269. *Id.*

270. DEC DEER MANAGEMENT PLAN, *supra* note 55, at 22.

## XI. CONCLUSION

*“Deer management is not that complicated; it’s the people management that’s extremely complicated... [Y]ou have to satisfy the needs of a hunter who wants more deer, a farmer who wants less deer, a resident who wants to see deer but doesn’t want them getting too close... an animal rights group that wants [deer] just to be left alone completely... another group that thinks you should reintroduce wolves to maintain the [deer] population, motorists who are complaining... [and] the municipality that doesn’t want to do anything with the park because the park is for walking your dog.”*

---Steve Joule, DEC Region 7, interview<sup>271</sup>

Historically, modern wildlife conservation management in the United States has evolved hand in hand with sport hunting practices, and the norms that govern both spheres are intertwined in interesting ways. Deploying legal ethnography, this article has attempted to decipher the complex historical and contemporary interrelations between conservation and hunting in the United States from the standpoint of the state wildlife manager, who is often a hunter. Tracing the ways in which these interrelations have manifested in and are reinforced by law, the article has documented their temporal restrictions (seasons and prohibitions against hunting at night), their technological limitations (prohibitions against baiting, spotlighting and using certain implements), and their territorial distinctions (WMUs, the Northern and Southern Zones, and the 500-foot rule). The article has also pointed out that some hunting practices are based in federal and state laws, others are based in DEC regulations and policy as well as in local ordinances, yet still others derive from tradition and, as such, often stand in the way of the law on the books. This already complex regulatory landscape, replete with inner tensions, is further complicated by the distinctions between hunting and nuisance permits.

Let me conclude by offering that this is an important moment for sport hunting in the United States generally, and in convergence with state and federal conservation practices in particular. Since its peak in the mid-1980s,<sup>272</sup> sport hunting in the United States has experienced a sharp decline. Lately, however, there has been a resurgence of interest among what the DEC refers to as “adult-onset hunters”—namely, hunters who were not raised in this tradition but came to it later in life,

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271. Interview with Steven Joule, *supra* note 102.

272. DEC DEER MANAGEMENT PLAN, *supra* note 55, at 18.

typically as part of the drive to eat locally.<sup>273</sup> Under these circumstances, wildlife agencies have felt the pressure to help with the recruitment and training of new hunters, and women in particular.<sup>274</sup> Only time will tell how this trend will affect hunting laws, policies, and practices; only time will tell if sport hunting in the United States, as we have known it for the last century at least, will become obsolete. And if hunting will change so dramatically, so, inevitably, will wildlife conservation.

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273. Interview with Gordon Batcheller (Aug. 8, 2014), *supra* note 1.

274. Interview with Jay Boulanger, *supra* note 61. For example, one of the six goals of New York State's recent deer management plan is to better understand the dynamics of hunter recruitment and retention and to identify mechanisms to sustain or increase hunter participation. The plan also sets out to "Promote recreational hunting, among all New Yorkers, as a safe, enjoyable and ethical activity and as the primary tool to manage deer populations," and to "[e]stablish deer hunting seasons, regulations, and programs that are effective for deer population management and that encourage hunter participation, recruitment, retention and satisfaction." DEC DEER MANAGEMENT PLAN, *supra* note 55, at 19, 20.



## Appendix A: Permit to Take or Harass Nuisance or Destructive Wildlife. Courtesy of Steve Joule, DEC.

### **Permit to Take or Harass Nuisance or Destructive Wildlife**

- **WHAT:** 11-0521 is section of Environmental Conservation Law (ECL) that governs taking (pursuant to permit) of "destructive wildlife".

ECL 11-0521 authorizes DEC to issue a permit to any person to take wildlife, including deer, whenever it becomes a nuisance, destructive to public or private property, or a threat to public health or welfare.

When the taking or destruction of menacing wildlife is authorized, such taking is exempt from the requirement of a hunting, big game, or trapping license unless the provision authorizing such taking specifies a license is required.

- **WHY:** damage to agricultural crops, ornamental plants, or gardens, as well as potential health and safety concerns such as on airport grounds.
- **WHEN:** Permits may be issued for the expected duration of the damage. If damage is still current, ongoing, or highly likely to recur upon expiration of the permit, it may be extended.

**Nuisance Wildlife** - A **wild animal** that may cause property damage, is perceived as a threat to human health or safety, or is persistent and perceived as an annoyance. Examples include a skunk or fox living under the porch or shed. If an animal is not causing any concern, for example, it is simply passing by, is observed only once or twice and does not cause any harm, then it should not be considered a nuisance.

**Damaging Wildlife** - A **wild animal** that **damages property**, for example, digs up your yard, eats your landscape plants or vegetable garden, kills or threatens your livestock or pets, fouls your lawn, eats the fish in your pond, damages your home, etc.

**Nuisance/Damaging Wildlife** - A **wild animal** that may cause property damage, is perceived as a threat to human health or safety, or is persistent and perceived as an annoyance. Examples include a skunk or fox living under the porch or shed. If an animal is not causing any concern, for example, it is simply passing by, is observed only once or twice and does not cause any harm, then it should not be considered a nuisance. Example: a **wild animal that damages property** (e.g. digs up your yard, eats your landscape plants or vegetable garden, kills or threatens your livestock or pets, fouls your lawn, eats the fish in your pond, damages your home, etc.).

- **HOW:** Potential deer damage permit conditions authorized pursuant to ECL include:
  1. Shooting of deer with either firearm or bowhunting equipment (including crossbow)
  2. Use of nets to confine deer or livestock corral systems to confine deer, allowing the use of normal livestock slaughter procedures for euthanizing deer.
- **Preferred killing methods for licensed NWCOS:**
  1. Shooting (using a shotgun with 20-gauge or larger slugs, a centerfire rifle, or other implement specified in the permit)
  2. Sedation/anesthesia and injection in the heart with potassium chloride (KCL) American Veterinary Medical Association (AVMA Euthanasia report, 2000)
  3. Stunning using a penetrating captive bolt pistol, followed by exsanguinations

### **Deer Damage Permits**

#### **What are Deer Damage Permits and why are they issued?**

As a state agency, the New York State Department of Environmental Conservation (DEC) is obligated to consider factors that may be overlooked by an individual or community. Some considerations are required by statute, such as the Fish and Wildlife Law (Environmental Conservation Law [ECL] Article 11; Sections 0105 & 0303) and others are generated by broad resource, social or economic concerns. The core mission of DEC's Bureau of Wildlife (BoW) is stewardship and management of all New York State's free-ranging, native wildlife species. Along with the regulatory authority vested in BoW for this purpose, there are also legal responsibilities. Among these is the directive to develop and carry out programs and procedures which will promote an ecological balance of natural resources on all lands whether owned by the state or held in private ownership. In addition, pursuant to ECL mandate, BoW must ensure that the public is not "caused to suffer inordinately from the damaging effects of, and conflicts arising from, resident wildlife."

#### **Under what circumstances are Deer Damage Permits issued?**

ECL 11-0521 authorizes DEC to issue a permit to any person to take wildlife, including deer, whenever it becomes a nuisance, destructive to public or private property, or a threat to public health or welfare. DDPs are used for site-specific management of deer populations where there is damage to agricultural crops, ornamental plants, or gardens, as well as potential health and safety concerns such as on airport grounds.

#### **What times of year are DDPs typically issued?**

It depends on the time of damage and the surrounding landscape. Certain types of damage tend to be seasonal in nature to some degree (e.g. pumpkin or Christmas tree farms, and flower or vegetable gardens), but it also depends on the year to year fluctuations in the local deer population and severity of the winter (particularly amount of snow cover), as well as the availability of natural food sources in the surrounding landscape. In an area like Cayuga Heights, where there is an abundance of ornamental shrubbery and very little natural browse to sustain an overabundant deer population with little or no fear of humans, the potential for damage exists year-round. Permits may be issued for the expected duration of the damage. If damage is still current, ongoing, or highly likely to recur upon expiration of the permit, it may also be extended.

#### **Do landowners using a DDP have to follow the same laws as hunters with respect to time of day, method of kill, use of attractants?**

Regulated hunting programs are constrained by the laws and regulations (i.e. Environmental Conservation Law) that govern public participation in "hunting" as a recreational activity, including implements legal to discharge, shooting hours, and use of lights and attractants. Actions pursuant to DDPs are not considered hunting and, thus, DDP permittees are not necessarily subject to the same constraints as might a hunter. As such, so long as it does not conflict with any local ordinance, the use of rifles, shotguns, and archery equipment (including crossbows) may be permitted, as may the use of rimfire or centerfire ammunition or shotgun slugs. Shooting during non-daylight hours and use of bait is also commonly authorized to enhance the safety and effectiveness of the culling operation.

Appendix B: Permit to Take or Harass Nuisance or Destructive Wildlife, Permit Number 2558, Cayuga Heights. Courtesy of Steve Joule, DEC.

New York State Department of Environmental Conservation  
 Division of Fish, Wildlife and Marine Resources  
 Region 7 Wildlife Office  
 1285 Fisher Avenue  
 Cortland, New York 13045  
 (607) 753-3095 Ext. 247



**PERMIT TO TAKE OR HARASS NUISANCE OR DESTRUCTIVE WILDLIFE PERMIT NUMBER: 2558**

Date issued: 11/15/2011

Permit expires: Valid until revoked

**PERMITTEE:**

Village of Cayuga Heights  
 863 Hanshaw Road  
 Ithaca, NY 14850

**LOCATION OF PROBLEM:**

County: Tompkins  
 Town(s): Ithaca  
 Location: Village of Cayuga Heights  
 Phone: [Redacted]

Pursuant to ECL sections 11-0505 and 11-0521, you or your Agent may:

kill 85 deer  antlerless deer only

Shooting hours: 1/2 hr before sunrise to 11:00 PM

**Other permitted activity:** 1. Shooting of deer with either a firearm or bowhunting equipment (*the net and bolt method of euthanization is not authorized by this permit*). 2. The use of rimfire ammunition, centerfire ammunition, or shotgun slugs is authorized. 3. Shooting at night, including use of lights to illuminate deer. 4. Use of bait to attract deer as a means of enhancing both the safety and effectiveness of shooting operations (*baiting is permitted 5 days prior to activities providing a) bait is free of animal proteins, b) ALL bait is removed within 5 days of completion or suspension of activities*).

**Special Conditions:** See list of special conditions. Conditions in this section supersede Standard Conditions.

**STANDARD CONDITIONS:**

1. You MUST notify the Environmental Conservation Officer at (607) 564-9458 or (607) 283-1494 each time the activities under this permit are to be carried out and any time deer are taken. If the ECO cannot be reached, notify Regional Law Enforcement Dispatch at (315) 426-7431.
2. Only the permittee and agents may act on this permit.
3. Agents must be at least 18 years old and possess a valid NYS hunting license, hunter education certificate, or firearms safety certificate.
4. Persons who have had their NYS hunting privileges revoked or suspended may not act as an Agent on this permit
5. The Agents acting on this permit must sign the attached agent log. The Permittee must retain the signed permit and agent log.
6. Permittee and Agents must possess a copy of the permit and carcass tags when acting on this permit.
7. Permittee must first obtain permission from the landowner before using this permit on leased or rented lands.
8. This permit is only valid for the properties listed on the permit (see "Location of Problem").
9. Permittee and Agents must abide by local firearms ordinances or obtain a written waiver from local authorities and attach to permit.
10. The use of artificial lights is permitted when shooting after sunset.
11. This permit is not valid during any open deer hunting season in the area used.
12. The DEC has the right to inspect any building, structure or property used for any activity pursuant to this permit.
13. All deer must be properly tagged and reported.

**ENVIRONMENTAL CONSERVATION LAW:**

- Possession of a loaded firearm in or on a motor vehicle is prohibited.
- Shooting from a motor vehicle, across any part of a public highway, or within 500 ft. of a school, playground, occupied factory or church is prohibited.
- Shooting within 500 ft. of a dwelling, farm building, or occupied structure is prohibited unless the shooter owns or leases the building or has the owner's written consent.

**AGREEMENT TO CONDITIONS**

I have read and fully understand the above permit conditions and agree to abide by them. Further, I am aware that failure to comply with any conditions of this permit may result in its revocation, denial of future permits, and violations and/or fines.

Permittee signature: \_\_\_\_\_ Date: \_\_\_\_\_

**New York State Department of Environmental Conservation**  
**Division of Fish, Wildlife and Marine Resources, Region 7**  
 Bureau of Wildlife  
 1285 Fisher Avenue, Cortland, New York 13045-1090  
 Phone: (607) 753-3095 • Fax: (607) 753-8532  
 Website: [www.dec.ny.gov](http://www.dec.ny.gov)



Joseph Martens  
Commissioner

**Special Conditions for Nuisance Deer Permit 2558 (Village of Cayuga Heights).**

1. Deer must be euthanized without the use of chemical agents. This is needed to make sure that the meat is suitable for human consumption.
2. Deer carcasses must be made available to venison donation programs so that all meat is put to good use.
3. Deer may only be euthanized using firearms or bowhunting equipment. The net and bolt method of euthanization is not authorized by this permit.
4. All capture devices must be clearly marked with the permittees name and permit number.
5. This permit is not valid during any open deer hunting season in the area used.
6. All bait must be removed within 5 days of completion of activities.
7. Any and all antlers from euthanized deer must be surrendered to the DEC Region 7 Wildlife Office.
8. The permittee shall provide a scientific report (including an evaluation of the effect of deer removals) to the DEC Region 7 Regional Wildlife Manager by December 31 of each calendar year in which the permit is valid and utilized.
9. Agents on this permit must be identified and approved by DEC prior to the activities on this permit being carried out. For approval by DEC, Agents must provide evidence of training with the use of all capture and euthanization techniques to be employed.
10. Any Agents financially compensated for actions covered by this permit must possess a Nuisance Wildlife Control Operator's License as per ECL section 11-0524.
11. Law enforcement personnel are the *ONLY* Agents authorized to shoot from a motorized vehicle.
12. This permit is valid only for use on property where the landowner has granted permission for its use.

Pursuant to the recommendations outlined in the Village of Cayuga Heights Deer Management Plan, this permit authorizes the permittee to take 85 total deer (does or bucks) subsequent to the initial sterilization phase of the plan. In order for the permit to be amended to allow more than 85 deer to be harvested, the permittee must submit a written request that includes justification for the removal of additional deer from the population (e.g. management objective not yet reached, population found to be higher than originally estimated, population has increased since issuance of permit, etc.).

These permit conditions are fully enforceable as per the "Agreement to Conditions" signed by the permittee on the "Permit To Take Or Harass Nuisance Or Destructive Wildlife".

Appendix C: Permit to Take or Harass Nuisance or Destructive Wildlife, Permit Number 7-13-7935, Cayuga Heights. Courtesy of Steve Joule, DEC.

New York State Department of Environmental Conservation Division of Fish, Wildlife and Marine Region 7 Wildlife Office 1285 Fisher Avenue, Cortland, New York 13045 (607) 753-3095 x 247



PERMIT TO TAKE OR HARASS NUISANCE OR DESTRUCTIVE WILDLIFE

Year Issued: 2013

Permit Number: 7-13-7935

Permittee Information:

Form fields for Permittee Information: Cornell University, Home Phone, Work Phone, Itaca NY 14853, Fax.

Location of Problem:

Form fields for Location of Problem: County: Tompkins, Town: Ithaca, Location: Cornell University core campus area; 14 shooting locations as indicated on map provided by applicant.

Pursuant to ECL sections 11-0505 and 11-0521, you or your agent (designated in writing)

Form fields for activity selection: Scare/ Harass Deer, TAKE THE FOLLOWING NUMBER OF ANTLERLESS DEER: 20, Tags numbers issued: 024001 - 024020, Other Permitted Activities: See list of Special Conditions.

Permit Issued: 12/18/2013 Permit Expires: 12/31/2013

Firearms May Be Discharged Between The Hours Of: 1/2 hour before sunrise and 11:00 P.M.

- When checked, 0 (#) deer must be donated to the Venison Donation Program. See enclosed list of Venison Donation participants.
When checked, the Division of Law Enforcement (see number below) must be given 24 hours advance notice of any shooting activity.

Regional Law Enforcement Office (315) 426-7431

\*\*\*SEE ATTACHED SHEET FOR STANDARD CONDITIONS\*\*\*

\*\*\* AND SIGNATURE BLOCK \*\*\*

**New York State Department of Environmental Conservation**  
**Division of Fish, Wildlife and Marine Resources, Region 7**  
**Bureau of Wildlife**  
1285 Fisher Avenue, Cortland, New York 13045-1090  
**Phone:** (607) 753-3095 • **Fax:** (607) 753-8532  
**Website:** [www.dec.ny.gov](http://www.dec.ny.gov)



Joseph Martens  
Commissioner

**Special Conditions for Nuisance Deer Permit 7-13-7935 (Cornell University).**

1. Other permitted activity:
  - ✓ Shooting of deer with either a firearm or bowhunting equipment (including crossbow).
  - ✓ Shooting at night, including use of lights to illuminate deer.
  - ✓ Use of bait to attract deer as a means of enhancing both safety and effectiveness of shooting operations. Baiting is permitted providing the bait is free of animal proteins and bait is removed within 5 days of completion of activities ***OR*** before the start of any open deer hunting season in the area, whichever occurs first.
2. This permit is valid only for use on the property where the landowner has granted permission for its use ***AND*** only at the sites identified on the attached map.
3. This permit is not valid during any open deer hunting season in the area used.

These permit conditions are fully enforceable as per the "Agreement to Conditions" signed by the permittee on the "Permit To Take Or Harass Nuisance Or Destructive Wildlife".

**STANDARD CONDITIONS FOR DEER DAMAGE PERMIT**

1. Permit is not valid until the AGREEMENT TO CONDITIONS (below) is signed by the Permittee and an agent may not exercise the rights of this permit until signing the LOG OF AGENTS (reverse).
2. The Permittee must maintain a LOG OF AGENTS (reverse) who may use the permit and all agents must complete and sign the log prior to using this permit.
3. Only the Permittee and designed Agents may be afield when exercising the rights of this permit and they must have in their possession an unused carcass tag and copy of this permit when afield.
4. Permittee and Agents must abide by local firearms discharge ordinances or obtain a written waiver from local authorities. If a waiver is required, it must be attached to the permit.
5. Agents must be at least 18 years of age and possess a valid NYS hunting license, hunter education certificate, or certificate of safe firearms training.
6. Persons who have had their NYS hunting privileges revoked or suspended may not serve as an Agent.
7. Permittee must have landowner permission before using this permit on leased or rented lands.
8. This permit is valid only on lands owned, rented or leased by the Permittee, where damage is occurring, as specified in the permit.
9. The Permittee is responsible for any property damage caused by the Agents while using the permit.
10. The use of artificial lights is permitted when shooting after sunset.
11. The DEC has the right to inspect, at any time, the LOG OF AGENTS, unused carcass tags and any building, structure, vehicle or property used for any activity pursuant to this permit.
12. NO ONE MAY SELL: (1) a nuisance permit, (2) a carcass tag, (3) a deer shot on a permit, (4) the ability to be an agent on a permit, or (5) the opportunity to shoot a deer on a permit.

**TAGGING, PROCESSING AND REPORTING DEER:**

13. All unused carcass tags must be retained on the property subject to this permit.
14. Upon taking a deer, a carcass tag shall be immediately completed using an indelible pen, pencil or marker and attached to the deer, except that the tag need not be attached while the deer is being dragged or physically carried to home, farm building or motor vehicle.
15. Every effort should be made to use any deer taken for human consumption.
16. WITHIN 10 DAYS of the expiration date, the Permittee must return the completed Summary Report form to the DEC office listed on the permit. Failure to report can be grounds for denial of future permit requests.
17. Upon expiration of this permit, unused carcass tags must be destroyed.

**ENVIRONMENTAL CONSERVATION LAW**

- Possession of a loaded firearm in or on a motor vehicle is prohibited.
- Shooting from a motor vehicle or across any part of a public highway is prohibited.
- Shooting within 500 feet of a school, playground, or occupied structure is prohibited.
- Shooting within 500 feet of a dwelling, farm building, or occupied structure is prohibited unless the shooter owns or leases the building or has the owners written consent

**AGREEMENT TO CONDITIONS**

This permit is not valid until signed below. Failure to comply with the conditions outlined above and elsewhere in this permit may result in the revocation of this permit and denial of future permits and may be considered violations of state and local laws.

I have read and fully understand the above permit conditions and agree to abide by them.

**Permittee Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Deer Damage Permit LOG OF AGENTS:**

Every Agent shooting on this Deer Damage Permit must read and abide by all the Permit Conditions. In addition, each Agent must read the certification below and print their full name, address, phone number, date of birth, and sign their full name prior to exercising the privileges of this permit.

**By signing this form I agree that I have read, fully understand, and agree to abide by all of the attached Permit Conditions and that I have successfully completed NYS hunter education or other firearms safety training and that my NYS hunting privileges have not been revoked or suspended.**

Print Full Name	Address	Phone Number	Date of Birth	Signature
				I have read and understand the permit conditions and the above heading and affirm under penalty of perjury that all information is true pursuant to section 210.45 Penal Law
				I have read and understand the permit conditions and the above heading and affirm under penalty of perjury that all information is true pursuant to section 210.45 Penal Law
				I have read and understand the permit conditions and the above heading and affirm under penalty of perjury that all information is true pursuant to section 210.45 Penal Law
				I have read and understand the permit conditions and the above heading and affirm under penalty of perjury that all information is true pursuant to section 210.45 Penal Law
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				I have read and understand the permit conditions and the above heading and affirm under penalty of perjury that all information is true pursuant to section 210.45 Penal Law
				I have read and understand the permit conditions and the above heading and affirm under penalty of perjury that all information is true pursuant to section 210.45 Penal Law



**JUSTIFICATION FOR NUISANCE DEER HUNTING ON CORNELL LANDS**

During the past five years, Cornell University has addressed chronic deer overpopulation on its lands through an integrated deer research and management program (IDRM). The program was designed to reduce unacceptable damage to University resources and plant collections, preserve the teaching and research mission of the University, and to reduce associated human-health and safety risks such as Lyme disease and deer-vehicle accidents.

The IDRM program utilized surgical sterilization of female deer on campus and regulated hunting near campus in an attempt to achieve its deer management goals. Despite large numbers of hunters harvesting over 500 deer and 92 sterilization surgeries over the last 5 years, there has not been an appreciable reduction in deer numbers; the campus deer population remains stable at approximately 100 deer. Consequently, substantial ecological and economic damage has continued along with serious human health concerns from a spike in the number of Lyme disease cases contracted in the county — including Cornell employees (please see the attached Cornell University IDRM's executive summary for additional details). During the last 4 years, Lyme disease in Tompkins County has increased 1,089%.

In 2012, the IDRM program's funding was reduced by two-thirds. Subsequently the university formed an internal Deer Management Committee to review the current deer management program goals and methods, and to evaluate new management options. The committee, comprised of representatives of units affected by deer overpopulation and their impacts, considered the full range of options, including maintaining the status quo, expanding hunting opportunities, and utilizing New York State Department of Environmental Conservation (DEC) nuisance deer-control permits. Committee members also considered extreme options such as cessation of deer management activities and hiring sharpshooters to cull the herd.

After a careful review, committee members — including staff currently charged with overseeing Cornell's deer management programs — strongly supported the option of expanding herd reduction efforts on campus through the use of DEC nuisance permits.

If approved by the University and the DEC, the use of nuisance deer permits would be tightly controlled (See Attachment A for proposed conditions). A Deer Permit Coordination Group would select a small group of highly trained and proficient hunters to safely and efficiently harvest antlerless deer outside of the regulated NYS deer-hunting season. This activity would take place over a one-month period in designated areas selected for being discrete and safe (see Attachment C), that are currently in the campus deer sterilization zone. Once the harvest is complete, the internal Deer Permit Coordination Group would evaluate the use of DEC nuisance permits to determine if it has accomplished the deer population reduction and associated damage-reduction goals set forth in Cornell's Deer Management Plan for 2013.