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Success Runs Wild: Pennsylvania Game Commission and Balancing Between Management and Survival of an Overpopulated Deer Herd that Poses a Potential Threat

Christopher E. Rice*

I. Introduction

Since the early 1900s, the population of whitetail deer has increased overwhelmingly throughout the United States. This population increase may seem surprising, as whitetail deer were facing extinction in some areas of the country in the 1890s.¹ By 2001, however, the estimated number of whitetail deer in the United States was around 25 million.² State and federal hunting regulations³ and habitat management programs

* This Comment is written in remembrance of my grandmother, Charlotte E'del, and, my grandfather, Willis Rice. My grandmother encouraged me to pursue a law degree and my grandfather's admiration for the outdoors influenced me to appreciate wildlife.

1. See Stuart Keck, WHITETAIL DEER (North American Game Species series 1), available at <http://www.bowhunting.net/naspecies/whitetail.htm>. During the 1890s, Rhode Island and Connecticut's whitetail deer population ceased to exist and New Jersey had less than 200 whitetail deer. See *id.* Seeing a deer in Massachusetts, New Hampshire, or Vermont was rare and often made headline news in local papers. See *id.*

2. See MICHAEL P. MOULTON & JAMES SANDERSON, WILDLIFE ISSUES IN A CHANGING WORLD 43 (1999). Less than 500,000 deer remained in the entire United States by the 1920s. See *id.* at 252. At the time of early settlers, the deer population was estimated around the same numbers as today. See *id.*

3. See *id.* U.S. Congress extended the life of an existing 10 percent tax on ammunition and firearms used for sport hunting and distributed the proceeds to the states for wildlife restoration. See *id.* The purpose of the Federal Aid in Wildlife Rehabilitation Act (referred to as the Pittman-Robertson Act) was to reestablish wildlife populations to natural habitats and wildlife research was to become the basis for a science-based management program. See *id.* Franklin D. Roosevelt signed the Act into law on September 2, 1937. See *id.* Presently, the funds from the Act are derived from an 11 percent federal excise tax on sporting arms, ammunition and archery equipment, and a 10 percent tax on handguns. See Pennsylvania Game Commission, *Wildlife Habitat Management*, at http://sites.state.pa.us/PA_Exec/PGC/annualrpt/00_01/wildHabitat.htm

contributed to the increase in deer numbers.⁴

Pennsylvania played an instrumental role in the overall reestablishment of the whitetail deer throughout the country by producing a herd that exceeds one million.⁵ Today, however, the rapid increase in Pennsylvania's deer population is posing a threat to humans, the environment, and to the whitetail deer itself.⁶ In the past, management programs focused on increasing the number of deer by sustaining a large doe population.⁷ Now, the Pennsylvania Game Commission (hereinafter "PGC") is reversing the focus to reduce the herd to a maintainable level.⁸ To meet these new management objectives, the PGC reevaluated its present position and created new hunting regulations in 2001. The enactment of these regulations marked the beginning of a radical new approach to deer management and established a hunting season unlike any other in Pennsylvania history.

The PGC's 2001-2002 deer management regulations were not without controversy. The new laws received criticism from various interest groups.⁹ Though the groups' views differed, they all lacked

(last updated May 9, 2002). See Pennsylvania Historical and Museum Commission, *Wildlife Conservation Timeline*, at http://www.dep.state.pa.us/dep/pa_envher/wildlife_cons_timeline.htm (last modified on Aug. 20, 2002) (passing laws to manage the Pennsylvania deer herd: the 1907 "bucks-only" law, the 1923 regulation allowing antlerless hunting in two counties, and the 1928 regulation protecting bucks from being hunted. See also 3 LOWELL W. ADAMS, *URBAN WILDLIFE HABITATS* 83 (1994) (passing laws to regulate land use).

4. See JOE KOSACK, *THE PENNSYLVANIA GAME COMMISSION 1895-1995*, at 36, 172 (1995). "The [PGC's] timber management strategies created prime deer habitat, and whitetail harvests took a jump." *Id.* at 172.

5. See *Deer Hunting Statistics/Information*, at <http://www.camohunter.com/stats.html>. The estimated whitetail population in Texas is the greatest, reaching over 3.5 million deer. *Id.* Alabama's whitetail population is around 1.5 million deer, ranking it fifth overall among the deer populations of the other states. *Id.* "Pennsylvania receives more funding from the Pittman-Robertson Act than any other state except Alaska and Texas because the state has the third largest population of hunters." See MOULTON, *supra* note 2, at 263.

6. See *id.* A study in 1933 on the 1146 acre George Reserve in Michigan resulted in a herd of deer growing from 6 to 162 in six years. See *id.* The same study was performed in 1975 at the George Reserve resulting in a herd of ten deer increasing to 212 in five years. *Id.* An adult doe typically produces two fawns yearly and will produce three if conditions such as food and habitat are adequate. *Id.*

7. See *id.*

8. See Brian Drosinski, *Our Forests, Our Deer*, MOSHANNON GROUP NEWS (Moshannon Group of the Pennsylvania Chapter of the Sierra Club, State College, Pa.), Apr. 2001, at 3, available at <http://pennsylvania.sierraclub.org/moshannon/Apr2001.pdf>. New hunting regulations will be utilized to reduce the deer herd, and this in turn will help balance our wildlife with its habitat. *Id.*

9. See Ben Moyer, *PGC Looks Inward for Answers on Deer*, PENNSYLVANIA SPORTSMAN, Feb. 1998, at 12. "Deer management has drawn increasingly heated criticism in [Pennsylvania] in recent years, from interests as varied as hunters, farmers, municipalities, tourism advocates, and commercial forestry." *Id.*

confidence in the PGC's methodology for controlling the deer herd.¹⁰ Despite the negative response from many Pennsylvania citizens,¹¹ the PGC set its most ambitious season for hunters by increasing the opportunities to take antlerless deer¹² during the 2001-2002 firearm season.¹³

The PGC's intent is to increase the quality of deer¹⁴ in Pennsylvania while balancing the size of the herd with its habitat.¹⁵ Traditionally, the antlerless firearm hunting season immediately followed the antlered firearm season.¹⁶ The antlerless season began the Monday after the two-week antlered season and ran for three days.¹⁷ The antlered season was specifically limited to a two-week period where hunters could harvest an antlered deer, having at least one antler with two or more points, or a spike, three or more inches in length or longer.¹⁸ The PGC designated both statewide seasons as firearm seasons.¹⁹ In 2001, however, the PGC granted hunters the opportunity to harvest either an antlered or an

10. *See id.*

11. *See Drosinski, supra* note 8, at 3. "Hunters are the largest and toughest group to persuade." *Id.* They fear the deer herds would be critically reduced by enacting new regulations that would combine the antlerless season with the two week antlered season. *See id.* But *see* RON BAKER, THE AMERICAN HUNTING MYTH 158 (stating a different view towards increased harvest and longer hunting seasons as of 1985).

12. *See* PENNSYLVANIA GAME COMMISSION, PENNSYLVANIA DIGEST OF HUNTING AND TRAPPING REGULATIONS JULY 1, 2001 – JUNE 30, 2002, 21 (2001). *See also* 58 PA. CODE § 139.2 (2002) (defining an "antlered" deer as a deer having two or more points to an antler, or one antler three or more inches in length and an "antlerless" deer as a deer without antlers, or a deer with antlers both of which are less than 3 inches in length). This is different from the terms "buck" and "doe." A buck is a male deer, and a doe is a female deer.

13. *See* 58 PA. CODE § 139.2. Regular firearm deer season is defined as "the designated period of time when deer may be hunted and taken by any person who possesses a General Hunting License or a General Hunting License and Antlerless License only." *Id.*

14. "Deer quality" means increasing the size and age of deer. A larger, more mature deer is ideal for both hunters and the breeding cycle.

15. Videotape: Pennsylvania Whitetails, Creating New Traditions, (Pennsylvania Game Commission 2001) (on file with the Pennsylvania Game Commission).

16. *See* PENNSYLVANIA GAME COMMISSION, *infra* notes 314-15.

17. *See id.*

18. The regular firearms deer season traditionally began the Monday after Thanksgiving and ran for two weeks, excluding Sundays. *See id.* The regular firearms deer season is "[t]he designated period of time when deer may be hunted and taken by a person who possesses a general hunting license or a general hunting license and antlerless license only." 58 PA. CODE § 139.2 (2002).

19. Arms and ammunition permitted during the regular firearm season are: "(1) [m]anually operated centerfire rifles, handguns and shotguns with all lead bullet or ball, or a bullet designed to expand on impact; (2) muzzleloading firearms of any type or caliber; and (3) long, recurve or compound bows with broadheads . . ." PENNSYLVANIA GAME COMMISSION, *supra* note 12, at 39.

antlerless deer during the two-week firearm season,²⁰ provided the individual obtained a valid Pennsylvania hunting license and an antlerless deer license.²¹ Additionally, the PGC enacted an antlerless firearm season and an extended muzzleloader season for antlerless deer during the month of October.²² Hunters could also use their antlerless deer licenses on both public and private lands.²³

For various reasons, many individuals questioned the PGC's decision to pass the regulations establishing this unique firearm season during 2001.²⁴ They feared the PGC's particular method of managing the deer herd – establishing a concurrent open season on whitetail deer²⁵ – might endanger the whitetails' existence in Pennsylvania and at the same time place hunters in a dangerous environment.²⁶

This Comment will lend insight to the whitetail deer's saga over the past two centuries and explore the development and mission of the PGC as a state agency. In addition, it will evaluate the rationale behind the 2001-2002 hunting regulations and identify the statutory authority which empowers the PGC to set hunting seasons. Finally, this Comment will consider the expectations of hunters and the necessity of management programs in Pennsylvania.

II. The Whitetail in Pennsylvania: A Long Stride to Survival

Admiring a small herd of deer feeding in an open field shortly before dusk has become a common sight in the Commonwealth of Pennsylvania. Today, Commonwealth residents and visitors do not need to travel far to see a whitetail deer. This luxury, however, was not always the case. If not for the whitetails' resilience to a changing environment, accompanied by the efforts of the PGC, the species most likely would have been extinct throughout Pennsylvania by the early 1900s.²⁷

20. See 58 PA. CODE § 139.4. See also Pennsylvania Game Commission, *Game Commissioners Give Final Approval to 2001-2002 Seasons and Bag Limits*, PA GAME COMMISSION NEWS RELEASE, Release #31-01 (Apr. 10, 2001), at http://sites.state.pa.us/PA_Exec/PGC/newsroom/2001news/nr31-01.htm.

21. See generally PENNSYLVANIA GAME COMMISSION, *supra* note 12, at 22, 55.

22. See *id.* at 22. This Comment will focus on the two-week regular firearms season because it has the greatest impact on the deer herd.

23. See *id.*

24. See Drosinski, *supra* note 8, at 3.

25. Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. § 102 (2002). An open season is defined as “[t]he indicated periods of the calendar year and the daily shooting hours during which game or wildlife may be legally hunted, taken or killed and includes both the first and the last day of the season or period of time designated by this title or by regulation of the commission.” *Id.*

26. See *infra* notes 230-238 and accompanying text.

27. See KOSACK, *supra* note 4, at 19. The passenger pigeon was one species of

The whitetail deer is native to Pennsylvania.²⁸ Although whitetail deer were not especially abundant in Pennsylvania when the first Europeans settled the state,²⁹ deer served as an important natural resource for both Native Americans and early European settlers.³⁰ They saw the whitetail deer as a commodity that could be used for food, shelter, and trade.³¹ Dave deCelesta, a forest ecologist with the United States Forest Service, has calculated six to eight deer per square mile (approximately 350,000 whitetails) during presettlement times in Pennsylvania.³²

Initially, the settlers' westward intrusion across Pennsylvania around 1800 proved advantageous for the whitetail deer.³³ Moderate logging, farming, and other land clearing methods thinned the dense woodlands, creating better habitats for deer.³⁴ In fact, deCelesta determined that the change from 45,000 square miles of mostly mature forests to an agricultural region doubled the average density of deer in Pennsylvania woodlands from eight to fifteen per square mile by 1850.³⁵

Game laws were an integral part in the revitalization of the deer population before and during this period.³⁶ The deer herds were also able to regain strength in numbers due to the gradual elimination of natural

wildlife that became extinct as a result of the wildlife market. *See id.* The pigeons were brutally killed for their meat throughout the 1880s and were last seen in Pennsylvania around 1909. *See id.*

28. *See* Sam Rohrer, *Pennsylvania Information State Animal-Whitetail Deer*, at <http://www.samrohrer.org/painfo.htm> (updated June 21, 2001).

29. *See* Ben Moyer, *200 Years With The Whitetail*, PENNSYLVANIA SPORTSMAN, Feb. 1998, at 47. "Most experts agree that deer were not especially abundant [in Pennsylvania] when the first Europeans [adventured] westward from the Delaware River." *Id.*

30. *See* Rohrer, *supra* note 28; *see also* WILLIAM J. MCSHEA ET AL., *THE SCIENCE OF OVERABUNDANCE* 16 (1997). "[F]rom 1500 to the early 1800s, . . . massive harvests [occurred] primarily at the hands of Indians smitten with trader geegaws, metalwares, guns, alcohol, textiles, and promises." *Id.*

31. *See* Rohrer, *supra* note 28.

32. *See* Moyer, *supra* note 29. Dave deCelesta has made his calculations regarding deer density in Pennsylvania after "[w]orking with biologists, botanists, written observations of early explorers and examination of remaining stands of old growth timber . . ." *Id.*

33. *See* Glen L. Bowers, *The Pennsylvania Deer Story 1958*, *GAME NEWS*, Oct. 1958 at 34.

34. *See id.*

35. *See* Moyer, *supra* note 29, at 47.

36. *See* KOSACK, *supra* note 4, at 6. Pennsylvania's first Game Law was enacted in 1721 and protected buck, doe, fawn, or any species of deer from being hunted between January 1 and July 1 of each year. *Id.* Indians were exempt from this law. *Id.* By 1869, legislators set a new deer season which ran from September 1 to December 31. *Id.* at 20. The season was adjusted in 1876 to begin a month later on October 1. *Id.* at 21. In 1895, the season was furthered narrowed to two months, beginning on October 15 and ending on December 15. *Id.*

predators, which was an indirect result of European settlement.³⁷ Hunting pressure on deer from Native Americans diminished as European settlement terminated their influence over the whitetail range.³⁸

As early American civilization rapidly advanced and moderate development became excessive, the deer population that had thrived began to decline. A booming logging industry increased the number of unattended fires and erosion, which caused the undergrowth and supporting soil to be stripped away.³⁹ Consequently, deer were deprived of both food and cover.⁴⁰ Additionally, hunters were profiting from the wildlife market. The railroad system expanded the venison market as trains began transporting meat to certain locations without the threat of spoilage.⁴¹ This transportation system enabled hunters to sell venison to stores and restaurants from Boston to Philadelphia.⁴² The logging industry and market hunting, accompanied by the lack of laws protecting deer, almost resulted in a complete decimation of the whitetail in Pennsylvania by the late 1800s.⁴³

The whitetail deer could not survive at this rate. Thriving industry and high meat demand were destroying the whitetail deer's environment, and current laws were insufficient to properly regulate hunting.⁴⁴ By 1890, Pennsylvania whitetail deer were facing extinction,⁴⁵ yet new factors were only compounding the stress on the whitetail deer population.⁴⁶ Transportation improved across the state as the railroad

37. See Moyer, *supra* note 29, at 47-48. By the end of the Civil War in 1865, mountain lions and wolves were nearly eliminated and posed little threat to deer growth. *Id.* at 48.

38. See WILLIAM J. MCSHEA ET AL., *THE SCIENCE OF OVERABUNDANCE* 16 (1997). "Settlement invaded the continental interior," terminating almost all Native American influence on the whitetails' landscape." *Id.*

39. See KOSACK, *supra* note 4, at 172. Reminisce of a lumber company after removing entire hillsides of forest left deer without food and cover, two essentials for their survival. *Id.*

40. See *id.*

41. See KOSACK, *supra* note 4, at 172. The population of deer "became the target for market and subsistence hunters. . . ." MCSHEA, *supra* note 38.

42. See Moyer, *supra* note 29, at 47. Venison is the flesh of a deer.

43. See 3 LOWELL W. ADAMS, *URBAN WILDLIFE HABITATS* 58 (1994). The whitetail deer was decimated after European settlement due to habitat loss. See *id.* Along with unregulated hunting, logging and agricultural development were main contributors to the deer's downfall. See *id.*

44. See KOSACK, *supra* note 4, at 22-24. In 1828, the residents of Potter County, PA, circulated a petition calling for wildlife laws; the petition was ignored. *Id.* at 14. Legislation was passed to protect some species of wildlife, including whitetail deer, during the late 1840s. *Id.* at 15. Such laws banned the hunting of deer with dogs.

45. See PENNSYLVANIA GAME COMMISSION, *PENNSYLVANIA DEER MANAGEMENT* (1995). Through the late 1800s and early 1900s, the sight of a whitetail deer in Pennsylvania became a newsworthy event. *Id.*

46. See Moyer, *supra* note 29, at 48.

industry expanded.⁴⁷ Pennsylvania continued to be a leading lumber state from 1900 to 1910.⁴⁸ Market hunting remained a way of life for some individuals,⁴⁹ while the popularity of recreational hunting grew.⁵⁰ Pennsylvanians were transforming the unknown wilderness into a recognizable state, and the whitetail deer could not adapt to the rapid change. The vanishing of the native whitetail deer was just one example of the changes Pennsylvania's ecosystem was undergoing.⁵¹ The state needed a system to protect and secure its wildlife.⁵²

The whitetail deer's chances of survival in Pennsylvania seemed grim. Optimism towards the whitetail deer's survival emerged after the General Assembly⁵³ created a new Pennsylvania state agency.⁵⁴ The agency initiated programs and collected funding to ensure the survival of wildlife in Pennsylvania.⁵⁵ It became known as the Pennsylvania Game Commission.⁵⁶

A. *The Creation of the Pennsylvania Game Commission*

With the future of whitetail deer and other state wildlife in jeopardy, the Pennsylvania State Sportsman's Association initiated a proposal to form a game agency.⁵⁷ The goal was to lobby legislators for the creation of an agency that would safeguard wildlife and game populations in Pennsylvania.⁵⁸ The General Assembly passed a bill on June 25, 1895,⁵⁹ and by the end of November 1896, Governor Hastings had appointed the first citizens that would serve as commissioners for the PGC.⁶⁰

47. See RON BAKER, *THE AMERICAN HUNTING MYTH* 158 (Vantage Press 1985) (cheaper and faster railway travel).

48. See KOSACK, *supra* note 4, at 6.

49. See Moyer, *supra* note 29, at 48.

50. See BAKER, *supra* note 47.

51. See *id.*

52. See generally KOSACK, *supra* note 4, at 21-23.

53. The General Assembly consist of both the Pennsylvania House of Representatives and the Senate.

54. See generally KOSACK, *supra* note 4, at 24-39.

55. See generally *id.*

56. See *id.* at 24

57. See *id.* at 22-24. The Pennsylvania State Sportsmen's Association (PSSA) was created in 1890 by H.A. Penrose, Elmer E. Shaner, John Phillips, and others to promote wildlife conservation and enforce game laws. *Id.* The Pennsylvania Fish and Game Association of Philadelphia later joined the PSSA in an attempt to establish a game agency. *Id.* at 24.

58. See *id.* at 22-24.

59. Pennsylvania Governor, Daniel H. Hastings, signed the bill, which created the Board of Game Commissioners. The Board was later renamed the Pennsylvania Game Commission (PGC). See *id.* at 23-24.

60. Six competent citizens served as members of the first PGC. See *id.* at 24.

As an independent state agency, the PGC would be responsible for the management of all wildlife resources in Pennsylvania.⁶¹ Wildlife management is the process used to manage game and other wildlife by monitoring populations, establishing laws and regulations, making habitat improvements, and providing outright protection.⁶² Through the years, the PGC's responsibilities grew to include numerous other tasks necessary to ensure the conservation of wildlife.⁶³ The PGC determines the state's hunting seasons, safety requirements, and preservation areas each year.⁶⁴

Today, the PGC consists of eight commissioners.⁶⁵ The governor of Pennsylvania appoints the commissioners with Senate approval.⁶⁶ An appointment lasts for a term of eight years.⁶⁷ The commissioners pass regulations, which are published in the Pennsylvania Code.⁶⁸ The PGC holds annual meetings in Harrisburg during the month of January and again in either June or July.⁶⁹ Additional meetings are held when business transactions are necessary.⁷⁰ At the January meeting, the commissioners elect one of their members as president, one as vice

61. See PENNSYLVANIA GAME COMMISSION, *THE PENNSYLVANIA GAME COMMISSION ORGANIZATION AND RESPONSIBILITIES* 2 (1980).

62. See Pennsylvania Game Commission, *About the Pennsylvania Game Commission*, (2002), at http://sites.state.pa.us/PA_Exec/PGC/pgc/aboutPGC.htm (educating the public, and assessing the expectations and satisfaction of the public are factored into wildlife management).

63. See *id.*

64. See Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. § 322(c)(1) (2002). "In order to administrate and enforce this title, the commission through proper action shall: subject to section 2102(b) (relating to seasons, possession, bag limits and devices), fix seasons, daily shooting or taking hours, and any modification thereof, and daily, season and possession limits for any species or game or wildlife." *Id.*; *Id.* § 2102(b)(1). "The commission shall promulgate regulations relating to seasons and bag limits for hunting or furtaking, the possession of certain species or parts thereof, the number and types of devices and equipment allowed, the identification of devices and the use and possession of devices." *Id.*

65. See *id.* § 301(a),(b). "The . . . Pennsylvania Game Commission shall consist of eight competent citizens of this Commonwealth who shall be well informed on the subject of wildlife conservation and restoration . . ." *Id.* "The members of the commission shall be appointed from the various geographical sections of this Commonwealth so that one and only one shall be a resident of each of the following districts." *Id.*

66. See *id.* § 301(a). Members "shall be appointed by the Governor, by and with the advice and consent of two-thirds of the elected members of the Senate." *Id.*

67. See *id.* § 301(c).

68. See generally 58 PA. CODE (2002).

69. Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. § 321(a) (2002). The PGC's office must be in or near Harrisburg, Pennsylvania. *Id.* "All meetings of the commission shall comply with the act of July 19, 1974 (P.L. 486, No. 175), referred to as the Public Agency Open Meeting Law." *Id.*

70. *Id.*

president, and one as secretary.⁷¹ Each officer is appointed for one year.⁷² The General Assembly has also enacted a statute that establishes conduct the PGC shall follow to create and maintain a relationship with the public by implementing policies and programs.⁷³

Set forth in the Game and Wildlife Code, 34 Pa.C.S.A. § 322, are the duties of the PGC to “protect, manage and preserve the game or wildlife” of Pennsylvania.⁷⁴ To accomplish these duties, the General Assembly granted ownership and control of the deer herd to the PGC.⁷⁵ The PGC also has the power to promulgate regulations concerning game or wildlife.⁷⁶ The regulations are to be related to both hunting seasons and bag limits.⁷⁷ The Pennsylvania judicial system has also taken a role in determining what powers belong to the PGC.⁷⁸ In one case, the court recognized the PGC’s right to establish an “open season”⁷⁹ for deer.⁸⁰

To assist the commissioners in setting future regulations, the PGC created a Deer Management Section in 1999.⁸¹ The Section is located within the PGC’s Bureau of Wildlife Management Research Division.⁸² Dr. Gary Alt, one of the foremost biologists in Pennsylvania, accepted the position as Deer Management Section Supervisor.⁸³ The mission of the Section is to meet with various groups and build a consensus among deer management stakeholders in support of the best management plan.⁸⁴ Through extensive research, Dr. Alt determined that in order to manage a

71. *Id.* § 321(b).

72. *Id.*

73. *See id.* § 301(a).

74. *Id.* § 322(a); *see also id.* § 2101. “The commission shall have the authority to administer and enforce this title and all laws of this Commonwealth relating to the encouragement, promotion and development of game or wildlife conservation interests and the protection, propagation, distribution and control over game or wildlife.” *Id.*

75. *See id.* § 103(a).

76. *See id.* § 2102(a). “The commission shall promulgate such regulations as it deems necessary and appropriate concerning game or wildlife and hunting . . . in this Commonwealth, including regulations relating to the protections, preservation and management of game or wildlife and game or wildlife habitat, permitting or prohibiting hunting . . . , the ways, manner, methods and means of hunting . . . and the health and safety of persons who hunt or take wildlife or may be in the vicinity of persons who hunt or take game or wildlife in this Commonwealth.” *Id.*

77. *See id.* § 2102(b). Bag limits pertain to the number of a particular species each individual is permitted to harvest during that hunting season. *See id.*

78. *See infra* notes 205-25 and accompanying text.

79. Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. § 102 (2002).

80. *See infra* notes 205-25 and accompanying text.

81. *See* Pennsylvania Game Commission, *Alt To Head New Deer Management Division*, PENNSYLVANIA GAME NEWS, Oct. 1999, at 36.

82. *See id.*

83. *See id.*

84. *See id.*

species like the whitetail deer, Pennsylvania must maintain the population at a level that the habitat can sustain.⁸⁵

B. Reestablishing the Whitetail Population

The year 1906 marked the first attempt by the PGC to reestablish a whitetail deer population in Pennsylvania.⁸⁶ The PGC initiated a “stocking” program that remained in effect until the early 1920s.⁸⁷ The reintroduction plan started when the PGC transferred 50 deer from Michigan into Pennsylvania’s woodlands.⁸⁸ The General Assembly also enacted laws to control the hunting of deer in hopes of increasing the population.⁸⁹ To speed up the growth rate of the herd, the General Assembly passed a “Buck Law,” which provided complete protection to doe and juvenile deer.⁹⁰ In essence, the Law banned the hunting of female deer. Pennsylvania also eliminated self-loading hunting guns⁹¹ when the General Assembly passed a bill banning the guns in 1907.⁹²

While policy change was valuable, environmental rejuvenation was equally valuable to the restoration of the deer herd in Pennsylvania.⁹³ Lumber companies left behind desolate hillsides after removing immense areas of trees from state forests.⁹⁴ The clear-cut areas, however, rejuvenated within years with saplings and brushy vegetation.⁹⁵ This

85. See Drosinski, *supra* note 8.

86. Pennsylvania Game Commission, *Pennsylvania's Wildlife Conservation History 1900-1909*, at http://sites.state.pa.us/PA_Exec/PGC/history/19001909.htm (last updated Jan. 13, 2000).

87. See Moyer, *supra* note 29, at 48. The reintroduction of whitetail deer was not as influential on the rebirth of the whitetail in Pennsylvania as was the return of brushy forest cover to areas that were previously logged. *See id.*

88. *See id.* The PGC bought a total of 1,192 deer. PENNSYLVANIA GAME COMMISSION, PENNSYLVANIA'S WILDLIFE CONSERVATION HISTORY 28 (1958). Only 417 of the 1200 deer were actually bought in Michigan. *Id.* Dealers in Kentucky (16), Maine (21), New Hampshire (84), New Jersey (64), North Carolina (50), Ohio (16), and Pennsylvania (524) contributed to the stocking program for the next 19 years. *Id.* *See also* Bowers, *supra* note 33, at 39. A Michigan deer and Pennsylvania deer are the same. *Id.*

89. *See* Pennsylvania Game Commission, *supra* note 45, at 36. In 1907, a new “Buck Law” was passed that gave antlerless deer complete protection from hunting. *Id.*

90. *See id.* Female deer have always fallen into the category of antlerless deer. The term “antlerless,” however, has not always held the same meaning. “Antlerless” has been used to describe a deer without visible antlers, or any deer not considered an antlered deer.

91. *See* KOSACK, *supra* note 4, at 38. Pennsylvania was a leader in the American movement to eliminate self-loading hunting guns. *See id.*

92. *See id.*

93. *See id.* at 36.

94. *See id.*

95. *See id.*

rejuvenation provided food and cover for whitetails, as well as other wildlife.⁹⁶

By 1923, the success of Pennsylvania's deer management program forced legislators to remove protection on female deer.⁹⁷ The statewide deer population had exceeded a controllable level, thus causing the number of farmers suffering crop damage to rise.⁹⁸ The PGC's first response was to hold an antlerless deer hunt.⁹⁹ As part of an experimental deer hunt, the PGC allowed two Pennsylvania townships, Quincy and Washington, both located in Franklin County, to hold antlerless hunts.¹⁰⁰ The General Assembly passed laws that permitted farmers suffering from crop damage to shoot nuisance deer and utilize deer-proof fencing.¹⁰¹ In 1928, the PGC took a dramatic step by closing the antlered season and holding an antlerless only season throughout 54 of the 67 counties in Pennsylvania.¹⁰² The decision to conduct an antlerless only season was a product of deer management schemes that failed to control the ever-growing deer herd.¹⁰³ The PGC conducted antlerless seasons in areas where crop damage was most prevalent; the PGC dispatched both game protectors and hunters to kill surplus deer.¹⁰⁴ These temporary solutions did not lessen the complaints from the agricultural community or improve the health of the deer herd.¹⁰⁵ The statewide problem called for the PGC to initiate an antlerless hunt throughout all of Pennsylvania.¹⁰⁶

Pennsylvania citizens highly criticized the regulation that closed the traditional buck season and permitted an antlerless deer hunt.¹⁰⁷ Many feared harvesting "mother" deer would drastically reduce the

96. See KOSACK, *supra* note 4. Deer, grouse, and hare benefited from the environmental change. *Id.*

97. See PENNSYLVANIA GAME COMMISSION, *supra* note 45.

98. See *id.*

99. See KOSACK, *supra* note 4, at 59.

100. See PENNSYLVANIA GAME COMMISSION, PENNSYLVANIA HUNTING FACTS, at 2 (1975). A total of eight antlerless deer were taken at the hunts. See KOSACK, *supra* note 4, at 59.

101. See PENNSYLVANIA GAME COMMISSION, *supra* note 45; Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. § 541(a) (2002).

102. See PENNSYLVANIA GAME COMMISSION, *supra* note 45. In 1928, buck season was closed, but each hunter was allowed to kill one antlerless deer in all Pennsylvania counties except: Chester, Crawford, Delaware, Erie, Greene, Lancaster, Lawrence, Lebanon, Mercer, Monroe, Montgomery, Montour, Northhampton, Philadelphia, Pike, and Washington. See *id.*

103. See KOSACK, *supra* note 4, at 59.

104. See *id.* at 60.

105. See *id.*

106. See *id.*

107. See MOULTON, *supra* note 2, at 264.

population.¹⁰⁸ In response to the antlerless only season, some hunters bought antlerless licenses and burned them.¹⁰⁹ The uproar among hunters did not persuade the PGC to change course.¹¹⁰ Consequently, hunters harvested a record number of antlered deer the following year when the antlered season was reopened.¹¹¹

Despite widespread public criticism, the PGC's crusade to develop a large and healthy deer herd continued. As the PGC initiated new programs and reintroduced older programs as a means of managing the herd, disapproval and criticism by Pennsylvania residents inevitably continued; but the positive results spoke for themselves.

With the enactment of new laws and the creation of innovative management programs, the Pennsylvania deer population steadily grew.¹¹² In 2001, over 1.4 million deer roamed Pennsylvania's fields and forests.¹¹³ Unfortunately, new problems accompanied the growth of the deer population. Deer encroachment into civilization increased the number of collisions between deer and motor vehicles while farmers continued to suffer crop damage. Diseases associated with whitetails became more of a social concern, and forests no longer could sustain the vast number of deer. The rising whitetail deer population threatened wildlife as the whitetails' endless feeding engulfed both food and cover. The dilemma forced the PGC to react with new solutions to save a tattered ecosystem.

III. Necessity of Pennsylvania Deer Management

The PGC plays an essential role in the protection and hunting of wildlife by ensuring survival and controlling overpopulation. The 2001-2002 management program was designed to meet the expectations of hunters and control the population of white-tailed deer throughout the state.¹¹⁴ Although the most obvious group affected by the PGC's

108. See PENNSYLVANIA GAME COMMISSION, *supra* note 45.

109. See *id.* Newspapers proclaimed "[O]nly yellow hunters shoot does" and "No Doe Hunting" signs became prevalent throughout the state. *Id.*

110. See *id.*

111. See *id.* The 1929 season set a new state record for the number of buck taken. See *id.*; Pennsylvania Game Commission, *Pennsylvania White-tailed Deer and Black Bear Harvest Reports*, at http://sites.state.pa.us/PA_Exec/PGC/harvest/1915harvest.htm (last updated Oct. 28, 2002). Hunters shot 22,822 antlered deer that year, which was eight thousand more than the previous record in 1927. See *id.*

112. See Pennsylvania Game Commission, *supra* note 15.

113. See Bret Wallingford, *Deer Management News*, in PENNSYLVANIA GAME COMMISSION, *supra* note 12, at 6-7. The number of deer is merely an estimation by the PGC of what the population may be in 2001. This number is accompanied by a degree of uncertainty. See Christopher S. Rosenberry, *Counting Deer*, PENNSYLVANIA GAME NEWS, Sept. 2001, at 18.

114. See Pennsylvania Game Commission, *supra* note 15.

decisions is hunters, the decisions affect all citizens of Pennsylvania. Such groups as motorists, farmers, and environmentalists, rely on the PGC to maintain the deer population.¹¹⁵ These groups expect proper preservation, growth, and management to ensure not only their safety and livelihood, but also to ensure the continued existence of wildlife.¹¹⁶ According to the PGC, the present number of deer exceeds safety limits and environmental capacity, and therefore, the 2001-2002 Deer Season regulations were necessary to reduce the deer herd to a reasonable level.

A. *Clear the Road*

With approximately 160,000 miles of roads throughout Pennsylvania¹¹⁷ and a state forest area within about 25 miles of any location in Pennsylvania,¹¹⁸ motorists are likely to encounter an area inhabited by deer when driving.¹¹⁹ The presence of deer near any road poses a threat to motor vehicles because of the animals' large size and quickness.¹²⁰ Over 45,000 whitetail deer are killed every year on Pennsylvania's highways,¹²¹ causing \$80 million worth of damage.¹²² Vehicle/deer collisions cause 1.5 of all accidents from roadside objects in Pennsylvania.¹²³ The statistics do not include the unreported number of interactions drivers have with deer, including accidents resulting from swerving to avoid collisions with deer.¹²⁴

The PGC uses a variety of preventative means to reduce vehicle/deer collisions. The PGC posts road safety warnings and tips

115. See Pennsylvania Game Commission, *supra* note 81.

116. See Gary Alt, *Whitetail Deer Management*, in PENNSYLVANIA GAME COMMISSION, PENNSYLVANIA DIGEST OF HUNTING AND TRAPPING REGULATIONS JULY 1, 2002 – JUNE 30, 2003 (2002), at 6.

117. See Kevin Mixon, *Wildlife Passages and Highways*, PA GAME NEWS, Oct. 2001, at 15.

118. See MCSHEA, *supra* note 38, at 39. “[A]n estimated one million deer are hit by cars in the United States each year.” *Id.*

119. See also House of Representatives, *Powering Pennsylvania*, 2 (1995), at http://www.legis.state.pa.us/WU01/VC/visitor_info/hello_pennsylvania/hello.htm.

“Pennsylvania’s immense road system equals all New England and New Jersey highways, local roads, and city streets combined.” *Id.*

120. See Mixon, *supra* at 117. More than 20,000 Americans are injured, and 100 die each year due to wildlife related automobile accidents. See *id.*

121. See *id.*

122. See Ted Williams, *Wanted: More Hunters*, AUDUBON, Mar. 2002, at <http://magazine.audubon.org/incite/incite0203.html>.

123. See Pennsylvania Department of Transportation, 1998 PENNSYLVANIA CRASH FACTS AND STATISTICS. See also Mixon, *supra* note 117, at 15. The actual number of accidents caused when deer and vehicles collide is greater than reported. See *id.*

124. See MOULTON, *supra* note 2, at 471. Deer threaten motorists at night when the animals are caught in the headlights of cars. See *id.* Overabundant deer populations can cause car insurance rates to increase. See *id.* at 411.

through both its website and newsletter.¹²⁵ The PGC also provides information as to when deer are most active during the year.¹²⁶ In the spring, doe preparing for a new fawn cycle chase away the deer born the previous year, last year's fawns.¹²⁷ Last year's fawns are no longer following their mothers but are moving independently through areas unfamiliar to them.¹²⁸ Young bucks usually travel farther than young does in order to establish a territory of their own.¹²⁹ When a deer is forced into new territory, it is more vulnerable to vehicle encounters because it has not yet established safe routes.

Another focal point of deer movement during the year is in the fall. During the rut, primarily between the months of October and November, deer movement increases.¹³⁰ Bucks chase does as part of their traditional courting.¹³¹ As the hunting season unfolds each year, hunters invade the deer's habitat in search of their quarry, increasing human interaction with wildlife. Inevitably, hunters chase deer out of their sanctuaries and onto the roads.¹³²

Although informing motorists of heightened deer activity is an important and helpful road safety measure, the most effective safety measure is to reduce the number of deer in an area. A management program that continues to lower the number of whitetail deer statewide will reduce the number of collisions.¹³³ Deer will not be forced to live in overpopulated areas and fewer deer will be chased out of cover by hunters and wildlife. The 2001-2002 deer management plan took the first step by gradually reducing the herd an estimated five percent.¹³⁴ If the program continues as planned and the number of deer in the state

125. See generally Pennsylvania Game Commission, at <http://www.pgc.state.pa.us/>; see also Mixon, *supra* note 117, at 10. Methods for reducing highway accidents with wildlife are in progress now. See *id.* Wildlife passages serve as safe travel routes between habitat patches. See *id.* By fencing off certain areas of the highways the deer and other wildlife are forced to use culverts, bridges, and overpasses which are designated for wildlife travel over and under road systems. See *id.*

126. See Pennsylvania Game Commission, *Game Commission Advises Motorists To Watch For Deer*, PA GAME COMMISSION NEWS RELEASE 85-01 (Oct. 30, 2001), available at http://sites.state.pa.us/PA_Exec/PGC/newsroom/2001news/nr85-01.htm (last updated May 9, 2002).

127. See *id.*

128. See *id.*

129. See *id.*

130. See *id.* Deer are preoccupied while in search of the opposite sex or chased away by rival suitors, making them less cautious around roads. *Id.*

131. See *id.*

132. See *id.* Wildlife plays its own part in creating an increase in deer activity. See *id.* Bears, which are increasing in numbers, flush deer from forested areas. *Id.*

133. See MOULTON, *supra* note 2, at 411.

134. See Pennsylvania Game Commission, *Game Commission Provides 2002 White-tailed Deer Forecast*, PA GAME COMMISSION NEWS RELEASE, Release 93-02 (Oct. 22, 2002.), at http://sites.state.pa.us/PA_Exec/PGC/newsroom/2002/nr093-02.htm.

decreased, the impact that deer once had on motor vehicle travel will decrease.

B. Reducing Property Damage

With around 45,000 farms in Pennsylvania,¹³⁵ overgrazing is a major concern, as deer cause millions of dollars in property damage every year.¹³⁶ Deer overgrazing affects both rural and suburban farms and gardens.¹³⁷ Pennsylvania farmers have continuously requested assistance from the PGC to end the problems associated with overpopulation.¹³⁸ In response, the General Assembly has granted farmers permission to kill deer in limited instances where farmers observe deer damaging their crops.¹³⁹ The PGC has encouraged farmers to join cooperative land programs such as the Cooperative Public Access and Deer Depredation Program (CPADDP) or the Link Program.¹⁴⁰ The CPADDP provides farmers with a subpermit to take a deer for every five acres under cultivation.¹⁴¹ On the other hand, the Link Program connects landowners with hunters and trappers who are looking for new hunting and trapping opportunities.¹⁴² The PGC designed the Link Program to assist landowners in managing overabundant species such as deer, which adversely affect agricultural crops and areas designated for forest regeneration.¹⁴³ The program empowers landowners to open their private land to public hunting. By directing hunting pressure to areas previously inaccessible to hunting, the PGC feels confident that landowners will be successful in lowering deer numbers.¹⁴⁴

Deer do not discriminate. They encroach on rural, suburban and urban landowners; they do not care if it is designated as commercial or

135. See American Farmland Trust, *Resources By State Pennsylvania*, at <http://www.farmlandinfo.org/fic/states/pennsylvania.html> (last major change Mar. 30, 2001) (stating that farmland covers over seven million acres of Pennsylvania).

136. See Michael Pechart, *Partnership Down On The Farm*, PA GAME NEWS, Oct. 1999, at 10. In 1997, Pennsylvania reported over 70 million dollars in agricultural crop damage attributed to wildlife. *Id.*

137. See MOULTON, *supra* note 2, at 411.

138. See Pennsylvania Game Commission, *Commissioners Take Action To Improve Deer Management*, PA GAME NEWS, Dec. 1999, at 36.

139. See generally Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. § 2121 (2002).

140. See Pennsylvania Game Commission, *Landowners Encouraged To Consider Link Program*, PA GAME COMMISSION NEWS RELEASE, Release 33-02 (Apr. 22, 2002), at http://sites.state.pa.us/PA_Exec/PGC/newsroom/2002/nr033-02.htm.

141. See Pennsylvania Game Commission, *supra* note 81.

142. See Pennsylvania Game Commission, *supra* note 140.

143. See *id.*

144. See *id.*

residential when in search of food.¹⁴⁵ Deer will eat whatever they can digest when forced to resort to residential backyards, eating azalea bushes, dogwood trees, and holly.¹⁴⁶ They are forced to do so when overcrowded woodlots cannot support an entire herd's feeding habits.¹⁴⁷

The PGC's task of controlling deer herds is further complicated when deer are located in suburban settings or private land areas. These areas usually prohibit public hunting due to the establishment of safety zones and the prerogatives of private landowners. An objective of the PGC is to aid farmers and landowners in preventing deer from destroying their valuable crops, livelihood, and property.¹⁴⁸ Furthermore, human intrusions on wooded land make it even more necessary to control the population of deer. As humans develop areas where wooded land once stood, they deprive deer of their natural environment. In part, individuals must become more aware of this situation and permit the PGC to handle such problems. It may be impossible to stop the expansion of civilization on certain deer inhabited areas but it is not impossible to maintain the herds at levels suitable for the environment and for hunting.¹⁴⁹ The PGC has begun the reduction process of the state deer herd as it initiated the 2001-2002 deer hunting regulations.

C. *Disease Carrying Deer*

A third complication of whitetail overpopulation is that the deer is a popular host of the bacteria that causes Lyme disease.¹⁵⁰ Deer often encounter the deer tick, an arachnid notorious for spreading Lyme disease.¹⁵¹ Ticks can transmit the disease by latching onto a species of

145. See MOULTON, *supra* note 2, at 411. Golf courses have felt the effects of too many deer as hoof prints damage putting greens. See *id.*

146. See *id.*

147. See ADAMS, *supra* note 43, at 59.

148. See *id.* at 82.

149. See Pennsylvania Game Commission, *supra* note 140. "In 1919, the Game Commission was granted authority to purchase lands to be set aside for the protection, propagation and management of game and wildlife, and to provide areas for public hunting and trapping. Since that time, the Game Commission has acquired more than 1.4 million acres in 65 of the state's 67 counties (Philadelphia and Delaware counties being the exceptions)." *Id.*

150. See also Pennsylvania Game Commission, *Game Commission Takes Action To Protect State's Wild And Captive Deer And Elk From CWD*, PA GAME COMMISSION NEWS RELEASE, Release 58-02 (Jul. 30, 2002), at http://sites.state.pa.us/PA_Exec/PGC/newsroom/2002/nr058-02.htm (last updated Sept. 19, 2002). Chronic wasting disease has been found in 10 states. *Id.* The disease, which ultimately results in death, has not been found to affect humans but is dangerous to the Pennsylvania whitetail deer. *Id.*

151. See Pennsylvania Game Commission, *Lyme Disease*, PA GAME NEWS, Sept. 1999, at 8.

vertebrate and passing the bacteria.¹⁵² The ticks are hard to detect, making the victim of the disease less likely to know they are infected.¹⁵³ Lyme disease can be difficult to diagnose because it shares symptoms of other diseases.¹⁵⁴ Patients usually develop a rash that may have a ring-shaped appearance.¹⁵⁵ Additionally, flu-like achiness, fatigue, and low-grade fevers are common.¹⁵⁶ Some individuals never acquire the early symptoms or the rash but may develop more serious side effects such as arthritis, neurological disorders, heart problems, and visual impairments.¹⁵⁷

Pennsylvanians cannot ignore Lyme disease because it is a potentially serious disease. Studies have shown that when deer populations increase, the number of Lyme disease cases also increase.¹⁵⁸ Management programs become essential because a reduction in whitetail deer densities will decrease the number of individuals infected with the disease.¹⁵⁹ The fewer the hosts, the less opportunities the disease has to spread.¹⁶⁰ Obviously, the PGC should pay particular attention to those areas where both deer overpopulation and disease are prevalent.

Another disease recently discovered in deer is bovine tuberculosis.¹⁶¹ This bacterial disease affects the respiratory system.¹⁶² Humans are susceptible to the disease through either contaminated meat, which is not properly cooked, or unpasteurized milk.¹⁶³ Usually deer pass the bacteria to each other through the nose, by means of sneezing, coughing, or nose-to-nose contact. Overabundant deer herds are more likely to pass the bacteria, especially at feeding stations.¹⁶⁴ Deer can also pass it to livestock. Livestock are destroyed if they contract bovine

152. *See id.*

153. *See id.*

154. *See id.* The deer tick (also referred to as the bear tick, western blacklegged tick, or blacklegged tick depending on the region of the country) carries Lyme disease and is much smaller than the common dog or cattle tick. *See id.* The deer tick can attach onto any part of a person's body. *See id.*

155. *See* Pennsylvania Game Commission, *Protect Yourself From Lyme Disease and Other Tick-Borne Infections!*, at http://sites.state.pa.us/PA_Exec/PGC/misc/lyme_disease.htm (last updated Nov. 13, 2002).

156. *See id.*

157. *See id.*

158. *See* MOULTON, *supra* note 2, at 411. In Montgomery County, Virginia, Lyme disease cases have increased as the deer population increased. *Id.*

159. *See* ANTHONY J. DENICOLA, *MANAGING WHITETAIL DEER IN SUBURBAN ENVIRONMENTS* 67 (2000).

160. *See* Williams, *supra* note 122.

161. *See* DENICOLA, *supra* note 159, at 89.

162. *See id.*

163. *See* Canadian Cattlemen's Association, *Frequently Asked Questions On Bovine Tuberculosis*, (July 22, 2002), at <http://www.cattle.ca/INDUSTRY/FactSheets/FAQ%20TB.pdf>.

164. *See* DENICOLA, *supra* note 159, at 89.

tuberculosis. As a result, the disease poses both a health risk and a financial risk to humans.¹⁶⁵

The 2001-2002 season should have a positive effect on disease epidemics associated with deer overpopulation. Although a reduction in the overall population will not eliminate risks of disease, population control should significantly curtail its spread.

D. Natural Resources Are Losing To Deer

Pennsylvania's wildlife management program concentrates on the whitetail deer because deer are one of the most influential species on the ecosystem and one of the most profitable resources for the state.¹⁶⁶ Large deer herds damage valuable ecosystems by over-browsing forested areas.¹⁶⁷ Over-browsing occurs when the vegetation is not sufficient to satisfy the number of deer in an area and still maintain its natural growth.¹⁶⁸ An overabundance of deer can damage forests by feeding on the midlevel of the forest floor.¹⁶⁹ Overpopulated deer herds consume forest resources faster than forests can regenerate.¹⁷⁰ They can wipe out both the upper and lower most layers of the forest floor by feeding on essential canopy trees and understories.¹⁷¹ As deer decimate their own food source, they also destroy the habitat of many other species.¹⁷²

The gross feeding affects species dramatically.¹⁷³ The population of songbirds and game birds is declining due to loss of habitat caused by deer over-browsing.¹⁷⁴ Excessive deer feeding eliminates the birds' nesting sites and protective covers.¹⁷⁵ Studies have shown that intermediate-canopy nesting birds are non-existent when deer densities

165. See Canadian Cattlemen's Association, *supra* note 163.

166. See John McGonigle, *A Grand Plan For Pa.'s Deer Population*, INTELLIGENCER JOURNAL (Lancaster, Pa.), Oct. 7, 2001, at C1.

167. See Drosinski, *supra* note 8, at 3. See also MOULTON, *supra* note 2, at 471. Too many deer negatively affect the biodiversity of native forest and have deleterious effects on it. *Id.*

168. See MOULTON, *supra* note 2, at 229; see also ADAMS, *supra* note 43, at 128. Instead of eliminating the number of deer in an over-browsed area, plant succession and habitat interspersion can be manipulated. *Id.* These methods should be accompanied by other deer control methods to provide a long-term solution. *Id.*

169. See MOULTON, *supra* note 2, at 229.

170. See *id.*

171. See Stephen B. Jones, *Whitetails Are Changing Our Forest*, AMERICAN FORESTS, Nov. - Dec. 1993, at 20-25, 53-54. After deer eliminate hardwood seedlings, the less competitive ferns and grasses are able to establish themselves. See *id.* The ferns and grasses spread, depriving hardwoods from the sunlight essential for sprouting. See *id.*

172. See ADAMS, *supra* note 43, at 82.

173. See MOULTON, *supra* note 2, at 416. "When one species sequesters most of the [forest's] resources, other species decline." *Id.*

174. See *id.* at 416-17.

175. See *id.* at 417.

exceed 7.9 deer per kilometer.¹⁷⁶ Large deer populations have indirectly wiped out woody species and vegetation by consuming all seedlings in the forest.¹⁷⁷ When the older trees died, there were no younger trees to replace them.¹⁷⁸ In 1920, twenty-seven woody species were identified within a Pennsylvania forest.¹⁷⁹ By 1990, deer density had doubled, and only eleven woody species remained.¹⁸⁰ Over the 70-year period, the deer herd consumed every seedling of the sixteen woody species until they were nonexistent.¹⁸¹ Deer also alter the character of shrubs and wildflowers in the understory of a forest.¹⁸² The remaining plants are ferns and other ground covering vegetation, which deer do not eat.¹⁸³ These plants block the sunlight from saplings and make growth more difficult.¹⁸⁴

In addition to affecting the ecosystem, the deer become a menace to themselves by over-browsing.¹⁸⁵ “Without adequate food sources and cover, deer populations are stressed,”¹⁸⁶ leading to malnourishment and death, as they are unable to build up the energy reserves to survive the winter.¹⁸⁷ Younger deer are at a greater risk than more mature deer¹⁸⁸ and require food for growth during the development stage of their lives.¹⁸⁹ The lack of food reduces their survival rate as compared to older deer.¹⁹⁰

IV. The Hunt for a Management Program

Prior to 2001, hunting programs did not protect ecosystems but were “designed to promote the proliferation of individual species for the

176. See *id.* See also Dave deCalestra, *Effect Of Whitetail Deer On Songbirds Within Managed Forests In Pennsylvania*, JOURNAL OF WILDLIFE MANAGEMENT, 1994, vol. 58 at 711-718. See also ADAMS, *supra* note 43, at 58. Ensuring tree regeneration and desired tree species composition may require management programs to regulate the density of deer at 7 per square kilometer (18 per square mile). See *id.*

177. See MOULTON, *supra* note 2, at 417. See also Jones, *supra* note 171, at 20-25, 53-54.

178. See MOULTON, *supra* note 2, at 417.

179. See Jones, *supra* note 171.

180. *Id.*

181. *Id.*

182. See *id.* at 416-17. “Deer are generalist herbivores that consume many plants.” *Id.*

183. See Pennsylvania Game Commission, *supra* note 15; Jones, *supra* note 171.

184. See Pennsylvania Game Commission, *supra* note 15.

185. Also impacting forest regeneration is acid rain, insect infestation, and poor soils. See *id.*

186. See Pennsylvania Game Commission, *White-tailed Deer*, at http://sites.state.pa.us/PA_Exec/PGC/w_notes/deer.htm (last updated Feb. 7, 2003).

187. See *id.*

188. See *id.*

189. See *id.*

190. See *id.*

continuation of sport.”¹⁹¹ In January 2001, the PGC held public meetings to discuss deer management plans for the 2001-2002 deer season.¹⁹² The focus of the meetings was to educate both the public and the appointed commissioners as to the effects of uncontrolled deer populations on wildlife, the environment, and society.¹⁹³ Dr. Alt’s proposal was to adjust hunting regulations for antlerless whitetail deer by creating more opportunities to harvest an antlerless deer.¹⁹⁴ The goals of the proposal were to balance the deer herd’s sex ratio, save more bucks from being hunted,¹⁹⁵ stabilize the herd’s size within its habitat, and improve the whitetail’s overall health and vitality.¹⁹⁶ The deer management program centered around the enactment of new regulations that would broaden the traditional two-week antlered season by providing an antlerless deer option.¹⁹⁷ The theory behind the regulations is that more bucks will escape because of the additional disturbances caused by antlerless deer hunting and that those hunters primarily interested in venison will harvest a large doe instead of a small-racked buck.¹⁹⁸ Hunters with both a general hunting license and an antlerless license could harvest either an antlered or an antlerless deer during the new two-week season.¹⁹⁹

191. D’Arcy Kemnitz, *Hunting Moves To Suburbia’s Backyard*, 6 U. BALT. J. ENVTL. L. 219, (1998).

192. See Williams, *supra* note 122. In the past two years, Gary Alt has given over 150 lectures across the state regarding the new deer regulations and goals for the future. See *id.* He met with various organizations interested in or affected by deer. See Pennsylvania Game Commission, *supra* note 81. His mission was to “work to build a consensus among deer management stakeholders so that Pennsylvania could move into the 21st century with a solid, positive deer management program in place.” *Id.*

193. See Pennsylvania Game Commission, *Dr. Alt Announces Public Meetings to Discuss Deer*, PA GAME COMMISSION NEWS RELEASE 03-01 (Jan. 17, 2001), available at http://sites.state.pa.us/PA_Exec/PGC/newsroom/2001news/nr03-01.htm.

194. The PGC’s goal for 2001 was to harvest 350,000 antlerless deer, therefore reducing the statewide herd by five percent. See Pennsylvania Game Commission, *Unprecedented Deer Season Approaches*, PA GAME COMMISSION NEWS RELEASE 97-01 (Nov. 7, 2001), available at http://sites.state.pa.us/PA_Exec/PGC/newsroom/2001news/nr97-01.htm. The last concurrent firearm deer season was held in 1908. See *id.*

195. See Pennsylvania Game Commission, *supra* note 15. Ideally, mature bucks should be the breeders of the doe. See *id.* Adherence by hunters to the PGC’s management plan will give young bucks the opportunity to mature and, therefore, increase the competition between bucks during mating the following year. See *id.* Mature bucks will most likely win out over younger bucks and breed with the does. See *id.*

196. See *id.*

197. See generally PENNSYLVANIA GAME COMMISSION, *supra* note 12.

198. See Pennsylvania Game Commission, *supra* note 15. A buck is considered an antlerless deer if it does not have at least one spike three inches in length or one antler with two or more points. See PENNSYLVANIA GAME COMMISSION, *supra* note 12, at 21. Yearling bucks born in the previous spring are referred to as button-bucks because their horns may not yet be visible.

199. See *id.*

Many hunters and non-hunters were originally dissatisfied with the regulations for the 2001-2002 deer season.²⁰⁰ Some saw the upcoming season as a step backwards from the past accomplishments of the PGC and as a threat to the population of deer in certain areas.²⁰¹ Although deer overpopulate certain areas of Pennsylvania, hunters fear the low number of deer in forested areas will be reduced.²⁰² Others praised the PGC for creating additional opportunities to harvest deer.²⁰³ A longer season will curtail crop damage and forest erosion since the season potentially increases the number of deer harvested, therefore, minimizing the problems associated with overpopulation.²⁰⁴

V. The Legality of the Management Program

Pennsylvania courts have addressed the issue of whether displeased parties can successfully challenge regulations that permit an open season on whitetail deer.²⁰⁵ The courts have explained why the PGC is best suited to make decisions concerning wildlife and hunting seasons.²⁰⁶ The discretionary power of the eight Pennsylvania Game Commissioners to set hunting seasons is illustrated in the case *Lehman v. Pennsylvania Game Commission*.²⁰⁷

In *Lehman*,²⁰⁸ the Dauphin County Court of Common Pleas considered the validity of the PGC's decision to allow an open season on antlerless deer for six days in 1938.²⁰⁹ The PGC removed regulatory protection and fixed an open season for all antlerless deer without minimum weight or age requirements.²¹⁰ The PGC opened the season to all licensed hunters, covering all counties and areas without regard to the number of deer in each.²¹¹ The plaintiffs, citizens of Pennsylvania, taxpayers, and 1938 hunting license holders, asserted three complaints: (1) the open season was unreasonable, arbitrary, and an abuse of discretion; (2) the provision allowing the PGC to declare an open season

200. See *infra* notes 248-52 and accompanying text.

201. See *id.*

202. See Pennsylvania Game Commission, *supra* note 81.

203. See *id.*

204. See Pennsylvania Game Commission, *supra* note 15.

205. See *Lehman v. Pennsylvania Game Commission*, 34 Pa. D. & C. 662 (Pa. D. & C. 1938). Cf. *Dietz v. Commonwealth*, 34 Pa. D. & C. 437 (Pa. D. & C. 1937) (holding an open season for antlerless deer was invalid because section 501(a) of The Game Law expressly prohibits hunting with single pellet guns during the five-day period preceding the open season for deer hunting).

206. See *Lehman*, 343 Pa. D. & C. 437.

207. See *id.*

208. See *id.*

209. See *id.* at 3.

210. See *id.* at 2-3.

211. See *id.*

was an unlawful delegation of legislative power;²¹² and (3) the fixing of such a season without specific standards²¹³ violated the express requirements of "The Game Laws"²¹⁴ and extended the powers of the PGC.²¹⁵ The court responded by ruling in favor of the PGC, and declaring that the PGC remained within the scope of its power when enacting the regulation.²¹⁶ Therefore, the court held that the regulation did not violate The Game Laws.²¹⁷

The court reasoned the purpose of creating the PGC was to handle daily matters concerning wildlife.²¹⁸ As a state agency, the PGC is in a better position than the General Assembly to handle the ever-changing status of Pennsylvania deer herd.²¹⁹ Regulations need to be constantly reviewed and changed to properly manage wildlife.²²⁰ Thus, the General Assembly delegated the sole power to manage the deer herd to the commissioners of the PGC.²²¹ The only limitations on the commissioners' powers are those set by the legislature.²²² The legislature did not prohibit the commissioners from setting an open season.²²³ Further, the court stated the PGC was permitted to create a deer season without setting weight and age standards.²²⁴ Requiring an average hunter to determine a deer's estimated age and weight is unreasonable.²²⁵

The General Assembly permits the commissioners to set an open season, provided that the commissioners use careful, expert, and scientific analysis to determine appropriate regulations.²²⁶ The eight

212. See Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. § 322(c)(2) (2002) (amending The Game Law of June 3, 1937, § 501).

213. See *Lehman*, 34 Pa. D. & C. at 10-11. The plaintiffs assert that the open season for antlerless deer needs to be set according to the deer's minimum age or weight and limited to specific areas where the deer herd has become overabundant. *Id.*

214. "The Game Laws" were reenacted in the Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. §§ 101-2965, on July 1, 1987.

215. See *Lehman*, 34 Pa. D. & C. at 10-11.

216. See *id.* at 18.

217. See *id.*

218. See *id.* at 9-12.

219. See *id.*

220. See *Lehman*, 34 Pa. D. & C. at 10-11.

221. See *id.* at 10. See Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. § 103(a) ("The ownership, jurisdiction over and control of game or wildlife is vested in the commission as an independent agency of the Commonwealth in its sovereign capacity to be controlled, regulated and disposed of in accordance with this title.")

222. See *id.* (noting that the PGC's duty is to protect, manage, and preserve the game of Pennsylvania).

223. See *id.* at 14.

224. See *id.* at 11.

225. See *Lehman*, 34 Pa. D. & C. at 11.

226. See *id.* at 12. The General Assembly is not in a position to constantly change the

commissioners appointed to the PGC are to be well-informed on the subject of wildlife conservation and restoration.²²⁷ An analysis of *Lehman* and of the Pennsylvania Game and Wildlife Code elucidates the PGC's administrative power to launch a concurrent antlered and antlerless season. The two-week open season for antlerless whitetail deer during the 2001-2002 deer season is permitted by Pennsylvania law.²²⁸

VI. Expectations and Safety: 2001-2002 Hunting Regulations

The PGC is required by statute to serve the interest of sportsmen and sportswomen by preserving and promoting hunting, as well as providing an adequate opportunity to hunt deer.²²⁹ "In order to administrate and enforce . . . [the Pennsylvania Game and Wildlife Code], the commission through proper action shall . . . serve the interest of sportsmen [and sportswomen] by preserving and promoting . . . [the] special heritage of recreational hunting and furtaking by providing adequate opportunity to hunt and trap the wildlife resources of . . . [Pennsylvania]."²³⁰

While the duty to serve the interest of all hunters is noble, the PGC often finds that accomplishing this duty is a difficult task. Whitetail deer are unevenly distributed²³¹ throughout 16 million rural acres,²³² as well as suburban and urban environments within Pennsylvania. This uneven distribution causes strong opposition from both ends of the spectrum as individuals argue over whether the herd should be reduced or increased in certain areas of the state. The two different views are easily understood. State game lands, which permit public hunting, vary in the number of deer per square mile compared to the suburban communities and private farmlands, where overpopulation is common and hunting is limited.²³³ Safety zone laws ban hunting in most suburban areas.²³⁴ Furthermore, farmers often report problems related to deer overpopulation because their lands are difficult to regulate when privately owned. Farmers are reluctant to allow a sufficient number of hunters, if any, on their property.²³⁵ In comparison, state game lands are

laws regarding the status of the deer in Pennsylvania. *See id.*

227. *See* Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. 301(a) (2002).

228. *See id.*

229. *See* 34 PA. CONS. STAT. ANN. § 322(c)(13).

230. *See id.*

231. *See* Moyer, *supra* note 29, at 47.

232. *See* MOULTON, *supra* note 2, at 265.

233. *See* Pennsylvania Game Commission, *supra* note 81.

234. *See* 34 PA. CONS. STAT. ANN. § 2505(c)(1).

235. *See* Pennsylvania Game Commission, *supra* note 15.

often over-hunted because access to the game lands is easy and permitted.

Keeping in mind the expectations of hunters, the PGC attempts to create a management program that will equally regulate the varying number of deer in each area while providing ample opportunities to hunt.²³⁶ The PGC holds both public meetings across the state to gain insight from local hunters about their wildlife concerns and conducts scientific research in order to uphold the statute.²³⁷ The PGC also limits the number of antlerless licenses in each county.²³⁸

A. *Hunters Expect Quality Quarry*

Of the estimated 12 million residents of Pennsylvania,²³⁹ over one twelfth of those residents are active hunters.²⁴⁰ Since 1995, over one million hunters have taken to the field each year.²⁴¹ Hunters constitute the largest class of individuals affected by the decisions of the PGC.²⁴² Whether it is the attraction of larger antlers or the increased opportunities to harvest a deer, hunters rightfully have high expectations.²⁴³ Each year hunters enter the woods in pursuit of game expecting quantity and quality.²⁴⁴ The PGC has various methods to meet these expectations.²⁴⁵ It believes healthier deer are found in areas where deer herds have not exhausted their food source. Therefore, the PGC attempts to improve the herd's health by controlling deer numbers through management programs.²⁴⁶ The most acceptable and efficient method is to set hunting regulations, which include determining seasons and bag limits.²⁴⁷

236. *See generally id.*

237. *See* 34 PA. CONS. STAT. ANN. § 328(a) (2002).

238. *See infra* notes 273-77 and accompanying text.

239. *See* Economic Research Service, *Pennsylvania Fact Sheet*, at <http://www.ers.usda.gov/statefacts/PA.htm> (page update Oct. 28, 2002).

240. *See* MOULTON, *supra* note 2, at 411 (1.1 million hunters).

241. *See* Pennsylvania Game Commission, *General Hunting License Sales*, at http://sites.state.pa.us/PA_Exec/PGC/license/totSales.htm (last updated at Jun. 18, 2002)(1995 year – 1,089,660 licenses purchased; 1996 – 1,088,733; 1997 – 1,063,366; 1998 – 1,071,205; 1999 – 1,033,315; 2000 – 1,038,846; 2001 – 1,047,820).

242. *See* Pennsylvania Game Commission, *supra* note 15.

243. *See id.*

244. High deer quality consists of a larger, healthier deer, and bucks with increased rack sizes. *See* MOULTON, *supra* note 2, at 325.

245. Hunters and regulated sharpshooters currently are the most effective direct techniques for controlling deer numbers. *See* ADAMS, *supra* note 43, at 127. Sterilization and introduction of predators are methods used to reduce deer populations. *See id.*

246. *See* Pennsylvania Game Commission, *supra* note 15.

247. *See* Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. § 2102(b)(1) (2002).

1. Public Opinion

Before the 2001-2002 regulations were enacted, the PGC spent both time and energy educating the public and gathering public opinion regarding Pennsylvania's deer issues. The PGC gathered many devote followers, who believed that the 2001-2002 season was necessary. Yet opposition remained. Some individuals predicted negative outcomes of the 2001-2002 season before it ever began. These individuals believed that a two-week antlerless season would dramatically affect the size of the herd in subsequent years since the majority of antlerless deer are doe.²⁴⁸ Doe play a major role as reproducers; thus, reducing the number of doe will eventually diminish the number of deer. These individuals that criticized the PGC believed the surviving doe herds in many regions of the state would be unable to produce sufficient numbers of offspring for the following year. The offspring are essential for providing game to the population of over one million hunters. An insufficient number of offspring would result in a reduction of antlerless permit allocations in subsequent years. More importantly, the offspring become the future reproducers for the herds.²⁴⁹ Inevitably, the PGC's focus would have to change as the number of deer decreased annually. The PGC would be forced to enact strict regulations to limit hunting and reduce the opportunities to harvest a deer in order to revive the Pennsylvania deer herd to its present size.

Another concern is that the number of bucks in the future would be diminished if the PGC were to dramatically increase the doe harvest.²⁵⁰ Many of the critics assume that protecting antlerless deer is the only way to ensure that large numbers of bucks will continue to exist. Their assumptions are supported with the ideas that protecting antlerless deer will help maintain the number bucks produced each year, and protect button bucks from being harvested because they are defined as antlerless deer.²⁵¹

Additionally, certain factors such as habitat, food, and hunting affect the number of deer in a particular area. These factors are not consistent among individual counties throughout the state because each county is unique in respect to the size of its deer herd and issues surrounding wildlife. Furthermore, if the concurrent open season

248. See Pennsylvania Game Commission, *Questions Hunters Ask About Deer*, (1995), available at http://sites.state.pa.us/PA_Exec/PGC/deer/deerqa.htm (last updated Apr. 25, 2001). The remainder of bucks are the antlered bucks that elude hunters during the season. See *id.*

249. See *id.*

250. See *id.*

251. See *id.* See Pennsylvania Game Commission, *supra* note 15. A "button buck" is a male deer that cannot grow visible antlers because it has not yet reached maturity and instead may have two small humps on its head. *Id.*

remains in effect and antler restrictions are not implemented, the regulations will cause the number of deer harvested in each county to be disproportional to the size of the deer herd in the county. The number of deer harvested each year will far exceed the number of deer that should be harvested in order to maintain a large but healthy herd. The continuation of the season will rapidly reduce the deer herd on public lands, causing an uneven reduction in the deer herd across the state. State game lands would suffer a greater impact from the regulations than suburban and agricultural areas because game lands are easier to access by the public.²⁵² These concerns were some of the reasons why Pennsylvanians did not agree with the new management plan and why some municipalities desire a greater role in determining wildlife issues in their communities.

2. Pennsylvania Game Laws Supercede Local Ordinances.

Pennsylvania's laws forbid municipalities from enacting local ordinances that conflict with game laws, even if the ordinances provide a greater degree of safety to the residents.²⁵³ The General Assembly created the PGC to handle wildlife issues because it could not adequately fulfill this obligation. The PGC is able to provide the time and expertise to identify the necessary adjustments in hunting regulations.

Other areas of wildlife conservation permit local laws to accompany state laws.²⁵⁴ In Connecticut, wetland protection consists of local ordinances supplementing state and federal regulations.²⁵⁵ Although the PGC sets specific regulations designed to encompass certain counties, neither the General Assembly nor the PGC allows local governments to enact laws that would better suit its community's deer issues.²⁵⁶

In *Duff v. Township of Northampton*,²⁵⁷ the Commonwealth Court of Pennsylvania was faced with the issue of whether a state statute precludes a municipal ordinance.²⁵⁸ The state statute prohibits hunting with firearms within a safety zone of 14.6 acres, which is 150 yards from certain statutorily defined buildings.²⁵⁹ The Ordinance enforced the same

252. Cf. Pennsylvania Game Commission, *supra* note 15.

253. Cf. Baird v. Township of New Britain, 633 A.2d 225 (Pa. Commw. Ct. 1993) (permitting a local municipality to enact firearm ordinance).

254. See ADAMS, *supra* note 43, at 83.

255. See *id.* at 84. "All but 13 of [Connecticut]'s 169 towns regulate wetlands at the local level." *Id.*

256. Special regulation areas include all of Allegheny, Bucks, Chester, Delaware, Montgomery, and Philadelphia counties. See PENNSYLVANIA GAME COMMISSION, *supra* note 12, at 53.

257. 532 A.2d 500 (Pa. Commw. Ct. 1987).

258. See *id.* at 500.

259. See *id.*; see also 34 PA. CONS. STAT. ANN. § 2505(c)(1).

area of law, but to a more stringent degree.²⁶⁰ The court held the Ordinance was invalid and that the Game and Wildlife Code preempted it.²⁶¹

The township passed an Ordinance that expanded the safety zone, requiring a distance of 20 acres around the center of a building.²⁶² The township argued its Ordinance provided more protection than the state's statutory safety zone; the state statute should only be a minimum standard.²⁶³ The court reasoned the purpose of the Game and Wildlife Code is to create comprehensive and uniform regulations concerning the hunting of wildlife. The PGC would not be able to freely utilize its experienced decision-making powers in determining the appropriate balance between hunter's rights, the control of wildlife, and the safety of citizens if it had to contend with local ordinances.²⁶⁴ The PGC would not be able to successfully regulate the state deer herd while having to compete with a patchwork of municipal regulations.²⁶⁵ Hunters could take advantage of different seasons throughout the counties and kill an unprecedented number of deer each year.²⁶⁶ Deer populations would dramatically fluctuate, leading to an unstable herd.²⁶⁷ The power to regulate wildlife rests primarily in the hands of the PGC.²⁶⁸

3. The Breeders

The PGC is confident that an open season will not reduce the deer population. "Population control can only be facilitated through a rationed harvest of female deer."²⁶⁹ Although doe serve as the herds' reproducers, this in turn makes them an invaluable component in a deer management plan focused around controlling deer numbers.²⁷⁰ The PGC utilized the doe population as a means of control over the size of the deer herd at an early stage of its own development.²⁷¹ The PGC's confidence in centering management plans on doe is based on both studies and experience. Studies have shown that although thirty percent of doe are harvested each year during the hunting season, the population of deer has

260. *See id.*

261. Game Law, Act of June 3, 1937, P.L. 1225, *as amended*, Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. §§ 101-2965 (1987).

262. *See Duff*, 532 A.2d at 502.

263. *See id.* at 500-02.

264. *See id.* at 507.

265. *See id.*

266. *See id.*

267. *See also* ADAMS, *supra* note 43, at 41. A deer herd is considered stabilized "when the annual rate of increase is equal to the rate of loss." *Id.*

268. *See Duff*, 533 A.2d at 507.

269. *See* Pennsylvania Game Commission, *supra* note 186.

270. *See id.*

271. *See* PENNSYLVANIA GAME COMMISSION, *supra* note 45.

consistently increased.²⁷² Further, the PGC allots each county in Pennsylvania a specific number of antlerless licenses.²⁷³ This allocation allows the PGC to regulate the number of doe harvested each year and in each county.²⁷⁴ The number of licenses issued is determined by population data.²⁷⁵ The data consists of deer populations and density goals based on habitat. Hunter success rates are also considered.²⁷⁶ An individual is not permitted to harvest an antlerless deer without the required antlerless license.²⁷⁷

Despite the arguments against the 2001-2002 regulations, the fact remains that when smaller herds are in balance with their habitat, they can produce as many fawns as an oversized herd on poor range.²⁷⁸ Furthermore, about 75 percent of the subsequent year's bucks have already been born before Pennsylvania's hunting season begins.²⁷⁹ These bucks are referred to as button bucks and fall under the category of antlerless deer.²⁸⁰ Typically, hunters only kill 20 percent of the button bucks through the deer season.²⁸¹ Pennsylvania's real problem is the number of young bucks harvested each year.²⁸² Studies have indicated that a buck reaches its greatest antler growth between the ages of four and eight.²⁸³ Of the total number of bucks killed each year in Pennsylvania, 90 percent are less than two years of age.²⁸⁴ No other state harvests this many of its first year bucks.²⁸⁵ Even more surprising is less than one in one hundred bucks actually reaches the age of maturity in Pennsylvania.²⁸⁶ The 2001-2002 concurrent season reduced the number of bucks killed, which was the first step in the PGC's management plan.²⁸⁷ Many hunters harvested antlerless deer to fulfill their yearly

272. *See id.*

273. *See* Pennsylvania Game Commission, *Wildlife Management*, at http://sites.state.pa.us/PA_Exec/PGC/deer/GN0208.htm (last updated Nov. 13, 2002). In 2001, 780,250 antlerless licenses were allocated statewide, and 1,029,350 licenses in 2002. *See id.* Pennsylvania consists of 67 counties.

274. *See* PENNSYLVANIA GAME COMMISSION, PENNSYLVANIA DIGEST OF HUNTING AND TRAPPING REGULATIONS JULY 1, 2002 – JUNE 30, 2003, 34 (2002).

275. *See* Pennsylvania Game Commission, *supra* note 15.

276. *See id.*

277. *See* PENNSYLVANIA GAME COMMISSION, *supra* note 274.

278. *See* Pennsylvania Game Commission, *supra* note 15. Doe have fewer young when habitat quality is lacking. *See id.*

279. *See id.*

280. *See id.*

281. *See id.*

282. *See* Pennsylvania Game Commission, *supra* note 15.

283. *See id.*

284. *See id.*

285. *See id.*

286. *See id.*

287. *See* Pennsylvania Game Commission, *supra* note 15.

supply of venison and were more willing to hold out for a mature buck later in the season.²⁸⁸ This example exposes a difference in hunting desires; some people hunt for venison, while others seek a trophy rack. Hunters also took advantage of the extended antlerless season by waiting to harvest an adult doe rather than a yearling deer that could be a button buck. Most likely, the hunter's patience allowed a button buck to survive and possibly grow into a mature buck.²⁸⁹ The later phases of the PGC management plan will aid in permitting these younger bucks to mature by placing extreme antler restrictions on antlered deer.²⁹⁰

Hunters question whether concurrent antlerless hunts should be held in the forested areas where there seem to be fewer deer.²⁹¹ Many hunters would like to see the opposite occur.²⁹² Hunters suggest that antlerless hunting be banned or the stocking program be reintroduced in these areas.²⁹³ The PGC recognizes that many forested areas have a relatively low number of deer.²⁹⁴ However, the solution is not to increase the size of the herd.²⁹⁵ The environment must first be restored to a healthy state before deer numbers can successfully flourish.²⁹⁶ Although the deer numbers are low in these areas, the deer are still able to keep an unhealthy forest from rejuvenating.²⁹⁷ In order for the forest to rejuvenate to its natural state, the PGC must reduce the number of whitetail deer in that area.²⁹⁸ Reducing the number of deer will eliminate over-browsing, which is the primary reason why the forests are unable to return to their natural state.²⁹⁹

4. The Answer

The 2001-2002 deer season proved that combining the antlered and antlerless seasons would not result in an excessive number of doe being shot. The probability the PGC will continue a two-week combined season is high, providing that the size of the deer herd does not rapidly decline.

The estimated 282,767 antlerless deer harvested in the 2001-2002 deer season is a positive indication that the PGC is heading towards its

288. See Wallingford, *supra* note 113.

289. See *id.*

290. See Pennsylvania Game Commission, *supra* note 15.

291. See *id.*

292. See *id.*

293. See *id.*

294. See *id.*

295. See Pennsylvania Game Commission, *supra* note 15.

296. See *id.*

297. See *id.*

298. See *id.*

299. See *id.*

goal to reduce the deer herd in Pennsylvania.³⁰⁰ The total number of antlerless deer, however, does not represent an equal harvest statewide. In a state spanning 28 million acres, some areas require different guidelines and restrictions.³⁰¹ Large deer herds that are spread out across the state pose the greatest obstacle in setting uniform regulations. Although not all counties in Pennsylvania are regulated equally, the majority of the counties are grouped under one uniform set of hunting regulations. Economically, the PGC does not have the resources to regulate each municipality within a county. The PGC provides alternative methods to assist municipalities with handling localized deer problems that general hunting seasons cannot.³⁰² But if areas within individual counties continue to experience deer problems, the PGC may be forced to adjust its desire for uniform regulations across the state and instead, permit municipalities to be more proactive in resolving their own wildlife issues.

B. Safety

Hunters expect the PGC to maintain a high standard of safety throughout the hunting season by passing appropriate regulations. When the PGC combines an antlered and antlerless season, many people believe that the risk of injury to hunters is increased.³⁰³ Many people feared that hunters would act carelessly by shooting at “deer” movement, rather than fully identifying the target as either an antlered or antlerless deer.³⁰⁴ The PGC has safety measures already in place, but are they enough?

In an effort to maximize protection of sportsmen and sportswomen and to produce safe and responsible hunters, the General Assembly created a Hunter Education Program.³⁰⁵ Pursuant to the Pennsylvania Game and Wildlife Code, the PGC conducts a mandatory course for hunters at no charge to the public.³⁰⁶ The course combines the

300. See generally Pennsylvania Game Commission, *Harvest Information*, (Jan. 13, 2003), available at http://sites.state.pa.us/PA_Exec/PGC/harvest/index.htm.

301. See American Farmland Trust, *supra* note 135.

302. Municipalities can request additional permits to harvest deer. Telephone Interview with Jerry Feaser, Press Secretary, Pennsylvania Game Commission, in Harrisburg, Pa. (Oct. 24, 2002).

303. See Wallingford, *supra* note 113.

304. See *id.*

305. See Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. § 2704(b) (2002).

306. See *id.* (“Persons who have not held a hunting license lawfully issued to them in this Commonwealth or another state or nation or have not hunted under the exceptions in section 2706 (relating to resident license and fee exemptions) or do not possess a certificate of training approved by the director prior to the enactment of this title shall be

knowledge of both hunting and trapping along with safety tips. The instructors emphasize the dangers that exist when hunting. They educate the attendees on how to avoid injury and to be responsible by using common sense. The PGC's first formal hunter education class was held in 1959.³⁰⁷ The course became a prerequisite for obtaining a Pennsylvania hunting license for hunters under 16 years of age in 1969 and mandatory for all first-time hunters by 1982.³⁰⁸ As of 2001, 1.7 million individuals have successfully completed the course, and as a result, injuries from firearms have declined nearly 80 percent since the 1960s.³⁰⁹

In addition to the safety course, the PGC enacted a fluorescent orange clothing requirement.³¹⁰ During the firearm season, each person in the field must wear at least 250 square inches of fluorescent orange.³¹¹ The fluorescent orange must be worn on the head, chest, and back and be visible 360 degrees.³¹² Regulations require that the hunter shall not remove the fluorescent orange when hunting during the firearm season.³¹³

In 1957, a semi-traditional hunting season emerged and continued until 2000. The PGC held a firearms season for antlered deer followed by a firearms season for antlerless deer.³¹⁴ The seasons did not overlap.³¹⁵ The traditional season raised the level of safety by forcing hunters to identify their quarry before pulling the trigger. Prior to 2001, a hunter had to identify whether the deer was antlered or antlerless before he could harvest the deer. Otherwise the hunter could possibly kill a protected deer.³¹⁶ A violator faces a fine and possible revocation of his or her license for killing a deer out-of-season.³¹⁷

required to attain accreditation in a hunter education program approved by the director before a hunting license is issued to them.”).

307. *See id.* “Hunter education is rooted in concepts of firearm safety, but has grown to include important training in ethics and responsibility.” *Id.*

308. *See* Pennsylvania Game Commission, *Hunter-Trapper Education Program*, (2002) at http://sites.state.pa.us/PA_Exec/PGC/education/index.htm (teaching individuals to be safe, responsible, and knowledgeable hunters by attending a mandatory course that last a minimum of 10 hours).

309. *See id.*

310. *See* PA. CODE § 141.43.

311. *See* PENNSYLVANIA GAME COMMISSION, *supra* note 12, at 28-29.

312. *See id.*

313. *See id.*

314. *See Alt, supra* note 116.

315. *See id.*

316. A protected deer is a “deer not defined as an antlered or antlerless deer” within that particular season. *See* PENNSYLVANIA GAME COMMISSION, *supra* note 274, at 26.

317. *See generally* Pennsylvania Game and Wildlife Code, 34 PA. CONS. STAT. ANN. § 2306 (2002) (describing penalties for mistakenly killing game or wildlife).

The PGC continuously encourages hunters to let safety be their guide in making decisions. Even with the emphasis placed on identifying a target and pre-requisite safety courses, a properly licensed hunter was not required to identify whether the deer was antlered or antlerless during the 2001-2002 hunting season. In essence, this season was a "two-week any-deer season."³¹⁸

1. Other Open Seasons Are Incomparable

Other hunting seasons in Pennsylvania have allowed hunters to take either a buck or a doe. The number of hunters in the field, however, is substantially lower. Both archery and muzzleloader seasons are concurrent antlered and antlerless seasons.³¹⁹ In 2000, only around 285,000 archery licenses were purchased.³²⁰ This number is relatively small compared to the over one million general hunting licenses sold that year. Archery season is also approximately three times longer than the firearm season, making it less likely that archers will encounter each other because they are not as limited to the number of days they may hunt.³²¹ Muzzleloader and late archery season is the last deer season each year, and many hunters have already harvested a deer before the season begins.³²² The PGC only sells Muzzleloader licenses between July 1st and August 31st of each year, therefore, an individual who does not purchase a license within that two-month window may not participate.³²³ In 2001, less than 138,000 muzzleloader licenses were sold; the number of hunters who actually participated in the season, however, was significantly lower because they already harvested a deer.³²⁴ During the firearm season, hunters are restricted to a two-week period; an estimated 900,000 hunters are present on opening day.³²⁵ Additionally, although a bow or muzzleloader can lead to death, a high-powered rifle is potentially more dangerous.³²⁶ The 2001-2002 firearm season cannot be compared to other combined hunting seasons.

318. See Wallingford, *supra* note 113.

319. See generally PENNSYLVANIA GAME COMMISSION, *supra* note 274.

320. Each hunting license holder must purchase an archery license to legally archery hunt in Pennsylvania. See PENNSYLVANIA GAME COMMISSION, *supra* note 12, at 21, 56.

321. See generally PENNSYLVANIA GAME COMMISSION, *supra* notes 12, 274.

322. See generally *id.*

323. See generally *id.*

324. See Pennsylvania Game Commission, *General Hunting License Sales*, (Jun. 18, 2002), available at http://sites.state.pa.us/PA_Exec/PGC/license/totSales.htm.

325. See Judy Lin, *Buck-and-doe Hunting Season Safe For All But Deer*, INTELLIGENCER JOURNAL (Lancaster, Pa.), Dec. 22, 2001, at B2.

326. The capabilities of a rifle compared to a bow or muzzleloader is significantly greater.

2. Goals, Statistics and Stability

Undoubtedly, the ultimate goal of the PGC is to complete a hunting season without a single accidental shooting incident.³²⁷ “A hunting-related shooting incident is defined as an occurrence when a person is injured as the result of the discharge of a firearm . . . while hunting”³²⁸ Statistically, the 2001-2002 season was a success.³²⁹ Although three people were killed and 12 injured during the two-week rifle season, these numbers were comparable to the past two seasons, which ranked among the safest in PGC history.³³⁰ In addition, these numbers were well below the 1998-1999 season, which was a traditional two-week antlered season.³³¹

The stability of a low number of hunting-related incidents may not extend to subsequent years, however. The PGC approved a similar open season for 2002-2003.³³² An open season will most likely continue each year provided the number of deer does not decline dramatically.

As younger individuals and newcomers are introduced to the sport of hunting, a regulation similar to the 2001-2002 season will increase the number of hunting-related incidents. While the Hunter Education Program stresses the importance of identifying the quarry, it is not enough to deter an over-anxious hunter from shooting at the first sign of movement.³³³ These newcomers will not be trained to perceive a brown object in the woods as a possible buck or doe, but as a target. Novice hunters will be less inclined to determine what kind of deer they are shooting because the regulation permits them to take either an antlered or an antlerless deer. Separating the antlered season from the antlerless season was a fundamental aspect of hunter safety.³³⁴ Wildlife officials

327. Telephone Interview with Jerry Feaser, Press Secretary, Pennsylvania Game Commission, in Harrisburg, Pa. (Jan. 10, 2002).

328. Pennsylvania Game Commission, *Hunting-Related Shooting Incident (HRSI) Statistics*, (2002), at http://sites.state.pa.us/PA_Exec/PGC/education/hrsi/index.htm (last updated Nov. 13, 2002).

329. Telephone Interview with Jerry Feaser, Press Secretary, Pennsylvania Game Commission, in Harrisburg, Pa. (Jan. 10, 2002).

330. See Pennsylvania Game Commission, *Game Commission Announces 2000 As Safest Hunting Year On Record*, PGC NEWS RELEASE 27-01 (Mar. 28, 2001), available at http://sites.state.pa.us/PA_Exec/PGC/newsroom/2001news/nr27-01.htm; Pennsylvania Game Commission, *supra* note 328. In 2000, one fatality and 21 non-fatal injuries occurred, making it the safest season in the past 86 years. *See id.* The 1999 season ended with two fatal incidents and 16 non-fatal incidents. *See id.*

331. See Pennsylvania Game Commission, *supra* note 328 (ending with five fatalities and 21 non-fatal injuries).

332. See PENNSYLVANIA GAME COMMISSION, *supra* note 274, at 26.

333. See BAKER, *supra* note 47, at 191-93.

334. See KOSACK, *supra* note 4, at 36. Dr. Joseph Kalbfus was the PGC's first executive secretary and first chief game protector. *Id.* at 27. Dr. Kalbfus believed that separate seasons for bucks and does would promote safety by requiring hunters to

realize that practices developed at an early age are habit-forming and difficult to break.³³⁵ The safety issues of a combined season may not be evident today, but could be in subsequent years if a similar open season would continue for a prolonged period.

The PGC has combated these concerns by developing a different approach for the 2002-2003 season. Instead of continuing with the prior year's open season or resorting back to the traditional regulations, the PGC has enacted new, radical antler restrictions. Once again, laws are forcing hunters to distinguish their quarry as either antlered or antlerless. Moreover, for the majority of the counties in Pennsylvania, an antlered deer is redefined as "a deer having three or more points to one antler."³³⁶ Of the 67 counties, 16 have exclusive regulations for the number of points required.³³⁷ Individuals hunting in the designated 10 counties in Western Pennsylvania are required to abide by an even greater restriction of at least four points to one antler.³³⁸ The remaining six counties will go unchanged.³³⁹ By increasing the number of points to be considered an antlered deer, the PGC is instilling the importance of identifying a target before shooting and ensuring a safety that the traditional season had provided. Members of the PGC have recognized the importance of antler restrictive regulations since its creation.³⁴⁰ Dr. Joseph Kalbfus, the PGC's first executive secretary and first chief game protector, believed regulations that restricted what category of deer a hunter could harvest promoted safety by "requiring hunters to identify their quarry before pulling the trigger."³⁴¹

identify their quarry before pulling the trigger. *Id.* at 36.

335. See BAKER, *supra* note 47, at 193.

336. 58 PA. CODE § 139.2 (2002). *But see id.* There is an exception in all counties. *Id.* Junior license holders, disabled person permit (to use a vehicle) holders, and residents serving on active duty in the United States Armed Forces, or in the United States Coast Guard, are permitted to harvest an antlered deer having two or more points to one antler, or with one antler 3 inches or more in length. *Id.*

337. A "point" is defined as "[a]n antler projection of at least [one] inch in length from base to tip, the brow tine and main beam tip shall be counted as points regardless of length." *Id.*

338. See PENNSYLVANIA GAME COMMISSION, *supra* note 274, at 26. Armstrong, Beaver, Butler, Crawford, Erie, Indiana, Lawrence, Mercer, Washington and Westmoreland Counties. *See id.*

339. See 58 PA. CODE § 139.2(ii). In the counties of Allegheny, Bucks, Chester, Delaware, Montgomery, and Philadelphia, [the Special Regulations Areas], an antlered deer will continue to be defined as a deer having two or more points to one antler, or with one antler 3 inches or more in length. *Id.*

340. See KOSACK, *supra* note 4, at 36.

341. *See id.* at 27, 36.

VIII. Conclusion

The PGC's regulations serve a greater purpose than simply protecting wildlife. The regulations protect the environment, farming industries, and the citizens of the state. Without a regulated hunting system, a balance between the ecosystem, wildlife, and humans would not be able to exist. The PGC has always enacted regulations in the best interests of both wildlife and citizens. As in the past, the PGC attempts to cope with negative reactions from its current decisions, and successful results fail to deter some groups from questioning the PGC's regulations, policies, and goals.

The commissioners of the PGC are knowledgeable in the field of wildlife. They have a difficult job of balancing management and safety. Their decisions and regulations are made with the anticipation that hunters will be responsible and assist in the goal of protecting and managing wildlife.

Hunters are an integral part of Pennsylvania's wildlife management programs. Deer management depends on the number and gender of the deer taken by hunters each year. Although the traditional season was changed, the new season has the potential to increase the quality of the whitetail deer and resolve the constant battle with overpopulation.

The 2001-2002 deer season is considered a success because it removed a controlled number of deer from the population without dramatically reducing the size of the herd. The two-week concurrent firearm season neither depleted the herd of its reproducers nor resulted in an excessive number of hunting related incidents. The benefits of having an open season include, among other things, more days for an individual to hunt and a gradual reduction in the state herd. The former satisfies the hunters' desires, and the latter serves the purpose of the PGC's management plan.

The potential for mature deer growth has increased, but this increase is only the start. The PGC has begun the second stage of its revitalization project. The 2002-2003 firearm season is another aspect of the PGC's plan to improve the vitality of the whitetail deer and revive Pennsylvania's ecosystem. The PGC has begun new studies that will lend a hand in determining proper management programs.³⁴² The PGC needs hunters' continued support. Although the PGC is rapidly changing old traditions by enacting new regulations, their goal is not to offend the past but to create new traditions, which promote deer vitality and safety to both society and the ecosystem.

342. See Pennsylvania Game Commission, *supra* note 15. The PGC has placed tracking devices on fawns to determine fawn fatality rates.

