

PATUXENT RESERVOIRS WATERSHED PROTECTION GROUP



Supplemental Documentation
In Support of the Patuxent Reservoirs
Technical Advisory Committee's
2009 Annual Report

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List of Acronyms and Abbreviations

BMP	Best Management Practice
CHL-a	Chlorophyll-a
DNR	Maryland Department of Natural Resources
DEP	Montgomery County Department of Environmental Protection
DO	Dissolved Oxygen
ea	Each
EPA	U.S. Environmental Protection Agency
ft	Feet
FY	Fiscal Year
GIS	Geographic Information System
HC	Howard County
HSCD	Howard Soil Conservation District
IBI	Index of Biological (or Benthic) Integrity
LA	Load Allocation
Lbs/yr	Pounds per year
MACS	Maryland Agricultural Cost Share
MC	Montgomery County
MDA	Maryland Department of Agriculture
MDE	Maryland Department of the Environment
mg/L	Milligrams per Liter
M-NCPPC	Maryland-National Capital Park and Planning Commission
MS4	Municipal Separate Storm Sewer System
MSCD	Montgomery Soil Conservation District
PGC	Prince George's County
PRW	Patuxent Reservoirs Watershed
RG	Rocky Gorge
RMC	Resource Management Concepts
SCD	Soil Conservation District
SEP	Supplemental Environmental Project
SSO	Sanitary Sewer Overflow
TAC	Technical Advisory Committee
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TP	Total Phosphorus
µg/L	Micrograms per Liter
USGS	US Geological Survey
WFP	Water Filtration Plant
WLA	Waste Load Allocation
WSSC	Washington Suburban Sanitary Commission

Introduction

In 2003, the Technical Advisory Committee (TAC) determined that the Annual Report should be more concise and focus on annual accomplishments. So beginning in 2004, a compilation of supplemental documentation (Technical Supplement) has been provided to include more detailed information that supports the accomplishments summarized in the annual report.

This year's Technical Supplement contains more detailed information that further explains the efforts undertaken as discussed in the 2009 Annual Report. For WSSC's Land Acquisition Program, a map is included which shows the location of two parcels purchased in 2009. A historical summary of biological and habitat monitoring results is also provided for tributaries within Howard County. For the riparian forest plantings along Reddy Branch, an update is provided of what has been accomplished since the annual report; furthermore, an aerial photo is also included that shows past and future planting areas. An accounting is also provided of the Patuxent Reservoirs Watershed Agricultural Cost-Share Program in addition to a historical summary of how those funds have been used to install riparian BMPs. Finally, a brief update is provided of a public meeting held in late 2009 regarding Montgomery County's MS4 Permit.

In addition, there are several items not covered in the annual report, briefly discussed here, and included in the appendices of this supplement. These include: Appendix A, which contains a report that evaluates the water quality data collected from the Patuxent Reservoirs; Appendix F, which contains a summary of both public information meetings held to elicit public input for the Interim Watershed Management Report completed by Versar Inc.; and Appendix G, which contains a ten-year summary of WSSC's Deer Management Program.

Appendix G

Annual Report of Deer Management Program of WSSC Owned Lands

ANNUAL REPORT

2009 – 2010



WASHINGTON SUBURBAN SANITARY COMMISSION

**Deer Damage Mitigation Program for the
Triadelphia and Rocky Gorge Reservoirs &
Piscataway Wastewater Treatment Plant**

BACKGROUND

The WSSC Deer Damage Mitigation Program was initiated in 2000 by the Watershed Manager in cooperation with the Maryland Department of Natural Resources (DNR) (**WSSC MANAGED DEER HUNT ANNUAL TOTALS: 2000 – 2010**) in response to severe damage to existing forest resources on the Triadelphia/Rocky Gorge Reservoirs buffer property. Since then several hunt areas have been added in response to complaints from farmers and home owners adjacent to watershed property, as well as other agencies and groups (**WSSC MANAGED DEER HUNT STATISTICS: 2009 - 2010**). Hunts have also been conducted on the grounds of the Piscataway Wastewater Treatment Plant in southern Prince Georges County as a result of a request from the Plant Manager.

Browse damage on most of the WSSC watershed property is severe, with the average adult deer eating up to seven pounds of forage per day (2,555 pounds/year). The elevated deer population has been called, “the biggest threat to agriculture in Montgomery County”. Additionally, there are over 2000 reported deer/auto collisions in Montgomery County annually. Maryland also has one of the highest incident rates of Lyme Disease in the U.S, and Howard County reportedly has the highest rate of all Maryland Counties. Infra-red deer population density studies carried out by the Howard County Department of Recreation and Parks in 2009 indicate that deer densities are generally well above the recommended fifteen per square mile. Twenty-five Program hunts were conducted on WSSC properties in Montgomery, Howard, and Prince Georges Counties during 2009 – 2010.

THE 2009 – 2010 SEASON

TRIADELPHIA AND ROCKY GORGE RESERVOIRS WATERSHED

Since Program inception we have conducted managed shotgun hunts on the WSSC reservoir buffer property in response to the deer problem. By utilizing managed shotgun-only hunts we are able to track the success of our program and control hunting access and safety in an area that is being increasingly urbanized. Several areas on the watershed property are also open to bow hunting during the Maryland bow hunting season. However, this Program is not able to immediately track bow hunt areas due to the fact that those hunts are tracked via the State check-in system only.

All hunt areas have been reviewed by the Maryland Department of Natural Resources (DNR) and WSSC biologists. A total of 24 hunts were conducted beginning in October 2009 and ending in January 2010. There were three locations in Montgomery County, five in Howard County, and one in Prince Georges County. A total of 574 hunter-days were spent afield, with 182 deer killed in Howard County, 134 in Montgomery County, and 24 in Prince Georges County, for a total of 340. In Montgomery County the Triadelphia Lake Road Area accounted for 108 deer, while 18 were killed at Link, and 8 at Dustin Road. In Howard County 95 were killed at Bufort Park, 31 at Pigtail, 28 at Reservoir Overlook, 9 at Big Branch, and 19 at Fox Haven. Twenty-four were killed at the Supplee Lane site in Prince Georges County.

Each hunt area is managed to account for unique factors including: desired harvest, acreage, access, terrain, urban density, and safety considerations. Hunts were managed utilizing rotating selection of qualified public applicants from a list pre-approved by the WSSC Office of Security and Safety Services. All hunters were required to successfully complete a State-certified Hunter Safety Course and obtain a current State Shooter Qualification Card or equivalent. Attempts were made to accommodate groups and family members who wished to hunt together, and hunters with disabilities were accommodated as needed.

Of the 340 deer harvested this season, 176 were does, 75 were button-bucks, and 89 were antlered bucks. A hunter was permitted to take one antlered buck at any time and a second antlered buck after killing two antlerless deer on any WSSC Managed Hunt. There was no bag limit on antlerless deer.

TRIADELPHIA LAKE ROAD AREA

Official data for this Montgomery County area (2000 – 2010) show that 959 deer have been removed to date. Five hunts this season produced 108 deer, compared to 98 taken last season. Although adjacent landowners and watershed staff are reporting fewer deer sightings in this area over the last several years, the number of deer taken continues to be high. Visual observations are supported by recruitment in forested parcels where there is a heavily vegetated shrub layer that was previously extremely sparse.

DUSTIN DRIVE AREA

The Program completed the sixth year of managed deer hunts at this area of Rocky Gorge Reservoir, Montgomery County, in response to the Timber Hill Home Owners' Association and other landowner requests. Eight deer were removed, an increase from the 3 taken last season. The effort put forth this area has not produced a consistent number of deer: one hunt was conducted in order to track the situation. Although residents continue to experience severe damage to landscaping and gardens, the large size of private lots allows deer access to extensive areas of habitat outside the managed WSSC portion of the watershed.

LINK AREA

The Link Area on Rocky Gorge, Montgomery County, was hunted this season for the sixth time, in response to damage complaints from an adjacent farm. Eighteen deer were killed in two hunts, up slightly from 16 in two hunts last year. This number is within the range expected for this season. The deer kill seems to have stabilized, and program management does not intend to drop below two hunt days next season.

BUFORT PARK AREA

The Bufort Park Area, on Rocky Gorge, Howard County, was hunted for the seventh season. Home owners in the area who requested the hunts seven years ago continue to experience deer damage to gardens and shrubbery, and citizen support for the hunts remains high. Ninety-five deer were killed in five hunts this season, a significant increase from 63 last season; five hunts were conducted compared to four held last year. Management efforts continue to be necessary, with 445 deer removed from the area to date.

PIGTAIL AREA

On Triadelphia Reservoir, Howard County, this area has been part of the Program for seven seasons, and frequency of hunts was reduced from four to three. The area is also open to bow hunting during the State season. Thirty-one deer were killed, up from last season due in part to the fact that the area was extended to Brighton Dam Road at the request of owners of adjacent property experiencing extensive browse damage to shrubbery and a high incidence of Lyme Disease. Thus far 174 deer have been removed from the area as a result of the Program hunts.

RESERVOIR OVERLOOK

Five years ago the Reservoir Overlook Home Owners' Association, at Rocky Gorge, Howard County, requested that WSSC conduct hunts to reduce the deer population damaging lawns, gardens, and ornamental plants in the neighborhood. Thus far 172 deer have been removed from this area, which is nearly surrounded by urban development. During the first season 65 deer were taken in 3 hunts, and neighbors immediately reported a reduction in deer damage. The following season 26 deer were killed in the same number of hunts. This season the area was extended to Rocky Gorge Dam (T. Howard Duckett Dam), and 28 deer were taken in two hunts. We expect to conduct two hunts in the area again next season, as it appears that two hunts are adequate to keep the deer population at a socially acceptable level.

FOX HAVEN

The Fox Haven Home Owners' Association at Rocky Gorge, Howard County, requested that WSSC reduce the deer population in their area four years ago. WSSC and DNR biologists surveyed adjoining WSSC property and concluded that a hunt was justified and could be safely conducted. Lot size in the development is large, including abundant deer habitat throughout. Nineteen deer were killed in two hunts this year, an increase over the 9 taken last year in the same number of hunts. Two managed hunts are expected to maintain an acceptable population level, given that the area is also open to bow hunting during the State season.

SUPPLEE LANE

The Supplee Lane area at Rocky Gorge Reservoir, Prince Georges County, is another heavily urbanized area bordered by I-95, the reservoir, Supplee Lane, and Brooklyn

Bridge Road. The hunts were scheduled in response to homeowner complaints regarding the deer damage. Since this area is so close to homes, the dam structure, a recreation area, and roads, special precautions were taken. Hunters were kept as far from homes and recreation areas as possible, escorted to hunt locations after daylight, and required to hunt from elevated stands. Some stand locations were restricted in regards to shooting lanes to eliminate any chance of an accident. The Hunt Manager began to drive deer immediately after hunters were in place. Hunts were also scheduled late in the season after the reservoirs had closed, when it was assumed that cold temperatures would reduce the number of persons utilizing the nearby recreation areas. Finally, WSSC Security Personnel were on site during the three hunts. A cooperative public was appreciated by the Program.

Habitat remains severely impacted, and the deer population appears to be unacceptably high, with twenty-four deer taken in the three hunts this season. Body fat was absent or severely reduced in all deer carcasses checked by the hunt manager, a sign of overpopulation and dietary stress. Indications are that the deer are in less than prime condition.

Even though hunt dates were expanded to three this season, the kill did not increase. The earliest hunt date was the most productive, and future plans are to reduce the number of hunt dates to two, and hold hunts earlier in the season. It appears that the deer are utilizing this habitat very little in the late season since there is virtually no browse to sustain them.

PISCATAWAY WASTEWATER TREATMENT PLANT

Last year a request was received from the manager of the Piscataway Wastewater Treatment Plant (Prince Georges County) to conduct a hunt due to the high amount of deer damage to vegetation on the plant grounds. WSSC and DNR biologists confirmed that there were severe impacts to the vegetation from deer.

One hunt was conducted this season during a snow event, and twelve deer were taken, four more than last year. All carcasses were examined at the end of the hunt, and the deer appeared to be in poor condition, as there was no body fat present. The condition of vegetation and damage to the property will continue to be monitored prior to making a determination regarding the number of future hunts.

OUTLOOK

The 2009-2010 deer damage mitigation efforts were very successful. Our pre-season goal of 250 was exceeded by 90 deer on the Patuxent Watershed hunts. The most significant difference between this year and last was the good mast crop compared to none last year. The deer appeared to stay in forested areas because there was adequate food particularly during the early part of this year's hunting season.

The success rate on WSSC managed hunts was significantly higher this season, with 62% of the man days accounting for a deer killed. Last season's rate was 49%. The data will be analyzed, and a hunt plan customized for next year accordingly. Every attempt will be made to mitigate documented deer damage while allocating limited time and staff resources. All precautions will be taken to insure the continued success of the Program by WSSC in cooperation with the Maryland DNR.

Of the 340 deer harvested on our managed Patuxent Watershed hunts this year 134 were killed in Montgomery County, 182 in Howard County, and 24 in Prince Georges County. The deer kill in Montgomery was up by seventeen, and the Howard County kill increased by a significant 76 deer, while the Prince Georges County kill dropped by two. Environmental factors, mast production, and weather proved favorable and hunter success ran high.

Currently, the Program can document progress in several areas such as: Triadelphia where ground vegetation is making a comeback, and Reservoir Overlook where residents noticed a significant reduction in deer damage. This season efforts were very successful in the Bufort Park Area as well. Other areas like Supplee Lane and Big Branch still have need for more deer reduction. We will also continue to monitor the deer impacts at the Piscataway Wastewater Treatment Plant.

It is important to note that the Deer Management Plan, the cooperation of DNR and WSSC Safety and Security Services staff, and qualified hunters from the public sector were key to the continuing success of the Program. Local residents have also been cooperative and supportive of efforts to reduce deer numbers to a more environmentally/socially compatible level.

Work with stakeholders to adjust mitigation efforts for maximum success in 2010-2011 will continue.

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