

# FOREST STEWARDSHIP PLAN

For

Town of Washington Grove  
C/O Joli McCathran  
PO Box 216  
Washington Grove, MD 20880



Maryland  
Department of  
Natural Resources

## Location

The property is located on the Eastern and Western side of the Town of Washington Grove.

ADC Map: Page 19, Grid H8-9, J8-9, K9

Maryland Grid (ft): 475,000 – 750,000

Latitude-Longitude: 39.140912, -77.172139 & 39.143874, -77.178147

Washington Metro Watershed  
Seneca Creek Sub watershed #02140208  
Rock Creek Sub watershed #02140206

In

Montgomery County

On

88 Forest Acres

## Prepared by

Daniel J. Lewis, Forester  
James C. Eierdam, Forester  
Howard / Montgomery Project

July 2, 2013



**Landowner's Objectives:** The Town of Washington Grove would like to manage their woodland primarily for soil and water conservation, natural heritage and recreation. They are also interested in aesthetics, wildflower and wildlife observation, privacy, protection of rare and endangered flora and fauna, protection of natural community, recreational trails, and cultural history.

**Primary:** Soil and Water Conservation

**Secondary:** Natural Heritage, Recreation and Aesthetics

**Overview:** The property has two woodland tracts, one is located off the west side of Washington Grove Road called the West Woods (Maple Lake) and the other tract is located off the east side off of Grove Road called the East Woods (Woodward Park). The West Woods contain a total of 47 acres and the East Woods contain a total of 41 acres of forested land. The property has an unnamed tributary that run along the western boundary and a couple intermittent streams in the western portion of the property. This property West woods are within the Seneca Creek Sub watershed (#02140208) and the East Woods are within the Rock Creek Sub watershed (#02140206) both of which are a apt of the Washington Metro Watershed.

*A survey of your property for rare, threatened and endangered species has been completed. According to the Natural Heritage Program database, there are no such species on your property.*

### **Soils found on the property**

Six soils types occur on the property of the Glenelg-Gaila-Occoquan association. This association has nearly level to strongly sloping, well drained, very deep to deep soils that are loamy throughout. This unit is found in the central part of the county.

#### **Gaila Series**

This soil is very deep and well drained. It is on broad ridge tops and side slopes in the uplands. Slopes generally are smooth, ranging from 3-15 percent; but a few are dissected by small drainage ways. The potential for tree productivity is moderate. Trees common to this soil are red oak, yellow poplar, Virginia pine, and shortleaf pine. Due to the texture and associated slopes to this soil are erosion and compaction.

*1B-Gaila silt loam, 3 to 8 percent slopes*

*1C-Gaila silt loam, 8 to 15 percent slopes*

#### **Glenelg Series**

This soil is very deep and well drained. It is on broad ridge tops and side slopes in the uplands. Slopes are generally smooth, ranging from 0-15 percent, but a few are dissected by small drainage ways. The potential for tree productivity is moderately high. Trees common to this soil are black oak, yellow poplar, Virginia pine, and shortleaf pine. Erosion hazard for this soil is slight. *2B-Glenelg silt loam, 3 to 8 percent slopes*



### **Glenville Series**

This soil is very deep and moderately to poorly well drained. It is found in low areas on uplands and along drainage ways. Slopes are generally smooth ranging from 0 to 8 percent. The potential tree productivity is moderately high, but a high water table may result in high seedling mortality and windthrow. Trees common to this soil are red oak, white ash, and yellow poplar.

For this soil erosion risk is slight and compaction risk is moderate.

*5A-Glenville silt loam, 0 to 3 percent slopes*

### **Neshaminy Series**

This soil is deep and well drained, and is found on broad ridgetops and side slopes in the uplands. Slopes are generally smooth, ranging from 3 to 15 percent. The potential tree productivity is moderately high. Trees common to this soil are red oak and yellow poplar. Erosion and compaction risks are slight except for wet periods when the risk of compaction increases.

*27B-Neshaminy silt loam, 3 to 8 percent slopes*

### **Watchung Series**

This soil is very deep and poorly drained, and is found on the flats and depressions on uplands. Slopes are generally smooth, ranging from 0 to 3 percent, with a few dissected by small drainage ways. The potential tree productivity is moderately high, but the slow permeability of the soil may cause seedling mortality and restricted equipment use. Trees common to this soil are black oak and pin oak. Erosion risk on this soil is slight while compaction risk is high especially during wet periods.

*28A-Watchung silty clay loam, 0 to 3 percent slopes*

### **Chrome series**

This soil is moderately deep and well drained, and found on broad ridgetops. Slopes are generally smooth, ranging from 3 to 15 percent, with a few dissected by small drainage ways. The potential tree productivity is moderate. Trees common to this soil are red oak and Virginia pine. Erosion and compaction risks are slight except for wet periods when the compaction risk is increased.

*35B-Chrome and Conowingo soils, 3 to 8 percent slopes*

### **Wheaton Series**

This soil is very deep, well drained and found in areas that have been graded, cut, and filled for recreational uses. Slopes range from 0 to 15 percent. Potential tree productivity is moderately high. Trees common to this soil are red oak, white oak, and yellow poplar. The risk of erosion and compaction is slight, except for wet periods, which increases the compaction risk.

*66UC-Wheaton-Urband land complex, 8 to 15 percent slopes*

Mrs. Joli McCathran can be contacted at her residence at (301) 869-5358.

**Management Unit:** 1-East Woods

**Acres:** 41

**Dominant Overstory Species:** White Oak

**Dominant Understory Species:** Greenbrier

**Development Stage:** Immature Sawtimber

**Age:** Uneven

**Stocking:** Adequate (Fully stocked at 74 %)

**Basal Area:** 98.75 sq. ft. /acre

**Site Growth Potential:** average to good

**Soil Types:** 35B-Chrome and Conowingo soils, 3 to 8 percent slopes; 28A-Watchung silty clay loam, 0 to 3 percent slopes; 27B-Neshaminy silt loam, 3 to 8 percent slopes

**Percent Desirable Trees:** 84%

**Recommendations / Practices:**

Management Unit #1 is an uneven-aged immature sawtimber with a few mature trees scattered throughout. The management unit consists mainly of white oak. Other overstory species include black oak, scarlet oak, red oak, black gum, red maple, hickory, black cherry, yellow poplar, elm and Virginia pine. The understory is dominated by greenbrier. Other species include poison ivy, wisteria, Japanese honeysuckle, Japanese stiltgrass, blueberry, wineberry, jack in the pulpit, holly, spicebush, viburnum, sedges, multiflora rose, oriental bittersweet, garlic mustard, deer tongue, mile a minute, Virginia creeper, privet, English ivy, black gum, oak seedlings and saplings, hickory seedlings, cherry, paw paw, mulberry, fringe tree and various types of grasses.

In general, the stocking in this unit is adequate. Adequate stocking means that in general the trees are growing at the optimum rate for growing timber. The percentage of desirable trees for growing as timber is seventy-six percent.

This woodland will provide habitat for white-tailed deer, wild turkey, squirrel, fox, and forest interior dwelling birds. Several species of trees on this woodland produce berries, nuts and mast which are essential for wildlife habitat. Some den trees exist, and there is an abundance of down woody debris and standing dead snags for wildlife habitat. To maintain the wildlife habitat, it is recommended to maintain as many non-hazardous dead snags as possible and down woody debris should be left to accumulate on the forest floor.



Forested areas along streams, rivers, wetlands and other water bodies are classified as riparian forest. Riparian forests should be maintained, established or enhanced to protect and improve water quality. Riparian forest can filter out, absorb and utilize most of the sediment, nitrogen and phosphorus transported in runoff from woods roads trails and adjacent fields.

This unit has a nice hiking trail/walking path through the woods. Forest roads and trails should be laid-out along natural contours to minimize slope. On slopes where there is or possibly be a hazard of erosion, water diversion devices, including waterbars, culverts and drainage dips should be installed and maintained. Water properly diverted onto the forest floor will be absorbed and filtered before it reaches adjacent streams. Frequently, grass seed or wood chips are used to stabilize exposed soil to reduce surface erosion. Access can be maintained by annually removing any down logs or brush, which may block passage along forest roads and trails.

The understory of this unit is being severely impacted by deer browse but also because of the abundance of greenbrier and several invasive plant species that were found throughout the property. The invasive species are multiflora rose, Japanese honeysuckle, mile-a-minute, Japanese stiltgrass, garlic mustard, oriental bittersweet and wisteria. The threat of these species is their ability to outcompete or choke out native vegetation reducing biodiversity. Elimination of these species is preferred if possible. Each species may favor different growing conditions and require different methods for control and removal. Please see invasive species inserts for more information.

**Management Unit:** 2- West Woods

**Acres:** 47

**Dominant Overstory Species:** Yellow Poplar

**Dominant Understory Species:** Spicebush

**Development Stage:** Mature and Immature Sawtimber

**Age:** Uneven

**Stocking:** Adequate (Fully stocked at 75 %)

**Basal Area:** 105 sq. ft. /acre

**Site Growth Potential:** Good

**Soil Types:** 1B-Gaila silt loam, 3 to 8 percent slopes; 1C-Gaila silt loam, 8 to 15 percent slopes  
2B-Glenelg silt loam, 3 to 8 percent slopes; 5A-Glenville silt loam, 0 to 3 percent slopes; 27B-Neshaminy silt loam, 3 to 8 percent slopes; 66UC-Wheaton-Urband land complex, 8 to 15

percent slopes

**Percent Desirable Trees: 84%**

### **Recommendations / Practices:**

Management Unit #2 is an uneven-aged mature and immature saw timber stand. The management unit consists mainly of yellow poplar. Other overstory species include white oak, black oak, scarlet oak, red oak, black gum, red maple, hickory, black cherry, elm, ash, birch and paulownia. The understory is dominated by spicebush. Other species include poison ivy, wisteria, Japanese honeysuckle, Japanese stiltgrass, skunk cabbage, violet, partridge berry, blueberry, wineberry, jack in the pulpit, holly, viburnum, sedges, multiflora rose, garlic mustard, deer tongue, mile a minute, Virginia creeper, privet, English ivy, ground ivy, wild strawberry, hay-scented fern, sensitive fern, Christmas fern, black gum, oak seedlings and saplings, hickory seedlings, cherry, paw paw, mulberry, fringe tree and various types of grasses.

This unit has a nice hiking trail/walking path through the woods. Forest roads and trails should be laid-out along natural contours to minimize slope. Frequently, grass seed or wood chips are used to stabilize exposed soil to reduce surface erosion. Access can be maintained by annually removing any down logs or brush, which may block passage along forest roads and trails. Installing bird boxes near trails and streams can create a wildlife niche, as well as add to the aesthetics for hikers.

To address the landowners' interest pertaining to the protection of the stream, it is recommended to maintain all roads and trails on the property to prevent erosion. Sediment from road runoff would be detrimental to the stream. It is also recommended to maintain a forested condition adjacent to the stream where possible. These streamside forests, or riparian forests, are essential for the water quality of the stream and the stability of the streambanks. Riparian forests provide significant benefits to water quality. These forests utilize nutrient pollution and trap sediment found in surface runoff. They provide critical habitat for aquatic birds and mammals, and they provide shelter for watering animals. Riparian forests provide shade and reduce the water temperature of the creek, which makes the water more inhabitable for cold water dependent species including trout.

The understory of this unit is being impacted by several invasive plant species that were found throughout. The invasive species are multiflora rose, Japanese honeysuckle, Japanese stiltgrass, English ivy, garlic mustard, and wisteria. The threat of these species is their ability to outcompete or choke out native vegetation reducing biodiversity. Elimination of these species is preferred if possible. Each species may favor different growing conditions and require different methods for control and removal. Please see invasive species inserts for more information.



**To meet your objectives of Soil and Water Conservation and Natural Heritage, Recreation and Aesthetics, implement the following practices:**

**Let this unit grow.** Maintain this area for wildlife habitat and watershed protection. On average, the trees in this unit are at a good spacing to grow at the optimum rate. Therefore, allow this management unit to grow for 15 years and have your forester reevaluate it at that time.

**Property boundary lines.** To help keep trespassers off the property, boundary lines should be well marked and maintained. Landowners can post their property as "No trespassing" by using signs or by marking boundary trees or posts with bright blue oil-based paint. Posting your property has the effect of making it illegal for anyone to enter your property without your permission. See Property-wide Recommendations for more information.

**Nest Boxes.** To enhance the cavity nesting wildlife habitat on your property, install nest boxes for bluebirds, wood ducks, Carolina wrens and Carolina chickadees and other birds and mammals. Please note that all boxes require some annual maintenance, and only those that can be maintained properly should be installed. **Information and instructions can be found on the Maryland DNR Website:** <http://www.dnr.state.md.us/wildlife/Habitat/WildAcres/>

**Riparian Forest.** Forested areas along streams, rivers, wetlands and other water bodies are classified as riparian forest. Riparian forests should be maintained, established or enhanced to protect and improve water quality. Riparian forest can filter out, absorb and utilize most of the sediment, nitrogen and phosphorus transported in runoff from woods roads trails and adjacent fields. See Property-wide Recommendations for more information.

**Trail maintenance and stabilization.** Stabilize and maintain roads and/or trails to prevent soil erosion and stream sedimentation, and to access nest boxes, and to use for recreation (See Property-wide recommendations and the insert for more details).

**Invasive Plants** - The property contains many invasive plants that can cause problems with tree growth and detract from the aesthetics of the tract. Invasive plants thrive on sunlight reaching the forest floor. Because of the early successional stage a significant amount of sunlight is reaching the forest floor. As more shade producing species fill the forest canopy and the canopy closes, problems with invasive plants will diminish. Controlling or eradicating invasive plants can be a time consuming and expensive process. Because of the large size of this property it may be more practical to concentrate your efforts on certain areas such as along trails, areas to be planted with tree seedlings and high-visibility areas. Methods of control can include cutting, burning, herbicide treatments, weed wrenching or most likely a combination of all four. Because purchase and application of most herbicides requires a pesticide applicator's license and the large size of this property, you may wish to consult with a licensed pesticide applicator to determine the most effective control methods.

## MANAGEMENT PRACTICE SCHEDULE

<u>Completion Date</u>	<u>Practice</u>	<u>Management Unit</u>	<u>Acres</u>
7/2013-7/2028	Mark and maintain property boundary lines.	All	213
7/2013-7/2028	Stabilize and maintain all roads and trails.	1, 2	88
7/2013-7/2028	Keep areas along creeks and wetlands protected with vegetation.	1, 2	88
7/2013-7/2028	Maintain snags and down woody debris, create new snags as needed	1, 2	88
7/2013-7/2028	Protect woodland from wildfire, insects and disease.	1, 2	88
7/2013-7/2028	Removal of invasive species	1, 2	88
7/2013-7/2028	Control Greenbrier	1	41
7/2018	Build, Install and Maintain four bird boxes	1, 2	88
7/2028	Have Forester Re-examine woodland and prepare a new Forest Stewardship plan.	1, 2	88

To provide you further assistance and advice in carrying out the recommended practices, please contact **Daniel J. Lewis**, Watershed Forester, Maryland Department of Natural Resources, Forest Service, 17400 Annapolis Rock Road, Woodbine, MD 21797, telephone: (301) 854-6060.