

Conserving Significant Cultural Landscapes

Protecting the Piscataway and Accokeek Historic Communities and the Mount Vernon Viewshed



The Maryland-National Capital Park and Planning Commission
Prince George's County Planning Department
Community Planning Division

March 12, 2013

Contents

Introduction	1
Background	5
Mount Vernon Viewshed Area of Primary Concern	5
Viewshed Analyses	6
Plan Policy Recommendations	9
Past Development—Preservation Conflicts in the Area of Primary Concern	10
Piscataway National Park and the Moyaone Reserve	11
Area of Primary Concern Lands Remaining to be Conserved	15
Land Analysis and Findings	15
Protection Techniques Considered in this Study	20
Option 1: No Action (i.e., retain the current review process)	21
Option 2: Legislative Amendments to the Zoning Ordinance and Subdivision Regulations	22
Option 3: Viewshed Overlay Zone	23
Option 4: Umbrella Overlay Zone (Two-Step Process: Adoption and Application)	24
Recommendation	24
Recommended Actions and Strategies	25
Conclusion	31
APPENDIX 1	34
APPENDIX 2	36
Area of Primary Concern Maps	36

Figures

Figure 1. Cross section of the Area of Primary Concern looking from Mount Vernon east toward Accokeek Road. The colors represent a bare ground (green) height of a 36-foot residential development (blue), and tree canopy (red).5

Maps

Map 1. Areas where 25-foot high buildings (approximately 1 story) or structures are in the unobstructed line of sight from Mount Vernon12

Map 2. Areas where 36-foot high buildings (approximately 2 stories) or structures are in the unobstructed line of site from Mount Vernon13

Map 3. Areas where 84-foot high buildings (approximately 6-7 stories) or structures are

in the unobstructed line of sight from Mount Vernon14

Map 4. Area of Primary Concern Developed Properties outside of Protected Lands.....36

Map 5. Area of Primary Concern Unimproved Properties (i.e., development value under \$15,000) outside of Protected Lands.....37

Map 6. Area of Primary Concern Tree Canopy outside of Protected Lands38

Map 7. Steep and Severe Slopes in the Area of Primary Concern outside of Protected Lands.....39

Map 8. Elevation Ranges within the Area of Primary Concern.....40

Map 9. Area of Primary Concern Peak Elevations (high points) Visible from Mount Vernon41

Map 10. Total tree cover, Area of Primary Concern42

Map 11. Tree cover screening existing or capable of screening new single-family development (25-foot building height) in the Area of Primary Concern43

Map 12. Tree cover screening existing or capable of screening new townhouse development (36-foot building height) in the Area of Primary Concern44

Map 13. Tree cover screening existing or capable of screening new high-rise residential or commercial development (84-foot building height) in the Area of Primary Concern45

Photos

Photo 1. Piscataway Creek at its confluence with the Potomac River.1

Tables

Photo 2: Accokeek Foundation’s National Colonial Farm2

Photo 3. Planned community development off Piscataway Road in the Mount Vernon Viewshed Area of Primary Concern. The white line depicts the line of sight from Mount Vernon.4

Photo 4. The same development as seen from Mount Vernon.....4

Photo 5. Single-family detached home in the Area of Primary Concern illustrating the importance of screening by natural tree cover.8

Photo 6. Typical clearing for new residential development.26

Photo 7. Potomac River shoreline showing replica of Captain John Smith’s ship.30

Table 1. Type of Development and Acres of Primary Concern Land with Potential Visibility from Mount Vernon.....8

Table 2. Acres of Area of Primary Concern Land outside of Protected Areas, by Development Tier..... 16

Table 3. Undeveloped Properties in the Area of Primary Concern outside of Protected Areas by Zoning and Development Policy Area 17

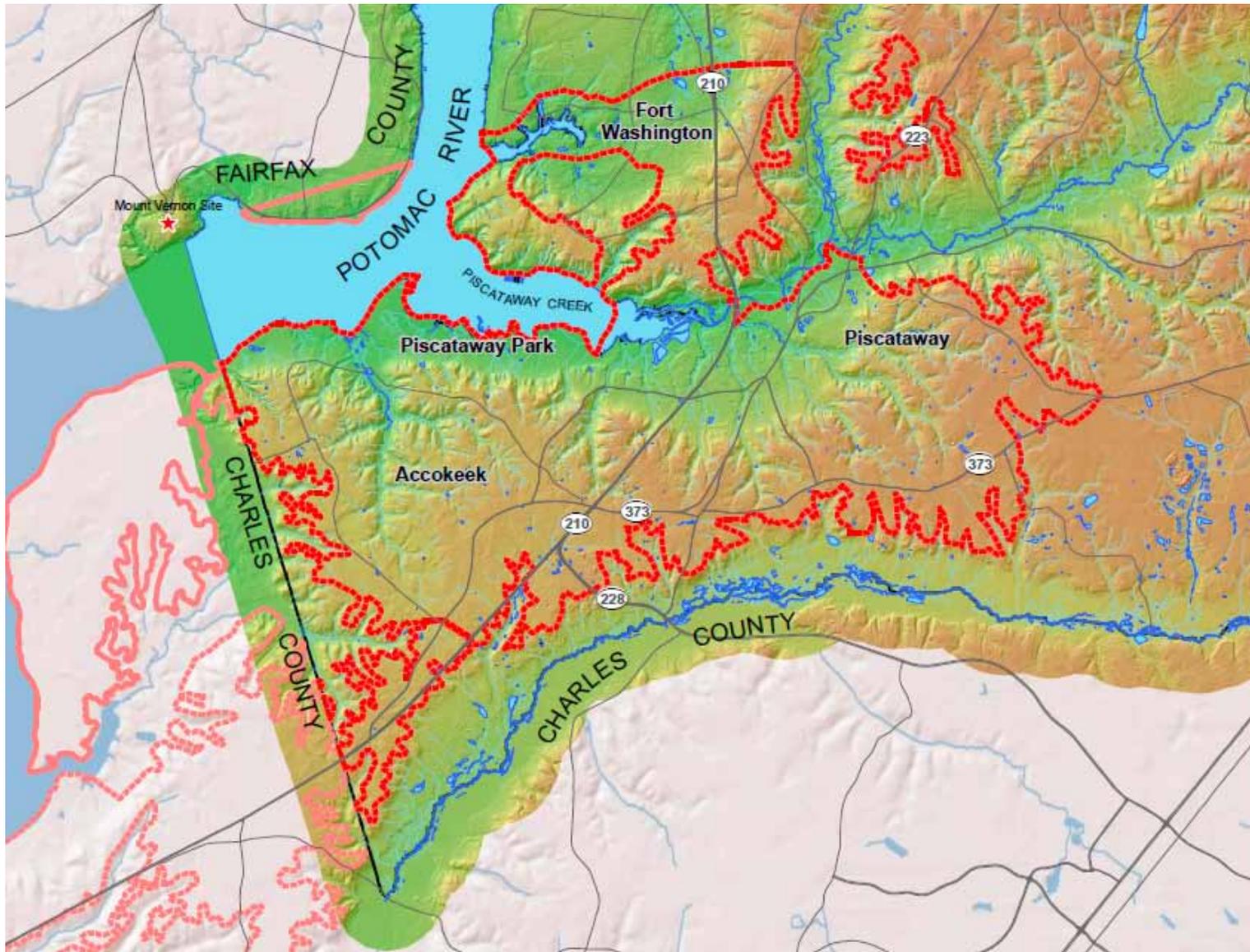
Table 4. Undeveloped Properties in the Area of Primary Concern outside of Protected Areas by Zoning and Elevation.... 18

Table 5. Acres of Woodland and Tree Cover within the Area of Primary Concern 19

Table 6. Acres of Tree Cover within the Area of Primary Concern Screening or Capable of Screening Development.....20

Table 7. Acres of Steep and Severe Slope outside of Protected Areas in the Area of Primary Concern27

The Mount Vernon Viewshed Area of Primary Concern in Prince George's County



Introduction

This study provides recommendations for conserving the cultural landscape of the rural communities of Piscataway and Accokeek, which are a portion of a significant viewshed across the Potomac River from the porch of Mount Vernon. Mount Vernon, located in Fairfax County, Virginia, is the historic home and Potomac riverfront plantation of George Washington, the nation's first president. It is one of the most important historic sites in the nation, receiving more than a million visitors each year, and the view across the Potomac River into southern Maryland is a key element of any visit to the site. The sweeping panorama or viewshed, also called the Mount Vernon Viewshed Area of Primary Concern, covers portions of Prince George's and Charles Counties, making them important components of the environmental setting of a national historic landmark and a candidate for World Heritage site designation. As seen from Mount Vernon, the Piscataway-Accokeek area has remained largely unchanged since the 18th century while locally under an extensive tree canopy. The area has moved into the 21st century as a rural enclave in Prince George's County, but development now threatens its cultural and historic integrity. The recommendations of this study focus on facilitating appropriate land development in two rural and historic communities in order to maintain and conserve the tree canopy coverage within the Mount Vernon Viewshed Area of Primary Concern, which would retain the local character and livability of these communities while preserving the historic, cultural landscape view.

The Piscataway-Accokeek area has unique history as all places do but is particularly unusual given its proximity to the nation's capital and its relationship to the District of Columbia. This area was once part of the territory of the Piscataway Native American tribe, one of the most populous and powerful in the Chesapeake Bay region. The tribe lived in fortified villages, including those found along the banks of Piscataway Creek where it flows into the Potomac River. The first European settlers arrived in that region in 1634, and the European population began to spread inland once they had established relations with their Native American hosts. Within 30 years, the settlers



Photo 1. Piscataway Creek at its confluence with the Potomac River.

had established farms and plantations along the Potomac and its tributaries in present day Prince George’s and Charles Counties and east past the Patuxent River into the area that is now Calvert County.

Piscataway Village developed in the latter half of the 17th century as a small trading center at the confluence of Tinkers Creek and Mattawoman Creek. By 1707 it was a thriving port town and social center with several popular taverns and performances by companies of traveling comedians and musicians. It became one of the area’s most important tobacco inspection stations with storehouses of prominent Glasgow trading firms. Piscataway remained a commercial center until the 19th century but was never more than a small village even at the height of its commercial activity.

Accokeek also developed, in the late seventeenth century, as a settlement for the English farmers and planters. According to preservationists, the land between Accokeek and Fort Washington was a vibrant landscape of Native American villages and colonial settlements frequented by George Washington (Daniel J. Gross, *The Gazette*, May 24, 2012). Its location, isolated from major transportation routes, preserved its rural character and historic viewshed into the 21st century.

Today, the Piscataway-Accokeek area remains largely rural in character and includes prominent ridges and knolls with unfragmented blocks of mature forest, farmland, and other open space. As transportation accessibility has continued, the area has experienced increasing pressure from development due to its proximity to Washington, D.C. The large areas of environmentally sensitive natural areas and the associated ecosystems offer a quality of place that is irreplaceable and highly valued. The June 2010 *Approved Historic Sites and Districts Plan*, defines this area of the county as a cultural landscape:

“... a geographic area that includes cultural and natural resources associated with a historic event, activity, person, or group of people.” (Page 63)

Numerous archaeological sites and artifacts have been identified in the Fort Washington, Piscataway, and Accokeek areas and along the Potomac River that point to the area’s rich history and the molding of Native American, European, and African (slave) cultures. Significant reminders of this



Photo 2: Accokeek Foundation’s National Colonial Farm

historic past include the Accokeek Foundation's National Colonial Farm, Alice Ferguson Foundation's Hard Bargain Farm Environmental Center, the Piscataway Historic District, the Fort Washington National Historic Site, the Moyaone Reserve, and Piscataway National Park. Piscataway National Park is unique in the national park system because of the partnership between the federal government and private property owners whose properties are subject to permanent protective scenic easements that comprise more than two-thirds of the total area of the park boundary.

There have been local planning efforts over the years to protect this important area after the establishment of the national park. The 1993 *Approved Master Plan and Sectional Map Amendment for Subregion 5, Planning Areas 81A, 81B, 83, 84, 85A, and 85B*; the 2006 *Approved Master Plan and Sectional Map Amendment for the Henson Creek-South Potomac Planning Area*; the 2009 *Preliminary Subregion 5 Master Plan and Proposed Sectional Map Amendment*; and the 2010 *Approved Historic Sites and Districts Plan* all included land use policies to retain, conserve, and enhance rural character during the development process. To date, nearly all of the development features that have been approved lie below the tree canopy; as a result, few impair the view into Maryland from Mount Vernon. This is significant given the pace of regional development spanning the past 300 years. Conservation efforts, however, have been piecemeal and largely reactive to specific high-profile threats. Various actions by the Mount Vernon Ladies' Association, the National Park Service, and others have preserved approximately half of this rural landscape mainly by means of fee simple acquisitions. The remaining lands are in private ownership and open to development that could have substantial visual impact on a significant cultural landscape if not reviewed and evaluated.

Several alternative options were considered in this study before recommending regulatory and non-regulatory strategies to protect the scenic resources within the Piscataway and Accokeek areas. These strategies include:

- Incorporating viewshed and rural conservation considerations into the land development process.
- Recommending additional measures to conserve forests, farmland, and scenic road corridors, including screening conditions on development review approvals.
- Identifying performance characteristics of the most appropriate size, type, and design of new development.
- Recommending measures to mitigate the impacts of site development that affect the views within the Mount Vernon Viewshed Area of Primary Concern.
- Developing additional guidelines, while promoting intergovernmental coordination, for locating telecommunication towers, utilities, and signs within the Mount Vernon Viewshed Area of Primary Concern.

These options to protect and enhance the existing character of the Piscataway-Accocheek area will also preserve the historic Mount Vernon Viewshed Area of Primary Concern while guiding future development in the area.



Photo 3. Planned community development off Piscataway Road in the Mount Vernon Viewshed Area of Primary Concern. The white line depicts the line of sight from Mount Vernon.



Photo 4. The same development as seen from Mount Vernon.

There are few extreme gradient changes in the Area of Primary Concern, which leaves tree cover as the most important means of screening development from view (EDAW, 1991). This issue is clearly illustrated by the location of the Preserve of Piscataway (photos 3 and 4 above), off Piscataway Road, which shows how present day residential development requiring large amounts of clearing can become highly visible.

Background

Mount Vernon Viewshed Area of Primary Concern

This study of the Mount Vernon Viewshed identifies the Area of Primary Concern for conservation purposes. The total area covers about 28,000 acres of land in Prince George's and Charles Counties as well as parts of the Potomac River shoreline in Fairfax County, Virginia (see The Mount Vernon Viewshed Area of Primary Concern in Prince George's County on page iv). The Prince George's County portion of the Area of Primary Concern consists of approximately 15,000 acres (53 percent of the total area) mainly within the vicinity of Accokeek, Piscataway, and Fort Washington. The landscape in this portion of the Area of Primary Concern is generally flat to undulating along the Potomac River shoreline, rising sharply to the north and more gradually to a series of forested ridges and knolls in the south and east (see the viewshed profile, Figure 1, below). Elevation above sea level ranges from about 10 feet near the river to 220 feet along Livingston Road in the southern portion. Other high points are east of Old Marshall Hall Road (150 to 170 feet), north of Piscataway Creek (up to 180 feet), in the vicinity of the Farmington Road/Berry Road/Bealle Hill Road areas (170 to 210 feet), and west of Danville Road south of Accokeek Road (210 to 240 feet).

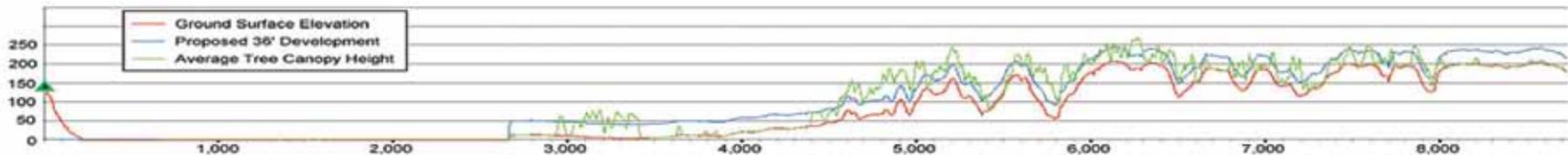


Figure 1. Cross section of the Area of Primary Concern looking from Mount Vernon east toward Accokeek Road. The colors represent bare ground (red) height of a 36-foot residential development (blue) and tree canopy (green).

For more than two centuries, rural and agricultural uses predominated before the construction in 1949 of the Woodrow Wilson Bridge over the Anacostia River, linking it to Washington, D.C. Some of these land uses remain today as scattered farms and nurseries, covering nearly 1,500 acres, but development has altered the former character of this area and threatens further alterations. Land uses in the area today are primarily residential and agricultural with shopping centers and pockets of commercial uses along Indian Head Highway as well as several mining and quarrying operations.

The confluence of the Potomac River and Piscataway Creek, which defines this area of the county, continues to be a focal point of the cultural landscape: wide, peaceful, and inviting to fishermen and sightseers. Other visible landscape features include hills and stream valleys, about 1,500

acres of parkland, mature forests, and woodland dominated by red oak, white oak, American beech, and tulip-poplar, sometimes occurring in large, unfragmented blocks for just over 9,000 acres of the area.

The 2010 Historic Sites and Districts Plan recognizes the value of such places and the importance of their preservation:

“When people learn to ‘read’ the landscapes that are a part of their surroundings, they begin to understand how changes affect these special places and learn to become better stewards of our significant cultural landscape heritage.” (Pg. 63)

Actions proposed for protecting the rural character will also protect the historic view from Mount Vernon.

The following sections present a summary of efforts to gather data about the area, the historical plan policies affecting this area of the county, an overview of efforts to preserve the Area of Primary Concern, and an analysis of the current threats that the area faces.

Viewshed Analyses

Studies have undertaken analyses to identify locations where development could impair the Area of Primary Concern. These studies included:

- A Trust for Public Land (TPL) initiative to do a preliminary study of the extent of the viewshed. The study, completed in 1988, delineated the viewshed as covering parts of Charles and Prince George’s Counties in southern Maryland and a portion of the Fairfax County, Virginia, shoreline. The study used topographic information and planning data available at the time but did not consider the screening effect of existing tree cover. TPL recommended further studies that utilize emerging computer modeling technology.
- A second, more detailed analysis was done by the consulting firm, EDAW, Inc., on behalf of the Mount Vernon Ladies’ Association in late 1989 through 1991 to qualify the effects of a range of development scenarios on the quality of the view from Mount Vernon. Unlike the previous study, the 1991 study considered the effect of screening by existing tree cover. It combined computerized modeling with geographic information system (GIS) technology to produce a detailed model of the viewshed, mapping portions where certain height thresholds would be visible from Mount Vernon. Heights of 12, 36, 84, and 120 feet were used to simulate building heights of 1, 2, 7, and 10 stories, respectively.

This study shows that the foreground of the delineated boundary of the Area of Primary Concern was largely protected by previous fee simple, easement, or parkland acquisitions. It illustrates the importance of maintaining existing tree canopy to screen development from

view and shows that tree canopy coverage would effectively screen structures less than 80- to 90-feet high at most properties except along portions of significant ridgelines where buildings would be visible. Significantly, the study concluded that the prominent nature of the ridgelines could even make structures as low as single-family residences visible in many areas of the viewshed if screening tree cover were removed.

- In 1995 TPL contracted with a consulting firm, Land Ethics, Inc., to research and prepare development guidelines for the Area of Primary Concern. The guidelines present general strategies to influence the design and construction of new development so as to protect the view from Mount Vernon.
- In 2007 the Mount Vernon Ladies' Association contracted with a private consultant with expertise in viewshed analysis (Michael Clarke) to update the 1991 EDAW analysis. Mr. Clarke was able to use newer GIS and visual simulation technology to predict and refine the impacts of a range of development scenarios on the Area of Primary Concern. The accuracy of the original viewshed delineation in 1991 is remarkable given the tools that were available then.
- The most recent viewshed analysis was completed by Planning Department staff in 2011. This computer-based study incorporated many of the best practices of the previous studies. Staff used the EDAW parameters (topography, tree cover, and their relationship to building location and design) to update the 2007 study. Heights of 25, 36, and 84 feet were used to simulate new single-family detached homes, townhouses, and high-rise offices or residential developments, respectively. Based on the 2011 analysis, there are new data, including revised maps, on parts of the Area of Primary Concern where single-family detached homes, townhouses, or high-rise offices and residential buildings would become visible with and without tree cover. Table 1 (on page 8) and Maps 1, 2, and 3 (on pages 12, 13, and 14, respectively) show portions of the Area of Primary Concern that are in the unobstructed line of sight from Mount Vernon and, therefore, more vulnerable in each of the different development scenarios modeled for the 2011 study. For example there are 358 acres on which 36-foot-high buildings (approximately 2 stories) or structures would be visible within the Area of Primary Concern when factoring in tree cover, because the buildings would be in the unobstructed line of sight (Table 1 on page 8, Map 2 on page 13). Similarly, the "vulnerable" area is 202 acres for 25-foot-high buildings (approximately 1 story) or structures and 4,040 acres for 84-foot-high buildings (approximately 6–7 stories) or structures (see Table 1 on page 8 and Maps 1 and 3 on pages 12 and 14, respectively).

The 2011 Planning Department study has reaffirmed that retaining existing tree and woodland cover and replanting through afforestation/ reforestation, where necessary, is the most effective primary strategy to screen new development from view. The siting of a building, the

height of the building, and the materials of the structure are the most critical secondary determinants of protecting the Area of Primary Concern (see Table 1 below and Maps 1, 2, and 3 on pages 12, 13, and 14, respectively). Subdivision layout and street alignments are also important.

A very important output of the 2011 analysis is a computer model that allows parcel-level investigations in high priority areas. This will be instrumental in informing land planning decisions and implementing viewshed protection efforts.



Photo 5. Single-family detached home in the Area of Primary Concern illustrating the importance of screening by natural tree cover.

Table 1. Type of Development and Acres of Primary Concern Land with Potential Visibility from Mount Vernon				
	Visible Acres	% Area of Primary Concern Visible	Screened Acres	% Area of Primary Concern Screened
25' Development with trees	201.50	1.37	14558.48	98.63
25' Development without trees	9641.49	65.32	5118.50	34.68
36' Development with trees	357.75	2.42	14402.23	97.58
36' Development without trees	11272.15	76.37	3487.84	23.63
84' Development with trees	4039.44	27.37	10720.54	72.63
84' Development without trees	14172.65	96.02	587.34	3.98

Plan Policy Recommendations

Numerous county plans over the last 20 years have recognized the importance of preserving the rural character of this area of the county. The 1993 Subregion 5 Master Plan recommended that historic resources and landscapes within the Subregion 5 master plan area should be recognized and protected. It proposed the development of techniques, such as conservation easements, historic preservation overlay zoning, performance zoning, transfer of development rights, land trusts, and expansion of the conservation subdivision concept to low-density zoning categories, to effectively protect specific historic landscapes such as the Area of Primary Concern. It recommended further that:

“In addition the ‘Areas of Critical Vegetation’ identified in the ‘Mount Vernon Viewshed Analysis’ should be considered in the review of Tree Conservation Plans during administration of the County’s Woodland Conservation Ordinance.” (Page 178)

The 2006 Henson Creek-South Potomac Master Plan, which includes a portion of the Area of Primary Concern, recommends that new development should retain and enhance rural character. It specifies that lands preserved during the development review process should preserve agriculture, minimize ecological impacts, retain scenic vistas, minimize impervious surfaces, and reduce forest fragmentation. Significantly, it recommends the creation and implementation of rural design standards, ensuring that new development is consistent with the prevailing character of the rural area.

Similarly, the 2009 Preliminary Subregion 5 Master Plan recognizes the importance of preserving rural character and resources within this area. This master plan characterizes Accokeek as having a “quiet slow-paced rural lifestyle” and proposes the following guidelines for new development along its main east-west corridor, Livingston Road:

- Limiting the height of freestanding signs to keep them below the tree line
- Using muted lighting
- Planting shade trees
- Containing views by framing parcels with trees to create clusters of interconnected development set in natural areas
- Preserving natural areas and unmanaged wooded lots

Finally, the 2009 Historic Sites and Districts Plan recognizes the importance of preserving significant cultural landscape features within this part of the county during all phases of the development process. It specifically asks for consideration of an overlay district to protect the historic view from Mount Vernon:

“Consider using protective mechanisms, such as overlay zones, for the protection of significant cultural landscapes, such as the Mount Vernon viewshed. A sector plan and a development district overlay zone could be used to regulate height, architecture, lighting, landscaping, and other elements that impact cultural landscape viewsheds.” (Page 65)

All of the planning area and functional master plans for this area recognize that development will occur, but they do not propose how to conserve the cultural landscape during development of the Area of Primary Concern.

Past Development—Preservation Conflicts in the Area of Primary Concern

Today this area of Prince George’s County, when viewed from Mount Vernon, appears to have few intrusions visible to the naked eye. This is a tribute to the efforts of the Mount Vernon Ladies’ Association, the National Park Service, and various public and private interests who have addressed past threats as they emerged. Significant threats, which became highly publicized, included:

- A 1955 proposal by a major oil company to locate an oil tank farm on the east bank of the Potomac River immediately across from Mount Vernon. Opposition to this proposal led to the purchase by Representative Frances Payne Bolton (R-Ohio and vice-regent of the Mount Vernon Ladies’ Association) of an initial 485 acres of the property, which subsequently became the Accokeek Foundation. At the time of the purchase, the property was mainly forest, fields, and farmland.
- In 1960 the Washington Suburban Sanitary Commission’s proposed construction of a sewage treatment plant at Mockley Point on the Maryland shoreline immediately upriver from Mount Vernon resulted in the subsequent creation of Piscataway National Park. Concerted lobbying by the Alice Ferguson Foundation, the Accokeek Foundation, the Moyaone Association, and others resulted in an Act of Congress in 1962 that authorized the creation of Piscataway National Park. Legislative acquisition of lands led to the completion of Park acquisition in 1974. (EDAW, Inc., 1991)

- A third major threat was the Port America development located on the site of present-day National Harbor. A 52-story office tower would have been visible from Mount Vernon. The height was later reduced because of Federal Aviation Administration concerns over aircraft safety and alarm about the impact on the historic view from Mount Vernon.

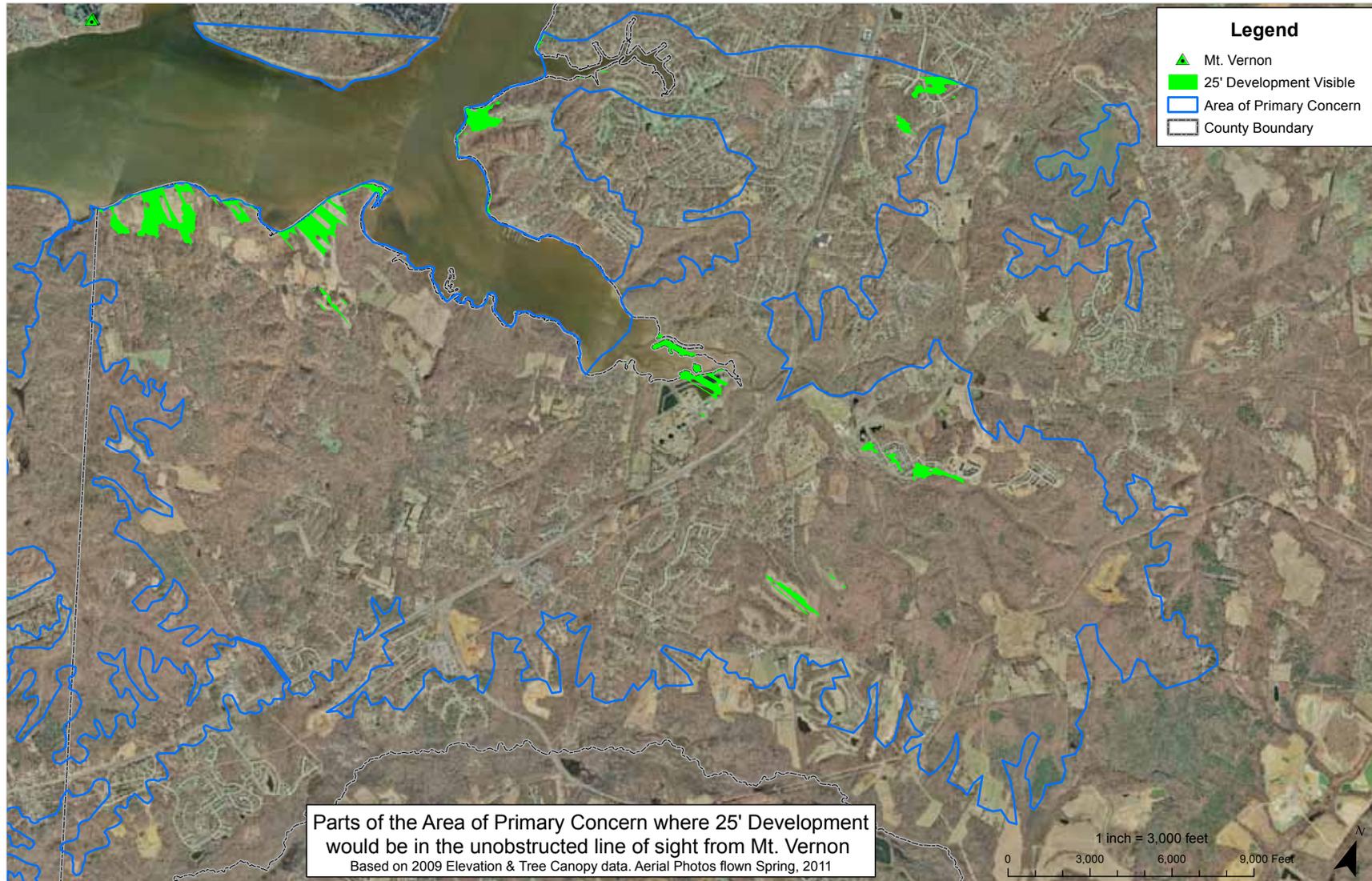
These past threats to the viewshed have provided opportunities to protect nearly 4,000 acres in the immediate Potomac River environs directly opposite Mount Vernon through their designation as parkland or scenic easements. Throughout the county, sensitive environmental resources, such as streams and their buffers, wetlands and their buffers, steep slopes associated with streams, floodplains, and cultural sites and their environmental settings, are protected during the land development process. Portions of the Area of Primary Concern that fall into these categories are protected, or will be protected, through existing county and state regulations. According to analyses, the preservation of sensitive environmental resources in the Area of Primary Concern protects an additional 2,000 acres, bringing the total protected area to about 6,000 acres or 40 percent of the Area of Primary Concern.

Piscataway National Park and the Moyaone Reserve

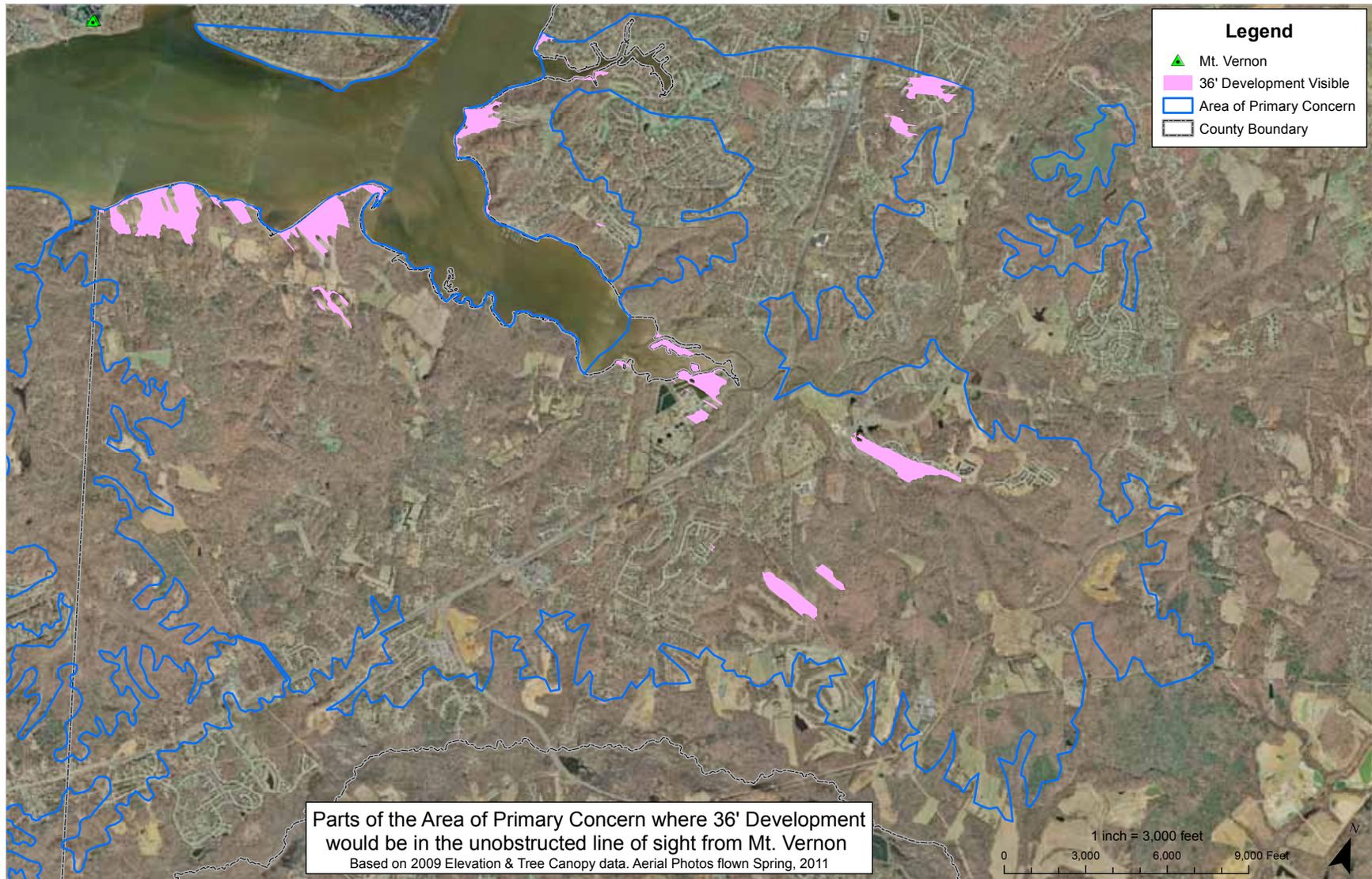
Piscataway National Park is unique in the national park system in that its boundaries include 2,800 acres of private residential properties protected by scenic easements. These scenic easements, held by the National Park Service, are in an area of Piscataway National Park called the Moyaone Reserve. The properties are protected by stringent deed restrictions supporting residential development and viewshed protection. These scenic easements, in their original format, are quoted in Appendix 1 on page 34. The Moyaone Reserve deed restrictions will be reviewed, and some of the concepts may be incorporated into the viewshed protection process as appropriate.

Preserving this portion of the Area of Primary Concern has also protected the Piscataway Park Archaeological Site (83-12) and the Accokeek Creek Archaeological Site (83-2, 18PR8) along with the historic settings associated with these former Native American settlements. Some of the farmland associated with this part of the Rural Tier and Developing Tier has also been preserved.

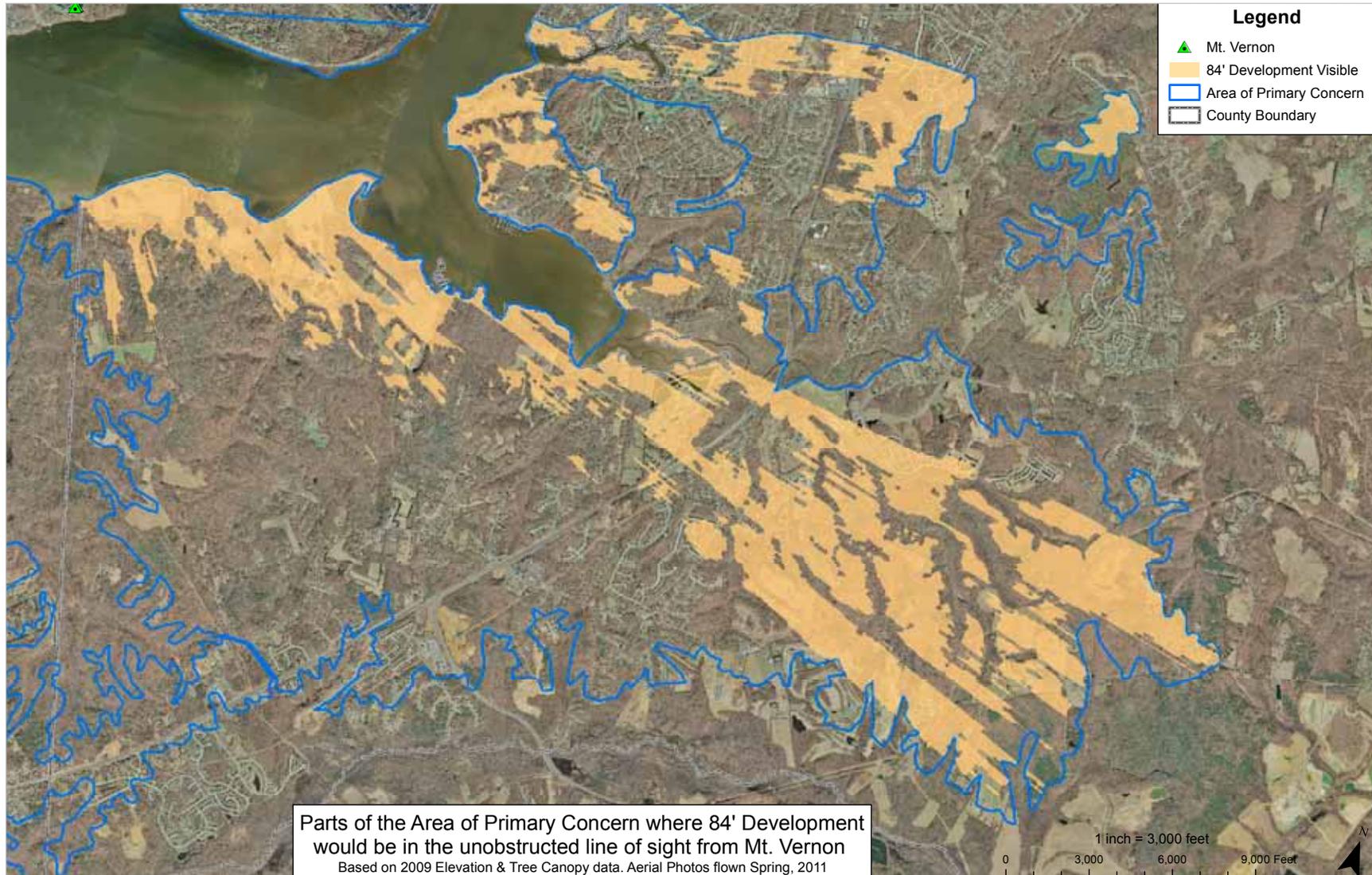
Map 1. Areas where 25-foot-high buildings (approximately 1 story) or structures are in the unobstructed line of sight from Mount Vernon



Map 2. Areas where 36-foot-high buildings (approximately 2 stories) or structures are in the unobstructed line of site from Mount Vernon



Map 3. Areas where 84-foot-high buildings (approximately 6–7 stories) or structures are in the unobstructed line of sight from Mount Vernon



Area of Primary Concern Lands Remaining to be Conserved

Although about 6,000 acres of the Area of Primary Concern, consisting of mainly the Potomac River environs in the immediate foreground of the view from Mount Vernon, are already protected by their inclusion in parkland, scenic, and environmental easements, more than 8,000 acres remain in private ownership. These private lands are currently available to future development based on zoning that could have significant visual impact unless appropriate development standards are applied. Development has continued to occur in the Area of Primary Concern, but there are no comprehensive viewshed-specific protection regulations or design standards that have been adopted, increasing the potential for cumulative erosion of the area's rural character and viewshed integrity over time.

Land Analysis and Findings

The 2007 viewshed analysis performed by Michael Clarke Associates confirms the identified critical areas in the Area of Primary Concern in Prince George's County. The most recent Planning Department study performed in 2011 has further evaluated these critical areas to determine just how vulnerable they are and prioritized future protection or mitigation action. In order to prioritize lands in the Area of Primary Concern for conservation, a comprehensive land analysis was done in 2012 to assess vulnerability to development. This was a multistep ArcGIS process involving the overlay of separate map layers on the (2011) viewshed analysis base maps. A detailed description of this evaluation, including the steps to generate the data, is presented in the next section of the study. The data generating process included:

1. Determining the extent of lands with no legislative protection by excluding parkland, scenic and environmental easements, or lands in public or semipublic ownership where development is not permitted.
2. For the remaining lands outside of protected areas:
 - a. Overlaying land development data to determine how much of the remaining area is undeveloped (i.e., whole properties or portions of properties with improvement value less than \$15,000), developed, already built up, or in the process of development.
 - b. Overlaying environmental data layers and compiling a forest resources inventory.
 - c. Overlaying slope and land elevation data layers to assess environmental risk and the potential visibility of new development.

- d. Identifying the zoning on undeveloped properties to evaluate additional development potential if any (see Tables 3 and 4 on pages 17 and 18, respectively).
- e. Determining the extent of undeveloped property.

This analysis yielded several important findings:

1. Approximately 8,125 acres (54 percent) of the Area of Primary Concern are outside of regulated areas. Of that area, about 4,265 acres are already developed without significant impacts to the Mount Vernon Viewshed based on the delineated Area of Primary Concern. This leaves the remaining 3,860 acres undeveloped and vulnerable to potential visual impacts from new development within the Area of Primary Concern (see Table 2 below and Maps 4 and 5 on pages 36 and 37, respectively).
2. Land located in the Rural Tier receives a degree of protection from land use policies and regulatory controls that promote the protection and preservation of contiguous tracts of land for historic, scenic, environmental, and rural qualities. However, Table 2 below shows that most of the vulnerable land is in the Developing Tier where there are few restrictions to development.

	Developing Tier	Rural Tier	Total Acres
Developed Property	3161.9	1100.6	4262.5
Undeveloped Property	2422.3	1438.4	3860.7
All Properties outside Protected Areas	5584.2	2539.0	8123.2

3. In addition to residential zones, land along Indian Head Highway in the Area of Primary Concern also includes lands zoned Commercial (C-A, C-O, C-S-C, C-M), Mixed Use-Transportation Oriented (M-X-T), and Comprehensive Design (L-A-C). These zones allow development that may be taller, more massive, and emit more light than the surrounding residentially zoned land (see Table 3 on page 17). Though this is only a small area (190 acres), it is located in the Developing Tier on an elevated area where the visual impact of nonresidential development would be greatest. Moreover, even the residential zones allow typically suburban development with building heights that could potentially be problematic.

4. Building heights of 40 and 50 feet are allowed on R-80- and R-A-zoned lands, respectively. Though few buildings in the area approach these heights, the potential for negative visual impact exists, because the zoning allows it. Incompatible street orientation, building siting, and design would accentuate the negative visual impact on the Area of Primary Concern as development continues on ridgelines where tree cover is removed or significantly reduced. Street orientation determines where buildings are located and how they relate to the viewshed (e.g., horizontal versus parallel to the view). Table 3 below and Table 4 on page 18 show that the R-A Zone is the dominant residential zone in the Area of Primary Concern; more than three quarters of this area are at elevations between 160 and 240 feet.

Table 3. Undeveloped Properties in the Area of Primary Concern outside of Protected Areas, by Zoning and Development Policy Area

Policy Area	Residential Housing Development (acres)								Commercial & Mixed-Use(acres)				No Zoning Class (acres)	Total Area (acres)		
	Residential—Low Density				Residential—Medium Density				Commercial							
	R-A	R-E	O-S	R-O-S	R-80	R-L	R-R	R-S	C-A	C-M	C-O	C-S-C	L-A-C	M-X-T		
Rural Tier	1291.7	0.0	143.4	2.9	0.0	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1438.4
Developing Tier	676.1	341.5	6.5	104.5	32.6	450.6	593.5	23.2	3.3	28.2	2.7	69.5	12.9	75.1	2.0	2422.3
TOTAL	1967.8	341.5	149.9	107.4	32.6	450.8	593.5	23.2	3.3	28.2	2.7	69.5	12.9	75.1	2.1	3860.7

5. Even in areas where preservation of rural character is a major goal, zones such as the R-O-S (Reserved Open Space) Zone allow private airstrips (by Special Exception); the O-S (Open Space) Zone allows uses such as electric power stations; and all zones within the Area of Primary Concern allow structures such as monopoles, antennas, and cell phone towers, potentially resulting in extensive forest clearing or inadequate screening of structures that may not be compatible with a scenic rural environment.
6. Some portions of the M-X-T- and C-S-C-zoned properties near the intersection of Indian Head Highway and Berry Road are currently developed with minimal visual impact, but the properties could be redeveloped in a manner that negatively impacts the Area of Primary Concern. Moreover, the existing development could immediately become more noticeable if tree cover (to the west) that currently screens it

is removed or significantly reduced. Even more significantly, 82 acres of commercially zoned land and 75 acres of M-X-T-zoned land are at elevations between 160 and 240 feet where development under current conditions would have substantial visual impact (see Table 4 below).

Table 4. Undeveloped Properties in the Area of Primary Concern outside of Protected Areas, by Zoning and Elevation																
Elevation	Residential Housing Development								Commercial and Mixed Use Development				No Zoning Class (acres)	Total (acres)		
	Residential—Low Density (acres)				Residential—Medium Density (acres)				Commercial (acres)							
	R-A	R-E	O-S	R-O-S	R-80	R-L	R-R	R-S	C-A	C-M	C-O	C-S-C			M-X-T (acres)	L-A-C (acres)
≥20'	0.5	0.0	2.6	0.4	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	4.1
21' - 40'	36.0	0.9	3.3	18.0	1.7	11.3	6.1	0.0	0.7	1.1	0.0	0.0	0.0	5.4	0.0	84.3
41' - 60'	15.8	15.8	0.5	60.7	8.0	49.9	14.3	0.0	0.0	4.3	0.0	5.0	0.0	6.1	0.0	180.4
61' - 80'	30.9	11.1	0.2	25.4	0.0	44.5	35.4	0.0	0.0	1.4	0.0	5.7	0.0	1.0	0.0	155.6
81' - 100'	38.4	10.4	1.2	0.0	0.8	34.5	13.7	0.0	0.0	0.0	0.0	0.2	0.0	0.4	0.0	99.6
101' - 120'	53.3	19.2	6.0	0.0	0.8	26.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	112.2
121' - 140'	57.5	23.4	12.4	0.0	2.8	28.0	11.7	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	136.7
141' - 160'	226.4	30.3	99.9	0.0	6.5	32.6	27.9	0.2	0.0	0.9	0.1	1.6	0.0	0.0	0.0	426.5
161' - 180'	374.8	36.1	23.5	0.0	11.3	77.3	188.3	22.9	0.0	20.0	0.9	2.5	10.1	0.0	0.3	767.9
181' - 200'	222.8	57.0	0.4	0.0	0.8	45.7	189.2	0.1	0.0	0.6	0.8	51.5	44.6	0.0	1.1	614.6
201' - 220'	679.8	99.3	0.0	2.2	0.0	34.8	86.6	0.0	0.0	0.0	0.7	2.3	19.8	0.0	0.2	925.7
221' - 240'	231.7	37.7	0.0	0.7	0.0	65.8	13.1	0.0	2.6	0.0	0.0	0.0	0.6	0.0	0.1	352.3
≥240'	0.0	0.3	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Total	1967.9	341.5	150.0	107.4	32.7	450.9	593.5	23.2	3.3	28.2	2.8	69.4	75.1	12.9	2.1	3860.6

7. In excess of 2,600 acres (69 percent) of the undeveloped properties outside of protected lands are at elevations of 160 feet or greater. Of that total, nearly 1,300 acres are between 200 and 240 feet elevation well above the elevation of lands to the west (see Table 4 above). Included in that total are 900 acres of the R-A Zone and 20 acres of the M-X-T Zone. Inappropriately sited buildings and extensive forest clearing in these areas could have adverse environmental impacts while potentially marring the rural landscape and the historic view from Mount Vernon in a significant way.

8. There are 9,200 acres of woodland in the Area of Primary Concern. Past efforts have ensured that nearly half of this woodland is protected within parkland, scenic, or environmental easements. However, 4,885 acres (53 percent of the Area of Primary Concern’s total woodland) are outside of protected areas potentially vulnerable to fragmentation by continuing development (see Table 5 below and Map 6 on page 38).

	Acres within Protected Lands	Acres outside Protected Lands	Total Acres
Woodland \geq 10,000 sq. ft.	4258.9	4885.5	9144.4
Tree Cover \leq 10,000 sq. ft.	30.9	107.2	138.1
Total	4289.8	4992.7	9282.5

9. A significant area of tree canopy cover in the Area of Primary Concern is exempt from the provisions of the Woodland Conservation Ordinance (WCO). WCO is the local implementation authority for the Maryland Forest Conservation Act, which seeks to protect or increase tree cover during site development. The process of site development generally begins with natural resource inventory and forest stand delineation (NRI/FSD) that identifies and maps sensitive environmental resources (e.g., forests, wetlands) on a site to be developed. Forests and woodland identified in the NRI/FSD may be protected by their designation as “tree save areas” in a forest conservation plan that must be prepared as specified by the act.

WCO requires the conservation of woodlands in accordance with the Prince George’s County Woodland Conservation and Tree Preservation Policy document for development plans and grading permits that affect a site that is 40,000 square feet or greater in area and contains a total of 10,000 square feet or greater of woodland or specimen trees. Sites containing a total of less than 10,000 square feet of trees are exempt from the provisions of WCO. Table 5 above shows that 138 acres of tree cover in the Area of Primary Concern fall into this exempt category (though much of this tree cover is not exempt under the Tree Canopy Coverage Ordinance).

10. For the purposes of this study, critical tree cover has been defined as the amount of tree canopy coverage needed to maintain the rural character and screen development in the Area of Primary Concern as viewed from Mount Vernon. While all the woodland in the Area of Primary Concern is important, the amount of tree cover that could be considered critical varies according to the type, location, and height of existing or planned development. There are 7,933 acres of tree cover existing in the area, screening (or capable of screening) existing and new single-

family development (25-foot building height) in the Area of Primary Concern. As new development occurs with taller buildings, however, the available tree cover that can screen this development reduces as shown in Table 6 below and illustrated in Maps 10, 11, 12, and 13 on pages 42, 43, 44, and 45, respectively. Maintaining the area’s tree cover is important for both screening development in the viewshed and preserving the area’s rural, cultural, and historic character.

Table 6. Acres of Tree Cover within the Area of Primary Concern Screening or Capable of Screening Development

	Tree Cover Capable of Screening Development (acres)	% of Area of Primary Concern	% of Total Area of Primary Concern Tree Cover	Acres of Screening Tree Cover on Unprotected Land	Acres of Screening Tree Cover on Protected Land
25’ Development	7932.9	53.7	85.5	4157.7	3775.3
36’ Development	7396.1	50.1	79.7	3817.1	3579.0
84’ Development	3995.2	27.1	43.0	1666.4	2328.8

An array of prior development approvals could result in a fragmentation of the area’s forest resources and incremental erosion of landscape integrity when the projects are built. Preliminary plans of subdivision do not expire once they are platted; therefore, many subdivisions are approved but unbuilt. The 2009 Preliminary Subregion 5 Master Plan forecasts an increase in the Accokeek population of 74 percent from 10,062 in 2008 to 17,508 in 2030. The master plan makes similar projections for increases in dwelling units (3,427 to 6,300) and employment (1,943 to 3,136 jobs) for Accokeek between 2008 and 2030. If current trends continue, this future development could include inappropriately sited buildings and highly visible structures, such as cell phone and microwave/radio towers and poorly screened residential developments, on potentially more than 2,500 acres of undeveloped properties throughout the Accokeek area. Some development proposals have already received development approvals (pipeline development), and unless the approvals expire, they will be implemented with potentially significant visual impact for the Area of Primary Concern.

Protection Techniques Considered in this Study

The following options were evaluated to determine the alternatives, opportunities, and tools that could be applied to address viewshed compatibility issues and achieve the overall objective of conserving the landscape character within the Area of Primary Concern:

Option 1: No Action (i.e., retain the current review process)

Prince George's County currently addresses viewshed protection during the broader development review process coordinated and administered by the Planning Board and District Council. The Development Review Division (DRD) takes the lead as the coordinators in reviewing development proposals when an application for a preliminary plan of subdivision, special exception, detailed site plan, or other development proposal is submitted. DRD refers the proposals to other departments and agencies that contribute to the review of the plans in regard to their area of expertise. In this process, staff reviews the proposals for conformance to environmental and other regulations and has commented on development proposals that were thought to impair the historic view from the Area of Primary Concern. The Environmental Planning Section has taken the lead for reviews of projects located within the Area of Primary Concern and the implementation aspect of protection by using the state Forest Conservation Act to protect woodlands within the Area of Primary Concern. While this review method offers significant flexibility in implementing viewshed-protection measures, it is constrained by the following:

1. Not all development plans get referred to DRD staff; intrafamily transfers, single lot development, and some commercial and industrial development can go straight to permit review. There is also no requirement that land within the Area of Primary Concern be reviewed for the impacts to the area, such as architectural products, or that prior approved detailed site plans (DSPs) and subdivision applications be analyzed for impacts to the Area of Primary Concern when previous approvals did not address this issue. Community Planning staff leads comments on the long-term planning process of viewshed protection. However, since the DSP, the preliminary plan of subdivision and other review processes are not required for all new development; some parcels in the Area of Primary Concern may potentially be developed without review. The largest issue is that there is no regulatory framework in place to specifically address viewshed protection.
2. Master plan policies that provide a basis for Community Planning referrals (viewshed) offer guidance during the review of development proposals and have only limited regulatory authority. A significant constraint is that only preliminary plan of subdivision applications can be evaluated for master plan conformance.
3. The current process is hampered by the Area of Primary Concern not being legally established as an area needing special protections.
4. The Environmental Planning Section reviews for the protection of scenic resources in the Area of Primary Concern mainly as a tree cover issue addressed through the WCO. (Portions preserved in that way are legally protected by their designation as a scenic easement, parkland, or woodland conservation area.) Staff reviews development proposals for compliance with the WCO and for viewshed protection. However,

woodland conservation is intended to maximize environmental protection, especially in evaluating an area's proximity to steep slopes, wetlands, or streams and not necessarily tree retention or afforestation/reforestation to prevent or minimize visual impact.

While the current process has protected the Area of Primary Concern to a large extent, it is piecemeal, using different agencies and disparate practices and guidelines (environmental, urban design, zoning, subdivision, historic preservation, and others), and there is no legal basis for the protection of the Area of Primary Concern at the local level. The protection mechanisms currently in place have been very effective on some R-A-zoned properties but not on the commercial properties or properties in especially vulnerable locations. It is critical that this situation be addressed, because development that fragments forest resources or is visible to Mount Vernon is beginning to occur. The risk is especially great on ridgelines in the central and eastern portions of the viewshed with elevations between 170 and 230 feet. The location of properties with prior development approvals and undeveloped properties primarily in these elevated areas of the viewshed further increase the odds of cumulative erosion of rural character over time.

Option 2: Legislative Amendments to the Zoning Ordinance and Subdivision Regulations

The second option is to revise the development review processes to include the Area of Primary Concern as one of the issues to be addressed, and embed viewshed protections in the Zoning Ordinance and subdivision regulations. It would create a new part to the Zoning Ordinance to include local policies as they relate to the Area of Primary Concern and establish a set of standards applicable to any development process for land located within the Area of Primary Concern. The standards would be cross-referenced throughout several sections of the Zoning Ordinance. This option will require all development in the Area of Primary Concern to go through a development review process such as a preliminary plan of subdivision, DSP, site development plan, or other regulatory tool. Conservation of scenic resources, preservation of rural character, and viewshed protection could be added as public goals as they relate to the Area of Primary Concern in the regulations. Section 25-121 (b) of the WCO would also need to be amended to make the woodland in the Area of Primary Concern a priority for protection. The advantage of this option is that it adds standards to strengthen the procedures currently being used to protect the Area of Primary Concern without creating a new process, thereby allowing quicker implementation than using an overlay zoning process. The Area of Primary Concern could be established as an exhibit to a legislative bill and not through the sectional map amendment process. The disadvantage of this approach is that the review standards and other requirements would be added as amendments in the Zoning Ordinance and subdivision regulations, adding this review element in prescribed areas. This approach will also add another set of review issues at the time of permit application.

Option 3. Viewshed Overlay Zone

A third option is an overlay zone to add design and preservation regulations applicable to development in the Area of Primary Concern. An overlay zone is a special regulatory tool used to strengthen existing zoning in an area. It is placed over existing zoning districts in an area to add elements that are either absent or inadequate in the underlying zones. It does not erase or change the underlying zoning or the designated use but simply adds one or more elements to alter the effects of the underlying zone to achieve a desired form or design. In this case the overlay zone would be a mapped district that is superimposed over the other zones in the Area of Primary Concern to establish design regulations controlling height, light pollution, tree removal, shoreline development, as well as building materials, façade, siting, and mass that are not adequately covered in the base zones and the subdivision regulations. Development district standards under the overlay zone for the Area of Primary Concern may supersede the underlying zone requirements. Public or quasi-public land and development that would not impair the viewshed would be exempted from the development district standards but would still need to comply with other regulations in the underlying zone or zones. Text amendments to the Zoning Ordinance would still be required but would be centrally located and easier to comprehend and implement. All the standards and other requirements would be in one location.

Overlay zones are a commonly used technique for protecting cultural, historic, scenic, and other resources. The Transit District Overlay Zone, which includes a comprehensive site plan review process to regulate development around Metro stations, is an example of an overlay district technique being used in Prince George's County. In other parts of Maryland, a number of communities have established overlay zones to protect viewsheds as well as historic areas. For example, a Viewshed Protection Overlay Zone was established in Allegany County in western Maryland. It protects the view to and from downtown Cumberland, Maryland, to Garrett County's Haystack Mountain in the Ridge and Valley Province of the Appalachian Mountains. Another example is the Antietam Overlay Zone, which provides mechanisms to protect significant historic structures and land areas associated with the Antietam Battlefield in Sharpsburg, Maryland. Overlay zones have also been used to protect environmental resources. In neighboring Montgomery County, the water quality and quantity in the Upper Rock Creek and its tributaries as well as the biodiversity in the watershed are protected by an Environmental Overlay Zone implemented in November 2004. Council designated the upper part of the Rock Creek Watershed as a special protection area and created the Environmental Overlay Zone for the Upper Rock Creek Special Protection Area to set a maximum amount of imperviousness for new residential development. (Non-residential development and development on septic systems are exempt from the imperviousness cap). The Environmental Overlay Zone was created by an amendment of the Montgomery County Zoning Ordinance, Chapter 59 of the Montgomery County Code to add a new Section 59-C-18.24: Environmental Overlay Zone for the Upper Rock Creek Special Protection Area.

In other parts of the nation, for example, overlay zones in California regulate development on hillsides with slope areas greater than 15 percent, in Virginia they control the location of signs and cell towers, and in Idaho and Indiana they protect scenic highway corridors.

The overlay zone for the Area of Primary Concern would add viewshed considerations to the current subdivision process so that review for viewshed impacts could be done early in the development process at par with the initial review of street layouts and woodland conservation. It could also include incentives encouraging developers to use innovative site design concepts to protect natural resources and the Area of Primary Concern's rural character (e.g., conservation subdivisions, site fingerprinting, pedestrian-oriented development with narrower streets and lower imperviousness, retention of farmland, etc.). Although, in general, administering overlay zones can be a complex undertaking, administration of the Viewshed Overlay Zone would be simpler, because it would be applicable only to the Area of Primary Concern, a mapped geographic area.

Option 4: Umbrella Overlay Zone (Two-Step Process: Adoption and Application)

The fourth option is to create an overlay zone using a two-step process. This option would first create a generalized umbrella overlay zone, potentially applicable throughout the county, to set the guiding authority for scenic resource protection in general. This would be followed by the adoption of secondary, individualized overlay zones to address more specific areas such as the Area of Primary Concern. The main advantage of this concept over the one-step process is the flexibility to act as umbrella legislation that would facilitate other preservation initiatives such as the Croom and Aquasco Roads Scenic Byway Plan Elements and the soon to be published Rural Villages Study. However, it requires a longer public review process, because the legislation would be enacted and a second, separate process would follow to apply the specific overlay zone to the Area of Primary Concern. It could also eventually give rise to multiple districts and requirements, making its administration complicated since different areas would have different goals and needs.

Recommendation

Based on the above assessment, a Viewshed Overlay Zone (Option 3) is the best tool to promote quality contextual development that is sensitive to the Area of Primary Concern's scenic character and preserves the important historic viewshed because:

- It is the quickest, most direct means to strengthen the base zones in the Area of Primary Concern by adding provisions limiting height, lighting, tree removal, siting of structures, and building façade and color.
- The overlay zone would be applicable only in the Area of Primary Concern, nowhere else in the county.

- The overlay zone would be another tool to protect the Rural Tier since its implementation would be consistent with the Rural Tier goals of preserving large contiguous tracts of land for historic, scenic, environmental, and rural qualities.
- New protections are needed quickly to ensure that development occurring in the Area of Primary Concern is compatible with the area's rural character and its historic and cultural significance.
- It would correct and strengthen the piecemeal review process currently being used.
- It would avoid the scattered amendments to the Zoning Ordinance that Option 2 would require.

Recommended Actions and Strategies

The overlay zone would address the concerns that development is ongoing in the Area of Primary Concern and that comprehensive regulatory measures are needed to mitigate its effects. It would implement comprehensive measures to ensure that future development in the Area of Primary Concern is compatible with the area's rural character and historic significance. In particular it would:

1. Require Review of Development in the Area of Primary Concern

All new development, signs, fencing, parking, lighting, and exterior renovations occurring within the Area of Primary Concern would be subject to a process similar to the limited DSP process to ensure that they meet the design principles, standards, and guidelines to preserve the area's rural character and the historic view from Mount Vernon. A two-step review process is envisioned. At the time of permit, a determination would be made to assess whether a development is impairing the viewshed. This initial process envisioned here is similar to a pre-application meeting between a developer and review staff. If there is no visual impact or if the impact is satisfactorily mitigated (e.g., additional landscaping and appropriate colors for roofing, siding, and trim on buildings that could be visible to Mount Vernon), then administrative approval would be granted, and no further review (for visual impacts) would be required.

If there were visual impacts that were not mitigated, then there would be a second, more detailed review to address these visual impacts before permitting. Planning Board approval of the site plan would show compliance with the design regulations and guidelines of the zone. The intent is to capture potential impacts early so they can be addressed.

2. Implement Consistent Siting and Design Standards

The practice for development of new residential communities is to clear large areas of tree cover, and place the new homes in the open areas created. This can result in severe visual impacts, an altered microclimate, and impaired quality of the remaining forest (e.g., fragmentation, edge effect). Given the location of some of the remaining undeveloped land, the siting of new buildings and the design of new development can potentially have significant impact on the viewshed. The overlay zone will require new development to be designed and sited to protect the Area of Primary Concern's rural landscape and the historic view across the Potomac River to and from Mount Vernon.

3. Provide Additional Protection of Steep and Severe Slopes, Ridgelines, and Hillside

The Area of Primary Concern is characterized by hilly terrain with significant woodland and surface water resources. The water resources include the Broad Creek and Piscataway Creek estuaries as well as tributaries of the Piscataway Creek, Lower Potomac River Tidal, Pomonkey Creek, and Mattawoman Creek Watersheds. The Maryland Department of the Environment has designated a segment of the Piscataway Creek Watershed and the Mattawoman Creek Watershed in Prince George's County as containing Tier II waters (i.e., waterways that are of high water quality). Additionally, Mattawoman Creek is widely recognized as "the best, most productive tributary to the Chesapeake Bay" (Subregion 5 Master Plan, page 80) and a priority for restoration and protection (1998 *Maryland Clean Water Action Plan*).

Steep slopes are those with a grade between 15 and 25 percent incline, meaning that the elevation rises by 15 feet and 25 feet, respectively, over a horizontal distance of 100 feet. Severe slopes have a grade of more than 25 percent incline. Steep slopes comprise nearly 300 acres of land outside



Photo 6. Typical clearing for new residential development.

protected areas of the Area of Primary Concern while severe slopes comprise about 45 acres (see Table 7 below and Map 7 on page 39). In general, many issues can be associated with development of such areas: significant loss of aesthetic quality when ridgelines and hillsides are developed; accelerated erosion and sedimentation during intense rain events, resulting in impaired water quality; and potential impairment of scenic viewsheds.

Table 7. Acres of Steep and Severe Slopes outside of Protected Areas in the Area of Primary Concern	
	Acres
Steep Slopes (between 15% and 25%)	298.4
Severe Slopes (greater than 25%)	45.5
Total	343.9

In addition to their scenic and aesthetic value, some of these ridgelines and hillsides contain environmentally sensitive areas, such as interior forest habitat, erodible soils, and occasional patches of bare rock, that could be compromised by poorly planned development. The most prominent ridgelines and hillsides that could be impacted by future development are north of Danville Road, south and east of Accokeek Road, and south of Berry Road (see Map 9 on page 41). Future development in these areas is likely to be residential because of the zoning, and because retail and commercial development is precluded in areas with steep slopes, which require significant terrain alteration to make a buildable site.

The Prince George’s County Water Quality Resources and Grading Ordinance (Subtitle 32 of the County Code) governs grading and development on sloped or non-sloped properties. The Department of Public Works and Transportation, Department of Environmental Resources, and the Soil Conservation District each administer different sections of the ordinance. However, the ordinance does not address any specific protections or setback requirements for steep or severe slopes. There are restrictions as to the steepest final grade that is allowed for yards and driveways, usually 2:1, depending on soil type, but there are no restrictions on development based on steepness of existing slopes. Ultimately, except where slopes are associated with stream systems, development can be placed on most slopes as long as the design results in slopes less than 2:1.

The only place in the code where development on steep slopes is regulated is in relation to stream buffers. The protection of steep slopes as a regulated environmental feature to be preserved in a natural state is addressed in Subdivision Regulation Section 24-130(b)(5) as one of the regulated environmental features within the primary management area delineated for any regulated stream. The primary management area in effect expands the buffer of a regulated stream beyond the minimum width to include:

- The 100-year floodplain as defined by Section 27-124.01.
- All wetlands and associated wetland buffers that are adjacent to the regulated stream, stream buffer, or the 100-year floodplain.
- All areas having slopes of 15 percent or greater adjacent to the regulated stream or stream buffer, the 100-year floodplain, or adjacent wetlands or wetland buffers.
- Adjacent critical habitat areas.

WCO (Subtitle 25, Division 2) also offers protection for priority woodlands associated with slopes located within the primary management area and for large contiguous blocks of woodlands but does not provide protection because of steep slopes.

In both the Zoning Ordinance and subdivision regulations, the primary management area is required to be preserved “to the fullest extent possible” during land development. This does not mean that disturbance is prohibited, but disturbance of the primary management area is to be avoided, and if impacts cannot be avoided, then they should be minimized. If the impacts are substantial, then the Planning Board may require mitigation on a case-by-case basis as a condition of approval.

The overlay zone could offer protection for isolated steep and severe slopes located on sensitive hillsides and highly visible ridgelines in the Area of Primary Concern by protecting blocks of steep and severe slopes that are not associated with a primary management area. The overlay zone could preserve some of the significant viewshed features that the residents in the Area of Primary Concern and visitors to Mount Vernon value so highly, which could be lost under current regulations.

Allegheny County in western Maryland is already taking steps to protect environmentally important landscape features similar to those in the Area of Primary Concern by proposing a Ridgetop Viewshed Protection Overlay Zone to protect environmentally sensitive lands within 250 feet of the ridgetop of Dans Mountain.

4. Discourage Terracing, Slope Stepping, Excessive Dumping of Fill Earth, and Other Engineering Modifications if They Significantly Alter the Natural Contours of a Development Site

To minimize visual impact and help preserve rural character, new construction should not occur on slopes 25 degrees or greater. This will avoid highly visible site clearing, to cut or fill the existing grade, or high retaining walls associated with building in such areas. Areas of steep topography, where elevation ranges from 160 to 240 feet, occur in pockets throughout the remaining unprotected Area of Primary Concern (see Map 9 on page 41). By discouraging development of such areas, the overlay zone will minimize the need for extensive earth movement and alteration of natural contours, thereby preserving both the rural character and the natural environment (especially water quality where there are stream systems).

5. Further Protect and Preserve Tree Cover

There are 138 acres of tree canopy cover in the Area of Primary Concern that are exempt from the provisions of WCO. Some of these areas exempt under WCO are not exempt under the Tree Canopy Coverage Ordinance. However, additional evaluation of the Tree Canopy Coverage Ordinance is needed to determine whether further consideration should be given to limiting some of the exemptions, especially regarding applicability (Sec. 25-127 (A), (B), (C), (D), (H)), waivers (Sec. 25-130), and tree canopy coverage requirements (Sec. 25-128). The 2011 viewshed analysis has developed a computerized visual simulation model that allows parcel-level investigations of development sites in the Area of Primary Concern. This model should be used to identify development sites within the Area of Primary Concern where tree retention is essential for viewshed protection before incompatible development occurs. The developer can then be advised where trees should be retained and how the development could be modified to protect critical areas. Additional viewshed analysis could be required on a site-specific basis to evaluate specific development proposals and the impact on the viewshed.

6. Lighting

Recommend a policy of full cut-off optics for lighting in the Area of Primary Concern to maintain the quality of the night sky.

7. Promote Intergovernmental Coordination in the Siting and Maintenance of Utility Rights-of-Way, Cell Phone Antennas, Water Towers, and Other Utility Corridors

Encourage the adoption of a policy of integrated tree cover management in utility rights-of-way and corridors in order to soften the visual impacts and retain ecosystem service functions. Intergovernmental coordination is needed for the clearing of telephone, electricity, and cable utility corridors as well as the type and location of water storage tanks. Structures such as utility poles, cell phone antennas, and water storage tanks can significantly impair scenic views by their height and the amount of tree removal to accommodate them. TPL has developed a strategy for locating these structures in a manner that does not impair the area’s rural character or the historic view from Mount Vernon. Community water storage tanks, for example, should be kept below the tree canopy and below the ridgeline where their mass can be screened. They should not be placed in open fields. The towers should be painted in dark, natural earth-tone colors to minimize their impact, where natural screening is not possible. The best option to minimize the visual impacts of (telephone and electric) utilities and increase the visual appearance of a rural landscape is to place wiring underground. This also reduces their vulnerability to falling trees and limbs or the need for constant pruning (TPL 1995). Costs, however, may be prohibitive and other alternatives may need to be used. These alternatives include locating utility easements and their associated poles and wires behind ridgelines, where possible, to completely screen them from view. Where this is not a viable option, the poles should be placed adjacent to the tree canopy so they are screened by the tree cover.

Utility easements could also be placed in road rights-of-way to minimize the amount of additional tree removal. This has the added benefits of shared maintenance responsibilities and reduced costs. Finally, utility companies (electricity, petroleum, and natural gas) could be asked to consider extending their mowing regimes (e.g., once a year) on their utility rights-of-way so that they take on the appearance and functions of meadow habitat.

8. Preserve the Setting for Heritage Tourism Links between the Area of Primary Concern and Mount Vernon

By further protecting scenic and environmental resources and helping preserve the rural character in the Area of Primary Concern, the overlay zone will increase the potential for both nature-based and heritage tourism in this area. Some of the scenic areas in the Area of Primary Concern are also important models for other state and regional initiatives to protect natural resources (e.g., the *Approved Countywide Green Infrastructure Plan*, Chesapeake Bay Critical Area Overlay Zone, Green Print Program, etc.). There are particularly good prospects for



Photo 7. Potomac River shoreline showing replica of Captain John Smith’s ship.

developing heritage tourism links between the Area of Primary Concern and Mount Vernon that build upon the Piscataway and Accokeek areas' history, Native American archaeological sites, and the Water Trail, commemorating the navigational exploits of Captain John Smith.

9. Encourage Viewshed-Sensitive Road Design and Location

Roads in the Area of Primary Concern should be designed to retain as much of the existing natural landform as possible and minimize grading, forest loss, and excessive cut and fill of the existing topography. Hillside grading should be kept to the minimum required to ensure public safety. Efforts should be made to align new road corridors perpendicular to, rather than along, the plain of the historic view from Mount Vernon. Roads that are not buffered by trees or those that are directly in line with the view angle from Mount Vernon create greater visual impact. Where possible, roads should be located adjacent to existing forest rather than across open fields to be better screened and to avoid bisecting farmland and open space. Reducing the actual paved width of a road to required minimums reduces road costs and helps protect water quality by reducing imperviousness and the thermal impacts of stormwater runoff to receiving streams. The orientation of streets parallel or perpendicular to the viewshed has significant impacts.

Conclusion

The creation of an overlay zone that delineates the Area of Primary Concern in Prince George's County for protection and sets consistent design and siting standards is the best strategy to protect not only the historic view from Mount Vernon (the Area of Primary Concern) but also the unique rural and historic character of the Accokeek and Piscataway communities. In order to implement the overlay zone, the Prince George's County Zoning Ordinance and subdivision regulations will need to be amended to define the Area of Primary Concern's boundary and establish regulations to guide new development in the district. All plans and applications for building and grading permits for new structures and architectural modifications in the Area of Primary Concern will need to comply with the overlay zone regulations.

The overlay zone will address existing gaps in environmental regulations to strengthen current protections for the Area of Primary Concern. Since 1991, for the protection of the Area of Primary Concern, the Environmental Planning Section has been reviewing the tree cover issues addressed in the Woodland and Wildlife Habitat Conservation Ordinance. The focus of the ordinance, however, is the protection of sensitive environmental features and woodland conservation issues and not viewshed protection specifically. Environmental Planning reviews have been supported by the Community Planning Division, commenting on the character of the development and site design. These have mainly been individual assessments

of each site as it has come up for review. The overlay zone will publicize and follow specific standards so that new development complementing the viewshed can be promoted, and the process will be transparent for all parties interested in development in this area.

A two-step process is envisioned: an initial review to determine any potential problem followed by a limited detailed site plan, if required, to address visual impacts. This should significantly streamline the review process and offer an option for those wishing to build to submit plans early, so that potential impacts can be captured, and have plans revised before significant investment to mitigate or alleviate any potential impact occurs.

In reviewing the studies and plans that have been done for this area of the county and its historic communities, and in meeting with the community members as part of our community outreach for this project, it has become clear that many residents of the Area of Primary Concern have significant pride and interest in preserving and celebrating the substantial historic, cultural, and environmental assets. It is hoped that this viewshed protection project may become a key step in a larger effort to accomplish this goal. While not preventing development, the overlay zone will provide several benefits to Prince George's County including:

- Allowing the county to address the needs of the Area of Primary Concern without inappropriately affecting any other area of the county.
- Helping protect environmental resources that provide ecological functions and lend to the area's rural character and visual appeal.
- Serving as an important tool to modify subdivision layouts and street alignments.
- Fostering a cultural landscape area in southern Prince George's County.
- Boosting future heritage tourism in southern Prince George's County by increasing opportunities for economic growth through capitalizing on links between Mount Vernon and southern Prince George's County.
- Helping to promote quality contextual development that is compatible with the character of its surroundings and protects the important historic viewshed, one of the nation's most significant historic landmarks.
- Maximizing the protection of ridgelines, steep slopes, and associated sensitive areas from the impacts of development.
- Helping increase homeowner property values; research shows that house values rise with proximity to parkland, mature forest, or other green space.
- Strengthening efforts to minimize development's footprint on the natural landscape especially in sensitive areas.

- Helping maximize forest interior dwelling species' habitats.
- Providing an opportunity for tricounty collaboration on protecting a national resource.

APPENDIX 1

Moyaone Reserve Scenic Easements Deed Restrictions (www.moyaone.org)

“Details may vary from property to property. The restrictions hereby imposed upon the use of the within described lands, and the acts which the fee simple owners thereof covenant to do and refrain from doing upon their said lands in connection therewith, are and shall be as follows:

“1. The land shall not be used for any professional or commercial activities except such as can be and are in fact conducted from a residential dwelling without alteration of the dwelling.

“2. No trailer shall be used on the land as a substitute for a residential building or other structure except on a temporary basis, not to exceed one year.

“3. The lands shall not be used as a site for any of the following: airports, hotels, taverns, dancehalls, apartment houses, flats, boarding homes, cemeteries, schools, nurseries, golf courses, hospitals, churches, sand, gravel or clay pits, sawmills, skeet or golf driving ranges, commercial swimming pools, tourist homes or cabins, trailer camps, entertainment centers, dumps, junkyards, greenhouses not attached to dwellings. Nothing herein, however, shall be deemed to prohibit the use of residential dwellings for purposes which can be and are in fact conducted therein without alteration of the dwelling.

“4. The land shall not be used as a site for any major public utilities’ installations such as electric generating plants, electric power substations, high tension electric power transmission lines, gas generating plants, gas storage tanks, water storage tanks or reservoirs, sewage treatment plants, microwave relay stations, or telephone exchanges. Nothing herein shall, however, be deemed to prevent the construction or maintenance on, over, or under the land of facilities usual to a residential neighborhood such as telephone and electric lines and water mains.

“5. No advertising signs or billboards shall be displayed or placed upon the land, with the exception of professional name plates and signs not larger than two square feet advertising home occupations or products or the sale or lease of the land.

“6. No mining or industrial activity shall be conducted on the land.

“7. No part of any of the lands is to sold or leased in lots smaller than five acres, or otherwise conveyed or divided into lots smaller than five acres.

“8. No building shall be erected, altered, placed or permitted to be built or remain on the said lands, except that on each five-acre parcel thereof there is permitted to be one detached single dwelling and such guesthouse, garage, stable or other outbuildings which may be required for the need of the owner or occupant of such residence. In no case is any building to be constructed on the lands described herein which, when completed, is to be used for any of the purposes which are expressly prohibited in this instrument.

“9. No tree larger than six inches in diameter and thirty feet in height shall be cut down without the written permission of the Secretary of the Interior or his authorized representative.

“Plans for the removal of the trees for the clearing of homesites shall be submitted to the Secretary of the Interior or his designated representative for approval. In passing upon such plans, the Secretary of the Interior or his designated representative shall take in to consideration not only the needs of the landowner, but also the extent of clearing around similar homesites in the vicinity.

“Permission need not be obtained for the removal of trees by or upon advice of the appropriate utility company or other organization for the purpose of protecting utility lines or water or sewer mains. Likewise, permission need not be obtained for removal of dead, diseased, or injured trees when such removal is necessary for reasons of safety.

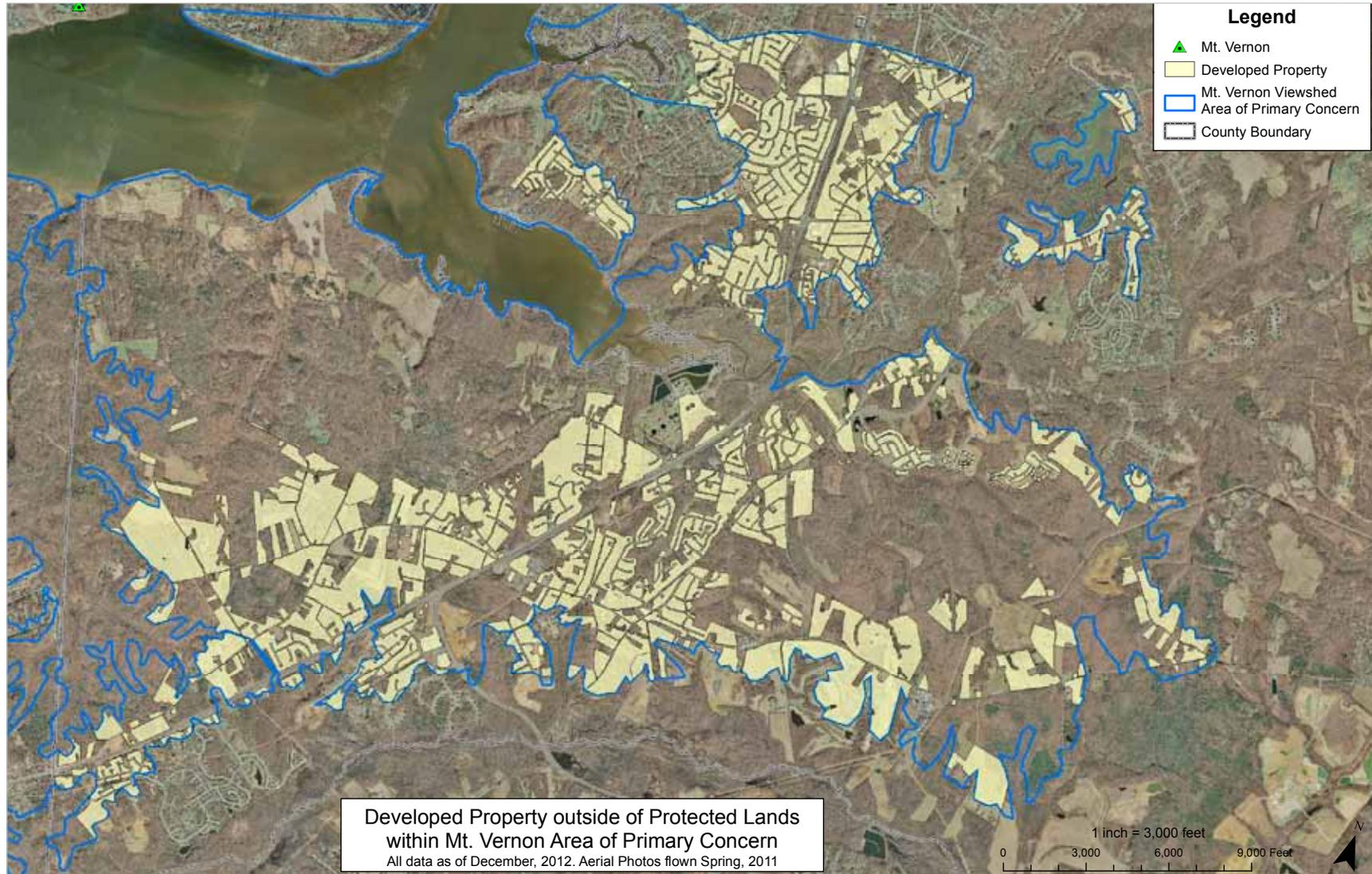
“10. Approval of a requested action shall be deemed to have been granted if the Secretary of the Interior or his designated representative has not responded to a written request within thirty days.

“11. No dump, of ashes, trash or any unsightly offensive material shall be placed upon the land except that in eroding areas of a drainage system where surface water runoff is destroying the natural ground cover, suitable heavy fill may be so placed as to control and prevent further erosion, provided said fill is covered by arable soil or humus.”

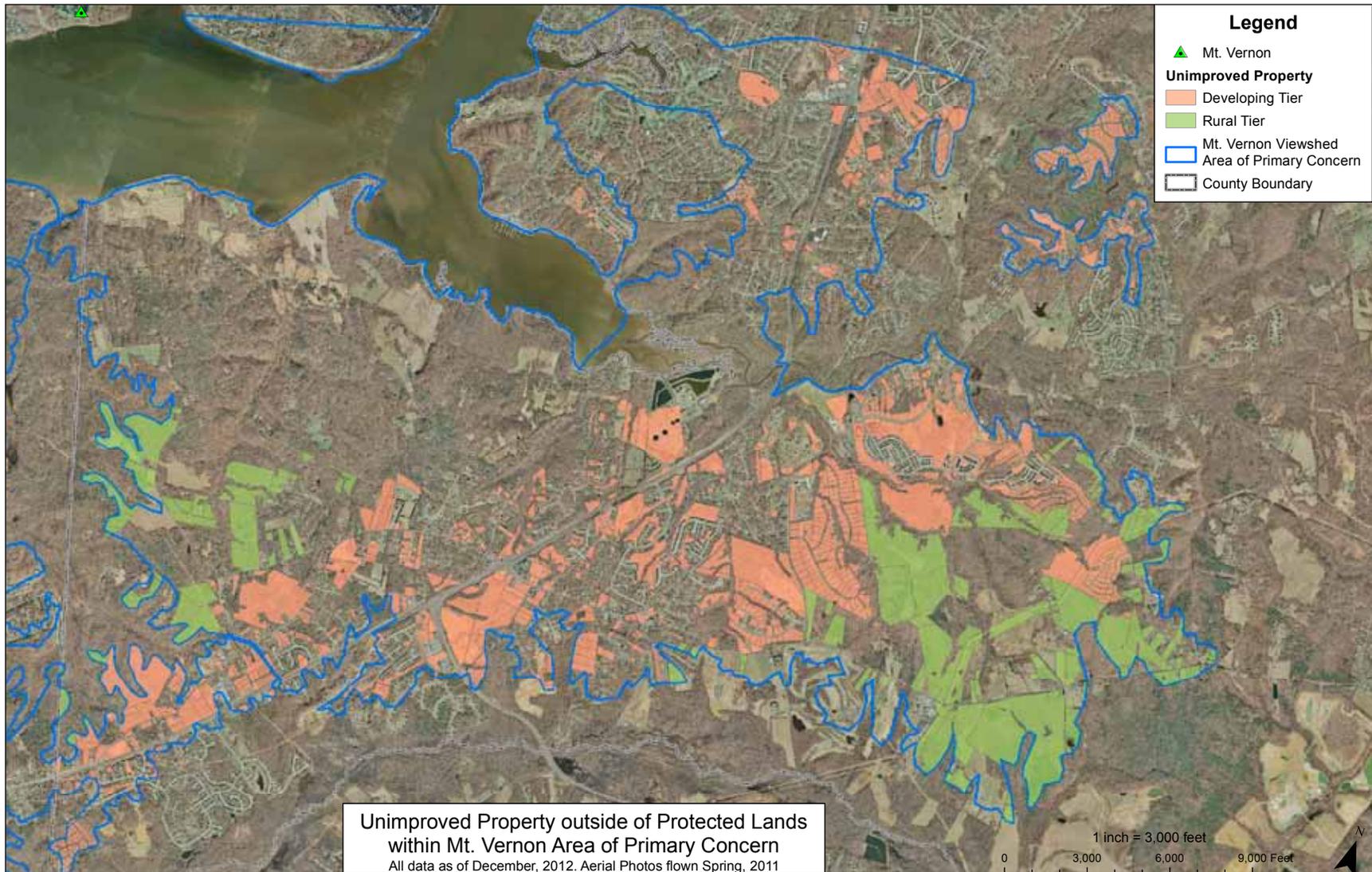
APPENDIX 2

Area of Primary Concern Maps

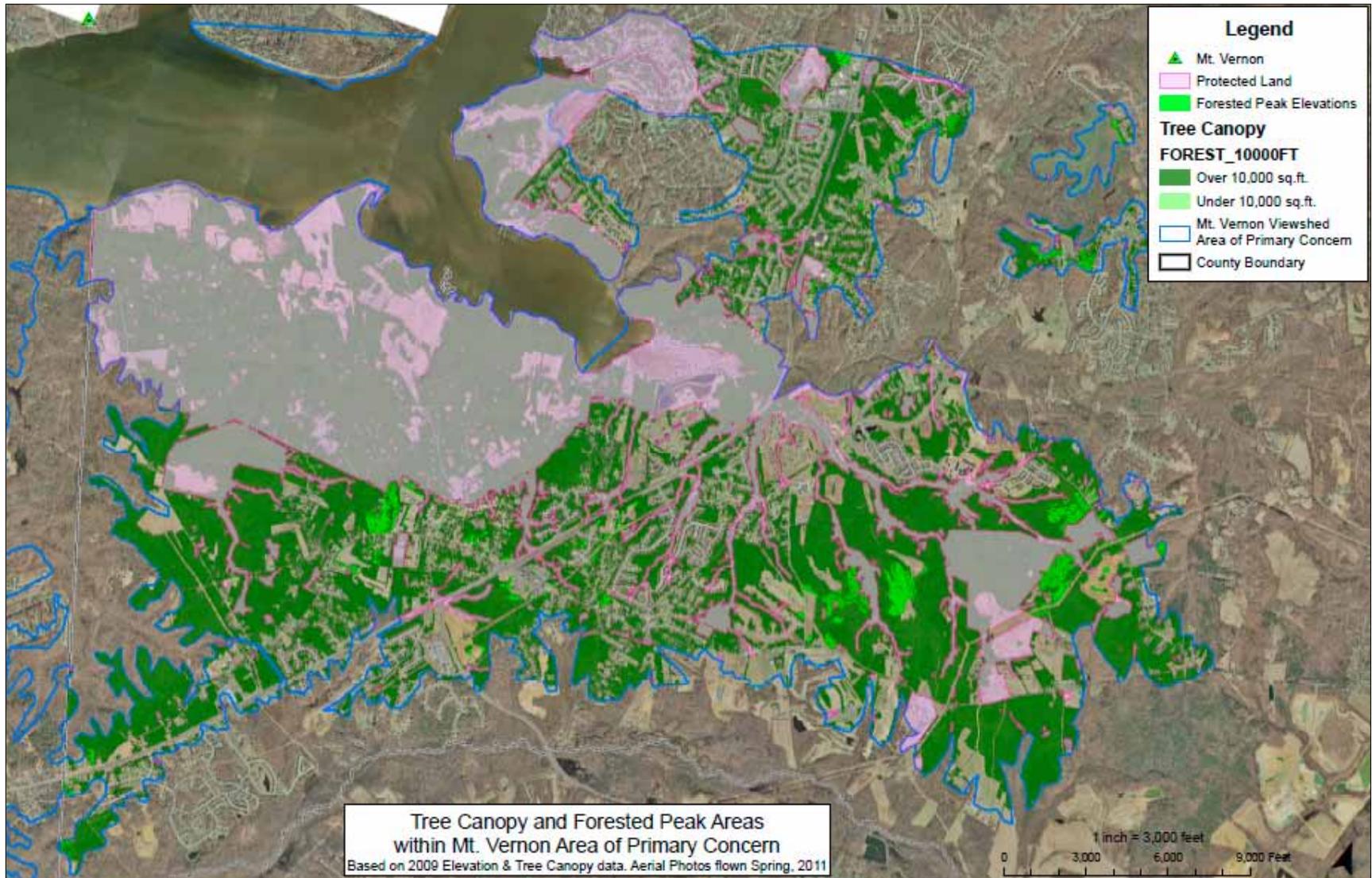
Map 4. Area of Primary Concern Developed Properties outside of Protected Lands



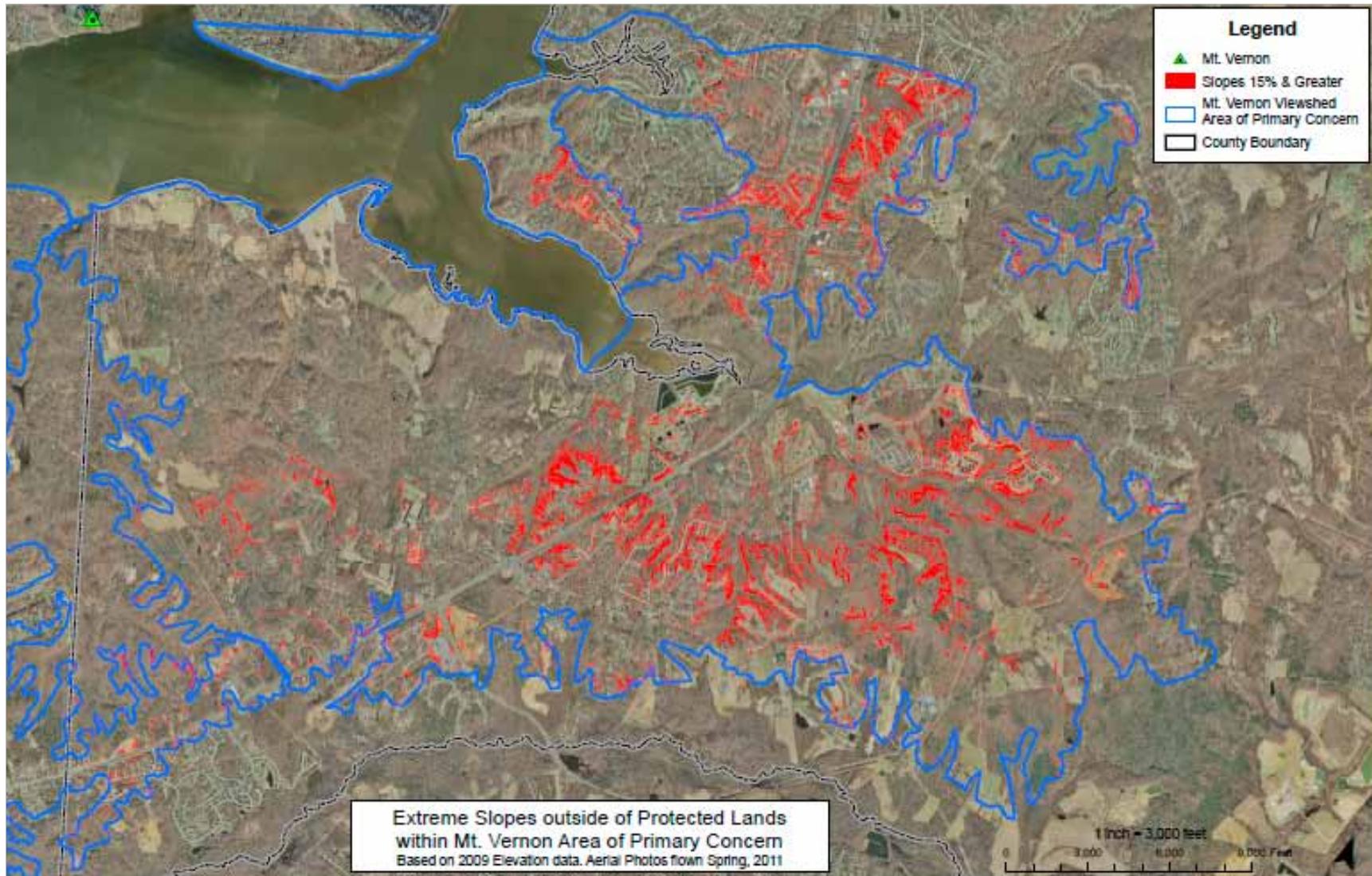
Map 5. Area of Primary Concern Unimproved Properties (i.e., development value under \$15,000) outside of Protected Lands



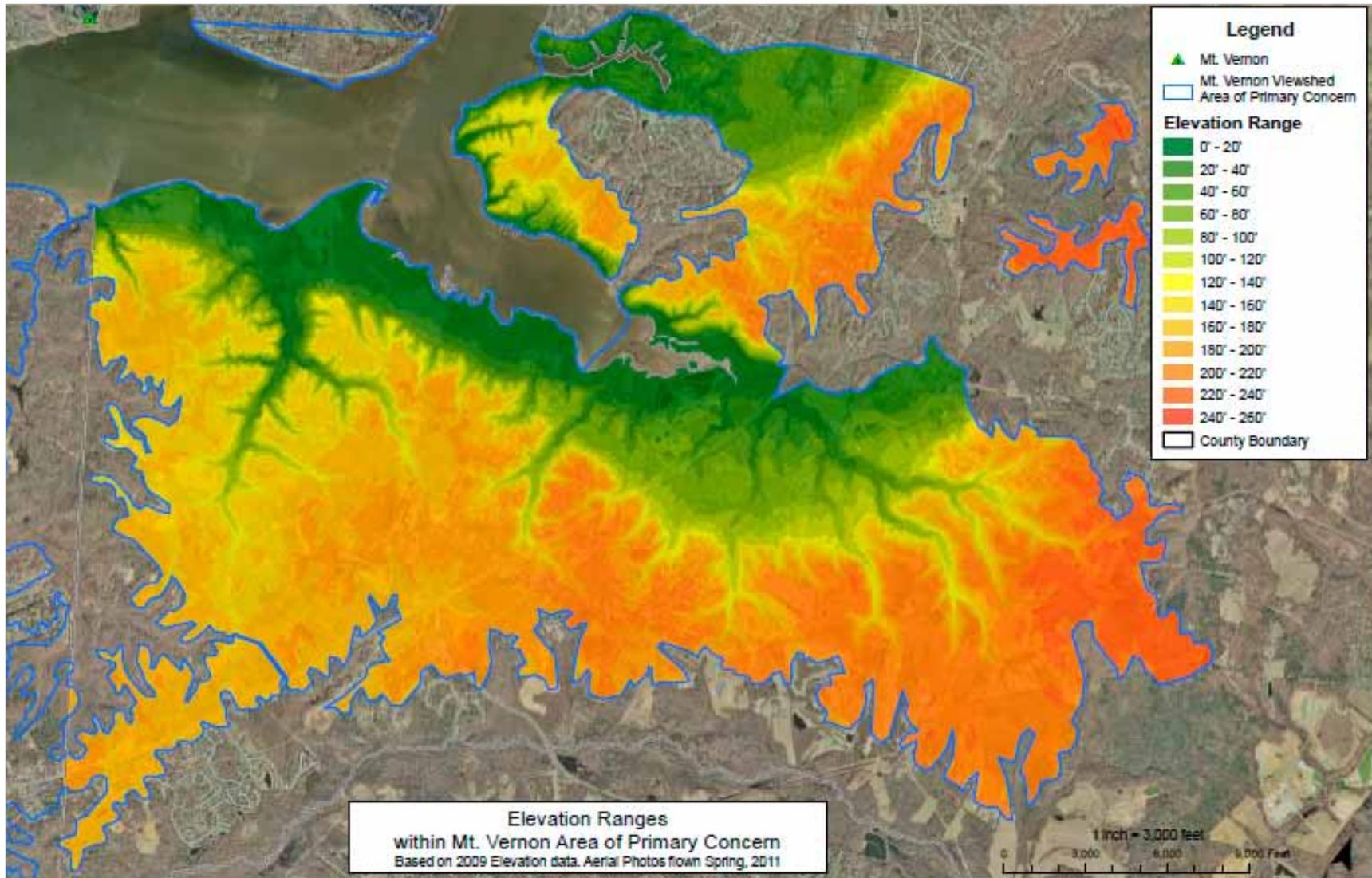
Map 6. Area of Primary Concern Tree Canopy outside of Protected Lands



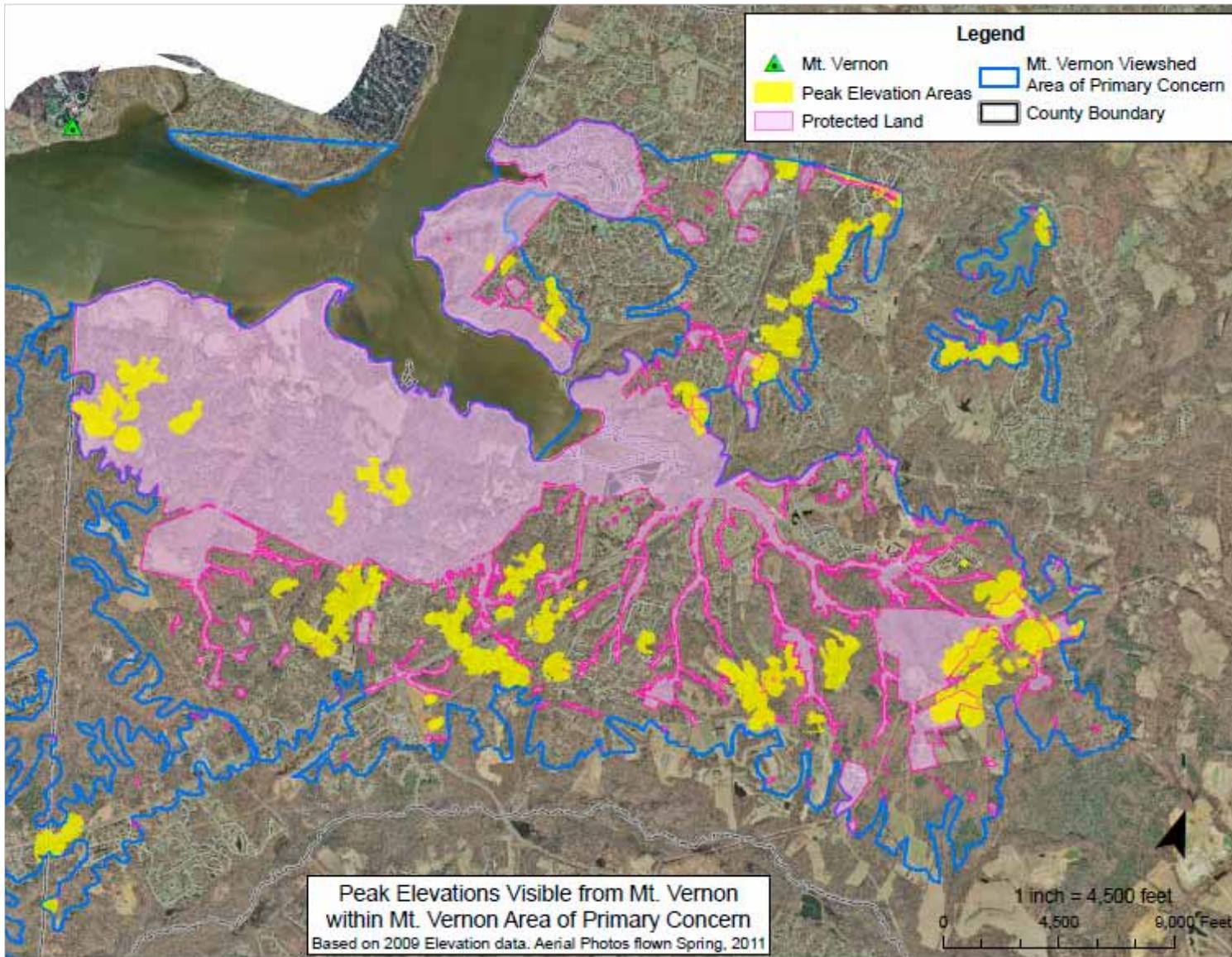
Map 7. Steep and Severe Slopes in the Area of Primary Concern outside of Protected Lands



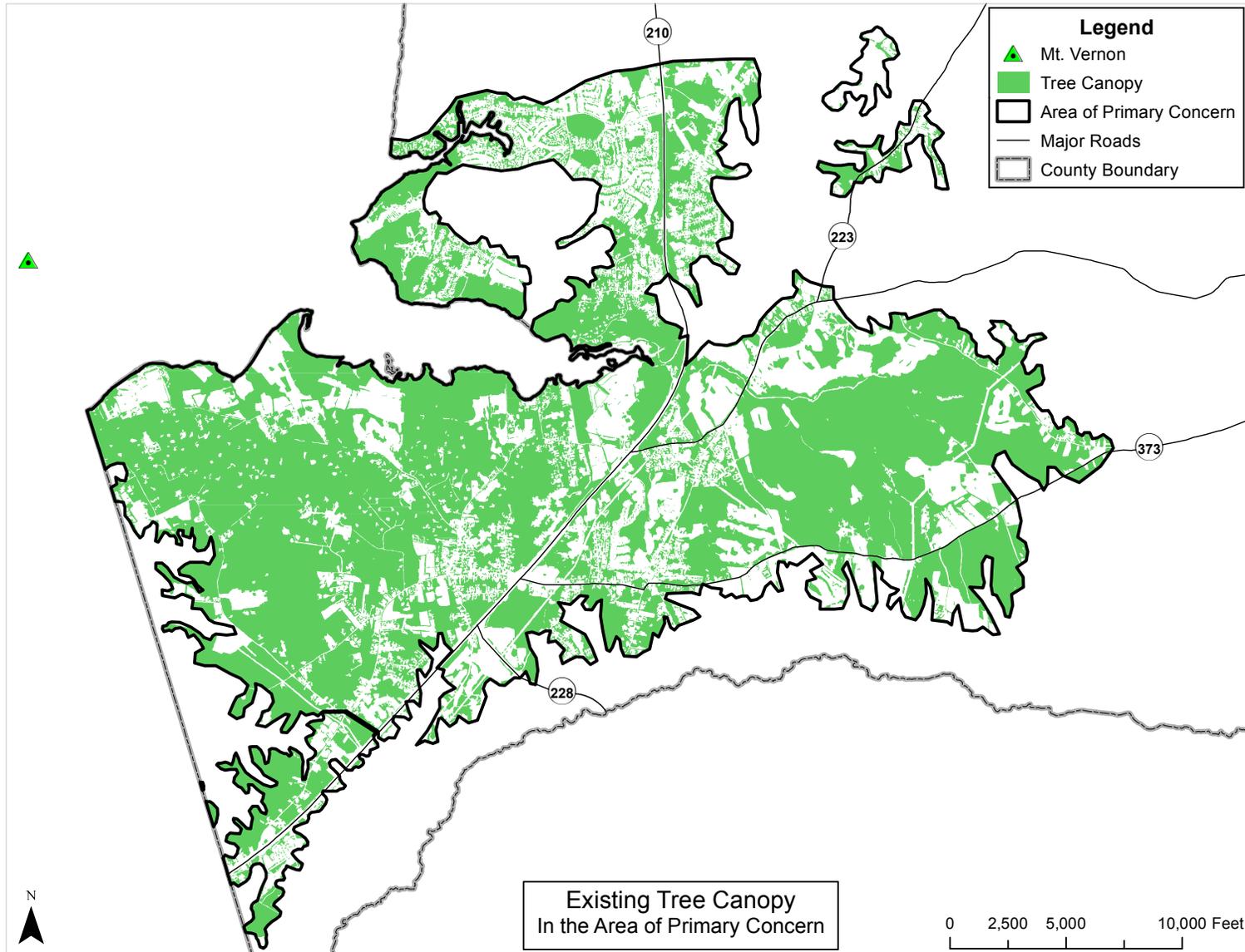
Map 8. Elevation Ranges within the Area of Primary Concern



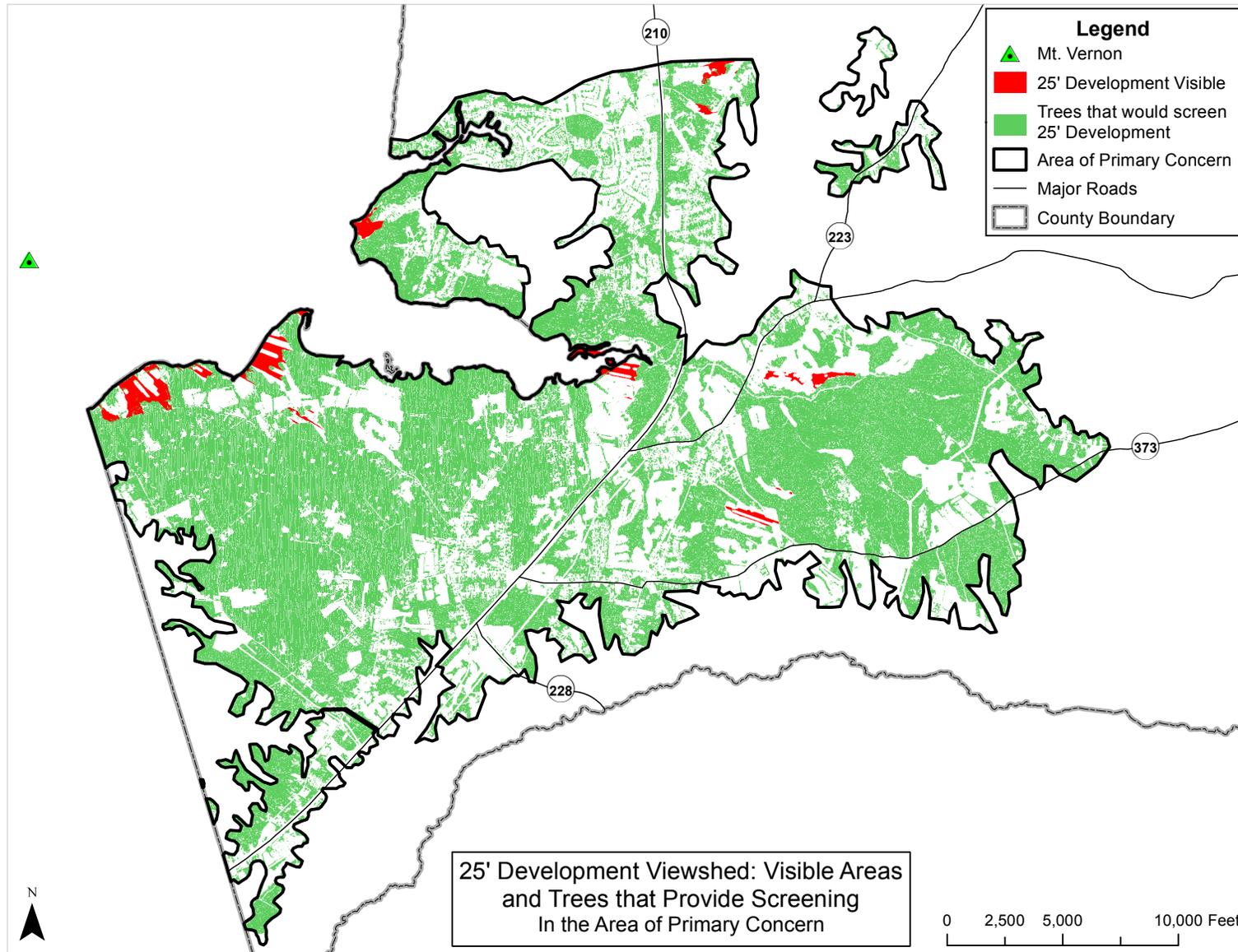
Map 9. Area of Primary Concern Peak Elevations (high points) Visible from Mount Vernon



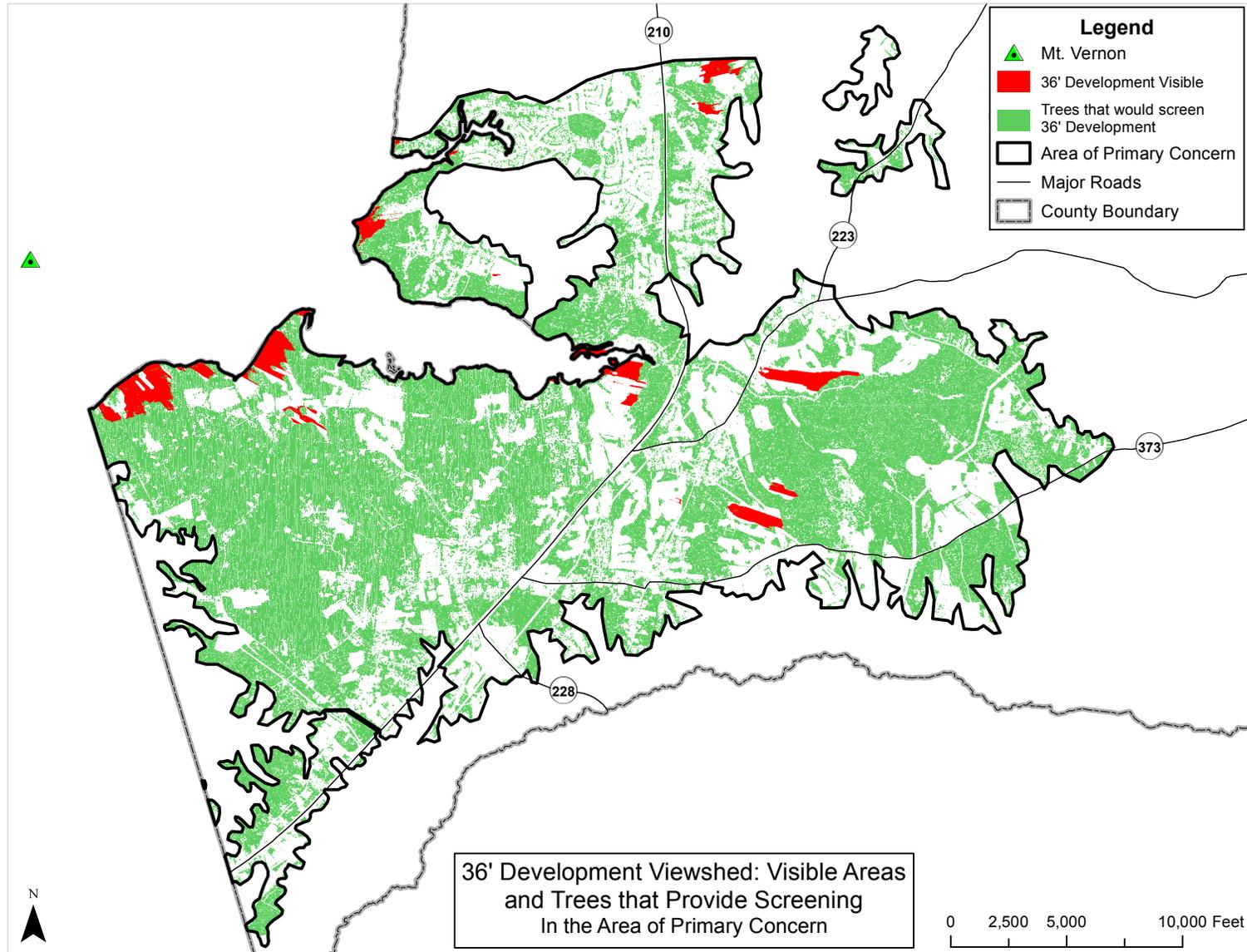
Map 10. Total tree cover, Area of Primary Concern



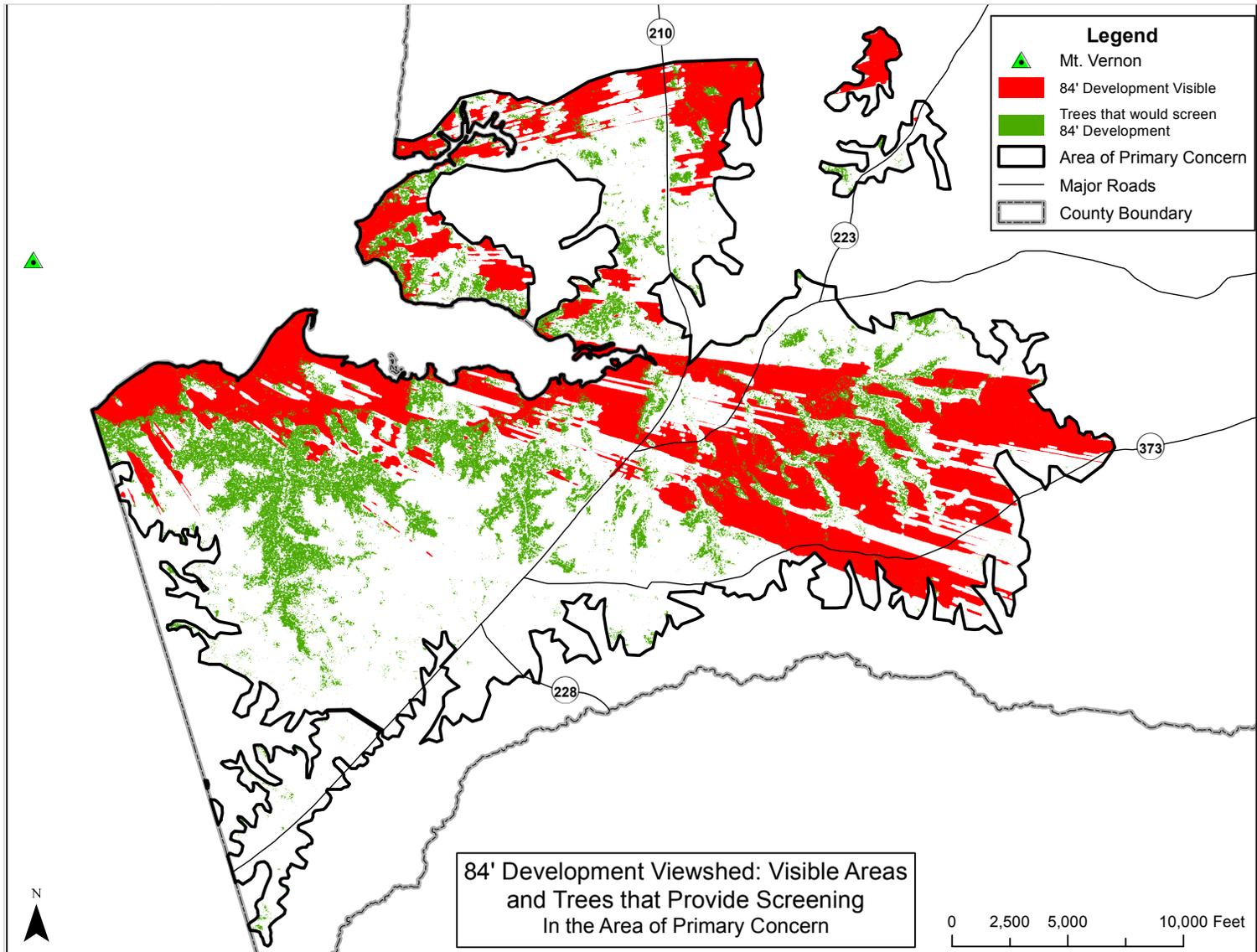
Map 11. Tree Cover Screening Existing or Capable of Screening New Single-Family Development (25-foot building height) in the Area of Primary Concern



Map 12. Tree Cover Screening Existing or Capable of Screening New Townhouse Development (36-foot building height) in the Area of Primary Concern



Map 13. Tree Cover Screening Existing or Capable of Screening New High-Rise Residential or Commercial Development (84-foot building height) in the Area of Primary Concern





Conserving Significant Cultural Landscapes



The Maryland-National Capital Park and Planning Commission
14741 Governor Oden Bowie Drive, Upper Marlboro, MD 20772
www.pgplanning.org • 301-952-4225 (voice) • 301-952-4366 (TTY)