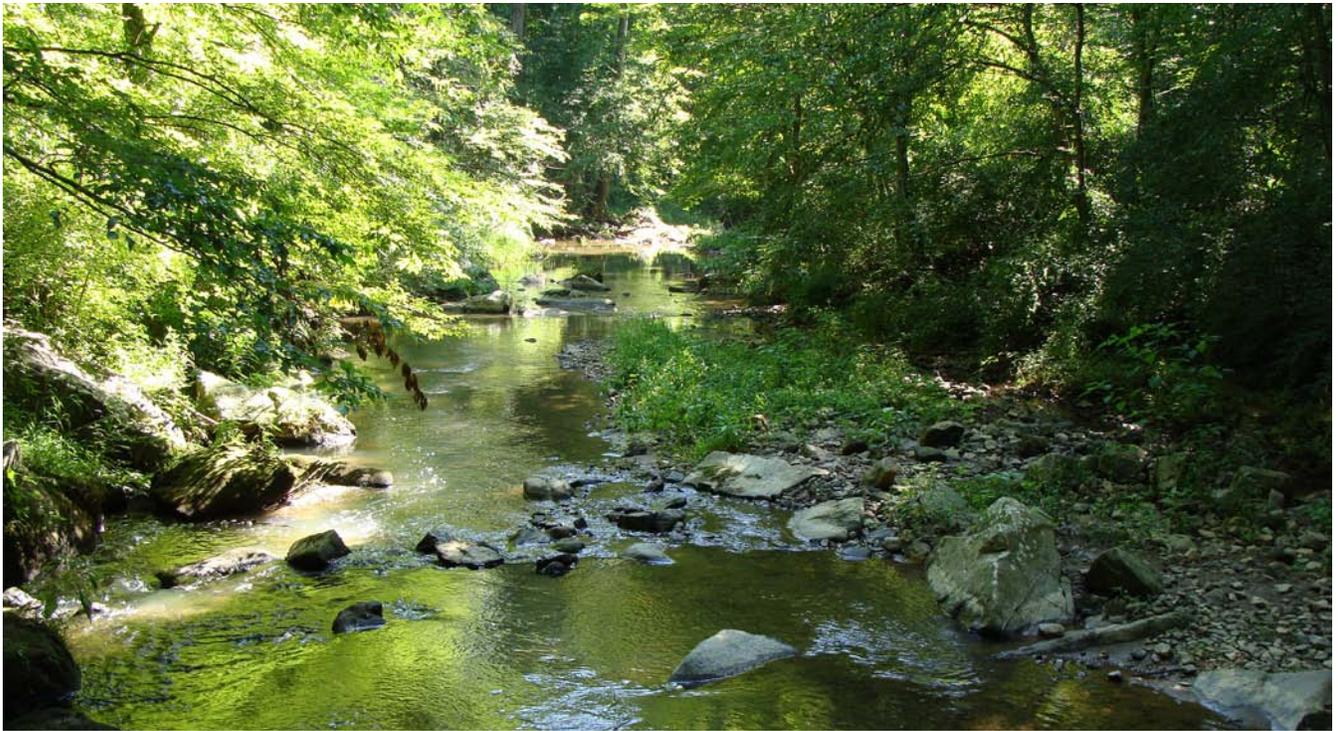


Chapter 5: Natural Resource Conservation



CHAPTER FIVE — NATURAL RESOURCE CONSERVATION

Chapter Five identifies State goals and Howard County's goals for conserving natural resources. The programs and techniques Howard County uses to attain its natural resource conservation goals are then identified and evaluated. Where appropriate, recommendations are included on how to protect more of Howard County's unique natural environment.

State Goals for Natural Resource Conservation

Howard County endorses and works locally to implement the State of Maryland's vision and goals for conserving natural resources. These visions are identified below.

Maryland's Vision for Environmental Protection: Land and water resources, including the Chesapeake and coastal bays, are carefully managed to restore and maintain healthy air and water, natural systems and living resources.

Maryland's Vision for Natural Resource Conservation: Waterways, forests, agricultural areas, open space, natural systems, and scenic areas are conserved.

Related State goals, according to the Maryland Departments of Planning and Natural Resources, including the following:

1. Identify, protect, and restore lands and waterways in Maryland that support important natural resources and ecological functions, through combined use of the following techniques:
 - Public land acquisition and stewardship;
 - Preservation and stewardship on private lands through easements and assistance; and
 - Local land use management plans and procedures that conserve natural resources and environmentally sensitive areas and minimize impacts to resource lands when development occurs.
2. Focus conservation and restoration activities on priority areas within the statewide green infrastructure.
3. Develop a more comprehensive inventory of natural resource lands and environmentally sensitive areas to assist State and local implementation programs. Accomplish this by synthesizing local inventories with the Maryland Department of Natural Resources' inventory of green infrastructure in each county.

The 2012 Howard County Land Preservation and Recreation Plan

4. Assess the combined ability of State and local programs to:
 - Expand and connect forests, farmlands, and other natural lands as a network of contiguous green infrastructure.
 - Protect critical terrestrial and aquatic habitats, biological communities and populations.
 - Manage watersheds in ways that protect, conserve and restore stream corridors, riparian forest buffers, wetlands, floodplains and aquifer recharge areas and their associated hydrologic and water quality functions.
 - Support a productive forest land base and forest resource industry, emphasizing economic viability of privately owned forest land.
5. Establish measurable objectives for natural resource conservation and an integrated State and local strategy to achieve them through State and local implementation programs.
6. Preserve the cultural and economic value of natural resource lands.
7. Encourage private and public economic activities, such as eco-tourism and natural resource-based outdoor recreation, to support long-term conservation objectives.

Howard County's Goals for Natural Resource Conservation

Howard County's goals for protecting the environment and conserving natural resources are spelled out in PlanHoward 2030. These goals are listed below:

- Protect natural resources
- Restore natural resources
- Connect protected natural areas in a comprehensive green infrastructure network
- Encourage resource conservation

In PlanHoward 2030, these goals are augmented with many recommended policies and actions pertaining to environmental stewardship, stream and wetland protection, steep slope and erodible soils conservation, reservoir protection, stream valley restoration, and woodland conservation. Related topics include enhancing wildlife habitat, preserving more open space, improving subdivision design, and conservation of energy and mineral resources.

Howard County is also committed to working with the State of Maryland to help carry out State goals for preservation of green infrastructure. Howard County's land acquisition strategies help

The 2012 Howard County Land Preservation and Recreation Plan

further the green infrastructure concept by setting aside land along major preservation corridors, including large regional waterways where State-endorsed greenways are planned. The County is working on its own Green Infrastructure Network Plan to set priorities for resource conservation. The County system is well-aligned with the State system but there are some areas where the two systems do not fully align because development has eliminated or degraded specific natural areas.

The 2012 Land Preservation, Recreation and Parks Plan endorses the environmental protection and resource conservation goals identified in the PlanHoward 2030, combined with the additional goals stated below:

- Encourage individual environmental stewardship.
- Ensure the environmental integrity of rivers, streams and wetlands.
- Safeguard the environmental integrity of the Patuxent reservoirs.
- Restore and protect stream valley environments.
- Improve stormwater management at park sites with alternative control measures such as bio-retention, water gardens, pervious parking surfaces, etc.
- Create, protect and restore woodlands, meadows and other native plant communities.
- Enhance protection of rare, threatened and endangered species.
- Meet County-wide green space needs.
- Secure better protection of environmental and landscape resources within new developments.
- Promote the use of energy conscious planning and design, and secure the environmental benefits of energy conservation, including a reduction in air pollution.
- Incorporate environmentally sensitive site development and property management practices into County activities.
- Balance mineral extraction with other land uses.
- Increase public awareness (children and adults) and understanding of our natural resources.
- Increase public awareness and understanding of responsible conservation.

The 2012 Howard County Land Preservation and Recreation Plan

- Utilize the Robinson Nature Center as a base for environmental education in the County.
- Examine the feasibility of an overnight environmental education facility in cooperation with the Department of Education, possibly at the Robinson Nature Center.
- Work with County Department of Public Works to incorporate the design and development of wildlife tunnels on County road and bridge projects.
- Promote sound natural resource stewardship through nature center programs and activities and increased participation in our environmental education programs.
- Continue to research, evaluate and expand our Geographic Information Systems (GIS) capabilities (mapping and data management) which improves the Department's ability to analyze and manage its operations, and enhances productivity.
- Remain committed to the Green Infrastructure concept as an important way to help conserve natural resources.

Comparing State and County Goals

Howard County's goals for natural resource conservation complement and are consistent with the State's goals in this same area of focus. Among other similarities, both levels of government recognize that: a) effective approaches must encompass both stronger regulations and more land acquisition; b) conservation needs extend across a range of environmentally sensitive physiographic features; and c) cooperation between state government and county government will continue to be important. The importance of comprehensive resource inventories in support of conservation activities is also noted in both the State's goals and the County's goals.

Implicitly, both the State's goals and the County's goals also recognize that individual natural resources are ecologically interconnected. For example, avoiding the clear cutting of trees on steeply sloped land not only protects scenic resources and wildlife habitat, but also helps to minimize soil erosion and subsequent siltation of nearby waterways.

Natural Resource Conservation In Howard County – Organizational Background

Efforts to conserve natural resources in the County are the responsibility of several County agencies, primarily the Departments of Planning and Zoning, Recreation and Parks, Public Works, the Office of Environmental Sustainability and the Howard Soil Conservation District.

Relevant zoning regulations, subdivision and land development regulations, and comprehensive planning initiatives (including those related to the State’s Sensitive Areas requirements) originate at the Department of Planning and Zoning. Within the Department of Planning and Zoning, the Resource Conservation Division focuses on formulating and implementing plans that foster conservation of natural resources. The Land Development Division focuses on enforcing development regulations designed to protect sensitive resources and protect open space.

The Natural Resources Division of the Department of Recreation and Parks oversees environmental conservation activities within the County parks and other County land holdings identified in Chapter Three of this Plan. The mission of the Natural Resource Division is to manage these areas in a way that conserves their ecological integrity while still making them available to the public for recreational and educational use. The Natural Resource Division is comprised of four management areas:

- Natural Resource Management – provides technical assistance and planning in the areas of resource conservation, habitat protection, trails, and land acquisition.
- Natural Resource Operations – implements conservation and natural resource management policies and programs including: regulation enforcement, forest conservation and open space dedication inspections, land acceptance and forest conservation planting programs including: Private Forest Conservation Establishment, Public Property Planting, Stream Re-leaf and Plant It Green programs. The section also conducts public outreach programs related to Parkland and Natural Resources Rules and Regulations, Open Space Management and Conservation efforts.
- Middle Patuxent Environmental Area – manages the County’s largest environmental area in conjunction with the Middle Patuxent Environmental Foundation.
- Deer Management – manages the White-tailed Deer population on County lands and provides technical assistance and education on deer management countywide.

The Department of Public Works, Stormwater Management Division (SWM), is responsible for inspecting and maintaining the County’s stormwater management system. The SWM Division implements stormwater management facility retrofits to improve water quality treatment,

The 2012 Howard County Land Preservation and Recreation Plan

develops watershed management plans, conducts stream corridor assessments and biological water quality monitoring, implements stream channel and riparian buffer restoration projects, and conducts public outreach and education to increase individual stewardship. These activities are done as part of the NPDES permit requirements to improve the quality of water discharging from the SWM system. The Department of Public Works Construction Inspection Division is responsible for sediment and erosion control inspection during the construction process.

For planning purposes, the County has good mapped information for streams, floodplains, forests, soils and steep slopes, although there is minimal information available on forest type and quality. The County does not have mapped wetlands information but uses the State information for the County. Information on these resources is generated on a parcel-by-parcel basis through the development review process for regulatory protection, but is not incorporated into countywide mapping. The State information provided on threatened and endangered species is very general and not useful for site-level planning or protection purposes, so questions on these species are directed to DNR. The County also has information on the development potential of parcels to help guide its decision making on greenways, green infrastructure and other initiatives.

The Howard Soil Conservation District helps landowners make wise land use decisions by promoting conservation practices that control erosion and improve water quality. The Howard Soil Conservation District is solely authorized to review sediment and erosion control plans and small pond designs for all proposed developments. They also participate on Howard County's weekly subdivision Review Committee with other state and county agencies.

The Soil Conservation District provides direct one-on-one assistance to homeowners, community associations and county departments with natural resource problems and questions.

The newest County entity concerned with environmental stewardship and sustainability is the Office of Environmental Sustainability. The Office coordinates with the Environmental Sustainability Board, which is a citizen advisory board formed in 2007. The Board assists in the implementation of the County's environmental agenda, providing both advice and review. Board members include experts in energy, air / water quality, environmental governance, community outreach and education, transit, green building, and environmental health.

Howard County's Implementation Programs For Natural Resource Conservation

Howard County's natural resource conservation activities focus primarily on trying to protect and restore the following natural features:

- Streams, wetlands, and 100-year floodplains
- Stream corridors, stream valleys and Patuxent River Reservoirs
- Steep slopes and erodible soils
- Woodlands and native plant/animal communities
- Rare, threatened and endangered species

This list includes most of the ecological resources targeted for protection under Sensitive Areas requirements associated with Maryland's 1992 Planning Act, as amended, including streams, wetlands and their buffers, 100-year floodplains, steep slopes, habitat for rare, threatened, and endangered species, and forest lands intended for resource protection or conservation. An additional resource in the Sensitive Areas requirements, agricultural lands intended for resource protection or conservation, is discussed in the previous chapter.

More generally, Howard County uses environmental education and other forms of public outreach to heighten local awareness about environmental issues and foster a greater sense of environmental responsibility in the County.

The following information provides an overview of the programs and techniques Howard County uses to help conserve the types of natural features identified above. For each type of natural feature, comments are then provided on the strengths and weaknesses of the County's approach to date. Lastly, program development strategies are identified. These strategies have a two-fold purpose: a) to note how Howard County intends to carry its conservation efforts forward; and b) to recommend, where warranted, how Howard County can refine and enhance its conservation initiatives. This format mirrors the State Local Land Preservation, Parks and Recreation Plan Guidelines, which call for: a) identifying the counties' conservation programs; b) evaluating these programs; and c) describing the steps the counties are taking to build on strengths and overcome weaknesses in their approach to conservation. In the concluding sections of this chapter, Howard County's recreational greenway planning and green infrastructure initiatives are examined in the same manner.

Streams, Wetlands, and 100-Year Floodplains

The County's Approach

Howard County adopted regulations in 1988 that mandate undisturbed streamside buffers 75 feet wide along perennial streams within residential zoning districts. In 1992, the County added regulations to require undisturbed streamside buffers 50 feet wide along intermittent streams and along perennial streams in non-residential zoning districts.

Howard County's subdivision and land development ordinance currently requires 100-foot buffers for Use III and Use IV streams (as classified by the State). The State considers the upper reaches of the Patapsco River and the Patuxent River and their upper tributaries as Use III waters, which are waters that support natural trout propagation. Other upper portions of the Patuxent River and the Patapsco River's main stem are designated as Use IV, which are waters protected for recreational trout stocking. Related County amendments prohibit the inclusion of streams and stream buffers within residential lots of less than 10 acres. Howard County's Water Resource Element (a part of the County's comprehensive plan) calls for strengthening these buffer requirements.

Howard County requires a 25-foot undisturbed buffer around non-tidal wetlands. In addition, no wetlands or wetland buffers can be part of residential lots of less than 10 acres.

Most of these wetlands also have a measure of additional protection because they are located within 100-year floodplains. Howard County prohibits development within 100-year floodplains and prohibits the inclusion of 100-year floodplain area on residential lots of less than 10 acres. The various resources that cannot be included on individual lots less than 10 acres – stream buffers, wetlands, wetland buffers, and floodplains – must be located within open space or on preservation parcels.

Evaluation and Program Development Strategies

While Howard County has strong streamside and wetland buffer regulations, Howard County's Water Resources Element (a part of the County comprehensive plan) calls for making these safeguards even stronger. As noted above, floodplain protection measures have long been in place. However, work remains to be done on sustaining water quality in streams and on restoring the health of streams whose water quality has been degraded. Specific initiatives are discussed in the next section, which addresses the problem more comprehensively by identifying actions needed on a watershed basis. While streamside and wetland buffers are in place, Howard County needs to continue its watershed-level planning (and related restoration activities) to make more progress on maintaining and improving stream water quality.

Stream Valleys and Patuxent River Reservoirs

The County's Approach

Planning at the watershed level recognizes that the use of land and the habitat conditions in areas that drain into a waterway affect the health of that waterway. The multi-state effort to restore the Chesapeake Bay and its tributaries continues to stimulate watershed planning in Howard County. All land in Howard County drains to either the Patuxent River or the Patapsco River, both of which flow into the Chesapeake Bay. The County is a member of the Patuxent River Commission that is working to coordinate Phase II Water Improvement Program planning efforts in the Patuxent River watershed.

Howard County has made significant progress in preparing watershed plans for priority watersheds:

- Major watershed studies were completed for the Little Patuxent River in 2002 and the North Branch Patapsco River in 2006.
- For more detailed watershed planning efforts, the County has been divided into sixty-two subwatersheds. In 2001, these subwatersheds were originally analyzed and ranked to identify the priority subwatersheds for future study and restoration, as part of compliance with the County's National Pollutant Discharge Elimination System stormwater discharge permit.
- Plans for two of the subwatersheds, Wilde Lake and Centennial Lake (within the Little Patuxent River watershed), were completed in September 2005. Subwatershed studies for Rockburn Branch and Sucker Branch were completed in 2006, as part of the Lower Patapsco River watershed study. An additional study in 2009 evaluated the five subwatersheds in the headwaters area of the Little Patuxent River.
- In addition, the Columbia Association has developed watershed plans for the portions of Columbia in the Little Patuxent Watershed.

Several restoration projects completed by Howard County include:

- West Durham Road (1999)
- Kingscup Court Stream Restoration (2002 / 2003)
- Yellowbell Lane Slope Stabilization (2004)
- The Bowl Pond (2004)
- Columbia Gateway Pond Retrofit (2004)
- St. Johns Woods Pond Retrofit (2005)
- Danmark Drive Pond Retrofit (2006)

The 2012 Howard County Land Preservation and Recreation Plan

- Wilde Lake Stream Restoration – Reach D (2006)
- Ducks Foot Lane Stream Restoration (2006)
- Autumn Harvest Stream Restoration (2006)
- Willowood Way Slope Stabilization (2006)
- Cherry Creek Stream Restoration – Phase 1 (2006)
- Fulton / Haddaway Channel Stabilization (2006 / 2007)
- Farewell Road Stream Restoration (2007)
- Oakland Executive Park Pond Retrofit (2007)
- Rockburn Township Pond Retrofit (2007)
- Brightwood Court Stream Restoration (2008)
- Brookmede Stream Restoration (2008)
- Green Clover Stream Restoration (2008)
- Wilde Lake Middle School Bioretention (2008)
- Burleigh Manor Middle School Bioretention (2008)
- Centennial High School Bioretention (2008)
- Board of Education Headquarters Pond Retrofit (2008)
- Centennial Park Sand Filter (2008)
- ARL Site Channel Retrofit (2009)
- Howard County Center for the Arts Water Quality Project (2009)
- Wesleigh Drive Stream Restoration (2009)
- Tiller Drive Stream Restoration (2009)
- Tall Maple Stream Restoration (2009)
- Brampton Hills Pond Retrofit (2010)
- Cherry Creek Stream Restoration – Phase 2 (2010)
- Baltimore–Washington Industrial Park Stormwater Retrofit (2010)
- Paul Mill Road Stream Restoration (2010)
- Cedar Lane Park – North Entrance Water Quality Retrofit (2010)
- Dorsey Building Parking Lot Water Quality Retrofit (2010)
- Red Hill Branch Rain Garden Program (2010)
- River Hill Shallow Marsh Restoration (2010)
- West Zone Repair Center Pond Retrofit (2010)
- Farmington Court Water Quality Swale (2010)
- Saint John’ Green Pond Retrofit (2011)
- Wilde Lake Stream Restoration – Reach C (2011) “CA”
- Red Hill Way Stream Restoration (2011)
- Old Willow Way Stream Restoration (2011)
- Atholton Park Water Quality Retrofit (2011)
- Stratford Downs Stormwater Retrofit (2011)
- Great Drum Circle Restoration (2011)
- Great Oaks Way Stormwater Retrofit (2011)
- Faulkner Ridge Circle Stream Stabilization (2011)
- LPPSI Stream Mitigation Project – Site A (2011)

The 2012 Howard County Land Preservation and Recreation Plan

- Savage Park Water Quality Enhancement Project (2011)
- Autumn Harvest – Phase 2 Stream Restoration (2011)
- Waverly Woods Stormwater Retrofit (2011)
- Hickory Ridge Village Center Pond Outfall Restoration (2011)
- Mount Hebron High School Stormwater Retrofit (2011)
- High Tech Road Stream Restoration Project (2012)
- Bramhope Lane Stream Restoration Project (2012)
- Meadowbrook Park Stream Restoration (2012)
- Salterforth Place Pond #1 Retrofit (2012)
- Threshfield Court Stream Restoration (2012)

A Stream Re-Leaf Program, begun in 2003, to encourage property owners in the Little Patuxent River watershed to plant trees within stream buffers located on their property has continued and been expanded to a countywide effort.

Stormwater management is another key technique Howard County uses to mitigate the environmental impacts of new development and redevelopment on waterbodies. Since the 1970s, Howard County has required stormwater management to help control runoff, in order to minimize flooding and reduce stream channel erosion. Additional requirements were added in the 1980s to help control the amount of pollutants flowing into waterbodies. In 2001, Howard County became the first county to adopt the Maryland Stormwater Management Regulations that promoted the use of low impact development or environmental site design (ESD). These regulations placed an emphasis on using site design to minimize the generation of stormwater runoff, and treating runoff with a number of smaller facilities to promote stream channel protection and maintain groundwater recharge through infiltration. In 2007, Maryland adopted new stormwater management regulations to require the use of ESD to the maximum extent practicable and to increase stormwater management requirements for redeveloping sites. Howard County adopted these regulations in 2010.

Howard County is a signatory to the 1996 inter-jurisdictional Patuxent Reservoirs Watershed Protection Agreement, along with Prince George's and Montgomery counties, the Washington Suburban Sanitary Commission, the Howard and Montgomery Soil Conservation District, and the Maryland-National Capital Park and Planning Commission. This agreement established a Policy Board and Technical Advisory Committee (TAC) to work together to protect the health of the Patuxent Reservoirs watershed. The Patuxent Reservoirs include the Rocky Gorge Reservoir and the Triadelphia Reservoir, both of which are on the Patuxent River along Howard County's southern boundary. Approximately half of the watershed for these two public water-supply reservoirs lies within Howard County.

The TAC identified six priority resources for protection and restoration within the watershed: the reservoirs and drinking water supply; terrestrial habitat; stream systems; aquatic biota; rural character and landscape; and public awareness and stewardship. The TAC identified the resource

protection issue for each resource, and measures, goals and implementation items to address the issue, along with a time line and responsible partners to accomplish the implementation items.

Evaluation and Program Development Strategy

As described above, Howard County is active in watershed-level planning and in carrying out related restoration measures. The County intends in the immediate future to: a) continue completing watershed plans for its priority watersheds; and b) implementing the recommendations identified in these plans through more stream restoration and related projects. Longer-term goals are to complete watershed plans for all County watersheds and to update these plans regularly.

Howard County currently has inadequate funding for watershed planning and restoration efforts needed to meet Chesapeake Bay cleanup goals specified for nutrients and sediment in the Chesapeake Bay Total Maximum Daily Loads and related watershed implementation plans. Options for future funding should include consideration of a special fund dedicated to watershed management initiatives, as proposed in the County's Water Resources Element.

Howard County will continue to participate in inter-jurisdictional efforts to protect the Patuxent River reservoirs. As called for in the Water Resources Element, future actions to further safeguard these waterbodies should include increasing funding and support for implementation of the Patuxent Reservoirs Priority Resource Protection Program.

Steep Slopes and Erodible Soils

The County's Approach

Howard County contains between 9,000 and 10,000 acres of steeply sloped topography. For planning purposes, these areas are often classified as steep slopes (15% to 25% grade) and very steep slopes (over 25% grade). The soils that cover steep grades are very susceptible to erosion when they are disturbed. Building roads, constructing buildings or clear cutting trees on slopes removes the plant roots that help hold hillside soils in place and result in accelerated levels of soil erosion. These practices can be particularly harmful in stream valleys, where stormwater flows carry eroded soil into nearby waterways. These effects are exacerbated on steeply sloped lands that have highly erodible soils, as defined by the federal Natural Resource Conservation Service.

Since 1989, Howard County has prohibited the disturbance of larger areas of very steep slopes, which are defined as contiguous areas greater than 20,000 square feet, with a slope of 25% or

more. In addition to minimizing erosion, these regulations are designed to help protect the diverse, unique habitats for plant and animal species that steep slopes often provide. Howard County also addresses steep slope and erodible soil protection via its Forest Conservation Manual. This manual identifies areas in excess of 25% grade as priority retention areas, and identifies these areas as well as areas of 15% to 25% grade with highly erodible soils, as priority locations for reforestation and afforestation (the planting of new woodlands).

Evaluation and Program Development Strategy

Howard County recognizes that additional protective measures for steep slopes and erodible soils are desirable. The County is endeavoring to include new measures in its Forest Conservation Manual, which is now being updated. Ideally, the updated manual would add lands of 15% to 25% slope that also have highly erodible soils to the list of areas identified as high priority locations for forest retention.

Woodlands and Native Plant Communities

The County's Approach

Approximately 28% of Howard County (45,464 acres) is in forest cover. In what was a major boost to woodland preservation, the Howard County Forest Conservation Act became effective in 1993. This act established regulations intended to: a) mitigate for forest cleared during development; and b) provide a minimum forest cover on developing sites. The Howard County Department of Planning and Zoning reports a loss of approximately 2,483 acres of forest resulting from land developed between November 1999 and June 2010. To mitigate this loss, approximately 1,051 acres of trees have been planted. In compliance with the Forest Conservation Act, 3,133 acres have been placed under the protection of Forest Conservation Easements. Acreage covered by these easements includes forest retained, forest planted on developing sites and forest planted off-site in connection with development activities.

Through agreements with the Howard County Department of Planning and Zoning, the Howard County Department of Recreation and Parks assumed full responsibility for the enforcement of existing forest conservation easements and the inspection of all post-development forest conservation projects. To date, more than 100 enforcement actions have been taken against violators of the Howard County Forest Conservation Act and nearly 1,300 inspections of post-development forest conservation projects for regulation compliance have been performed to determine compliance with project requirements and development regulations. Initial project compliance since July 2006 has been 47.8% of projects. County regulations require developers to undertake supplemental forest conservation activities and pay additional inspection fees until

The 2012 Howard County Land Preservation and Recreation Plan

projects are determined to be in complete compliance with approved forest conservation plans and agreements.

Since adopting its Forest Conservation Act, Howard County has allowed landowners who cannot accommodate forest mitigation on their developing sites the option of paying a fee to the Department of Planning and Zoning. The Department of Planning and Zoning transfers this fee to the Department of Recreation and Parks to perform the required mitigation. These fees are used to plant trees in areas the County deems most appropriate. The County's first priority is to plant and enhance streamside forest buffers. The Department of Recreation and Parks planted and has managed over 308 acres of forest conservation easements between 1996 and 2011 on public lands. This acreage also provided a forested buffer for over 15 miles of streams. This planting augmented the 59.24 acres of trees that the Department planted prior to the Forest Conservation Act between 1988 and 1995.

Howard County, through the Department of Planning and Zoning and the Department of Recreation and Parks, has created the Private Forest Conservation Establishment (PFCE) program. The PFCE program is designed to create forest conservation easements on private properties. Funding for the program is provided by the Forest Conservation Act.

To be considered for the PFCE program, properties must be ten acres or larger and forest conservation planting sites on these properties must be one acre or larger. Areas under federal or state programs that provide funds for similar tasks are not eligible for this program. Planting on properties that are encumbered by another preservation easement must comply with policy for forest planting on such easements.

Since the first planting in November of 2008, over 35 acres of forest conservation easements have been established under the Private Forest Conservation Program to date, buffering 15,377 feet of stream which will be protected in perpetuity. An additional 36 acres of forest conservation are being incorporated into the program over the next two years.

Howard County's Subdivision and Land Development Regulations prohibit the inclusion of forest conservation easements on private residential lots of less than 10 acres. Consequently these areas must be on permanent open space or preservation parcels that are dedicated to the County, a homeowners association or some other third party.

Evaluation and Program Development Strategy

Howard County's accomplishments in the area of woodland preservation reflect the spirit and intent of the 1991 State legislation that required counties to develop and carry out forest conservation initiatives. To further strengthen and improve the program, Howard County's Forest Conservation Manual, which contains the policies and guidelines for implementing the

The 2012 Howard County Land Preservation and Recreation Plan

County's Forest Conservation Act, is being updated. A revised manual and corresponding changes to the Forest Conservation Act are forthcoming.

The revised Forest Conservation Manual will also focus more attention on the need to retain more forest on-site, to conduct better site preparation and to improve management of newly planted areas, especially regarding the control of invasive exotic plant species.

The County recognizes that despite its Forest Conservation Act, woodlands are still being lost to development. In addition, remaining forests are often fragmented into small disconnected areas, which reduces their value as wildlife habitat. The County's Water Resources Element cites the need to establish and achieve measurable goals for forest cover and riparian forest buffers in all County watersheds. Howard County has completed an aerial photo inventory of forest cover. Related policy initiatives for the County to consider in the future should include the following:

- Initiate a program to establish and protect scrub-shrub and grassland habitat.
- Implement a program to establish and protect wildlife corridors that include forest interior habitat.
- Encourage more use of native species for landscaping in residential and non-residential development.

A natural landscape using native trees and shrubs, and less turf grass, offers environmental benefits over traditional formal landscapes (see U.S. Fish and Wildlife Service BayScapes website at: <http://chesapeakebay.fws.gov/>).

Rare, Threatened, and Endangered Species

The County's Approach

The 2010 Maryland Department of Natural Resources (DNR) list of current and historical rare, threatened and endangered species identifies 59 species within Howard County. Of these 59 species, 13 are animals and 46 are plants. In addition to zoning and development regulations that protect natural features, open space acquisition, and agricultural preservation, all of the following Howard County initiatives help protect habitat for native plants and animals:

- Mandatory streamside buffers, wetland buffers and floodplain restrictions help conserve riparian habitat.
- Stormwater management and watershed conservation activities sustain and restore water quality and maintain habitat for amphibious species, fishes, and other aquatic life.

The 2012 Howard County Land Preservation and Recreation Plan

- Forest conservation strategies conserve habitat for both riparian and upland wildlife.
- The Howard County Department of Recreation and Parks preserves wildlife habitat by acquiring both small and large land parcels for environmental protection and then managing these lands with a conservation-based approach.

The Department of Recreation and Parks is the main environmental steward for all County land holdings. The Department oversees a wide range of activities designed to protect, restore and enhance natural ecosystems on lands under County control. Virtually all of the Department's planning, education, implementation and maintenance activities influence ecosystem quality in some manner. The following is a sampling of the Department of Recreation and Parks initiatives that directly affect plant and animal life "in the field", which, depending on location, includes habitat for officially designated Rare, Threatened and Endangered Species. In addition to enhancing conservation, these activities provide public outreach and education on important environmental conservation issues. These initiatives focus on a variety of wildlife habitat areas, not just those concerned with rare, threatened and endangered species.

- Stream and pond clean-up
- Forest mitigation / reforestation
- The Frog Watch USA program
- Canada Goose population control
- White-tailed Deer population control
- Trout in the Classroom / trout stocking
- Purple Loosestrife monitoring and biological control utilizing predatory beetles
- Beaver population control
- Creation of wildlife clearings / grasslands
- Nestbox monitoring

Beyond these specific programs and activities, the Department of Recreation and Parks enforces regulations designed to protect County land under Title 19, Subtitle 2 of the Howard County Code. The County enacted these regulations in 1992 and revised them most recently in 2004. They are designed to help prevent dumping, illegal structures, illegal signs, and other illegal activities on County park property. The regulations apply to all land the County owns, leases, or otherwise manages for public recreation purposes, including easements. They help prevent man-made degradation of wildlife habitat and biological communities in addition to protecting scenic open space.

Evaluation and Program Development Strategy

Howard County's efforts at preserving rare, threatened, and endangered species currently focus on preventing habitat destruction. By minimizing the loss of wetlands, riparian corridors, steep

slopes and forests, the County helps protect the plants and animals that exist in these areas. The County continues to refine its review process and associated regulations to ensure proposed developments are screened for potential habitat of sensitive species. The County has maps of Sensitive Species Project Review Areas in the County and will screen all projects for potential impacts. The Forest Conservation Program requires that critical habitats of rare, threatened or endangered species be delineated. The County's updated Forest Conservation Manual will require the applicant to submit a comment review letter from DNR if a project site is located wholly or partially within a Sensitive Species Project Review Area.

Greenways and Green Infrastructure

The County's Approach

Howard County has designated both recreational greenways and a Green Infrastructure network. Recreational greenways are envisioned to include multi-purpose trails that are publically accessible either by public fee simple ownership or through easements. In contrast, the County's Green Infrastructure network will feature a system of natural hubs and corridors preserved primarily for their ecological attributes. Public ownership and public access to these lands will not be a baseline requirement for inclusion in Howard County's Green Infrastructure network. The recreational greenways and Green Infrastructure network will overlap in many areas.

Recreational Greenways

The following is a summary of Howard County designated recreational greenways. The underlying vision is that regional greenways will be established along the Patapsco River and the Patuxent River. These regional greenways will be the arteries of the greenway system, to which other greenways will connect. At this time, the individual components of the greenway network are in different stages of planning and development. Some are partially completed while others are in the conceptual stage. (See map titled "Recreational Greenways & Protected Lands".)

Deep Run

Deep Run is a partially established greenway in the eastern section of the County. The portion of Deep Run from where it meets the Patapsco River, west to the Dorsey area, is contained within the Patapsco Valley State Park. The County owns some areas and will seek opportunities for open space dedication through the subdivision process.

Hammond Branch Greenway

Hammond Branch Greenway is a partially established greenway running along Hammond Branch from the Little Patuxent River at the County line. The corridor runs within a mile of Savage Park and continues northwest, passing the Maryland-Virginia Milk Producer Co-Op and Hammond Park. It will be important to connect this greenway to Savage Park and Hammond Park.

Little Patuxent Greenway

Little Patuxent Greenway is a partially established greenway along the Little Patuxent River. The river valley extends in a northerly direction from its junction with the Middle Patuxent. Five County-owned parks exist along this corridor: Savage Park, David W. Force Park, Gwynn Acres, Centennial park, and Alpha Ridge Park. The Department of Recreation and Parks is currently working to establish a connection between the Alpha Ridge Park and the Patapsco Regional Greenway. Additional areas are protected within Columbia's open space, including the Lake Kittamaquindi Area, and within the privately-owned Turf Valley Country Club. The County is acquiring more sections through the subdivision process. A pedestrian pathway, including boardwalks, has been constructed along a half-mile of the river at Gwynn Acres, and a 4.5-mile pathway is planned for the segment from Lake Elkhorn to Savage Park.

Middle Patuxent Greenway

Middle Patuxent Greenway is a partially established 19-mile greenway extending diagonally through the center of the County from Savage to Cooksville. The 1,000-acre Middle Patuxent Environmental Area as well as County-owned parks (including Savage, Gorman, and West Friendship) and Columbia's open space network comprise portions of this greenway. This corridor also includes the University of Maryland's Central Farm. The Department should pursue a gift, donation, and/or use easement with the University to form this connection through the Central Farm parcel. In addition, smaller portions are being acquired through the subdivision process. The County's Mill Trail parallels the river in Savage Park. The Columbia Association has also provided numerous trails.

This greenway is a natural link between the more densely developed eastern portion of the County and the rural western portion of the County.

Patapsco Regional Greenway

Patapsco Regional Greenway is a partially established, multi-jurisdictional greenway along the Patapsco River. The Patapsco Valley State Park serves as the spine for the greenway and provides over 14,000 acres of protected land in Anne Arundel, Baltimore, Carroll, and Howard

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counties. The state park has five separate recreation areas that are heavily used by residents of the surrounding urban area.

Much of the protected land in Howard County is within Patapsco State Park and Hugg-Thomas Wildlife Management Area (WMA). The County has been acquiring land along the South Branch to connect Hugg-Thomas WMA to Patapsco Valley State Park. Unfortunately, at present, the state park is not continuous around Ellicott City. If the greenway were to connect to this historic town, access to Baltimore County's #9 Trolley and Caton / Loudoun trails would also be made possible, allowing a scenic and cultural route to downtown Baltimore.

West of Sykesville, the river corridor known as the South Branch of the Patapsco remains unprotected. Howard County is interested in working with Carroll County to protect the corridor west to Mt. Airy. The Department of Recreation and Parks is also investigating the possibility of connecting greenways along the Middle Patuxent River and Little Patuxent River.

Patuxent Regional Greenway

Patuxent Regional Greenway is a partially established regional greenway that includes seven jurisdictions extending from central Maryland through southern Maryland. In Howard County, the corridor is about 30 miles long and forms the boundary between Howard, Montgomery, and Prince George's counties. The greenway includes the five-mile-long Triadelphia Reservoir and the seven-mile-long Rocky Gorge Reservoir. The majority of the stream valley is in the State Park or owned by the Washington Suburban Sanitary Commission (WSSC). The County owns approximately 2.5 miles of stream valley, including High Ridge Park. Currently, there are some trails located on the WSSC property.

The Patuxent River stream valley is of major significance because it is a natural area located between the major population centers of Baltimore and Washington. In addition, it naturally connects to the lower portions of the river valley between Prince George's, Anne Arundel, and Calvert counties, giving it the potential as a long-distance recreational greenway of almost 100 miles.

Green Infrastructure

Howard County's draft Green Infrastructure network encompasses interconnected waterways, wetlands, woodlands, wildlife habitats, parks, open space and other conservation lands. Working farms and forests are also included. The Green Infrastructure network will support native species, maintain natural ecological processes, sustain air and water resources, and contribute to the health and quality of life for communities and people.

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The basic building blocks of the Green Infrastructure network are hubs and corridors. Hubs, which will anchor the Green Infrastructure network, are large, ecologically significant natural areas that provide habitat for native plants and wildlife. They may include protected areas, such as State and County parks that are managed for natural values, and private lands where natural features and ecological processes are protected and/or restored. Hubs include large contiguous blocks of interior forest and large wetland complexes as an essential component of the network.

Corridors are the linear features that tie the hubs together and serve as biological conduits for native plants and wildlife. Corridors should be located along the best ecological or natural routes. Where feasible, they should also provide habitat similar to the hubs being connected (forest to forest, aquatic to aquatic, etc.). Most corridors will be centered on waterways, but they will also include upland areas that serve as cross-watershed connections.

Howard County's Green Infrastructure Network Plan (GI Plan) is a separate plan the County will finalize in 2012. When completed, it will allow the County to consider important natural resources when implementing PlanHoward 2030, the 2012 Land Preservation and Recreation Plan, transportation plans, watershed plans and other related initiatives. The new GI Plan will also help in making decisions about zoning and development proposals, acquiring land for parks and public facilities, and obtaining easements to protect farmland, environmentally sensitive properties and other lands. The GI Plan will offer a comprehensive approach to land and water conservation that also takes into account the County's development plans.

Howard County's GI Plan will refine and expand on efforts by the Maryland Department of Natural Resources (DNR) by adapting the State's methodology to County-scale analysis and priorities. The 2000 Maryland Atlas of Greenways, Water Trails and Green Infrastructure (a document now being updated) recommended that the following greenways should be established in Howard County:

- Cabin Branch Greenway
- Cattail Creek
- Deep Run
- Hammond Branch Greenway
- Little Patuxent Greenway
- Long Corner Connector (along an unnamed tributary in the northwestern part of the County to connect the Patapsco River and the Patuxent River)
- Middle Patuxent Greenway
- Patapsco Regional Greenway
- Patuxent Regional Greenway

The list of corridors to be assessed in Howard County's upcoming GI Plan will overlap the State list identified above. However, in certain cases, more detailed investigations at the County level

have revealed that certain preservation corridors are no longer viable in some of the areas noted above because of development that has occurred there since this State list was first produced.

Evaluation and Program Development Strategy

Recreational Greenways

As noted above, Howard County's recreational greenway system is evolving. To date, progress is tangible along some corridors, while other recreational greenway corridors are in the concept stage. This is consistent with the County's view of this greenway network as a long term undertaking to be implemented in phases only as right-of-way opportunities, funding, stewardship partners and other resources become available. Areas under development pressures, particularly in the eastern part of the County will continue to be a priority for inclusion into the County's recreational greenway network.

In the future, Howard County intends to continue planning and developing its recreational greenway network incrementally. As a longer range planning tool, Howard County is examining the possibility of preparing a greenway master plan. This master plan would:

- Identify and place priorities on specific lands and features to be included in the County's recreational greenway system.
- Suggest trailhead locations where parking, informational kiosks and public convenience facilities could be provided.
- Provide design guidelines for constructing various types of trail sections and safe trail/road intersections.
- Identify volunteer groups that are available to help maintain the trails.
- Outline a strategy for educating the public about the trail network and promoting public support.

Green Infrastructure

Howard County's Green Infrastructure Network Plan (GI Plan) will enable planners to consider important natural resources when preparing transportation plans, watershed plans and community plans. It will also aid in making decisions about zoning and development proposals, acquiring land for parks and public facilities, obtaining agricultural, and land preservation easements. The GI Plan will offer a comprehensive approach to land and water conservation that

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also takes into account the County's future development trends. The GI Plan will set priorities for natural resource protection in the County and also be a resource in establishing priorities. The County is currently identifying uncommitted parcels (parcels with development potential) in the network and prioritizing them for future protection.

Other Related Programs

Other funding opportunities that Howard County would like to use more intensively to preserve open space include the following:

- Greenprint – Howard County will continue to apply for Greenprint, but is not as competitive as other counties due to its higher land prices.
- Federal TEA 21 monies (Transportation Enhancement Act for the 21st Century).
- Maryland Environmental Trust easements.
- Maryland Program Open Space – as described earlier, Howard County's annual allotments under Program Open Space are much less than they were at one time. In addition to curtailing development of recreational areas, these reductions have made less funding available for acquiring land for preservation purposes.
- Rural Legacy Program – Howard County's designated Rural Legacy Area is the Upper Patuxent Headwaters Watershed. In FY 2001, Howard County was allocated \$400,000 in Rural Legacy Program funding for easement purchases in the Upper Patuxent Watershed Rural Legacy Area. The County purchased four conservation easements, held by the County's Agricultural Land Preservation Program, preserving 81 acres. No further Rural Legacy acquisitions are anticipated. High land prices and the limited number of remaining undeveloped properties make it difficult for the County to compete for limited State funding. Howard County will continue to monitor land use activities in the Upper Patuxent Rural Legacy Area and use the density sending and cluster development provisions of the Zoning Regulations to pursue protection with dedicated preservation easements.

Fee Simple Acquisition and Easement Acquisition As Natural Resource Protection Tools

The County depends heavily on its Zoning Regulations and Subdivision and Land Development Regulations to protect the natural features discussed in this chapter. These regulations also provide for dedicated open space, preservation parcels, and forest conservation easements. Although the protective measures provided through the zoning and subdivision processes are effective, fee simple land acquisition is often the most appropriate course of action. Accordingly, land acquisition activities are a key part of the County's natural resource protection strategy. Due to the high cost of land in Howard County, and the limited availability of local and state funds, the County focuses its land acquisition efforts on major initiatives endorsed by the State, such as greenways and green infrastructure networks.

The County is cooperating with the State to complete land acquisition efforts along the Patapsco and Patuxent Greenways. In addition, the County has established local priorities that include the expansion of existing parks, the acquisition of additional parks and open space, and the acquisition of land or easements for the future GI network. Like acquiring land in fee simple, acquiring easements will continue to be an important natural resource protection tool in Howard County.

The County utilizes the following strategy in protecting critical natural resources:

- Identify sensitive natural resources using the State's Green Infrastructure database and the County's Geographic Information Systems database.
- Monitor activity on these lands through the subdivision and land development processes.
- If zoning and land use patterns indicate future residential subdivision and development, then monitor and accept sensitive natural areas as dedicated Open Space or establish Preservation Parcels where applicable (West Planning Area).
- If there are sensitive areas not protected by environmental regulations, and if the acquisition of these areas through the subdivision process is not likely to happen, the County will continue to consider the acquisition of a conservation easement, or buying the property in fee simple.
- In the case of recreational greenways where public trails or pathways are envisioned, ownership in fee simple is most desirable. Fee simple ownership will not be as crucial in establishing the GI network.

Summary Overview of Natural Resource Protection

While several different types of natural resources contribute to the environmental character of Howard County, the County uses a common set of strategies and techniques to help preserve these resources. In summary, Howard County relies primarily on the following inter-related approaches to safeguard its natural environment:

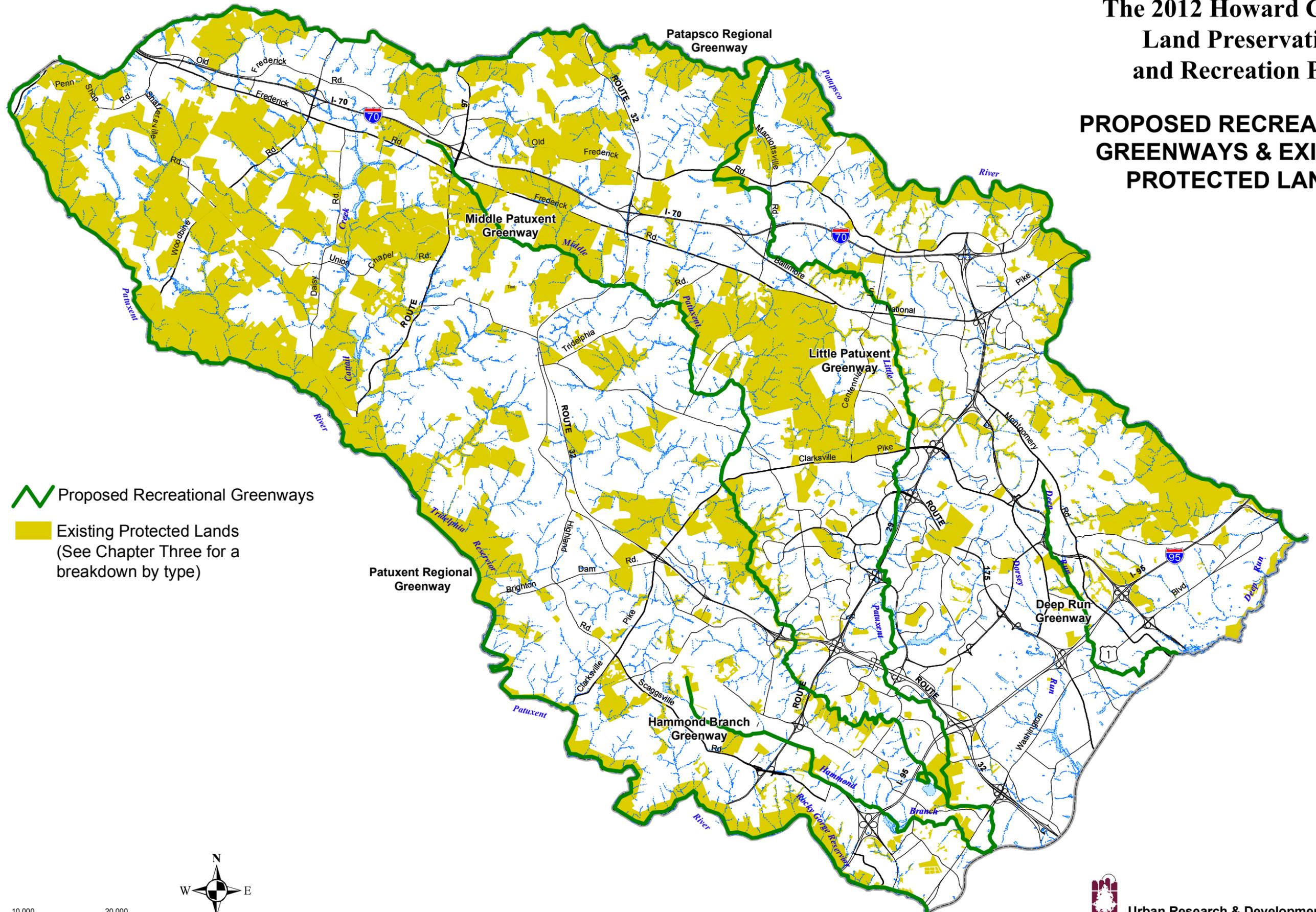
- Zoning regulations that establish maximum density levels, minimum setbacks and other requirements based on location and the character of the land being developed.
- Zoning and subdivision regulations that minimize the impacts of land development on sensitive natural features.
- Land acquisition in fee simple (or the use of easements) to permanently set aside properties of special environmental importance or properties at key locations.
- Watershed planning as the basis for prioritized restoration activities.
- Stormwater management to maintain and improve stormwater detention and retention facilities.
- Forest conservation activities that include the planting of trees on- and off-site to mitigate the impact of trees cleared for new construction.
- Outreach and education regarding private landowner stewardship.

The use of fee simple acquisition and various types of conservation easements to permanently set aside certain lands are approaches that Howard County uses for a variety of different preservation-related purposes. In addition to securing land for green infrastructure and recreational greenway corridors, the County uses fee simple acquisition and conservation easements to:

- Conserve farmland,
- Preserve individual natural resource areas,
- Preserve historic properties, and
- Set aside land for future park sites.

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PROPOSED RECREATIONAL GREENWAYS & EXISTING PROTECTED LANDS



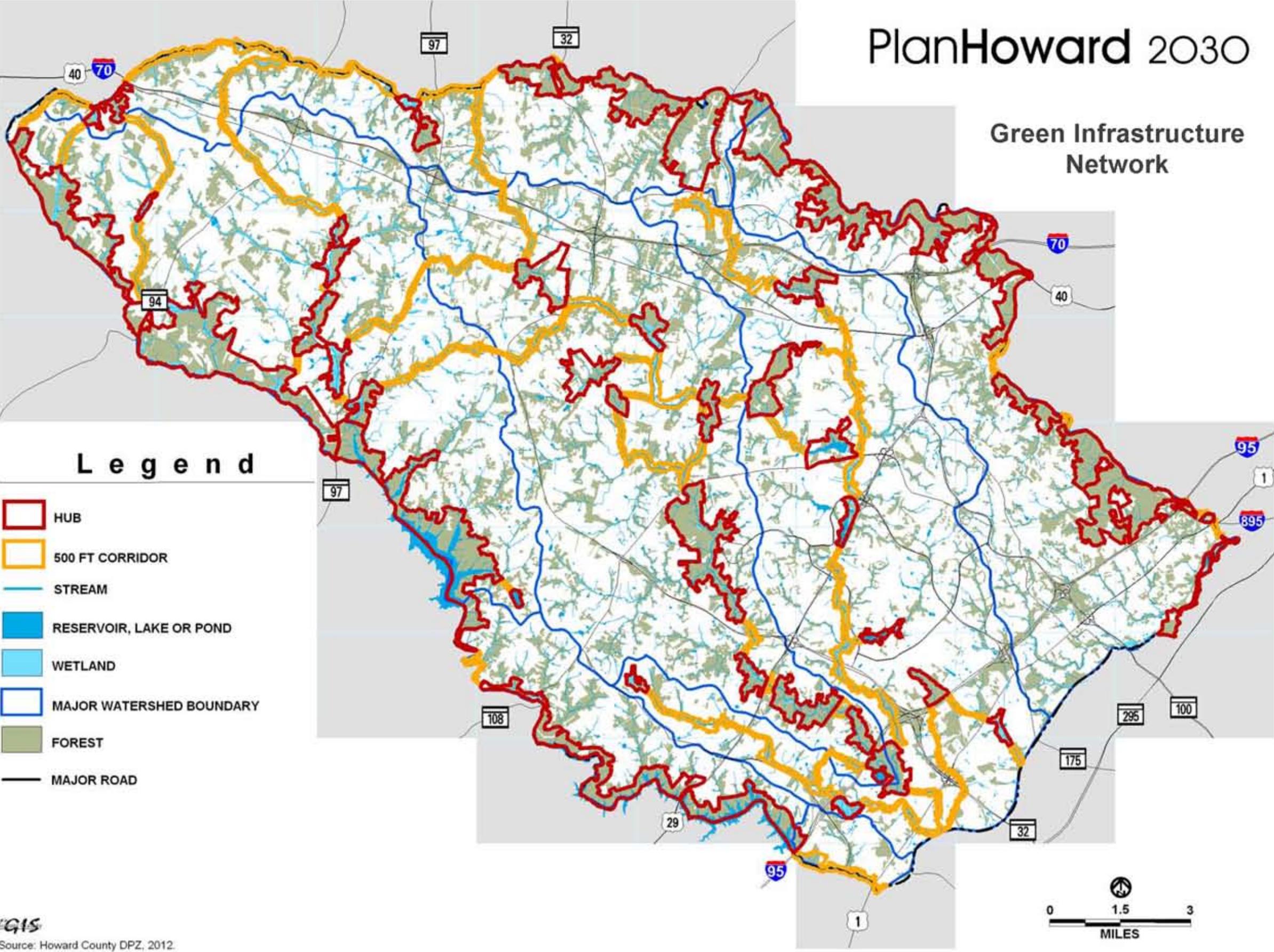
-  Proposed Recreational Greenways
-  Existing Protected Lands
(See Chapter Three for a breakdown by type)



Source: State of Maryland, Howard County, and URDC

PlanHoward 2030

Green Infrastructure Network



Legend

- HUB
- 500 FT CORRIDOR
- STREAM
- RESERVOIR, LAKE OR POND
- WETLAND
- MAJOR WATERSHED BOUNDARY
- FOREST
- MAJOR ROAD

GIS
Source: Howard County DPZ, 2012.

Chapter 6: Summary & Synthesis



CHAPTER SIX — SUMMARY AND SYNTHESIS

Chapter Six brings together important highlights of this Plan’s three major elements. These elements include: Recreation, Parks and Open Space (Chapter Three); Agricultural Land Preservation (Chapter Four); and Natural Resource Conservation (Chapter Five). Together, the initiatives identified in these three chapters form an interrelated approach to addressing land preservation, parks and recreation goals held by both Howard County and the State.

The Maryland General Assembly adopted 12 Visions to provide growth management guidance to local governments. These Visions are key principles underlying the policies and direction identified in this Plan. They include the following:

1. **Quality of Life and Sustainability:** *A high quality of life is achieved through universal stewardship of the land, water, and air resulting in sustainable communities and protection of the environment.*
2. **Public Participation:** *Citizens are active partners in the planning and implementation of community initiatives and are sensitive to their responsibilities in achieving community goals.*
3. **Growth Areas:** *Growth is concentrated in existing population and business centers, growth areas adjacent to these centers, or strategically selected new centers.*
4. **Community Design:** *Compact, mixed-use, walkable design consistent with existing community character and located near available or planned transit options is encouraged to ensure efficient use of land and transportation resources and preservation and enhancement of natural systems, open spaces, recreational areas, and historical, cultural, and archeological resources.*
5. **Infrastructure:** *Growth areas have the water resources and infrastructure to accommodate population and business expansion in an orderly, efficient, and environmentally sustainable manner.*
6. **Transportation:** *A well-maintained, multimodal transportation system facilitates the safe, convenient, affordable, and efficient movement of people, goods, and services within and between population and business centers.*
7. **Housing:** *A range of housing densities, types, and sizes provides residential options for citizens of all ages and incomes.*
8. **Economic Development:** *Economic development and natural resource-based businesses that promote employment opportunities for all income levels within the capacity of the State’s natural resources, public services, and public facilities are encouraged.*
9. **Environmental Protection:** *Land and water resources, including the Chesapeake and coastal bays, are carefully managed to restore and maintain healthy air and water, natural systems, and living resources.*
10. **Resource Conservation:** *Waterways, forests, agricultural areas, open space, natural systems, and scenic areas are conserved.*

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11. **Stewardship:** *Government, business entities, and residents are responsible for the creation of sustainable communities by collaborating to balance efficient growth with resource protection.*
12. **Implementation:** *Strategies, policies, programs, and funding for growth and development, resource conservation, infrastructure, and transportation are integrated across the local, regional, state, and interstate levels to achieve these Visions.*

The Land Preservation, Recreation and Parks Plan Map

The accompanying Land Preservation, Recreation and Parks Plan map illustrates many of the policies and projects Howard County is now pursuing, and will pursue in the future, to: a) continue expanding recreation and park services; and b) further conserve undeveloped land. In particular, this map depicts the following elements:

Preserved Lands Owned in Fee Simple

These are park sites, school recreation areas and other preserved open spaces that now exist in Howard County. Site owners include the State, Howard County, the Board of Education, home owners associations, and other private entities, such as the Columbia Association and the Washington Suburban Sanitary Commission. The sites shown provide active and passive recreation opportunities to different size service areas, ranging from the neighborhood level to the county-wide level.

Chapter Three – Recreation Parks and Open Space describes the sites in more detail and features the Howard County Department of Recreation and Parks 2013 – 2028 Capital Improvement Program (CIP). Among other initiatives, the CIP lists the physical improvements that Howard County envisions making at the County-owned parks, greenways and historic/cultural sites shown on this map.

Lands Preserved By Easement

Howard County strongly endorses the purchase of easements where fee simple acquisition is not a feasible or desirable way to secure permanent open space. The accompanying map shows the agricultural easements now in place in Howard County and these easements are described in Chapter Four - Agricultural Land Preservation. The map depicts easements held by land trusts and other conservation groups. Easements held by the Maryland Historic Trust to protect historic/cultural resources are also illustrated.

Rural Legacy Areas

As noted in Chapter Five - Natural Resource Conservation, Howard County has established a Rural Legacy Area in the watershed of the Upper Patuxent. High land prices have made it difficult for Howard County to compete for the State funds available to buy easements under this program. However, the Rural Legacy Area is shown on the accompanying map as an indication of Howard County's on-going interest in this conservation initiative.

Greenways and Green Infrastructure

Howard County is committed to devoting more resources to recreational greenways, for constructing multi-use trails (shown on the accompanying map) and to a system of hubs (large natural resource areas) and connecting corridors known as the Green Infrastructure network (not shown on the accompanying map). The accompanying map outlines the five greenways described in Chapter Five- Natural Resource Conservation. As highlighted in Chapter Five, the Patapsco Regional Greenway and the Patuxent Regional Greenway are envisioned in the longer run as the twin arterials of a greenway system to which other local greenways will eventually connect.

Greenway Expansion Areas

Greenways expansion areas are unprotected regions along the Patapsco River and the Patuxent River that Howard County hopes to preserve in the future in cooperation with the State and neighboring counties. In addition to preserving the environmental amenities along these corridors, the purpose is to use these infill lands to connect lands already preserved, with the aim of furthering the two regional greenways noted above.

Community Park Study Areas

The Howard County Department of Recreation and Parks is continually monitoring demographic and land use trends in Howard County to ensure new parks are built where they are needed most. Chapter Two - Framework For the Local Plan includes an overview of current growth and development patterns in Howard County. Chapter Three - Recreation, Parks and Open Space provides extensive detail on the location of current parks in Howard County and the recreation facilities at those parks.

The Community Park Study Areas featured on the accompanying Land Preservation, Recreation and Parks Plan map derive directly from the analysis featured in Chapter Two and Chapter

Three. The Community Park Study Areas (shown as concentric circles with one-mile radii and two-mile diameters) are the areas Howard County is targeting for new community parks.

Additional Policies and Recommendations

The accompanying Land Preservation, Recreation and Parks Plan map, together with the Capital Improvements Program (CIP) included in Chapter Three, provide an overview of important policies and recommendations in this Plan. However, there are aspects of Howard County's approach to land preservation, recreation and parks not readily apparent on the map or the CIP. This is the case for all three of the Plan's major elements: Recreation, Parks and Open Space (Chapter Three); Agricultural Land Preservation (Chapter Four); and Natural Resource Conservation (Chapter Five).

Recreation, Parks and Open Space

In addition to recreation lands, greenways, recreation facilities and preserved open space, Howard County will remain committed to providing a comprehensive range of recreation programming services, Chapter Three - Recreation, Parks and Open Space features a brief summary overview of the County's recreation programming function, which is recognized by the CAPRA Accreditation through the National Recreation and Parks Association (NRPA) as meeting the standards of excellence required for NRPA accreditation. A listing of recreation program types offered by the Department is provided in Appendix B. Through its Bureau of Administrative Services, the Howard County Department of Recreation and Parks is dedicated to 100% customer satisfaction in all aspects of its recreation programming including the following:

- Fitness and martial arts
- Volunteers
- Services to senior adults.
- Heritage and historic sites programming.
- Environmental education.
- Therapeutic recreation and inclusionary programming for individuals with disabilities.
- Special events, such as community events, fine arts events, holiday programming, day trips, and overnight trips, among others.
- Dance, visual arts, crafts, summer camp programs, personal improvement and other enrichment activities for children and youth.
- After school care partnerships with schools, police and other community organizations.
- High adventure trips and skills.
- Recreational licensed child care.
- Aquatics programming.

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- Sports for youths and adults, including both competitive and instructional sports.
- Special initiatives for health and fitness, wellness, and fighting obesity in youth.

The Howard County Department of Recreation and Parks carries out on-going evaluation and marketing of its program offerings. The goal is to ensure that its recreation program services keep pace with the growing and changing leisure time needs of people of all ages, both genders and a wide spectrum of interests.

Agricultural Land Preservation

The agricultural easements and Rural Legacy Area shown on the map accompanying this chapter and on the map in Chapter Four- Agricultural Land Preservation are important parts of Howard County's farmland conservation efforts. From a broader perspective, the County will continue to refine and rely on the following three main techniques to protect agricultural land. Together these techniques and related tools are aimed at preserving 21,000 to 22,000 acres in the Rural West, an area of Howard County where public water and public sewer services will not be provided.

- The Agricultural Preservation Easements – As of January 1, 2012, agricultural easements acquired through all State and County programs in Howard County totaled 21,646 acres, thereby meeting the goal of preserving 21,000 to 22,000 farmland acres which the County established in 2005. At this time, Howard County does not anticipate budgeting County funds in the foreseeable future to acquire new agricultural easements. However, any additional farmers interested in preserving their land still have the option of participating in Maryland's State-funded agricultural easement programs or in the County's Density Exchange / Cluster Exchange zoning options.
- County Zoning and Subdivision Regulations – While some refinements may still be needed, these regulations are a major tool for agricultural preservation because of their role in setting aside sizeable parcels of preserved land through clustering and various forms of transfer of development permitted within the boundaries of Howard County's Rural West region.
- The Howard County Economic Development Authority's Agricultural Marketing Program – The Agricultural Marketing Program promotes more diversified forms of agriculture, including metropolitan farming enterprises, such as horticulture, turf farms, organic food growers, horse breeding, pick-your-own farms and other alternatives to staple crop farming. This effort will continue to grow as a major agricultural preservation tool, especially now that Howard County's current farmland acreage preservation goals are met.

As a byproduct of efforts to sustain and adapt the agriculture industry in Howard County to changing times, agritourism is becoming a growing leisure time activity. Efforts such as

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farm heritage celebrations, visits to working farms, educational programs on farming, and petting zoos are adding a new dimension to the County's recreation opportunities.

Natural Resource Conservation

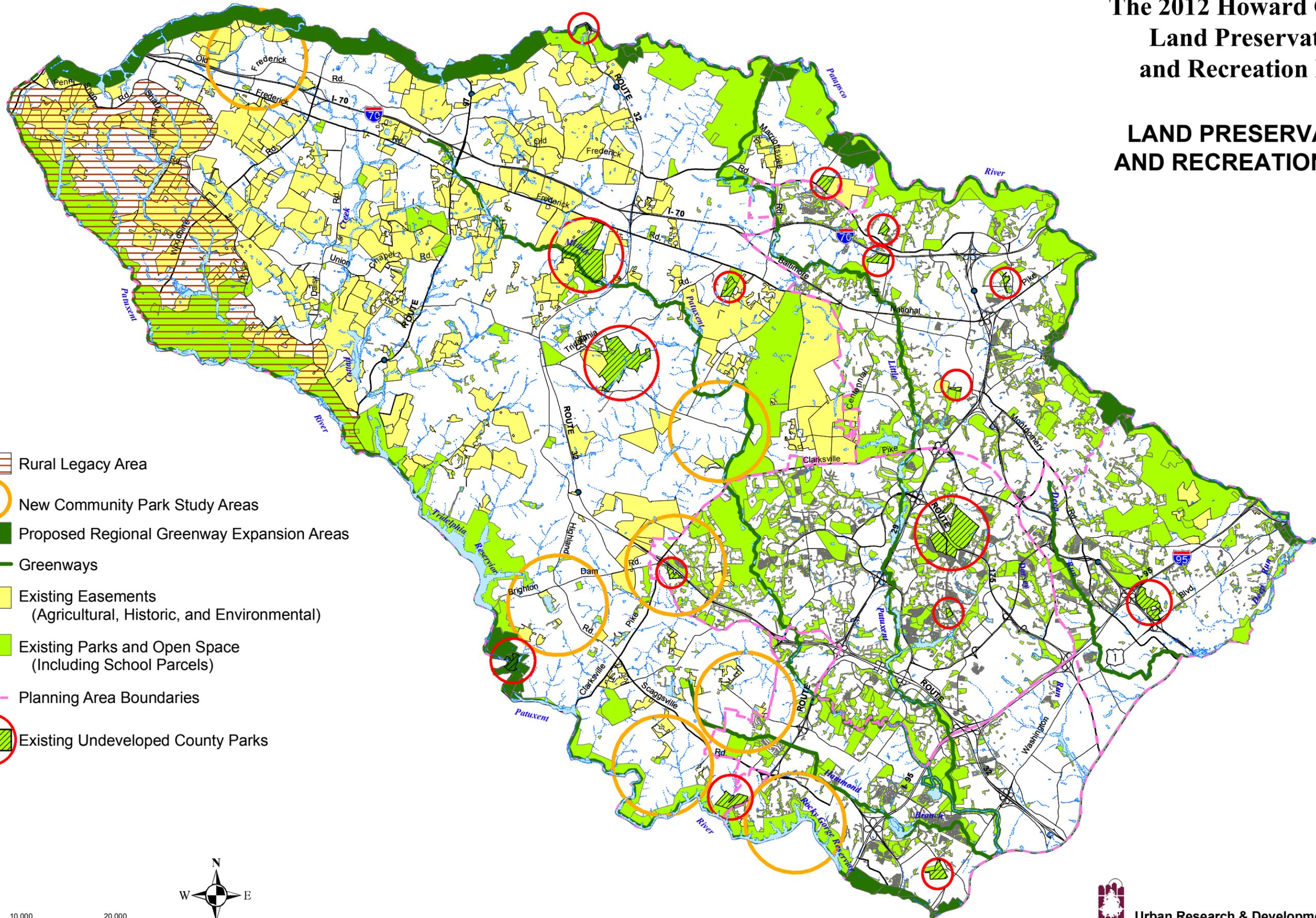
Among the elements illustrated on the accompanying Land Preservation and Recreation Plan map are County-owned lands, environmental easements and properties preserved by other entities. Also shown on the accompanying maps are Greenways, Rural Legacy Areas, Greenway Expansion Areas, and Community Park Study Areas which are relevant to future land preservation and resource conservation efforts. The following are important initiatives Howard County will continue relying on to help conserve natural resources that are not apparent from the map:

- Subdivision Regulations – County regulations that help protect the natural environment are a major aspect of Howard County's conservation approach. These include, for example, mandatory buffers along streams and around wetlands within which no disturbance is permitted. Other examples are: (1) requiring sensitive resources to be located in open space or within preservation parcels, or within residential lots of 10 acres or more; and (2) prohibition of development within 100-year floodplains and on very steep slopes. The County is striving to strengthen these regulations where appropriate.
- Watershed Planning – Howard County continues to prepare watershed plans for priority watersheds and sub-watersheds. These plans provide guidance on needed protection and restoration measures, and have led to several stream restoration projects now complete or underway. Adopted County policy calls for preparing a plan for all watersheds in Howard County.
- Stormwater Management – Federal Clean Water Act legislation requires Howard County to remain deeply involved in maintaining and improving stormwater management facilities. Among other obligations, the County will continue to be responsible for enforcing stormwater requirements in new developments and providing stormwater facilities to older developed areas that do not now have these facilities.
- Forest Conservation Act – Howard County's Forest Conservation Act requires a minimum amount of forest cover at all new developments. Where this minimum is impossible to either retain or establish, developers must plant the necessary trees or pay to have the County do it off-site. Some of the environmental easements on the accompanying map result from this process. Changes are expected to the Forest Conservation Act as a companion to changes now underway to the Forest Conservation Manual.

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LAND PRESERVATION AND RECREATION PLAN

-  Rural Legacy Area
-  New Community Park Study Areas
-  Proposed Regional Greenway Expansion Areas
-  Greenways
-  Existing Easements (Agricultural, Historic, and Environmental)
-  Existing Parks and Open Space (Including School Parcels)
-  Planning Area Boundaries
-  Existing Undeveloped County Parks



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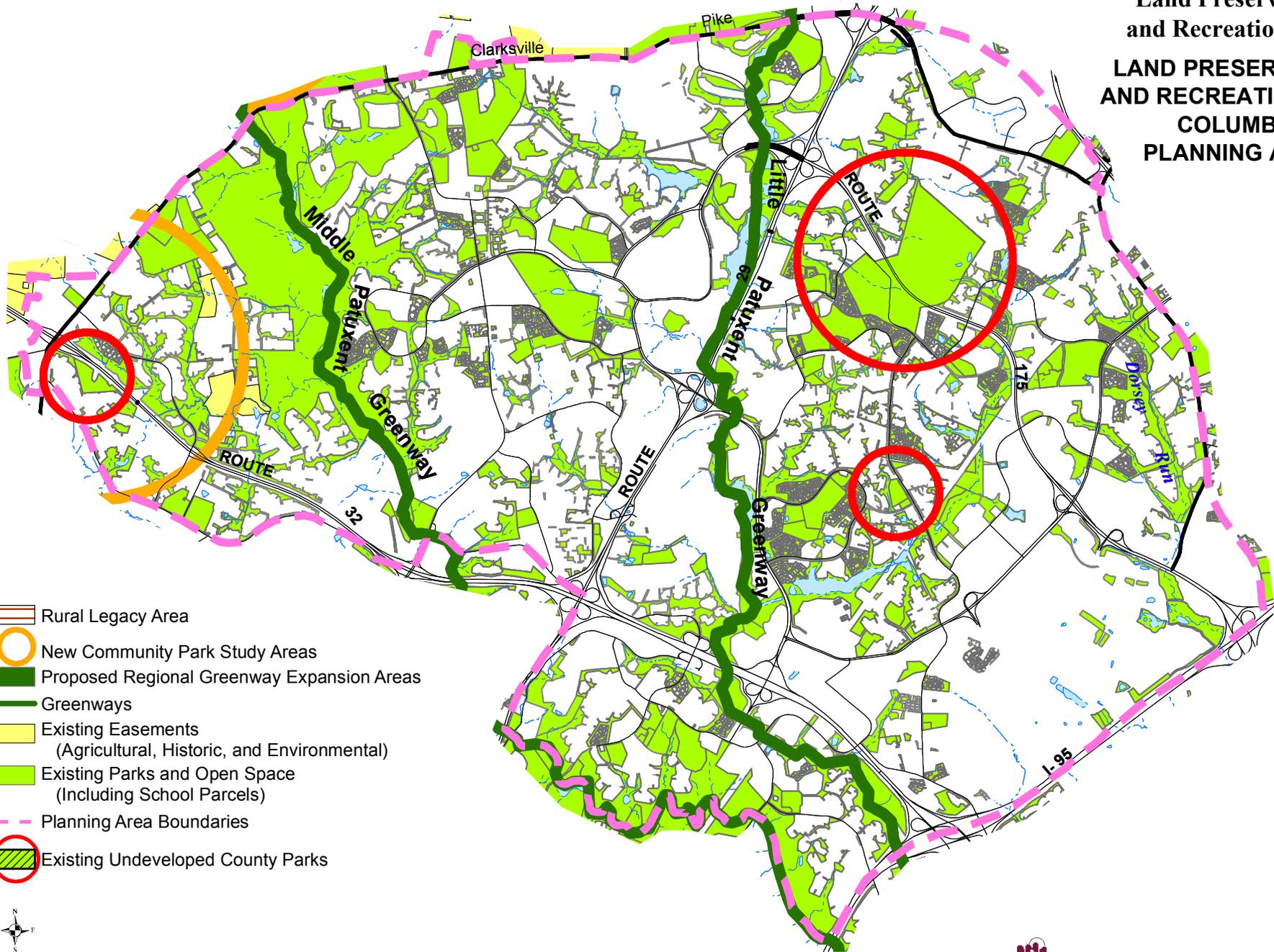


Source: State of Maryland, Howard County, and URDC



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The 2012 Howard County
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and Recreation Plan
**LAND PRESERVATION
AND RECREATION PLAN
COLUMBIA
PLANNING AREA**



-  Rural Legacy Area
-  New Community Park Study Areas
-  Proposed Regional Greenway Expansion Areas
-  Greenways
-  Existing Easements
(Agricultural, Historic, and Environmental)
-  Existing Parks and Open Space
(Including School Parcels)
-  Planning Area Boundaries
-  Existing Undeveloped County Parks



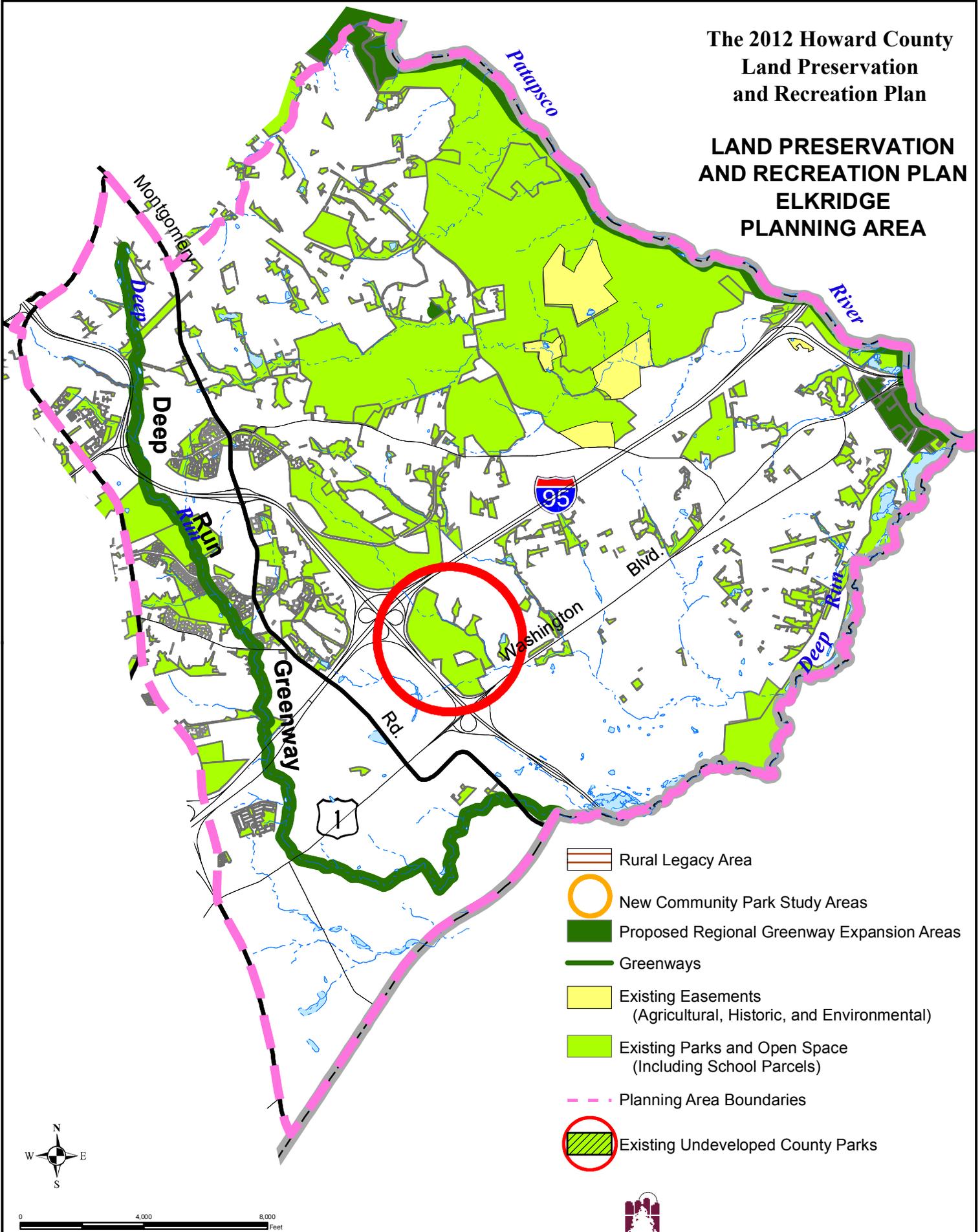
Source: State of Maryland, Howard County, and URDC



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and Recreation Plan

LAND PRESERVATION
AND RECREATION PLAN
ELKRIDGE
PLANNING AREA



-  Rural Legacy Area
-  New Community Park Study Areas
-  Proposed Regional Greenway Expansion Areas
-  Greenways
-  Existing Easements
(Agricultural, Historic, and Environmental)
-  Existing Parks and Open Space
(Including School Parcels)
-  Planning Area Boundaries
-  Existing Undeveloped County Parks



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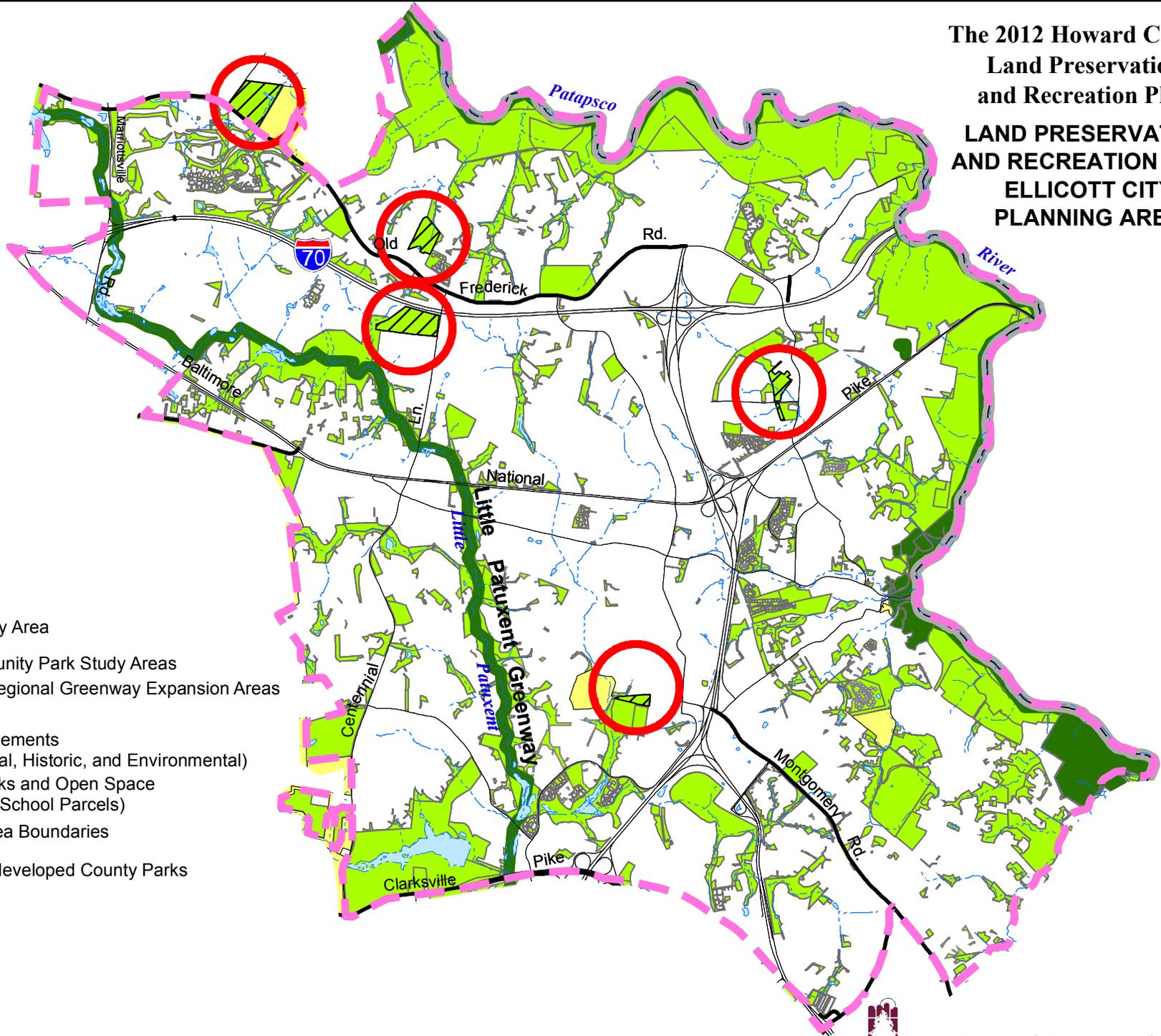
Source: State of Maryland, Howard County, and URDC



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**LAND PRESERVATION
AND RECREATION PLAN
ELLICOTT CITY
PLANNING AREA**

-  Rural Legacy Area
-  New Community Park Study Areas
-  Proposed Regional Greenway Expansion Areas
-  Greenways
-  Existing Easements
(Agricultural, Historic, and Environmental)
-  Existing Parks and Open Space
(Including School Parcels)
-  Planning Area Boundaries
-  Existing Undeveloped County Parks

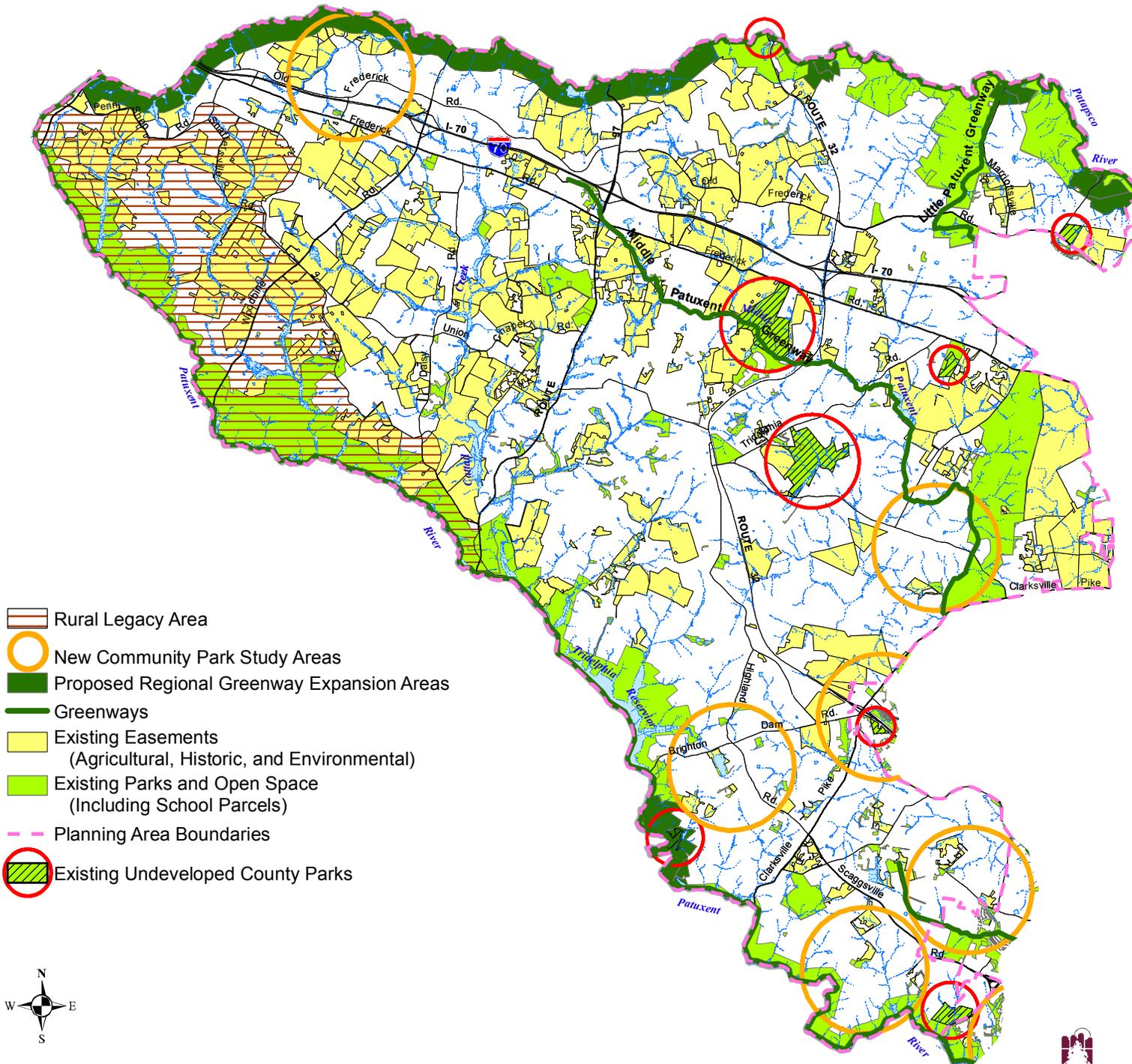


Source: State of Maryland, Howard County, and URDC

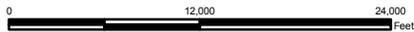


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and Recreation Plan
**LAND PRESERVATION
AND RECREATION PLAN
RURAL WEST
PLANNING AREA**



-  Rural Legacy Area
-  New Community Park Study Areas
-  Proposed Regional Greenway Expansion Areas
-  Greenways
-  Existing Easements
(Agricultural, Historic, and Environmental)
-  Existing Parks and Open Space
(Including School Parcels)
-  Planning Area Boundaries
-  Existing Undeveloped County Parks



Source: State of Maryland, Howard County, and URDC

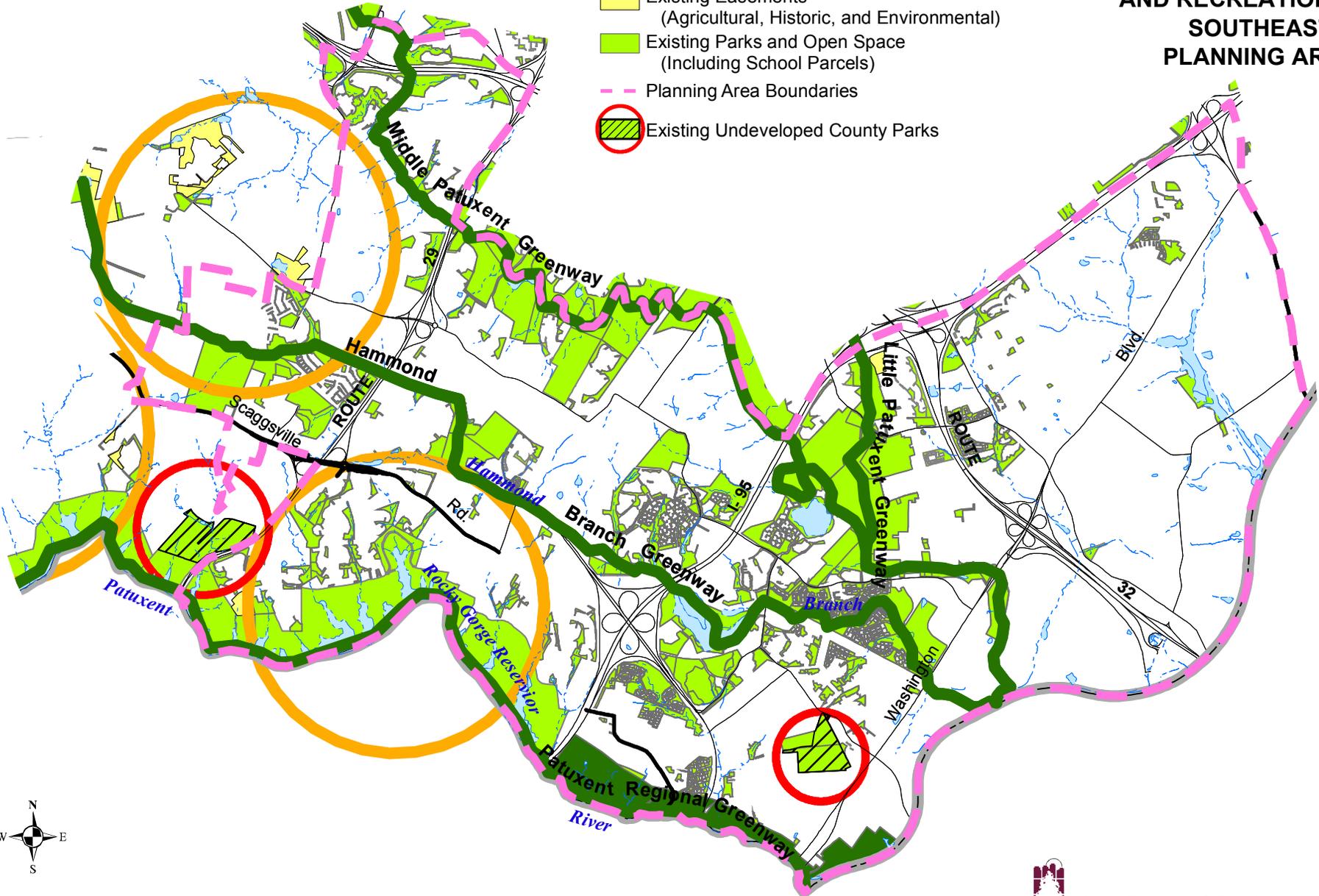


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and Recreation Plan**

**LAND PRESERVATION
AND RECREATION PLAN
SOUTHEAST
PLANNING AREA**

-  Rural Legacy Area
-  New Community Park Study Areas
-  Proposed Regional Greenway Expansion Areas
-  Greenways
-  Existing Easements
(Agricultural, Historic, and Environmental)
-  Existing Parks and Open Space
(Including School Parcels)
-  Planning Area Boundaries
-  Existing Undeveloped County Parks



133



Source: State of Maryland, Howard County, and URDC



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Appendix A - Howard County Eligible Recreational Acreage



APPENDIX A
HOWARD COUNTY
ELIGIBLE RECREATIONAL ACREAGE
March 2012

	Site Name	Site Ownership	Total Acres	Eligible Acres (Per State Guidelines)
State Lands				
Eligibility:	Hugg Thomas WMA	State	251.00	0.00
0%	Patapsco Valley State Park	State	5618.00	0.00
	Patuxent State Park	State	3883.60	0.00
			9752.60	0.00
Regional Parks				
Eligibility:	Benson Branch Park	Co.	340.63	340.63
100%	Blandair Park	Co.	298.08	298.08
	Cedar Lane Park	Co.	93.21	93.21
	Centennial Park	Co.	339.44	339.44
	Rockburn Branch Park	Co.	415.08	415.08
	Schooley Mill Park	Co.	192.07	192.07
	Timbers at Troy Golf Course	Co.	201.98	201.98
	Troy Park	Co.	100.95	100.95
	West Friendship Park	Co.	350.68	350.68
	Western Regional Park	Co.	189.65	189.65
			2521.77	2521.77
Community Parks				
Eligibility:	Alpha Ridge Park	Co.	72.00	72.00
100%	David Force Park	Co.	36.94	36.94
	East Columbia Library Park	Co.	16.59	16.59
	Font Hill Park	Co.	26.18	26.18
	Fulton South Area Park	Co.	71.66	71.66
	Hammond Park	Co.	43.17	43.17
	High Ridge Park	Co.	88.41	88.41
	Houchens Property (Patapsco Greenway)	Co.	37.67	37.67
	Kiwanis Wallas Park	Co.	25.17	25.17
	Lewis Property (Patapsco Greenway)	Co.	6.07	6.07
	Manor Woods Park	Co.	40.51	40.51
	Meadowbrook Park	Co.	84.15	84.15
	North Laurel Park	Co.	40.29	40.29
	Route 29 Pedestrian Bridge	Co.	0.40	0.40
	Savage Park	Co.	87.47	87.47
	Sewells Orchard Park	Co.	25.31	25.31
	Warfields Pond Park	Co.	19.85	19.85
	Waterloo Park	Co.	21.62	21.62
	Westside Garden Plots	Co.	9.96	9.96
	Woodstock Park	Co.	45.13	45.13
	Worthington Park	Co.	83.78	83.78
			882.33	882.33
Neighborhood Parks				
Eligibility:	Allenford - North Farm Park	Co.	18.75	18.75
100%	Atholton Park	Co.	9.54	9.54
	Cedar Villa Heights Park	Co.	3.03	3.03
	Cypressmeade Park	Co.	20.80	20.80
	Dayton Park	Co.	12.68	12.68
	Dickinson Park	Co.	10.70	10.70
	Dunloggin Park	Co.	7.18	7.18
	Elkhorn Garden Plots	Co.	10.17	10.17
	Elkhorn Park	Co.	10.08	10.08
	Ganon Bahl Property	Co.	3.21	3.21

	Governor's Run Playground	Co.	0.15	0.15
	Guilford Park	Co.	11.24	11.24
	Harwood Park	Co.	1.79	1.79
	Hawthorne Park	Priv.	9.99	9.99
	Headquarters	Co.	7.95	7.95
	Heritage Heights Park	Co.	19.62	19.62
	Holiday Hills Park	Co.	6.55	6.55
	Hollifield Station Park	Co.	4.38	4.38
	Hopewell Park	Priv.	9.96	9.96
	Howard Co. Center for the Arts	Co.	12.65	12.65
	Huntington Park	Priv.	11.00	11.00
	Lisbon Park	BoEd.	9.25	9.25
	Long Reach Garden Plots	Co.	4.41	4.41
	Martin Road Park	Co.	6.01	6.01
	Pleasant Chase Playground	Priv.	0.55	0.55
	Roger Carter Rec Center	Co.	2.43	2.43
	South Branch Park	Co.	10.49	10.49
	Tiber Park	Co.	0.08	0.08
	Town and Country Park	Co.	12.97	12.97
	Willowood Playground	Co.	0.11	0.11
	Wyndemere Playground	Co.	0.13	0.13
	Zirn Property	Co.	38.06	38.06
			285.91	285.91
School Recreation Areas				
Eligibility:	Applications Research Lab & Homewood School	BoEd.	45.48	27.29
60%	Atholton Elementary School	BoEd.	12.31	7.39
	Atholton High School	BoEd.	36.28	21.77
	Bellow Springs Elementary School	BoEd.	40.00	24.00
	Bollman Bridge Elementary School	BoEd.	16.95	10.17
	Bryant Woods Elementary School	BoEd.	9.25	5.55
	Burleigh Manor Middle School & Centennial High School	BoEd.	70.00	42.00
	Bushy Park Elementary School	BoEd.	19.20	11.52
	Cedar Lane Special	BoEd.	99.00	59.40
	Centennial Lane Elementary School	BoEd.	11.23	6.74
	Clarksville Elementary School	BoEd.	10.69	6.41
	Clarksville Middle School	BoEd.	20.43	12.26
	Clemens Crossing Elementary School	BoEd.	10.80	6.48
	Cradlerock Elementary and Lake Elkhorn Middle School	BoEd.	33.16	19.90
	Dayton Oaks Elementary School	BoEd.	22.74	13.64
	Deep Run Elementary School	BoEd.	11.67	7.00
	Dunloggin Middle School	BoEd.	20.00	12.00
	Elkridge Elementary School and Elkridge Landing Middle School	BoEd.	48.58	29.15
	Ellicott Mills Middle School	BoEd.	16.22	9.73
	Faulkner Ridge Center	BoEd.	9.01	5.41
	Forset Ridge Elementary School	BoEd.	20.85	12.51
	Fulton Elementary School and Lime Kiln Middle School and Reservoir High School	BoEd.	99.00	59.40
	Glenelg High School	BoEd.	40.94	24.56
	Glenwood Middle School	BoEd.	30.00	18.00
	Gorman Crossing Elementary School	BoEd.	15.00	9.00
	Guilford Elementary School	BoEd.	11.00	6.60
	Hammond Elementary and Middle Schools	BoEd.	35.00	21.00
	Hammond High School	BoEd.	33.14	19.88
	Harper's Choice Middle School	BoEd.	19.67	11.80
	Hollifield Station Elementary School	BoEd.	14.50	8.70
	Howard County Community College	Co.	117.84	70.71
	Howard Senior High School	BoEd.	41.00	24.60
	Ilchester Elementary School and Bonnie Branch Middle School	BoEd.	27.22	16.33
	Jeffers Hill Elementary School	BoEd.	10.00	6.00
	Laurel Woods Elementary School	BoEd.	27.00	16.20
	Lisbon Elementary School	BoEd.	22.55	13.53
	Long Reach High School	BoEd.	50.00	30.00
	Longfellow Elementary School	BoEd.	9.50	5.70
	Manor Woods Elementary School	BoEd.	43.23	25.94
	Mamotts Ridge High School	BoEd.	42.40	25.44
	Maryland School for the Deaf	State	54.03	32.42

	Mayfield Woods Middle School	BoEd.	2.00	1.20
	Mount Hebron Senior High School	BoEd.	40.05	24.03
	Mount View Middle School	BoEd.	35.75	21.45
	Murray Hill Middle School	BoEd.	25.00	15.00
	Northfield Elementary School	BoEd.	10.10	6.06
	Oakland Mills Middle School	BoEd.	20.00	12.00
	Oakland Mills High School	BoEd.	28.60	17.16
	Patapsco Middle School	BoEd.	21.13	12.68
	Patuxent Valley Middle School	BoEd.	30.00	18.00
	Phelps Luck Elementary School	BoEd.	10.00	6.00
	Pointers Run Elementary School	BoEd.	13.69	8.21
	River Hill High School	BoEd.	64.20	38.52
	Rockburn Elementary School	BoEd.	8.74	5.24
	Running Brook Elementary School	BoEd.	9.00	5.40
	St. John's Lane Elementary School	BoEd.	10.00	6.00
	Stevens Forest Elementary School	BoEd.	10.00	6.00
	Swansfield Elementary School	BoEd.	10.00	6.00
	Talbot Springs Elementary School	BoEd.	10.00	6.00
	Thunder Hill Elementary School	BoEd.	14.93	8.96
	Triadelphia Ridge Elementary School	BoEd.	39.47	23.68
	Veterans Elementary School	BoEd.	23.66	14.20
	Waterloo Elementary School	BoEd.	10.00	6.00
	Waverly Elementary School	BoEd.	11.49	6.89
	West Friendship Elementary School	BoEd.	17.85	10.71
	Wilde Lake Middle School	BoEd.	21.00	12.60
	Wilde Lake High School	BoEd.	31.25	18.75
	Worthington Elementary School	BoEd.	19.69	11.81
			1874.47	1124.68
Natural Resource Areas				
Eligibility 33%				
	Carrs Mill NRA	Co.	20.10	6.63
	Chaconas Property NRA	Co.	19.09	6.30
	David Force Stream Valley NRA	Co.	221.33	73.04
	Gorman Stream Valley Park NRA	Co.	227.70	75.14
	Gwynn Acres NRA	Co.	10.34	3.41
	Middle Patuxent Environmental Area & Robinson Nature Center - NRA	Co.	1039.41	343.01
	Patuxent Basin & Teeter Property NRA	Co.	37.93	12.52
	Wincopin Trails, Lash & Collins Property - NRA	Co.	288.68	95.26
			1864.58	615.31
County Open Space				
Eligibility:	A.H. Smith	Co.	11.18320	3.69
33%	Abbeyfield Estates	Co.	3.47800	1.15
	ALTA at Regency Crest	Co.	0.68900	0.23
	Amber Meadow	Co.	2.13000	0.70
	Amberwoods	Co.	13.00900	4.29
	Amylynn Dorsey	Co.	0.97000	0.32
	Angela Valley	Co.	1.85300	0.61
	Annapolis Station	Co.	0.42100	0.14
	Arborwoods	Co.	7.01300	2.31
	Arrowhead	Co.	1.27900	0.42
	Ashleigh Green	Co.	2.51400	0.83
	Aspen Woods	Co.	1.51100	0.50
	Autumn Manor	Co.	10.63700	3.51
	Autumn River	Co.	20.35530	6.72
	Autumn View	Co.	120.45000	39.75
	Autumn Woods	Co.	4.20600	1.39
	Bageant Property	Co.	1.57200	0.52
	Bedford Square	Co.	2.11400	0.70
	Beech Creek	Co.	5.98300	1.97
	Beechcrest Apartments	Co.	0.04400	
	Belmont Station	Co.	6.46300	2.13
	Benson Branch Estates	Co.	12.24700	4.04
	Bethany Brook	Co.	1.20900	0.40
	Bethany Woods	Co.	4.84900	1.60

Bishop Property 1	Co.	0.43500	0.14
Bishop Property 2	Co.	0.41100	0.14
Blaugh Property	Co.	0.68300	0.23
Bluffs at Ellicott Mills	Co.	4.44500	1.47
Bluffs at Pine Orchard	Co.	4.07100	1.34
Bock Property	Co.	1.01300	0.33
Bonnie Brae	Co.	1.90300	0.63
Bonnie Branch Overlook	Co.	5.88000	1.94
Bonnie Branch Point	Co.	3.62000	1.19
Bonnie Branch Woods	Co.	3.19000	1.05
Boone Farm	Co.	6.33400	2.09
Boone Subdivision	Co.	0.16100	0.05
Bounty Vista	Co.	0.87000	0.29
Bowling Brook Farm	Co.	33.79200	11.15
Brae Brooke	Co.	1.23700	0.41
Brampton Hills	Co.	34.63600	11.43
Brampton Hills West	Co.	2.81300	0.93
Bridge Water	Co.	9.86200	3.25
Brightfield	Co.	16.94890	5.59
Brinkleigh	Co.	6.11700	2.02
Brittany Manor	Co.	8.71500	2.88
Brook View Estates	Co.	1.77800	0.59
Brookfield	Co.	1.40600	0.46
Bryant Square	Co.	0.25900	0.09
Bryce Overlook 2	Co.	1.26000	0.42
Burleigh Manor	Co.	79.13800	26.12
Cabin Branch Farm	Co.	32.86600	10.85
Cahill Overlook	Co.	0.34320	0.11
Calvert Ridge	Co.	5.12680	1.69
Caplan Property	Co.	14.23700	4.70
Cardinal Forest	Co.	3.25100	1.07
Carlee Manor	Co.	0.08100	0.03
Caroline Estates	Co.	2.26100	0.75
Carriage Hill	Co.	3.01700	1.00
Carriage Mill Farm	Co.	26.61000	8.78
Carter's Crossing	Co.	1.08200	0.36
Cascade Overlook	Co.	14.51000	4.79
Catterton Property	Co.	0.55000	0.18
Cedar Acres	Co.	6.21770	2.05
Cedar Manor	Co.	1.01500	0.33
Cedar Ridge	Co.	0.18800	0.06
Centennial Lake	Co.	4.24900	1.40
Centennial Manor	Co.	35.29000	11.65
Chaconas Property	Co.	19.08600	6.30
Cherry Creek	Co.	4.85300	1.60
Cherry Creek Overlook	Co.	4.91500	1.62
Cherry Tree Farm	Co.	32.02600	10.57
Cherry Tree Park	Co.	4.74950	1.57
Cherrytree View	Co.	0.18880	0.06
Chestnut Ridge	Co.	0.95200	0.31
Chestnut Crest	Co.	1.72700	0.57
Chestnut Farm	Co.	5.98700	1.98
Child's Property	Co.	0.71080	0.23
Claremont Overlook	Co.	24.04920	7.94
Clarks Glen	Co.	19.98300	6.59
Clark's Glen North	Co.	4.18100	1.38
Clark's Meadow	Co.	7.06000	2.33
Clemen's Square	Co.	3.18000	1.05
College Farm	Co.	3.27000	1.08
Columbia Hills	Co.	1.98000	0.65
Columbia Open Space	Co.	5.59400	1.85
Columbia Woodlands	Co.	2.13890	0.71
Cornell Property	Co.	0.94000	0.31
Costel Property	Co.	1.66800	0.55
Cricket Creek	Co.	3.48000	1.15
Crystal Springs	Co.	4.51300	1.49
Curry Property	Co.	0.50700	0.17
Cypress Springs	Co.	9.92560	3.28

	Daniel Mills Overlook	Co.	69.48400	22.93
	Deep Run	Co.	2.07400	0.68
	Dennis Preserve	Co.	8.99400	2.97
	Dorsey Hall	Co.	172.98700	57.09
	Dorsey Woods	Co.	31.81800	10.50
	Dublin Property	Co.	6.16000	2.03
	Duggan Property	Co.	1.63580	0.54
	Dunloggin Square	Co.	0.10300	0.03
	Dunteachin Farm	Co.	10.60700	3.50
	Eagles Point Landing	Co.	0.93200	0.31
	Eastern View	Co.	4.41700	1.46
	Eckers Hollow	Co.	2.16700	0.72
	Edgewood Farm	Co.	40.84000	13.48
	Elkhill	Co.	8.95000	2.95
	Elkridge Town Center	Co.	7.37000	2.43
	Ema's Manor	Co.	0.07840	0.03
	Emmerson	Co.	189.11200	62.41
	Enchanted Forest Estates	Co.	21.92400	7.23
	Faad	Co.	4.58500	1.51
	Fairways	Co.	11.76800	3.88
	Feaga Property	Co.	3.39500	1.12
	Fels Lane Open Space	Co.	0.50900	0.17
	Fincham Property	Co.	0.99900	0.33
	First Ridge	Co.	11.94800	3.94
	Fisher Property	Co.	3.23100	1.07
	Forest Creek	Co.	0.85000	0.28
	Forest, The	Co.	5.72900	1.89
	Fox Chase Estates	Co.	7.70000	2.54
	Free State	Co.	14.03900	4.63
	Fulton Manor	Co.	9.70100	3.20
	Furnace Ave	Co.	0.21900	0.07
	G Roscoe Property	Co.	0.77800	0.26
	Garber Property	Co.	0.26900	0.09
	German Property	Co.	3.65200	1.21
	Gibson Property	Co.	1.02060	0.34
	Gill Property	Co.	0.26340	0.09
	Glen Brook	Co.	7.96000	2.63
	Glenmar	Co.	3.91500	1.29
	Glynchester Farm	Co.	6.66300	2.20
	Gorman Woods	Co.	1.75400	0.58
	Governors Run	Co.	54.60500	18.02
	Gray Rock Farm	Co.	50.75990	16.75
	Grayloch Woods	Co.	0.44400	0.15
	Green Briar Manor	Co.	0.24600	0.08
	Green Hill Manor	Co.	1.35700	0.45
	Grovemont	Co.	11.20000	3.70
	GTWs Waverly Woods	Co.	19.39600	6.40
	Guilford Rd & Sanner Rd Prop	Co.	5.26000	1.74
	Gwynn Acres Open Space	Co.	10.34000	3.41
	Hammond Hills	Co.	12.76900	4.21
	Hammond Overlook	Co.	25.26600	8.34
	Hammond Park	Co.	3.81600	1.26
	Hammond Village	Co.	8.25100	2.72
	Hammond's Promise	Co.	1.49200	0.49
	Hammond's View	Co.	0.42410	0.14
	Harding Woods	Co.	6.25000	2.06
	Harry Holliday Property	Co.	0.36800	0.12
	Harwood	Co.	1.08900	0.36
	Hawk's Watch	Co.	0.69300	0.23
	Heyn Property	Co.	4.02000	1.33
	Hidden Valley	Co.	2.98700	0.99
	Hogg Property	Co.	9.86400	3.26
	Holiday Hills	Co.	0.09100	0.03
	Hollifield Estates	Co.	5.90980	1.95
	Hollifield Estates 1	Co.	6.48000	2.14
	Hollifield Estates 2	Co.	1.73000	0.57
	Hollifield Hills	Co.	5.65700	1.87
	Hunt Country Estates	Co.	5.28600	1.74

Hunterbrook	Co.	9.66100	3.19
Hunter's Creek Farm	Co.	14.34000	4.73
Hunter's Ridge	Co.	7.80900	2.58
Huntington South	Co.	3.48900	1.15
Ilchester Heights	Co.	1.92800	0.64
Ilchester Hills	Co.	2.55000	0.84
Ilchester Oaks	Co.	3.66000	1.21
Ilchester Oaks 2	Co.	0.72000	0.24
Ilchester Woods	Co.	4.28700	1.41
Jamestown Landing	Co.	3.43000	1.13
Journey's End	Co.	0.82700	0.27
Kalmia Farms	Co.	8.69000	2.87
Kiing's Arms	Co.	2.41000	0.80
Kindler Overlook 2	Co.	1.65000	0.54
King's Meade	Co.	3.99600	1.32
King's Woods	Co.	18.82400	6.21
Laisla	Co.	0.98400	0.32
Lakeview	Co.	3.59000	1.18
Larenas Property	Co.	0.15070	0.05
Leishear Knolls	Co.	2.01300	0.66
Lilly Property 2	Co.	0.20300	0.07
Lilly's Addition to Lakeview	Co.	3.11200	1.03
Lime Kiln Valley	Co.	9.77726	3.23
Linwood	Co.	0.07500	0.02
Lisbon Manor	Co.	2.13900	0.71
Little Patuxent Ridge	Co.	49.79700	16.43
Longgate / Wheatfield	Co.	16.74900	5.53
Lynwood Manor	Co.	4.99950	1.65
Lyons Hill	Co.	1.05300	0.35
Maisel Tract	Co.	1.19300	0.39
Makowski Property	Co.	0.85700	0.28
Malcolm Property	Co.	2.09100	0.69
Manors of Oakwood	Co.	1.35300	0.45
Maple Lawn Farms	Co.	74.71830	24.66
Maple Lawn Farms (westside)	Co.	17.49830	5.77
Maple Side	Co.	10.83090	3.57
Marble Hill Development	Co.	1.00000	0.33
Marbuck Estates	Co.	0.78000	0.26
Marshalee Woods	Co.	17.98440	5.93
Martin Meadows	Co.	2.06900	0.68
Mary Oaks	Co.	2.36700	0.78
Mayfield Manor	Co.	16.76100	5.53
McKendree View	Co.	7.21000	2.38
McKenzie Discovery	Co.	15.11500	4.99
McKenzie Meadows	Co.	12.08800	3.99
Meadowbrook	Co.	0.94124	0.31
Meadowland	Co.	2.40300	0.79
Milltowne Overlook	Co.	2.67000	0.88
Mongomery Estates	Co.	4.41100	1.46
Mongomery Knolls	Co.	0.35100	0.12
Mongomery Meadows	Co.	34.31020	11.32
Montpelier Research Park	Co.	20.84700	6.88
Moon Shine Hollow	Co.	0.05900	0.02
Mooresfield	Co.	9.57712	3.16
Morgans Landing	Co.	1.21270	0.40
Mount Hebron	Co.	84.30040	27.82
Mount Joy Farm	Co.	19.15689	6.32
Murray Hill Subdivision	Co.	8.09400	2.67
North Gate Woods	Co.	1.22100	0.40
North Ridge	Co.	3.22800	1.07
Nottingham Village	Co.	14.61160	4.82
Nottingham Way Acres	Co.	4.54100	1.50
Oakwest	Co.	11.66400	3.85
Old Mill	Co.	1.27300	0.42
Old Mill Overlook	Co.	2.80730	0.93
Orchard Hill	Co.	4.22900	1.40
Overlook at Blue Stream	Co.	12.74570	4.21
Owen Brown East	Co.	0.50700	0.17

Owen Brown Estates	Co.	4.45500	1.47
Owen Brown Woods	Co.	5.70870	1.88
Owens Property	Co.	9.81500	3.24
Paddocks East, The	Co.	25.78000	8.51
Palmer Hill 2	Co.	1.79480	0.59
Palmer Hill Property	Co.	1.03500	0.34
Papillon	Co.	9.68400	3.20
Park Estates	Co.	1.64000	0.54
Patapsco Ridge	Co.	10.87870	3.59
Patuxent Heights	Co.	4.35800	1.44
Patuxent Ridge	Co.	3.04000	1.00
Patuxent Run	Co.	25.92500	8.56
Patuxent Springs	Co.	5.42600	1.79
Patuxent Valley Overlook	Co.	1.99100	0.66
Pindell Chase	Co.	3.34900	1.11
Pindell Crossing	Co.	2.93800	0.97
Pine Ridge	Co.	2.43200	0.80
Prince Property	Co.	1.62300	0.54
R. Taylor Property	Co.	2.75550	0.91
Rausch Property	Co.	2.58000	0.85
Rebecca Dorsey	Co.	0.43610	0.14
Red Fox Estates	Co.	2.12000	0.70
Red Hill Branch Overlook	Co.	2.87800	0.95
Reservior Overlook	Co.	15.96000	5.27
Rettger Property	Co.	10.31300	3.40
Revitz Property	Co.	31.03300	10.24
Rich Glow Acres	Co.	3.21500	1.06
River Walk at Patapsco Park	Co.	14.39000	4.75
Riverside	Co.	11.37200	3.75
Riverside Estates	Co.	17.09950	5.64
Riverside Overlook	Co.	17.79300	5.87
Riverwalk	Co.	1.11350	0.37
Riverwood	Co.	57.60000	19.01
Rockburn Manor	Co.	1.30300	0.43
Rockburn Township	Co.	22.61800	7.46
Rockburn View	Co.	7.96400	2.63
Rockland at Rogers	Co.	24.50000	8.09
Rockland Square	Co.	2.15700	0.71
Roxbury	Co.	28.16300	9.29
Ruppert Property	Co.	3.60700	1.19
Saddle Ridge	Co.	1.28600	0.42
Saddlebrook Farms	Co.	5.30200	1.75
Saglimbeni Properties LLC	Co.	4.00000	1.32
Scott Acres	Co.	4.80700	1.59
Semon Property	Co.	0.53640	0.18
Settlers Landing	Co.	2.17700	0.72
Sewells Orchard	Co.	0.24400	0.08
Sewells Property	Co.	0.23900	0.08
Shady Lane Crossing	Co.	2.03985	0.67
Shank Property	Co.	1.12900	0.37
Sherwood Crossing	Co.	4.65700	1.54
Shipley Meadows	Co.	4.64300	1.53
South View RD. Pindell Crossing	Co.	0.57730	0.19
Spring Lake Garden	Co.	1.24920	0.41
St. John's Green	Co.	3.70000	1.22
Steven Curran Property	Co.	0.77000	0.25
Stone Lake	Co.	21.14540	6.98
Stone Manor	Co.	21.53350	7.11
Stonefield 2	Co.	0.35000	0.12

Storch Woods	Co.	6.04000	1.99
Stratford Downs	Co.	1.08900	0.36
Strawberry Fields	Co.	11.43700	3.77
Stricker Property	Co.	0.46000	0.15
Summer Haven	Co.	4.22500	1.39
Sunnyfield Estates	Co.	7.27600	2.40
Talbots Woods	Co.	2.39600	0.79
Talbots Woods 2	Co.	4.04500	1.33
Taylor Farm	Co.	5.81000	1.92
Taylor Property	Co.	1.97400	0.65
The Bluffs at Whitetail Woods	Co.	0.29000	0.10
The Boarman Estates	Co.	1.76100	0.58
The Chase	Co.	16.29000	5.38
The Chase 2	Co.	2.50500	0.83
The Hillside at Rocky Gorge	Co.	1.76000	0.58
The Hillside at Rocky Gorge 2	Co.	0.98430	0.32
The Hillside at Rocky Gorge 3	Co.	0.41000	0.14
The Hillside at Rocky Gorge 4	Co.	1.37300	0.45
The Hillside at Rocky Gorge 6	Co.	0.94000	0.31
The Over Look at Centennial Park	Co.	2.15100	0.71
The Preserve at Clarksville	Co.	42.44000	14.01
The Woods at Park Place	Co.	6.68990	2.21
Thomas Purchase	Co.	0.02900	0.01
Thompson's Purchase	Co.	9.77300	3.23
Tiber Ridge	Co.	1.36202	0.45
Tiber Woods	Co.	0.13600	0.04
Toliver Property	Co.	0.92400	0.30
Tollhouse	Co.	21.44800	7.08
Towers Property	Co.	1.36490	0.45
Townhomes of Timberland	Co.	23.86200	7.87
Travis Landing	Co.	0.40600	0.13
Treyburn	Co.	15.41000	5.09
Triadelphia Crossing	Co.	12.30000	4.06
Trotter Crossing	Co.	0.83160	0.27
Trotter Hill	Co.	1.25800	0.42
Trotter Ridge	Co.	2.08000	0.69
Trotter Woods	Co.	5.01000	1.65
Trotters Run	Co.	1.02000	0.34
Turf Valley Overlook	Co.	34.15600	11.27
Twin Oaks	Co.	5.48300	1.81
U.S. 1 Joint Venture	Co.	1.39000	0.46
U.S. Route 29	Co.	2.35510	0.78
Valley Meade	Co.	12.34600	4.07
Vetick Property	Co.	0.16600	0.05
Village of Ceder Ridge	Co.	46.75000	15.43
Village of Hickory Ridge	Co.	18.88300	6.23
Village of Kings Contrivance	Co.	9.22700	3.04
Village of Montgomery Run	Co.	3.46700	1.14
Village of River Hill	Co.	2.58480	0.85
Vinyards at Cattail Creek	Co.	3.96000	1.31
Walter & Laverne Brown Property	Co.	0.50000	0.17
Warfields Range 2	Co.	1.20700	0.40
Warfields Range	Co.	1.05920	0.35
Waverly Overlook	Co.	2.14400	0.71
Waverly Woods	Co.	1.24000	0.41
Wellington	Co.	7.09400	2.34
West Cliffe Manor	Co.	2.40500	0.79
West Gate Woods	Co.	1.53000	0.50
Westmount	Co.	36.00000	11.88
Whitetail Woods	Co.	0.81000	0.27
Willow Pond	Co.	4.78800	1.58
Willows of Rocky Gorge	Co.	5.99900	1.98
Willows, The	Co.	10.28000	3.39
Willowwood	Co.	34.36390	11.34
Windy Knolls	Co.	12.99000	4.29
Winterbrook	Co.	12.93500	4.27
Winteroak	Co.	3.04400	1.00
Wood Brook	Co.	7.50000	2.48

	Woodberry	Co.	3.00500	0.99
	Woodcrest	Co.	5.35200	1.77
	Woodcrest 2	Co.	0.29500	0.10
	Woodfords Grant	Co.	18.56700	6.13
	Woodland Park	Co.	10.58700	3.49
	Woodland Village	Co.	7.36800	2.43
	Woodlot	Co.	26.87900	8.87
	Woods of Tiber Branch	Co.	5.49440	1.81
	Woods of Tiber Branch 2	Co.	15.49561	5.11
	Worthington Addition	Co.	1.31000	0.43
	Worthington Fields	Co.	34.98383	11.54
	Worthington Reserve	Co.	23.22700	7.66
	Wyndemere	Co.	25.73900	8.49
	Zanti Property	Co.	3.06000	1.01
			3505.17	1156.69

Historic Cultural Areas				
Eligibility:	B&O Railroad Museum	Co.	0.64	0.21
33%	Baldwin Commons Park	Co.	1.22	0.40
	Bollman Truss Bridge	Co.	0.50	0.17
	Colonel Anderson Memorial	Co.	0.15	0.05
	Ellicott City Colored School	Co.	13.76	4.54
	Little Court House	Co.	0.03	0.01
	Old Firehouse Museum	Co.	0.02	0.01
	Patapsco Female Institute	Co.	9.82	3.24
	Poplar Springs Park	Co.	7.07	2.33
	Pratt Truss Bridge	Co.	0.42	0.14
	Thomas Isaac Log Cabin	Co.	0.51	0.17
	Waverly Mansion	Co.	3.44	1.14
			37.58	12.40
Home Owner Association Lands				
Eligibility:	Home Owner Association Lands	Priv.	1205.60	397.85
33%				
Other Permanently Preserved Private Open Spaces (Columbia Assn. & WSSC)				
Eligibility:	Dorsey Search Village Open Space	Priv.	228.20	75.31
33%	Harper's Choice Village Open Space	Priv.	439.46	145.02
	Hickory Ridge Village Open Space	Priv.	255.52	84.32
	Kings Contrivance Village Open Space	Priv.	639.78	211.13
	Long Reach Village Open Space	Priv.	341.54	112.71
	Oakland Mills Village Open Space	Priv.	253.42	83.63
	Owen Brown Village Open Space	Priv.	396.78	130.94
	River Hill Village Open Space	Priv.	367.16	121.16
	Towncenter Village Open Space	Priv.	215.36	71.07
	Washington Suburban Sanitation Commission (WSSC)	Priv.	3204.08	1057.35
	Wild Lake Village Open Space	Priv.	108.89	35.93
			6450.19	2128.56
	Total Acres	28380.20		
	Total Eligible Acres	9066.11		
	Howard County Population in 2010 =	287,085		
	Total Eligible Acres Divided by Howard County 2010 Population in Thousands	9066.11/287.085 =	31.58	Acres Per Thousand Popu
Source: Howard County Department of Recreation and Parks, URDC				

Appendix B - Howard County Recreation and Parks Programs/Activities



Howard County Recreation & Parks Nature of Program Services Matrix

Programs/Activities by Age	Programs with general or little supervision	Programs with Structured Leadership	Fee (\$) Free (F) or Both (B)	Scope/Level: Basic (B) Interm (I) Expert (E)	Types of Participation: Physical (P) Intellectual (I) Social (S) Creative (C)	Types of Participation: Individual (I) Small Group (S) Groups (G)
Teenage:	6.2.1	6.2.2	6.2.4	6.5	6.6	6.7
After School Education/Recreation	X	X	B	B,I	P,I,S,C	I,S,G
After School Care (Student Union)		X	\$	B	P,I,S,C	I,S,G
Instructional Sports		X	\$	B,I,E	P,I,S	I,S,G
Competitive Sports	X		\$	B,I,E	P,S	I,S,G
Recreational Sports	X		\$	B	P,S	I,S,G
Swim Lessons/Aquatics		X	\$	B,I,E	P	I,S
Therapeutic Recreation		X	\$	B,I	P,I,S,C	I,S,G
TR Extended Care (after School)		X	\$	B	P,I,S,C	I,S,G
Dance Classes		X	\$	B,I	P,S,C	I,S,G
Fitness/Health Classes		X	\$	B,I	P,I,S	I,S,G
Visual Arts/Crafts Classes		X	\$	B,I	C,I	I
Art Classes (TR)		X	\$	B,I	C,I	I
Social Events (TR)		X	\$	B	S	S,G
Music Classes		X	\$	B,I	C,I	I,S
Summer Camps		X	\$	B,I,E	P,I,S,C	I,S,G
High Adventure Skills Classes		X	\$	B,I,E	P,I,S,C	I,S
High Adventure Trips		X	\$	B,I,E	P,I,S,C	I,S,G
Parks-pathways, green spaces, natural areas	X		F	B,I,E	P,I	I,S,G
Lakes & Streams - Boating, Fishing, Kayaking	X		B	B,I,E	P,I	I,S,G

Howard County Recreation & Parks Nature of Program Services Matrix

Programs/Activities by Age	Programs with general or little supervision	Programs with Structured Leadership	Fee (\$) Free (F) or Both (B)	Scope/Level: Basic (B) Interm (I) Expert (E)	Types of Participation: Physical (P) Intellectual (I) Social (S) Creative ©	Types of Participation: Individual (I) Small Group (S) Groups (G)
Adult:	6.1.3	6.1.4	6.1.6	6.5	6.6	6.7
Fitness/Health Classes		X	\$	B,I,E	P,I,S	I,S,G
Therapeutic Fitness Classes		X	\$	B,I	P,I,S	I,S,G
Visual Arts/Crafts Classes		X	\$	B,I	C,I	I,S
Music Classes		X	\$	B,I	C,I	I,S,G
Personal Development Classes		X	\$	B,I	I	I
Day Trips	X		\$	B	S,I	I,S,G
Recreational Sports	X		B	B,I	P,S	I,S,G
Competitive Sports	X		\$	B,I	P,I,S,C	I,S,G
Instructional Sports		X	\$	B,I,E	P,I,S,C	I,S,G
Special Events for ages 18-Up	X		B	B	S	S,G
Social Events (TR)		X	\$	B	S	S,G
Outdoor Recreation	X		B	B,I,E	P,I,S,C	I,S
Parks-Pathways, Green Spaces, Natural Areas	X		F	B,I,E	I,P	I,S

Howard County Recreation & Parks Nature of Program Services Matrix

Programs/Activities by Age	6.2.1 Programs with general or little supervision	6.2.2 Programs with Structured Leadership	6.2.4 Fee (\$) Free (F) or Both (B)	6.5 Scope/Level: Basic (B) Interm (I) Expert (E)	Types of Participation: Physical (P) Intellectual (I) Social (S) Creative ©	Types of Participation: Individual (I) Small Group (S) Groups (G)
Elementary Age:	6.2.1	6.2.2	6.2.4	6.5	6.6	6.7
Licensed Child Care 38 Programs		X	\$	B,I	P,I,S,C	S,G
Special Events	X		B	B	S	G
After School Education/Recreation	X	X	B	B,I,E	P,I,S,C	I,S,G
Fitness/Health Classes		X	\$	B,I	P,S	S,G
Dance Classes		X	\$	B,I	P	S,G
Visual Arts/Crafts Classes		X	\$	B,I	I,C,S	I,S,G
Instructional Sports		X	\$	B,I,E	P,S,I	S,G
Competitive Sports		X	\$	B,I	P,S	I,S,G
Swim Lessons/Aquatics		X	\$	B,I,E	P,S	I,S,G
Summer Camps		X	\$	B,I,E	P,I,S,C	S,G
High Adventure Skills Classes		X	\$	B,I	P,I,S,C	I,S,G
High Adventure Trips	X		\$	B,I,E	P,I,S,C	I,S,G
Playgrounds (equipment)		X	F	B	P,S	I,S
Parks-Pathways, green spaces, natural areas	X	X	F	B,I	I,P	I,S,G
Lakes streams-Fishing, boating	X	X	B	B,I,E	I,P	I,S

Howard County Recreation & Parks Nature of Program Services Matrix

Programs/Activities by Age	6.2.1 Programs with general or little supervision	6.2.2 Programs with Structured Leadership	6.2.4 Fee (\$) Free (F) or Both (B)	6.5 Scope/Level: Basic (B) Interm (I) Expert (E)	6.6 Types of Participation: Physical (P) Intellectual (I) Social (S) Creative (C)	6.7 Types of Participation: Individual (I) Small Group (S) Groups (G)
Over 55:	6.2.1	6.2.2	6.2.4	6.5	6.6	6.7
Day Trips	X		\$	B	S	S,G
Overnight Trips	X		\$	B	S	S,G
Themed Social		X	\$	B	S	G
Special Events	X		B	B	S	S,G
Card Clubs	X		F	B,I,E	S,I	I,S,G
Fitness/Health Classes		X	\$	B,I	P,I,S	I,S,G
Music Classes		X	\$	B,I,E	C,I	I,S
Visual Arts/Crafts Classes		X	\$	B,I,E	C,I	I,S
Enrichment Programs		X	\$	B,I,E	I,P,S,C	I,S,G
Dance Classes		X	\$	B,I,E	P,S	I,S,G
Recreational Sports	X		B	B,I,E	P,S	I,S,G
Competitive Sports	X	X	\$	B,I	P,S	I,S,G
Outdoor Recreation	X	X	B	B,I	P,I,S,C	I,S,G

Howard County Recreation & Parks Nature of Program Services Matrix

Programs/Activities by Age	Programs with general or little supervision	Programs with Structured Leadership	Fee (\$) Free (F) or Both (B)	Scope/Level: Basic (B) Interm (I) Expert (E)	Types of Participation: Physical (P) Intellectual (I) Social (S) Creative (C)	Types of Participation: Individual (I) Small Group (S) Groups (G)
	6.2.1	6.2.2	6.2.4	6.5	6.6	6.7
Pre-School:						
Early Learning Center		X	\$	B	P,I,S,C	S,G
Dance Classes		X	\$	B,I	P,C	S,G
Drama		X	\$	B	C	S,G
Parent & Child Classes and Programs		X	\$	B	S	S,G
Music Classes		X	\$	B	C	S,G
Visual Arts/Craft Classes		X	\$	B	C,I	S,G
Themed Special Events		X	B	B	S	G
Swim Lessons/ Aquatics		X	\$	B,I	P	S,G
Fitness/Health Classes		X	\$	B	P,S,I	ALL
Instructional Sports		X	\$	B,I	P,S	ALL
Summer Programs		X	\$	B,I,E	P,I,S,C	S,G
Playgrounds (equipment)	X		F	B	P,I,S	I,S
Parks-pathways, green space, natural	X		B	B	P,I,S	S
Lake-Fishing, boating	X		B	B,I,E	P,I,S	S

Appendix C - Recreational Facility Needs Analysis



Columbia Planning Area

Demand

Activity	Participation Rates (Percent of Total Population)	Frequency Rates (Occurrences per User per Year)	Demand (User Occurrences Per Year)		
			Current: 2010 Population 99,476	2020 Population 101,946	2030 Population 106,425
Baseball / Softball	13.4%	19.64	261,797	268,297	280,085
Football/Soccer/Field Hockey/Lacrosse	28.2%	20.97	588,255	602,862	629,348
Basketball	11.3%	19.6	220,319	225,790	235,710
Swimming	49.6%	11.57	570,865	585,040	610,743
Tennis	10.3%	13.11	134,325	137,661	143,709
Golf	17.2%	12.25	209,596	214,800	224,237
Bike / Hike Trails	46.0%	17.85	816,797	837,079	873,856
Playgrounds	52.4%	9.06	472,256	483,983	505,246

Supply

Activity	Facility Type	Number of Sites	Season Length	Daily Supply Per Facility	Annual Supply Per Facility	Total Annual Supply
Baseball / Softball	Diamonds	63	90	40	3,600	226,800
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	43	180	52	9,360	402,480
Basketball	Courts	72	180	40	7,200	518,400
Swimming	Pools	26	90	800	72,000	1,872,000
Tennis	Courts	77	150	16	2,400	184,800
Golf	Courses	2	210	360	75,600	151,200
Bike / Hike Trails	Miles	110.31	240	68	16,320	1,800,259
Playgrounds	Playgrounds	203	180	60	10,800	2,192,400

Columbia Planning Area

Needs

Activity	Facility Type	2010		2020	
		Surplus/ (User Occurrences)	Deficit Facilities	Surplus/ (User Occurrences)	Deficit Facilities
Baseball / Softball	Diamonds	-34,997	-10	-41,497	-12
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	-185,775	-20	-200,382	-21
Basketball	Courts	298,081	41	292,610	41
Swimming	Pools	1,301,135	18	1,286,960	18
Tennis	Courts	50,475	21	47,139	20
Golf	Courses	-58,396	-1	-63,600	-1
Bike / Hike Trails	Miles	983,462	60	963,181	59
Playgrounds	Playgrounds	1,720,144	159	1,708,417	158

Activity	Facility Type	2030	
		Surplus/ (User Occurrences)	Deficit Facilities
Baseball / Softball	Diamonds	-53,285	-15
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	-226,868	-24
Basketball	Courts	282,690	39
Swimming	Pools	1,261,257	18
Tennis	Courts	41,091	17
Golf	Courses	-73,037	-1
Bike / Hike Trails	Miles	926,404	57
Playgrounds	Playgrounds	1,687,154	156

Elkridge Planning Area

Demand

Activity	Participation Rates (Percent of Total Population)	Frequency Rates (Occurrences per User per Year)	Demand (User Occurrences Per Year)		
			Current: 2010 Population 40,141	2020 Population 49,752	2030 Population 53,431
Baseball / Softball	13.4%	19.64	105,641	130,935	140,618
Football/Soccer/Field Hockey/Lacrosse	28.2%	20.97	237,375	294,210	315,966
Basketball	11.3%	19.6	88,904	110,191	118,339
Swimming	49.6%	11.57	230,358	285,513	306,626
Tennis	10.3%	13.11	54,204	67,182	72,149
Golf	17.2%	12.25	84,577	104,827	112,579
Bike / Hike Trails	46.0%	17.85	329,598	408,514	438,722
Playgrounds	52.4%	9.06	190,567	236,195	253,660

Supply

Activity	Facility Type	Number of Sites	Season Length	Daily Supply Per Facility	Annual Supply Per Facility	Total Annual Supply
Baseball / Softball	Diamonds	22	90	40	3,600	79,200
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	11	180	52	9,360	102,960
Basketball	Courts	22	180	40	7,200	158,400
Swimming	Pools	0	90	800	72,000	0
Tennis	Courts	6	150	16	2,400	14,400
Golf	Courses	1	210	360	75,600	75,600
Bike / Hike Trails	Miles	14.21	240	68	16,320	231,907
Playgrounds	Playgrounds	11	180	60	10,800	118,800

Elkridge Planning Area

Needs

Date

Activity	Facility Type	2010		2020	
		Surplus/ (User Occurrences)	Deficit Facilities	Surplus/ (User Occurrences)	Deficit Facilities
Baseball / Softball	Diamonds	-26,441	-7	-51,735	-14
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	-134,415	-14	-191,250	-20
Basketball	Courts	69,496	10	48,209	7
Swimming	Pools	-230,358	-3	-285,513	-4
Tennis	Courts	-39,804	-17	-52,782	-22
Golf	Courses	-8,977	0	-29,227	0
Bike / Hike Trails	Miles	-97,691	-6	-176,606	-11
Playgrounds	Playgrounds	-71,767	-7	-117,395	-11

Activity	Facility Type	2030	
		Surplus/ (User Occurrences)	Deficit Facilities
Baseball / Softball	Diamonds	-61,418	-17
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	-213,006	-23
Basketball	Courts	40,061	6
Swimming	Pools	-306,626	-4
Tennis	Courts	-57,749	-24
Golf	Courses	-36,979	0
Bike / Hike Trails	Miles	-206,815	-13
Playgrounds	Playgrounds	-134,860	-12

Ellicott City Planning Area

Demand

Activity	Participation Rates (Percent of Total Population)	Frequency Rates (Occurrences per User per Year)	Demand (User Occurrences Per Year)		
			Current: 2010 Population 65,652	2020 Population 70,339	2030 Population 74,508
Baseball / Softball	13.4%	19.64	172,780	185,115	196,087
Football/Soccer/Field Hockey/Lacrosse	28.2%	20.97	388,236	415,952	440,606
Basketball	11.3%	19.6	145,406	155,787	165,020
Swimming	49.6%	11.57	376,758	403,656	427,581
Tennis	10.3%	13.11	88,652	94,981	100,610
Golf	17.2%	12.25	138,329	148,204	156,988
Bike / Hike Trails	46.0%	17.85	539,069	577,554	611,785
Playgrounds	52.4%	9.06	311,679	333,930	353,722

Supply

Activity	Facility Type	Number of Sites	Season Length	Daily Supply Per Facility	Annual Supply Per Facility	Total Annual Supply
Baseball / Softball	Diamonds	35	90	40	3,600	126,000
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	24	180	52	9,360	224,640
Basketball	Courts	31	180	40	7,200	223,200
Swimming	Pools	1	90	800	72,000	72,000
Tennis	Courts	21	150	16	2,400	50,400
Golf	Courses	0	210	360	75,600	0
Bike / Hike Trails	Miles	14.74	240	68	16,320	240,557
Playgrounds	Playgrounds	19	180	60	10,800	205,200

Ellicott City Planning Area

Needs

Date

Activity	Facility Type	2010		2020	
		Surplus/ (User Occurrences)	Deficit Facilities	Surplus/ (User Occurrences)	Deficit Facilities
Baseball / Softball	Diamonds	-46,780	-13	-59,115	-16
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	-163,596	-17	-191,312	-20
Basketball	Courts	77,794	11	67,413	9
Swimming	Pools	-304,758	-4	-331,656	-5
Tennis	Courts	-38,252	-16	-44,581	-19
Golf	Courses	-138,329	-2	-148,204	-2
Bike / Hike Trails	Miles	-298,512	-18	-336,997	-21
Playgrounds	Playgrounds	-106,479	-10	-128,730	-12

Activity	Facility Type	2030	
		Surplus/ (User Occurrences)	Deficit Facilities
Baseball / Softball	Diamonds	-70,087	-19
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	-215,966	-23
Basketball	Courts	58,180	8
Swimming	Pools	-355,581	-5
Tennis	Courts	-50,210	-21
Golf	Courses	-156,988	-2
Bike / Hike Trails	Miles	-371,228	-23
Playgrounds	Playgrounds	-148,522	-14

Rural West Planning Area

Demand

Activity	Participation Rates (Percent of Total Population)	Frequency Rates (Occurrences per User per Year)	Demand (User Occurrences Per Year)		
			Current: 2010 Population 40,753	2020 Population 45,494	2030 Population 49,844
Baseball / Softball	13.4%	19.64	107,252	119,729	131,177
Football/Soccer/Field Hockey/Lacrosse	28.2%	20.97	240,994	269,031	294,754
Basketball	11.3%	19.6	90,260	100,760	110,394
Swimming	49.6%	11.57	233,870	261,077	286,041
Tennis	10.3%	13.11	55,030	61,432	67,306
Golf	17.2%	12.25	85,867	95,856	105,021
Bike / Hike Trails	46.0%	17.85	334,623	373,551	409,269
Playgrounds	52.4%	9.06	193,472	215,980	236,631

Supply

Activity	Facility Type	Number of Sites	Season Length	Daily Supply Per Facility	Annual Supply Per Facility	Total Annual Supply
Baseball / Softball	Diamonds	36	90	40	3,600	129,600
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	26	180	52	9,360	243,360
Basketball	Courts	27	180	40	7,200	194,400
Swimming	Pools	0	90	800	72,000	0
Tennis	Courts	22	150	16	2,400	52,800
Golf	Courses	0	210	360	75,600	0
Bike / Hike Trails	Miles	27.99	240	68	16,320	456,797
Playgrounds	Playgrounds	16	180	60	10,800	172,800

Rural West Planning Area

Needs

Date

Activity	Facility Type	2010		2020	
		Surplus/ (User Occurrences)	Deficit Facilities	Surplus/ (User Occurrences)	Deficit Facilities
Baseball / Softball	Diamonds	22,348	6	9,871	3
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	2,366	0	-25,671	-3
Basketball	Courts	104,140	14	93,640	13
Swimming	Pools	-233,870	-3	-261,077	-4
Tennis	Courts	-2,230	-1	-8,632	-4
Golf	Courses	-85,867	-1	-95,856	-1
Bike / Hike Trails	Miles	122,174	7	83,246	5
Playgrounds	Playgrounds	-20,672	-2	-43,180	-4

Activity	Facility Type	2030	
		Surplus/ (User Occurrences)	Deficit Facilities
Baseball / Softball	Diamonds	-1,577	0
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	-51,394	-5
Basketball	Courts	84,006	12
Swimming	Pools	-286,041	-4
Tennis	Courts	-14,506	-6
Golf	Courses	-105,021	-1
Bike / Hike Trails	Miles	47,528	3
Playgrounds	Playgrounds	-63,831	-6

Southeast Planning Area

Demand

Activity	Participation Rates (Percent of Total Population)	Frequency Rates (Occurrences per User per Year)	Demand (User Occurrences Per Year)		
			Current: 2010 Population 41,063	2020 Population 50,128	2030 Population 56,172
Baseball / Softball	13.4%	19.64	108,068	131,925	147,831
Football/Soccer/Field Hockey/Lacrosse	28.2%	20.97	242,828	296,434	332,175
Basketball	11.3%	19.6	90,946	111,023	124,410
Swimming	49.6%	11.57	235,649	287,671	322,355
Tennis	10.3%	13.11	55,449	67,689	75,851
Golf	17.2%	12.25	86,520	105,620	118,354
Bike / Hike Trails	46.0%	17.85	337,168	411,601	461,228
Playgrounds	52.4%	9.06	194,944	237,980	266,673

Supply

Activity	Facility Type	Number of Sites	Season Length	Daily Supply Per Facility	Annual Supply Per Facility	Total Annual Supply
Baseball / Softball	Diamonds	27	90	40	3,600	97,200
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	8	180	52	9,360	74,880
Basketball	Courts	33	180	40	7,200	237,600
Swimming	Pools	0	90	800	72,000	0
Tennis	Courts	20	150	16	2,400	48,000
Golf	Courses	0	210	360	75,600	0
Bike / Hike Trails	Miles	15.05	240	68	16,320	245,616
Playgrounds	Playgrounds	16	180	60	10,800	172,800

Southeast Planning Area

Needs

Date

Activity	Facility Type	2010		2020	
		Surplus/ (User Occurrences)	Deficit Facilities	Surplus/ (User Occurrences)	Deficit Facilities
Baseball / Softball	Diamonds	-10,868	-3	-34,725	-10
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	-167,948	-18	-221,554	-24
Basketball	Courts	146,654	20	126,577	18
Swimming	Pools	-235,649	-3	-287,671	-4
Tennis	Courts	-7,449	-3	-19,689	-8
Golf	Courses	-86,520	-1	-105,620	-1
Bike / Hike Trails	Miles	-91,552	-6	-165,985	-10
Playgrounds	Playgrounds	-22,144	-2	-65,180	-6

Activity	Facility Type	2030	
		Surplus/ (User Occurrences)	Deficit Facilities
Baseball / Softball	Diamonds	-50,631	-14
Football/Soccer/Field Hockey/Lacrosse	Athletic Fields	-257,295	-27
Basketball	Courts	113,190	16
Swimming	Pools	-322,355	-4
Tennis	Courts	-27,851	-12
Golf	Courses	-118,354	-2
Bike / Hike Trails	Miles	-215,612	-13
Playgrounds	Playgrounds	-93,873	-9