



## RECOMMENDED MODEL DEVELOPMENT PRINCIPLES

for Baltimore County, Maryland  
Consensus of the Builders for the Bay  
Site Planning Roundtable

FUNDED IN PART BY:

Abell Foundation  
Baltimore County, MD  
Chesapeake Bay Trust  
Constellation Energy  
National Association of Home Builders  
National Fish and Wildlife Foundation  
Rauch Foundation  
US EPA Chesapeake Bay Program

AN INITIATIVE OF THE *BUILDERS FOR THE BAY*:

Center for Watershed Protection  
Alliance for the Chesapeake Bay  
Home Builders Association of Maryland  
Baltimore County, MD

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# Acknowledgments

The Baltimore County Site Planning Roundtable would not have been possible without the time and effort extended by the Roundtable members, the resources provided by the County, and the generous support of:

- Abell Foundation
- Baltimore County, MD
- Chesapeake Bay Trust
- Constellation Energy
- National Association of Home Builders
- National Fish and Wildlife Foundation
- Rauch Foundation
- US EPA Chesapeake Bay Program

We would also like to thank the individuals who served as subcommittee spokespersons:

- Jay Doyle: Residential Streets, Parking Lots and Infrastructure Subcommittee
- Russ Dickens and Pat Keller: Lot Development Subcommittee
- Ernie Shepp: Stormwater Management Subcommittee
- Bruce Seeley: Review and Approval Process Subcommittee

In addition, we would like to extend a special thanks to the staff of Baltimore County and Home Builders Association of Maryland who assisted in completing the Codes and Ordinances Worksheet (COW) and the Codes Analysis. We also want to thank the following organizations for the use of their facilities:

- Baltimore County Department of Environmental Protection and Resource Management
- Baltimore County Department of Recreation and Parks
- Baltimore County Department of Planning
- GW Stephens & Associates
- Morris Ritchie and Associates
- Ruxton-Riderwood Lake Roland Area Improvement Association

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Copies of this document are available from: Baltimore County Department of Environmental Protection and Resource Management ([www.co.ba.md.us/Agencies/environment/](http://www.co.ba.md.us/Agencies/environment/)), Home Builders Association of Maryland ([www.homebuilders.org](http://www.homebuilders.org)), or the Center for Watershed Protection ([www.cwp.org](http://www.cwp.org)).



Just over a year ago, a partnership of the Baltimore County Government, Alliance for the Chesapeake Bay, Home Builders Association of Maryland, and the Center for Watershed Protection initiated a process known as the Local Site Planning Roundtable to systematically examine local codes and ordinances with an eye to promoting more environmentally-sensitive and economically-viable development. This process, known as Builders for the Bay, is a collaborative consensus initiative designed to pull together local government agencies, the development community, neighborhood organizations, engineering and planning firms, and groups interested in environmental and conservation issues.

Throughout the past year, participants have reviewed current development practices involving five major categories: 1) Residential Streets and Parking Lots, 2) Lot Development, 3) Natural Areas, 4) Stormwater Management, and 5) the Review and Approval Process. From this review, the participants have prepared a consensus document, which contains a variety of recommendations and action items. These range from very specific changes in policy to ongoing review and updating of the County’s development review process. These actions will require an ongoing commitment of all the partners to work together to see that the recommendations of the consensus document are implemented. There is also a commitment to continue to identify improvements to the development process and environmental protection of Baltimore County’s natural resources and quality of life.

The Builders for the Bay has been embraced by the County Executive and partners, acknowledging a long history of progressive management of our natural resources. The consensus process also positions this county to look forward to continuing our quality of life, supporting economic growth, and ensuring that we have strong communities. On behalf of the Builders for the Bay partners, we are pleased to convey this document to the citizens of Baltimore County and to seek their support in our stewardship challenges for our environmental resources.

Very truly yours,

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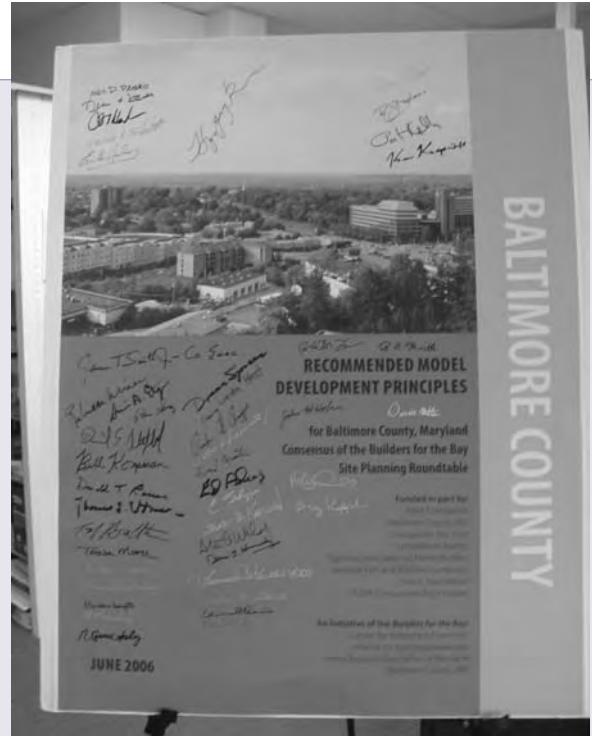


## Executive Summary

This document is a product of the Baltimore County Site Planning Roundtable (Roundtable), a consensus process initiated by the Builders for the Bay Program. The Baltimore County Site Planning Roundtable is the sixth of 12 Builders for the Bay roundtables planned for the Chesapeake Bay region. The purpose of the Builders for the Bay program is to comprehensively evaluate existing development practices with the goal of more effectively protecting natural resources by utilizing innovative and cost effective site design and land planning techniques.

Membership of the Roundtable consisted of a multi-stakeholder group of local government, civic, non-profit, environmental, homebuilding, development and other community professionals. Through a consensus process, members of the Roundtable provided the expertise needed to adapt the national Model Development Principles to specific local conditions including greenfield, infill and redevelopment settings. Roundtable membership recommendations include general and specific code and ordinance revisions that would increase flexibility for site design standards and promote the use of open space and flexible design development in Baltimore County.

The national Model Development Principles refined by the Roundtable are designed to collectively meet the objectives of Better Site Design, which are to: (1) reduce overall site impervious cover, (2) preserve and enhance existing natural areas, (3) integrate stormwater management, and (4) retain a marketable product. Code modifications and other targeted recommendations of the Roundtable were crafted to remove regulatory hurdles and provide incentives, flexibility, and guidance for developers in implementing Better Site Design. This process is focused on Model Development Principles at the site level and does not include discussions on zoning designations or land use.



Participants signed this representative cover of the Consensus Document at the final Roundtable meeting.



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## Purpose

This document presents specific recommendations on how to foster more environmentally-sensitive greenfield, infill and redevelopment site design in Baltimore County. The recommendations were crafted by a diverse cross-section of local government, civic, non-profit, environmental, homebuilding, and other community professionals that participated in the Baltimore County Site Planning Roundtable initiated by the Builders for the Bay program.

## Introduction and Background

Every year, over two million acres of land are altered as a part of the development process of the United States. Development has historically led to degradation in water quality and biological integrity (NRCS, 2001). The impacts of watershed urbanization on the water quality, biology, and physical conditions of aquatic systems have been well documented (CWP, 2003). As such, local codes and ordinances that promote reduced impact of development on local water resources are critical to future sustainability.

Protecting water resources and the character of the local landscape while allowing growth and promoting redevelopment, requires local governments, developers, and site designers to fundamentally change current development practices. Deciding where to allow

or encourage development, promote redevelopment, and protect natural resources are difficult issues that jurisdictions have to balance. While effective zoning and comprehensive planning are critical, communities should also explore measures to minimize the impact of impervious cover, maintain natural hydrology, and preserve contiguous open space on sites where development is to occur.

Toward this end, the Center for Watershed Protection, in concert with the Alliance for the Chesapeake Bay, the Home Builders Association of Maryland, and the Baltimore County Department of Environmental Protection and Resource Management, convened a local Site Planning Roundtable in Baltimore County.

The local Roundtable process in Baltimore County was modeled after the National Site Planning Roundtable (CWP, 1998a), the 22 Model Development Principles (CWP, 1998b), the Smart Site Practices for Redevelopment and Infill (CWP, 2001) and four basic objectives:

1. Reduce overall site impervious cover.
2. Preserve and enhance existing natural resources.
3. Integrate stormwater management.
4. Retain a marketable product.

The Model Development Principles act as benchmarks upon which more specific code and ordinance recommendations were adapted for Baltimore County. The benefits of applying these Model Development Principles are summarized in the table on the following page.



## Benefits of Applying the Model Development Principles

### Local Government:

- Increase local property tax revenues
- Facilitate compliance with wetlands and other regulations
- Assist with stormwater regulation compliance

### Homeowners:

- Increase property values
- Create more pedestrian friendly neighborhoods
- Provide open space for recreation
- Result in a more attractive landscape
- Reduce car speed on residential streets
- Promote neighborhood designs that provide a sense of community

### Developers:

- Provides flexibility in design options
- Reduce development costs
- Allow for more sensible locations for stormwater facilities
- Facilitate compliance with wetlands and other regulations

### Environment:

- Protect sensitive forests, wetlands, and habitats from clearing
- Preserve urban wildlife habitat
- Protect the quality of local streams, lakes, and estuaries
- Generate smaller loads of stormwater pollutants
- Help to reduce soil erosion during construction

## Why Baltimore County?

The Baltimore County Site Planning Roundtable is the sixth of 12 Builders for the Bay roundtables planned for the entire Chesapeake Bay watershed. The purpose of the project is to adapt the principles developed at the national level for local application and to identify local codes and ordinances that act to prohibit or impede Better Site Design through a consensus building process. Baltimore County was selected as a location for a roundtable for several reasons:

- Baltimore County is within the Chesapeake Bay Watershed.
- Baltimore County has experienced a moderate amount of growth within the past few years. From

1990 to 2000, the number of housing units increased by 11.4%.

- Moderate growth is expected to continue and households are expected to increase by 10.3% by 2030.
- As the amount of developable land continues to shrink in Baltimore County, new and innovative techniques will be necessary to encourage and promote efficient and environmentally-sensitive infill and redevelopment within these remaining areas.
- The County government expressed an interest and was willing to commit staff and resources to the process.
- The County has a 40-year track record of progressive growth and natural resource management.
- The Home Builders Association of Maryland generated support for the project among its members.



### Baltimore County's Green Renaissance Program

On January 20, 2005, Baltimore County Executive Jim Smith announced the Green Renaissance Initiative before the Baltimore County Planning Board. Baltimore County's Green Renaissance represents a comprehensive approach to the protection of the County's natural resources. It also seeks to move the County away from old-school adversarial relationships to an inclusive decision-making process that is open to ongoing improvements. Green Renaissance seeks to establish a holistic and sustainable approach to maintaining the County's forests, preserving land heritage, protecting watersheds and incorporating an environmental stewardship ethic in all its citizens. Green Renaissance incorporates a full range of programs, initiatives and projects designed to enhance existing neighborhoods, create the setting to encourage more creative design for new communities and to protect, restore and enhance Baltimore County's unique natural heritage.



Baltimore County Executive Jim Smith announcing the Baltimore County Builders for the Bay Roundtable as part of the County's Green Renaissance initiative.

## The Baltimore County Roundtable Process

Baltimore County Roundtable members convened many times over a 12-month period to become familiar with the Model Development Principles, review existing codes and regulations, work in subcommittees, and reach group consensus on a final set of recommendations. The Roundtable consisted of over 60 dedicated members representing a wide range of professional backgrounds and experience related to local development issues. The process included the following steps:

### Kick-off Meeting: June 2005

Approximately 60 stakeholders from Baltimore County participated in the meeting. Almost every major

stakeholder group was represented including those from the development community, local government, environmental groups, community associations and local utilities. The kickoff meeting introduced stakeholders to the Better Site Design principles (greenfields), Smart Sites practices (infill and redevelopment) and the Roundtable process.

### Detailed Codes Analysis: September 2005

The results of the codes analysis were presented to the Roundtable membership at the September 2005 meeting. The results were based on output from the Baltimore County Codes and Ordinances Worksheet (COW)<sup>1</sup>; feedback from the June kickoff meeting; in-depth review of existing codes; ordinances, policies and regulations; and interviews conducted with

<sup>1</sup> Codes and Ordinances Worksheet (COW): Worksheet that quantitatively scores local development rules against the model development principles. The COW can be downloaded from [www.buildersforthebay.net](http://www.buildersforthebay.net).



developers, engineers and County staff. This analysis, completed by the Roundtable facilitators, provided a concise summary of the regulatory barriers to implementing environmentally-sensitive site design in Baltimore County and served as the foundation for subcommittee discussions. This analysis was presented to the Roundtable membership at a meeting held in September 2005.

More than 30 documents were reviewed as part of the codes analysis, with a primary focus on the following County documents:

- Bureau of Development Plans Review Policy Manual
- Citizen's Guide to Zoning in Baltimore County
- Code of Ordinances
- Comprehensive Manual of Development Policies
- Department of Public Works Design Manual
- Development Management Policy Manual
- Forest Conservation Technical Manual
- Local Open Space Manual
- Manual of Landscaping Standards
- Master Plan 2010
- Stormwater Management Regulations
- Zoning Regulations

### **Subcommittee Meetings and Consensus Building: October 2005 – May 2006**

The full Roundtable divided into five subcommittees with the diversity of interests and expertise represented



Baltimore County Roundtable participants at the Kick-off Meeting

in each. Each subcommittee was responsible for reaching consensus on a subset of the Model Development Principles:

1. Residential Streets, Parking Lots and Infrastructure
2. Lot Development
3. Natural Areas
4. Stormwater Management
5. Review and Approval Process

All five subcommittees met multiple times between October 2005 and May 2006. The full Roundtable membership met again in January 2006 and April 2006 to complete the full membership consensus-building process.

### **Consensus on Final Recommendations: June 2006**

The Roundtable came to consensus on the full set of recommendations.



## Membership Statement of Support

This document of Model Development Principles and associated recommendations for implementation was crafted in conjunction with the diverse cross-section of development, local government, non-profit, environmental, and other community professionals who participated in the Builders for the Bay Baltimore County Site Planning Roundtable.

The Model Development Principles set forth in this document are recommended guidelines for development that, when used in combination, will help reduce the impacts of development on receiving waters. The recommendations provided for the Model Development Principles identify specific actions that should be taken to allow for full implementation and application of the Model Development Principles in Baltimore County.

Members of the Roundtable provided the technical experience and input needed to craft and refine the Model Development Principles for Baltimore County. These Model Development Principles and associated recommendations reflect the Roundtable members' professional and personal experiences with land development and do not necessarily carry the endorsement of the organizations, agencies, and companies represented by their members. Endorsement implies support of the principles and recommendations as a package and does not necessarily imply an equal level of support among individual recommendations by all Roundtable members.

The members of the Baltimore County Site Planning Roundtable endorse the Model Development Principles presented in the document: Recommended Model Development Principles for Baltimore County, Maryland.

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# Model Development Principles

## Recommended by the Baltimore County Site Planning Roundtable

 Throughout this section the icon shown to the left is used to denote principles that address infill and redevelopment.

### *Residential Streets, Parking Lots and Infrastructure Recommendations*

#### **PRINCIPLE S1. STREET WIDTH**

Design Residential Streets for the minimum required pavement width needed to support travel lanes; on-street parking; and emergency, maintenance, and service vehicle access. These widths should be based on traffic volume and surrounding land use.

#### **RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- This principle should be addressed through ongoing discussions regarding the development of rural road standards.

The following recommendations apply to projects inside the urban-rural demarcation line (URDL):

- Utilize bump-outs creatively for possible natural landscaping and/or stormwater conveyance off the street.
- Section 8, Part B of the Bureau of Development Plans Review Policy Manual (February 27, 2002) regarding Public Facilities should incorporate the language as stated in the principle above.



Source: Valleys Planning Council

Pedestrian on a rural road

#### **RATIONALE**

The County scored well for maintaining minimum pavement widths within the suggested parameters. The Department of Public Works (DPW) is not comfortable with queuing streets at this time due to concerns about parked cars. Utilizing bump-outs to control speeds and convey stormwater is encouraged.

#### **PRINCIPLE S2. STREET LENGTH**

Support a more efficient layout and connectivity of streets that encourage neighborhood designs and facilitate walking and biking.

#### **RECOMMENDATION**

The Roundtable supports this principle and recommends the inclusion of the principle in the Bureau of Development Plans Review Policy Manual and in the preliminary considerations of the Baltimore County Design Manual Section on Roads and Streets (page R1, paragraph IIA).



**RATIONALE**

Rather than focusing on street length, the subcommittee believes that promoting efficient street layout as a whole and encouraging walking and biking meets several objectives including reducing overall impervious cover, promoting alternative transportation options, and promoting better site layout.

**PRINCIPLE S3. RIGHT-OF-WAY WIDTH**

Wherever possible, residential street right-of-way widths should reflect the Master Plan designation and the minimum needed to accommodate the travel-way, sidewalk, and stormwater infrastructure. Utilities and storm drains should be located within the pavement section of the right-of-way wherever feasible.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- The specific language of the principle to be included in the Bureau of Development Plans Review Policy Manual.
- Revisions should also reflect recommendations made in Principle L2 of the Lots Subcommittee.
- This principle should be addressed through ongoing discussions regarding the development of rural road standards.

**RATIONALE**

The County scored well on its right-of-way standards. For example, the Better Site Design Handbook (CWP, 1996) recommends minimum right-of-way widths of 45’ or less, Baltimore County recommends minimum right-of-way widths of 40’ in its codes for local roads. The principle can be strengthened by encouraging reduced right-of-way widths in general so that impervious cover is minimized. To this end, the principle recommends inclusion of the specific language in the Bureau of Development Plans Review Policy Manual and practicing these widths.

**PRINCIPLE S4. CUL-DE-SACS**

Consider other alternatives to cul-de-sacs to increase connectivity and incorporate landscaped areas to reduce their impervious cover. The radius of cul-de-sacs should be the minimum required to accommodate emergency and maintenance vehicles. Alternative turnarounds should be considered.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendation:

Add “or design alternatives such as eyebrows and loop roads” along with the term “cul-de-sacs” throughout the Baltimore County Design Manual for Water Mains, Sanitary Sewers, Storm Drains, Roads and Streets, Bridges and Culverts, and Structural and Land Acquisition.



Source: Baltimore County Office of Planning

Missed opportunity: A cul-de-sac that could have incorporated a landscaped island



## RATIONALE

The current codes in the Baltimore County Design Manual for Water Mains, Sanitary Sewers, Storm Drains, Roads and Streets, Bridges and Culverts, and Structural and Land Acquisition state that the number of cul-de-sacs utilized on a site should be minimized, but does not mention other cul-de-sac alternatives. Other cul-de-sac alternatives such as eyebrows, loop roads, and t-turnarounds can reduce the amount of impervious cover and pavement costs providing both environmental and economic benefits. This principle does not eliminate the use of cul-de-sacs, but simply states that other alternatives exist that may reduce impervious cover.

### PRINCIPLE S5. PARKING RATIOS

Existing parking ratios should be reviewed for conformance taking into account local and national experience to see if lower ratios are warranted and feasible. The required parking ratio governing a particular land use or activity should be minimized when possible.

## RECOMMENDATION

The Roundtable supports this principle and makes the following recommendations:

- The County should conduct annual research into parking ratios and update code accordingly.
- The County should allow for reduced parking ratios if a developer can substantiate claims for the reduction.
- This principle language should be stated in section 409.6 and 307.1 of the Baltimore County Zoning Regulations.



Well utilized parking lot

## RATIONALE

Current code numbers do not reflect trends in parking space usage. Opportunities to reduce parking may be found by updating actual parking ratios. To this end, this principle recommends addition of the above language in the Baltimore County Zoning Regulations Manual.

### PRINCIPLE S6. PARKING CODES

Provide incentives for shared parking and a model shared parking agreement. Shared parking arrangements for smaller businesses should be encouraged by changing the minimum square footage requirements.

## RECOMMENDATION

The Roundtable supports this principle and makes the following recommendations:

- The County should maintain a model agreement on the Baltimore County Bureau of Development Plans Review website.
- Section 409.6 of the Baltimore County Zoning Regulations should include a model agreement and cite the above mentioned website where an electronic copy can be obtained.



**RATIONALE**

The County code currently reduces minimum requirements where mass transit is available and where shared parking arrangements are in place. Additional measures can be taken to further encourage these practices, thereby reducing impervious cover and providing environmental benefits. Therefore, this principle recommends a more visible presentation of these alternatives in the codes and on the Baltimore County websites.

**PRINCIPLE S7. PARKING LOTS**

Reduce the overall imperviousness associated with parking lots by providing compact car spaces, minimizing stall dimensions, incorporating safe, efficient parking and travel lanes, and using pervious materials in spill-over parking areas.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

The County should:

- Maintain a current list of approved alternative, pervious parking surfaces. This list should be referenced in section 409.8 of the Baltimore County Zoning Regulations.
- Utilize parking islands creatively for possible conservation landscaping and/or stormwater management in parking lots.
- Revise existing County stormwater regulations to allow stormwater credits for approved alternative, pervious parking surfaces.

**RATIONALE**

The County requires a durable and dustless surface for all parking areas, but does not define what durable or dustless means. Some alternative paving materials can be both durable and dustless, and by adding a list of approved surfaces, the use of permeable alternatives can be encouraged.

**PRINCIPLE S8. STRUCTURED PARKING**

Where appropriate and when public benefit is demonstrated, provide meaningful incentives to encourage structured parking to make it more economically viable.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- “Public benefits” and “incentives” should be defined.
- The County should authorize a cost effectiveness study of structured parking that considers life cycle costs such as maintenance, savings from snow removal, and landscaping savings.
- The County should promote greenroofs on top level parking structures.



Structured parking lot





- The above principle, in conjunction with the recommendations, should be applied in the front of section 409 of the Baltimore County Zoning Regulations with its own subsection using the words “Structured Parking” as the lead.

### **RATIONALE**

Structured parking can provide a method for reducing the total amount of land acreage used for parking. Currently, structured parking is not necessarily encouraged, and most often economics alone dictate whether or not it will be built. This principle provides additional ways to encourage structured parking where appropriate.

### **PRINCIPLE S9. MAXIMIZE TRANSPORTATION CHOICES**

Design sites to maximize transportation choices in order to reduce pollution and improve air and water quality.

### **RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- The County should convene a task force to address this principle on a regional scale<sup>2</sup>.
- The County should include an addendum in the Baltimore County Master Plan, 2010 stating that the Roundtable supports the following policies of the Master Plan and encourages its adoption:
  1. Improve bicycle and pedestrian linkages within and between residential and commercial areas and transit and;
  2. The County will develop a plan for a comprehensive bicycle network with on-road and off-road facilities and;
  3. Adopt a coordinated county policy for pedestrian facilities.

### **RATIONALE**

This principle recognizes that Smart Growth and environmental benefits go beyond impervious cover. Issues like air pollution, livability, and community benefits are also important to consider and help improve overall environmental benefit.

<sup>2</sup> Task Force should reflect the diversity of interests represented in the Roundtable membership.



## Lot Development Recommendations

### PRINCIPLE L1. OPEN SPACE DESIGN

Advocate environmentally-sensitive development that incorporates certain practices to minimize total impervious area, reduce total construction costs, conserve natural areas, provide community recreational space, and promote watershed protection. These practices may include:

- Smaller lot sizes and/or reduced setback and frontage requirements
- Reduced length and/or width of driveways
- Trails and other passive recreational amenities along stream corridors in designated recreational greenways, County parks or where the County believes they facilitate valuable connections between other recreational amenities
- Development with ecological/environmental focus

### RECOMMENDATION

The Roundtable supports this principle and makes the following recommendations:

- Revise the Local Open Space Manual (LOSM) to address the following issues:
  - Clarify and differentiate how the LOSM is applied in rural versus urban areas, including addressing the following issues:
    - > Outside the URDL (Rural areas):
      - Allow open space within subdivisions outside of the urban-rural demarcation line (URDL) to be waived for fee-in-lieu.
      - Developers may pay into a fund to meet open space needs on a multi-district or other regional basis, rather than creating small, poorly utilized and inaccessible open space areas in neighborhoods.
      - Provide staff with more flexibility in determining how open space needs will be met through the development review process in rural areas.
    - > Inside the URDL:
      - Revise the LOSM to specify performance standards, rather than prescriptive requirements, that identify ratios and locations of passive and active open space. Develop standards for paths, benches, etc. to be provided in greenway or forest buffer areas and allow these areas to count for part of the open space element, rather than clearing and grading desirable natural areas to meet open space requirements.
      - Allow a more flexible development process that gives the developer an option to set aside the necessary land area and designate it as active open space and provide escrow funds to be used by the homeowners' association (or similar entity) to develop desired facilities, but not develop specific active recreational facilities until later in the land development process.



Path through natural open space

Source: Baltimore County Office of Planning



- Develop standards for urban parks/pocket parks that can be used in redevelopment and infill scenarios:
  - o Allow flexibility to exchange quality of space or additional amenities for dimensional requirements.
  - o Conduct strategic neighborhood planning to identify options for creating contiguous (larger) open space areas in redevelopment.
  - o Develop design standards and guidance on credit for using urban open space areas for multiple purposes including stormwater management facilities (e.g., bioretention, infiltration practices, grass channels, rain gardens, etc.).
- o As an incentive, where Better Site Design principles are used, allow more options for unit type in the lower density Density Residential (DR) zones in order to provide flexibility for clustering and open space preservation.

### **RATIONALE**

Although “cluster” design subdivisions are allowed in certain zones, the land area in the County that remains to be developed in these zones is very small. Adding cluster provisions to the Resource Conservation Rural-residential Zone (RC-5), which currently does not allow it, was not considered a good option due to the potential for extensive community opposition, and the limited benefit due to the relatively small land area that remains undeveloped. The options remaining for improving environmental site design include addressing how active versus environmental open space is provided, and improving the provision and design of urban parks. The current open space requirements are fairly prescriptive and lack flexibility to respond to specific site conditions, resulting in frequent variances or waivers. As an example, currently it is possible that desirable natural areas would be graded and cleared to meet “active” open space requirements, rather than leaving them in a natural condition and allowing for more passive recreation. The flexibility to meet requirements with more environmental open space, along with developing better standards for urban parks and pocket parks, are priority issues. Providing incentives for more options of unit types in several of the DR zones could provide more options to cluster development and preserve open space. Developers also find that addressing impervious cover in site planning is difficult to do without baselines or targets that can help to guide the design process. Establishing some goals, either by zone or subwatershed, would provide a basis for design and other decision-making.

### **PRINCIPLE L2. REDUCE SETBACKS**

Relax setbacks to reduce driveway length and overall site imperviousness. Utilize this practice, in combination with a narrower street width, to provide more flexibility in the right-of-way for viable tree plantings.

### **RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

Outside the URDL (rural areas):

- Revert to 50’ front setbacks in the rural areas, reserving the 100’ to 150’ front setback requirements for specifically designated scenic roads.
- Better define scenic vistas and provide more flexibility in the site plan review process to establish appropriate setbacks.



Development with shortened front setbacks

Source: Baltimore County Office of Planning



Inside the URDL:

In order to provide more width for tree planting within the Neighborhood Street and Neighborhood Collector right-of-way (ROW), locate the sidewalk within the ROW to abut the outside edge of the ROW (closest to the house), and locate the 2' Public Utilities Easement (PUE) outside of the ROW, inside the lot line.

**RATIONALE**

In rural areas of the County, very wide setbacks result in long driveways that add impervious cover to lots, and result in the need for donut turnarounds on private driveways in order to allow emergency fire and rescue vehicles to avoid backing long distances. Narrower front setbacks will provide more flexibility in lot layout, provide opportunities to preserve more unfragmented open space, and reduce impervious cover.

In urban areas of the county, the DR zones provide a good level of flexibility in establishing setbacks. The need is for more space within the ROW to provide for viable tree plantings. The recommended ROW configuration that locates the 2' PUE outside of the ROW is actually the standard in the Comprehensive Manual of Development Policies (CMDP); however, it is not always done this way in practice – placing the PUE within the ROW puts too much constraint on tree planting areas.

**PRINCIPLE L3. MORE FLEXIBLE SIDEWALK STANDARDS**

Promote more flexible design standards for residential subdivision sidewalks. Where practical, consider locating sidewalks on only one side of the street and providing common walkways linking pedestrian areas.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- This principle applies only applies inside the URDL.
- Revise the CMDP and public works standards to create performance standards that identify types of development where single-sided sidewalks will be allowed without a variance.

**RATIONALE**

Providing sidewalks on only one side of the street is considered a viable way of reducing impervious cover, however, this needs to be balanced with pedestrian safety and pedestrian movement concerns, particularly in higher density areas and around transit. Clear standards should be developed that reduce the need to request a variance in all instances to do single-sided sidewalks.

**PRINCIPLE L4. DRIVEWAY ALTERNATIVES**

Reduce overall lot imperviousness by promoting alternative driveway surfaces and shared driveways that connect two or more homes together.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:



Source: Baltimore County Office of Planning

Outside the URDL (rural areas):

- Reduce front setbacks as recommended under Principle L2, and eliminate use of donut turnarounds on private driveways.

Inside the URDL:

- In the urban areas, in certain circumstances, allow paved on-street parking to count for some or all of the required on-site parking spaces, thereby allowing a reduction in the parking pad width.
- Develop policies and regulations to better address shared driveways, particularly for minor subdivisions.



Example of a shared driveway

### **RATIONALE**

In rural areas, the front setback typically determines driveway length. The very wide setbacks currently required in many rural zones contribute to increased impervious cover. The expansion of driveways in urban areas is deemed to be problematic but difficult to control. The use of shared driveways, particularly in an infill setting, needs to be carefully addressed, because it involves two-fold issues: shared driveways are desirable for reducing impervious cover, but their inappropriate use may result in providing access to otherwise unbuildable lots, thereby increasing overall neighborhood impervious cover.

### **PRINCIPLE L5. ADDRESS IMPERVIOUS COVER CREEP**

Establish impervious cover performance goals to provide a baseline and allow the development of meaningful design guidelines.

### **RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- Address impervious cover creep from driveway expansions, new auxiliary structures, modified ingress and egress points, etc., by ensuring appropriate measures are taken to provide adequate public facilities and meet applicable stormwater management requirements.
- Form a technical advisory committee, including all stakeholders, to consider impervious cover caps/limits for each zoning category<sup>3</sup>.
- Intersect this effort with the small watershed action plan process.

### **RATIONALE**

Impervious cover creep commonly occurs in older existing neighborhoods where homeowners are looking to make improvements to their lots. Individually, the modifications are often small and do not require permits or thorough reviews from the County. Cumulatively, these changes can have a negative impact on existing conditions because inadequate infrastructure exists to reasonably accommodate the modifications.

<sup>3</sup> Technical advisory committee should reflect the diversity of interests represented in the Roundtable membership.



### PRINCIPLE L6. LONG-TERM MANAGEMENT OF OPEN SPACE

Clearly specify how community open space will be managed and designate a sustainable legal entity or other designated party responsible for managing both natural and recreational open space.

#### RECOMMENDATION

The Roundtable supports this principle and makes the following recommendations:

- Provide assistance to developers and/or real estate agents to develop and transfer information to homebuyers and homeowners' associations concerning maintenance of on-site water quality practices, the purpose of stormwater management facilities, proper management of conservation areas, etc.
- Work creatively with existing communities to identify and monument existing stream buffer and forest conservation areas.

#### RATIONALE

The majority of concerns over open space management in subdivisions revolve around managing encroachment into conservation areas in existing neighborhoods, particularly in the DR zones, and in RC-5. Better tools for educating residents are needed along with better ways of identifying the most severe encroachments that should be addressed on a prioritized basis.

### PRINCIPLE L7. EFFICIENT USE OF IMPERVIOUS COVER

Sites should be designed to utilize impervious cover efficiently and to minimize stormwater runoff. Where possible, impervious cover should be reduced in accordance with State of Maryland redevelopment stormwater requirements, i.e. a 20% reduction in impervious cover. In situations where impervious cover stays the same or increases, sites should be designed to improve the quality of stormwater runoff at the site in accordance with State redevelopment requirements, at a minimum.

#### RECOMMENDATION

The Roundtable supports this principle and makes the following recommendation:

- As an incentive, allow clustering and additional unit types in DR 1, 2, and 3.5 zones where it is shown to result in reduced impervious cover.

#### RATIONALE

This recommendation effectively reinforces existing state stormwater requirements for redevelopment sites. The County currently follows these state regulations.

**PRINCIPLE L8. BETTER SITE DESIGN TECHNIQUES FOR INFILL AND REDEVELOPMENT** 

Utilize a combination of Better Site Design techniques with redevelopment and infill projects to minimize stormwater runoff and maximize vegetated areas.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- Define infill development in a manner that will help differentiate it from new development so that stormwater management and related site design features are treated in a uniform and consistent manner.
- Examine four case studies to determine how existing Better Site Design practices for infill and redevelopment, such as redevelopment stormwater requirements, parking lot and perimeter landscaping, the provision of open space, etc., are done in practice.



Infill residential development

Source: Baltimore County Office of Planning

LOT DEVELOPMENT

**RATIONALE**

The County has a number of Better Site Design requirements for infill and redevelopment; however, there is concern that what is on paper looks better than what really occurs in practice. A detailed comparison of “paper” versus “practice” will allow the County to determine where to focus Better Site Design improvements.



## Natural Areas Recommendations

### PRINCIPLE N1. STREAM BUFFER SYSTEMS

Create a variable width, naturally vegetated buffer system along all perennial/intermittent streams that also encompasses critical environmental features such as the 100-year floodplain, steep slopes and freshwater wetlands on all development sites outside of the Chesapeake Bay Critical Area. Minor subdivisions, lot line adjustments, building permits, and similar limited exemptions on agricultural land are excluded from this buffer system requirement, except for non-agricultural lots resulting from agricultural minor subdivisions.

### RECOMMENDATION

The Roundtable supports this principle and makes the following recommendations:

- Baltimore County should continue to require the establishment of a science-based variable width buffer that protects water quality; streams; wetlands; water bodies; steep slopes; erodible soils; riverine floodplains; and significant fish, plant and wildlife habitats. However, the current requirements should be modified as follows:
  - A. The steep slope and erodible soils evaluation regulations should be updated to include current scientific literature, and additional diagrams and figures for clarification purposes.
  - B. A definition for “adjacent” wetlands and wetland regulatory authority should be added to the Forest Buffer and Critical Area laws for clarification purposes.
  - C. The process and requirements for the establishment of, and reductions to, the 300-foot buffer adjacent to streams, tidal wetlands and tidal waters in certain portions of the Critical Area should be updated for clarification purposes. These updates should take into consideration:
    1. Goals of the State-mandated Critical Area law
    2. Goals of both Baltimore County and the Critical Area Commission to protect existing riparian forests
    3. Existing land uses within the buffer at the time of development
    4. Adequacy of mitigative measures proposed by an applicant to offset impacts to water quality, forests, and significant fish, plant and wildlife habitats
    5. Provision of clear and consistent definitions for terms
  - D. In order to streamline the review process and to enhance water quality functions of disturbed buffers, a provision should be added to the steep slope and erodible soils evaluation regulations to require an applicant to establish “good” vegetative cover in buffers where “poor” or “moderate” cover exists (these terms are to be defined through a collaborative process). Evaluation approval is conditional based on one of the following scenarios:
    1. The applicant must establish “good” vegetative cover in predetermined areas of the buffer prior to grading/sediment control plan approval by the Baltimore County Department of Environmental Protection and Resource Management (DEPRM). A planting plan for the buffer areas must be approved by DEPRM prior to planting. This scenario would not require posting of a security or installation of additional sediment control measures within the Limit of Disturbance for the project; OR
    2. The applicant must establish “good” vegetative cover in predetermined areas of the buffer within one year of grading permit or building permit issuance by the County, as determined by the Environmental Impact Review Section of DEPRM. This scenario would require posting of a security via an Environmental Agreement with DEPRM. The security would be released once “good” vegetative cover has been established. This scenario would also require installation of additional sediment control measures, as prescribed by DEPRM, within the Limit of Disturbance for the project to alleviate the potential for sediment runoff into a stream or other resource areas during construction; OR





3. The applicant must phase grading and building to avoid disturbance in areas of the development site that drain to buffers proposed to be established in “good” vegetative cover. Under this scenario, DEPRM would “hold” grading or building permits for certain areas of a site until “good” cover has been established. A planting plan for the buffer areas must be approved by DEPRM prior to planting. DEPRM would reserve the right to set planting timeframes, and prescribe installation of additional sediment control measures within the Limit of Disturbance to alleviate the potential for sediment runoff into a stream or other resource areas during construction.
- There are extensive geographic areas of Baltimore County where protection of productive agricultural land is essential to maintaining the overall long-term viability of farming in the County. However, on proposed development sites in these areas, the full application of laws pertaining to protection of forests and stream buffers may potentially result in loss of productive agricultural land. DEPRM should reevaluate existing forest conservation and forest buffer regulations and procedures to ensure that they include provisions for continued farming on properties with productive agricultural lands, while ensuring adequate protection of priority forests and water quality and implementation of best management practices.
  - DEPRM should update the regulations entitled “environmental guidelines for agricultural minor subdivisions” to address the item above.

### **RATIONALE**

Vegetated systems along shorelines, wetlands and streams can protect water quality, reduce flooding impacts, provide wildlife habitat, serve as a recreational resource and offer many economic benefits to the local community. Baltimore County has had buffer requirements for a number of years, with a minimum width of 75 feet or greater that is adjusted to include contiguous, sensitive areas, such as steep slopes or erodible soils. Current County buffer requirements can be improved through adjustments to the existing policies to account for changes in knowledge and procedures. The County can also implement policies and regulations that resolve potential conflicts between the goals of preserving agriculture and protecting environmental resources.



Overly manicured stream buffer

### **PRINCIPLE N2. BUFFER MANAGEMENT**

The riparian stream buffer should be preserved and managed to encourage native vegetation that can be maintained throughout the plan review, delineation, construction, and occupancy stages of development.

### **RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- The following standard note should be added to right-of-way plats for minor subdivisions, and other development plans where recordation is required and record plats are not required, to provide for conveyance of environmental easements to Baltimore County by successive property owners:



## NATURAL AREAS

“Highways and highway widenings, slope easements, drainage and utility easements, access easements, forest buffer areas in fee or easement, forest conservation areas in fee or easement, Critical Area protected areas in fee or easement, and stormwater management areas, no matter how entitled, shown hereon are reserved unto the owner and except for those indicated as private are hereby offered for dedication to Baltimore County, Maryland. The owner, his personal representatives and assigns will convey said areas by deed to Baltimore County, Maryland at no cost. Until such time as said conveyance is accepted by Baltimore County, the owner authorizes Baltimore County, its agents and assigns the right to enter upon the property for the purpose of installing, constructing, maintaining and repairing roads, utility lines and facilities and stormwater ponds and facilities.”

- DEPRM should prepare colorful “fact sheets” to educate homeowners about the values of natural resources within environmental easements, and about protective covenants governing allowable uses within the easements.
- DEPRM should determine a legal mechanism for requiring a seller to notify prospective buyers about the presence of environmental easements and associated declarations of protective covenants.
- DEPRM should prepare procedures for allowing property owners to control invasive plant species within environmental easements. These procedures should encourage planting of these areas with native woody and herbaceous species.
- Surveyed limits of environmental easements near or on lots, or in other areas of potential human impact, should be clearly marked in the field at predetermined intervals with a permanent below-grade marker to facilitate identification of easement limits by both homeowners and County staff. Easement “Do Not Disturb” signs should be installed as “witness” posts near each permanent below grade marker location. Additionally, the locations of the permanent below-grade markers, and the outer easement limits, should be submitted digitally to DEPRM in a format that could be incorporated into a GIS layer for future County use.
- Baltimore County should pursue the adoption of environmental enforcement laws, regulations and procedures similar to those currently contained in Article 3, Title 6 of the Baltimore County Code that are implemented by the Department of Permits and Development Management.
- DEPRM should promulgate regulations and procedures regarding in-kind and out-of-kind mitigation standards for forest buffers, Critical Area buffers and wetlands.
- A provision should be added to the Forest Buffer law to allow a development project applicant to pay a fee to the County in-lieu of performing mitigation, when onsite and offsite mitigation opportunities are unavailable. However, an applicant should not be allowed to pay a fee-in-lieu of mitigation to avoid mitigation requirements or to justify impacts to the Forest Buffer or resources contained therein.

### **RATIONALE**

Buffer requirements should be more than a line drawn on a map, which is virtually invisible to contractors and landowners. The key to effective preservation and management is development and active enforcement of a strong buffer ordinance that outlines the legal rights and responsibilities for the long-term management of the buffer. Education of land owners is vital to preventing encroachment within the buffer, as well as real penalties for violation of buffer requirements to emphasize the importance of maintaining buffer integrity.



### PRINCIPLE N3. CLEARING AND GRADING

Clearing and grading of forests and native vegetation at a site should be limited to the minimum amount needed to accommodate improvements, allow access and provide fire protection. A fixed portion of any community open space should be managed as protected green space in a consolidated manner.

#### RECOMMENDATION

The Roundtable supports this principle with no further recommendations.

#### RATIONALE

Conservation of natural areas within a site can reduce erosion and sediment and clearing and grading costs while maintaining natural features of the site. Common tools to limit clearing are: erosion and sediment control ordinances, grading ordinances, forest conservation or tree protection ordinances, and open space development.



New construction

### PRINCIPLE N4. TREE CONSERVATION

Conserve trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native plants. Where appropriate, manage community open space, street rights-of-way, parking lot islands, and other landscaped areas to promote low maintenance or sustainable, native, and naturalized vegetation.

The Roundtable supports this principle and makes the following recommendations:

- Large contiguous conservation easements have been demonstrated to provide better habitat and water quality functions than small isolated easements. Therefore, in order to ensure the long-term viability of natural resources within Baltimore County, and to minimize fragmentation of these resources, existing environmental laws and regulations should be modified to encourage consolidation of environmental easements on development sites. Baltimore County should explore ways to achieve this goal without impacting site density.
- Implementation projects that involve vegetation planting should adopt the definitions and guidance being created by the Baltimore County Advisory Commission on Environmental Quality (CEQ) with regards to the use of the following terms: Native plants, Invasive plants, Naturalized plants, Natural vegetation, Conservation Landscaping.
- Baltimore County should adopt the coordinated, multi-departmental plan being developed by the CEQ for implementing conservation landscaping (i.e., “bayscaping”) practices on property owned or maintained by the County.
- County planting guidance should denote vegetation that is resistant to browsing by wildlife in some way (e.g., with an asterisk).



**RATIONALE**

Native trees, shrubs, and grasses are important contributors to the overall quality and viability of the environment. In addition, they can provide noticeable economic benefits to developers and homeowners. Baltimore County has several initiatives and regulations that demonstrate their continuing long-term commitment to tree conservation, and should continue to pursue policies that increase natural areas in the County.

**PRINCIPLE N5. LAND CONSERVATION INCENTIVES**

Incentives and flexibility in the form of density compensation, property tax reduction, stormwater credits, and by-right cluster development should be encouraged to promote the conservation of stream buffers, forests, meadows, rare species or unique habitat, and other areas of environmental value. In addition, off-site mitigation consistent with locally adopted watershed plans should be encouraged.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- DEPRM should incorporate forest retention, forest planting, and wetland mitigation “banks” into existing regulatory programs to encourage long-term protection and establishment of large contiguous forests and wetlands in stream buffers and other sensitive environmental areas.
- Baltimore County should encourage redevelopment of commercial and industrial waterfront sites containing historically impacted buffers by incorporating redevelopment measures for these areas into the County’s Chesapeake Bay Critical Area Buffer Management Plan. These measures should ensure water quality protection.
- Baltimore County should waive Forest Conservation requirements under certain circumstances to encourage redevelopment of properties containing a predominance of impervious surfaces.

**RATIONALE**

Conservation and protection measures that require excessive administrative requirements, such as lengthy plan reviews, additional upfront costs to developers and unclear appeal procedures can create a major barrier to implementation. Incentives and flexibility are an effective way to promote adoption of conservation and protection measures.

**PRINCIPLE N6. PRESERVE NATURAL AREAS, REVEGETATE **

Plan and design sites to preserve naturally vegetated areas and to encourage revegetation, soil restoration and the utilization of CEQ recommended conservation landscaping vegetation where feasible.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:



- Baltimore County should promote conservation landscaping throughout the County by:
  1. Updating existing development-related regulations and manuals, as necessary, to include conservation landscaping provisions.
  2. Encouraging public participation in conservation landscaping efforts.
  3. Educating the public about the benefits of conservation landscaping.
  4. Promoting existing County programs that involve conservation landscaping practices.
- County planting guidance should denote vegetation that is resistant to browsing by wildlife in some way (e.g., with an asterisk).
- The County should look for opportunities to promote conservation landscaping guidance in state and private party landscaping lists.



Reforestation area

### RATIONALE

The urban environment often contains remnants of what were once large tracts of natural areas, which may be good candidates for restoration. The potential benefits of natural areas restoration and preservation can be aesthetic, environmental and economic. Designed properly, benefits can include increased land values, reduced small drainage complaints, creation of habitat for urban wildlife, better stormwater management, reduced air conditioning costs, lower ambient temperature, reduced incidents of violence in public housing, and provision of passive recreational space.

### PRINCIPLE N7. LONG-TERM MAINTENANCE OF VEGETATED AREAS

Establish mechanisms to guarantee long term management and maintenance of all vegetated areas.

### RECOMMENDATION

The Roundtable supports this principle with no recommendations.

### RATIONALE

The benefits of continuing maintenance of vegetated areas are abundant. For the local community, benefits include increased property values for land adjacent to vegetated spaces, and community participation and buy-in for further redevelopment due to increased private investment. Guaranteed long-term management and maintenance of vegetated areas can also ensure continuous enjoyment and function of the area as planned. Responsible land owner upkeep through innovative partnerships, conservation easements, or donations to land trusts can help ensure that vegetated areas on urban lands are actively maintained.



### PRINCIPLE N8. INCREASE TREE CANOPY

Assess the physical condition and health of urban tree cover and take appropriate action to increase canopy coverage and vitality.

#### **RECOMMENDATION**

The Roundtable supports this principle with the following recommendation:

- Baltimore County should explore options and funding opportunities for increasing urban tree canopy cover in the county, including street tree planting in existing neighborhoods.

#### **RATIONALE**

Today there is greater recognition of the value of urban trees and forests and their benefits to air and water quality, reduction of storm water runoff, energy conservation, and public health. The loss of trees and forests in developing watersheds and the deterioration of urban tree canopy in inner cities through removal or lack of replacement has become a major concern. Baltimore County has begun to address this concern through its Green Renaissance Initiatives and programs such as Growing Home Campaign and Neighborspace of Baltimore County. Continued emphasis should be placed on programs that evaluate the health and economic vigor of the county's urban tree resources and support efforts to increase tree coverage and health.



Source: Baltimore County Office of Planning

Good tree canopy in existing neighborhoods



## Stormwater Management Recommendations

### PRINCIPLE SW1. VEGETATED OPEN CHANNELS

Where density, topography, soils, and slope permit, vegetated open channels should be used in, or adjacent to, the street right-of-way to convey and treat stormwater runoff. In particular, open section roads should be encouraged in non-residential areas such as industrial/business parks, boulevards, and other collector roads where appropriate site conditions exist.

### RECOMMENDATION

The Roundtable supports this principle and makes the following recommendations:

- More flexibility in design criteria to accommodate use of open section roads. Specifically, modifying language associated with the Environmentally Sensitive Design stormwater credit as presented in the Maryland Stormwater Design Manual (MDE, 2000). Replace the bullet discussing average lot size with a bullet that says the credit can apply to development projects using clustering techniques in the RC zone criteria. Also replace the bullet discussing grass channels with the following language: the use of open section roads with slopes up to 6% and designed so as to be non-erosive in the 10-year storm in accordance with Appendix D.12 criteria in the Maryland Stormwater Design Manual.
- The grass channel credit in the Maryland Stormwater Design Manual should be revised to allow steeper slopes and greater velocities, but with a smaller credit. Specifically, the recommended modification is to give 50% of the water quality credit for channels in excess of 4% but up to 6% slope and to allow maximum flow velocity for runoff from the 1-inch rainfall to be less than or equal to 2 feet per second.



Vegetated open channel

### RATIONALE

Streets contribute higher loads of pollutants to urban stormwater than any other source area in residential developments. The use of vegetated open channels to convey stormwater runoff can remove some of these pollutants and decrease the volume of stormwater generated from a site.



**PRINCIPLE SW2. PARKING LOT RUNOFF**

Encourage use of parking lot landscaped areas as stormwater receiving areas (i.e., depression islands in parking lots for stormwater management that act as bioretention areas). Perimeter landscape areas of parking lots should also be encouraged to receive stormwater where possible.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- The County Landscape Manual guidance should be modified so that landscape islands are not required to be mounded or curbed. Stormwater regulations should also be modified to allow bioretention in parking areas with adjusted criteria for side slopes (maximum allowed of 2H:1V) and no fencing requirement. Adequate provisions and guidelines need to be provided to ensure that the interface between pavement and vegetated area is protected from impacts such as vehicle encroachment and snow plows. Potential design options include use of curb cuts, curb stops, and bollards.
- Issue impervious cover reduction credits for alternative pavers (e.g., interlocking grid pavers, porous asphalt and concrete, and other similar surfaces) for light use parking areas such as churches and overflow parking areas associated with retail, commercial and institutional land uses.



Source: Ray Bahr

Recently planted raingarden treating residential rooftop runoff

**RATIONALE**

Parking lots generate high volumes of stormwater runoff, and high levels of runoff contamination from pollutants deposited on the lot surface. Additionally, internal landscaping requirements already exist. Therefore, there is an opportunity to achieve two site objectives/requirements within a single location of a parking lot.

**PRINCIPLE SW3. ROOFTOP RUNOFF**

Direct rooftop runoff to pervious areas such as yards, open channels, or vegetated areas and/or use rain barrels, cisterns, or greenroofs. Avoid routing rooftop runoff directly to the roadway and hardlined stormwater conveyance system.

**RECOMMENDATION**

The Roundtable supports this principle with no further recommendations.

**RATIONALE**

Directing rooftop runoff over a pervious surface before it reaches an impervious surface can decrease annual runoff volume from developed sites and also provide water quality benefits through filtering of runoff.





#### **PRINCIPLE SW4. STORMWATER MANAGEMENT FOR INFILL PROJECTS**

Develop stormwater criteria and standards that are applied in a uniform and consistent manner for infill development.

#### **RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- For sites defined as infill development, water quality and recharge requirements should be fulfilled on site, but fee-in-lieu for water quantity (i.e., channel protection and larger storms) is an acceptable alternative, provided that the downstream watershed can handle the resulting flows and volumes (i.e., the infill project doesn't flood or cause undue harm to downstream neighbors for specified design storms). The burden of demonstrating no undue harm on downstream property is that of the applicant.

#### **RATIONALE**

There is a perception that variances or waivers are arbitrarily granted by County reviewers for certain stormwater criteria in what are considered to be infill development cases. Defining infill development in a manner that will help differentiate it from new development will reduce the occurrence of variances associated with infill projects and should reduce the administrative burden on County reviewers while at the same time satisfying the public that infill development is being treated in a uniform and consistent manner from a stormwater perspective.

#### **PRINCIPLE SW5. WATERSHED-BASED STORMWATER CRITERIA**

Establish watershed overlay districts or Small Watershed Action Plans (SWAPs) for targeted County water resource areas such as drinking water supplies, watersheds with known flooding issues, cold water fisheries, Tier II waters, and Total Maximum Daily Load (TMDL) waters. At a minimum, these overlay districts or SWAPs should be identified in County stormwater regulations and regional planning documents. Special stormwater management provisions should be developed for each overlay district, which will apply to both new development and redevelopment. The provisions should specifically address the targeted watershed issue.

#### **RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- The County should pursue a process whereby it initiates dialogue between Baltimore County Department of Environmental Protection and Resource Management (DEPRM), Maryland Department of Natural Resources, and Maryland Department of the Environment to identify specific subwatershed areas where modified stormwater management requirements are put in place based on known biological conditions and associated watershed data primarily related to presence or absence of cold water fisheries.
- The County should convene a technical advisory team comprised of different stakeholder groups to develop appropriate stormwater provisions in priority overlay areas<sup>4</sup>. Where feasible, a regional approach that extends to adjacent counties and shared watersheds should be pursued.

<sup>4</sup> Technical advisory team should reflect the diversity of interests represented in the Roundtable membership.



**RATIONALE**

Special stormwater and water quality criteria developed using a watershed overlay approach provide flexibility to specifically address targeted watershed issues. Considering stormwater management with a watershed perspective in addition to a site perspective can provide better receiving water protection and be more cost effective.

**PRINCIPLE SW6. STORMWATER MANAGEMENT FOR OPEN SPACE DESIGN**

Open space regulations should contain the flexibility necessary to incorporate appropriate stormwater management features and limit the total amount of site disturbance.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- The Open Space Regulations should be revisited by County staff and revised to remove inflexible barriers to Better Site Design and associated stormwater management inside the urban/rural demarcation line (URDL).
- The intent of open space requirements should not be compromised in order to accommodate a stormwater best management practice (BMP). Rather, this recommendation is looking for opportunities to incorporate stormwater BMPs within or adjacent to open space areas in ways that improve the overall aesthetics and use of the open space while at the same time minimizing site environmental impacts.

**RATIONALE**

Existing open space regulations contain multiple constraints that are counter productive to environmentally-sensitive site design, particularly with respect to meeting stormwater management requirements.

**PRINCIPLE SW7. STORMWATER INFRASTRUCTURE MAINTENANCE**

A dedicated and reliable funding source is necessary to properly and effectively keep up with long-term maintenance requirements of the County’s stormwater infrastructure (conveyance and BMPs).

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- The County should establish a technical advisory team to investigate stormwater utility fees and other options (which may include future homeowners’ association (HOA) agreements) for long-term maintenance of facilities<sup>5</sup>.
- The County should encourage but not require HOAs and other willing community groups to do routine maintenance (mowing, fence maintenance, trash pick up) of stormwater facilities. Appropriate education and training on how to conduct the routine maintenance activities should also be provided by the County.

<sup>5</sup> Technical advisory team should reflect the diversity of interests represented in the Roundtable membership.



## RATIONALE

A dedicated source of funding is needed to keep up with increasing amount of infrastructure as well as increasing maintenance burden due to infrastructure aging.

### PRINCIPLE SW8. FEE-IN-LIEU FOR REDEVELOPMENT

DEPRM should regularly assess and adjust as necessary the fee-in-lieu rate schedules to fairly and accurately reflect the actual cost of designing, constructing and maintaining a stormwater practice that would be required at a site requesting the fee-in-lieu option.

## RECOMMENDATION

The Roundtable supports this principle and makes the following recommendations:

- Applicants must demonstrate that on-site treatment is not possible before requesting the fee-in-lieu option.
- When fee-in-lieu is approved and received, funds will be applied (as a first priority when feasible) toward projects within the same community or watershed that the proposed development site is located in.
- DEPRM should continue to consider and approve alternative treatment technologies that have demonstrated capabilities to meet certain stormwater criteria.

In addition, DEPRM should make efforts to inform applicants about these technologies. Examples include, but are not limited to, greenroofs, cisterns, stormwater planters and porous pavement.



Source: Morris & Ritchie Associates, Inc.

Stormwater pond retrofit in a redevelopment setting

## RATIONALE

The current fee-in-lieu payment structure is inadequate with respect to being representative of the true cost of construction and long-term maintenance of new BMPs that are installed. A reasonable increase to the fee-in-lieu cost structure would be fair and would provide adequate and needed funds for “equivalent” implementation and maintenance of stormwater management facilities, retrofits, and other regional BMP projects. The current costs incurred under fee-in-lieu may also be stifling innovative practices.

<sup>6</sup> Technical advisory team should reflect the diversity of interests represented in the Roundtable membership.



**PRINCIPLE SW9. POLLUTION PREVENTION** 

Utilize proper storage, handling and site design techniques to avoid the contact of pollutants with stormwater runoff.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendation:

- A technical advisory team should be formed to develop specific pollution prevention measures and criteria and associated stormwater credits for redevelopment sites<sup>6</sup>. These measures and credits may also apply to new development located in special watershed overlay areas.

**RATIONALE**

During the design of redevelopment and infill projects, opportunities exist to reduce and improve water quality by reducing the level of polluted runoff leaving a site. Controlling pollutants at the site (source control) is often the simplest and most cost-effective way to limit stormwater runoff contamination, especially for commercial sites. Source control can be characterized as 1) handling and storage practices and 2) site design practices. Handling and storage practices focus on vehicle and material storage in outdoor areas, while site design practices include improved design of loading docks, coverings for materials stored outdoors, and containment of dumpsters and fueling areas. Other opportunities to reduce pollutants can be found in fleet parking areas, outdoor maintenance areas, and above ground storage tanks.

**PRINCIPLE SW10. ROOFTOP RUNOFF FOR INFILL AND REDEVELOPMENT** 

Manage rooftop runoff through storage, reuse, and/or redirection to pervious surfaces for stormwater management and other environmental benefits.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- Encourage the use of greenroofs where feasible as a means to meet the 20% impervious cover reduction target for redevelopment.

**RATIONALE**

Directing rooftop runoff over a pervious surface before it reaches an impervious surface can decrease annual runoff volume from developed sites and also provide water quality benefits through filtering of runoff.



Missed opportunity for treating rooftop runoff

Source: Baltimore County Office of Planning

**PRINCIPLE SW11. COURTYARDS AND PLAZAS FOR INFILL AND REDEVELOPMENT** 

Design courtyards, plazas, and amenity open space areas to store, filter, or treat rainfall.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- Site layouts will effectively dictate where and how this dual use approach can be used.

**RATIONALE**

Much of the open space in redevelopment and infill projects consists of hard surfaces that generate runoff. With creative site planning and consideration, courtyards, plazas, and open spaces can be designed to store, filter and treat rainfall.

**PRINCIPLE SW12. PARKING AND STREETSAPES FOR INFILL AND REDEVELOPMENT** 

Parking lots, especially surface lots, should be minimized and designed to reduce, store and treat stormwater runoff. Where site limitations or other considerations prevent full parking lot runoff management, designs should target high use areas first. Then, priority should be placed on using alternative paving materials on low use areas, including parking stalls. Similarly, where possible with redevelopment streetscapes, provide planting spaces that promote the growth of healthy street trees so that they can capture and treat stormwater runoff.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendations:

- Water quality and/or impervious cover reduction credits should be issued for alternative pavers (e.g., interlocking grid pavers, porous asphalt and concrete, and other similar surfaces) for light use parking areas such as churches and overflow parking areas associated with retail, commercial and institutional land uses.

**RATIONALE**

Parking lots generate high volumes of stormwater runoff, and high levels of runoff contamination from pollutants deposited on the lot surface. Additionally, internal landscaping requirements already exist. Therefore, there is an opportunity to achieve two site objectives/requirements within a single location of a parking lot. With proper design and consideration, the streetscape (or interface between the street, sidewalk and other structures) of a site plan can also provide opportunities to manage stormwater runoff while providing numerous other environmental and aesthetic benefits.



Source: City of Portland, OR



## ***Review and Approval Process Recommendations***

### **PRINCIPLE P1. LAND DEVELOPMENT REVIEW PERMITTING SYSTEM UPDATE**

Baltimore County should prioritize the funding and implementation of the replacement of the current land development review information permitting system to a Windows-based format accessible to all County agencies and made available on-line.

#### ***RECOMMENDATION***

The Roundtable supports this principle and makes the following recommendations:

- Aim for a three- to five-year timeline for the process to occur.
- Implementation should address, but not be limited to, personnel training and adequate staffing.

#### ***RATIONALE***

Despite the large cost of this conversion, updating the database would vastly improve coordination and communication of the application and permit approval process on a project by project basis both internally and to the general public.



Treed right-of-way in Baltimore County, MD



## **PRINCIPLE P2. PERMIT AND DEVELOPMENT MANAGEMENT HEARINGS – GEOGRAPHIC REFERENCE**

The Baltimore County Department of Permits and Development Management (PDM) currently publishes a weekly calendar of development related hearings and meetings on its website. The Department of Permits and Development Management should add a geographic reference to these postings such as a tax map reference, address or nearest intersection.

### ***RECOMMENDATION***

The Roundtable supports this principle with no further recommendations.

### ***RATIONALE***

The geographic reference could better facilitate the communication of development proposals to community associations and other interested parties.

## **PRINCIPLE P3. MINOR SUBDIVISION OR LIMITED EXEMPTION COMMUNITY NOTIFICATION**

An applicant who submits a minor subdivision or limited exemption package should be required to send one copy, with contact information, to the primary community association wherein the property is located or nearest to.

### ***RECOMMENDATION***

The Roundtable supports this principle and makes the following recommendations:

- An up-to-date list of community associations and contacts should be created and maintained by the Department of Planning.
- If multiple community associations exist in the vicinity of the proposed development, the plan will be submitted to the primary community organization. Plans will not be sent out to multiple community associations.
- It is strongly recommended that the applicant offer to meet with the primary community organization prior to the Development Review Committee (DRC) meeting.
- Timeframe: The minor subdivision or limited exemption package should be submitted simultaneously to the County and the community association. The community association submission and optional meeting will not lengthen or change the current limited exemption process timeframe and must occur at the time of the DRC meeting.



**RATIONALE**

Many of the development proposals coming into Baltimore County fall into the Minor Subdivision or Limited Exemption approval processes. Providing the opportunity for community input at an early stage could assist in identifying drainage issues and other similar community concerns that can be addressed in the plan and improve project acceptance.

**PRINCIPLE P4. OPTIONAL EARLY ENVIRONMENTAL SUBMITTALS**

In the interest of providing adequate review time, all required and complete environmental submittals may be submitted to the Baltimore County Department of Environmental Protection and Resource Management (DEPRM) as early as possible or at least 30 days prior to the filing of the development plan. This early submittal would guarantee that DEPRM have a review of the plan by the development plan conference, but does not necessarily guarantee an approval. The review will be delivered at time of review completion, but no later than the development plan conference. This submittal will not increase or delay the current review process timeline.

**RECOMMENDATION**

The Roundtable supports this principle and makes the following recommendation:

- This recommendation applies to the full development review process and should be implemented as DEPRM policy. Depending on the site, environmental submittals may include:
  - An Alternatives Analysis: to document the need for impacts by roads, utilities and/or grading to the Forest Buffer and/or Forest Conservation Easements
  - A Forest Buffer Variance and/or Special Variance to the Forest Conservation regulations: for impacts by houses, buildings and yard space in the easements
  - Stormwater Management: Hydrology, Outfall Suitability Analysis, and a Breach Analysis
  - Groundwater Management (private wells and/or septic systems) documents: Revised plans - especially if additional perc tests are needed, and a Water Balance Assessment for Commercial Sites
  - Chesapeake Bay Critical Areas Requirements

**RATIONALE**

This recommendation would provide DEPRM staff with additional review time to ensure adequate protection of natural resources and appropriate application of stormwater management.

**PRINCIPLE P5. INFILL DEFINITION**

There are unique issues and characteristics associated with infill development that are beyond the scope of this Roundtable. A separate technical group<sup>7</sup> should be charged with defining and examining infill in the context of:

- |                      |  |                |
|----------------------|--|----------------|
| • Planned open space | • Environmental constraints              | • Economics    |
| • Traffic            | • Infrastructure (roads, drainage, etc.) | • Density      |
| • Schools            | • Stormwater                             | • Neighborhood |
| • Smart Growth       |  |                |

<sup>7</sup> Technical advisory group should reflect the diversity of interests represented in the Roundtable membership.





Source: Baltimore County Office of Planning

### RECOMMENDATION

The Roundtable supports this principle and makes the following recommendations:

- The group studying this issue should be comprised of a diverse group of stakeholders including community associations, local government and the development community.
- This group should also identify the mechanism for implementation.



Infill development in Baltimore County, MD

### RATIONALE

Currently infill development is reviewed on a case-by-case basis and is not examined at a larger scale to judge potential impacts. Since much of the development occurring within the urban-rural demarcation line (URDL) is infill development, the Process subcommittee recommends that a technical group be set up to proactively look at the impact of developing infill lots.

### PRINCIPLE P6. GREEN BUILDING TAX INCENTIVE

The County should work with a diverse group of stakeholders<sup>7</sup> to develop residential and commercial green building incentives. These incentives should be tied to an established certification such as Leadership in Energy and Environmental Design (LEED), Green Globe or other similar established standards.

### RECOMMENDATION

The Roundtable supports this principle with no further recommendations.

### RATIONALE

Additional incentives should be examined in order to encourage and make innovative development more cost-efficient and appealing.



### **PRINCIPLE P7. DEVELOPMENT PROCESS EDUCATION**

The Baltimore County Development Review Agencies should reach out to residents beyond Roundtable members to foster better understanding between parties regarding the current development processes and community concerns.

#### ***RECOMMENDATION***

The Roundtable supports this principle and makes the following recommendations:

- Representatives from the development community should also be involved in the education process.
- Educational efforts should be divided based on councilmatic district.
- Education should be tied into existing efforts such as Neighborspace and Green Renaissance Initiatives to maximize exposure and outreach opportunities.

#### ***RATIONALE***

The discussions of the Baltimore County Builders for the Bay Roundtable process have resulted in productive and healthy discussions among County staff, community associations and the development community (among others). A continued education process could help expand these discussions beyond the Roundtable process.



## Implementation Overview and Plan

The Roundtable process is a monumental step towards the promotion of environmentally-sensitive development in Baltimore County through code, policy and regulatory updates. The Roundtable itself generated innovative ideas and fostered better communication and relationships amongst the County, community associations, environmental groups and development community. The strength of the Roundtable process lies in the expertise and diversity of the membership who collaboratively crafted the recommendations summarized in this document.

The recommendations must be incorporated and translated into the County’s codes, policies and regulations in order for implementation of the Roundtable process to be recognized. One of the desired ends of this process is to have development occur that incorporates the recommendations of the Roundtable.

The table on the following pages was developed to guide the implementation of the Roundtable recommendations. Each recommendation has a designated appropriate action, responsible agency/partner and a general timeframe for completion. In some cases the complexity of the issue warrants an additional committee solely dedicated to examining the issue at hand.

The Baltimore County Builders for the Bay Steering Committee, which consists of Department heads, key development community leaders and community association representatives, will head up the implementation phase of the Roundtable process. The Steering Committee will continue to meet on a bi-monthly basis and provide updates to the Roundtable membership on a quarterly basis. The implementation plan will serve as the guide for their progress.

Utilize the information below in conjunction with the table on the following pages.

Notes:

\*Should be a inter-departmental effort that also includes outside stakeholders

**Action**

C: Code change/modification requires legislation and approval by the County Council  
 P: Policy change/modification (preferred) applies to any internal policies or guidelines that do not affect the rights or obligations of the public; policy changes do not require a public hearing.  
 R: Regulation change is a statement of county government that:  
 (1) Has general application;  
 (2) Has future effect;  
 (3) Details or carries out a law that the county government administers; and  
 (4) Is in any form including :  
 i. A requirement;  
 ii. A standard;  
 iii. A statement of interpretation; or  
 iv. A statement of policy

FS: Further Study  
 E: Education  
 O: Other  
 N/A: Not applicable

**Acronyms**

CEQ: Commission on Environmental Quality  
 DPW: Department of Public Works  
 DEPRM: Department of Environmental Protection and Resource Management  
 HBAM: Home Builders Association of Maryland  
 LOSM: Local Open Space Manual  
 PDM: Permits and Development Management  
 DR: Density Residential zone  
 SWAP: Small Watershed Action Plans

**Timeframe**

1: Within the next year  
 2: Within the next 3 years



# IMPLEMENTATION OVERVIEW AND PLAN

Principle	Recommendation	Action	Responsible Agency/ Support Agency(ies)	Timeframe
Residential Streets, Parking Lots and Infrastructure				
S1. Street Width	Address principle through ongoing rural road standards discussions	P	DPW	1
	Utilize bump-outs	R	DPW	1
	Inclusion of principle	C	DPW*/PDM	1
S2. Street Length	Inclusion of principle	C	DPW	1
	Inclusion of principle	C	DPW/PDM	1
S3. Right-of-Way Width	Address principle through ongoing rural road standards discussions	P	DPW*	1
	Add design alternatives	C	DPW/PDM	1
S4. Cul-de-Sacs	Annual research	FS/P	Office of Planning	1
	Allow reduced ratios as policy	P	Office of Planning/DPW	1
S5. Parking Ratios	Inclusion of principle	C	Office of Planning/DPW	1
	Maintain model agreement	P	PDM	1
S6. Parking Codes	Include mention of model agreement in code	C	PDM	1
	Maintain list of approved pervious parking surfaces	P	PDM/DEPRM	1
S7. Parking Lots	Utilize parking islands	P	Office of Planning	1
	Revise stormwater regulations	R	DPW/DEPRM	1
	Define public benefits and incentives	FS	Office of Planning/ DEPRM*	1
S8. Structured Parking	Study cost effectiveness of structured parking	FS	Office of Planning	2
	Promote greenroofs	P	DEPRM	1
	Inclusion of principle	C	PDM	1
S9. Maximize Transportation Choices	Task force to address regional implications	FS	Office of Planning/DPW*	1
	Addendum to Master Plan	C	Office of Planning	2
Lot Development				
L1. Open Space Design	Revise LOSM	FS/P	Recreation and Parks/Office of Planning/DEPRM	2
	Allow more unit type options in lower density DR zones	R/P	Office of Planning	1
L2. Reduce Setbacks	Rural: Reduce setbacks to 50' except for scenic roads	C	Office of Planning	2
	Urban: More space for tree planting	P	Office of Planning	1



# IMPLEMENTATION OVERVIEW AND PLAN

Principle	Recommendation	Action	Responsible Agency/ Support Agency(ies)	Timeframe
L3. More Flexible Sidewalk Standards	Promote one-side sidewalks in select types of development	P	Office of Planning /DPW	1
	Eliminate donut turnarounds on private drives in rural areas	P	DEPRM	1
	Allow reduction in parking pad width under certain circumstances	R	DEPRM	1
L4. Driveway Alternatives	Develop better policies and regs for shared parking	R	DEPRM	2
	Address impervious creep by ensuring adequate public facilities exist	R	Office of Planning/ DPW	2
L5. Address Impervious Cover Creep	Set goals by zoning category	FS/R	Office of Planning/ DEPRM	2
	Intersect with SWAP process	O	Office of Planning/ DEPRM	2
	Provide assistance to developers to develop educational materials	E	DEPRM/Recreation and Parks	2
L6. Long Term Management of Open Space	Monument natural areas such as stream buffer and forest conservation areas	P	DEPRM	1
	Use clustering as incentive to reduce impervious cover	R/P	Office of Planning	2
L8. Better Site Design Techniques for Infill & Redevelopment	Define infill	FS	Office of Planning*	2
	Case studies	FS	Office of Planning*	2
	Natural Areas			
N1. Stream Buffer Systems	Update Steep Slope and Erodible Soil Methodology	R	DEPRM	1
	Create definition for adjacent wetland	C	DEPRM	1
	Clarify application of 300 foot buffer in Critical Area	C/R	DEPRM	1
	Create provisions for good vegetative cover on disturbed buffer	P	DEPRM	2
	Review forest regulations to resolve conflicts with agricultural preservation and update policies	R/P	DEPRM	1
	Minor subdivision plat note	R	DEPRM	1
	Environmental easement education	E	DEPRM	1
	Protective covenant notification	P	DEPRM	1
	Invasive plant control policies for easements	R	DEPRM/CEQ	2
	Permanent marking of easements	C	DEPRM	2
N2. Buffer Management	Adoption of environmental enforcement laws	C/P	DEPRM	1
	Mitigation standards for forest buffer, critical area buffers and wetlands	R/P	DEPRM	2
	Forest buffer fee-in-lieu	C	DEPRM	1



# IMPLEMENTATION OVERVIEW AND PLAN

Principle	Recommendation	Action	Responsible Agency/ Support Agency(ies)	Timeframe
N3. Clearing and Grading	Maintain current practice	N/A	DEPRM	1
	Encourage consolidation of environmental easements	R	DEPRM	1
N4. Tree Conservation	Adopt conservation landscaping definitions developed by CEQ	O	DEPRM/CEQ	1
	Adopt CEQ plan for conservation landscaping	O	DEPRM/CEQ	1
	Guidance on browse resistant planting	P/E	DEPRM	1
N5. Land Conservation Incentives	Incorporate forest retention, forest planting, and wetland mitigation "banks" into existing regulatory programs	C	DEPRM	1
	Incorporate redevelopment measures for historically impacted buffers into the County's Chesapeake Bay Critical Area Buffer Management Plan	C/R	DEPRM	2
	Waive Forest Conservation requirements under certain circumstances to encourage redevelopment of properties	R	DEPRM	2
N6. Preserve Natural Areas, Revegetate	Promote conservation landscaping to public	P/E	DEPRM	1
	Encourage conservation landscaping in State and private plant list	P/E	DEPRM	1
N7. Long-Term Maintenance of Vegetated Areas	Maintain current practice	N/A	DEPRM	1
N8. Increase Tree Canopy	Explore options and funding opportunities for increasing urban tree canopy cover in the county	O	DEPRM	1
<b>Stormwater Management</b>				
SW1. Vegetated Open Channels	Flexible design criteria to promote open section roads and use credits more widely	R	DEPRM	1
SW2. Parking Lot Runoff	Revise County Landscape Manual	R	PDM/DEPRM	1
SW3. Rooftop Runoff	Direct rooftop runoff to pervious areas rainbarrels, cisterns or greenroof	E	DEPRM	1
SW4. Stormwater Management for Infill Projects	Develop stormwater criteria for infill development	FS	Office of Planning/ DEPRM*	2
SW5. Watershed-Based Stormwater Criteria	Meet with MDE to develop revised stormwater criteria for certain watersheds	FS/R	DEPRM	2
	Develop watershed based stormwater criteria to reflect receiving water goals	FS/R	DEPRM*	2



# IMPLEMENTATION OVERVIEW AND PLAN

Principle	Recommendation	Action	Responsible Agency/ Support Agency(ies)	Timeframe
SW6. Stormwater Management for Open Space Design	Revise LOSM	FS/R	Recreation and Parks/ DEPRM*	2
SW7. Stormwater Infrastructure Maintenance	Establish a technical group to assess feasibility of stormwater utility	FS	DEPRM/DPW*	2
	Educate HOAs and others on routine BMP maintenance	E	DEPRM	1
SW8. Fee-In-Lieu for Redevelopment	Grant fee-in-lieu only as last option and review and approve new practices that are appropriate for redevelopment	P/E	DEPRM	1
SW9. Pollution Prevention	Establish nonstructural criteria that can be used as credits to apply towards stormwater criteria	FS	DEPRM*	3
SW10. Rooftop Runoff for Infill and Redevelopment	Encourage use of greenroofs in redevelopment situations	P	DEPRM	1
SW11. Courtyards and Plazas for Infill & Redevelopment	Site layouts will dictate where this can be used	E	DEPRM/Office of Planning	1
SW12. Parking and Streetscapes for Infill & Redevelopment	Develop impervious cover reduction credits for alternative paver use in certain areas	R	DEPRM/Office of Planning/ PDM	1
<b>Review and Approval Process</b>				
P1. Land Development Review Permitting System Update	Replace current permitting system to Windows-based format	O	PDM	2
	Address adequate staffing and training as related to permitting system	O	PDM	2
P2. PDM Hearings - Geographic Reference	Add geographic reference to development related hearings calendar	O	PDM	1
	Require that a copy of minor subdivision or Limited Exemption package be sent to primary community association	P	PDM	1
P3. Minor Subdivision or Limited Exemption Community Notification	Update and maintain list of primary community associations	O	Office of Planning	1
	Accept early and complete environmental submittals	P	DEPRM*	1
P4. Optional Early Environmental Submittals	Define and examine infill	FS	Office of Planning*	2
P5. Infill Definition	Develop residential and commercial building incentives	FS/R	CEQ	1
	Foster better understanding between parties re: the current development processes and community.	E	DEPRM*	1
Note: * Should be an inter-departmental effort that also includes outside stakeholders				



## Builders for the Bay

In December 2001, the Alliance for the Chesapeake Bay, the Center for Watershed Protection, and the National Association of Homebuilders launched a partnership known as Builders for the Bay. The primary mission of the Builders for the Bay coalition is to coalesce local builders, developers, environmental groups, local governments, and other important stakeholders in a process to review their existing codes and ordinances and begin a locality specific roundtable process. More information and resources related to the Builders for the Bay program can be accessed at [www.buildersforthebay.net](http://www.buildersforthebay.net).

### Center for Watershed Protection

Founded in 1992, the Center for Watershed Protection (CWP) is a non-profit organization that works with local, state, and federal governmental agencies, environmental consulting firms, watershed organizations, and the general public to provide objective and scientifically sound information on effective techniques to protect and restore urban watersheds. The Center for Watershed Protection also acts as a technical resource for local and state governments around the country to develop more effective urban stormwater and watershed protection programs. For more information on CWP, visit [www.cwp.org](http://www.cwp.org).

### Alliance for the Chesapeake Bay

The Alliance for the Chesapeake Bay (ACB) is the only organization in the Chesapeake region dedicated to restoring the Bay watershed exclusively through collaboration and consensus-building. ACB has a successful track record in building consensus on Bay policies, engaging volunteers in important hands-on restoration, educating citizens about the watershed, and strengthening the capacity of grassroots watershed organizations. Known as “The Voice of the Bay” for its unbiased information on Bay issues, ACB has worked to protect and restore the Bay watershed since 1971. Visit ACB at [www.alliancechesbay.org](http://www.alliancechesbay.org).

### Home Builders Association of Maryland

Since 1919 the Home Builders Association of Maryland (HBAM) has been the voice of the Housing Industry in central Maryland. HBAM, through its affiliate, the National Association of Home Builders, was an originator of the Builders for the Bay Roundtable process and also sponsored the Harford County, MD Roundtable. HBAM is a leader in research and development of innovative land use policy and planning techniques to prepare for the household and employment growth expected over the next 20 years in Maryland. Visit HBAM at [www.homebuilders.org](http://www.homebuilders.org).

### Baltimore County

Baltimore County is known nationally and internationally for innovative resource management approaches, programs and development practices. The County has a long standing tradition of developing and implementing a variety of programs to ensure the long-term quality of life for its residents and visitors. The Builders for the Bay Roundtable process has offered the County an opportunity to partner with a variety of interest groups to evaluate the effectiveness of resource and development programs and create new management tools for the future. Baltimore County is committed to continue to work with the Roundtable partners as we identify and implement new approaches to restoring and protecting our natural resources and our communities. Visit Baltimore County at [www.baltimorecounty.gov](http://www.baltimorecounty.gov).





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## List of Acronyms and Abbreviations

ACB:	Alliance for the Chesapeake Bay
BMP:	Best Management Practice
C:	Code change/modification
CEQ:	Baltimore County Commission on Environmental Quality
CMDP:	Comprehensive Manual of Development Policies
COW:	Codes and Ordinances Worksheet
CWP:	Center for Watershed Protection
DEPRM:	Baltimore County Department of Environmental Protection and Resource Mgt.
DPW:	Baltimore County Department of Public Works
DPW:	Baltimore County Department of Public Works
DR:	Density Residential zone
DRC:	Development Review Committee
E:	Education
FS:	Further Study
HBAM:	Home Builders Association of Maryland
HOA:	Homeowners' Association
LEED:	Leadership in Energy and Environmental Design
LOSM:	Local Open Space Manual
MDE:	Maryland Department of the Environment
MDE:	Maryland Department of the Environment
MDP:	Model Development Principles
N/A:	Not Applicable
NRCS:	Natural Resource Conservation Service
O:	Other
P:	Policy change/modification
PDM:	Baltimore County Department of Permits and Development Management
PUE:	Public Utilities Easement
R:	Regulation change
RC-5:	Resource Conservation rural residential zone
ROW:	Right of Way
SWAP:	Small Watershed Action Plans
TMDL:	Total Maximum Daily Load
URDL:	Urban-Rural Demarcation Line





# Builders for the Bay

CENTER FOR  
**WATERSHED  
PROTECTION**



**ALLIANCE**  
for the  
CHESAPEAKE BAY



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