## Recommended Model Development Principles for Frederick County, MD

## County





## **Executive Summary**

Communities have long struggled to achieve the goal of sustainable development: economic growth that also protects the local environment. However, many communities have found that their development codes and standards give developers little or no incentive to conserve the natural areas that are so important for watershed protection and, in some cases, actually work against sustainable development. Consequently, some communities are choosing to re-evaluate their local codes and ordinances to ensure that they produce more ecologically sound sustainable development.

The rapid pace of development in recent years made Frederick County an ideal candidate for reevaluation of current development rules. Towards this end, a diverse group of development, environmental, local government, civic, non-profit, business, and other community professionals convened as the Frederick County Site Planning Roundtable. The Roundtable analyzed Frederick

County's existing development codes and ordinances over the course of nine months. Through a consensus process, the Roundtable determined that several of Frederick County's codes and ordinances will require revision in order to better protect the area's water resources and aquatic communities. The group recommended 23 model development principles designed to guide future development towards the goals of measurably reducing impervious cover, conserving natural areas, and minimizing stormwater pollution. Specifically, these model development principles address the issues of streets and parking lots, lot development, and conservation of natural areas. The 23 principles recommended by the Roundtable have been detailed in a document entitled *Recommended Model Development Principles for Frederick County, MD* for presentation to the Frederick County Commissioners and eventual incorporation into the County practices. The following are just a few of the types of code modifications suggested by the Roundtable:



- Shorter, narrower streets
- Fewer and smaller cul-de-sacs
- Smaller parking lots
- Increased stormwater treatment practices
- More community open space
- Flexible sidewalk standards
- Increased vegetated buffers
- Enhanced native vegetation
- Limited clearing and grading

Copies of the Roundtable's recommendations can be acquired from the Center for Watershed Protection,

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## Introduction

Every year, hundreds of thousands of acres of land are altered as part of the development process. The development radius around many cities and smaller municipalities continues to widen at a rapid rate, far outpacing the rise in population (Leinberger, 1995). If we are to have any hope of retaining the quality of our water resources and the character of our landscape, the preservation of large, contiguous areas of land in the form of wetlands, forests, meadows and other diverse natural areas is essential.

In order to achieve widespread implementation of development strategies that preserve open space and minimize impervious cover, local governments and developers alike must fundamentally change how and where land is developed. Towards this end, in 1996 the Center for Watershed Protection (Center) began the "Site Planning Roundtable" project to encourage better design at the site level. In the first phase of this project, a roundtable membership consisting of planners, engineers, developers, attorneys, fire officials, environmentalists, transportation, and public works officials from nationally recognized organizations developed and endorsed a set of *national model land development principles* that promote economically viable and environmentally sensitive site planning techniques. The products of this phase of the Site Planning Roundtable project include the development of a *Consensus Agreement* and a supporting technical document: *Better Site Design: A Handbook for Changing Development Rules in Your Community* (CWP, 1998b).

A primary goal of the Site Planning Roundtable project is to provide communities with a technical and economic framework to rethink their zoning and subdivision ordinances, planning processes, and individual site development decisions. Most development projects don't incorporate innovative site planning techniques because these techniques often require a special exception process or aren't allowed by current governmental development regulations and/or subdivision codes. By helping communities revise their planning and zoning ordinances, the Site Planning Roundtable project provides local governments with the tools to promote more

environmentally sensitive development.

Conventional, low-density residential development consumes twice as much land as more compact, open space development (CBF,

### A Locally Adapted Roundtable for Frederick County, Maryland

The Frederick Roundtable project is intended to adapt the principles developed at the national level for local application. In short, the purpose of the project is to identify, through a consensus building process, local codes and ordinances that act to prohibit or impede better site designs. This document presents the resulting recommendations on how these codes might be amended to foster more environmentally friendly development.

# Audit of Frederick Co.

As a part of the Site Planning Roundtable process, the Center staff first conducted an "audit" of Frederick County's local subdivision and zoning codes to document the actual development rules in effect and quantify how these rules compare with the nationally developed model development principles. The Center reviewed the County's subdivision and zoning ordinances, the *Streets and Roads Design Manual* (1994), the County's code for grading, erosion and sediment control, the *Forest Resource Ordinance*, the *Draft Storm Drainage and Stormwater Management Design Manual* (1998), and the *Frederick County Health Department's Soil Evaluation and Percolation Procedures* (1998).

The Center reviewed the County's codes and ordinances using the Codes and Ordinance Worksheet (COW) developed by the Center during the national Roundtable project (see *Better Site Design*, CWP 1998). Results of this analysis indicated that Frederick County's current development rules are insufficient to protect the County's water resources and aquatic communities.

### Why Do a Roundtable in Frederick County?

Frederick County was selected for implementation of the Roundtable model development principles at the local level for several reasons:

- Current rate of growth is significant (approximately 22% since 1990).
- The county still has large undeveloped land areas remaining.
- Growth management and the cost of growth are currently pressing issues in the county.
- A willing local agency has agreed to partner in the process.
- The county is already planning to revisit its local subdivision and zoning codes in the near future.



### **Benefits of Applying the Model Development Principles**

The model land development principles have been documented to benefit both the natural environment and the community. Communities that have implemented the model principles have realized the following benefits:

- Protected the quality of local streams, lakes, and estuaries
- Generated smaller loads of stormwater pollutants
- Helped to reduce soil erosion during construction
- Reduced development costs
- Increased property values
- Created more pedestrian-friendly neighborhoods
- Provided open space for recreation
- Protected sensitive forests, wetlands, and habitats from clearing

- Resulted in a more attractive landscape
- Reduced car speeds on residential streets
- Allowed for more sensible locations for stormwater facilities
- Increased local property tax revenues
- Facilitated compliance with wetland and other regulations
- Promoted neighborhood designs that provide a sense of community
- Preserved urban wildlife habitat

The Frederick County Site Planning Roundtable was conceived, in part, as a result of conversations between the County's planning and zoning staff and Center staff, who observed that the County was rapidly developing, that much of the development employed conventional practices, and that many of the County's codes prohibited more innovative development strategies designed to reduce impervious cover. The planning and zoning staff agreed to partner with the Center in a Site Planning Roundtable project with the goal of modifying current site development design strategies.

Potential Roundtable members were invited to participate in a nine-month process to review the County's existing subdivision and zoning codes. The Site Planning Roundtable ultimately consisted of more than 30 individuals representing a wide range of professional backgrounds (see membership list on page 15), all of whom reviewed the model development principles to identify what modifications could be made for application to Frederick County. The Frederick County Site Planning Roundtable proceeded as follows:

The Roundtable members met for the first time in February 1999 to review the County's program "audit," comment on the national model development principles, and participate in an innovative site design exercise.

In a second meeting in May 1999, members agreed on the format for the resulting recommendations and a review process to critically evaluate the current model development principles and possible modifications to the County's codes. The members also agreed to participate in one of three subcommittees: Residential Streets and Parking Lots (Habitat for Cars), Lot Development (Habitat for People) or Conservation of Natural Areas (Habitat for Nature).

In a series of meetings throughout the summer of 1999, the three subcommittees each dissected their relevant model development principles. The subcommittees took various actions on each of the principles to either support, delete, support with conditions, or add additional principles. Each subcommittee prepared a document incorporating a series of recommendations for review by the full Roundtable membership.

In September 1999, the full Roundtable membership met to review the recommendations of each subcommittee and draft a comprehensive set of recommendations supported by the full Roundtable. The following document summarizes these recommendations.

### Model Development Principles Recommended by the Frederick County Site Planning Roundtable

### Principle No. 1



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 desired speed.

The Membership examined street design requirements for subdivision streets only. The following recommendations do not pertain to arterial, sub-collector, and larger roads.

The Membership endorses the principle with the following recommendations:

Change the current road design standards to reflect average daily trips (ADT) instead of density, and reduce
the minimum required road width as follows:

Recommended Standards for Closed Section Roads			
Minimum Road Width	Parking	Average Daily Trips (ADT)	# of Dwelling Units
20'	parking on both sides*	< 200	20
22'	parking on one side*	200-400	20-40
26***	parking on both sides	400-2000	40-200
26***	parking on one side	> 2000	> 200
32***	parking on both sides	> 2000	> 200

- Restrict parking to one side during snow emergency. No parking permitted if road is a designated fire lane.
- \*\* Frederick County currently has a 28' width which provides some flexibility, especially for creating a road width somewhere between 26' and 32'.
- This recommended change to ADT as the basis for road width should not serve to support widening existing residential streets in the future.
- Consider reduced pavement widths for streets with no required parking.



Reduce the total length of residential streets by examining alternative street layouts to determine the best option for increasing the number of homes per unit length.

The Membership endorses this principle with no recommended changes to existing codes and ordinances.

### Principle No. 3



Wherever possible, residential street right-of-way (ROW) widths should reflect the minimum required to accommodate the travel-way, the sidewalk, and vegetated open channels. Utilities and storm drains should be located within the pavement section of the right-of-way wherever feasible. Where the right-of-way needs to be expanded to accommodate utilities or a wider street section, building setbacks may be relaxed.

The Membership endorses the principle with the following recommendations:

- The required ROW width should be directly related to the road width.
- Reduce the current ROW standard from 50' to 40'.
- In environmentally sensitive areas, ROW width should only extend to back of curb or edge of pavement.
- For wider streets, either widen the ROW or place sidewalks in an easement when they fall outside of the ROW.

### Principle No. 4



Minimize the number of residential street cul-de-sacs 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.

The Membership endorses the principle with the following recommendations:

- Do not set a limit on the number of cul-de-sacs allowed to be constructed in a subdivision.
- If road is less than 1300' long (1/4 mile), *do not* size a cul-de-sac or other turnaround based on school bus turning radius.
- Allow hammerheads (T-turnarounds) to be constructed if a road has eight or fewer lots, and do not allow driveways to be placed on the end of the "T."
- Setbacks on loop-de-lanes (horseshoe-shaped turnarounds with vegetated open areas in the center) should be from the centerline of the center island, and setbacks on eyebrows should be from the centerline of the main road.



Where density, topography, soils, and slope permit, vegetated open channels should be used in the street right-of-way to convey and treat stormwater runoff.

The Membership endorses the principle with the following recommendations:

- Eliminate the 15,000 square foot minimum lot size requirement at which closed section roads are required.
- Require closed section roads when the *average* lot frontage is 80' as opposed to the *minimum* lot width. A minimum and maximum width should be set. A certain percentage above and below the average frontage should be permitted. This should not be implemented as a code change; staff should be given the flexibility to enforce these requirements on a case-by-case basis.
- Use of open section roads should not be restricted by zoning, only by use. If land use changes, staff should be allowed to revisit the road section.
- Width of open section roads should be directly related to density and ADT and consistent with the recommended standards in the table under Principle No. 1.
- Restrict use on steep slopes.
- Design to prevent erodible velocities for the ten-year storm event.

### Principle No. 6



The required parking ratio governing a particular land use or activity should be enforced as a median of national standards in order to curb excess parking space construction. 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 Membership endorses the principle with the following recommendations:

- Review and update the current parking ratio requirements based on actual local demand.
- Expand the land uses covered in the parking ratio requirements.
- Required parking ratios should be changed from minimum requirements to median requirements. A number
  of parking spaces (the percentage of the median requirement) should be allowed above and below this median
  requirement as by-right. Above or below this by-right increase and decrease, the developer should have to
  provide documentation that the increase or decease is warranted. The required documentation should be left
  to the discretion of the Planning staff.
- Developers should be allowed to "ghost in" additional spaces. In the future, if demand requires it, the owner should be able to increase the size of the parking lot without going through the entire planning approval process. In these cases, stormwater management should be designed for the maximum possible impervious surface.



Parking codes should be revised to lower parking requirements where mass transit is available or enforceable shared parking arrangements are made.

The Membership endorses the principle with the following recommendations:

- Incorporate language encouraging and permitting shared parking into ordinances.
- Examine options to allow for shared parking when a new development adjoins an existing development.

### **Principle No. 8**



Reduce the overall imperviousness associated with parking lots by providing compact car spaces, minimizing stall dimensions, incorporating efficient parking lanes, and using pervious materials in the spillover parking areas where possible.

The Membership endorses the principle with the following recommendations:

- Eliminate the parking stall dimension requirement of 9' by 20'.
- Incorporation of compact car spaces should be allowed and encouraged. Compact car spaces should be
  allowed as a certain percentage of the total parking spaces, at the discretion of the developer and Planning
  staff.
- Wheel stops should be placed at the end of parking stalls only.
- National standards for parking stall sizes (both standard and compact) should be reviewed.
- Parking requirements should allow for more efficient design of parking lots.
- Pervious materials in spillover parking areas may be allowed on a case-by-case basis at the discretion of the Planning staff. Site conditions will be reviewed by Planning staff at the time of submittal.

### Principle No. 9



Wherever possible, provide stormwater treatment for parking lot runoff using bioretention areas, filter strips, and/or other practices that can be integrated into required landscaping areas and traffic islands.

The Membership endorses the principle with the following recommendation:

• The integration of stormwater treatment into required landscaping areas and traffic islands should be addressed with the implementation of the new state and local stormwater management regulations.



Advocate open space development incorporating smaller lot sizes to minimize total impervious area, reduce total construction costs, conserve natural areas, provide community recreational space, and promote watershed protection.

The Membership endorses the principle with the following recommendations:

- Make cluster development "by right" (meaning that the Planning Commission would not require additional plan review and public hearings.)
- Allow reduced lot size for detached housing on public water and sewer, with the condition that the applicant
  must demonstrate a workable design that does not increase the yield (allowed by zoning) of the project.
- At the discretion of the Health Department, lots with septic systems may be reduced in size to less than 40,000 square feet as long as the Maryland Department of Environment Subdivision regulations are met.
- Relax permit fee requirements for cluster submittals.
- Consider providing incentives to encourage clustering.

### **Principle No. 11**



Relax side yard setbacks and allow narrower frontages to reduce total road length in the community and overall site imperviousness. Relax front set back requirements to minimize driveway lengths and reduce overall lot imperviousness.

The Membership endorses the principle with the following recommendations:

- Minimum side yard setback requirements should be based on fire code requirements (6' spacing between houses). This will provide maximum design flexibility without sacrificing safety and emergency access.
- Front setbacks for front loaded lots (driveways and garage at front of lot) should be 20 25' from the back edge of sidewalk (this setback applies to the garage).
- For lots that are not front loaded, no minimum setback is required other than providing sufficient room for required utility easements.
- Lot frontage requirements can be waived on private streets so long as there is a Homeowners Association agreement in place.
- Townhome requirement to front on private roads should be waived.

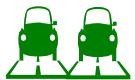
### **Principle No. 12**



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. The Membership endorses the principle with the following recommendations:

- Sidewalks can be allowed on only one side of the road (for both open and closed section roads) at the discretion of the Planning Commission and in consideration of density and traffic volume issues. Where a suitable alternative path system exists, sidewalks would not be required.
- Sidewalks should not be required around the entire perimeter of a cul-de-sac.

### Principle No. 13

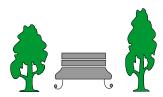


Reduce overall lot imperviousness by promoting alternative driveway surfaces and shared driveways that connect two or more homes together.

The Membership endorses the principle with the following recommendations:

- Allow consideration of shared driveways in major subdivisions (this typically implies panhandle lots). Initial review would be performed at the staff level. Approval, however, will still be required by the Planning Commission. If staff approves of the design layout of the shared drives, no special clause of exception would be required in the staff report to the Planning Commission.
- Encourage the Planning Commission to be aware of the need to allow for driveway design flexibility, especially when there is no associated increase in development yield by the innovative approach.

### Principle No. 14



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

The Membership endorses the principle with the following recommendations:

- The county will ensure that the initial setup of Home Owner Associations (HOAs) is adequate to cover the proposed and required operation and maintenance issues associated with open space management. Adequate HOA documents should contain provisions for annual assessments, mechanisms for increasing annual assess ments, mechanisms for levying special assessments, reserve fund for capital improvements, lists of improve ments/common areas to be maintained by HOA, and provisions for collecting and enforcing collection of assessments.
- The county will prepare an open space/greenway Master Plan that provides a vision of the desired future makeup and location of public access lands, county-wide.
- Consider allowing the use of some portion of the current forest resource funds to be allocated for open space acquisition for the maintenance of existing county-owned lands for the benefit of overall water quality.



Direct rooftop runoff to pervious areas such as yards, open channels, or vegetated areas and avoid routing rooftop runoff to the roadway and the stormwater conveyance system.

The Membership endorses the principle with the following recommendation:

- Adopt the conditions specified in the Draft Maryland Stormwater Design Manual for proper and effective disconnection of rooftop runoff. These conditions are generally as follows:
  - Disconnection must ensure no basement seepage or impacts to septic systems or wells.
  - The contributing length of rooftop to a discharge location should be 75' or less.
  - The rooftop contributing area should be no more than 500 square feet per disconnected down spout.
  - The length of the "disconnection" should be equal to or greater than the contributing rooftop length.
  - The entire vegetative "disconnection" should be on a slope less than or equal to 5.0%.
  - The disconnection should drain continuously through a vegetated channel, swale, or through a filter strip to the property line or BMP.
  - Downspouts should be at least 10 feet away from the nearest impervious surface to discourage "reconnections."

### Principle No. 16



Create a variable width, naturally vegetated buffer system along all perennial and intermittent streams that also encompasses critical environmental features such as the 100-year floodplain, steep slopes and freshwater wetlands.

The Membership endorses the principle with the following recommendations:

• Implement the policies outlined in the Countywide Comprehensive Plan. As a way of fine tuning existing floodplain regulations, evaluate the expansion of the buffer to account for moderate (15% to 25%) and steep (>25%) slopes, highly erodible soils, soils that define upland drainage swales, and other sensitive environmental features.



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

The Membership endorses the principle with the following recommendations:

- Examine greater use and more stringent enforcement of protective easements during the site planning process. Also consider applying protective requirements to farm lot plats and addition plats. Specifically, a site plan should be provided that identifies natural resources information within 100' of waterways. (These applications would require a fundamental change in the subdivision code).
- · Consider requiring signage to ensure that private homeowners and contractors are aware of the buffer.
- Buffer maintenance requirements should be incorporated into the text of homeowners association covenant language.

### Principle No. 18



Clearing and grading of forests and native vegetation at a site should be limited to the minimum amount needed to build lots, 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.

The Membership endorses the principle with the following recommendations:

- Encourage limits on mass clearing where moderate and highly erodible slopes, steep slopes, geologic features, and other sensitive environmental areas exist.
- Encourage phasing to limit the amount of land disturbed on a site at a given time.

### Principle No. 19



Enhance trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native plants. Wherever practical, manage community open space, street rights-of-way, parking lot islands, and other landscaped areas to promote natural vegetation.

The Membership endorses the principle with the following recommendation:

 The County should adopt landscape regulations for site plan development that contain specific green space provisions, landscaping criteria, and guidance on compliance with the Forest Conservation Ordinance.



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

The Membership endorses the principle with the following recommendations:

- Review the current tax structure to support a proportional reduction of lot taxes based on lot size, therefore rewarding smaller lot sizes.
- Ensure that stream buffer regulations include provisions that maintain the density at a site.
- Consider providing incentives to encourage clustering.

### Principle No. 21



New stormwater outfalls should not discharge untreated or unmanaged stormwater into jurisdictional wetlands, sole-source aquifers, or other water bodies.

The Membership endorses this principle, and supports current state and county efforts to address stormwater.

### Principle No. 22



Protect drinking water supplies by restricting certain activities in wellhead areas.

The Membership endorses this principle.



Address the issue of development on agricultural remainder parcels outside community growth and/or priority funding areas.

In Frederick County, farmers in the agricultural zone may divide their land into three residential plots. The land that remains in agriculture is termed an agricultural (ag) remainder. It is possible to rezone this land to a residential or commercial use. The Membership makes the following recommendation:

• Critically examine the County requirements for protecting ag remainders from further redevelopment. Encourage rezoning only in designated growth areas.

### Acknowledgment

The Frederick County Site Planning Roundtable would not have been possible without the generous support of our funders: the US Environmental Protection Agency (EPA) Office of Policy, the Chesapeake Bay Trust, and the Chesapeake Bay Program.

We would also like to thank the individuals who served as chairs of the Roundtable subcommittees:

- Robert Blanchard: Residential Streets and Parking Lots
- Krista McGowan: Lot Development
- Tim Goodfellow: Conservation of Natural Areas

Finally, we would like to express our appreciation to those who participated in the Roundtable process and helped make this document a reality. Specifically, thanks are due to the members of the Frederick County Site Planning Roundtable, Harriet Tregoning and Geoffrey Anderson of the EPA, David Minges of the Chesapeake Bay Trust, Menchu Martinez and Bill Matueski of the Chesapeake Bay Program, and Mark Bundy of the Maryland Department of Natural Resources. In addition, we would like to extend a special thanks to the staff of the Frederick County Department of Planning and Zoning.

A number of overreaching issues were discussed by the Roundtable during the course of the project. While the group attempted to confine discussions to the County's codes that affected site design strategies, there were several issues that overlapped into a county-wide, regional and even state planning arena. Some of these issues include the following (in no particular order):

Several recommendations contained in the preceding *development principles* involve changes in policy that may not be fully within the control of the County. Changes to the Forest Resource Ordinance, for example, would involve state approval. Likewise, changes to the tax code would require legislative action, or a change in policy at the state level. The recommendation to link open spaces through a county-wide system of publicly owned land (see Principle No. 14) requires a planning assessment or development of a "master plan" to accomplish this goal. The County's elected officials should consider these overreaching issues when reviewing the recommendations contained herein.

The Roundtable Membership felt that there was a significant loophole in environmental regulations in Frederick County and that the County should critically evaluate the current practice of exempting agriculture uses from zoning regulations. The Membership recognized that this would be a fundamental change in current policy, but was nonetheless crucial to protecting the overall quality of the County's water resources. The Roundtable Membership recommends that county officials explore the possibility of enhanced incentives and programs to assist agricultural areas with water resource protection and other environmental issues.

These proposed recommendations for improving development in Frederick County are only the first step in what must be a county-wide commitment to protecting water resources. While the Site Planning Roundtable supports these recommendations, it is not possible for us to simply go forth and apply them. The Roundtable recognizes that adequate financial and human resources will need to be made available to implement the recommendations contained in this document.

Finally, the County must devote resources to formally revisit zoning ordinances and subdivision codes that have served the County well for many years, but have become outdated and even obsolete as we enter the next millennium. Implementation of the recommendations contained in this document will only be realized when new zoning and subdivision ordinances have been developed, reviewed and adopted.

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### **Statement of Support**

This document of recommended development principles was crafted in conjunction with the diverse cross-section of development, local and state government, civic, non-profit, environmental, business, and other community professionals that participated in the Frederick County Site Planning Roundtable. Members of the Roundtable provided the technical experience needed to craft and refine the model development principles for Frederick County. The recommendations of the Site Planning Roundtable reflect our professional and personal experience with land development and do not necessarily carry the endorsement of the organizations and agencies represented by their members.

Founded in 1992, the Center for Watershed Protection 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 also acts as a technical resource for local and state governments around the country to develop more effective urban stormwater and watershed protection programs.

The Center for Watershed Protection is a non-membership, nonprofit 501(c)3 corporation. Since its inception, the Center has provided technical assistance to local governments in thirty states and the District of Columbia.

Oversight of the Center is provided by a Board of Directors and a national watershed advisory council, whose members are leaders in the watershed protection arena. Our mission is to do the following:

- Understand and define the relationship between urban growth and the degradation of water sheds
- Link specific land uses to water quality
- Educate public and private sectors about the need for greater protection of our waters through watershed protection
- Advise communities on the most reliable and effective ways to protect and restore watersheds over the entire development cycle
- Bring together new approaches to watershed management by promoting technology-transfer and professional dialog

The Center does not expend funds for fund-raising purposes, nor does it participate in lobbying activities or political advocacy. For more information on the Center for Watershed Protection, visit our website at www.cwp.org.



### References

- Center for Watershed Protection (CWP), 1998a. Nutrient Loading from Conventional and Innovative Site Development. Ellicott City, MD.
- **CWP, 1998b.** Better Site Design: A Handbook for Changing Development Rules in Your Community. Ellicott City, MD.
- Chesapeake Bay Foundation (CBF), 1996. Growth, Sprawl, and the Bay: Simple Facts About Growth and Land Use. Chesapeake Bay Foundation. Annapolis, MD.
- Frederick County Department of Public Works (FCDPW), 1998. Draft Stormwater Management Design Manual. Frederick County, MD.
- FCDPW, 1994. Street/Roads Design Manual. Frederick County, MD.
- Frederick County Health Department (FCHD), 1998. Soil Evaluation and Percolation Procedures. Frederick County, MD.
- **Leinberger, C.**, 1995. "Metropolitan Development Trends of the Late 1990s: Social and Environmental Implications." *Land Use in America*, H.L. Diamond and P.F. Noonan, 1996, editors. Island Press. Washington, DC.
- Schueler, T., 1995. "The Importance of Imperviousness." *Watershed Protection Techniques* 1(3), Center for Watershed Protection, Ellicott City, MD.

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