



Linking Land Use and Lake Erie: Best Local Land Use Practices

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INTRODUCTION

The *Lake Erie Protection & Restoration Plan* was adopted by the Ohio Lake Erie Commission in 2000. The Plan which was prepared with the participation of many Lake Erie stakeholders, experts, and officials concluded that the “*quality of Lake Erie is a reflection of the quality of the entire watershed.*” The Plan established a priority strategic objective to “infuse *best available Balanced Growth principles in local land use decision making.*” A specific action was recommended as follows:

(H-5) Publish and distribute a Lake Erie Model Zoning Ordinance and Building code by 2003 and encourage its voluntary acceptance by local communities.

- *Ensure that all interested concerns (local communities, developers, conservationists, agriculture, etc.) have the opportunity to fully participate.*

The development of this Lake Erie Model Zoning Regulation was assigned to the Balanced Growth Blue Ribbon Task Force that was created in 2001 to develop strategies to balance the protection of the Lake Erie watershed with continued economic growth. This Task Force consists of government officials, business leaders, conservationists, academia, agriculture and other stakeholder groups. A list of the members of the Task Force are Appendix A.

The Balanced Growth Task Force is concurrently recommending that Watershed Balanced Growth Plans be developed. “*Linking Land Use and Lake Erie: A Planning Framework for Achieving Balanced Growth in the Ohio Lake Erie Watershed*” outlines these recommendation. The Executive Summary for this document is Appendix B. It is anticipated that over time the local comprehensive plans will conform to the Watershed Balanced Growth Plans developed pursuant to these recommendations. These models and guidance recommendations could then serve as tools for local government to fully implement

the Watershed Balanced Growth Plans. However, it is not essential for the use of these model regulations to be linked to a Watershed Balanced Growth Plan. They could be used by any local government interested in adopting best land use practices.

This document reflects the work of the Balanced Growth Panel and serves as one part of the recommendations of the Balanced Growth Blue Ribbon Task Force. The Balanced Growth Panel decided to develop models and basic standards for best land use practices that could be adopted by local governments voluntarily and would be encouraged through incentives (funding, awards, etc.). The Panel has met repeatedly to develop recommendations for model land use regulations and guidance that could be used by Ohio local governments to implement land use plans that would be more protective of the Lake Erie Watershed while at the same time providing clear direction for continued development.

Model regulations were developed for:

- Storm Water Management and Riparian/Wetland Protection,
- Coastal Protection,
- Meadow Protection.

In addition the Balanced Growth Panel has developed Guidance Documents for several other development-related issues. These Guidance Documents are accompanied by example(s) of regulations which have been used elsewhere (Ohio examples whenever possible). These regulations may be adopted and used by local governments to implement their Watershed Balanced Growth Plan or due to local circumstances or comprehensive plans. Guidance Documents have been prepared for the following:

- Conservation Development
- Compact Development
- Source Water Protection
- Agricultural Lands Protection
- Tree and Woodland Protection
- Scenic Protection

- Historic Preservation
- Steep Slopes Protection
- Transfer of Development Rights (TDR)
- Brownfields Redevelopment
- Access Management

In addition, the Balanced Growth Task Force has prepared recommendations for consideration by local governments as they undertake local comprehensive planning. The Task Force strongly recommends that local governments use comprehensive planning as the basis for making decisions about the community's future that could be furthered by the use of the above model regulations. These regulations will be much better understood, accepted, and deemed defensible if they implement a well discussed and developed comprehensive plan.

The Balanced Growth Task Force has also recommended a companion report entitled *Linking Land Use and Lake Erie: A Planning Framework for Achieving Balanced Growth in the Ohio Lake Erie Watershed*. This set of recommendations calls for a program of technical assistance and public education on watershed planning and balanced growth concepts. This should include best local practices for local land-use regulation.

The current model regulations as well as examples of regulations from Ohio and elsewhere can be found at the Ohio Lake Erie Commission web site, and will be kept up to date there: <http://www.epa.state.oh.us/oleo/index.html>.

The model regulations and guidance documents **should never be adopted without careful local review** to assure that they are adapted to fit the needs of the specific local government. They will need to be adapted for use by the specific type of local government: city, village, township, or county. **The law director/solicitor or county prosecutor should be consulted prior to adoption of any land use controls.** Questions about the models and guidance can be directed to the Ohio Lake Erie Commission.

RECOMMENDATIONS FOR LOCAL COMPREHENSIVE PLANNING

This document addresses model zoning and land use codes and land-use and zoning-related issues that can make a difference in the quality of watersheds in our communities. These model zoning and land use codes contain a wealth of information on how communities can update and adapt their land use and zoning codes to incorporate better storm water management, reduce impacts to waterways and watersheds, enhance the development environment, and provide for a higher quality of life.

Zoning alone cannot make public policy; in fact, the most defensible, logical zoning code is based on a well-discussed, well-researched comprehensive plan. Such a plan incorporates policy that results from public discourse, informed by sound planning and evaluation.

The development of a Watershed Balanced Growth Plan as recommended by the Balanced Growth Blue Ribbon Task Force will go a long way toward meeting these needs. The Priority Conservation Areas and Priority Development Areas should be incorporated into a local government's comprehensive plan but it will not substitute for a local comprehensive plan.

The Balanced Growth Panel of the Balanced Growth Initiative for Lake Erie, while working on its recommendations for model zoning and land use codes, has outlined critical components of a comprehensive plan that are needed to establish the basis for the recommended codes and guidance documents. A list of those components follows:

1. **Identify Potential for Cooperation:** The plan should address the plans of overlapping and surrounding jurisdictions and identify policy for cooperative efforts such as transfer of development rights, watershed, riparian, and storm water protection that would be more effective at a multi-jurisdictional scale.

2. **Identify Priority Development Areas:** Priority Development Areas are locally designated areas where growth and/or redevelopment is to be especially promoted in order to maximize development potential, maximize the efficient use of infrastructure, promote the revitalization of existing cities and towns, and contribute to the restoration of Lake Erie. To effectively implement the recommendations of this document, the local comprehensive plan should map out the appropriate location of different types and intensities of development. This applies to different types and densities of housing and commercial and institutional uses such as office, retail, education, civic, etc. Compact development areas should be designated.

3. **Identify Priority Conservation Areas:** Priority Conservation Areas are locally designated areas for protection and restoration. They may be critically important ecological, recreational, heritage, agricultural, and public access areas that are significant for their contribution to Lake Erie water quality and general quality of life.

To effectively implement the recommendations of this document, the local comprehensive plan should inventory and prioritize primary resource areas targeted for preservation and conservation. All four categories of resources should be addressed: natural, agricultural, cultural/historic, and scenic. Unique habitats and soils and primary riparian protection areas should be designated.

4. **Plan for Open Space Protection:** The plan should set policy for different levels of open space protection and conservation, including civic parks, natural areas, recreation facilities, and farmland preservation, as applicable. Open space linkages should be designated.

5. **Plan for Transfer of Development Rights:** The plan should identify sending and receiving zones for the potential transfer of development rights.

6. **Examine Local Economics:** The plan should include an economic component that addresses

projected tax revenues and the cost of services, the desirable balance of commercial and residential uses, needed public infrastructure, and governing staff and associated costs, etc.

7. **Plan for Brownfields:** The plan should address policy for facilitation of brownfields redevelopment.

8. **Plan for Shorelines:** A plan including a shoreline area should include provisions for two miles lakeward to the shoreline.

9. **Plan for Public Access:** The plan should provide for improved public access to the shoreline and other natural resources.

10. **Plan for Agricultural Protection:** A plan for agricultural protection should prioritize protection areas based on soils, viewshed, microclimate, and critical farm business mass, as determined by the community.

11. **Plan for Public Participation:** The process should incorporate meaningful public participation, as determined by the community. A strong education component should be included to provide the public with needed information on new tools, balanced growth, and their benefits.

12. **Plan for Incentives:** The plan should set policy for incentives to encourage desirable development approaches, including density bonuses, streamlined review processes, and design flexibility, where applicable.

13. **Review for Disincentives:** The plan should evaluate existing zoning codes, review processes, and regulations for disincentives to desirable development practices, and set policy for correcting the disincentives.

LEGAL REVIEW

The Office of the Attorney General has reviewed the Model Ordinances and Guidance Documents developed by the Balanced Growth Task Force of the Ohio Lake Erie Commission and found they are not inconsistent with federal and state law. However, that review is not a guarantee that some or all of these documents will withstand every legal challenge to their adoption or will be without possible legal risks to the governmental entity utilizing them upon their implementation. **IT IS IMPERATIVE THAT ANY GOVERNMENTAL ENTITY SEEKING TO ADOPT OR IMPLEMENT ANY ORDINANCE OR GUIDANCE DOCUMENT BASED IN WHOLE OR IN PART UPON THE MODELS DEVELOPED BY THE OHIO LAKE ERIE COMMISSION SEEK INDEPENDENT LEGAL REVIEW BY THEIR OWN COUNSEL.**

A number of ongoing practical and legal concerns make independent review upon consideration and adoption of these Models or Guidance Documents an absolute requirement. First, laws of all sovereigns change constantly. Any review previously provided may be out of date given changes in legislation or judicial interpretation. Second, each local sovereign, be it city, county, township or other entity, may have specific procedural or substantive requirements that may change what can or should be adopted or might compromise the ability to adopt the models as drafted. Finally, as with any legal review, it is impossible to anticipate all factual and legal variables.

The Models and Guidance raise a number of legal issues about which communities should be aware as they consider development, adoption and/or implementation of them. Without limitation, a few of the most obvious concerns include:

Authority to adopt/Home Rule. The authority of any governmental entity to act is set forth by the Constitution of the

State of Ohio and Chapters 1 through 7 of the Ohio Revised Code. In the adoption of these recommendations, a governmental entity, acting alone or in concert with other such entities, must confirm that the authority to do so is consistent with these authorities.

Appropriations/Takings. In as much as some of the recommendations may be seen as impacting upon the ownership of real property, property owners may believe that they amount to a taking of such property for which the property owners may seek compensation. As such, both the process for the adoption of the recommendations and the substance of them should be reviewed closely. As one way to minimize concerns regarding appropriations/takings, it is strongly recommended that governmental entities adopting these recommendations include clear and reasonable criteria for the implementation of the ordinances or guidance, coupled with administrative and/or legal procedures to review the decisions of the implementing entity. In addition, it is recommended that any procedures adopted include an administrative procedure for seeking variances from the adopted requirements or procedures in appropriate cases.

Consistency with existing authority. When adopting any new legislation, the governmental entity must consider whether the proposed new laws are consistent with the body of existing law in that jurisdiction.

There may be other legal concerns that could be relevant to the specific application of any of these proposed items. While they have all been reviewed in the abstract prior to the recommendation of the Ohio Lake Erie Commission, each must be considered individually by the adopting entity in order to insure correct procedures for their

implementation, minimize potential legal liability for the adopting entity and minimize subsequent litigation among members of the community impacted by any models that may be adopted.

RESOURCES

Your Local County Planning Commission

Your Local OSU Extension Office
<http://www.ag.ohio-state.edu/>

Your Local County Soil and Water Conservation District Office

American Planning Association
122 S. Michigan Ave., Ste. 1600
Chicago, IL 60603
312-431-9100
<http://www.planning.org>

Smart Growth America
1200 18th Street NW Suite 801
Washington, DC 20036
202-207-3350
<http://www.smartgrowthamerica.com>

Joseph H. And Mary M. Chadbourne., *Common Groundwork: A Practical Guide to Protecting Rural and Urban Land*, Chadbourne & Chadbourne Inc., 18554 Haskins Rd., Chagrin Falls, Ohio 44023; Tel:440-543-7303

Stuart Meck, FAICP, Gen. Editor, *Growing Smart Legislative Guidebook: Model Statutes for Planning and the Management of Change*, American Planning Association, 122 South Michigan Avenue, Suite 1600, Chicago, IL 60603; Tel: 312-431-9100; Web: <http://www.planning.org/>

Ohio State University, Fact Sheet *Comprehensive Planning*; Web: <http://ohioline.osu.edu/>

Office of Land Information Services, Wisconsin Department of Administration, 17 South Fairchild St, 7th Floor, Madison, WI 53703-3219; Tel: 608-264-6180; Web: <http://www.doa.state.wi.us/>; See *Wisconsin: Comprehensive Planning Law Fact Sheet* at Web: <http://www.doa.state.wi.us/dir/>

STORM WATER MANAGEMENT & RIPARIAN/WETLAND PROTECTION

BACKGROUND

Storm Water Management and Riparian/Wetland Protection

Storm water management and riparian/wetland protection encompasses a range of subjects that have a significant impact on flooding, erosion, and water quality. The topics involved include long-term storm water management for quantity and quality, erosion and sediment control on construction sites, and management of riparian areas, floodplains, and wetlands.

The benefits of storm water, riparian, and wetland management are well documented in Ohio and nationwide. The quantity of storm water runoff to streams and other water resources has increased as communities throughout the Lake Erie drainage grow and increase parking lots, roads, rooftops, and other impervious surfaces, while impacting riparian areas and wetlands. Riparian areas and wetlands naturally control flooding, limit erosion, and protect water quality. The results of this increase in impervious cover and loss of natural resource services are increases in storm water runoff volume and velocity and decreases in storm water quality. These impacts are apparent in more flooding, increases in stream bank erosion, and decreases in urban water quality. Flooding, erosion, and water quality problems result in property and infrastructure loss and the degradation of water resources.

A variety of zoning and land management tools are available to local governments to manage storm water and protect riparian and wetland functions.

These tools include:

- Riparian Setbacks
- Wetland Setbacks
- Storm Water Management
- Erosion and Sediment Control

These tools can have a direct return in cost savings to communities and landowners for flood, erosion, and storm water management. Natural vegetation and landforms slow, store, and filter storm and flood waters. The maintenance of these features as land is developed provides a low cost alternative to costly human-made remediation structures. Prevention of flooding, erosion, and sedimentation and other water quality problems through good site design and construction site management can greatly reduce the cost of remediation after a problem has developed.

OEPA NPDES Phase II Storm Water Requirements

Regulates: Owners or operators of Municipal Separate Storm Sewer (MS4) in Urbanized Areas, includes townships, villages, cities, counties, and non-traditional MS4s such as park districts.

Requires: Storm Water Management Program detailing how community will complete:

- Public Education and Outreach
- Public Involvement & Participation
- Illicit Discharge Detection & Elimination
- Construction Site Runoff Control
- Post Construction Runoff Control
- Pollution Prevention on Municipal Operations

OEPA NPDES Construction Site General Permit

Regulates: Owners or operators of construction activities disturbing 1 acre or more, or less than 1 acre if part of a larger common plan of development.

Requires: Storm Water Pollution Prevention Plans detailing how applicant will:

- Minimize erosion
- Control sediment
- Control nonpoint pollution
- Treat storm water quality

Implementation of the tools discussed above will have a direct effect on improving the quality of life and recreation opportunities along the Lake Erie shoreline, its tributary rivers, and throughout the Lake Erie drainage, and it is critical to the economic development of the basin. In many communities implementation of these tools will also help in their compliance with Ohio EPA's Phase II storm water requirements for construction site erosion and sediment control and long-term storm water management.

The Role of Low Impact Development

The first three of the tools discussed above – riparian and wetland setbacks and storm water management – can collectively be achieved through Low Impact Development (LID). LID is a site design approach to storm water management that seeks to integrate hydrologically functional design with pollution prevention measures to compensate for land development impacts on hydrology and water quality. LID's goal is to mimic natural hydrology and processes by using small-scale, decentralized practices that infiltrate, evaporate, detain, and transpire storm water. LID storm water controls are uniformly and strategically located throughout the site.

LID is achieved by:

- Minimizing storm water runoff impacts to the extent practicable through preservation of existing landscape features, such as streams and wetlands, and their hydrologic functions.
- Maintaining predevelopment time of concentration through strategic routing of flows using a variety of site-design techniques.
- Dispersing runoff storage measures through a site's landscape with the use of a variety of detention, retention, and runoff practices.

LID is a design approach that must be implemented early in the site-design process and represents a collection of storm water management practices that may be used together to manage storm water. LID measures provide post-construction water quality benefits and are often

used as a supplement to conventional storm water practices designed to ensure water quantity control in conformance with the critical storm criteria.

The LID principles are designed to minimize disturbance and manage storm water as close to its source as possible. Specific low impact development controls, called Integrated Management Practices (IMP's), are tools for developers to use to manage storm water at its source rather than relying solely on centralized Best Management Practices (BMP's), such as detention basins. These IMPs include a variety of non-structural and structural practices such as:

- Impervious surface reduction through alternative site layouts
- Riparian and wetland setbacks
- Biofiltration facilities
- Vegetated swales
- Cistern & rain barrels
- Infiltration trenches
- Green roofs
- Soil amendments to increase permeability

ISSUES

Communities should consider the following points as they implement the attached model regulations for storm water management and riparian and wetland protection.

Riparian and Wetland Setbacks

- **Setbacks not Buffers:** Protective areas along riparian corridors and around wetlands are best provided through local zoning setbacks. These setbacks are implemented similar to front, side, and rear yard setbacks and keep development activities a certain distance from rivers and wetlands. The term buffers has historically been used to describe agricultural areas not used for row crops and does not have a direct link to local zoning terminology and approach. Buffers, for example, tends to imply a prohibition on a range of uses and does not imply flexibility for non-conforming uses as well as variances to ensure lots remain

buildable. By contrast, the term setback has a more clear meaning and history in local zoning regulations. The use of the term is more precise than buffers to explain that the riparian and wetland setback model regulations are simply requiring that structures and a limited number of uses be kept back a certain distance from watercourses and wetlands and that these model ordinances contain non-conforming use and variance sections.

- **Flexibility and Buildability:** When implementing riparian and wetland setbacks, it is essential that communities include a variance section to ensure that, to the extent possible, lots remain buildable and subdivision lot yields are maintained. This is best done by giving the Planning Commission, the Board of Zoning Appeals, or other appropriate body the ability to work with landowners to flex all applicable setbacks, such as front and side yard, to maintain the riparian or wetland setbacks to the maximum extent possible while allowing development.
- **NPDES Phase II:** Riparian and wetland setbacks are an essential step in complying with Phase II requirements for post-construction storm water management.
- **Erosion and Sediment Control & Storm Water Management**
- **Ohio EPA Has Set the Minimum Standard:** Ohio EPA recently issued its updated NPDES General Permit for Construction Sites. This applies to all owners and operators of construction sites disturbing 1 acre or more, or less than 1 acre if part of a larger common plan of development or sale and includes erosion and sediment control requirements and storm water quality requirements. Communities should ensure that their erosion and sediment control regulation and storm water management regulation meets these standards at a minimum.

- **Ohio EPA Has Increased Requirements for Storm Water Quality Control:** Ohio EPA's new requirements for storm water quality will necessitate that new storm water infrastructure be designed to effectively detain storm water runoff for a period sufficient to protect stream channels and water quality. This will result in increased maintenance and related funding requirements as storm water infrastructure, such as detention basins, will be intentionally designed to collect sediment.

- **Operation and Maintenance:** In light of these new requirements for storm water basins, it is important that communities ensure the long-term operation and maintenance of storm water management infrastructure by establishing procedures of inspection and funding when these facilities are constructed.

- **Limitations of Counties:** Counties are limited by the Ohio Revised Code to requiring erosion and sediment control and storm water management plans on lots of five acres or more. Townships can fill this gap through local zoning resolutions that require erosion and sediment control and storm water management, where appropriate, on sites less than five acres.

- **NPDES Phase II:** Erosion and sediment control regulations that include BMP requirements, site plan review, inspection, and enforcement, as well as storm water management requirements that address water quality protection and long term storm water control, are all required under Phase II.

Low Impact Development

- **Site Considerations:** High clay content soil, high water tables and other site-specific considerations may reduce cost-effectiveness of LID practices and should be considered during project review.

- **Deed Restrictions:** Maintaining distributed depression storage measures within residential subdivisions will require deed restrictions on individual parcels as well as homeowner education to ensure measures are maintained.
- **Zoning Variances:** Variances from zoning, subdivision, building, storm water management, and drainage regulations may be required unless LID is permitted under the storm water management regulations.

RECOMMENDATIONS

It is recommended that communities adopt zoning and other appropriate land-use and management provisions to address riparian and wetland protection, erosion and sediment control, and storm water management and to allow for the use of low impact development techniques by interested landowners. This may be done through a comprehensive regulation related to site development or a set of related regulations. Steep slope provisions and updates to building codes for floodplain standards may also be included.

STANDARDS

The following standards are required for a community's code to be considered in compliance with the recommended program.

Riparian and Wetland Setback Checklist

- **Apply to Streams and Wetlands:** Riparian setbacks are applied to all locally designated watercourses within a community and wetland setbacks apply, at a minimum, to Ohio EPA Category 2 and 3 wetlands.
- **Conform to Minimum Widths:** Minimum riparian setback widths should range from 25 feet to 300 feet on either side of locally designated watercourses, as measured from the ordinary high water mark, and depending on the drainage area. Minimum wetland setback widths should be 75 feet from Category 2

wetlands and 120 feet from Category 3 wetlands.

- **Include 100-year Floodplain and Riparian Wetlands:** Minimum riparian setback widths should be extended to the full extent of the 100-year floodplain and around riparian wetlands.
- **Prohibit Construction in Riparian Setbacks:** Riparian and wetland setback regulations should prohibit construction in the setback area.
- **Include Variance Provisions:** Variance provisions allowing communities to flex other setbacks, such as front and side yard, to maintain the riparian and wetland setbacks while allowing relief based on site constraints should be included.
- **Provide for Inspection and Enforcement:** Regulations should enable the zoning inspector or community engineer to inspect the riparian and wetland setbacks during construction and any time evidence of a violation is brought to the community's attention. These regulations should also provide the community with the ability to require riparian and wetland restoration for unpermitted impacts in the setback.

Erosion and Sediment Control & Storm Water Management Checklist

- **Meet Ohio EPA Standards:** Regulations should meet or exceed Ohio EPA minimum standards for erosion and sediment control and storm water management best management practices, as detailed in the most recent version of the NPDES General Permit for Construction Sites.
- **Erosion and Sediment Control and Storm Water Management Plan Review, Inspection, and Enforcement:** Regulations should have provisions for plan review prior to

construction, regular inspections during construction, and provide the community with the authority to stop work, where allowable by local laws, for activities not in compliance with an approved plan.

- **Allow for the Implementation of Low Impact Development Techniques:** A community's storm water management regulation should allow for the implementation of low impact development techniques and provide community staff with the resources necessary to review such proposals and ensure on-going operation and maintenance.
- **On-going Operation and Maintenance:** Under both erosion and sediment control regulations and storm water regulations, communities must ensure that contractors provide sufficient funds to stabilize sites if the contractor is unable to complete erosion and sediment control requirements. Similarly for storm water management, communities must ensure that landowners make provisions for on-going operation and maintenance of any structural or non-structural storm water best management practices. It is important that communities clarify long-term costs and have funds available for on-going operation and maintenance before problems develop. In general, delegating these responsibilities to homeowner associations is not an effective long-term solution.

MODEL CODES

The Chagrin River Watershed Partners, Inc., P.O. Box 229, Willoughby, Ohio 44096-0229. (440) 975-3870

The model regulations **should never be adopted without careful local review** to assure that they are adapted to fit the needs of the specific local government. They will need to be adapted for use by the specific type of local government: city, village, township, or county. **The law director/**

solicitor or county prosecutor should be consulted prior to adoption of any land use controls. Questions about the models and guidance can be directed to the Ohio Lake Erie Commission.

RESOURCES

The Chagrin River Watershed Partners, Inc., P.O. Box 229, Willoughby, Ohio 44096-0229. (440) 975-3870

A Review of Selected Functions of Riparian Buffer Zones and Some Widths Associated with Them, Divelbiss, Ohio Department of Natural Resources, 1994.

Wetland and Stream Buffer Size Requirements – A Review, Castelle et al. Journal of Environmental Quality, 1994.

Environmental Land Planning Series: Site Planning for Urban Stream Protection, Schueler, 1995.

Maryland Department of the Environment, 1999. *Maryland Storm Water Design Manual Volumes I and II*. Copy available at 1-800-633-6101 or <http://www.mde.state.md.us>.

Prince George's County, Maryland Department of Environmental Resources Programs and Planning Division, 2000. *Low-Impact Development Design Strategies: An Integrated Design Approach*. EPA 841B00003. Available from the National Service Center for Environmental Publications (NSCEP) 1800-4909198 or online at <http://www.epa.gov/ncepihom/orderpub.html>.

Low Impact Development Center on line at <http://www.lowimpactdevelopment.org/>

Tyne, Ron. 2000. *Bridging the Gap: Developers Can See Green* Land Development Spring/Summer 2000: 27-31.

U.S. EPA <http://www.epa.gov/owow/nps/urban.html>

Prince George's County, Maryland <http://www.goprincegeorgescounty.com>

NAHB Research Center Toolbase Services <http://www.toolbase.org/>

Ohio Department of Natural Resources, Division of Water, Floodplain Management Program <http://ohiodnr.com/water/floodpln/>

Your Local Metropolitan Planning Organization (MPO): NOACA, TMACOG, NEFCO, etc.

Your Local County Soil and Water Conservation District

Your Local Watershed Group

COASTAL PROTECTION

The Coastal Protection model is still being developed.

MEADOW PROTECTION

BACKGROUND

In many communities, regulations have been put in place which restrict the height of mowed lawns in private residential and commercial landscapes seen from the road. Known as “weed laws,” these were implemented in recent decades in response to community concern about property owners who would neglect their landscapes, leading to an influx of weeds and an appearance of poor care or absent owners, which would reduce the property values of surrounding homes. The regulations typically set a maximum height for lawns, and outlined procedures for notifying the delinquent property owner for permitting the community government to remedy a longstanding noncompliant situation, and for billing the property owner for any services involved.

These regulations typically evolved in communities with a number of standard postwar subdivisions, where the use of lawn was universal and lots were rather small. An unkempt lawn usually was the result of neglect, and could indeed have a negative effect on surrounding property. However, in recent years lots have enlarged, and many landowners have chosen to maintain part or all of their lots in natural meadow. Interest in native plants has expanded among homeowners, and there is a steadily increasing body of knowledge of native meadows and their culture and restoration. A parallel expansion in availability of many plants and seed mixes has added to this increasing sophistication.

Furthermore, a new pattern of subdivision design (conservation development) has resulted in an increase of large open space areas held in common by homeowners’ associations. Many of these open spaces were specifically designed to be natural meadows. And yet, in many cases weed laws are still applied by the local community, resulting in the mowing of often carefully planned and tended native meadow areas.

While mowed lawn is often thought of as “soft space,” absorbent and natural, it is in fact a surface

treatment that has many detrimental effects on the environment. As it often covers an area that was compacted during construction or through traffic over time, its runoff coefficient is similar to that of many types of paved areas. It also is often overtended with fertilizers, herbicides and pesticides. The result is an impact to local waterways, with increased runoff quantity and increased pollutants in that runoff. Lawn has habitat impacts, as it creates a monoculture that supports large populations of plant pests and diseases, while providing no genetic diversity, and no cover, shelter or food for wildlife. In contrast, a natural meadow area absorbs a large percentage of the water that falls on it and filters it before it hits local waterways, both key components of effective storm water management. It is very low maintenance, and the use of polluting substances is limited. Furthermore, natural meadows support a huge diversity of wildlife, and can be managed to encourage wildlife habitat enhancement.

The expansion of natural meadow use in conservation development subdivisions and in large private lots is generally seen as an improvement to environmental quality, especially water quality. Many soil and water districts and park districts have active education programs to promote the use of native landscaping, including natural meadows. While problems with neglectful landowners will probably always exist, it is critical that weed laws be designed and applied not to prohibit the use of true, tended, natural meadows. A well-written regulation will permit both natural meadows and lawn in appropriate applications.

ISSUES

- Weed laws are not intended to permit noxious or invasive species to proliferate. State law requires communities, including townships, to control noxious weeds. In addition, there are many species not on the noxious weed list which are invasive and locally undesirable. A well-written regulation will be no less restrictive than state law and will prohibit additional species that are considered to be of local concern.

- Weed laws that provide for natural meadows fall into three general groups:
 - (1) Permit laws – require an applicant to submit for approval a management plan, and require compliance with the plan
 - (2) Exclusion laws – simply exempt native grass areas (species specified) from application of the law
 - (3) Proactive laws – actually require a certain percentage or amount of native grass areas in new landscapes
- Permit and proactive laws are generally seen as more regulatory, requiring a review board qualified and authorized to review, condition, approve, and enforce a design and/or management plan submitted by the applicant. Both types are seen as more difficult and expensive to carry out by the government because of the need for an educated review board and a monitoring program which applies to every applicant.
- Exclusion laws are less regulatory, relying on the occurrence of a problem before the regulation applies. Exclusion laws typically rely on the designation of a “weed expert” – a person who is qualified and authorized to distinguish on a case-by-case basis between neglected sites and bona fide meadows.
- Some laws are set up as setback laws, establishing a setback line (which varies depending on lot size) beyond which natural meadows must be located.
- All laws enacted must address a means for enforcement of the requirements.
- Many communities, especially townships, have no restrictions at all concerning the landowners’ choice and maintenance of landscaping, beyond their obligation to comply with state laws controlling noxious weeds. Where there is a lack of regulation, it is not necessary to enact a meadow-friendly weed law. No laws provide the maximum flexibility to the property owner, as long as property values will not be affected by lack of attention to land areas.
- Most of the general public are not aware of the value of natural meadow and often interpret

meadow areas, particularly those in the early stages of succession from lawn to meadow, as unkempt, neglected sites. Education is critical to help people understand the water quality, habitat and rural-character value of natural meadow in the appropriate applications, and the process of natural succession.

- Communities need technical resources to consult to determine if an unmowed area is actually a meadow. In most counties SWCDs can provide this service.
- Communities need a maintenance section of the model regulation to ensure on-going maintenance of the meadow area.

RECOMMENDATIONS

Communities wishing to enact new mowing regulations should ensure that natural areas are protected and that lawn is required only in appropriate, limited situations. Those with weed laws should revisit them and insert language that permits and encourages natural meadows. Those without requirements are best left as is, unless there are compelling reasons to restrict the landscaping choices of the homeowner.

Communities with local concerns about natural meadows and weed control should work with local experts such as soil and water districts and park districts to educate the public about the benefits of natural areas and the process of natural succession. They should provide technical assistance to those who would like to implement natural meadow areas.

STANDARDS

- If a weed law exists, it must permit natural meadows
- Must protect against both noxious and nuisance weeds
- Must provide method for discerning natural meadows from neglected landscape
- Must allow for hearing/appeal procedure

MODEL REGULATIONS

Attached are three model regulations addressing

meadow protection that have been used elsewhere. The code from Madison, Wisconsin, is an example of a permit law. The White Bear Lake, Minnesota, model is an example of an exclusion code, while the model from Long Grove, Illinois, is a proactive code.

The model regulations **should never be adopted without careful local review** to assure that they are adapted to fit the needs of the specific local government. They will need to be adapted for use by the specific type of local government: city, village, township, or county. **The law director/solicitor or county prosecutor should be consulted prior to adoption of any land use controls.** Questions about the models and guidance can be directed to the Ohio Lake Erie Commission.

OHIO'S NOXIOUS & REGULATED WEEDS

Ohio has 14 noxious weed and 2 regulated weeds:

Noxious

Musk Thistle
Oxeye Daisy
Canada Thistle
Poison Hemlock
Wild Carrot
Purple Loosestrife
Wild Parsnip
Mile-a-Minute
Russian Thistle
Cressleaf Groundsel
Shattercane
Johnsongrass
Grapevines (abandoned)

Regulated

Multiflora Rose
Purple Loosestrife
See: <http://ohioline.osu.edu/b866/>

Refer to your local SWCD for a list of invasive species and weeds of local concern. The ODNR Division of Natural Areas and Preserves can also provide a list of invasive species.

RESOURCES

City of White Bear Lake, 4701 Highway 61, White Bear Lake, MN 55110; Web: <http://www.whitebearlake.org/>

The Countryside Program, P. O. Box 24825, Lyndhurst, OH 44124; Tel: 216-295-0511; Web: <http://www.countrysideprogram.org/>

Holden Arboretum, 9500 Sperry Road, Kirtland, OH 44094-5172; Tel: 440-946-4400; Web: <http://holdenarb.org>

Wild Ones Natural Landscapers, Ltd., P. O. Box 1274, Appleton, WI 54912-1274; Tel (920) 730-3986 Toll-free (877) FYI-WILD; Web: <http://www.for-wild.org/>

Society for Ecological Restoration International, 1955 West Grant Road #150, Tucson, Arizona 85745 USA
Tel: 520.622.5485, Web: <http://ser.org/>.

Your Local County Soil and Water Conservation District

Your Local Metropark Staff

CONSERVATION DEVELOPMENT

BACKGROUND

Over the last 10 years in Ohio, the quality of new development in rural areas has become a growing concern. Communities appreciate the need for continued growth and expansion, but also worry about the wide spread of new development across the countryside. In particular, they are concerned about the impact of this new development on the quality of life, rural and community character, and the protection of valuable resources. In the Lake Erie Watershed, balanced growth addresses the concern about the impact of new development on water quality and water quantity. The standard way of zoning new development not only results in a loss of resources and rural character, but also it substantially increases the quantity, and reduces the quality, of water in our waterways, leading to erosion, sedimentation, and nonpoint source pollution.

A good community plan will outline areas for concentration of new development to help offset the breadth of sprawl. It will also identify areas that are a high priority for maximum preservation, using the wide variety of tools that are available. Conservation development is a technique that applies to the in-between areas, those that we know are going to develop, but where we would like to balance the impact of the development with the protection of water and other resources, including community character.

Conservation development most often applies to residential development, where the number of homes normally permitted on a specific parcel of land is grouped together on smaller lots, while a sizeable proportion of the property – at least 40% – is set aside as open space. The open space serves as a buffer to protect vegetation, streams, wetlands, and floodplains on the property, and helps to manage storm water effectively on site. In exchange, the developer realizes a premium on the development because the results are high in quality and meet an underserved market. Conservation development can also apply to

commercial and institutional development, primarily to those types that are campus-like in nature, where buildings and parking can be rearranged to accommodate natural, agricultural, cultural, or scenic resources. Office parks, graduated living facilities, educational campuses, and the like all work well in a conservation-development scheme.

Standard patterns for retail or single parcel commercial development present a related set of problems, however, as any set-aside of open space constitutes a reduction in the development potential of the site, yielding a lower return for the developer. In these cases, open space set-asides are best incorporated when property is changing from residential to commercial zoning (the site under commercial zoning, even with open space, still has a higher value than under residential zoning) or when the overall value of the property in the neighborhood is significantly enhanced by the overall plan for the area. In some limited cases, significant benefits can be achieved by concentrating the building or parking into multi-story structures, permitting open space set-asides without reduction in value. To concentrate structures, often some community subsidy or financial involvement is a part of the arrangement in order to offset the cost of construction of multi-story structures.

It should also be noted that conservation development schemes, which provide for a patchwork of open space and development, are generally not suited to preservation of large blocks of land, as would be desired for a significant natural area or a designated area of farmland preservation. The resulting patchwork creates conflict among residents, workers, and farmers. It also presents access and management problems for the farmer, and increases the “hassle factor” of continuing to farm in a developed area. A patchwork of open spaces may also not provide the “critical mass” of farms to support farm-related businesses such as banks, supply and equipment stores, and professional advisors. However, a patchwork of open spaces is well

suiting to buffer views of development, provide for continuity in linear habitats such as along streams, reduce and filter storm water runoff from development, and ensure the long-term survival of wetlands, rural views, and historic features. Conservation development is an approach that should be available in the zoning toolbox of every community that still has open land that could yet be developed.

ISSUES

Communities considering the implementation of conservation development face several important decisions. These decisions are best made as part of a comprehensive planning process conducted before zoning is put in place.

Residential Conservation Development

- Residential conservation development often is based on the concept of “neutral density,” i.e., that no additional units will be provided beyond those which could be built with a conventional zoning approach. Some communities choose to incorporate a modest density bonus (e.g., allowing 10% more units than current zoning allows) as an incentive for innovative design. They need to ask what the suitable level of development intensity is for the district(s) which will be zoned conservation development. How will density be calculated?
- A yield plan asks the developer to work out a suitable conventional subdivision plan, and then it applies that number of units to a conservation development design. This approach can be a disincentive; however, as twice the formal review time is involved for the community to examine first the yield plan, then the development plan.
- Statistical density merely involves the application of the mathematical lot size to the parcel size. So a 100-acre parcel zoned for 1-acre lots would be permitted 100 units. This incorporates an effective density bonus as lot layout inefficiencies for roads, topography, cul-de-sacs, etc., are not considered.
- Many communities come up with a formula that approximates neutral density based on

typical subdivisions and site conditions in their location.

Commercial Conservation Development

- The level of intensity of development is similarly of concern, but it is calculated differently. After the amount of open space to be set aside is decided upon, including landscaped and storm water management areas, the amount of parking required can make a big difference in the level of intensity of the final development. It might be desirable to give developers parking reductions in exchange for innovative design, set-aside of open space, etc. It might also be desirable to allow a reduction in the required quantity of open space in exchange for more concentrated, village-like design.

Both types

- The structure of the regulation must be decided. Will a Residential Conservation Development or Commercial Conservation Development approach be used? Will the district be a permitted or conditional use? Will the zone be applied on the map to certain districts, or will it “float” until an applicant asks that it be applied to his parcel?
- In rural areas in particular, the provisions for wastewater and water supply must be addressed to allow more concentrated development on one part of the parcel in exchange for another.
- A decision must be made about whether roads will be public or private.
- Ideally, the desired linkage of open spaces between parcels will be worked out in a community planning process ahead of time.
- The location and protection of wetlands, floodplains, and desired riparian setbacks also need to be worked into the code.
- The requirements for open space must be weighed. How much open space will be required in each district, and what will be included in that open space? Will the land required for storm water retention be included? Will land required to be landscaped be

included? How much of the open space may include active play areas such as soccer fields and playgrounds? Will land that is unbuildable or inaccessible be included? Will it be acceptable for open space to be concentrated in the back of property, out of view?

- Perimeter distances are a consideration, since concentrating development on parts of a parcel may result in the placement of structures much closer to the parcel boundary than would result under conventional zoning. It is recommended that the conventional zoning perimeter distances be approximated in the conservation development approach to reduce the concerns of adjacent property owners.
- What approval criteria will be used for the district? What criteria will be objective standards, and what will be more subjective? What education might be needed on the part of zoning or planning officials to ensure an intelligent review according to the criteria?
- What will be the structure of the review process? This is especially important in townships where review must be dovetailed with the county subdivision review process. It is also especially important to ensure that the review process is streamlined and functional, and does not involve greater risk or time on the developer's part than would be provided under conventional zoning.
- Finally, it is important at the end of the drafting process to review the entire document from the incentives perspective. Are the requirements of the district encouraging or discouraging conservation development? A developer should not have to significantly increase his cost, risk, or approval time to "do the right thing". This is especially important in townships where a residential development approach is an option. Communities must decide how they can balance incentives with disincentives to achieve a measure of success.

RECOMMENDATIONS

It is recommended that communities implement conservation development, both residential and commercial, as a component of their zoning code.

This must be done following a well-discussed planning process. As part of that planning process, recommended types of development, levels of development intensity, and areas for open space linkages and retention must be designated. Ideally, areas where the conservation development districts may apply should be mapped; other areas should be identified for more concentrated development in a traditional neighborhood environment. Areas that are a high priority for preservation, especially agricultural preservation, should be addressed with other tools than conservation development.

All development types

- Provisions should be made for permanent protection of open space, including provisions for maintenance and capital improvements.
- Provisions must be made to minimize fragmentation of open space,
- Provisions should provide for linkages of open space with other spaces in the community
- Requirement for developer to prove that highest quality resources on the site were evaluated and are protected via the open space
- A minimum project size should be designated
- Provisions for wastewater and well approval should be given
- Perimeter distance requirements
- Streamlined approval process
- Coordination between subdivision review and zoning review
- Clearly defined review criteria

Residential Conservation Development

- At least a 40% open space requirement must be included for lot sizes less than one acre, with 50% for lot sizes greater than one acre
- Density bonuses should not exceed 10-20%.
- Maximum access to the open space by private users should be required

Commercial Conservation Development – office parks

- At least 40% open space requirement, of

which 25% is natural open space
Planned Commercial Development

- For areas already zoned commercial, open space requirement is 25%
- For areas currently zoned residential or being rezoned, open space requirement is 40%
- Open space requirement should be at least half of the natural functioning open space

EXAMPLE REGULATIONS FOR GUIDANCE

The following is one example of a model code that meets the requirements listed above. The residential model is based on a model developed by the Countryside Program of Northeast Ohio. The Planned Commercial District is based on a code developed by D.B. Hartt, Inc., for Rootstown Township, Portage County, Ohio.

The example regulations **should never be adopted without careful local review** to assure that they are adapted to fit the needs of the specific local government. They will need to be adapted for use by the specific type of local government: city, village, township, or county. **The law director/solicitor or county prosecutor should be consulted prior to adoption of any land use controls.** Questions about the models and guidance can be directed to the Ohio Lake Erie Commission.

RESOURCES

The Countryside Program, P. O. Box 24825,
Lyndhurst, OH 44124; Tel: 216-295-0511; Web:
<http://www.countrysideprogram.org/>
Rootstown Township, 3988 State Route 44,
Rootstown, OH 44272; Tel: 330-325-9370; Web:
<http://www.rootstowntwp.com>

City of Delaware, One South Sandusky St.,
Delaware, OH 43015; Tel (Planning Department):
740-368-1652; Web: www.delawareohio.com

COMPACT DEVELOPMENT

BACKGROUND

It is commonly recognized that balanced growth encourages new development and redevelopment, the quality and design of that development can have a major impact on the future of our watersheds, particularly the Lake Erie watershed. One of the ways to have the biggest impact is to encourage more compact development whenever possible. Concentrated development requires less road and impervious surface; allows infrastructure, including storm water management, to be provided in a more efficient fashion; and permits a wider range of cost-effective transportation options. Concentrated development can allow for the conservation of open space as well as natural and other resources that can fit in to the development. It also enhances the efficiency of business, the quality of neighborhoods, and the relationships (such as school and church) that develop within them. For these reasons, all communities are encouraged to explore ways in which they can make development more compact where appropriate.

Compact development regulations are sometimes identified as “traditional neighborhood design,” or TND. However, these principles apply in a wide range of situations that may not include traditional neighborhoods. Compact development will have a very different character, depending on whether it is occurring in an urban neighborhood, a small town center, a rural crossroads, or a major retail center. Four sample development regulations are provided here to illustrate the range of possibilities that may be applied.

ISSUES

1. One of the primary principles of compact development is providing a mix of uses. In a traditional neighborhood, this means that several types of housing, commercial, and office space are provided in close proximity to each other to facilitate communication among them, good pedestrian access, and a balanced community.
2. Larger compact development areas will be designed to incorporate a hierarchy of scales, starting with individual streets at the smallest scale and moving up through neighborhoods, districts, and the town or city itself. Each sub-area will have its own recommendations for types of buildings and uses, travel distances, streets, central focus areas (such as a main street or neighborhood center), and open spaces. Smaller compact development areas might be designed around one such district or neighborhood, with associated guidelines for streets, center focus, and open spaces.
3. Compact development projects rely on careful attention to traditional street design, with a hierarchy of rectilinear streets, including alleys, to meet practical access needs without impacting pedestrian scale. Blocks are short and provide maximum street frontage for uses. Buildings are often located right at the curb or with a minimal setback, with more extensive parking provided behind the buildings.
4. Usually these uses are provided at a fairly small scale, although there has been a lot of recent exploration into providing larger scale retail uses in smaller spaces. The challenge is to provide a balance of pedestrian-friendly walking distances among establishments, while accommodating cars needed for some of the uses, such as major retail or residential parking.
5. Compact development design provides for civic spaces in the mix of uses, fostering a sense of community and providing opportunities for community interaction. Schools, meeting halls, parks, and recreation opportunities are woven into the fabric of the development area. Public waterfront access is often a keystone of these projects.
6. Mixed uses take into account the potential for shared parking, which can greatly reduce the

amount of space needed by various uses. For example, movie theaters can share parking with offices, one using the parking during daytime hours, the other at night. Restaurants can share parking with churches or schools.

7. Design guidelines are critical to maintain compactness, consistency, local and regional identity, and a lively street character. Many compact development regulations have a full set of illustrations accompanying guidelines for building location, parking area design, façade treatments, landscaping, and signage.
8. Specific parking requirements are highly individual to each situation, depending on expected uses and their anticipated markets. Parking requirements should be calculated for each community or district using the attached models as an example only.

RECOMMENDATIONS

1. Use the comprehensive planning process to identify development and redevelopment areas that would benefit from a compact development concept.
2. Look for ways to incorporate a mix of uses into districts that have traditionally been single-use, such as office districts and major retail uses.
3. Develop specific planning concepts for individual districts or neighborhoods that address land use; street hierarchy and parking; retail, office and residential markets; resource protection opportunities; and open space/recreation needs.
4. Develop a street design and parking strategy that incorporates a range of transportation options besides the automobile. Look for opportunities for shared parking. Ensure that adequate parking is provided for the typical condition rather than the peak. Ensure that parking does not compromise pedestrian scale, short walking distances, and access to public transportation.

5. Develop design guidelines that enhance the vibrancy and quality of the development area.

EXAMPLE REGULATIONS FOR GUIDANCE

Urban: Columbus TND ordinance

Small town: Wisconsin ordinance

Rural/village: Mantua Village ordinance

Major retail: South Euclid/University Heights ordinance

The example regulations **should never be adopted without careful local review** to assure that they are adapted to fit the needs of the specific local government. They will need to be adapted for use by the specific type of local government: city, village, township, or county. **The law director/solicitor or county prosecutor should be consulted prior to adoption of any land use controls.** Questions about the models and guidance can be directed to the Ohio Lake Erie Commission.

RESOURCES

Randall Arendt, *Crossroads, Hamlet, Village, Town: Design Characteristics of Traditional Neighborhoods, Old and New*, Report, American Planning Association Planning Advisory Series, No. 487/488, Planners Press, July 1999, ISBN No. 1884829333. Email: bookservice@planning.org

City of Fort Collins - Advance Planning Dept., PO Box 580, Fort Collins, CO 80522-0580; Tel: 970-221-6376

Web: <http://www.ci.fort-collins.co.us/>

1000 Friends of Wisconsin, 16 North Carroll Street, Suite 810, Madison, WI 53703; Tel: 608/259-9045; Web: <http://www.1kfriends.org/>.

City of Columbus, Department of Development, Planning Division, 109 North Front Street, Ground Floor, Columbus, OH 43215-9030; Tel: 614-645-6556; Web site: <http://www.columbusinfobase.org/>

Mantua Village, Village Hall & Mayor's Office,
4736 East High St., Mantua, OH 44255; Tel: 330-
274-3199; Web: <http://mantuavillage.com/>

City of South Euclid, 1349 South Green Rd, South
Euclid, OH 44121; Tel: 216-381-0400; Web: [http://
www.cityofsoutheuclid.com/](http://www.cityofsoutheuclid.com/)

SOURCE WATER PROTECTION

BACKGROUND

This document provides specific information on steps local governments can take to protect their drinking water sources from point and nonpoint source contamination. Drinking water comes from both surface water and ground water. Surface water sources include rivers, lakes, and reservoirs. Ground water is pumped from wells that are drilled into aquifers. State and federal regulations exist to assess and protect drinking water sources.

The Safe Drinking Water Act (SDWA) was initially enacted in 1974 and authorized EPA to regulate contaminants in public drinking water systems. A public water system is defined as a system that serves piped water to at least 25 persons or 15 service connections for at least 60 days per year. Water which serves only one or a few homes are considered private supply and are not regulated at the state or federal level. The SDWA established primary and secondary standards and minimum standards on construction & operation of public water systems. The act has been amended twice, once in 1986 and again in 1996.

The 1986 amendments emphasized the protection of the water bodies being used to supply these systems and required every state to develop a wellhead protection program (WHP). The 1996 amendments expanded the concept of source water protection developed through the WHP Program to all public water systems, including those based on rivers, lakes and reservoirs and also required every state to develop and submit a Source Water Assessment and Protection (SWAP) program to the U.S. EPA and to complete a source water assessment of every public water system.

Following the 1996 amendments to the SDWA, Ohio developed the Source Water Assessment and Protection Program. The SWAP identifies drinking water protection areas for both ground and surface water sources and provides information on how to reduce the potential for contaminating the waters

within those areas. The SWAP is a joint effort between Ohio EPA's Division of Drinking and Ground Water and the Division of Surface Water.

Ohio's Wellhead Protection (WHP) Program was approved by the United States Environmental Protection Agency in May 1992. This program is administered by the Ohio EPA Division of Drinking and Ground Water.

Ohio's WHP was designed to:

1. Protect public drinking water supplies using ground water by determining the area providing water to a well
2. Inventory potential contaminant sources within that area
3. Develop strategies to protect the ground water from those potential contaminant sources.

Assessment and protection typically is a greater effort for public water systems using surface water than for those using ground water. Surface water, such as lakes and streams, are more exposed to contaminants than ground water. Also, a spill into a stream may arrive rapidly to a public water system's intake. As a result, protection areas for public water systems using surface water are completed on a watershed scale which can be extensive. Protection areas for ground water-based systems range in size from an acre or so to over a square mile, depending on the amount of pumping. In Ohio there are about 6,000 ground water systems and about 150 surface water systems. Community public drinking water assessments were to be completed by June 2003. Further information on the status of assessments can be obtained by contacting the appropriate Ohio EPA District Office.

Ohio EPA completes Source Water Assessments on public drinking water sources. As a part of these assessments, the Ohio EPA recommends that communities complete a Source Water Protection Plan. These plans may include:

- Implementation of local regulations,
- A public education program,
- Acquisition of critical wellhead or riparian protection properties,

- Loans and incentive programs to existing industries to minimize potential contaminant sources.

While Ohio EPA has been completing assessments on public water supplies, the agency has limited authority to enforce implementation of recommended protection strategies. The Ohio EPA does require Source Water Protection Plans as a condition of new public system well approvals. Additional incentives and requirements to complete Source Water Protection Plans are not necessary as local governments' incentives to protect their drinking water sources are clear and abundant. Local incentives to protect drinking water are significant and include:

- Provide safe drinking water for residents
- Protection of sources to minimize or eliminate costs associated with investigation, clean up and remediation costs, which may include:
 - o Cost of purchasing a temporary water supply from another community or bottled water
 - o New wellfield development if the affected wells must be abandoned
 - o Real estate devaluation
 - o Decline in consumer confidence in water quality
 - o Potential lawsuits from the consumption of contaminated water
 - o Lost jobs

RECOMMENDATIONS

As detailed above, significant incentives exist for communities to complete Source Water Protection Plans. To further assist communities, the Blue Ribbon panel recommends that communities work with Ohio EPA to complete accurate drinking water assessments and adopt Source Water Protection Plans.

Completion of source water protection plans is not required for every community as many communities do not operate a public water supply. Occasionally the community public water supply will be located outside of the community jurisdiction, thus regulations may not be possible or appropriate, and source water protection plans

may simply emphasize education and prevention. Within a community, numerous non-community public water supplies may exist. Public water supplies include transient and non-transient systems which may be operated by restaurants, schools, hotels, churches etc. Inclusion of these systems may not be appropriate. Based on the considerations above, each Source Water Protection Plan will differ based on:

- Source of drinking water (ground water versus surface water)
- Location and size of protection zones
- Current uses within protection zones
- Current contaminants within protection zones

Communities may decide to include a source water protection regulation as a part of their Source Water Protection Plan. If so, interactions among other regulations must be examined. Areas identified in the source water protection assessment may be similar to those identified in other community regulations such as riparian and wetland setbacks and conservation design subdivisions. For example, if a community's drinking water source is from a lake, reservoir or stream, delineation of protection areas may overlap with those identified in a riparian setback regulation. It may be possible for some communities to augment the riparian setback regulation to include protection of drinking water sources as opposed to drafting a separate regulation. If a community decides to include a source water protection regulation in their Source Water Protection Plan, the Blue Ribbon panel recommends the following items should be included in a source water protection regulation.

- Establish protection zones
- Establish prohibited and allowable uses within zones
- Include requirements for geotechnical and hydrologic analysis to determine potential impacts and spill control procedures, particularly for variances
- Detail enforcement mechanisms
- Require reporting of spills
- Require registration of industries within protection zones

Regulations might also include the following components:

- Delineate multiple protection zones with different uses
- Establish maximum impervious cover allowable
- Establish fees for loan programs (Dayton, OH)

Each community public water systems will have unique concerns, thus protection strategies must be individualized. The Blue Ribbon Panel recommends that communities should submit a Source Water Protection Plan tailored to each community's public water supply.

RESOURCES

Chagrin River Watershed Partners, Inc., P.O. Box 229, Willoughby Hills, OH 44096-0229; Tel: 440-975-3870; Web: <http://www.crwp.org/>

Ohio Environmental Protection Agency, Division of Drinking & Ground Waters

The following link will take you to a page where the Northwest and Northeast Districts are clickable, and then within each, offices may be clicked by county for contact information. Web: <http://www.epa.state.oh.us/ddagw/staff.html>

Ohio Environmental Protection Agency, Division of Surface Water, Source Water Assessment Program, Lazarus Government Center, P. O. Box 1049, Columbus, Ohio 43216-1049; Tel: 614-644-2001; Web: <http://www.epa.state.oh.us/dsw/>

Ohio Department of Natural Resources, Division of Water, 1939 Fountain Square, Columbus, OH 43224; Tel: 614-265-6758; Web: <http://www.ohiodnr.com/water/>

U. S. Geological Survey, Ohio GAP Analysis Project (with Ohio Department of Natural Resources & Ohio State University), & Great Lakes Aquatic GAP Analysis (with USGS, U. S. Department of the Interior, & Great Lakes Science Center), Busch Corporate Park, 6480 Doubletree Ave., Columbus, OH 43229; Tel: 614-430-7752;

For Ohio GAP Analysis, Web: [http://www.gap.uidaho.edu/Bulletins/11/Factsheet2000.asp?StateAbbreviation=oh](http://www.gap.uidaho.edu/Bulletins/11/Factsheet2000.asp?StateAbbreviation=oh;); and Web: <http://oh.water.usgs.gov/ohgap/ohgap.html>; for the Great Lakes Aquatic GAP Analysis, Web: <http://www.glsc.usgs.gov/research/aquaticGAP.asp>

Hamilton to New Baltimore Groundwater Consortium, 5140 River Road, Fairfield, OH 45014; Tel: 513-868-5993; Web: <http://www.gwconsortium.org/>

U.S. Environmental Protection Agency, Source Water Protection

At the first link below, an email can be sent on questions regarding ground water and drinking water; the second link will take you directly to the Source Water Protection Home Page.

Web: <http://www.epa.gov/safewater/drinklink.html>
Web: <http://www.epa.gov/safewater/protect.html>

AGRICULTURAL LANDS PROTECTION

BACKGROUND

Agricultural preservation has been a much-discussed topic in recent years, particularly in communities that are on the edge where rural and urban areas intersect. There is much debate and discussion about the role of agricultural land in our state, regional, and local economies, and the costs and benefits of its preservation.

Sound watershed planning often includes policies related to the conservation of agricultural land due to the contribution it makes in reducing the quantity of storm water entering local waterways. While the quality of water running off agricultural land must be managed, agricultural land preservation, coupled with riparian setbacks and vegetation filters, can play a major role in water quality control in the Lake Erie watershed. Agricultural land preservation can also play a role as part of a balanced comprehensive plan, helping to focus new development on compact growth areas where infrastructure is easily provided and expanded, and where storm water impacts can be better mitigated. Finally, agricultural land preservation can play a role in recharge of groundwater sources, leading to better quality and quantity of drinking water within the watershed.

In recent years, a variety of tools have become available to assist communities in meeting their goals for agricultural land preservation. Agricultural zoning is one such tool, and it is the focus of this zoning-based document. Further information on other tools can be found in the resources list at the end of this section. It should be kept in mind that agricultural zoning is only one of a number of tools that can be used and that the most effective land preservation plans will use several tools working together to achieve preservation goals.

Agricultural zoning is a tool with very specific objectives. It is best used in combination with other tools. Its strengths are that it is inexpensive, flexible, and provides uniform protection to an

entire district. The use of agricultural zoning in a community can provide significant weight to consideration of applications for other programs, such as the Clean Ohio Fund. Agricultural zoning has the potential to reduce conflict through requirements for buffers between agricultural land and notification of right to farm laws. It makes a strong community statement about intent to preserve land, and can be used to help implement policies for balanced growth in a comprehensive plan. And it can be used, as in Transfer of Development Rights programs, as an incentive to landowners to increase focus on development in appropriate places.

Agricultural zoning, however, is not a commonly used tool in Ohio. Its greatest drawback is that it reduces the value of land, which many landowners, particularly those in transition zones at the fringe of urban areas, may find undesirable in the absence of programs which compensate that loss in value. In these locations, landowners have a realistic sense that their property could increase in value with development pressure, and many count on that value for economic stability. In communities with strong farm economies, however, the land is seen as a necessary asset, which could be made less suitable for farm purposes by encroaching development. These communities often can make good use of agricultural zoning to achieve preservation goals.

ISSUES

- Agricultural zoning can only be implemented through the careful development of a strong climate of community support. It is best put in place as a follow-up to a thoroughly discussed comprehensive plan which sets goals for balanced growth, development, and preservation. Ideally, this discussion would take place before development pressure begins to build and would include all key landowners who would be affected by the regulation. A strong community education process, which is ongoing over time, is a critical component of any policies that include agricultural zoning.

- A comprehensive plan can similarly identify target areas for primary and secondary efforts for agricultural land preservation.
- Agricultural zoning codes vary widely in their provisions, which can be put in place to protect the landowner, adjacent landowners, and community members. If the entity enacting such an Agricultural Zoning ordinance is a county or a township, it should clearly state that the ordinance does not attempt to regulate agricultural purposes and is in accordance with R.C. Sections 303.21 or 519.21 as applicable. The following is a list of possible purposes and provisions of an agricultural zoning code:
 - Set the minimum size of a farm parcel as of a certain date (size of parcel varies widely from code to code)
 - Limit nonfarm uses
 - Give notice of right-to-farm laws
 - Separate agricultural uses from incompatible uses
 - Define different types of agricultural uses
 - Prohibit planting adjacent to agricultural fields
 - Create setbacks from agricultural property
 - Provide for homestead retention
 - Permit value added uses, such as in an “agricultural business overlay”
 - Restrict sizes of structures
 - Provide for resource protection in agricultural areas
 - Require conservation plans
- There is considerable debate at the present time about the ability of local governments to regulate the industrial impacts of factory farms and to limit their impacts on surrounding properties. Refer to the resources and your local planning commission for current information.
- Other programs which should be evaluated and implemented along with agricultural zoning include: purchase of development rights programs at the state, federal and local level; current agricultural use valuation (CAUV),

agricultural districts, agricultural service areas, and transfer of development rights. Economic development programs are also beginning to be effective components of a comprehensive agricultural preservation plan.

- As they are often confused, the following table outlines the differences among three of the tools mentioned:

AGRICULTURAL DISTRICTS

- In place in Ohio
- Voluntary
- Landowner applies to the county auditor for inclusion in the district
- District can involve one or more properties
- Provides deferred relief from assessment for water and sewer improvements
- Recapture is provided upon conversion of the land to development, if it occurs

CAUV (current agricultural use valuation)

- In place in Ohio
- Voluntary
- Landowner applies to the county auditor to be given CAUV status
- Property taxes are based on agricultural value of the land, rather than on full development value
- Eligibility is based on parcel size, gross revenues, and soil type
- There is a 3 year recoupment if land is converted to development use

AGRICULTURAL SECURITY AREA

- Currently a proposal in the state legislature, not actively in use in Ohio
- Voluntary
- Intended to protect landowners from local government activities that promote development
- Usually designated in a comprehensive plan with significant support from involved landowners
- Landowner agrees not to develop in exchange for tax considerations
- A minimum acreage is usually required within the security area

RECOMMENDATIONS

Communities should develop a comprehensive plan through a sound citizen participation process that identifies goals for local economic stability, including the farm-based economy. The process should include a thorough public education effort about the various conservation and development tools that are available and their pros and cons. If goals are set that include farmland preservation, a range of tools should be explored and implemented to achieve those goals. Agricultural zoning should be considered with input from landowners and farmers.

EXAMPLE REGULATIONS FOR GUIDANCE

Included in this section are model agricultural regulations from Miami Township in Montgomery County, Ohio. Further information on this example may be obtained from the resources listed below.

The example regulations **should never be adopted without careful local review** to assure that they are adapted to fit the needs of the specific local government. They will need to be adapted for use by the specific type of local government: city, village, township, or county. **The law director/solicitor or county prosecutor should be consulted prior to adoption of any land use controls.** Questions about the models and guidance can be directed to the Ohio Lake Erie Commission.

RESOURCES

Ohio State University Extension, Fact Sheet Series, 700 Ackerman Road, Suite 235, Columbus, OH 43202-1578; Tel; TDD No. 800-589-8292 (Ohio only) or 614-292-1868; Web: <http://ohioline.osu.edu>

American Farmland Trust, 1200 18th St., NW, Suite 800, Washington, D.C. 20036; Tel: 202-331-7300;
Web: <http://www.farmland.org/cgl/index.htm>

American Farmland Trust, Central Great Lakes Region, Ohio Field Office, 50 West Broad Street,

Suite 3250, Columbus, OH 43215; Tel: 614-469-9877;

Ohio Department of Agriculture, 8995 E. Main St., Reynoldsburg, OH 43068; Tel: 614-728-6200; E-mail: agri@odant.agri.state.oh.us

Ohio Office of Farmland Preservation (same address as Ohio Dept. of Agriculture, above); Tel: 614-728-6211

Miami Township, Planning & Zoning, 2700 Lyons Road, Miamisburg, OH 45342; Tel: (937) 433-3426; Web: <http://www.miamitownship.com>

TREE AND WOODLAND PROTECTION (On Development Sites)

BACKGROUND

The protection of trees and woodlands in developing areas is a critical issue from an environmental quality and community character standpoint. Woodland areas perform important water management services by absorbing and filtering runoff before it can impact local waterways. They provide valuable climate control functions by cooling surfaces and water bodies and processing pollutants in the air. They provide habitat for a variety of wildlife and shade to critical creek habitats. And, they enhance property values significantly when compared to open, non-wooded sites.

In spite of these benefits, it is a significant challenge to maintain wooded areas throughout the development process, and so most woodlands are lost to suburbanization. First, our typical spread-out pattern of development breaks up blocks of woodland, leaving only a few scattered trees. Trees which were once part of a woodland community fare very poorly once exposed, and can be expected to die within a few years; so even when a developer of a standard subdivision attempts to protect trees, he or she often fails. Even stand-alone trees in the midst of development are subject to drainage pattern alteration, soil and root compaction, and damage during construction, yielding a very low long-term survival rate. And even when subdivisions are well designed to reserve blocks of wooded areas, little attention is given to evaluating the trees prior to design in order to prioritize areas of varying woodland and habitat value.

Some communities have enacted regulations which attempt to address this problem. This document provides some background information on the different types of woodland and tree protection regulations and recommendations on their use.

ISSUES

- There are four stages of the development process at which tree protection provisions can be applied:
 - (1) Preliminary design – identifying woodland areas on a site or in a community which are of high value for preservation
 - (2) Specific design – identifying specific trees on the site which will be preserved and those which will be removed, and specifying methods for protection of those to remain
 - (3) Construction protection – implementation of the specifications for protection of trees during the construction process
 - (4) Post construction monitoring – ongoing evaluation of tree health after construction and implementation of recommendations for remedial care if necessary
- Most regulations only address the second stage. These regulations often make no distinction between trees of good health and high quality, and those of lower quality. Minimum size is used instead as a blanket requirement for identification of trees on the site. This can lead to extensive documentation of every tree with no evaluation or professional judgment of relative importance of various stands of trees, leaving a review board with little information on which to base decisions.
- Identification and evaluation of valuable tree stands at the preliminary stage assists the community in setting priorities for later development decision-making. This evaluation is best done generally as part of a comprehensive plan. At the site plan level, it can be done by a general review by a qualified professional. Size alone should not be used to determine the value of a tree for preservation.
- Professionals qualified to make tree protection recommendations include registered arborists and certified urban foresters. See model codes for specific qualifications.
- Most regulations require the development of a tree protection plan by a qualified professional.
- Enforcement and monitoring are critical elements of a well-written tree protection code

and provide for protection at stages three and four.

- Many communities have tree protection regulations which apply only to the protection of public trees in road rights of way. This is adequate for older areas, but more must be done in developing areas.
- Woodland protection along riparian areas is often provided by riparian setback regulations. See the section on riparian setbacks for more information.

RECOMMENDATIONS

Communities with developing areas should protect woodlands by both the comprehensive plan and controls during and after the development process. In the comprehensive plan, areas of woodland of likely high value to the community should be identified for further attention at the site design level. A zoning code should be developed which avoids the requirement for every tree on a site to be identified but which requires professional evaluation of blocks of woodland at the preliminary design stage. Then, the code should require a tree protection plan and its approval prior to permit, and assure that the plan is implemented and monitored during construction. Provisions for monitoring for at least a year after construction should be included.

As new areas are annexed to a community, some of the included woodlands may be enrolled in a working forest easement program or the Ohio Forest Tax Law (OAC 1501:3-10-01 to 1501:3-10-07) both of which may require forest management activities. It is recommended that the role and benefits of forest management to healthy forests, water quality, wildlife habitat on properties so enrolled, as well as forests not so enrolled should be recognized. It is further recommended that forest management activities can take place while protecting or enhancing the other benefits derived from forests.

EXAMPLE REGULATIONS FOR GUIDANCE

The code from Olmsted Falls is an example (stages

2-4) of a basic tree protection regulation for developing areas. Second, language developed by The Countryside Program is provided which outlines a possible preliminary woodland evaluation requirement (stage 1).

The example regulations **should never be adopted without careful local review** to assure that they are adapted to fit the needs of the specific local government. They will need to be adapted for use by the specific type of local government: city, village, township, or county. **The law director/solicitor or county prosecutor should be consulted prior to adoption of any land use controls.** Questions about the models and guidance can be directed to the Ohio Lake Erie Commission.

RESOURCES

The Countryside Program, P. O. Box 24825, Lyndhurst, OH 44124; Tel: 216-295-0511; Web: <http://www.countrysideprogram.org/>

Shade Tree Commission, City of Olmsted Falls, 26100 Bagley Road, Olmsted Falls, OH 44138; Tel: 440-238-2691

International Society of Arboriculture, P.O. Box 3129, Champaign, IL 61826, Web: <http://www.isa-arbor.com>

Society of American Foresters, 5400 Grosvenor Lane Bethesda, MD 20814-2198; Tel: 301-897-8720; Web: <http://www.safnet.org>

SCENIC PROTECTION

BACKGROUND

Lake Erie's scenic viewsheds and other open space areas are important to many people in the region. These areas can increase recreational opportunities and ensure economic growth. In a survey completed for the Lake Erie Quality Index, it was found that the most popular coastal activity was scenic enjoyment of the lake. Ninety-nine percent of people surveyed stated that viewing the lake was an important and frequent pastime for them. This type of activity can also lead to increases in tourism. It has been found that nature-based tourism is one of the most promising industries in terms of its potential monetary benefit. This clearly indicates the strong need for preserving viewsheds in order to maintain quality of life in the region from both recreational and economic perspectives. The benefits attained from protecting viewsheds are not limited to only scenic enjoyment and tourism, as they may also increase property values in the area. In addition, protecting viewsheds allows for reductions in the conversion of open space into developed areas. This may aid in improving water quality by maintaining the natural hydrology and flow characteristics of streams, tributaries, and wetlands.

ISSUES

Communities should address the following points when developing scenic protection regulations.

1. Designation of scenic areas is an important component of comprehensive planning and visual assessments. Local comprehensive planning sets the context for designation through the state (e.g., scenic byways).
2. Design guidelines that include specifications for landscape development, signage requirements, and other relevant concerns intended to protect the integrity of the viewshed.
3. Permitted and prohibited uses within the designated scenic area.

4. Width requirements between boundaries of the viewshed are designated that operate similarly to setbacks and should include variance procedures.
5. A reviewing body may need to be established to act as an enforcer of specified guidelines. This may also require the development of penalties for violations.

RECOMMENDATIONS

It is recommended that communities consider scenic issues in comprehensive planning. Designated scenic resource areas should be protected by adopted zoning provisions to address scenic area preservation. Included in such a regulation should be guidelines for design, setbacks, enforcement, and penalties.

EXAMPLE REGULATIONS FOR GUIDANCE

The following model regulations are intended to provide an example of how to establish protection of scenic areas and viewsheds. The first model on visual management corridors is from Wisconsin and is a framework to help direct development and redevelopment activities along highways. The main focus of this model is on design guidelines. Provided within the discussion are several examples of types of development that can be used to maintain environmental sensitivity and aesthetic compatibility. The second model given is a billboard regulation from Missouri. It details permitted and prohibited uses, along with general design and construction standards.

The example regulations **should never be adopted without careful local review** to assure that they are adapted to fit the needs of the specific local government. They will need to be adapted for use by the specific type of local government: city, village, township, or county. **The law director/solicitor or county prosecutor should be consulted prior to adoption of any land use controls.** Questions about the models and guidance can be directed to the Ohio Lake Erie Commission.

RESOURCES

The Countryside Program, P. O. Box 24825,
Lyndhurst, OH 44124; Tel: 216-295-0511; Web:
<http://www.countrysideprogram.org/>

Scenic Missouri, 401 Locust, Suite 302, Columbia,
MO 65201-4262; Tel 573-256-2550; Web: <http://www.scenicmissouri.org/> and <http://www.scenicmissouri.org/bboardordinance2.htm>

Scenic America, 801 Pennsylvania Ave., SE, Suite
300, Washington, DC 20003; Tel: 202-543-6200;
Web: <http://www.scenic.org/>

Scenic Ohio, P. O. Box 5835, Akron, OH 44372;
Tel; 330-865-9715; Web: <http://www.scenicohio.org>

Preserving Endangered Rural Character by
Thomas K. Kindschi, ASLA, and Charles W.
Causier, AICP, ©1999 (Sheboygan County,
Wisconsin), 1999 Planning Conference
Proceedings of the American Planning
Association.

American Planning Association, 1776
Massachusetts Ave., Washington, D.C., 20036;
Tel: 202-872-0611; Web: <http://www.planning.org>

HISTORIC PROTECTION

BACKGROUND

One of the main principles of creating a sustainable watershed is to encourage that all new development and redevelopment initiatives address the need to protect and preserve access to historic, cultural, and scenic resources. This provides a key reason for the creation of a historical protection regulation. The preservation of these areas also fulfills several other balanced growth objectives, including increased economic development. It has been determined that historical designations can increase property values by as much as 20% and often lead to reinvestment in the community. These sites can also increase tourism and employment opportunities by attracting visitors who are interested in exploring Lake Erie's heritage and culture. Another benefit of protection is that by promoting reuse of buildings in historical areas there is less need to build new infrastructure. This helps accomplish the goal of reinvestment in existing core urban areas, transportation, and infrastructure networks to enhance the economic viability of existing communities. The use of historical preservation can also contribute to minimizing the conversion of green space and open spaces by protecting areas from being developed in ways not compatible with balanced growth principles.

ISSUES

Two of the main components of regulations pertaining to historical areas are preservation and compatibility. For this reason, the following issues should be addressed when creating such a regulation.

1. Preservation is best achieved through inventory and classification of existing sites and designation of future ones. Delineation of boundaries is an important component of this process and should include an adequate buffer area surrounding the site to help protect against development activities that may not be compatible with the existing historical use.

2. Design guidelines should be established to preserve the character of the historic site or area. These guidelines should contain provisions for appeal and variance procedures.
3. A commission or body may be needed to develop review criteria and oversee the application process. This body may also act as an enforcer of penalties and to evaluate special cases such as phasing and demolition by neglect.
4. Another commission may be needed to deal with public relations and education for historic sites or to act in the role of a land bank.

RECOMMENDATIONS

It is recommended that communities address historic resources through comprehensive planning following an inventory, evaluation, and prioritization of historic sites. Implementation may include designation of significant sites. Zoning regulations designed to preserve historical sites should address the delineation of historical boundaries, design guidelines, variance procedures, and violation guidelines.

EXAMPLE REGULATIONS FOR GUIDANCE

Listed below are two example historic preservation model regulations. The first of these was developed for establishing historic districts in Pennsylvania. It provides guidelines for the granting or refusal of permits for the erection, alteration, restoration, reconstruction, demolition, or razing of any building within these districts. The second model code was developed by the Indiana Alliance of Historic District Commissions. This regulation establishes procedures for the creation of historic preservation commissions, visual compatibility, appeal provisions, and enforcement of adopted regulations.

The example regulations **should never be adopted without careful local review** to assure that they are adapted to fit the needs of the specific local government. They will need to be adapted for use by the specific type of local government: city,

village, township, or county. **The law director/solicitor or county prosecutor should be consulted prior to adoption of any land use controls.** Questions about the models and guidance can be directed to the Ohio Lake Erie Commission.

A Model Historic District Regulation for Local Governments in Pennsylvania- Pennsylvania Historic and Museum Commission Bureau for Historic Preservation.

http://www.phmc.state.pa.us/bhp/Community/model_ordinance.pdf

Model Ordinance for Historic Preservation.
Indiana Alliance of Historic District Commissions.
<http://pages.prodigy.net/hlfinro/Model%20Ordinance.doc>

RESOURCES

The Countryside Program, P. O. Box24825,
Lyndhurst, OH 44124; Tel: 216-295-0511; Web:
<http://www.countrysideprogram.org/>

Historic Landmarks Foundation of Indiana, State
Headquarters, Indianapolis, 340 West Michigan
Street, Indianapolis, IN 46202; Tel: 317-639-4534
or 800-450-4534; Web:
info@historiclandmarks.org.

Pennsylvania Historical and Museum
Commission, 300 North Street, Harrisburg, PA
17120; Tel: 717-787-0771 (Lefevre) (717) 787-
3362; Web: <http://www.phmc.state.pa.us/bhp/Community/>

STEEP SLOPES PROTECTION

BACKGROUND

Riparian areas are naturally vegetated lands along rivers and streams. By slowing, storing, and gradually releasing storm flows, they prevent soil erosion, decrease the extent and duration of flooding, and filter and settle out pollutants. This process aids in protecting the ecological functioning of a watercourse. In areas where steep riparian slopes (>12%) are present, the ability to control storm flows is greatly diminished, increasing the potential for flood damage and deterioration in the watercourse's ecological health.

ISSUES

The impact of developing steep riparian slopes can often be significant. The main concern is that flood control in these areas is reduced because the developed land (1) provides less infiltration than a riparian zone, (2) increases flow velocity, and (3) may substantially alter the direction of flow. Following heavy rainfall, these three factors may all contribute to causing the soil to become unstable and erosion and/or slumping to occur. Impacts from these processes can seriously affect the surrounding ecosystem and human communities. Ecologically, one problem that may occur is that habitat in the stream receiving the runoff is destroyed by increases in sedimentation from larger and higher velocity storm flows. There is also the potential for water pollution to occur in these situations due to a lack of adequate filtering and settling out in the riparian areas. Human impacts from developed steep slopes include the aforementioned water pollution problems, and also economic costs. Because of the potential for slumping to occur in these areas, extra structural measures must be incorporated into buildings in order to minimize damage.

RECOMMENDATIONS

The development of areas containing steep slopes should generally be discouraged due to the issues given previously. In situations where this is not feasible, development should be done with the

intent of minimizing soil disturbances, maximizing retention of trees and vegetation, and complementing steep slope character. In addition, the following three options can assist in establishing riparian setback widths that provide the same watercourse protection as flatter areas. Option 1 is the least recommended choice because it focuses mainly on structural integrity and not the functioning of the riparian area and watercourse. The recommendations given under this option may also not be appropriate for all areas of the watershed. Option 2 only focuses on the degree of sloping and does not take other important factors that play a role in riparian effectiveness into consideration. Option 3 provides the best alternative, as it based on site-specific conditions and recommendations.

Option 1: Permit Based Hillside Protection Zones

Regulations are passed that limit development activity in areas with slopes between 15% and 30%. In order for permits to be given for disturbances in these areas, additional information including topographic maps, grading and site plans, geotechnical reports, details on future and present site stability, and an erosion and sediment control plan must be submitted for review. Following this review, the Building Inspector issues permits based on conditions set forth by the Planning Commission. Some activities such as driveways on slopes greater than 10%, embankments above 33%, and excavations above 40% are prohibited, as are projects that may endanger public health, safety, or welfare.

Option 2: Expansion of Riparian Setback for % Slope

For many communities in the nation, minimum widths are usually established for riparian setbacks. In areas in which steep slopes exist within the designated riparian setbacks, these widths are expanded. The expansions to the original widths are as follows:

- Add 10 feet for slopes between 15-17%

- Add 30 feet for slopes between 18-20%
- Add 50 feet for slopes between 21-23%
- Add 60 feet for slopes between 24-25%

Option 3: Expansion of Riparian Setbacks Based on Analysis of Slope, Slope Length, Soil Erodibility and Existing Vegetation

Riparian setbacks are adjusted where steep slopes, 10% or greater, exist within 500 feet of a watercourse. In these areas, a plan is required that details information regarding the degree of sloping, the slope length, soil erodibility, vegetative cover, and sediment delivery. For each of these evaluation criteria, a score is given as seen in the following table. For areas with a score of 35 or greater, no development is allowed to take place. Scores of 25 and 30 require additional protective measures in order to be developed. Areas with a score of 20 or less can be developed with standard protective measures.

Table 1. Evaluation Criteria for Steep Slopes and Erodible Soils

Factors	Scores		
	High (10 points)	Medium (5 points)	Low (0 points)
Slope (S)	$S \geq 20\%$	$10\% < S < 20\%$	$S \leq 10\%$
Slope Length	$SL \geq 200$ ft	50 ft $< SL < 200$ ft	$SL \leq 50$ ft
Soil Erodibility (K)	$K \geq 0.32$	$0.24 < k < 0.32$	$K < 0.24$
Vegetative Cover	Bare soil, fallow land, crops, active pasture in poor condition, orchard tree farm in poor condition	Active pasture in fair condition, brush-weeds in poor condition, orchard tree farm in fair condition, woods in poor condition	Active pasture in good condition, undisturbed meadow, brush weeds in fair condition, orchard tree farm in good condition, woods in fair condition
Sediment Delivery (distance from down slope limit of disturbance to outer edge of wetlands or top of stream bank)	Adjacent to watercourses or wetlands (< 100 ft buffer)	Adjacent to watercourses or wetlands (100 ft – 300 ft buffer)	Not adjacent to watercourses or wetlands (> 300 ft buffer)

EXAMPLE REGULATIONS FOR GUIDANCE

The following model regulations provide examples of the options given above. The ordinance from Baltimore, Maryland, is an example of option 3. The Chagrin Falls Ordinance and Bath Township Zoning Resolution are two examples from Ohio that illustrate option 1.

The example regulations and guidance documents **should never be adopted without careful local review** to assure that they are adapted to fit the needs of the specific local government. They will need to be adapted for use by specific type of local government: city, village, township or county. **The law director/solicitor or county prosecutor should be consulted prior to adoption of any land use controls.** Questions about the models and guidance can be directed to the Ohio Lake Erie Commission.

Baltimore County, Maryland: Protection of Water Quality, Streams, Wetlands and Floodplains. <http://www.co.ba.md.us/Agencies/environment/waterqua.html>. Steep slopes guidelines are contained in Sec. 14-341. “Design Standards for

Forest Buffers and Building Setbacks.”

Chagrin Falls, Ohio: Hillside Protection Ordinance <http://www.conwaygreene.com/Chagrin.htm>
Regulation is listed under: Part Eleven- Planning and Zoning Code, Title Seven- Subdivision Control, Chapter 1165- Hillside Protection

Bath Township, Ohio: Steep Slopes Regulations <http://www.bathtownship.org/Zoning%20Resolution/article4.pdf>

RESOURCES

The Countryside Program, P. O. Box 24825,
Lyndhurst, OH 44124; Tel: 216-295-0511; Web:
<http://www.countrysideprogram.org/>

Chagrin Falls Village Hall, 21 West Washington
St., Chagrin Falls, OH 44022; Tel: 440-247-5050;
Web: <http://www.chagrin-falls.org>

Department of Environmental Protection and
Resource Management, Baltimore County,
Maryland, Courts Building, Mailstop 3403, 401
Bosley Avenue, Room 416, Towson, MD 21204;
Tel: 410-887-3733; Web: [http://www.co.ba.md.us/
Agencies/environment/waterqua.html](http://www.co.ba.md.us/Agencies/environment/waterqua.html)

Your Local Natural Resources Conservation
Service Office

Your Local County Soil and Water Conservation
District

Your Local County Planning Commission

TRANSFER OF DEVELOPMENT RIGHTS

BACKGROUND

As discussed earlier, compact development focused on areas of existing infrastructure is the most desirable from a watershed protection standpoint. Compact development allows for reduced impervious surface, more efficient management of storm water, a wider range of transportation options, more organized management of wastewater, and the continued strength of existing cities and towns. In rural areas, however, the standard character of new development is just the opposite: low density, decentralized residential and commercial uses extending out into the countryside.

One of the reasons for the expansion of low density development in rural areas is the need for rural landowners to develop their properties to raise funds for retirement, health care, or other family needs. Tools have been developed in other states that allow rural landowners the flexibility to choose to develop or to sell the development rights on their land to another landowner who can apply them to a more compact development proposal. For example, a landowner with 100 acres in a 2-acre zoning district would be permitted 40 or 50 homes to be built on his property. Instead of selling land for development, this “sending” landowner could sell the 50 development rights to another landowner, perhaps in a village, with 100 acres, thus allowing the “receiving” landowner the right to build 50 additional homes on the receiving property. The sending landowner places a conservation easement on the sending property and retains ownership and the ability to farm or use the property for other open space oriented uses. Usually, a few development rights are retained by the sending landowner to permit homes for his children or others.

This approach is known as “transfer of development rights”(TDR). If applied properly in Ohio, it could allow development in rural areas to be transferred to more compact development areas in urban areas, thereby encouraging balanced

growth and retaining the quality of life and watershed in the countryside, while enhancing the small town feel and vibrancy of the village site. Legislation in other states has included, among others, components such as:

- Program should be voluntary
- Program must be tied to comprehensive planning, ideally countywide/regionwide watershed planning
- Programs should provide for receiving zones in areas with supporting infrastructure
- Programs should allow for increased density in receiving areas
- Programs should provide for township tax base stability in sending zones
- Programs should provide for density transfer across jurisdictional boundaries, and should not require contiguous boundaries of participating communities
- Communities and counties should be enabled to establish banks to facilitate transfer of development rights
- Participating jurisdictions should be enabled to provide incentives such as density bonuses and streamlined review processes

The strengths of TDR as a tool for Ohio are first of all that a TDR program can be set up as entirely voluntary, with incentives to encourage participation without impinging on private property rights. TDR is typically done on the private real estate market, requiring very little in the way of public regulation and revenue. The transfer of development rights can be coupled with a variety of financing mechanisms in the development area, such as Tax Increment Financing, to provide additional incentives. Tax incentives for townships, including CEDA agreements, can be accommodated. Finally, transfer of development rights as a tool particularly suits the township-village relationship which is so prevalent throughout the state.

ISSUES

1. TDR is currently being done in Ohio on a case-by-case private basis as arranged by

individual landowners and accommodated through variances by the local community. However, a well-done TDR program will be based on a comprehensive plan, with designated sending and receiving zones, and will require the cooperation of two or more jurisdictions. While charter cities and villages can currently embark on such a program, townships and counties, both critical partners, are not specifically authorized under Ohio law. Statewide enabling legislation is needed to make this tool widely available in the form of quality programs.

2. A well-done comprehensive plan will include the designation of desired sending and receiving zones. The number of development rights is based on the underlying existing zoning in these zones. In voluntary programs, incentives are often offered as increased development rights when they are transferred. For example, our landowner in the above illustration might be permitted to build 40 homes on 100 acres, but would be allowed to sell 50 development rights if participating in a TDR program. The addition of 10 rights would be an inducement to sell through a TDR program, rather than build on the site.
3. While sometimes landowners are able to locate an interested receiving party at the time they want to sell their development rights, the entire process is facilitated through the establishment of a community, county, or regional bank. Similar to a wetlands mitigation bank, this mechanism allows a sending landowner to sell development rights at his convenience, and an interested receiving landowner can purchase rights at the time of his choosing.
4. Public resistance to new TDR programs can be traced to three main difficulties: (1) general public resistance to new programs, especially due to a lack of understanding of the voluntary nature of the program; (2) resistance of the public in receiving areas to

more compact new development with higher densities; and (3) resistance of the sending area communities to “giving up” development that might generate future taxes. To offset these concerns, new TDR programs MUST: (1) incorporate sound education programs with real life examples to help the public understand the benefits and principles of the program; (2) focus on high quality design and the associated benefits of compact development in villages and cities; and (3) provide tax-sharing components that ensure sending communities will continue to receive future tax revenues.

5. Developer and landowner resistance can also be traced to a concern about decreased revenues and increased regulatory requirements. Especially in voluntary programs, it is critical that incentives such as streamlined review processes and density bonuses be incorporated to ensure that the program will be used.

RECOMMENDATIONS

1. Legislation is needed at the Ohio State level to ensure that strong programs can be established across jurisdictions.
2. Communities should conduct a comprehensive planning process which examines the potential for use of TDR as a development management tool. This planning process should incorporate surrounding jurisdictions and might be best done at the county or regional level. Through this process, sending and receiving zones should be established as well as policies for education, tax sharing, and design in compact areas, base densities in sending and receiving zones, density incentives, and review process incentives.
3. Communities should incorporate community education and communication in every step of the process, including meetings with affected landowners and developers, as well

as surrounding property owners.

4. Receiving communities should develop design guidelines for compact development that incorporate increased density from TDR in a high quality fashion.

EXAMPLE REGULATIONS FOR GUIDANCE

Transfer of development rights, while potentially a highly useful tool in watershed planning and development, usually requires no special zoning language. The comprehensive planning process will need to examine closely the underlying zoning in both sending and receiving zones to ensure that the desired effect in transfer of rights will be achieved. Provisions for density, including incentives such as density bonuses, can be incorporated into existing zoning. Review processes can be streamlined through zoning as well as subdivision regulations and administrative review policy.

RESOURCES

Rick Preutz, *Saved by Development, Preserving Environmental Areas, Farmland and Historic Landmarks with Transfer of Development Rights*, Arje Press, Burbank, California, 1997.

The Countryside Program, P. O. Box 24825, Lyndhurst, OH 44124; Tel: 216-295-0511; Web: <http://www.countrysideprogram.org/>

Department of Agricultural, Environmental, and Development Economics, Ohio State University, 336 Agricultural Administration Bldg., 2120 Fyffe Rd., Columbus, OH 43210-1067; Tel: 614-688-4907

BROWNFIELDS REDEVELOPMENT

BACKGROUND

In recent years, the need to redevelop underused or abandoned former industrial properties, known as brownfields, has been much discussed, particularly in urban communities. The lack of redevelopment of these lands plays a negative role in our state, regional and local economies. As regions fail to redevelop and reuse land in urban areas, industries and developers develop more land in rural and suburban areas thus contributing to the loss of critical green space, agricultural lands, and to the economic and population decline in older existing urban areas. These losses, as well as the failure to remediate former industrial properties which may leach contaminants into Lake Erie and the surrounding waters, play a role in the water quality of Lake Erie and the environmental conditions in the Lake Erie watershed.

The Ohio legislature and Ohio EPA have attempted to address this problem by enacting and implementing a program to encourage cleanup and reuse of brownfields sites. The program allows the volunteer (owner, developer, municipality, etc.) that is doing the remediation to clean up a property, under the supervision of an environmental professional certified by the Ohio EPA. When the “certified professional” certifies that the site meets the state’s standards for its intended future use, they will issue a “No Further Action” letter for Ohio EPA review. The volunteer may also seek a “covenant not to sue” from Ohio EPA promising that the state will not pursue legal action regarding the cleanup performed at the site. This covenant provides state civil liability protection for the environmental cleanup but does not protect the volunteer from liability from third-parties, or the U.S. EPA. (Ohio EPA has negotiated a process with U.S. EPA, known as the VAP MOA-Track, through which a volunteer may obtain protection from the U.S. EPA as well as by participating in a variation of the cleanup program that requires direct supervision by Ohio EPA and includes opportunities for public participation in the process.).

ISSUES

- There are several definitions of the term “brownfield”. According to the Small Business Liability Relief and Brownfields Revitalization Act, “brownfield” means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. According to McKinney’s Environmental Science, brownfields are old, run-down, and abandoned parts of a city or town. A Brownfield is commonly defined as an “abandoned, idled, or underutilized property where redevelopment is in part inhibited by actual or perceived environmental contamination.”
- This lack of consistency makes it difficult for communities to identify sites and decide what to do with them.
- There are many programs and initiatives, at the federal, state, and local levels, designed to encourage the redevelopment of brownfield land. These initiatives tend primarily to address the liability concerns and the financial costs associated with redevelopment of contaminated properties. They provide methods and incentives for cleanup, such as reduced cleanup standards, and some limited protection from future liability. Some initiatives focus on providing funding for cleanups through loans, grants, tax increment financing, and other methods.
- However, brownfields are not being redeveloped at the rates necessary to maintain the economic and environmental health of the region, in part because existing programs do not address many important barriers to their redevelopment. For example, existing initiatives do not always acknowledge that many potential brownfield redevelopers are seeking large sites on which to develop industrial and commercial parks whereas most brownfields are located on small, sometimes oddly configured sites. The programs do not address other reasons brownfields may not be chosen for redevelopment, such as tax incentives in less developed areas, local crime

rates, convenience of the site to managers' residences, etc.

- Because of some of these problems, existing programs have had difficulty matching potential users to appropriate sites.
- Although redeveloping blighted, contaminated sites could bring new development and improved aesthetics to the area, citizen groups are sometimes reluctant to get involved. This is partly because there are at least two strongly held views regarding the cleanup programs. First, some feel that the surrounding neighborhood needs to encourage redevelopment of brownfields to improve the area for those who live there. Others feel that the laws that encourage redevelopment by allowing cleanup at risk based standards are less protective of public health. The tension between these positions can lead to inaction.
- Even when existing programs help lead to the redevelopment of a brownfield, there is some concern about the ability of local governments to enforce the use associated with the cleanup standard the site attained. Some question the actual and legal longevity of deed restrictions because of potential difficulty with enforcement.
- For many reasons, including decentralization of redevelopment efforts, lack of definitional clarity, and lack of funding, communities have not developed or maintained useable brownfields inventories. For example, in Cuyahoga County, there is an inventory of contaminated lots which is searchable for a number of specific brownfields characteristics but not for all brownfield sites in an area.
- Despite the attempts by Ohio EPA and federal and local governments to create some comfort for business and banks to get involved in redevelopment, many still fear the cleanup costs and liability associated with getting involved in contaminated properties.

RECOMMENDATIONS

- Improve systems for identification of sites and create a useful inventory of sites and site characteristics

- Use planning to identify areas and sites for redevelopment
- Facilitate the matching of sites to potential users
- Change statutes and programs to address the non-environmental barriers to brownfield redevelopment that are not addressed in existing programs
- Educate the public, businesses, and redevelopers about the benefits and opportunities that lie with existing programs

EXAMPLE REGULATIONS FOR GUIDANCE

We have found no model regulations specifically on brownfields redevelopment issues at the local level. Most law and regulation in this area is at the state and federal level. More information on brownfields issues in general and on state and federal brownfields redevelopment initiatives may be obtained from the resources listed below.

RESOURCES

US EPA Brownfields website, www.epa.gov/brownfields

- EPA's Brownfields Economic Redevelopment Initiative is designed to empower states, communities, and other stakeholders in economic redevelopment to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields. A brownfield is a site, or portion thereof, that has actual or perceived contamination and an active potential for redevelopment or reuse. EPA is funding: assessment demonstration pilot programs (each funded up to \$200,000 over two years) to assess brownfields sites and to test cleanup and redevelopment models; job training pilot programs (each funded up to \$200,000 over two years), to provide training for residents of communities affected by brownfields to facilitate cleanup of brownfields sites and prepare trainees for future employment in the environmental field; and, cleanup revolving loan fund programs (each funded up to \$500,000 over five years) to

capitalize funds to make loans for the environmental cleanup of brownfields. These pilot programs are intended to provide EPA, states, tribes, municipalities, and communities with useful information and strategies as they continue to seek new methods to promote a unified approach to site assessment, environmental cleanup, and redevelopment.

- Through its, Brownfields Assessment, Cleanup & RLF Pilots/Grants, US EPA has funded many projects in Ohio, including projects in Akron, Cleveland, Columbus, Dayton, Elyria, Fostoria, Girard, Hamilton, Lancaster, Lima, Lincoln Heights, Mahoning County, Mansfield, Reading, Sebring, Springfield, Toledo, and Youngstown. EPA includes in its “success stories” projects in Cuyahoga County and Lima, Ohio.

US EPA Region 5 website www.epa.gov/R5Brownfields

- Includes contact information for officials involved in brownfields redevelopment throughout the region, including both local and rural areas.

Ohio EPA Voluntary Action Program(<http://web.epa.state.oh.us/derr/volunt/volunt.html>)

- This program was designed to provide a way to investigate possible contamination at a site, clean it up if necessary under the supervision of a certified environmental professional, and receive a promise from the State of Ohio that no more cleanup is needed. The promise, called a “covenant not to sue,” protects the participant from liability to the State of Ohio, but it does not protect against liability to third parties or US EPA. Ohio EPA has negotiated a Memorandum of Agreement with US EPA to provide a process by which a participant may derive some protection from federal liability by following a cleanup process overseen directly by Ohio EPA personnel and includes opportunities for public review of and comment on documents regarding the site.

Clean Ohio Program <http://www.odod.state.oh.us/ud/CleanOhioFund.htm>

- The Clean Ohio Revitalization Fund and the Clean Ohio Assistance Fund, are financial tools which were developed to provide funding for brownfield clean up activities which are a key component in brownfield redevelopment. Brownfield redevelopment allows a community to reclaim and improve its lands, making previously developed property viable for new development.
- The Clean Ohio Revitalization fund and the Clean Ohio Assistance Fund are a \$200 million dollar initiative approved by Ohio voters as part of the \$400 million Clean Ohio Fund. The continuation of this program would be subject to reauthorization in 2005. The Ohio Department of Development, through its Office of Urban Development, implements the Clean Ohio Revitalization and Assistance Funds in consultation with the Ohio Environmental Protection Agency. Contact: Office of Urban Development, Ohio Department of Development, 77 South High Street, 26th Floor, Columbus, Ohio 43216-1001, 614-995-2292 oud@odod.state.oh.us

Cuyahoga County

- The Cuyahoga County Planning Commission developed its Brownfields GIS (geographic information system) as a project through its Brownfields Pilot Demonstration project. The system, begun in 1995 and updated in its current status as an internet application, was designed to promote both economic development of industrial property and to provide information to the public on the status of industrial and commercial sites. The site provides an array of environmental data which may be useful in transaction screening analyses and Phase I assessments. Economic factors and certain infrastructure attributes can also be screened through radial searches featuring demographics, census blocks, travel time, roadways, utility, and rail lines.
- The District One Public Works Integrating Committee (DOPWIC) oversees implementation of the State Capital

Improvement Program (Issue 2) in Cuyahoga County. In addition to providing financing for capital infrastructure projects, the DOPWIC evaluates and selects brownfields redevelopment projects for financial assistance.

Ohio Environmental Protection Agency, Division of Emergency and Remedial Response, 122 S. Front St., Columbus, OH 43215; Tel: 614-644-2924; Web: <http://www.epa.state.oh.us/derr/SABR/Brown/brown.html>

Brownfields One Stop Shop (BOSS), Great Lakes Environmental Finance Center, Cleveland State University, 1717 Euclid Avenue, Cleveland, OH 45551; Tel: 330-528-3237; Web: www.glefc.org

ACCESS MANAGEMENT

BACKGROUND

Access management regulations control the number and spacing of driveways, traffic signals, medians, and intersections. These regulations can control allowable turning movements to and from driveways and streets, provide for cross access between parcels and require adequate space for on-site vehicular circulation without causing overflow onto surrounding major highways. The purpose of these regulations is to reduce vehicular conflicts and accidents and maintain the capacity of the major highways. Poorly spaced driveways can reduce roadway capacity by over 50%, and it has been estimated that left turns at driveways account for 60% of accidents on many urban roadways.

Local officials need to rank each roadway based on its importance to mobility and access. The level of access control increases with the importance of the roadway.

The Ohio Department of Transportation (ODOT) adopted access management regulations for their highways in 1998. Those regulations are spelled out in detail in the ODOT Access Management Manual. A very short synopsis of those regulations is shown in the table below:

OHIO STATE HIGHWAY ACCESS CATEGORY		
CAT	TRAFFIC	DESIGN STANDARDS
I	High speed, high volume, long distance	Multi-lane; median; access at interchange; no direct
II	Relatively high speed, high volume, long distance through traffic for interstate, interregional, intercity and some intracity travel. Typically includes Expressways	Access at interchange or public street intersection; no direct private access allowed unless property retains deeded rights and then for RT.* LT** may be allowed if (1) the access does not have potential for

CAT	TRAFFIC	DESIGN STANDARDS
III	Moderate to high speeds, volumes, and distances for interregional, intercity, and intracity travel. Typically includes rural arterials, high-speed urban arterials, and some urban collectors.	No direct private access if property has other reasonable alternative access or opportunity to obtain such access, when allowed, generally for RT only. LT may be allowed if (1) the LT does not have the potential for signal, and if (2) the Department determines that the LT does not cause congestion or safety problems or lower the level of service, and (3) alternatives to the LT would cause roadway and intersection operation and safety problems, and (4) the LT does not interfere with operation of street system or access to.
IV	Balanced service to access and mobility at moderate to high speeds and volumes in rural areas for moderate to short distances and low	One direct access allowed per parcel; additional access may be allowed if the Department determines it meets access safety, design, and operational standards.
V	Low to moderate volumes, speed, and distance serving	All turning movements allowed subject only to safety considerations.

Often the only access restrictions placed on properties outside commercial areas and high density residential areas is to limit the number of driveways so that they are separated by a safe stopping distance for the posted speed limit. The driveway spacing for category IV highways maintained by ODOT is 250 feet for a section of roadway with a 35 miles per hour speed limit, 325 feet for 40 mph, 495 feet for 45mph, 550 feet for 50mph, and 605 feet for 55 mph.

Counties and townships were given authority to adopt access management regulations on county and township maintained roads by Substitute House Bill 366, which became effective October 24, 2002. Counties have one year to begin the process to implement access management regulations on both county and township-

maintained roads. After that time townships could adopt regulations for their roads if the county did not take action. Cities and villages already had authority under home rule.

Sometimes these driveway spacing requirements can require frontages larger than what might be required by subdivision regulations or zoning requirements depending on where existing driveways are on adjacent properties. Furthermore, limited sight distances near hillcrests or along horizontal curves might restrict driveway and street locations.

Access management can discourage strip development, flag lots, or minor subdivisions (lot splits) and promote clustering of land uses into unified developments with shared access. In addition to improving safety and mobility properly implemented access management can discourage wasteful land use practices that can be aesthetically displeasing and environmentally harmful.

ISSUES

- County access management regulations must, to the extent possible, be consistent with county zoning regulations and must be coordinated with any existing township zoning regulations.
- Township access management regulations must, to the extent possible, be consistent with any county or township zoning regulations that are in effect in the township.
- County or township regulations apply to only county- and township-maintained roads in the unincorporated part of the townships. They either apply to any state routes inside or outside corporations nor to any streets or highways inside corporations.
- Non-urban townships may not adopt township access management regulations if the county has adopted access management regulations. Essentially county regulations take precedence over non-urban township access management regulations.

- Urban township access management regulations take precedence over county access management regulations on urban township maintained roads but not on county-maintained roads in that township.
- The best opportunity to establish the highest level of access management is when new roads are constructed or before development occurs.

RECOMMENDATIONS

A comprehensive countywide approach to access management is strongly recommended. Land use, zoning subdivision, and commercial regulations should address the following issues to support access management.

1. Building set back requirements to preserve right-of-way for future road improvements and achieve adequate sight distances.
2. Joint easement requirements to allow internal traffic circulation and encourage shared access between adjoining commercial frontage.
3. Minimum frontage requirements for conforming lots to support desirable access spacing.
4. Subdivision development along an arterial to provide access to all lots by an internal road system.
5. Regulate minor land divisions (lot splits) to support access standards.
6. Development review to provide an opportunity to ensure proper access and street layout in relation to existing and planned roadways.
7. Private road regulations and restrictions on flag lots or privately owned access easements to address substandard private roads and related land division problems.

RESOURCES

“Access Management Manual,” Ohio Department of Transportation, Office of Urban & Corridor Planning.

Web: <http://www.dot.state.oh.us/planning/>

“Access Management,” County Advisory Bulletin
No.2002-06 September 2002, County
Commissioners Association of Ohio. Web: [http://
www.ccao.org/newsletter/cab200206](http://www.ccao.org/newsletter/cab200206).

County Engineers Association of Ohio, 37 West
Broad Street, Suite 660, Columbus Ohio 43215-
4132, Tel: (614) 221-0707; Web: [http://
www.ceao.org](http://www.ceao.org).

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Appendix B

Executive summary

Balanced Growth is a strategy to protect and restore Lake Erie and its watersheds to assure long-term economic competitiveness, ecological health, and quality of life.

This report recommends a voluntary, incentive-based program for balanced growth in the Ohio Lake Erie basin. It calls for the creation of a planning framework that includes:

- A new focus on land use and development planning in the major river tributary watersheds of Lake Erie. The goal is to begin to link land-use planning to the health of watersheds.
- The creation of Watershed Planning Partnerships composed of local governments, planning agencies, nonprofit organizations, and other parties in each watershed. Participation in these partnerships would be voluntary but encouraged by incentives.
- The locally determined designation of Priority Conservation Areas and Priority Development Areas in each watershed.
- The development of suggested model regulations to help promote best local land use practices that minimize impacts on water quality.
- The alignment of state policies, incentives, and other resources to support watershed planning and implementation.

This framework follows from the recommendations and the “10 Guiding Principles” of the *Lake Erie Protection & Restoration Plan*. And it builds on many existing watershed initiatives that have received broad community support and will allow the state to promote many other important objectives related to economic competitiveness and quality of life.

Rationale for balanced growth and this initiative

- Lake Erie is Ohio’s greatest natural resource and provides tremendous natural and economic benefits to all Ohioans. It truly is a resource of global significance. As part of the Great Lakes, it is part of an interconnected, natural system with one-fifth of the world’s surface freshwater and many rare ecosystems. These lakes have also been the source of one of the world’s leading economies.
- The citizens of Ohio are stewards of this valuable resource. They must work together in their own communities, and in cooperation with other communities throughout the Great Lakes basin, to protect the health of the lake and its ability to sustain economic prosperity in the 21st century.
- Recognizing the critical link between land use and water quality, the *Lake Erie Protection and Restoration Plan* called for a Balanced Growth Task Force to recommend ways that the State of Ohio can promote sustainable patterns of development.

Planning by watersheds

- The major river watersheds of Ohio’s Lake Erie Basin are appropriate geographic areas for effective land-use planning that addresses growth and development issues transcending county, municipal, and township boundaries, as well as local issues.
- The concept of watershed-scale planning is becoming an accepted approach in Ohio. Indeed, noteworthy collaborations are occurring in watersheds throughout the Lake Erie watershed and the rest of the state. Many local government activities already address watershed issues.

Watershed Balanced Growth Plans

- A Watershed Balanced Growth Plan is a framework for coordinated, local decision-making about how growth and conservation should be promoted by local and state policies and investments in the context of watersheds.

- The process should be locally driven and voluntary. The state should offer incentives for participation.
- The main feature of watershed balanced growth plans should be the designation of Priority Conservation Areas (PCAs) and Priority Development Areas (PDAs). Watershed plans are not comprehensive plans.
- PCAs are locally designated areas for protection and restoration. They may be critically important ecological, recreational, heritage, agricultural, and public access areas that are significant for their contribution to Lake Erie water quality and general quality of life.
- PDAs are locally designated areas where growth and/or redevelopment is to be especially encouraged in order to maximize development potential, maximize the efficient use of infrastructure, promote the revitalization of existing cities and towns, and contribute to the restoration of Lake Erie.

Watershed Planning Partnerships

- Watershed Balanced Growth Plans should be developed by local Watershed Planning Partnerships.
- The partnerships should be a local effort that, depending on the watershed, can be organized in flexible ways to respond to local conditions, existing planning structures, and available resources. Their work should be open, inclusive, and focused on consensus-building. Public education and involvement will be important parts of the process.
- The partnerships can be composed of representatives of local governments, planning agencies, councils of governments, special purpose authorities (such as metropolitan planning organizations, sewer districts, or transit authorities), or non-governmental organizations (such as watershed organizations, chambers of commerce, or land trusts).
- To assist with coordination and provide state-level input, state agency representatives should participate in the planning process as advisors.

- For staff support, the partnerships can contract with existing planning agencies, universities, nonprofit organizations, or other private consultants.
- To assure the implementation of plans, the partnerships must demonstrate the support of local governments with land-use planning and implementation authority.

Local government roles

- Since local governments can influence land use in Ohio, it is vital that they be strongly involved in the Watershed Planning Partnerships. Local governments are townships, villages, cities, and counties.
- Local governments will be encouraged to participate in the watershed planning process and help identify priority conservation and development areas.
- Once a Watershed Balanced Growth plan has been approved, local governments in the watershed will be encouraged to: (a) update and amend their existing land-use plans to reflect the watershed plan and establish consistency; (b) if no comprehensive or master land-use plans exist, develop such plans to the extent necessary to support implementation of the watershed plan; (c) adopt local ordinances/resolutions based on the guidance for applicable best practices and models recommended by the Lake Erie Balanced Growth Task Force; (d) direct local capital expenditures to support the Priority Conservation Areas and Priority Development Areas in the watershed plan, as opportunities arise during the expansions or maintenance of existing infrastructure.

State roles

- The task force recommends that the State of Ohio support both the development of watershed-based plans for balanced growth and the implementation of such plans by special strategic initiatives and in the conduct of its regular activities.
- State support for balanced growth planning should include information, guidance, financial

assistance, technical assistance, and public education. The Lake Erie Commission should begin the balanced growth planning process by promoting pilot planning projects in at least two watersheds

- To support implementation of watershed plans, the state should develop a Lake Erie Balanced Growth Strategy that should describe how state programs, policies, and incentives will be aligned with local efforts to focus development efforts in PDAs and promote successful conservation efforts in PCAs.
- The state also should keep up to date the suggested best practices and model ordinances/resolutions for minimizing development impacts on water quality that are contained in the accompanying Balanced Growth document entitled *Best Local Land Use Practices*.

Measuring success

Taking into account the unique character of different watersheds, the Lake Erie Commission should measure the progress of the Balanced Growth Program with the following three sets of indicators: programmatic successes, measures of actual changes in land-use, and actual improvements in water quality and habitat in the watershed.

Recommended implementation steps

In summary, the Lake Erie Balanced Growth Task Force recommends a number of specific implementation steps by the state (see Section 8 for details):

- Establish a Balanced Growth technical advisory committee to the Lake Erie Commission.
- Develop an Ohio Lake Erie Balanced Growth Strategy that describes the incentives and policies with which state agencies will promote balanced growth in the context of locally determined plans.

- Develop a public outreach and education program to explain the benefits of watershed-based planning and balanced growth.
- Initiate and support Balanced Growth Plan development, starting with at least two pilot projects.
- Monitor progress and adjust the program as needed.

Overall, balanced growth is in the long-term interest of Ohio. By linking land-use planning with the health of watersheds, the state will also be promoting other important objectives related to economic competitiveness and quality of life, including:

Sustaining natural systems in the Lake Erie Basin, as well as restoring what has been degraded.

- Providing consistency and predictability for development decisions, thus enabling more cost-effective development.
- Encouraging the reuse and redevelopment of urban lands.
- Maximizing the efficient utilization of infrastructure.
- Conserving farmland.
- Providing open space and recreational opportunities.
- Promoting compact development patterns that build on the unique qualities of communities.
- Helping local governments plan for economic development opportunities and streamline decision-making processes.
- Promoting greater transportation choices for communities.
- Providing consistency and predictability for development decisions, thus enabling more cost-effective development.

These recommendations will help move Ohio in a new direction in its thinking about growth and development. They will: raise the stewardship of Lake Erie to a higher level; promote new forms of regional cooperation; and help everyone in the state envision how, in the 21st century, the restoration of natural resources will be an essential part of Ohio's progress

Appendix C

Public Comments and Responses

The recommendations were publicized through news releases to the public, media, GLIN Announce, commission databases, list serves and at three public open house meetings (Bay Village, Toledo and Ashtabula) for the Task Force members to explain the proposals and solicit comments. A public comment period was also held from December 29, 2003 - February 18, 2004. Written comments have been received from 30 separate commentators.

All of the written comments have been summarized and are available for consideration during implementation. Editorial comments were considered and acted upon as appropriate. General comments of support have been summarized but did not entail a response. Changes to the documents were considered by the panel chair and workgroup chairs. These changes are underlined in the “Response/Recommendation” column below.

Section	Comments	Response/Recommendations
Storm Water Management	Page 10: “Setbacks not buffers” The title implies an explanation why buffer terminology is not preferred, but none is given.	The following statement has been added: <u>The term buffers has historically been used to describe agricultural areas not used for row crops and does not have a direct link to local zoning terminology and approach. Buffers, for example, tends to imply a prohibition on a range of uses and does not imply flexibility for non-conforming uses as well as variances to ensure lots remain buildable. By contrast, the term setback is more precise than buffers to explain that the riparian and wetland setback model regulations are simply requiring that structures and a limited number of uses be kept back a certain distance from watercourses and wetlands and that these model ordinances contain non-conforming use and variance sections.</u>
Storm Water Management	Page 13: The list of resources did not contain ODNR Floodplain Management.	<u>Ohio Department of Natural Resources, Division of Water, Floodplain Management Program</u> http://ohiodnr.com/water/floodpln/ was added to the list.

Meadow Protection	Pages 24-27: The list of noxious weeds has particular application to agricultural settings where production is of primary importance. Additional invasive species may need referenced which can be obtained from the ODNR-Division of Natural Areas and Preserves.	A change has been made to final sentence of Meadow Protection section which now reads: Refer to your local SWCD for a list of <u>invasive species and weeds of local concern.</u> <u>The ODNR Division of Natural Areas and Preserves can also provide a list of invasive species.</u>
Agricultural Protection	There was no statement defining the relationship between the provisions of a agricultural zoning code and regulation of agricultural purposes.	The following language was added prior to the list of agricultural uses/activities: <u>If the entity enacting such an Agricultural Zoning ordinance is a county or a township, it should clearly state that the ordinance does not attempt to regulate agricultural purposes and is in accordance with R.C. Sections 303.21 or 519.21 as applicable.</u>
Agricultural Protection	The Lancaster County, PA model regulation is similar to the Miami Township, OH regulation.	The Lancaster County, PA model was removed from the list of example regulations.
Agricultural Protection	The Miami Township model agricultural regulations was wrongly identified as being from Greene County instead of Montgomery County.	The correct resource information has now been used: Miami Township, Planning & Zoning, 2700 Lyons Road, Miamisburg, OH 45342; Tel: (937) 433-3426; Web: http://www.miamitownship.com
Woodland Protection	The woodland protection section should also address trees.	The intention of this section is to encourage protection for trees and woodlands on development sites. <u>Trees and</u> was added prior to the first two instances of “Woodland” to clarify.
Transfer of Development Rights	The list of essential components for TDR legislation under the Recommendations reads as if they are a required and exhaustive list. Needs to be changed so that it is only a list of possible components.	The list of components, along with the statement <u>Legislation in other states has included, among others, components such as:</u> was moved to the background section.
Brownfields	In the background section, the definition of volunteer was unclear.	Added the statement: <u>The volunteer doesn't have to be the responsible party, can be developer, municipality, etc.</u>
Brownfields	The Clean Ohio Program was not included in the list of resources.	A description and contact information for the Clean Ohio Program was added to the list of resources.

Brownfields	In the background section, the use of the term “urban sprawl” was perceived as being too negative and should be replaced with a clearer statement of the problem.	The statement was changed to <u>As regions fail to redevelop and reuse land in urban areas, industries and developers develop more land in rural and suburban areas, thus contributing both to the loss of critical green space and agricultural lands, and to economic and population decline in older existing urban areas.</u>
Brownfields	In the background section, what an Ohio EPA issuance of a “covenant not to sue” meant was unclear.	Changed existing statement to read: <u>The volunteer may also seek a “covenant not to sue” from Ohio EPA promising that the state will not pursue legal action regarding the cleanup performed at the site. This covenant provides state civil liability protection for the environmental cleanup, but does not protect the volunteer from liability from third-parties or the U.S. EPA.</u>
Brownfields	Clarify the term VAP MOA-Track	Added statement that the process through which a volunteer may obtain protection from the U.S. EPA as well as by participating in a variation of the cleanup program that requires direct supervision by Ohio EPA and includes opportunities for public participation in the process is <u>known as the VAP MOA-Track.</u>
Brownfields	In the discussion of opposing viewpoints about brownfield redevelopment in the issues section, it was noted that there are perceived concerns with the use of risk-based standards	The wording of the fourth sentence under the sixth bullet was changed to “Others feel that the laws that encourage redevelopment by allowing cleanup at risk based standards are less protective of public health.”
Brownfields	In the discussion of opposing viewpoints about brownfield redevelopment in the issues section, the inclusion of “In addition, many brownfields are located in areas in which residents tend to be somewhat politically inactive.” was perceived as being too negative and not universally correct.	This sentence was removed.