

3 COMPATIBLE ZONING AND SUBDIVISION REGULATIONS



A conservation subdivision.

Background

Local government in Indiana has a variety of effective tools for managing “smart growth” while protecting and preserving environmentally sensitive areas. Planning, zoning and subdivision control authority in Indiana is vested in local government. Home rule authority is also available to facilitate implementation of regulatory systems designed to effectively control soil erosion and sedimentation, protect wetlands and facilitate stormwater management. Creation of special function districts, such as “conservancy districts” can help oversee preservation and protection activities.

The comprehensive planning process is used to identify and plan land use patterns in a general fashion. Before implementing zoning and subdivision regulations, Indiana communities must engage in the comprehensive planning process. In adopting its comprehensive plan, an Indiana community can identify preservation of its natural resources as a priority.

Zoning and subdivision regulations provide for specific and detailed control of the type and intensity of land use within carefully defined districts or zones and the orderly division of land into smaller lots. By using various zoning and subdivision regulatory techniques, an Indiana community is able to implement a strategy such as density techniques to emphasize and prioritize conservation of environmentally sensitive areas. Under classic “Euclidean” zoning techniques, the entire community is divided into geographically defined zoning districts and the zoning ordinance identifies what kind of land use is to be allowed in each zone or district. This technique geographically separates non-compatible land uses such as industrial versus residential. Local zoning can also identify environmentally sensitive areas such as wetlands. The regulation of new subdivision development can also be a tool to facilitate preservation of the area’s natural resources by regulating stormwater runoff and soil erosion, the placement of public rights-of-way, and the siting of home locations. The developer can be required to set aside portions of the property for public use such as walking trails and open space requirements. Communities also have available a system of imposing “impact fees” to help defray or mitigate the capital costs of infrastructure

required to serve a new subdivision development.

Indiana communities should assure that their staff members are familiar with the requirements outlined in the zoning and subdivision codes. This will help insure that these regulations are being utilized and enforced on a regular basis. Full utilization of home rule authority and the creation of special function districts add additional available tools for the effective protection and preservation of environmental sensitive areas.

Recommended Approaches

Zoning

By utilizing its zoning authority, an Indiana community can effectively implement strategies for environmental protection. Pursuant to its local zoning authority, a community separates and controls land use by identifying what kind of activities and uses are allowed in each geographically defined zone or district. Typically, residential, industrial and commercial uses will be separated as incompatible. Within each zone, restrictions will regulate use, density and dimension of activity.

Regulating uses within defined geographical areas is an effective tool for preserving natural areas and providing a buffer between sensitive natural areas and incompatible activity. Most local zoning ordinances require specific amounts of open space in each zoning category. In residentially zoned areas, the open space requirement is typically formulated as a function of lot size and set-back requirements or maximums for building site coverage. Zoning also can be used simply to prohibit incompatible land uses in or near natural areas. The zoning ordinance can identify compatible uses such as public or private open space or low density or clustered residential development near or immediately adjacent to natural areas. Limiting and restricting the density of construction can be accomplished through zoning restrictions and subdivision development regulation. This is done by encouraging higher

development densities in areas with few natural resources and lower densities in more sensitive areas. By controlling the density of development in and near natural areas, waterways and wildlife habitat, a local government can use its zoning regulations to reduce the impact of development on these environmentally sensitive areas. Subdivision control regulations can also utilize a clustering technique by allowing planned unit developments (PUDs) which cluster land use in high density areas so as to preserve open space on the undeveloped portion of the site. By clustering a residential development, a community can reduce infrastructure costs by concentrating service areas for utilities, roads and public services such as police, fire and schools.

Performance Zoning

Performance zoning is an alternative to traditional zoning and regulates development impacts by incorporating into the community's subdivision development regulations environmental protection standards that must be met if development is to proceed. Minimum habitat protection and restoration requirements, limits on tree and vegetation removal, erosion control requirements, prohibitions on building on flood plains, and wetland preservation can all be accomplished through such performance standards. A developer can be encouraged to use innovative and alternative design techniques so as to accomplish the natural preservation goals and meet the performance standards.



Cluster Development/ Conservation Development

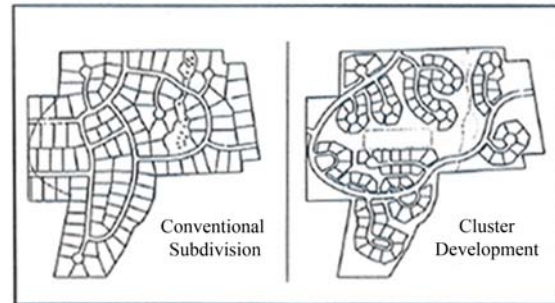
Traditional subdivision development regulations establish minimum lot sizes and encourage division of a site into large individually owned lots. By utilization of the PUD technique, land development can encourage the clustering of building sites by downsizing the minimum lot size requirements and bringing the developed portion of the property closer together. This facilitates greater use of open space while maintaining the same gross density of the site. This technique can be particularly useful when unique or specific natural features of the development site need to be protected. Wetlands, wildlife habitats, flood plains, and groundwater recharge zones can all be effectively isolated from development by clustering.

Cluster development is an important tool to achieve the objectives of a conservation development. Conservation developments are tailored to the characteristics of the site and are intended to achieve several basic environmental objectives:

- Minimize the overall disturbance of the site to prevent soil erosion and compaction during construction;
- Facilitate the protection of sensitive habitats, including stream corridors, wetlands and woodlands;
- Allow for the protection of open space and for greenway linkages to adjacent sites; and
- Facilitate the use of natural drainage and landscaping approaches, and reduce the impervious areas of a development, thereby minimizing off-site stormwater impacts.

In utilizing the clustering technique to establish development standards which are compatible with the preservation of natural resources, a community's zoning requirements must clearly provide guidance for developers. That guidance begins with a clear and definitive statement of public policy in the community's comprehensive master plan. That policy statement should emphasize the community's commitment to

short and long term preservation of its natural resources. The conservation objectives and priorities need to be identified with specificity in the zoning ordinance. The community's subdivision development and control regulations should also contain specific cluster design guidelines. This would include direction on the amount of open space to be preserved on a site. Preferably, a community should specify a maximum, rather than minimum, lot size within each residentially zoned designation.



Cluster Development (Lacy, 1990).

Planned Unit Development (PUD)

Another approach to enable conservation development without actually specifying requirements is through utilization of the Planned Unit Development technique. Local communities in Indiana have the ability to supplement their zoning requirements by allowing PUDs. A PUD facilitates the mixing and matching of land uses within the same geographical area. It facilitates the combination of compatible land uses while preserving the community's ability to regulate incompatible combinations. A properly written PUD ordinance can allow developers the flexibility to utilize cluster developments and other alternative approaches that may otherwise conflict with the standard zoning requirements.

In addition to providing obvious environmental benefits, cluster and conservation developments can provide substantial savings to developers on infrastructure costs, thereby improving the affordability of housing.

Once the environmentally sensitive areas have been protected, management of that important

resource becomes critical. Local communities can facilitate proper resource management by utilizing the subdivision control and development authority to require creation of property owner associations as conditions precedent to subdivision approval. Use of special function districts or park departments can also facilitate management of natural resources. Private corporations such as land conservancies can also assume management responsibilities.

Setbacks, Buffers, and Open Space Requirements

Building setbacks have traditionally been used by communities to regulate the location of a building in reference to the property lines. Building setbacks can also be effective tools in minimizing the impact of a development on natural resources. Setback requirements can be used to prevent development from occurring close to environmentally sensitive areas such as wetlands, flood plains, and wildlife habitats. This technique protects the natural areas by establishing buffers between intensive use and areas in need of protection.

Open space requirements are another form of setback that require developers to leave a specific percentage of a site undeveloped. Local communities may require that the undeveloped land be protected via dedication to the government or remain in the control of the homeowner or property association created as part of the development process. Environmentally sensitive areas can also be conveyed to local conservation organizations for preservation and management.

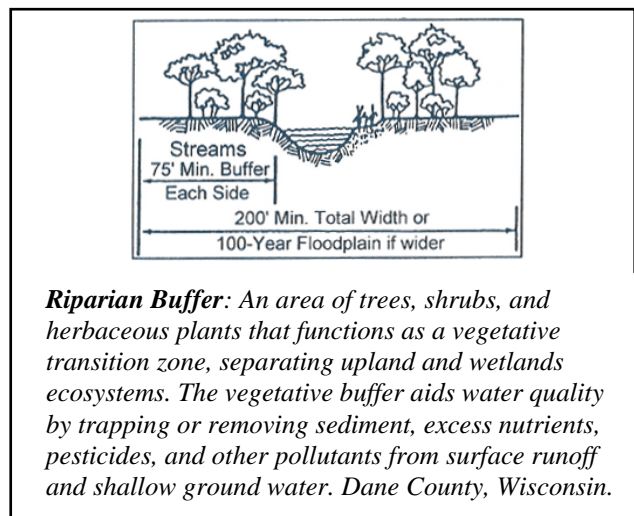
Indiana has also adopted the Uniform Conservation Easement Act which provides another tool for preservation of environmentally sensitive areas. A conservation easement is a non-possessory interest in real estate imposing limitations or affirmative obligations upon the underlying owner of the property to do any one of the following:

- Retaining or protecting natural, scenic, or open space values of real estate;

- Assuring its availability for agricultural, forest, recreational, or open space use;
- Protecting natural resources; and
- Maintaining or enhancing air or water quality.

The Indiana Uniform Conservation Easement Act provides a tax incentive by requiring that the underlying real estate subject to the conservation easement be assessed and taxed as a conservation area.

Buffers and green space areas are another means of separating incompatible land uses. Like setbacks, buffers require a minimum amount of preserved land to protect natural areas from disturbances such as buildings or parking lots. Buffers should remain in a natural state or otherwise conform to specific standards contained in the community's zoning ordinance or subdivision control regulations. Buffers and green space requirements can be used by a community to protect a stream or flood plain by requiring that certain specific and identified vegetation be planted to form the barrier. Stream banks can be protected by utilization of buffer zones with the added requirement that deep rooted vegetation be planted to avoid excessive soil erosion and the resulting sedimentation problem in the stream.

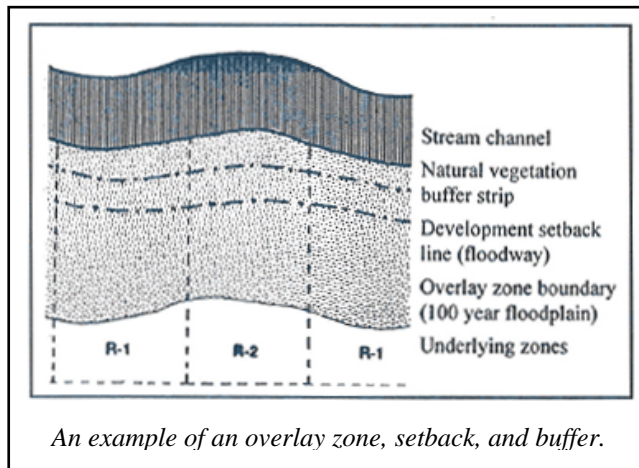


Riparian Buffer: An area of trees, shrubs, and herbaceous plants that functions as a vegetative transition zone, separating upland and wetlands ecosystems. The vegetative buffer aids water quality by trapping or removing sediment, excess nutrients, pesticides, and other pollutants from surface runoff and shallow ground water. Dane County, Wisconsin.

technique overlays criteria for development that are in addition to the standards and criteria of the base zoning district to which it is applied. The purpose of overlay zoning is to identify

specific land use activities which will be prohibited by the overlay zone while still allowed by the underlying zoning district. If a particular development falls within both of the established zones, then it must conform to regulations of both zones. One of the advantages of overlay zones is that they can be added to the existing zoning, and do not require rezoning of the entire community to accomplish preservation objectives.

Overlay zoning can be used by a local community to identify and protect flood plains and wetland areas. The overlay district superimposes protection criteria by adding supplemental standards concerning buffers, set backs, landscaping, and the prohibition of development within certain geographical areas. The overlay zoning can also establish guidelines for construction and even impose special design review requirements if building is to occur in the protected area. Other types of overlay zones could be used to protect trees and vegetation, establish percentage requirements for open space preservation, and protect wildlife habitat.



An example of an overlay zone, setback, and buffer.

Subdivision Regulation and Review

Most comprehensive plans contain policy statements concerning the regulation of the subdivision of land for development. Communities normally implement that policy by adopting comprehensive subdivision development regulations. These regulations provide another tool for protecting

environmentally sensitive areas. The regulations set guidelines for developers to follow for public infrastructure, services and improvements such as stormwater management, erosion control, and open space protection. Some controls that can be included in zoning regulations, such as buffers and minimum lot sizes, can also be addressed in subdivision control regulations. Effective subdivision development regulation can also include requiring a developer to post a performance bond to assure that the developer complies with the subdivision regulations. These regulations can also be used to implement a strategy of open space set aside for environmentally sensitive areas. This is a particularly valuable tool for protecting natural areas, especially if the subdivision development ordinance includes criteria stating a preference for setting aside natural areas that occur on the site. Provisions still need to be made for ownership of the open space and management of the area after the development is completed.

Design Requirements

Communities may adopt specific design guidelines for subdivision or residential development that require builders to protect natural resources. Design requirements can be used to encourage or require builders to use native vegetation for landscaping and to implement stormwater drainage designs that minimize off-site environmental impacts. Specific design requirements could include minimizing the presence of impervious surfaces such as concrete roadways and parking lots while maximizing areas of water absorption such as green space and native vegetation.

Home Rule Authority

Communities are granted extensive regulatory authority under the Indiana Home Rule Statute. Independent of planning, zoning and subdivision control authority, a local community can utilize its home rule authority to implement numerous environmental protection ordinances. Such ordinances can include wetland and flood plain protection, erosion control, and preservation of wildlife habitat. The policy underlying home

rule authority is to grant to the home rule community all the powers needed for effective operation of government as to local affairs. Unless preempted by state regulation, a local community can use its home rule authority to implement a wide range of comprehensive regulations. Home rule authority also allows for enforcement of local regulations by authorizing local communities to impose financial penalties for ordinance violations.

Special Function Districts

Indiana law provides for the creation of a number of special function districts designed to implement environmental protection activities and preserve environmentally sensitive areas. Special function districts have the advantage if focusing solely and exclusively on a limited number of environmentally sensitive issues, whereby all of the district's resources can be focused on a few specific issues. The staff of special function districts can develop unique expertise and devise innovative solutions to environmental protection problems. Special function districts can serve as regulators of land use activity and can also own and manage environmentally sensitive areas.

Two such special function districts would be the conservancy district and the stormwater management district. Conservancy districts can be created for any of the following:

- Flood prevention and control;
- Improving drainage;
- Providing for irrigation;
- Providing water supply;
- Providing for sanitary sewer;
- Developing forest, wildlife areas, parks and recreational facilities;
- Preventing the loss of top soil from injurious water erosion;
- Storage of water for augmentation of stream flow.

A conservancy district can implement and enforce local ordinances designed to protect wetlands, flood plains, and wildlife habitat. Conservancy district regulations can also control the loss of top soil by mandating effective soil

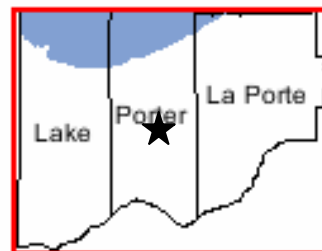
erosion control techniques at construction sites within the district. A conservancy district can also acquire and manage environmentally sensitive areas. It also has the power to impose a real estate property tax and can finance its operations through the issuance of bonds.

Local communities can also create a stormwater management district operated by a department of stormwater management. The district is empowered to install, maintain, and operate a stormwater collection and disposal system within the district. A stormwater management district identifies drainage problems and is empowered to acquire, construct, install, operate, and maintain facilities and land for stormwater management systems. The district becomes a special taxing district with the power to impose a real estate property tax and finance its operations through the issuance of bonds.



Local Examples

❖ *City of Valparaiso*



The City of Valparaiso has adopted a comprehensive tree and landscaping ordinance intended to safeguard the ecological environment within the city by minimizing the clearing and disturbing of land; preserving existing natural vegetation; and promoting planting of trees and shrubbery in the community. The ordinance emphasizes the preservation of existing trees and shrubbery as a means of enhancing the beauty of the community and protecting the environment. Developers are required to present landscaping plans to a site review committee and the Valparaiso Park Department horticulturist. The landscape plans must show that the developer intends to work with the natural features of the property thereby minimizing the development's impact on the environment.

The landscape plan must include techniques that will be used during construction to preserve existing trees and natural vegetation. Minimal root damage is encouraged by requiring tunneling versus open trenching at construction sites. Soil grading around preserved trees is also discouraged. No construction activity is allowed within one linear foot for every inch of tree diameter.

If a tree is removed as part of the development process, it must be replaced by the planting of another tree on a one-for-one basis. Developers are given an option of making a \$200 per tree payment in lieu of planting a new tree. Payment is made to the "tree fund" administered by the Valparaiso Department of Parks and Recreation. The fund is used to implement tree planting projects throughout the community.

Contact the City of Valparaiso Department of Planning: (219) 462-1161.

❖ *Porter County*

The newly adopted Porter County Comprehensive Land Use Plan identifies preservation of natural resources as a "guiding principle and objective" in the planning process.

The plan is designed to insure that Porter County preserves, maintains and enhances environmental resources and features including the dunes, wetlands, woodlands, wildlife habitats, groundwater recharge areas, prime soils, river and stream corridors, and watersheds. In areas that have been designated by the plan as prime farmland, the county commits to protecting the character provided by prime farmland and support an agriculturally based life style. Specifically, the plan identifies the following activities:

- Limit types and intensities of development around environmentally sensitive areas;
- Protect prime farmland and other agricultural businesses and resources to support continuing agricultural production;
- Preserve and protect prime farmland and lands containing significant natural resources;
- Preserve scenic road, river and stream corridors;
- Protect the natural resources in Porter County by supporting sound conservation practices; and
- Require measures to reduce pollution.

The plan further identifies potential future land use techniques including the creation of a "conservation development" zoning category. This land use category would require that developers identify and protect Porter County's significant environmental features through the use of innovative subdivision design, which preserves open space, environmental features, and the general character of the area. The land use plan recommends that the county adopt incentives to encourage the clustering of homes and the preservation of open space within the "conservation development" use category. It emphasizes the possibility of mandating clustering or conservation subdivisions in especially sensitive areas. Allowing greater density is recommended as a means of incentive for use of conservation design or cluster development in order to protect wetland and wildlife habitat, agriculture, flood plains and other similar designations.

Contact the Porter County Planning
Commission: (219)465-3540.

❖ *Valparaiso Lakes Area Conservancy District*

The Valparaiso Lakes Area Conservancy District (the District) is a special function unit specifically empowered to enforce environmentally related ordinances including soil erosion and sedimentation control and stormwater protection. Two such ordinances provide examples of environmental protection through zoning and development regulations.

➤ **Soil Erosion and Sedimentation Control Ordinance**

The Valparaiso Lakes Area Conservancy District has implemented guidelines providing for the control of soil erosion and sedimentation from areas undergoing development. The ordinance is a comprehensive effort to regulate activities impacting on soil erosion and sedimentation in the lakes area north of Valparaiso. The ordinance requires developers to submit a soil erosion and sedimentation plan and secure a permit prior to starting construction. The guidelines require that natural vegetation should be retained and protected wherever possible. The objective of the ordinance is to control soil erosion and sedimentation caused by development activities and to facilitate measures to control erosion and sedimentation so as to prevent topsoil from leaving construction sites.

The ordinance requires developers to utilize silt fences and hay bales at construction sites. Developers are also required to install sediment basins and silt traps prior to commencing construction. The goal is to minimize the loss of

topsoil during the construction phase of site development. The ordinance requires that the developer minimize the time during which the soil is disturbed or, as an alternative, temporarily seed the disrupted area.

The soil erosion and sedimentation control plan requires the developers to avoid areas of steep slopes where high cuts and fills may be required and to develop property along natural contours as closely as possible. The ordinance encourages preservation of naturally occurring vegetation with substantial root systems as a means of facilitating minimization of soil erosion.

During construction, the District monitors site development and enforces the soil erosion and sedimentation control ordinance. After major storm events, onsite inspection is made and the District works with the developer to insure the integrity of the soil erosion and sedimentation measures.

➤ **Stormwater—Illicit Discharge Ordinance**

The Valparaiso Lakes Area Conservancy District created an ordinance to protect and enhance the water quality of the watercourses and water bodies in the District by reducing pollutants in stormwater discharges and regulating non-stormwater discharges to the storm drainage system. The ordinance prohibits any person from discharging pollutants or polluted waters into the municipal separate storm sewer system or any watercourse. Pollutants include but are not limited to those discharges contributing to a violation of applicable water quality standards. In addition, the ordinance prohibits any person from intentionally dumping liquid or solid pollutants on the ground.

The ordinance protects the municipal separate storm sewer system directly by prohibiting construction, use, maintenance, or continued existence of illicit connections. The ordinance also forbids connecting or using lines conveying sewage to the municipal separate storm sewer system.

Indirectly, the ordinance protects the municipal separate storm sewer system by forbidding deposition of materials into storm drains, gutters and other watercourses in a manner or location that threatens to discharge pollutants into these conduits. Similarly, stockpiles used in construction and landscaping must be properly stored to prevent discharge. Materials no longer contained in a pipe, tank or other container are considered to be threatened discharges.

Specifically, the ordinance requires that:

- watercourse property owners or lessees keep and maintain the watercourse within the property free of trash, debris, and excessive vegetation;
- landscape irrigation discharge must be kept below a concentrated flow into the municipal separate storm sewer system;
- paved surfaces must be cleaned to prevent buildup and discharge of pollutants;
- mobile cleaning operations may not discharge to the municipal separate storm sewer system;
- leaks or spills related to equipment maintenance in an outdoor uncovered area must be contained;
- vehicles, machinery and equipment must be maintained to reduce leaking fluids;
- pet waste must be disposed of as solid waste or sanitary sewage; and
- pesticides, herbicides and fertilizers must be stored and applied properly.

Any person with information of illegal discharges or pollutants discharging into stormwater must notify the District. Upon notice of a violation or potential violation of the ordinance, the District staff may enter the site to investigate. When there is immediate danger to public health or safety, the District may take all measures necessary to abate the violation. For illegal pollutant discharges, the District may require remediation and monitoring to determine compliance.

Contact the Valparaiso Lakes Area Conservancy District: (219) 464-3770.

❖ Watershed Management Plan for Lake, Porter, and LaPorte Counties

The Northwestern Indiana Regional Planning Commission developed a framework for water quality improvements and planning within a tri-county area. The regional approach focuses on two large northern Indiana watersheds (Little Calumet-Galien basin and Kankakee River Basin) instead of artificial political boundaries. The Plan was developed by an advisory group representing federal, state, and local agencies, industry, agricultural and environmental groups, and citizens building on existing regional initiatives and resources.

The Plan addressed problems and specified goals, objectives, and actions needed to achieve improved water quality. The advisory group focused on three categories of high priority issues: urban and rural areas, agricultural sources and hydromodifications.

The problems in urban and rural areas are air pollution from increased traffic, soil erosion and increased runoff from development, and decreased water quantity from loss of undeveloped land for water infiltration. The Plan lists specific zoning and regulatory activities to mitigate these problems, such as:

- revise ordinances and provide assistance to local zoning and planning commissions on Low Impact Development practices;
- implement regional planning/zoning to direct development away from environmentally sensitive areas;
- create new ordinances and technical assistance for septic system management;

- implement ordinances governing site-specific septic system sizing and siting requirements and;
- distribute examples of natural resource protection ordinances.

The problems in agricultural areas are erosion of soils from agricultural practices and animal grazing in sensitive areas, water contamination from confined animal facility wastewater overflow, and impairment of aquatic environments from fertilizer and pesticide runoff. The activities for mitigation revolve largely around technical assistance and outreach on agricultural management practices.

The problems inherent in hydromodification are transporting more sediment downstream in the channelized Kankakee River, diversion of water from the watershed resulting from the altered flow of the Calumet River, erosion of stream beds from development activities and dams, changes in water temperature from dams, and loss of biologically diverse wetland communities from degraded water quality in reduced wetland areas. The Plan recommends developing ordinances requiring wetland protection and mitigation.

The Plan provides a watershed planning and management framework to enhance, restore and protect water quality in northwestern Indiana. The Plan recommendations will be implemented by the Watershed Advisory Group, regional authorities, industries, municipalities and governmental agencies and will be reviewed every five years. The Plan can be amended as needed to accommodate changes in law or new information.

Contact the Northwestern Indiana Regional Planning Commission: (219) 763-6060.

Suggested Reading

Local Ordinances: A User's Guide. Terrene Institute. 1995

Opportunities for Water Resource Protection in Local Plans, Ordinances, and Programs: A Workbook for Local Governments. Southeast Michigan Council of Governments. 2002

Chicago Wilderness Magazine-Online
<http://www.chicagowildernessmag.org/>

Local Greenprinting for Growth: Using Land Conservation to Guide Growth and Preserve the Character of Our Communities. The Trust for Public Lands. 2002

The Cluster Subdivision: A Cost-Effective Approach. Welford Sanders. 1980. Planning Advisory Service Report No. 356. Chicago. American Planning Association.

Conservation Designs for Subdivisions: A Practical Guide for Creating Open Space Networks. Randall Arendt. 1996. Island Press.

Environmental Considerations in Comprehensive Planning -- A Manual for Local Officials. Northeastern Illinois Planning Commission. 1994. Chicago.

An Examination of Market Appreciation for Clustered Housing with Permanently-Protected Open Space. J. Lacy. 1990. Center for Rural Massachusetts, University of Massachusetts.

Habitat Protection Planning: Where the Wild Things Are. Christopher Duerksen, et al. 1997. Planning Advisory Service Report No. 470/1. Chicago. American Planning Association.

Home Ownership -- Keeping the Dream Alive. Attainable Housing Task Group and DuPage County Development Department. 1993.

Model Stream and Wetland Protection Ordinance. Northeastern Illinois Planning Commission. 1988. Chicago.

Preparing a Conventional Zoning Ordinance.
Charles A. Lerable. 1995. Planning Advisory
Service Report No. 460. Chicago: American
Planning Association.

Rural by Design. Randall Arendt, et al. 1994.
Chicago. Planner's Press.

Subdivision Design in Flood Hazard Areas.
Marya Morris. 1997. Planning Advisory
Service Report No. 473. Chicago: American
Planning Association.

Unified Development Ordinance. Lake County.
In progress.

Village of Long Grove Code of Regulations.
Village of Long Grove. 1991.

*Zoning Handbook for Municipal Officials with
Suggested Forms.* Illinois Municipal League.