

A Land Planning Primer for Lake Superior Basin Communities



A Community Based Planning Process

Geographic Information and Decision Support Tools for Land Use Planning
in the Minnesota Lake Superior Coastal Boundary
Natural Resources Research Institute, University of Minnesota, Duluth
Center for Rural Design, University of Minnesota, Twin Cities
2003

This primer was prepared by the Center for Rural Design, University of Minnesota/St. Paul, in cooperation with the Natural Resources Research Institute (NRRI), Center for Water and the Environment, University of Minnesota/Duluth. Primary funding was provided by the Lake Superior Decision Support Project, which in turn was funded by the U.S. Environmental Protection Agency Region 5 Coastal Environmental Management Grant Program through the Minnesota Department of Natural Resources. Additional funding was provided through Minnesota's Lake Superior Coastal Program.

Study Team Members/Roles:

University of Minnesota, Center for Rural Design

Planning strategy, presentation and documentation

Thora Cartlidge, Landscape Architect and Planner

Linda Lawson, Architecture Graduate Student

Melissa Wyatt, Landscape Architect

Natural Resources Research Institute

Concept development, maps

Lucinda Johnson, Landscape Ecologist

George Host, Landscape Ecologist

Amy Trauger, Geographer

Gerald Sjerven, Geographic Information Systems Specialist

Acknowledgments:

Special thanks to Sandy Schultz and David Lee, both with the Bayfield County Land Records Office, for their advice and support. Thanks also to Mike Kinnick with the Northwest Regional Planning Commission, Cindy Hagley of U of M Extension/Seagrant, Nancy Larson from the Lake Superior Binational Program, and Mike Koutnik from ESRI for their review and comments. Chris Faust generously gave permission for the use of several photos in this report, and we thank him for his assistance.

December 2002, final report to Lake Superior Decision Support project, revised June 2003 for MN Coastal Program.

University of Minnesota- Center for Rural Design

3 Coffey Hall

1420 Eckles Avenue

St. Paul, MN 55108

phone: 612.624.9273 fax: 612.624.1704

www.ruraldesign.umn.edu

*Cover Photos: Lake Superior shoreline, EPA photo.
North Shore, along Highway 61 in Northern Minnesota, MN Coastal Program.*

Natural Resources Research Institute (NRRI)

Center for Water and the Environment

5013 Miller Trunk Highway

Duluth, MN 55811

Phone: 218.720.4279

www.nrri.umn.edu

| Table of Contents | Page Number |
|---|--------------------|
| <i>Introduction</i> | |
| Preface | 1 |
| Organization of the Primer | 1 |
| How to Use This Planning Primer | 1 |
| <i>Chapter One: The Planning Process</i> | |
| Reasons for Creating Land Use Plans | 3 |
| Sustainable Community Planning | 3 |
| Actors in the Planning Process | 5 |
| <i>Chapter Two: Creating a Community-Based Land Plan</i> | |
| Community-Based Processes | 8 |
| Components of a Plan | 8 |
| <i>Chapter Three: Design Strategies</i> | |
| Developing a Planning and Design Strategy | 12 |
| Preserving, Conserving and Protecting Natural Resources | 13 |
| Preserving, Protecting and Improving Water Quality | 15 |
| Managing Growth and Infrastructure in Rural Communities | 16 |
| Creating, Promoting and Improving Community Vitality | 17 |
| Enhancing Rural Character | 19 |
| Glossary of Design Strategies | 20 |
| <i>Chapter Four: Data Collection and Resources</i> | |
| Tools and Techniques | 32 |
| <i>Chapter Five: Planning Resources</i> | |
| Financial and Technical Resources | 34 |
| Libraries | 34 |
| Agencies | 35 |
| Planning Web Sites | 39 |
| Case Studies and Model Ordinances | 39 |
| <i>References</i> | |

Introduction

Preface

Rural communities are in a state of flux and change. Declining populations, economic uncertainties, and fragmentation or loss of resource lands threaten the very existence of some small towns. These issues are of particular importance to Lake Superior Basin communities, where undeveloped rural landscapes are fewer and further between than even ten years ago. Increasingly communities are experiencing a loss of connection to Lake Superior. The challenge is to help these rural communities survive and prosper into the foreseeable future, while protecting the region's ecological health, as well as agrarian, natural resource or tourism based resources.

Through the community-based planing process as described in this Primer, rural citizens are provided a strategic approach to the complex task of envisioning future scenarios for their communities. Citizen volunteers living in the Lake Superior Basin are the intended primary audience for this publication; however, policy makers should also find it a useful reference, examining the range of strategies for building or rebuilding sustainable communities in this and other rural regions of the Upper Midwest.

Organization of the Primer

This primer is organized into five sections:

- ❑ The Planning Process: a general description of the planning process
- ❑ Creating a Community Based Plan: a step-by-step guide to the process of gathering and integrating local knowledge and community values into land use plans
- ❑ Design Strategies: land management themes to help develop strategic design solutions to achieve the community's land management goals
- ❑ Data Collection and Resources: a quick reference on collecting and applying data for a land plan
- ❑ Planning Resources: a listing of local, regional as well as national resources for information and assistance in planning

How to Use This Planning Primer

For the citizen new to the land planning process, getting started may prove to be a daunting task. The chapters of the primer will assist in answering some of the most common questions by breaking them down into a step-by-step approach to planning. These organizing questions are as follows:

- **What is the current status of the land plan in my community?** The first task is to identify at what point the community is currently in the planning process. A comprehensive plan may already exist, or perhaps municipal zoning may govern land use decisions. Chapter One describes the steps in a community-based planning process.
- **Does the plan reflect community values?** After the status of land planning in the community is determined, interested citizen groups, together with their planning committees and with the assistance of planning professionals can choose how to proceed. If a plan exists, it should be reviewed to see how closely it reflects the values of the community. If there are oversights or conflicts, most governing bodies have an appeal or review process which can be pursued. The citizen group, organized as an advisory or steering community, should become active at this point. Chapter Two describes the process of gathering information from the within the community describing the values and goals which should be reflected in the land plan.
- **What can be done to integrate community values into the land plan?** Once the community's collective values and goals have been identified, design strategies can be chosen to best implement and achieve the community's desired outcomes. Chapter Three describes these strategies within the framework of community design principles that can help achieve planning goals.
- **What other kinds of information are needed to assist in the planning process?** Citizens' values are key in the community based planning process. Chapter Four describes how to collect other types of data, such as information on growth trends, economics, natural resources, and physical characteristics of the planning area.
- **Where can I go for help?** A wide variety of resources, including libraries, agencies, websites, and other sources are available to assist in planning. Chapter Five lists some available resources and groups to contact for information.

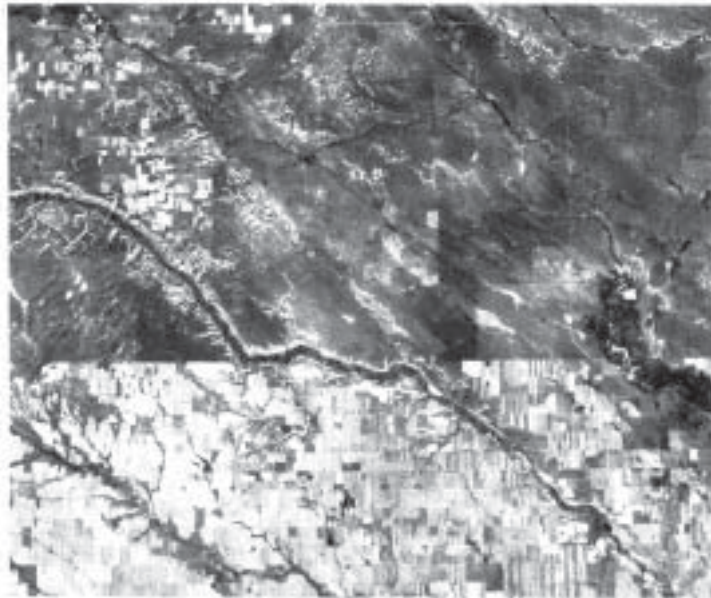
Chapter One: The Planning Process

Reasons for Creating Land Use Plans

In general, a land use plan is created to ensure orderly management of resources and a sustainable way of life. Plans may be created to fulfill legal requirements according to statutes which may vary from state to state. State statutes should be consulted for specific requirements. Website addresses are including in appendices of this document. Legislative descriptions of Wisconsin's plan are included in Wisconsin Act 9, and Technical Revisions from AB872. An excellent reference is a 1000 Friends of Wisconsin publication, *Comprehensive Planning and "Smart Growth: A Summary and Guide*

Land use plans are used in decision making. Elected officials and planning commission members will rely on and use the land use plan when making decisions which affect the shape of the community's future. The land use plan will also be used when making decisions on citizen requests for variances and permits. Land use plans may be created in response to requirements for obtaining funding for various community projects, such as sewer lines or community development projects. Though land use plans may deal with broad visions and goals, it is important that they not be vague or difficult to interpret. Where managing growth is an issue, as is the case in northwestern Wisconsin, planning officials will need the means to determine citizens' values and goals. Moe and Wilkie remark in the book *Changing Places*:

"Managing growth is not an easy task, but it is one that governments must undertake if they are to fulfill their responsibilities to their citizens. Each place is different in its history, its culture, its politics, and its growth patterns, and therefore each place needs to find the solution that fits the locale. There is no one-size-fits-all answer to growth management. But failing to find the right answer, or, worse, failing to try to find the right answer will almost certainly lead to unwanted answers down the road- fiscal bankruptcies, abandoned older communities, unnecessary loss of open space, and chaos." (254)



Land use planning decisions can have huge impacts on the landscape, as illustrated in this photo near the Canada/US Border (prairie to the north, in contrast to cropland to the south) (Forman)

Sustainable Community Planning

Sustainability is a complex concept to define, as it incorporates the gamut of interests in a landscape from human concerns to natural resource management. In 1987, the World Commission on Environment and Development

addressed issues of sustainability in their important book *Our Common Future*. The Environmental Quality Board of the state of Minnesota followed this effort in 1991 with its *Sustainable Community Report to the Governor*. Both of these plans define sustainable community terminology and approaches and can serve as models for other efforts. The World Commission defines a sustainable community as one which “meets the needs of the present without compromising the ability of future generations to meet their own needs.” The Environmental Quality Board of Minnesota expounds on this definition:

[A sustainable community is one] ... that uses its resources to meet current needs while ensuring that adequate resources are available for future generations. A sustainable community seeks a better quality of life for all its residents while maintaining nature’s ability to function over time by minimizing waste, preventing pollution, promoting efficiency and developing local resources to revitalize the local economy. Decision making in a sustainable community stems from a rich civic life and shared information among community members. A sustainable community resembles a living system in which human, natural and economic elements are interdependent and draw strength from each other. (*Environmental Quality Board [EQB] Sustainable Community Report to the Governor*, State of Minnesota, 1991)

The idea of the interdependence of natural and human systems is clearly laid out in this definition. A significant component of this definition is that the land use decision making is done by the community. Community-based planning involves a commitment on the part of both citizens and governing bodies to a cooperative process which will integrate legislative and administrative goals with the desires of the community. This process can also lead to greater community cohesion as citizens feel invested in the process of creating the type of environment in which they make their home.

In recent years, the discourse in the design and planning professions has investigated the concept of sustainability. On an individual site scale, this could mean such things as using environmentally friendly materials, reducing waste by recycling both materials and buildings, or using alternative energy sources, among others. Changing the layout of buildings within the landscape, as illustrated in the conservation subdivision model, is also among new trends. Such planning on a neighborhood and community scale views natural resources and sensitive ecological areas as amenities to be protected and preserved during the development process. In addition to revising the model for new development, sustainability can impact redevelopment and revitalization of areas that are struggling economically. There is a direct relationship between declining rural economies and increasing fragmentation of the cultural and physical landscape due to contemporary land use patterns.



Conservation subdivision design (far right) can preserve open space, natural resources and rural character (Arendt)

Prevention and reduction of fragmentation can benefit a community in the form of ecological services and the long term economic benefits they provide. Fragmentation, the breaking up of the dominant landscape pattern through development or land use, changes the ways in which an ecosystem functions. Fragmentation can have detrimental effects on an ecosystem, limiting its ability to function efficiently, and sometimes even to function and sustain itself at all. Ecological services, or benefits, such as resource extraction, flood attenuation and prevention, and hunting or recreation use have an economic value which the community will no longer be able to draw upon when ecological function is weakened. Community awareness of these issues can help lessen the impacts and reduce fragmentation before it affects the local economy.

Sustainability as a guiding principle in planning takes an interdisciplinary approach. Natural resource conservation, ecological function and health, economic stability and prosperity, quality of life issues, and many other concerns are addressed in a sustainable community plan. Past planning efforts, primarily concerned with legislative and zoning issues, did not always consider the social and natural elements in the planning area. Key to the interdisciplinary approach is involving all members of a community to work with each other to identify and determine how their community will exist in relationship to the environment, the economic fabric, as well as in relation to other communities within the region.

This planning primer is driven by and rooted in the concepts of sustainability for communities and the environment. As a model, *The Sustainable Community Report to the Governor* (State of Minnesota, 1991) describes key tenets of sustainable planning as follows:

- ❑ the planning process is community based and driven
- ❑ communities are viewed as interrelated, dynamic systems including both human and natural systems interests
- ❑ the community's goals and visions need to respect and accommodate the resources of the region
- ❑ the use of the community's resources (natural, economic, and human-based) provides for use by future generations while meeting current needs

Actors in the Planning Process

Citizens

In community based planning, the citizens of a community are the ones who define the visions and goals for their land use plan. The community-based process lends itself to many methods for gathering citizen input in the creation of their visions. These methods can vary significantly depending upon the amount and nature of available planning resources, interests of citizens, and amount of time available to complete the plan.



Citizen input is a vital component of community-based planning (CRD photo)

The vision is described in terms of goals and policies formulated for specific areas of the community which together create the whole. Legal authority for the creation of plans is provided through state statute. The community can be assisted by any number of people and agencies experienced in planning.

If there are adequate resources and time available, a framework plan could be developed to guide the process of community participation. This framework plan would detail the how, when, who, and where of involving its citizens. In lieu of this framework plan, there are many other resources available to help the community with planning.

Planning Authorities

The legal authority to create land use plans lies within state statutes (Wisconsin S. Chapter 62). Generally, cities, counties, villages, and townships are the entities that have legal authority to develop land use plans. The statutes also direct who may create plans. In the state of Wisconsin, county boards, county planning commissions, town boards, town planning commissions and town park commissions are the legal entities that are responsible for creating land use plans.

Commissions

Commissions are formal bodies that are created and appointed by county or town boards through passage of an ordinance. The purposes of a planning commission are multifaceted: they are instrumental in preparing land use plans; they administer, implement, and monitor the town's plan.

Wisconsin state statutes allow for a 5 member zoning committee in towns that have zoning ordinances already in place. These committees are responsible for establishing and administering the town's zoning ordinances, and often provide planning functions for the community as well.

A town park commission may be formed to study and plan for recreation, open spaces and parks. The park commission is appointed by the town board and may have 7 members. Park commissions are authorized to serve as a zoning committee and review subdivision plats.

Once the legal entities, be they commissions or boards, are established, a planning process is developed by the commissions, boards, and others (consultants, universities, agencies) which recognizes that its citizens are the ones who will define their community. Both planning commissions and committees perform the work of community planning when all interests of the community are represented. It is important that members of the planning groups have a strong commitment to the well being of the community; that they are willing to listen to others and compromise for the good of the community; and that they are willing to commit significant amounts of time to the process.

Planning Committees

Steering committees are appointed by the town board, or in some instances are self-selected citizens through grassroots efforts. In Wisconsin, the committees may be formed without the passage of an ordinance. This is a less formal structure, generally not a permanent entity, and sometimes may be used as a method to broaden input for the planning process.

Consultants and Other Resources

There is a wide variety of help available for planning. There are people who can help with involving citizens in the planning process, gathering data, and making maps. These partners may be from government agencies, universities, or private consultants. The mix of partners is determined by the towns, their budgets, and the planning expertise available in their communities.

Chapter Two: Creating a Community-Based Land Use Plan

There are two primary activities associated with creating a community-based land use plan.

- Communities must examine their visions and goals for development in their area. This process includes an investigation and examination by citizens of the resources, values, and future plans they hold for their jurisdiction.
- A plan should encompass the goals and visions of the community, protecting resources and guiding growth through regulations, zoning, and other local actions.

Community-Based Processes

In community based planning process it is **the citizens** who craft the visions and goals for their land use plan. This community-based process lends itself to many methods for gathering of citizen input in the creation of their visions. These methods can vary significantly depending upon the amount and nature of available planning resources (money and information), interests of citizens, and amount of time available to complete the plan. Wisconsin's smart growth legislation requires community participation at all steps of the planning process. Open houses, public forums and hearings, design charrettes (short, but intensely focused planning sessions), questionnaires, photo surveys, and other methods can be combined to get a more accurate perception of what community values should be reflected in the land use plan. Several books, including *Solving Sprawl: Models of Smart Growth in Communities Across America (2002)*, and many websites are referenced in the reference and resource sections of the primer.

If there are adequate resources and time available, **a framework plan** could be developed to guide the process of community participation. This framework plan would detail the how, when, who, and where of involving its citizens. In lieu of this framework plan, there are many other resources available to help with community participation. Ideally, in a community-based process, the community is helped through this process by people skilled in planning. These guides may be members of a community, government workers, or consultants.

Components of a Plan

The components of a plan are similar to building blocks. That is, they start with a community vision and create that vision through the application of goals, policies and strategies. Wisconsin's Comprehensive Planning Legislation (1999, revised 2001) states that there are nine elements to address in comprehensive planning for smart growth. Each of these elements must be considered and incorporated into a well-rounded land use plan. While these elements may seem self-explanatory, when viewed through the lens of legislation, the goals may vary slightly from traditional interpretation. Wisconsin State Statutes (Wisconsin Act 9, and Technical Revisions from AB872) explain the premise behind these elements as follows:

- Issues and Opportunities: a background of issues and opportunities in the existing community should be developed with an eye towards sustainability. Such an inventory will help identify deficits, issues and resources unique to each area in the planning process.
- Housing: a diversity of housing, affordable to all income levels, needs to be developed. Affordable housing

is becoming more scarce, and special attention needs to be made to provide a mix of housing opportunities (including mixed income neighborhoods) should be provided in all communities.

- ❑ **Transportation:** roadways need to be expanded to accommodate growth prior to completion of new development. In considering transportation needs in the context of smart growth, alternative forms of transportation, such as walking, biking, and mass transit, should be implemented wherever possible.
- ❑ **Utilities and Community Facilities:** prior to new development, community facilities such as schools and law enforcement coverage should be considered. In addition, utilities such as sewer, water, electric, gas and telephone service should be planned for in expansion areas.
- ❑ **Agricultural, Natural and Cultural Resources:** each community has a unique list of local resources. Areas which may come under threat due to new development and expansion should be inventoried, considered and preserved wherever possible. Every effort should be made to enhance the resources identified as important to the community in the issues and opportunities community survey process.
- ❑ **Economic development:** every community needs a stable economic base. A survey of the existing economy can help identify areas for expansion, as well as point out services and industries which may need assistance in order to prosper.
- ❑ **Intergovernmental Development:** consideration of adjacent communities needs to be made. Planning conflicts often occur at the borders of jurisdictions such as townships or counties. Lines of communication need to be developed so that one plan will compliment another as one moves through a region.
- ❑ **Land Use:** a guide to future development, based on community values, needs to be established. Such a plan should reflect the concerns identified in the issues and opportunities inventory process.
- ❑ **Implementation:** once a clear plan of action has been established, an incremental plan of action should be made for a community to reach its stated goals and outcomes.

(1000 Friends of Wisconsin publication, *Comprehensive Planning and "Smart Growth: A Summary and Guide"*)

The planning process cannot be viewed as a static document. Situations and community values change over time, and a community will need to reevaluate its plans on a regular basis. Wisconsin legislation states that plans will need to be updated and reevaluated no less than every ten years.

Vision and Goals

When a community begins its planning process, citizens gather to create a vision as to what they want their community to become. This vision is defined and achieved through the establishment of goals. The goals are broad-based descriptions for a specific area of a community-based on character and culture, the local economic outlook, and the natural environment. It is often helpful for the community to actually define what their community looks like now, in terms of these visions and goals. Often times, visions for the future can better be created when one understands the current situation.

Policies and Principles

The goals of an area are defined through the development and implementation of policies and principles. These policies and principles, when adequately developed to address the specific local interests, will be manifested through the actual design and implementation decisions at the site level. Policies become part of the legal zoning code of an area.

Smart Growth legislation in Wisconsin requires that inventories of local interests be made. For a detailed description of this process, reference *Comprehensive Planning and "Smart Growth", A Summary and Guide (1000 Friends of Wisconsin website)*. After this assessment is completed, the next step is to identify principles to guide planning decisions. In northwestern Wisconsin, there are several issues which could threaten the existing rural condition. These are:

- ❑ Population Loss/Change
- ❑ Agricultural Land Loss
- ❑ Economic Change
- ❑ Natural Resource Loss
- ❑ Water Quality Issues

Strategies

Once a community has defined its vision, goals and policies, there is a need for strategies for implementation of the land use plan. For any number of goals and policies, there are many different strategies to achieve them. For example, high densities of human habitation may be achieved through cluster development, through strip development, or through urban development, depending upon the goals and policies for the area. These strategies all create different environments for humans and for animals. Strategies may vary by the scale at which one looks. For instance, on a regional scale, there may be a need for high-density urban development for human habitation in designated areas, so that lower levels of human habitation (and perhaps higher levels of conserved open space) are available elsewhere.

This section lists strategies which can be used to address issues that may be confronting rural communities, as well as ways in which communities can manage their assets. The section is divided into five broad categories:

- ❑ Preserving, Conserving and Protecting Natural Resources
- ❑ Preserving, Protecting and Improving Water Quality
- ❑ Managing Growth and Infrastructure in Rural Communities
- ❑ Creating, Promoting and Improving Community Vitality
- ❑ Enhancing Rural Character

Recognizing that there is a fundamental connection between the identification and inventory of valued resources in an area and the threats to the stability of those resources is crucial. The planning process needs to be ap-

proached in a step-by-step, rather than project-by-project nature. The implementation of a single project is good, but an opportunity is lost if the project does not mesh somehow into a greater scheme for the community.

Chapter Three: Design Strategies

Developing a Planning and Design Strategy

“There is a crisis in rural America with dynamic changes that quickly impact on quality of life and economic development. Rural design is the process of integrating knowledge, with citizen participation, into the planning of rural environments- physical, social and economic. Rural design is more than rural planning or policy making, because it uses design as a problem solving process to create and build plan [through interdisciplinary actions].”

(Mission Statement from the Center for Rural Design, University of Minnesota)

A key question for a community to ask at the onset of planning efforts is what values and resources are of greatest importance to their area. These shared values and goals will be evaluated through the community planning process into what might be considered a “mission statement”. With this community-developed mission statement, the planning process can begin to focus on strategies to achieve the goal of preservation of the community’s character as well as a vision for the future..

There are two types of questions which can be considered in implementing a plan. The first type asks “how do we do this (accomplish our intended goals)?” These “how” questions typically are answered with policy implementation through zoning laws, growth policy, or other legislation. The other type of questioning asks “what should we do to reach our goals?” The “what” questions are answered with design solutions. This generally takes the form of a specific project with a specific goal. For example, a community may ask how to protect a resource such as a river corridor from environmental degradation and encroaching development. The answer may come in the form of a greenway and floodplain protection plan, integrating a design solution within a zoning plan (a “how” question).

Thematic Strategies

Five thematic strategies are presented in this section. These are:

- ❑ Preserving, Conserving and Protecting Natural Resources
- ❑ Preserving, Protecting, and Improving Water Quality
- ❑ Managing Growth and Infrastructure
- ❑ Creating, Improving, and Promoting Community Vitality
- ❑ Enhancing Rural Character

Further explanation of the goals and philosophy of these strategies follows. Ideally, a community will choose not one single strategy, but will develop a balance of these approaches with their unique goals, to reach an appropriate and hopefully successful planning solution for their area.

Important to keep in mind is that these plans are not set in stone and need to be amenable to change. As a region grows, the priorities and values of its communities may shift. Plans cannot be viewed as a static, onetime solution to planning questions. They serve as a guide for the immediate future. With some effort, the original goals of a plan can be met, and as the situation changes, planning strategies should be revisited and modified as necessary to reflect the changes in a community.

Implementation Tools

There are primarily three ways to implement strategies:

- ❑ **Enforcement:** Enforcement is accomplished through the establishment of local zoning ordinances and through the laws and regulations established by other entities such as state and county governments.
- ❑ **Incentives:** Incentives can be provided through a number of means such as establishing tax increment financing districts or through other tax incentive programs. In Wisconsin and elsewhere, the state or federal government may sponsor programs which can directly provide funding for certain projects or offer additional tax breaks for preservation, conservation or restoration projects. Occasionally private citizens may choose on their own to designate land into a conservation trust or to a larger project such as a greenbelt or other project. In these cases, there may not always be a monetary incentive for the action, but rather a private interest in preserving a particular area.
- ❑ **Acquisition:** Acquisition as a strategy can mean purchasing the rights for development of a piece of property or acquiring the property itself. In acquiring the property, it can either become public land or it may be sold to developers or organizations who can help meet the desired goals for the property. It is also possible to transfer certain development rights of a piece of property (TDR) or the purchase of development rights (PDR).

These are not the only tools that can be used. In some cases, negotiations with developers, community action, and special interest groups can influence the design decisions made concerning private development projects. Some efforts, such as “downtown revitalization programs” and others, do meet with success. The difference between these voluntary efforts versus mandated or legislative actions is that they are subject to poor interpretation or outright dismissal of the community’s goals. In short, strong leadership and commitment is needed on the part of the community when the goal of sustainability is not built into the zoning and planning codes of a municipality or county.

Preserving, Conserving and Protecting Natural Resources

Each region of the country has resources and characteristics which are unique and help provide an identity for that area. In rural areas the mix of resources becomes perhaps more complex than in more urban areas. Natural resources, in the form of forests, streams, prairie and other land cover types, often come under threat when unplanned development occurs. For example, if an area possesses a series of unique vistas, such as views to Lake

Superior, the vistas (a resource) can be threatened or impacted by development. Forest lands, once fragmented into smaller blocks of ownership, can lose their value as a timber resource, as well as the ability to function effectively as a sustainable ecosystem. Historic landscapes may not be adequately preserved or protected under private ownership. Agricultural areas, the destination not only of scenic ‘Sunday drives’ but an integral part of the rural economy may be lost when the expansion and development of urban areas occurs with inadequate planning. When the countryside becomes populated with more subdivisions than farmsteads, it ceases have value as a ‘pastoral landscape’, and the odds of reversion to agricultural production are next to none. As patches of forests and fields grow smaller and further apart, their ability to support the wildlife native to the area may flounder or even disappear.

A community needs to recognize that preservation of natural resources benefits its residents in a myriad of ways. The availability of hunting and fishing areas, open space for recreation on a variety of levels, and the preservation of timber, agricultural and forest resources will yield not only ecological benefits, but economic benefits in the form of tourism and resource acquisition. The quality of life in the region may also be preserved or improved, as many people will have access to more soundly managed and preserved park spaces and natural areas.

Design Strategies to Consider:

- Agricultural Zoning
- Best Management Practices
- Community Land Trusts
- Compensable Regulations
- Conservation Easement
- Conservation Zoning
- Cluster Development
- Dark Skies Legislation
- Evaluation and Classification Planning and Natural Science Rating
- Growth Management
- Identify and Label Historic Resources
- Infill Strategies
- Land Evaluation and Site Assessment
- Mixed Use Zoning Changes
- Natural Science Rating
- Open Space Zoning
- Public Purchase: Restricting and Resale
- Private Land Trusts
- Purchasing, Zoning, Designation
- Restricting Subdivision Development to Rural Byways

- ❑ Sewered Lots
- ❑ Scenic Easements
- ❑ Scenic Turnouts
- ❑ Shore Land Zoning
- ❑ Sign Restrictions
- ❑ Tax Stabilization Contracts
- ❑ Town Commons/Plazas
- ❑ Transferable Development Rights (TDRs)
- ❑ Urban Growth Boundaries
- ❑ Wetland Regulation



Removal of vegetation from shoreline areas can lead to severe erosion (EPA photo)

Preserving, Protecting, and Improving Water Quality

Water quality is one of the most readily observable changes when land use in a watershed changes. When development and land use change is guided with an eye towards preserving or even improving water quality, results can have a positive impact on local water bodies. Poor planning can lead to damage to a watershed or resource which can take decades to repair, if recovery from the change is possible at all.

Rural areas have some specific issues to consider when assessing water quality issues. Agricultural runoff often can contain pesticides, fertilizers, and herbicidal residues which negatively affect fish and other wildlife. Farming itself has in the past led to draining of wetland areas to produce arable land. When wetlands are drained, for agriculture or other development, they cease to serve as ‘holding areas’ for runoff following natural rainfall or snowmelt. As a result, a greater volume of water, with a greater number of contaminants, is released at a faster rate into our streams, rivers, and eventually lakes. The results can be increased erosion, increases in the quantity of runoff, changes in the natural community supported by a lake or stream, increased presence of pollutants and pesticides in runoff, or even flooding problems.

The goal of preserving, protecting and improving water quality can provide a good framework for a land use plan. By using water quality as one indicator of a natural system’s health, we also serve the interest of preserving some of the natural and scenic resources vital to preserving rural character.

Design Strategies to Consider:

- ❑ Best Management Practices (BMPs)
- ❑ Conservation Easement
- ❑ Conservation Zoning

- ❑ Evaluation and Classification Planning and Natural Science Rating
- ❑ Flood Plain Zoning
- ❑ Growth Management
- ❑ Infill Strategies
- ❑ Purchasing, Zoning, Designation
- ❑ Source Water Assessment Program
- ❑ Shore Land Zoning
- ❑ Urban Growth Boundaries
- ❑ Wetland Regulation

Managing Growth and Infrastructure in Rural Communities

Many rural communities originally developed at crossroads, with at least one of the main arteries being a major transit route, be that a railroad, a highway, a river, or a port. Many smaller towns still possess the core of this crossroads in the form of an old downtown. However, following World War II, the increasing use of the automobile has stretched the form of our communities, with new development often spreading out in a linear



form along a main highway, developing ever further from the original core. The infrastructure, including roads, phone and utility lines, and sewer lines have followed this linear pattern from the center as well.

Without careful infrastructure planning, growth may not take the form desired by the community (Faust)

A community can help define the form it wants its home to take. By describing the areas in which development is permitted through infrastructure improvements, growth can be guided into designated areas. In some cases, such as the obstacle of a river, lake or other resource, this growth may be limited. In most cases, these obstacles can be creatively integrated into a plan.

The architectural form of buildings is not often considered in land use planning. However, elements defining the character of some small towns can be directly attributed to not only the layout of the town, but also its architecture. Planning commissions and the community can control to some degree the form new buildings will take. For example, a planning commission can choose to limit the size of buildings to two or three stories, or define a specific maximum footprint a building can occupy on a lot. Setbacks and parking provisions can be tailored to face an existing Main Street or pedestrian amenity. Such regulations within a land use plan can make it more attractive for retailers to adapt or modify a prototype plan for a store to better fit into the fabric of an existing community, achieving the goal of preserving rural character.

As a community grows, it is vital that transportation infrastructure accommodates increasing demands. In addition to roadway construction, expansion and improvements, consideration for alternative forms of transportation should be made. Bus service where demand is high, bicycle trails and pedestrian corridors can serve not only to accommodate increased traffic flow, but can also serve as amenities in growing communities.

Design Strategies to Consider:

- Access Management
- Cluster Development
- Compensable Regulations
- Dark Skies Legislation
- Encourage Non-Automobile Traffic
- Expand Existing Capacity of Infrastructure System
- Growth Management
- Infill Strategies
- Mixed Use Zoning Changes
- Nursery and Tree Plan
- Open Space Zoning
- Promote High Occupancy Vehicle (HOV) Use
- Public Purchase: Restricting and Resale
- Restricting Subdivision Development to Sewered Lots
- Rural Byways
- Scenic Turnouts
- Town Commons/Plazas
- Traffic Reductions
- Transferable Development Rights
- Urban Growth Boundaries
- Utility Corridors



Old town plans show the congregation of homes at crossroads, with fields and woods nearby

Creating, Promoting and Improving Community Vitality

Often the move for conservation, preservation, and protection of resources addresses the concerns of solely the natural environment and biological communities of an ecosystem. This is a valid view to take, as we humans are intertwined with the environments we call home. But the economic, recreation, and quality of life issues of rural areas must also be addressed. We make choices to live where we do for a variety of reasons, and while visitors may serve as stakeholders in some rural and scenic areas, local residents will be affected on a daily basis by the planning decisions made in the region. To continue to foster the vitality of rural communities, we plan because we want not only to enjoy the landscapes we live in and visit, but to be able to prosper and have a high quality of life as residents of these areas.

Communication and community cohesion are difficult issues in the sometimes isolated and far-flung rural landscape. Without an effective communication network, the implementation of projects may become onetime occurrences unless the lines of communication remain open. In the community planning process, information can be gathered in a variety of forums, including design charettes, meetings and workshops where community members are invited to participate in the planning process. Important to remember is that the planning process is dynamic; plans will need to be reevaluated and assessed as the situation changes. The existence of a concerned group of citizens who are acquainted with each other and the planning process can help make these reassessments easier. Opportunities such as a “Friends of the Lake” group (or other resources), community gardening or planning groups should be considered when undertaking the task of planning. Maintaining an interest in community issues can help facilitate the implementation of the original vision and goals described in the planning inventory process.

Rural areas have in the last century become increasingly difficult areas in which to make a reasonable living. A land use plan which provides for not only preserving natural areas as amenities, but also a place to live well year-round benefits a wider sphere of people. This sphere of concern and interest can expand beyond the region's residents to the interests of those who visit and contribute to a tourism economy. Preservation of rural character and resources can increase the inflow of economic support from areas of greater prosperity economically to those possessing a great prosperity of natural resources, and perhaps not as stable a financial base. Community support of agriculture and recreation, through agricultural zoning, community sponsored farmers markets and co-ops, creation of nature trails and conservation areas, and other methods can help the farming component of a community thrive into the next century. As projects and plans are implemented, a sense of momentum is created, promoting additional plans and projects which will benefit the community.

Design Strategies to Consider:

- Conservation Easement
- Conservation Zoning
- Community Land Trusts
- Community Organizing
- Encourage Non-Automobile Traffic
- Growth Management
- Infill Strategies
- Mixed Use Zoning Changes
- Nursery and Tree Plan
- Open Space Zoning
- Purchasing, Zoning, Designation
- Scenic Easements
- Tax Stabilization Contracts

- ❑ Town Commons/Plazas
- ❑ Traffic Reduction
- ❑ Urban Growth Boundaries



As development occurs, there is the potential to lose rural character as land use changes (EPA photo)

Enhancing Rural Character

The history of the United States is deeply linked with our agrarian roots. Our landscapes, dotted with farms, fields and woodlots, provide us with a sense of place and community identity. The American dream remains the single family house with a picket fence. Yet, as development happens, the losses often include the very fields and farms which link us to our farming past. Historic landscapes may not be adequately preserved or protected under private ownership. The loss of agricultural land can lead to instability in the local economy, requiring the local job market to absorb farmers needing work after giving

up their farms. The closing of timber mills and mines has proven catastrophic for many communities in the Lake Superior Basin as well.

A community is defined by multiple factors. Its history, economy, community values and natural setting contribute to its unique identity. The small town setting is a disappearing icon in our culture, but creative planning can help to change this trend. The goal of preserving rural character is not to halt growth, but rather to allow the community to define the elements of its make-up which it most wants to preserve. Landscapes, vistas, local architecture, Main Street developments, historical town layout, and many other elements are important to inventory. Once these elements are defined, planning can begin to allow for change without catastrophic loss of unique resources.

Design Strategies to Consider:

- ❑ Agricultural Zoning
- ❑ Cluster Development
- ❑ Community Land Trusts
- ❑ Conservation Easements
- ❑ Conservation Zoning
- ❑ Dark Skies Legislation
- ❑ Growth Management
- ❑ Identify and Label Historic Resources
- ❑ Open Space Zoning
- ❑ Purchasing, Zoning, Designation
- ❑ Restricting Subdivision Development to Sewered Lots

- ❑ Rural Byways
- ❑ Scenic Easements
- ❑ Sign Restrictions
- ❑ Town Commons/Plazas
- ❑ Transferable Development Rights
- ❑ Urban Growth Boundaries

Glossary of Design Strategies

Design strategy terms correspond to the lists in the previous section and are listed in alphabetical order.

Access Management

Unplanned development may create congested and hazardous driving conditions in areas experiencing rapid growth. One method of coping with this problem is referred to as access management. “Access management is the planning, design and implementation of land use and transportation strategies that control the flow of traffic between the road and surrounding land”. Access management can prevent expensive highway modifications, improve safety for automobiles, pedestrians and bicyclists, reduce congestion and improve access to arterial routes. An important aspect of access management is examining an entire traffic corridor so that traffic conditions and the surrounding land uses can complement each other rather than conflict.

Agricultural Zoning

Agricultural zoning keeps land in agricultural production through the prohibition of other land uses. To ensure preservation of agricultural areas, use of special tax appraisal which reduces the tax burden on a land owner. While the owner could potentially make more money developing the land, tax incentives can help increase success and compliance by land owners.



Agricultural zoning can help to eliminate conflicts in land use (Stokes, left; Faust, right)



Best Management Practices as illustrated by riparian vegetation and use of contour tilling practices. (MacLean and McKibben)

Best Management Practices

Best management practices are methods of preventing and reducing point and non-point source pollution. These methods can include structural and non-structural controls, as well as maintenance and operative procedures, and they can be used in any combination to control contamination of water resources. Rather than monitoring the effects of environmentally damaging practices as other attempts to control pollution have done, BMPs prevent degradation of the environment by instituting methods of using the environment without damaging it. (Getzels, 1988)

Traditional

Conservation

Cluster Development



Conservation subdivision design with clustering (shown on the right) sets aside a portion of the site as designated, preserved open space (Arendt)

Clustering keeps land in agriculture by requiring that all buildings be concentrated on a specified, proportional area of a total acreage. To be effective, this requirement should rate building sites according to some functional criterion such as soil suitability for on-site sewage disposal, degree of slope, or the erodibility of soil. The clustering provision in a zoning ordinance should indicate the maximum number of building units per acre.

By-laws can be adopted by the local jurisdiction that set aside one-half or more of a parcel for agricultural use, open space, or wetland protection while still allowing the same number of lots that conventional subdivision permits. Permit approval may also depend on a transfer of development rights on the remaining land dedicated to the town or county jurisdiction. The undeveloped land could thereby remain in agriculture or be preserved as open space without being a burden to other taxpayers. The seller would still receive full value for the land. (Sargent, 1991)

Community Land Trusts

Community land trusts entail the purchase of property which is then held by the municipality or county for conservation or preservation purposes. CLTs can also be used to help preserve family farms and other resources. There have also been successful projects which involved the purchase of land for CLTs with development for affordable housing. In some cases, a CLT can ensure community access to land which, if privately held, would prohibit use by the general public.

Community Organizing

Maintaining community interest in planning issues and regulation can be a difficult undertaking. Formal organized groups, such as “Friends of the Lake” (name your resource) can help keep community interest focused on issues. Efforts should also be made for community governing groups (town boards, etc.) to allow informal groups as well as organizations to be heard at public meetings. The value of discussions at the ballpark, at PTA meetings, or even the local coffee shop cannot be disregarded. Often issues can be sorted out and identified in these informal interactions, and then later be brought to the attention of a planning board or interest group.

Compensable Regulations

Compensable regulations do not involve a transfer of land between owners. A landowner with ecologically valuable land essentially creates a covenant with local government. The land must remain undeveloped, although certain activities such as recreation or other low-impact agricultural uses may continue. The property remains under the care of the property owner. The owner receives compensation only when the land is sold. The local government must pay the difference between the sale price of the land and the assessed market value if the land did not have a ‘no-development’ restriction. Compensable regulations generally are used to preserve smaller parcels of land.

Conservation Easement

A conservation easement is a legally recorded agreement by which landowners may voluntarily restrict the use of their land. Provided that certain conditions are met, donors of easements may be eligible for certain income, estate and property taxes benefits. One condition is that there is an established, recognizable public benefit, such as protecting rare species, public water supplies, or scenic vistas visible from roads. See also conservation zoning and scenic easements.

Conservation Zoning

Land in floodplains, on steep slopes, in riparian areas, on wetlands or at high elevations may be zoned as an area designated for conservation, thereby protecting the area from development. Recreation and agriculture are acceptable uses of land in conservation zones. As long as Best Management Practices are implemented. This type of zoning, however, only protects agriculture as long as the agricultural land in question falls into one of the protected categories, and is perhaps more useful for protecting wetlands, endangered species and ecosystems and preserving open space. (Sargent, 1991)



Satellite imagery shows the spread of light across the country (Defense Meteorological Satellite Program)

Dark Skies Legislation

Light pollution is an increasing problem in the rural environment. Overlighting, use of floodlighting, and the incursion of light onto adjacent properties (called ‘light trespass’) are typical issues. Reduction of the clarity of the night sky, high energy costs, and disturbance to both human and animal sleep cycles are some documented impacts of light pollution. Lighting ordinances can specify use of cutoff light fixtures (which block the flood of light upwards), reduction of lighting after business hours, and restriction of illumination within property boundaries can help reduce light pollution impacts.

Encourage Non-Automobile Traffic

Building bicycle lanes and paths, as well as creating pedestrian-friendly environments not only reduces traffic but conserves natural resources and decreases pollution. (Getzels, 1988)

Evaluation and Classification Planning and Natural Science Rating

It is difficult to place a specific monetary value on lands for watershed protection, habitat, recreational areas, and other uses. Use of a natural science rating can start to assess the scientific and resource value of areas, bolstering efforts for preservation and conservation. Evaluation and Classification Planning and Natural Science Ratings can identify areas with unique qualities, and help protect rare plant and animal species, unusual or regionally significant landscapes, and other resources. A natural science rating can also provide legal precedent and protection for preservation or conservation of threatened landscapes.

Expand Existing Capacity of Infrastructure System

Minor improvements in existing infrastructure such as signal improvements, one-way streets, turn restrictions, turn-on red, channelization and widening, curb-parking restrictions and speed limits may expand the capacity of the transportation network without building new roads. (Getzels, 1988)

Flood Plain Zoning

Agricultural land can be protected by the local jurisdiction through floodplain zoning. There are three possible steps to zoning a floodplain. First, obtain a soil map delineating flood-prone areas from the local Soil Conservation Service office. Transfer this information onto a planning map. Two, inspect the floodplain in person to see if it corresponds to the locally accepted notion of what floods cover. Three, draft a zoning regulation stating the permitted uses of the floodplain—agriculture, recreation, no buildings, and so forth. Floodplain zoning can be justified on the by both economic and public health. Floodplain zoning can also protect wetlands, promote

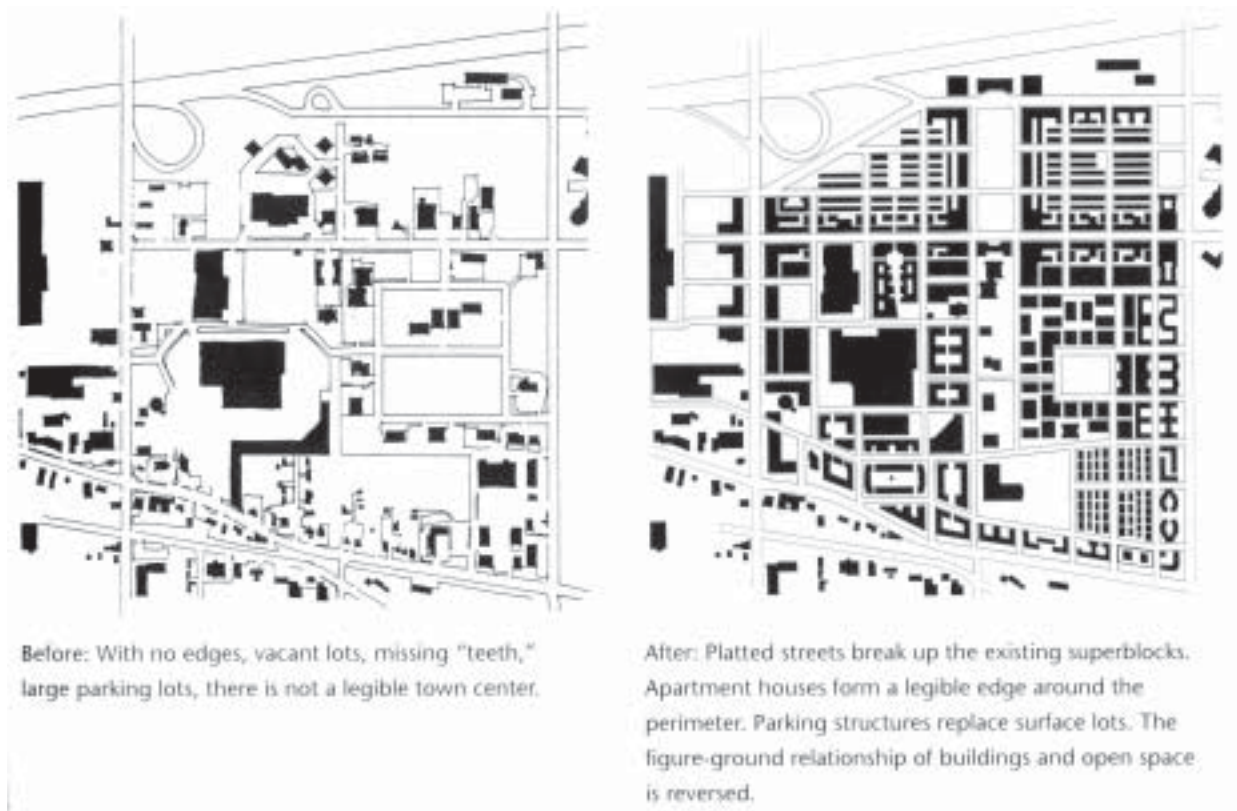
recreation, protect water quality and preserve natural areas. (Sargent, 1991)

Growth Management

Growth management is a planning strategy that attempts to influence the rate, amount, type, location, and/or quality of future growth and development in a particular town, region or city. Some communities have rejected the assumption of the past that bigger and faster growth was better, and are now attempting to effect a more intentional, planned growth. Not only do planners analyze the factors of growth listed above, they also examine “impact” factors such as the environmental impact, fiscal impact, or population impact of growth and development. The goal is to balance the positive benefits of new growth against the negative impacts of development. One method of managing growth is to directing new development to areas already served by municipal water and sewer systems, or limiting the rate of growth to a level that can be accommodated by planned public facilities.

Identify and Label Historic Resources

Historic resources in towns and cities are vulnerable to modern development if not properly designated and recognized as assets to the community. One method of preserving buildings or neighborhoods of historic significance is to designate the area as an historic or special architecture zone. Use of the property other than its zoning allows would require approval by the planning commission. Identification and designation of historically



(Kelbaugh illustration, 277)

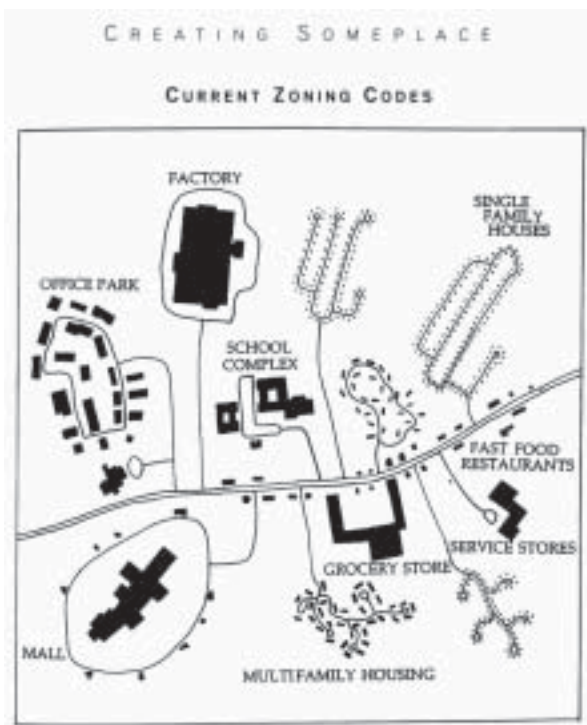
important places and buildings is the first step in preservation. State historical societies can provide assistance, advice or preservation status.

Infill Strategies

Traditional zoning has sometimes required setbacks and lot sizes which may be unnecessary in some situations. Evaluations of existing conditions in strategically chosen areas could reveal opportunities which could benefit from infill development. Changes to zoning or creation of special overlay districts allowing smaller lot sizes or changes to setbacks can often lead to optimal use of currently un- or under-used land in already developed areas.

Land Evaluation and Site Assessment

The LESA program was developed by the Soil Conservation Service to protect farmland. The LESA program assesses the value of land for agricultural potential, with the goal being to protect the most valuable areas. This tool helps planning officials conduct site assessments which are then paired with a potential impact proposal when development may occur. Issues such as the size of the parcel, existing or potential agricultural use, existing land use regulations and other factors are considered in these assessments. The goals and degree of preservation/conservation is determined at a local level and on a site-by-site basis.



Mixed Use Zoning Changes

Zoning originally was adopted to protect the public from conflict between industrial uses and everyday life. Unfortunately this led to a separation and isolation of daily activities, such as grocery stores being located outside of neighborhoods, or residences located far from residences. Zoning ordinances can be modified to accommodate mixed use in situations where activities are compatible. Apartments can be located over small businesses, corner stores can be relocated into neighborhoods, and places to work can be located within walking distance in this scenario.

Traditional zoning isolates land use to node areas.

Nursery and Tree Plan

“Trees and shrubs lining streets and bordering lots make a rural town beautiful. To maintain such beauty it is necessary to plant and replace trees as old ones die. Landscaping should be required when new streets are laid out. To accomplish these objectives it helps for a rural community to have a nursery and tree plan. A nursery can be established in a greenbelt and can be managed by volunteers working under the direction of a conservation or planning commission. A tree plan consists of an inventory of existing trees and a replacement and planting program. The inventory lists and locates all trees on community roads and other rights-of-way and classifies them according to size and vigor. The plan estimates how many trees must be replaced each year and the variety needed. Low maintenance trees and native shrubs and plants reduce costs and increase survival, especially in arid environments”. (Sargent, 1991)

Open-Space Zoning

Open space zoning allows the same overall amount of development that is permitted under “conventional development”, but requires that new construction take place on only a portion (typically half) of the parcel. The remaining open space is a permanently protected under a conservation easement co-signed by a local conservation commission or land trust and recorded in the registry of deeds.

Private Land Trusts

“A private land trust is a nonprofit corporation whose objective is to hold land for the particular purposes of the trust. Some land trusts are established to hold land in an open and natural state. The land trust concept can be adapted to protect agricultural land by purchase of development rights from farmers. The Maine Coast Heritage Trust is an example. It was founded in 1971 for the protection of Maine’s coastal islands. Land trusts of this type work well when public interest in maintaining agriculture for aesthetic or environmental protection reasons is high and the number of operating farms is low. Such land trusts have been effective in the hilly tourist areas of northern New England and New York”. American Farmland Trust is a national organization that works to stop the loss of productive farmland and to promote farming practices that lead to a healthy environment. (Sargent, 1991)

Promote High Occupancy Vehicle (HOV) Use

Promoting ride sharing through preferential parking and driving lanes for high occupancy vehicles (HOV) may reduce the number of vehicles in traffic. Promoting the use of public transit through improvements in fares, routes and schedules and advertising also reduces traffic and expands the capacity of the transportation network without building costly new roads. (Getzels, 1988)

Public Purchase: Restricting and Resale

“Agricultural land may be protected from conversion by public purchase. After purchase, the government agency sells or leases the land on the open market, in this case, for farming purposes only. This can be an effective way to supplement other methods of maintaining land in agriculture. A program of this type, developed in Saskatchewan, Canada, assisted low-income farmers by restricting the resale of land to families whose annual income was less than \$10,000 and whose net worth was less than \$60,000. The program promoted and protected agriculture, by keeping land, and people who otherwise would not be farming”. (Sargent, 1991)

Purchasing, Zoning, Designation

“There are three conventional methods for protecting natural areas: purchasing, zoning and designation. Outright public purchase is recommended when a natural area is part of a larger purchase area such as a park. Zoning is recommended to protect a natural area in a conservation zone such as a higher elevation, a lakeshore, or a wetland. Designation consists of identification, objective evaluation, and incorporation of the description, evaluation, and a statement of public interest in a master plan or declaration. Designation is recommended as a land-use control when the objectives of the public and of private owners coincide. Through designation, decisions about acquisition or easement purchase to achieve public objectives can be deferred until public and private objectives differ. Designation, by itself is not a taking of value or a limit on existing rights of ownership. Rather, it serves notice that if a change in use is proposed by the owners, that change must be adjusted to accommodate the public interest”. (Sargent, 1991)

Restricting Subdivision Development to Sewered Lots

Municipal and county subdivision regulations may require that all newly constructed duplex, apartment and mobile home park be connected to municipal sewer and water lines. Although not effective in restricting single-family dwellings using septic systems or composting, or cluster-home package-treatment systems, this technique allows the planning commission to control more intensive suburban expansion. This limits leapfrog development in open country and allocates the concentration of development to urbanizing areas. While this method can be effective, it has not been widely used by rural towns. Sprawl occurs slowly and is often not recognized by the community until it is too late to control. (Sargent, 1991)

Rural Byways

Much of the aesthetic quality of a rural area can be attributed to its roads. Narrow winding, hilly, tree-shaded byways may not be preferred by a highway engineer, but they are a source of delight to both residents and visitors. Thus the people of a community may want to maintain and augment the aesthetic qualities provided by old country roads. An effective way to promote appreciation and protection of country road beauty is by designating selected roads as rural or scenic byways and representing them as such on official maps. Safety on these roads is promoted by setting lower speed limits, not by straightening, leveling, or widening the roadway, and not by extensive cutting of trees”. (Sargent, 1991)

Scenic Easements



Scenic Easements can preserve views and rural Character (Arendt)

A scenic easement is the acquisition by purchase, dedication, or other means of the right to an unobstructed view at a particular location or over a certain area of land. This may include purchasing development rights and restricting advertising signs or other obstacles at strategic locations to protect views. Scenic easements have been used effectively in Wisconsin to protect the scenery along the Great River Road, which runs parallel to the Mississippi River. Maine passed

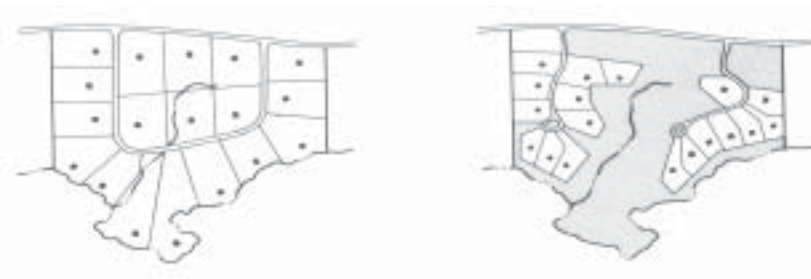
enabling legislation for conservation easement in 1970. Scenic easements can be considered for floodplains along major rivers where the combination with flood protection reinforces their benefit to the public. Scenic easements may also be used to preserve wetlands, promote recreation, preserve natural areas and protect water quality. Land conservation organizations, land trusts and other private conservation groups usually provide political and economic support for scenic easements. Scenic or conservation easements may also be used to preserve historic areas as illustrated here. (Sargent, 1991)

Scenic Turnouts

“Rural locations need areas in which to watch a sunset, to view cumulus clouds over the distant hills, or to enjoy a pastoral scene. In decades past state highway departments, straightening bends in roads, would leave behind small crescents called turnouts for the benefit of travelers. These, however, often occurred without regard to the view. Today, automobile turnouts should be provided at scenic junctures. They should be designed with space for trash barrels and picnic tables for family outings”. (Sargent, 1991)

Shore Land Zoning

Shore land zoning along both riverways and lakes was developed by the state of Wisconsin in the 1960s as a way to protect the habitat, natural beauty and recreational opportunities of surface waters. Rules developed the Department of Natural Resources are administered by local governments in the form of shore land zoning ordinances. The ordinances regulate development density, activities that contribute to erosion and sedimentation and provide a buffer of undisturbed vegetation between development and the water's edge.



Shoreland zoning clusters parcels to protect water quality (Arendt)

Sign Restrictions

“In community efforts to plan and establish a quality environment, advertising signs represent a special challenge. Permissive planning, zoning, and variance procedures permit roadside businesses and advertisers to post signs in competition with their neighbors. This leads to such an intensive concentrations of signs that they lose their effectiveness in communicating to the traveling public. A special committee should be appointed by the planning commission to review the issue of appropriate signage. Clear, legible, and attractive pictorial signs can provide needed information to people in any language. Reducing their number and controlling their size reduces cost for merchants and improves communication with potential customers”. (Sargent, 1991)

Source Water Assessment Program

The Wisconsin Department of Natural Resources (WDNR) has developed a proposed Source Water Assessment Program as required by the 1996 reauthorization of the federal Safe Drinking Water Act (SDWA). The 1996 amendments to the SDWA require states to delineate assessment area boundaries from which public water systems receive supplies of drinking water, inventory significant potential sources of contamination within those boundaries, determine the susceptibility of the public water systems to those potential sources of contamination and provide the assessment results to the public.

Tax Stabilization Contracts

“California, New Hampshire, and Vermont, have developed tax relief programs authorizing restrictive agreements where a landowner receives a preferential tax assessment in exchange for a written contract to retain farmland in agricultural use on a long-term basis. The ordinance language varies from state to state and sometimes county to county. In Vermont, towns may stabilize the tax rate, the tax appraisal value, or the dollar amount of the tax, or any combination of above. The tax stabilization program can be initiated by a favorable two-thirds vote at a town meeting, after which elected officials negotiate contracts with farmers who wish to participate. The program is useful in a town with a small number of farms and a large number of citizens who appreciate keeping land in agriculture. In a rural area made up largely of farmers it would not be equitable to transfer farmers’ taxes to a small group that did not farm. Tax stabilization is a holding action, and it may not keep land permanently in agriculture. It may, however, keep it in agriculture until other methods of doing so are developed or become acceptable. The towns in Vermont with tax stabilization have not experienced a significant tax transfer because farms in that state are generally assessed according to agricultural productivity, even though Vermont statutes require that land be taxed at farm market value”. (Sargent, 1991)

Town Commons / Plazas

“The town common or the village plaza is the heart of a community. Well designed, it is a place where people of all ages can go for recreation, cultural enrichment, socializing or just relaxing. It should be within walking distance of population concentrations and include a field for free play as well as “tot lots” and benches. Most rural communities lacking a common area at least have a site for one. A common area can be built without great cost,

and it will increase the property value of abutting land. It is reasonable, therefore, to suggest to a landowner or group of adjacent property owners that is an acre or two is donated to the town for a common, it is possible for the abutting land to increase in value by more than the value of acres donated". (Sargent, 1991)

Traffic Reduction

The quality of transportation networks can be improved and maintained by reducing the flow of traffic overall, redirecting traffic to less congested routes, or reducing traffic at peak times. Promoting ride sharing through preferential parking or high occupancy vehicle lanes, improving bus routes, schedules and fares, and promoting bicycling through bike lanes can help reduce traffic overall. A plan to redirect traffic and reduce traffic at peak times may be drawn up by a local planning commission with help from the department of transportation. (Getzels, 1988)

Transferable Development Rights

Transferable development rights (TDRs) refer to the right to build structures on a parcel, which is determined by local zoning laws. A property owner who possesses a parcel with a high ecological or open space value may choose to sell off their right to build. This area is called a sending site. The development right then can be sold for use on a receiving site. The receiving site represents an area of lesser ecological or environmental value, more amenable and appropriate for development. The receiving site then can be developed at a higher density, lessening the impact and rate of land use change on other environmentally significant parcels.

Urban Growth Boundaries

An urban Growth Boundary is an officially adopted and mapped line dividing land to be developed from land to be protected for natural or rural uses. Urban growth boundaries are regulatory tools, designated for long periods of time — 20 or more years. In order to provide greater certainty for both development and conservation goals they are rarely subject to revision and can be made permanent over time.

Utility Corridors

"A number of techniques are available for reducing the aesthetic degradation wrought by power lines. For example, one corridor may be shared by several utility lines. Corridors should be as narrow as the safe transmission of electricity permits. Lines need not follow a straight line, but should be fitted into the terrain to appear less imposing. The additional cost in design and construction for alignments may be more than offset by the reduced cost of property-taking or damages. The problem is that, most often, separate agencies account for costs and do not consider the community context. Routes should be selected where the fewest people are affected. The cleared area under power lines should be "feathered", not clear-cut parallel to the utility lines, and landscaping should fit existing contours. In new subdivisions distribution lines should be buried underground." (Sargent, 1991)



Wetland Regulation

Federal and state agencies have developed laws and regulations regarding the protection, management and restoration of wetlands. The Wisconsin Department of Natural Resources has a web page with links to laws, agencies and fact sheets for a variety of wetland issues and questions. The U.S. Environmental Protection Agency also has a similar web page.

Wetlands support a great diversity of plants and wildlife (EPA photo)

Chapter Four: Data Collection and Resources

Tools and Techniques

The needs for data are directly related to the information needed to carry out the visions for the community. In developing a plan, data is used in three ways:

- ❑ Description of the existing situation (baseline data)
- ❑ Analysis of the current situation and formulation of goals and visions for change
- ❑ Monitoring the successes or failures of the plan

It may also be useful for a community to collect historic data, if available, to examine past events. Often this can reveal past losses or changes which are not immediately apparent.

The investigation of a community can take place at a variety of levels. The word “data” is often taken to mean “computer data”. However, in the community-based planning process, data should be collected from a wide

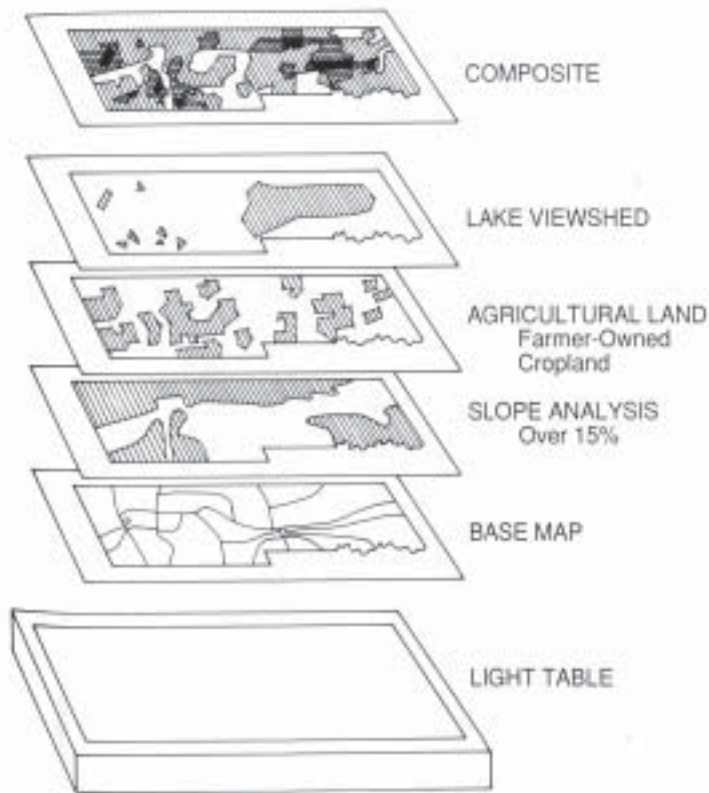


Diagram illustrating how physical and cultural information about a place can be layered as map data for land planning purposes, using GIS technologies.

variety of sources. In developing a plan, three broad categories should be considered:

- ❑ Community character and culture
- ❑ Economic components
- ❑ The natural environment

Generally, data describing natural resources, land use, infrastructure, and densities are the most readily available. Collecting the data that describes the character and cultural aspects of the area may be more difficult. Community meetings, long-term resident interviews, or review of historic newspapers may prove helpful sources of information. Additional data may be gathered through experiential methods, such as writing, photography, or questionnaires.

Geographic Information Systems (GIS) technology has become increasingly valuable as a means of mapping physical phenomenon such as land cover, soils and hydrology, as well as cultural information such as land use, property ownership and utilities. GIS tools effectively map data in

layers and link the data to databases about the mapped objects. NRRI, through the Geographic Information and Decision Support Tools for Land Use Planning in the Minnesota Lake Superior Coastal Boundary, has created data layers for Lake, Cook, Pine, St. Louis, Aitkin, Itasca, and Carlton Counties in Minnesota, for use in guiding

the land planning process. These layers include land use/land cover, geology, hydrology, transportation networks, elevations, census, township boundaries, school districts, original vegetation, land ownership, major watersheds. Detailed information on accessing this data can be found at the NRRI website by clicking here: <http://www.nrri.umn.edu/coastalgis>

Chapter Five: Planning Resources

***** PLEASE NOTE: The websites and addresses listed here are current at the time of publication. Website addresses change often; if the links are not current, web searches can yield the correct address.**

Financial and Technical Resources:

There are community planning resources available from many sources including government agencies (Federal, state and county), universities, consultants, and community resources themselves. This information can be obtained at a variety of venues, including libraries, the internet, and direct phone or written contact with any of the agencies or universities. Plans for communities generally are funded by the responsible government agency. In many instances, such as in rural townships, the financial resources may sparse. To augment these funds, grants from both government and nonprofit entities may be available to match funds the community already has. In some situations, universities may be required as part of their mission to provide assistance in rural planning initiatives.

Libraries:

The University of Wisconsin at Superior grants borrowing privileges to area residents. The University of Minnesota at Duluth will also grant courtesy library cards to non-UMD individuals, including Wisconsin residents.

The Jim Dan Hill Library

University of Wisconsin-Superior
Belknap and Catlin Streets
Superior, Wisconsin 54880
Phone: 715.394.8343
<http://www.uwsuperior.edu/library>

The University of Minnesota Duluth Library

10 University Drive
Duluth, MN 55812
Phone: 218.726.612

Northern Waters Library Service

3200 East Lakeshore Drive
Ashland, WI 54806
Phone: 1.800.228.5684 or 715.682.2365
<http://www.nwls.lib.wi.us/>

Agencies:

The University of Wisconsin School of Architecture and Urban Planning

University of Wisconsin- Milwaukee

PO Box 413

Milwaukee, WI 53201

Phone: 414.229.4114

The University of Wisconsin – Madison Dept. of Urban and Regional Planning

925 Bascom Mall

Madison, WI 53706

Phone: 608.262.1004

University of Wisconsin Extension Service

432 N. Lake St.

Madison, WI 53706

608.262.3980

<http://www1.uwex.edu>

University of Wisconsin Extension Service:

ASHLAND COUNTY OFFICE

Room 107

201 W. Main Street

Ashland, WI 54806-1652

Voice: 715.682.7017

Fax: 715.682.7922

University of Wisconsin Extension Service:

BAYFIELD COUNTY OFFICE

117 East 5th Street, Courthouse

Washburn, WI 54891

Voice: 715.373.6104

Fax: 715.373.6304

University of Wisconsin Extension Service

DOUGLAS COUNTY OFFICE

Courthouse Room 107

1313 Belknap Street

Superior, WI 54880-2769

Voice: 715.395-1363

Fax: 715.395.1399

University of Wisconsin Extension Service

IRON COUNTY OFFICE

Courthouse

300 Taconite Street

Hurley, WI 54534-1589

Voice: 715.561.2695

Fax: 715.561.2704

Toll Free from Mercer or Springstead: 888.561.2695

Sigurd Olson Environmental Institute

Programs and information useful in ecological issues in northern Wisconsin

Northland College

1411 Ellis Avenue

Ashland, Wisconsin 54806-3999

715.682.1224

800.753.1840

Natural Resources Research Institute (NRRI)

Center for Water and the Environment

5013 Miller Trunk Highway

Duluth, MN 55811

Phone: 218.720.4279

<http://www.nrri.umn.edu>

Wisconsin Department of Natural Resources

Provides assistance and resources on natural resource use and preservation

Shore Land Management Program

Public Water Section Source Water Protection

Outdoor Recreation

Wetlands

<http://www.dnr.state.wi.us>

United State Environmental Protection Agency

Information regarding legal issues and federal conservation issues and human health, images of regional resources and model ordinances to protect local resources

<http://www.epa.gov>

Center for Rural Design (CRD)

Assistance and expertise in rural planning issues, case studies on sustainable community planning

University of Minnesota

College of Architecture and Landscape Architecture / College of Agriculture, Food, and Environmental Sciences

277 Coffey Hall

1420 Eckles Avenue

St. Paul, MN 55108

Phone: 612.624.9273

<http://www.ruraldesign.umn.edu>

American Farmland Trust

Information on legislation and programs aimed at farmland enhancement and preservation.

1200 18th St. NW Suite 800

Washington, DC 20036

202.331.7300

<http://www.farmland.org>

Lake Superior Binational Program

Prepared a Lake Superior Lakewide Management Plan 2000 by Agreement (IJC 1993) between the U.S. and Canada to address the water quality issues of the Great Lakes in a coordinated, joint fashion.

<http://www.epa.gov/glnpo/lakesuperior/lamp2000>

The Trust for Public Lands Midwest Regional Office

Highlights and provides information about regional conservation issues

2610 University Ave. Suite 300

St. Paul, MN 55114

651.917.2240

<http://www.tpl.org>

The Nature Conservancy Field Office

Provides information and works on preservation and restoration issues

623 West Main St.

Madison, WI 53703

<http://www.nature.org>

Bayfield Regional Conservancy

Land trust group which purchases and/or protects scenic and natural areas in Bayfield county

P.O. Box 410
Bayfield, WI 54814
715.779.5263
<http://www.brcland.org>

1000 Friends of Wisconsin

Information on smart growth planning, publications, farmland and natural resource preservation strategies
<http://www.1000friendsofwisconsin.com>

The National Trust for Historic Preservation

Assistance and information regarding preservation of significant buildings and landscapes.
1785 Massachusetts Ave. NW
Washington, DC 20036
<http://www.nthp.org>

Seagrant and NEMO

(Nonpoint Education for Municipal Officials)
Education on non-point pollution and water quality issues.
<http://www.seagrant.umn.edu/water/nemo.html>

The National Scenic Byways Program

Information, grant opportunities and assistance for planning, creating or enhancing scenic byways
<http://www.byways.org>

USGS Survey Maps and Aerial Photos

Materials and information valuable to mapping and planning. Purchase and/or downloads of information available
<http://mapping.usgs.gov/>

International Dark Sky Association

Information on reducing light pollution.
3225 N. First Avenue
Tucson, AZ 85719
<http://www.darksky.org>

ESRI

GIS mapping tools and data.
<http://www.esri.com>

Minnesota Land Trust

Information on land conservation and preservation techniques and incentives.

2356 University Ave. W. Suite 240

St. Paul, MN 55114

Phone: 651.647.9590

Fax: 651-647-9769

<http://www.mnland.org>

Planning Web Sites:**American Planning Association:**

<http://www.planning.org>

Planners Web Site:

<http://www.plannersweb.com>

Badgerlink, for Wisconsin information resources on the web:

<http://www.dpi.state.wi.us/badgerlink>

Minnesota State Planning Agency

Information on sustainable community model ordinances

<http://www.mnplan.state.mn.us>

Wisconsin Coastal Management Program

Helps fund and support comprehensive planning in coastal counties

<http://www.coastal.wisconsin.gov>

Wisconsin Office of Land Information

http://www.doa.state.wi.us/olis/wlc/land_council.asp

Federal Communications Commission Wireless Telecommunications Bureau

<http://www.fcc.gov/wtb/siting>

Case Studies and Model Ordinances:

Wisconsin DNR: Community Planning and Land Use Management

<http://www.dnr.state.wi.us/org/es/science/landuse/index.htm>

Regional Design Strategy: the Greater McGregor Area

<http://www.ruraldesign.umn.edu/mcgregor.htm>

Central Minnesota Community Dairy Partnership

<http://www.ruraldesign.umn.edu/dairy.htm>

50-Year Master Planning Process for the City of East Grand Forks

http://www.cala2.umn.edu/design_center/PROJECTS/EGF/DCAULEGF.html

MN Planning Sustainable Model Ordinances

<http://www.mnplan.state.mn.us/Report.html?Id=1927>

EPA Model Ordinance to Protect Local Resources

<http://www.epa.gov/owow/nps/ordinance/mol1.htm>

Residential Cluster Development Fact Sheet Series

Detailed information on cluster development and water resource management

<http://www.extension.umn.edu/distribution/naturalresources/DD7059.html>

References

- Allmann, Laurie. *Land Protection Options: A Handbook for Minnesota Landowners*. The Nature Conservancy: Minneapolis, MN. 1996.
- Arendt, Randall, *Conservation Design for Subdivisions*. Island Press: Washington, DC. 1996.
- Arendt, Randall, *Growing Greener*. Island Press, Washington, DC. 1999.
- Arendt, Randall, et.al. 1994. *Rural By Design*. Chicago, IL. The American Planning Association.
- Benfield, F. Kaid, Jutka Terris and Nancy Vorsanger. *Solving Sprawl: Models of Smart Growth in Communities Across America*. New York: Natural Resource Defense Council. 2001.
- Charter for New Urbanism*, Congress For New Urbanism, 5 Third Street, Suite 500a, San Francisco, CA 94103
- Cullingworrth, J. Barry, "Aesthetics in US Planning: from billboards to design controls". *Town Planning Review*. Oct 1991, v62, n4, p. 399-413.
- Daniels, Thomas L., John W. Keller, and Mark B. Lapping. *The Small Town Planning Handbook*. Chicago: American Planning Association. 1995.
- Dramstad, Wenche E., James D. Olson, and Richard T. T. Forman. *Landscape Ecology Principles in Landscape Architecture and Land-Use Planning* Washington DC: Island Press. 1996.
- Easley, V. Gail. *Staying Inside the Lines: Urban Growth Boundaries*. Chicago: American Planning Association. 1992.
- Forman, Richard T. T. *Land Mosaics: The Ecology of Landscapes and Regions*. Cambridge: Cambridge University Press. 1997.
- Getzels, Judith, and Frank S. So. *The Practice of Local Government Planning* Washington, DC: Published for the ICMA Training Institute by the International City Management Association, 1988.
- Golany, Gideon. *New Town Planning* New York: John Wiley & Sons, Inc. 1976.
- Grenville, Jane, et al. *Managing the Historic Rural Landscape*. New York : Routledge. 1999.
- Holden, Robert. "Rock in the Quarry". *Architect's Journal*. Oct. 2, 1997. v. 206, n12, p. 43 – 45.
- Kelbaugh, Douglas. *Common Place: Toward Neighborhood and Regional Design*. Seattle: University of Washington Press. 1997.

Kelly, Eric Damian and Barbara Becker. *Community Planning: An Introduction to the Comprehensive Plan*. Washington, DC: Island Press. 2000.

Logan, Terry. *Best Management Practices: Implications for Groundwater Protection*. Ohio State University. 1998.

Minnesota Planning. *Under Construction: Tools and Techniques for Local Planning*. St. Paul, MN. 2002.

Moe, Richard and Carter Wilkie. *Changing Places: Rebuilding Community in the Age of Sprawl*. New York: Henry Holt and Company, Inc. 1999.

Morrish, William, (2001), Unpublished Class Notes Principles of Urban Design, Spring 2001.

Nassauer, Joan Iverson. *Placing Nature: Culture and Landscape Ecology*. Washington DC: Island Press. 1997.

Planning Advisory Services Report No. 440, Governor's Design Team Manual. State of Minnesota. 1991.

Richardson, Jean. *Partnership in Communities: Reweaving the Fabric of Rural America*, Island Press, Washington, DC. 2001.

Sargent, Frederic, et. al. *Rural Environmental Planning for Sustainable Communities*. Washington DC: Island Press. 1991.

Stokes, Samuel N. *Saving America's Countryside*. Baltimore: John Hopkins Press. 1989.

Urban and Regional Planning (Dept. of), University of Wisconsin-Madison Extension Service and Wisconsin DNR. *Planning for Natural Resources: A Guide to Including Natural Resources in Local Comprehensive Planning*. January 2002.

University of Wisconsin Extension Service. *Preserving Local Resources- A Guide for Town Officials*. ND.

World Commission on Environment and Development. *Our Common Future*. New York: Oxford University Press. 1987.

Zelinsky, Wilbur. "Where Every Town is Above Average: Welcoming Signs along America's Highways." *Landscape* 1988, v.30, no.1, p. 1-10.