



Center for Land Use Education

The Land Use Tracker

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IN THIS ISSUE:

CASE LAW UPDATE

[MORATORIA AND TAKINGS](#)

GENERAL ARTICLES

[MANAGING RURAL RESIDENTIAL DEVELOPMENT](#)

[PUBLIC LANDS AND PROPERTY TAXES: WHAT IS THE RELATIONSHIP?](#)

[LAND USE EDUCATION COURSE GROUP OFFERED THIS SUMMER AT UWSP](#)

[CALENDAR OF EVENTS](#)

[ARTICLE SUBMISSIONS](#)

[OUR STAFF](#)

[CONTACT US BY E-MAIL](#)



[CLUE HOMEPAGE](#)

[PREVIOUS ARTICLE](#) [FRONT PAGE](#) [NEXT ARTICLE](#)

Managing Rural Residential Development

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As many communities begin to prepare their comprehensive plans and consider the various elements required under the comprehensive planning law, the relationship between agricultural or open space preservation with housing can be both confusing and contentious. Especially for those communities that are experiencing growth pressure struggling to manage rural residential development along with other community concerns can be difficult. One primary goal of many communities is to balance residential development with agricultural needs, open space, and natural resources while trying to retain a sense of place. Several plan implementation tools are available that local governments can use including, but not limited to: Large minimum lot size, purchase of and transfer of development rights, overlay zones for shorelands, hillsides, and other environmentally sensitive areas, and conservation subdivisions.

This is the first of two articles addressing rural residential development. In this article, I provide a brief definition of each tool, how each tool works, potential benefits, limitations, and references. In the following article, we will provide a more in-depth look at one of these tools – conservation subdivisions.

Which Tool is “Right” for Our Community?

Each community should decide on the types of tools they want to use. Recognize that your community can use these tools together – they are not mutually exclusive. It

is reasonable, for example, to have a purchase of development rights program in place along with overlay zones and a conservation subdivision ordinance. Below is a list of criteria to consider when choosing plan implementation tools:

- Does your community have an accepted plan that identifies rural residential development or at least sprawl as an issue?
- Does the plan specify goals and objectives that address how your community will contend with rural residential development?
- Will the tool accomplish any of your community's goals and objectives?
- Is the tool politically acceptable?
- Can the local government or some other organization administer the new tool given current personnel or is another position or committee necessary?
- Are there any enforcement issues the local government personnel would need to contend with?
- To be effective, would the same tool need to be used by adjoining communities and is a cooperative effort possible?

Answering the above questions will give you a better idea which tools are appropriate to use in your community. Avoid choosing to use any plan implementation tool before you have done your homework and understand how that tool works and the implications for administering and enforcing it.

[Tools for Managing Rural Residential Development](#)

(See table below.)

For Further Reading

Daniels, Tom and Deborah Bowers. 1997. **Holding Our Ground: Protecting America's Farms and Farmland.** Washington, D.C.: Island Press.

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All comments and suggestions are appreciated for those who reviewed this article.

Tools for Managing Rural Residential Development

Tool	Definition	How it Works	Potential Benefits	Limitations
Large minimum lot size	<p>A common type of agricultural zoning that says that a farm cannot be broken into parcels below a certain size for farming purposes.</p> <p>Daniels and Bowers 1997: 117.</p>	<p>Designate minimum lot size within an agricultural zone.</p> <p>Determined by legal and political acceptance balanced with effective land protection.</p> <p>Examples: some Oregon counties – 80-acre minimum; McHenry County, IL – 40-acre minimum; Pennsylvania – 50-acre minimum.</p>	<p>Can be changed over time as circumstances change.</p> <p>Keep farmland in large blocks to maintain economic viability.</p> <p>Easy to administer.</p>	<p>Can be ineffective if lot size is reduced to a size that makes farming impossible.</p>
Purchase of development rights	<p>A landowner agrees to sell the rights to develop his/her property to a local government, land trust or DNR. The development rights to a piece of property can be separated from the bundle of rights that go with the land. With the sale of that development right, a conservation easement is put into effect which restricts development in perpetuity. The value of the development right is determined by the difference between the market value and agricultural value of the farmland.</p>	<p>Local government or land trust must determine how to buy development rights, bonds, impact fees, additional levy on property are some possibilities.</p> <p>A local ordinance designates how funds are to be allocated and which agency will operate the program.</p> <p>The PDR agency drafts program regulations and guidelines and selects criteria for making decisions on appropriate land to preserve.</p> <p>The PDR agency solicits and receives applications and ranks them.</p> <p>An appraisal of the development rights is conducted by a independent appraiser.</p>	<p>Seller gets sale price and possibly property and estate tax reduction. Voluntary and permanent means of land use control. Avoids property rights outcry that zoning can elicit. Equitable method of containing sprawl, protecting valuable farmland and openspace. Property is retained on tax rolls and is privately owned and managed. Can separate funding and managing conservation easements from administration of program.</p>	<p>Substantial acquisition costs involved.</p> <p>Can result in scattered preservation if only some landowners participate.</p> <p>Property owners may not donate development rights if they know they can be paid.</p> <p>Can undermine the power of regulation by creating incentive-based expectations.</p> <p>A challenge to administer and find funds.</p>

Tools for Managing Rural Residential Development (continued)

<p>Transfer of development rights</p>	<p>Similar to a PDR program in that the property owner agrees to separate his/her development rights from the bundle of rights that go with the land and a conservation easement is put into effect. Rather than the local government purchasing the development rights to a property, a TDR program transfer the "rights to develop" from one area to another. The property owner still sells his/her development rights, but those rights are bought by a developer. In turn, the developer can use those development rights to create a denser subdivision, for example.</p> <p>Daniels and Bowers 1997.</p>	<p>Must have a comprehensive plan in place.</p> <p>Transfer the "rights to develop" from one area – a "sending" or preservation area - to another – "receiving" or development area.</p> <p>The costs of purchasing the easements are recovered from developers who receive the building bonus.</p> <p>Buying development rights is similar to a PDR program, but more controlled than PDR.</p> <p>Designate sending and receiving areas. The components of a TDR program include a preservation zone, a growth area, a pool of development rights, and a procedure for transferring development rights.</p>	<p>Provides certainty about where development will happen</p> <p>Creates incentive for developers to buy development rights rather than the local government needing to find a source of funds to purchase them.</p> <p>Allows higher density (developer incentive) than zoning ordinance might allow.</p> <p>Creates a competitive market between sellers and buyers.</p>	<p>Lack of community willpower to designate a "receiving" area.</p> <p>Misconceptions about the concept of density and meaning of "higher" density.</p> <p>Program depends on a stable and predictable real estate environment.</p> <p>A consensus is necessary to place conservation easements on agricultural areas while allowing for an increase in development densities or "bonuses" in other areas.</p> <p>Can be a challenge to administer.</p>
<p>Overlay zones</p>	<p>A set of zoning requirements that is described in the ordinance text, is mapped, and is imposed in addition to those of the underlying district. It is a technique for imposing more restrictive standards for a certain area than those specified under basic zoning. Development within the overlay zone must conform to the requirements of both zones or the more restrictive of the two. It usually is employed to deal with special physical or cultural characteristics present in the underlying zone, such as flood plains, fragile environments, or historical areas.</p> <p>Schiffman 1999.</p>	<p>In Wisconsin a typical overlay zone is shoreland zoning. Shoreland zoning is overlaid onto usually already zoned areas, such as a residential zone around a lake.</p> <p>The ordinance must specify and map the area that is within the overlay zone.</p> <p>Other types of overlay zones include:</p> <p>Hazards overlay zones, such as floodplains;</p> <p>Hillside/slope overlay zones;</p> <p>Historic preservation overlay zones;</p> <p>Woodland protection overlay zones; and</p> <p>Groundwater overlay zones.</p>	<p>Communities can provide additional protection to environmentally sensitive areas without changing underlying zoning.</p> <p>Straightforward to administer.</p>	<p>Property owners, developers and other may not understand with which regulations they need to work.</p> <p>Like zoning, variances are possible and can dilute the power and usefulness of this type of zoning.</p>

Tools for Managing Rural Residential Development (continued)

<p>Conservation subdivisions</p>	<p>The purpose of a conservation subdivision is to protect natural resources while allowing for the maximum number of residences under current community zoning and subdivision regulations.</p>	<p>Can be formalized within an ordinance.</p> <p>One of the more popular methods advocated by Randall Arendt is a four step process that identifies primary and secondary conservation areas, designs open space to protect them, arrange houses outside of those protected areas and finally lay out streets, lots and infrastructure.</p> <p>Minnesota Land Trust and University of Minnesota 2001.</p>	<p>Achieves a community goal of preserving openspace at the same density standard.</p> <p>None of the land is taken for public use unless the developer/owners want it to be.</p> <p>There are a variety of ownership choices: The original landowner, a farmer, for example, can retain ownership of up to 70% of the land and continue to work that land as a farm; and/or a homeowner's association, a local government, or a land trust can manage the property.</p> <p>If implemented under a plan and with conservation as the motivation, potential benefits include: "does not require public expenditure of funds; does not depend on landowner charity; does not involve complicated regulations for shifting rights to other parcels; does not depend upon the cooperation of two or more adjoining landowners to make it work.</p> <p>Better Designs for Development in Michigan</p>	<p>It is not a panacea.</p> <p>Conservation subdivision design should take place with a planning framework and conservation goals in place.</p> <p>These subdivisions should connect to a broader network of conservation areas, if not a community will have a chopped up landscape.</p> <p>Conservations subdivisions not attached to already developed areas and not connected to services result in poor land use practices.</p> <p>May not provide any affordable housing.</p>
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Center for Land Use Education

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IN THIS ISSUE:

- ➔ [AN INNOVATIVE TOOL FOR MANAGING RURAL RESIDENTIAL DEVELOPMENT: A LOOK AT CONSERVATION SUBDIVISIONS](#)
- ➔ [WISCONSIN SUPREME COURT RULING: AGRICULTURAL USE VALUE ASSESSMENT](#)
- ➔ [COURT OF APPEALS UPHOLDS RULES FOR PRIVATE ONSITE WASTEWATER TREATMENT SYSTEMS](#)
- ➔ [IMPERVIOUS SURFACE - AN ENVIRONMENTAL INDICATOR](#)
- ➔ [CALENDAR OF EVENTS](#)
- ➔ [ARTICLE SUBMISSIONS](#)
- ➔ [OUR STAFF](#)
- ➔ [WHAT'S NEW AT THE CENTER](#)
- ➔ [CONTACT US BY E-MAIL](#)



[CLUE HOMEPAGE](#)

[FRONT PAGE](#) | [NEXT ARTICLE](#)

An Innovative Tool for Managing Rural Residential Development: A Look at Conservation Subdivisions

by Anna Haines, Ph.D.

This is the second of two articles addressing rural residential development. The [previous article on rural residential development](#) provided a definition of four related management tools (large minimum lot size, purchase of and transfer of development rights, and conservation subdivisions), and explained briefly how each tool worked, its potential benefits and limitations, and provided a list of references. In this article, I will provide a more in-depth look at conservation subdivisions.

The comprehensive planning law (or "Smart Growth" law) specifies nine elements that must be in the comprehensive plan. Among them is the implementation element that needs to outline the types of plan implementation tools a community will use to implement its plan. One primary goal of many communities is to balance residential development with agricultural needs, open space, and natural resources while trying to retain a sense of place. This kind of goal can make an important link between the housing, and agriculture, cultural and natural resources element of the comprehensive plan.

Consideration of the goals and objectives within the comprehensive plan is necessary as the community considers the types of tools it will use to achieve its plan. One potentially useful tool to achieve the above goal is to describe conservation subdivisions as a *floating* zoning district or a conditional use in residential districts in the local zoning or land division code.

A model conservation subdivision ordinance was prepared by UW Extension. Local governments are not required to adopt this ordinance (see Ohm 2000), but may find it useful in crafting their own conservation subdivision ordinance.

Conservation Subdivisions: A Definition

Conservation subdivisions are characterized by common open space and clustered compact lots. The purpose of a conservation subdivision is to protect farmland and/or natural resources while allowing for the maximum number of residences under current community zoning and subdivision regulations. In

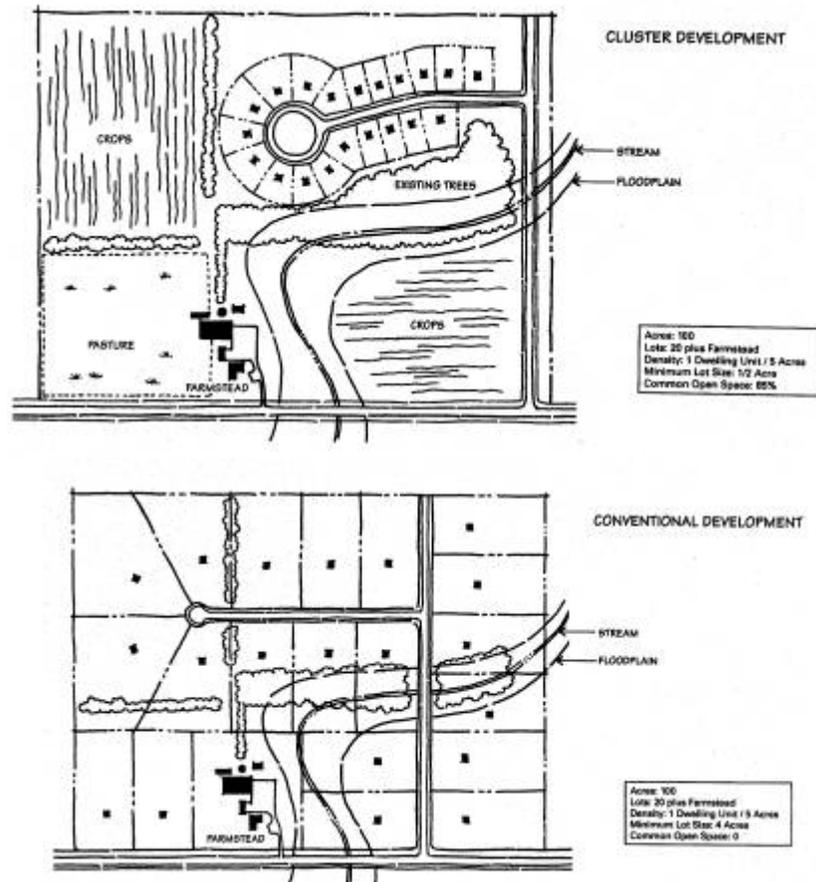
some cases a greater density (density bonus) may be offered in the local ordinance to encourage this approach to residential development planning. Generally, this tool is used for parcels 40 acres or larger.

Development Density

One interesting feature of conservation subdivisions is that they are density neutral (except where a density bonus is offered). What does density neutral mean? Many people assume that a conservation subdivision automatically implies a reduction in the number of lots allowed on a parcel of land. Actually, the same numbers of lots are built in a conservation subdivision as would be built in a conventional subdivision. Thus, a conservation subdivision maintains the same level of density as a conventional subdivision. Conventional lot-by-lot subdivisions spread development evenly throughout a parcel without consideration to environmental or cultural features (Ohm 2000).

The primary difference between conservation subdivisions and conventional ones involves the location of the homes on one part of the parcel, i.e., the homes are clustered. Other changes involve management and ownership of the land that has been left for preservation.

Figure 1: Conservation vs. Conventional Subdivision Layout



Source: SEWRPC. 2002. "Model Zoning Ordinance For Rural Cluster Development"
www.sewrpc.org/modelordinances/default.htm

Open Space Design, Use and Ownership Options

Conservation subdivision ordinances generally require permanent dedication of 40% or more of the total development parcel as open space. Open space design requirements often include contiguity and connection to other open space or conservation areas. Open space uses may include agriculture, forestry or outdoor recreation and in some cases has included use for waste water disposal or sports facilities in urbanizing areas. There are a variety of ownership choices for the open space (individual residential lots are owned as in conventional subdivisions): The original landowner can retain ownership of the land and continue to use it as a farm, for example (usually agricultural use is limited; a confined animal feed lot is an inappropriate use, while a vegetable farm is appropriate); a homeowner's association could manage it, it can be held as individual outlots for each of the building lots, or a local government or a land trust can manage the property for conservation purposes or outdoor recreation.

Consolidated infrastructure and reduced development costs

Clustering homes reduces the amount of infrastructure. For example, the linear miles of road are reduced; thus, the associated costs of construction, operations and maintenance are also reduced. As well it is possible to share wells and septic systems in these clustered developments. However, placement of wells and septic systems must be carefully designed to prevent unwanted uptake of wastewater into private wells.

Marketing amenities

Conservation subdivisions are desirable from a developer/realtor perspective. They appeal to potential homeowners who want easy access to open space for the views and/or for a range of outdoor activities, i.e., a "golf course" development without the golf course.

How it works

One of the more popular methods is advocated by Randall Arendt who has outlined a four step process. The process begins with the community identifying the cultural and natural resources that are valued on a specific parcel earmarked for development. This communication results in (i) identifying primary and secondary conservation areas, (ii) designing open space to protect them, (iii) arranging houses outside of those protected areas, and (iv) finally laying out streets, lots and infrastructure. Often between 40% to 80% of the site is permanently set aside for open space (Arndt 1992, Minnesota Land Trust 2000, Natural Lands Trust).

Potential Benefits

Conservation development or subdivisions **potentially** can benefit a community in a variety of ways:

- Achieves a community goal of preserving open space at the same density standard as is outlined in current ordinances.
- Establishes an open space network, if done within the context of a comprehensive plan and these types of developments/subdivisions are purposefully linked together. Continuous open space (farmland, forest or other natural resources) allows for greater benefits for the environment, i.e., habitat preservation for wildlife, and for a local economy if

dependent on agriculture and/or tourism. This open space network also can extend and join recreational trails.

- None of the land is taken for public use unless the developer/owners want it to be.
- Does not require public expenditure of funds.
- Does not depend on landowner charity.
- Does not involve complicated regulations for shifting rights to other parcels.
- Does not depend upon the cooperation of two or more adjoining landowners to make it work.
- Provides a quality residential and recreational environment.

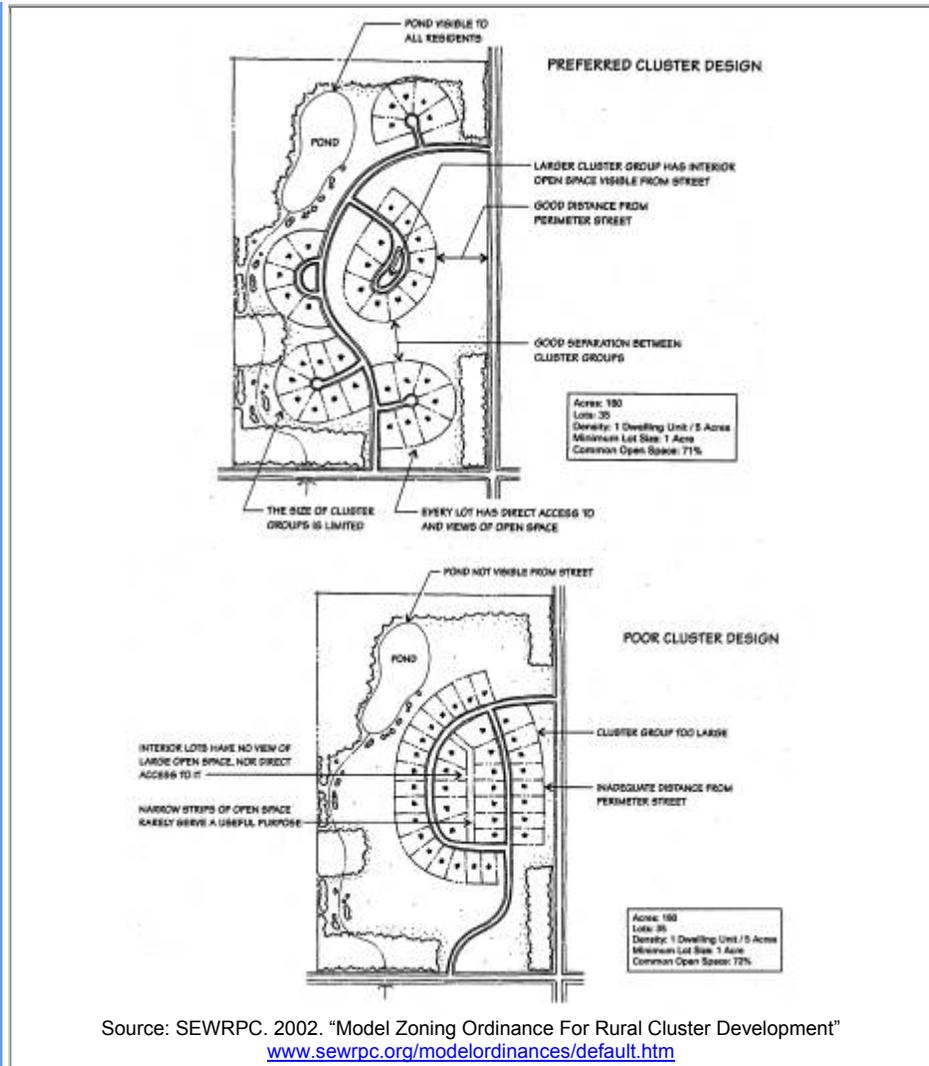
Source: Better Designs for Development in Michigan and Minnesota Land Trust and University of Minnesota 2001.

Limitations

While conservation subdivisions can achieve a variety of benefits, there are a number of limitations to consider:

- Conservation subdivisions are not a panacea. Used alone they cannot fully accomplish goals related to establishing and preserving open space or managing residential development.
- These subdivisions should connect to a broader network of conservation areas, if not a community will have a chopped up landscape.
- Conservations subdivisions not attached to already developed areas and not connected to services can result in poor land use practices.
- If one goal of your community is to create affordable housing, conservation subdivisions may not provide this housing option. Many conservation subdivisions are expensive, and are marketed to “high end consumers.” On the other hand, there is no reason why these types of subdivisions cannot include more affordable housing.
- If a goal of the community is to promote development that is less dependent on the automobile, conservation subdivisions may not help.
- Technical assistance is important. Poorly designed conservation subdivisions may not achieve open space goals of the community.

Figure 2: Good vs. Poor Cluster Design



Guidelines for conservation subdivision development and design:

- Conservation design is not a panacea
- Setting goals in the community's planning framework is critical.
- It is important to have good resource information
- Think big and plan for a large open space network
- Ordinances should create incentives and reduce barriers
- Open space should be diligently designed, not just set aside
- Water quality and quantity is paramount
- The management of the protected areas is critical
- Conservation development must be profitable
- Many of the barriers to change are not technical, but institutional

Source: Minnesota Land Trust, 2000.

Is This Tool "Right" for Our Community?

Each community should decide on the types of land management tools they

want to use. Recognize that your community should choose a number of tools rather than rely on one exclusively. The reason to choose a group of tools is to bring strength where one tool is weak and to send consistent signals to the development community and property owners regarding appropriate and planned uses for particular parcels. It is reasonable, for example, to have a purchase of development rights program in place along with overlay zones and a conservation subdivision ordinance. Below is a list of criteria to consider when choosing plan implementation tools, including conservation subdivisions:

- Does your community have an accepted plan that identifies rural residential development, open space, or sprawl as an issue?
- Does the plan specify goals and objectives that address how your community will contend with rural residential development?
- Will the tool accomplish any of your community's goals and objectives?

Is the tool politically acceptable?

Can the local government or some other organization administer the new tool given current personnel or is another position or committee necessary?

Are there any enforcement issues local government personnel would need to contend with?

To be effective, would the same tool need to be used by adjoining communities and/or is a cooperative effort possible?

Answering the above questions will give you a better idea which tools are appropriate to use in your community. Avoid choosing any plan implementation tool before you have done your homework. Understand how that tool works and the implications for administering and enforcing it.

Resources

Arndt, Randall. "Open Space" Zoning: What it is & Why it Works: www.plannersweb.com/articles/are015.html (from Planning Commissioners Journal, Issue 5, July/August 1992, page 4)

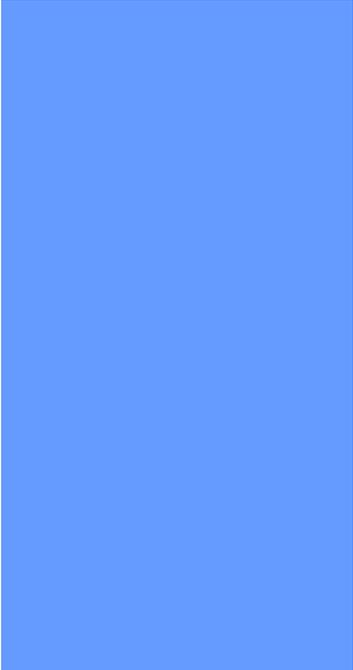
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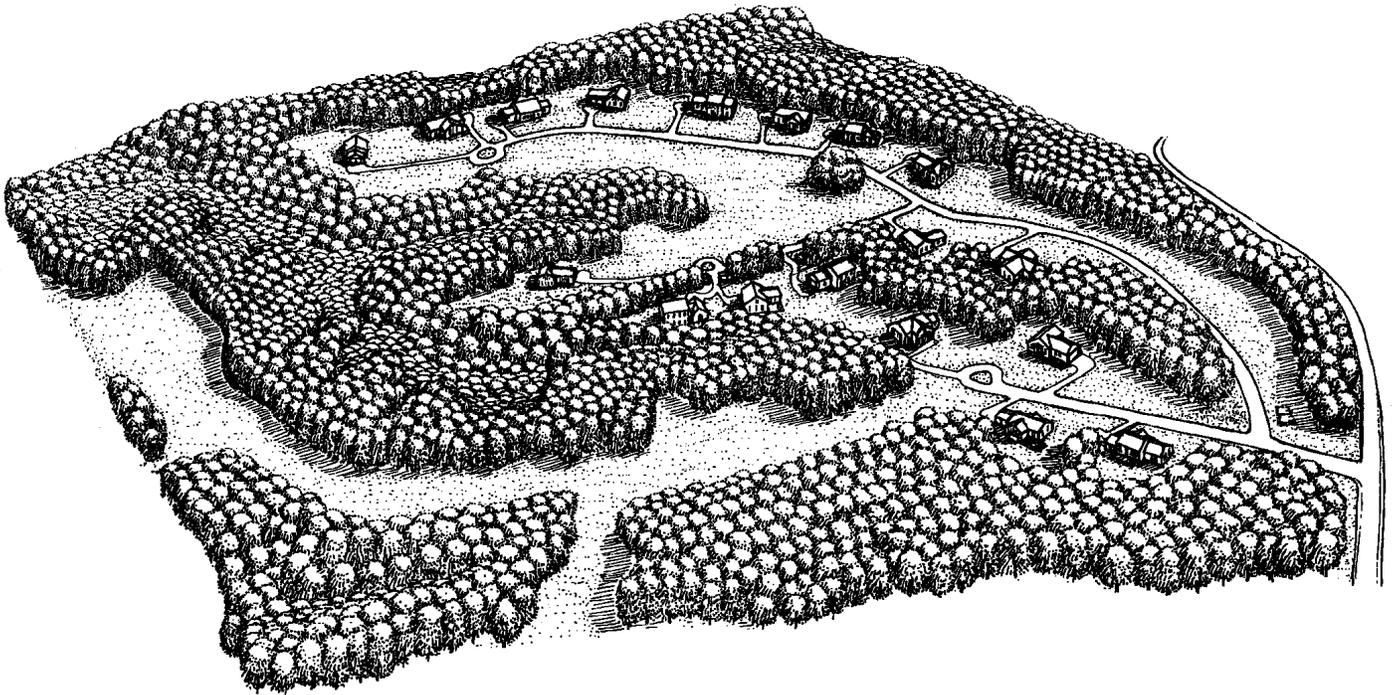
Wisconsin Department of Natural Resources. “Position on ‘Cluster Development.’” www.dnr.state.wi.us/org/es/science/landuse/tools/index.htm

Alicia Acken contributed to an earlier draft of this article. DNR’s Land Use Team, Michael Dresen, Gary Korb, Lynn Markham and Brian Ohm reviewed this article for form and content. Any errors, mistakes and omissions remain the responsibility of the author.

[FRONT PAGE](#) | [NEXT ARTICLE](#)

BETTER DESIGNS FOR DEVELOPMENT IN MICHIGAN

PUTTING CONSERVATION INTO LOCAL LAND USE REGULATIONS



Local communities can take control of their destinies so that conservation goals will be achieved simultaneously with development objectives, in a manner that is fair to all parties concerned. This “bird’s-eye” perspective shows a new way of designing residential developments which differ dramatically from the current land consumptive approach typical of most Michigan communities. In the subdivision shown above, the developer can build the maximum number of homes permitted under the community’s zon-

ing, while at the same time permanently protecting over half of the property, adding it to an interconnected network of conservation lands. The property illustrated above has been used elsewhere in this booklet to demonstrate the principles of “conservation planning/design.” If you would prefer to see new development create more livable communities and in the process conserve irreplaceable natural resources such as prime farmlands, forest land and wildlife habitat, this approach may be right for your community.

THE CONSERVATION PLANNING/DESIGN CONCEPT

Each time a property is developed (especially for residential purposes), an opportunity exists for adding land to a community-wide network of conservation lands. Although such opportunities are seldom taken in most communities, this situation could be reversed fairly easily by making several small but significant changes to a community's land use plan and regulations

Simply stated, Conservation Planning/Design rearranges the development on each parcel as it is

being planned so that only half (or less) of the buildable land is consumed by lots and streets. Without controversial "down zoning," the same number of lots can be developed, but in a less land consumptive manner, allowing the balance of the property to be permanently protected and added to an interconnected network of conservation lands. This "density neutral" approach provides a fair and equitable way to balance conservation and development objectives.

FOUR KEY CONSERVATION TOOLS

Experience around the country has shown communities which are likely to be successful at conserving significant amounts of land on an on-going basis incorporate the following techniques into their community planning:

1 *Envisioning the Future: Performing "Community Audits"*

Successful communities have a realistic understanding of their future. The audit projects past and current development trends into the future so that officials and residents may easily see the long-term results of continuing with current land use regulations. Communities use this knowledge to periodically review and adjust their goals and strategies for conservation and development.

2 *Identifying Networks of Conservation Lands*

Successful communities have a good understanding of their important natural, scenic and historic resources. They establish reasonable goals for conservation and development that reflect their special resources, existing land use patterns and anticipated growth. Their Land Use Plans document these resources, goals and policies. The plan contains language about the kinds of ordinance updating and conservation programs necessary for those goals to be realized. A key part of the Land Use plan is a Map of Potential Conservation Lands that is intended to identify the location of potential conservation lands in each development as it is being laid out.

3 *Conservation Zoning: A "Menu of Choices"*

Successful communities have legally defensible, well-written zoning regulations that meet their "fair share" of future growth and provide for a logical balance between community goals and private landowner interests. They incorporate resource suitabilities, flexibility, and incentives to require the inclusion of permanent conservation lands into new development. The four zoning options summarized in this publication, and described in detail in the Better Designs for Development manual, respect the property rights of landowners and developers without unduly impacting the remaining natural areas that make our communities such special places in which to live, work and recreate.

4 *Conservation Design: A Four Step Process*

Successful communities recognize that both design standards and the design process play an important part in conserving a community's natural and scenic resources. Such communities adopt land use regulations which require site planning while identifying the special features of each property, and introduce a simple methodology showing how to lay out new development, so that the majority of those special features will be permanently protected in designated conservation areas or preserves. To a considerable extent, these areas can be pre-identified in the Land Use Plans' Map of Potential Conservation Lands so that as each area is developed it will form an integral part of a community-wide network of protected conservation lands, as noted above. 

ENVISIONING THE FUTURE

PERFORMING "COMMUNITY AUDITS"

The future that faces most communities in Michigan under current zoning practices is the systematic conversion of every unprotected acre of buildable land into developed uses. Most local ordinances allow, encourage and in many cases mandate standardized layouts of "wall-to-wall lots." Over a period of time this process produces a broader pattern of "wall-to-wall sprawl" (see Figure 1). The "community audit" visioning process helps local officials and residents see the ultimate result of continuing to implement current land-use policies. The process helps start discussions about how current trends can be modified so that a more desirable future is ensured.

No community active plans to become a bland expanse of suburban-type "sprawl." However, most zoning codes program exactly this outcome. Communities can perform audits to see the future before it happens, so that they will be able to judge whether a mid-course correction is needed. A community audit entails:

Numerical Analysis

The first step involves a numerical analysis of growth projections, both in terms of the number of dwelling units and the number of acres that will probably be converted into houselots and streets under present codes.

Written Evaluation

The second step consists of a written evaluation of the land-use regulations that are currently on the books, identifying their strengths and weaknesses and offering constructive recommendations about how they can incorporate the conservation techniques described in this booklet. It should also include a realistic appraisal of the extent to which private conservation efforts are likely to succeed in protecting lands from development through various non-regulatory approaches such as purchases or donations of conservation easements or fee title interests.

"Build-Out" Maps

The third step entails mapping future development patterns on a map of the entire community (see Figure 2). Alternatively, the "build-out map" could focus only on selected areas in the community where development is of the greatest immediate interest, perhaps due to the presence of special features identified in the Land Use Plan or vulnerability due to development pressures.

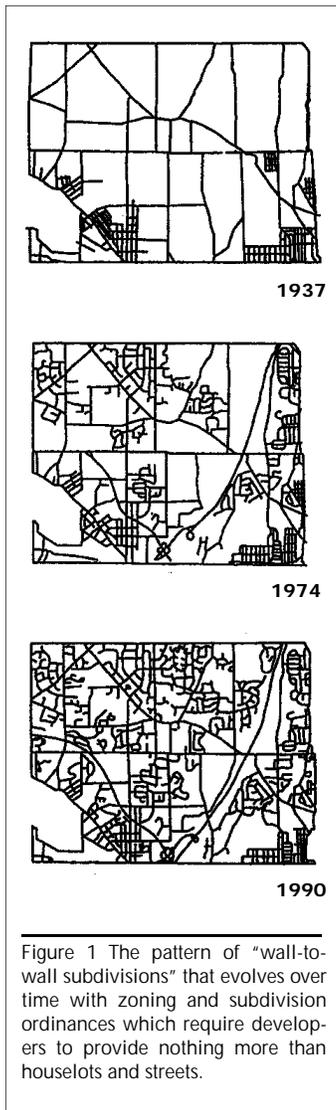


Figure 1 The pattern of "wall-to-wall subdivisions" that evolves over time with zoning and subdivision ordinances which require developers to provide nothing more than houselots and streets.



Figure 2 A matching pair of graphics, taken from an actual "build-out map," showing existing conditions (mostly undeveloped land) contrasted with the potential development pattern of "checkerboard suburbia" created through conventional zoning and subdivision regulations.

The following parts of this booklet describe practical ways in which communities can take control of their destinies so that conservation goals will be achieved simultaneously with development objectives, in a manner that is fair to all parties concerned.

IDENTIFYING NETWORKS OF CONSERVATION LANDS

Although many communities in Michigan have adopted Land Use Plans which outline the need to protect their natural, aesthetic and historic resources, very few have taken the next logical step of identifying these areas and creating a Map of Potential Conservation Lands

Such a map is the first step for any community interested in conserving natural and aesthetic resources in an interconnected network. The Map of Potential Conservation Lands serves as the tool which guides decisions regarding which land to protect in order for the network to eventually take form and have substance.

A Map of Potential Conservation Lands usually starts with information contained in the community's existing planning documents. The next task is to identify two kinds of resource areas. Primary Conservation Areas comprise only the most severely constrained lands, where development is typically restricted under current codes and laws (such as wetlands, flood plains, and areas where slopes exceeding 20-25% predominate). Secondary Conservation Areas include all other locally noteworthy or significant features of the natural or cultural landscape. This may include features such as mature woodlands, wildlife habi-

tats and scenic roadways, prime and unique farmlands, prime timberlands, groundwater recharge areas, greenways and trails, river and stream corridors, historic sites and buildings, and scenic viewsheds. These Secondary Conservation Areas are often best understood by the local residents who may be directly involved in their identification. Usually under most community land use regulations these resource areas are totally unprotected and are simply zoned for one kind of development or another.

A base map is then prepared on which the Primary Conservation Areas have been added to an inventory of lands which are already protected (such as parks, land trust preserves, and properties under conservation easement). Clear acetate sheets (or GIS Data Layer) showing each kind of Secondary Conservation Area are then laid on top of the base map in an order reflecting the community's preservation priorities (as determined through public discussion).

This "sieve mapping" process will reveal certain situations where two or more conservation features appear together (such as woodlands and wildlife habitats, or farmland and scenic viewsheds). It will also reveal gaps where no features appear.

Although this exercise is not an exact science, it frequently helps local officials and residents visualize how various kinds of resource areas are spatially related to one another, and enables them to tentatively identify both broad swaths and narrow corridors of resource land that could be protected in a variety of ways. Figure 3 illustrates a portion of a township map which has followed this approach.

The planning techniques which can best implement the community-wide Map of Potential Conservation Lands are **Conservation Zoning** and **Conservation Design**. These techniques, which work hand in hand, are described in detail below. Briefly stated, **Conservation Zoning** expands the range of development choices available to landowners and developers. And just as importantly, it also eliminates the option of creating full-density suburban sprawl layouts that convert all land within new developments into new lots and streets.

The second technique, **Conservation Design**, devotes half or more of the buildable land area within a development as undivided permanent conservation lands. Not surprisingly, the most important step in designing a new development using this approach is to identify the land that is to be preserved. By using the community-wide Map of Potential Conservation Lands as a template for the layout



Figure 3 Part of a Map of Potential Conservation Lands showing roads, parcel lines, historic structures (large dots), and the following resource areas: wetlands/floodplains (dark gray), woodlands (medium gray), open fields and pastures (white), and prime farming soils (diagonal hatched lines).

and design of conservation areas within new developments, an interconnected network of conservation lands spanning the entire community is eventually created.

Figure 4 shows how the conservation lands in three adjoining developments has been designed to connect, and illustrates the way in which the Map of Potential Conservation Lands can become a reality.

Figure 5 provides a bird's-eye view of a landscape where an interconnected network of conservation lands has been gradually protected through the steady application of conservation zoning techniques and conservation design standards.

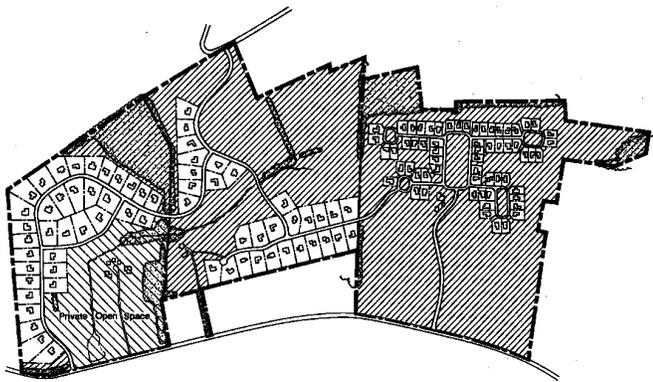


Figure 4 The conservation lands (shown in gray) were deliberately laid out to form part of an interconnected network of open space in these three adjoining subdivisions.

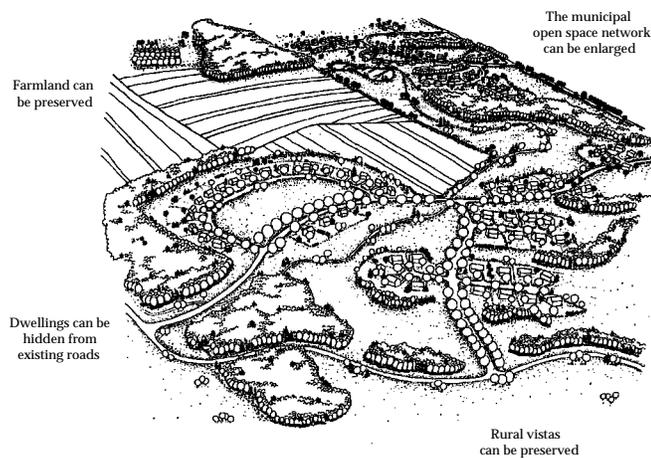


Figure 5 The end-result of applying the techniques described in this booklet is illustrated in this perspective sketch prepared by the Montgomery County Planning Commission.

CONSERVATION ZONING

A "MENU" OF CHOICES

As mentioned previously the main reason that most new development in Michigan consists of nothing more than new lots and streets is that most communities have adopted a very limited planning model whose sole purpose is to convert natural lands into developed properties. Little if anything is asked in respect to conserving natural resources or providing neighborhood amenities (see Figure 9).

Communities wishing to discourage this type of development pattern need to consider modifying their zoning to require new development to set aside at least 50 percent of the buildable land as permanently protected conservation lands. The development potential that could normally be realized in this area is "transferred" to the remaining 50 percent of the buildable lands on the property.

Following this approach, a municipality would first calculate a site's yield using traditional zoning. A developer would then be permitted full density only if at least 50 percent (or more) of the buildable land is maintained as undivided conservation lands (illustrated in Figure 6: "Option 1"). Under certain conditions communities might also consider offering as much as a 100 percent density bonus for protecting 70 percent of the land (Figure 7: "Option 2").

It is noteworthy that the 36 village-like lots in Option 2 occupy less land than the 18 lots in Option 1, and that Option 2 therefore contributes more significantly to the goal of creating community-wide networks of conservation lands. The village-scale lots in Option 2 are based on traditional neighborhood design principles and are modeled after historic hamlet and village layouts. This type of development has proven to be particularly popular with empty nesters, single-parent households, and couples with young children.

Developers wishing to serve the large lot market have a "country properties" option (Figure 8: "Option 3"). Under this option up to 20 percent of the properties gross area (10 acres in this case) may be split into small lots. The average size of these small lots may be no less than two acres. The remainder of the property may remain as a single contiguous parcel or if area allows this parcel may be split into large lots a minimum of 25 acres in area..

Under conservation zoning, absent from this menu of choices is the conventional full-density development providing no conservation lands (Figure 9). Because that kind of development causes the largest loss of resource lands and poses the greatest obstacle to conservation efforts, it is not included as an option under this approach.

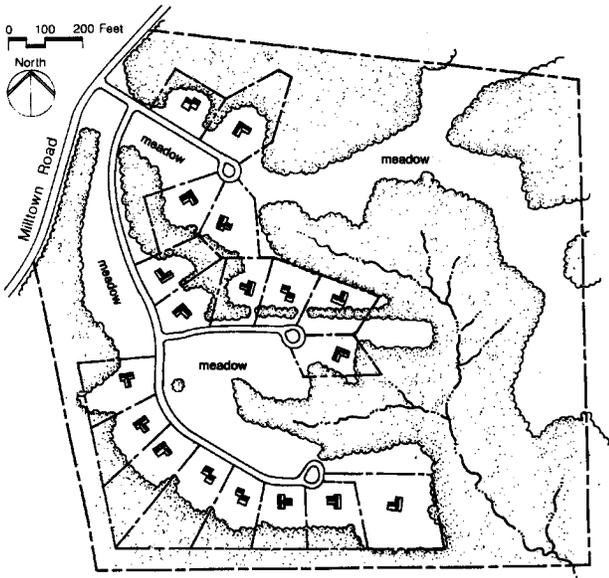


Figure 6
 Option 1 Density-neutral with Pre-existing Zoning
 18 Lots Lot Size Range: 20,000 to 40,000 sq. ft.
 50% undivided open space

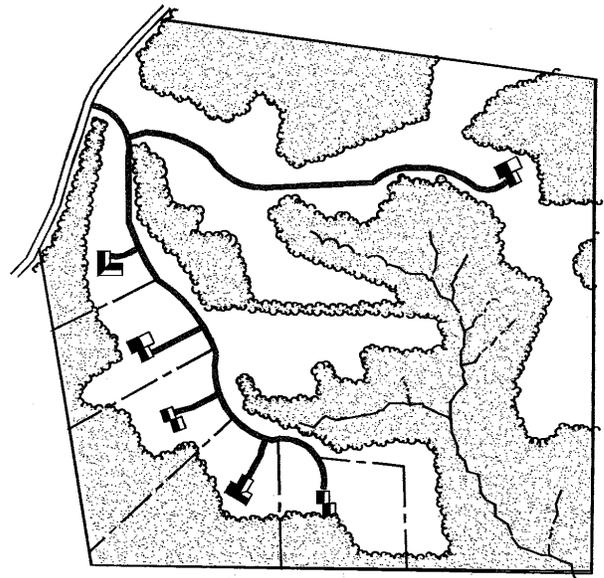


Figure 8
 Option 3 County Properties
 A maximum of 5 lots may be created on 10 acres
 The remainder of the land remains as a single parcel or may be divided into lots 25 acres or greater in area

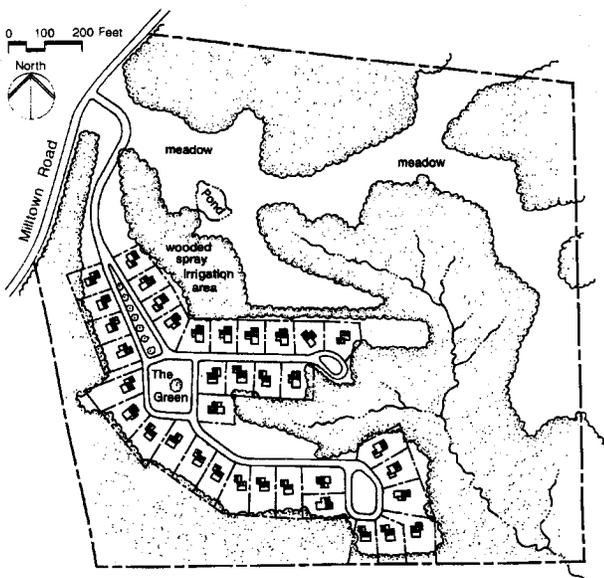


Figure 7
 Option 2 Hamlet or Village
 36 Lots Lot Size Range: 6,000 to 12,000 sq. ft.
 70% undivided open space

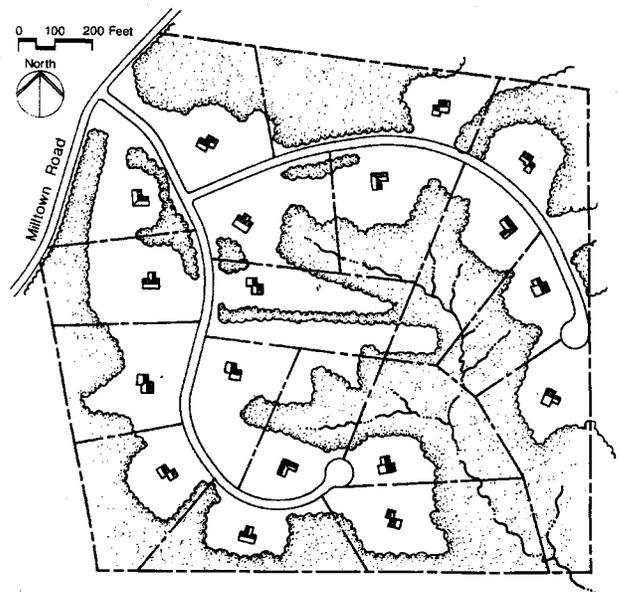


Figure 9 The kind of subdivision most frequently created in Michigan is the type which blankets the development parcel with houselots, and which pays little if any attention to designing around the special features of the property. However, such a sketch can provide a useful estimate of a site's capacity to accommodate new houses at the base density allowed under zoning—and is therefore known as a "Yield Plan."

CONSERVATION DESIGN, A FOUR-STEP PROCESS

Designing developments around the central organizing principle of land conservation is not difficult. However, it is essential that ordinances contain clear standards to guide the conservation design process. The four-step approach described below has been proven to be effective in laying out new full-density developments where all the significant natural and cultural features have been preserved.

Step One consists of identifying the land that should be permanently protected. The developer incorporates areas pre-identified on the community-wide Map of Potential Conservation Land and then performs a site analysis in order to precisely locate features to be conserved. The developer first identifies all the Primary Conservation Areas (Figure 10). He then identifies Secondary Conservation Areas (Figure 11) which comprise noteworthy features of the property that are typically unprotected under current codes. These include: mature woodlands, greenways and trails, river and stream corridors, prime farmland, hedgerows and individual free-standing trees or tree groups, wildlife habitats and travel corridors, historic sites and structures, scenic viewsheds, etc. After “greenlining” these conservation elements, the remaining

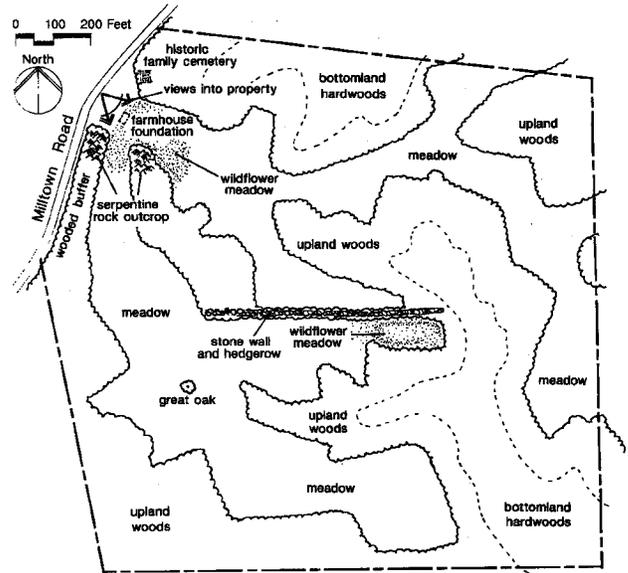


Figure 11
Step One, Part Two
Identifying Secondary Conservation Areas

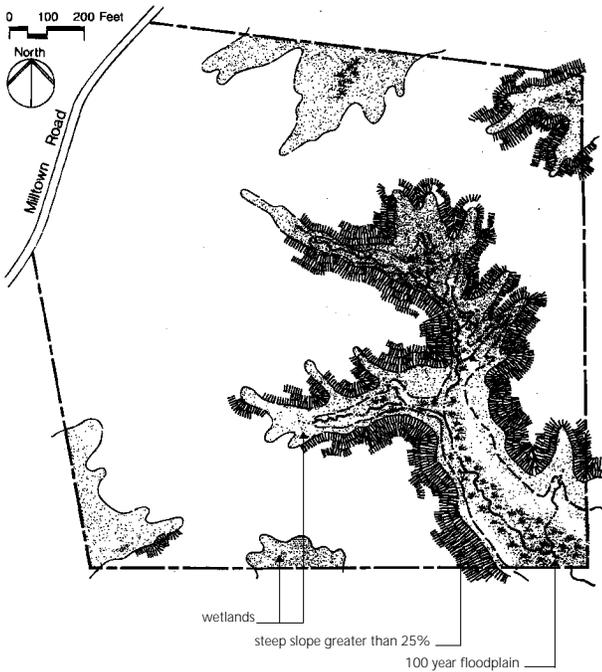


Figure 10
Step One, Part One
Identifying Primary Conservation Areas

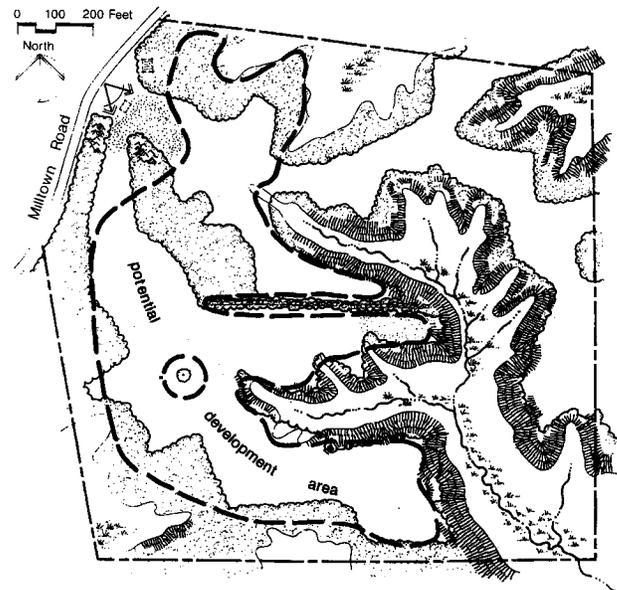


Figure 12
Outline Potential Development Areas
for Options 1 & 2

part of the property becomes the Potential Development Area (Figure 13).

Step Two involves locating sites of individual building envelopes within the Potential Development Area so that their views of the conservation lands are maximized (Figure 13). The number of building envelopes is a function of the density permitted within the zoning district, as shown on a Yield Plan (Figure 9).

Step Three simply involves “connecting the dots” with streets and informal trails (Figure 14), while **Step Four** consists of drawing in the lot lines (Figure 15).

This approach reverses the sequence of steps in laying out conventional developments, where the street system is the first thing to be identified, followed by lot lines fanning out to encompass every square foot of ground into new lots. When communities require nothing more than “new lots and streets,” that is all they receive. By setting community standards higher and requiring 50 to 70 percent conservation lands as a precondition for achieving full density, officials can effectively encourage the conservation of natural and scenic resources in their community. The protected conservation lands in each new development become building blocks that add new acreage to a community-wide network of interconnected conservation lands each time a property is developed.

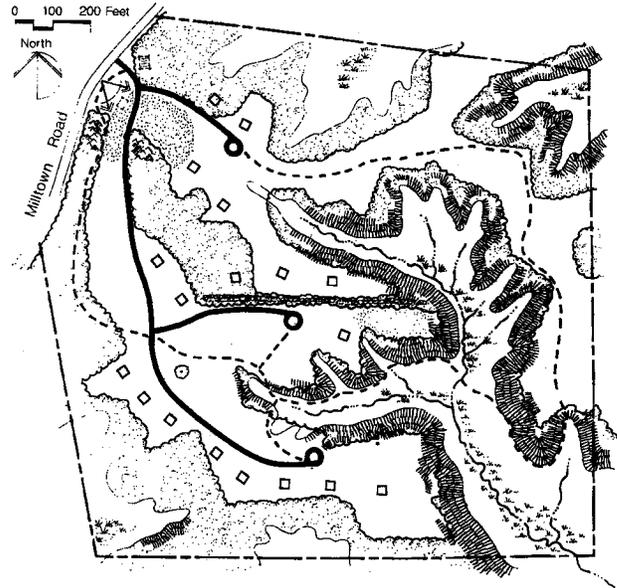


Figure 14
Step Three
Aligning Streets and Trails

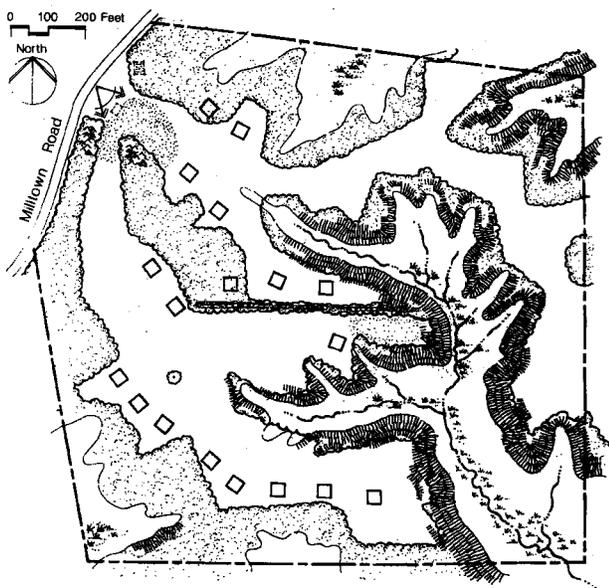


Figure 13
Step Two
Locating House Sites



Figure 15
Step Four
Drawing in the Lot Lines

FREQUENTLY ASKED QUESTIONS

ABOUT CONSERVATION DEVELOPMENT DESIGN

Q. Does conservation planning/design involve a “takings”?

A. No. People who do not fully understand this conservation-based approach to development may mistakenly believe that it constitutes “a taking of land without compensation.” This misunderstanding may stem from the fact that conservation developments, as described in this booklet, involve either large percentages of undivided conservation lands or lower overall building densities.

There are two reasons why this approach does not constitute a “takings.”

First, no density is taken away. Conservation zoning is fundamentally fair because it allows landowners and developers to achieve full density under the municipality’s current zoning and, in some cases even to increase that density significantly through several different “as-of-right” options. Of the three options previously described, two provide for either full or enhanced densities. The other option offers the developer the choice to lower densities and increased lot sizes. Although conservation zoning precludes full density layouts that do not include conservation

lands, this is legal because there is no constitutional “right to sprawl.”

Second, no land is taken for public use. None of the land which is required to be designated for conservation purposes becomes public (or even publicly accessible) unless the landowner or developer wants it to be. In the vast majority of situations, communities themselves have no desire to own and manage such conservation land, which they generally feel should be a neighborhood responsibility. In cases where local officials wish to provide community recreational facilities (such as ballfields or trails) within conservation developments, the community must negotiate with the developer for the purchase of that land on a “willing seller/willing buyer” basis. To facilitate such negotiations, conservation zoning ordinances can be written to include density incentives to persuade developers to designate specific parts of their conservation land for public ownership or for public access and use.

Q. How can a community ensure permanent protection for conservation lands?

A. The most effective way to ensure that the conservation of land in a new development will

remain undeveloped forever is to place a permanent conservation easement on it. Such easements run with the chain of title, in perpetuity, and specify the various uses that may occur on the property. These restrictions supersede zoning ordinances and continue in force even if legal densities rise in future years. Easements are typically held by land trusts and units of government. Sometimes adjacent property owners are also easement co-holder in conjunction with the local unit of government or land trust. Deed restrictions and covenants are, by comparison, not as effective as easements, and are not recommended for this purpose. Easements can be modified only within the spirit of the original agreement, and only if all the co-holders agree.

Q. What are the ownership, maintenance, tax and liability issues?

A. Among the most commonly expressed concerns about developments with permanently protected conservation lands are questions about who will own and maintain the conservation land, and who will be responsible for the potential liability and payment of property

taxes. The short answer is that whoever owns the conservation land is responsible for the above.

Q. But who owns this land?

A. *Ownership Choices*

There are basically four options, which may be combined within the same development where that makes the most sense.

1. *Individual Landowner*

At its simplest level, the original landowner (a farmer, for example) can retain ownership of 70 to 100 percent of the conservation land to keep it in the family. (In these cases up to 30 percent of the conservation lands could be reserved for common neighborhood use by development residents.) That landowner can also pass this property on to sons or daughters, or sell it to other individual landowners, with permanent conservation easements running with the land and protecting it from development under future owners.

2. *Homeowners’ Associations*

Most conservation land within developments is owned and managed by homeowners’ associations

(HOAs). A few basic ground rules encourage a good performance record. First, membership must be automatic, a precondition of property purchase in the development. Second, zoning should require that bylaws give such associations the legal right to place liens on properties of members who fail to pay their dues. Third, facilities should be minimal (ballfields and trails rather than clubhouses and swimming pools) to keep annual dues low. And fourth, detailed maintenance plans for conservation areas should be required by the community as a condition of approval. The community should have enforcement rights and may place a lien on the property should the HOA fail to perform their obligations to maintain the conservation land.

3. Land Trusts

Although homeowners' associations are generally the most logical recipients of conservation land within developments, occasionally situations arise where such ownership most appropriately resides with a land trust (such as when a particularly rare or significant natural area is involved). Land trusts are private, charitable groups whose principal purpose is to protect land under its stewardship from inappropriate change. Their most common role is to hold easements or fee

simple title on conservation lands within new developments and elsewhere in the community.

To cover their costs in maintaining land they own or in monitoring land they hold easements on, land trusts typically require some endowment funding. When conservation zoning offers a density bonus, developers can donate the proceeds from the additional "endowment lots" to such trusts for maintenance or monitoring.

4. Municipality or Other Public Agency

In special situations a local government might desire to own part of the conservation land within a new development, such as when that land has been identified in a Land Use Plan as a good location for a neighborhood park or for a link in a community trail network. Developers can be encouraged to sell or donate certain acreage to communities through additional density incentives, although the final decision would remain the developer's.

5. Combinations of the Above

As illustrated in Figure 18, the conservation land within new developments could involve multiple ownerships, including (1) "non-common" conservation lands such as cropland retained by the original farmer, (2) common conservation lands such as ballfields owned by an

HOA, and (3) a trail corridor owned by either a land trust or by the community.

Tax Concerns

Property tax assessments on conservation developments should not differ, in total, from those on conventional developments. This is because the same number of houses and acres of land are involved in both cases (except when part of the conservation lands is owned by a public entity, which is uncommon). Although the conservation lands in conservation developments is usually taxed at a lower rate because easements prevent it from being developed, the adjacent lots usually are taxed at a higher rate since their location next to permanently protected conservation lands usually result in them being more desirable.

Q. How does this conservation approach differ from "clustering"?

A. The conservation approach described in the previous pages differs dramatically from the kind of "clustering" that has occurred in many communities throughout Michigan over the past several decades. The principal points of difference are as follows:
Higher Percentage and Quality of Conservation lands

In contrast with typical cluster codes, conservation

zoning establishes higher standards for both the quantity and quality of conservation lands that is to be preserved. Under conservation zoning, 50 to 70 percent of the unconstrained land is permanently set aside. This compares with cluster provisions that frequently require only 25 to 30 of the gross land area be conserved. That minimal land area usually ends up including all of the most unusable land as conservation lands, and sometimes also includes undesirable, left-over areas such as stormwater management facilities and land under high-tension power lines.

Conservation lands Pre-Determined to Form Community-wide Conservation Network

Although clustering has at best typically produced a few small "green islands" here and there in any community, conservation zoning can protect

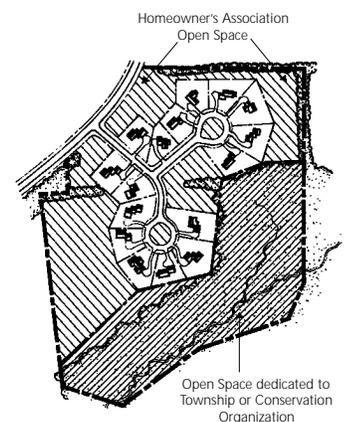


Figure 16 Various private and public entities can own different parts of the open space within conservation subdivisions, as illustrated above.

blocks and corridors of permanent conservation lands. These areas can be pre-identified on in the community's Map of Potential Conservation Lands so that each new development will add to rather than subtract from the community's conservation lands acreage.

Eliminates the Standard Practice of Full-Density with No Conservation lands

Under this new system, full density is only achievable for layouts in which 50 percent or more of the unconstrained land is conserved as permanent, undivided conservation lands. By contrast, cluster zoning provisions are typically only optional alternatives within ordinances that permit full density, by right, for stan-

dard "cookie-cutter" designs with no conservation lands.

Q. How do residential values in conservation developments compare to conventional developments?

A. Another concern of many people is that homes in conservation developments will differ in value from those in the rest of the community. Some believe that because so much land is set aside as conservation lands, the homes in a conservation development will be prohibitively priced and the community will become a series of elitist enclaves. Other people take the opposite view, fearing that these homes will be smaller and less expensive than their own because of the

more compact lot sizes offered in conservation developments.

Both concerns are understandable but they miss the mark. Developers will build what the market is seeking at any given time, and they often base their decision about selling price on the character of surrounding neighborhoods and the amount they must pay for the land.

In conservation developments with substantial open space, there is little or no correlation between lot size and price. These developments have sometimes been described as "golf course communities without the golf course," underscoring the idea that a house on a small lot with a great view is frequently worth as much or more than the same house on a

larger lot which is boxed in on all sides by other houses.

It is a well-established fact of real estate that people pay more for park-like settings, which offset their tendency to pay less for smaller lots. Successful developers know how to market homes in conservation developments by emphasizing the conservation lands. Rather than describing a house on a half-acre lot as such, the product is described as a house with 20 and one-half acres, the larger figure reflecting the area of conservation land that has been protected in the development. When that conservation area abuts other similar land, as in the township-wide conservation lands network, a further marketing advantage exists. 

RELATIONSHIP OF THE BETTER DESIGNS

APPROACH TO OTHER PLANNING TECHNIQUES

Successful communities employ a wide array of conservation planning techniques simultaneously, over an extended period of time. Communities should continue their efforts to preserve special properties in their entirety whenever possible, such as by working with landowners interested in donating easements or fee title to a local conservation group, purchasing development rights or fee title with county, state or federal grant money, and transferring development rights to certain "receiving areas" with increased density. While these techniques can be effective, their potential for influencing the "big picture" is limited.

The conservation approach outlined above offers great potential because it:

1. does not require public expenditure of funds
2. does not depend upon landowner charity
3. does not involve complicated regulations for shifting rights to other parcels
4. does not depend upon the cooperation of two or more adjoining landowners to make it work

The conservation planning/design approach offers communities a practical way of protecting large acreages of land in a methodical and coordinated manner. 