

# *Conservation Subdivision Design Handbook*



Prairie Crossing, Grayslake, Illinois

*Moving toward a profitable balance between  
conservation and development in Southwestern Illinois*

**Southwestern Illinois Resource Conservation & Development, Inc.**

2006

# Contents

Overview .....	3
Benefits of Conservation Design .....	4
Relationship of Conservation Subdivision Design to Other Strategies .....	5
Establishing a Framework for Conservation Development .....	5
The Ideal Parcel .....	7
The Process .....	7
Design Example .....	8
Open Space: Characteristics .....	10
Open Space: Protection and Maintenance .....	11
Open Space: Ambiguities .....	11
Is Conservation Design Profitable? .....	12
Implementation Strategies .....	13
Conclusion .....	13
References and Resources .....	14

*This Conservation Subdivision Design Handbook is the result of a collaborative effort by local stakeholders to lay the groundwork for conservation development in Southwestern Illinois and the greater St. Louis Metro area. Working together as the Conservation Subdivision Design Task Force, a diverse group of planners, engineers, municipal officials, and others with an interest in residential development has collaborated to identify issues and strategies to help this region move toward a development approach that balances development and conservation.*

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## Overview

Conservation subdivisions have been described as “golf course communities...without the golf courses”. A conservation subdivision involves the same attention to site design and the same economic dynamics as a golf course community (i.e., a small lot with access to a shared amenity commands a premium price). In the case of a golf course community the proximity to a recreational amenity, the guarantee that the view of the golf course will not change and the exclusivity of the community contribute to desirability in the market despite the more compact arrangement of houses on smaller lots. The same factors drive the market in a conservation subdivision. However, in a conservation subdivision, the shared amenity is protected open space instead of a golf course.

Conservation subdivision design requires careful attention to site planning to delineate areas to be

protected as open space and areas to be developed as home sites. Ideally, a conservation design will identify unique, scenic, or significant natural features of a site to be preserved in large contiguous blocks. Homes and lots are then laid out to maximize visual and physical access to the open space by the residents. Homes are clustered together on smaller lots, usually in a few areas of the site to maximize each resident’s access to the open space. The combined effect of the protected open space and the clustered homes results in an average overall density no greater than the density achieved using a conventional subdivision design. An easement or other mechanism for preserving the open space ensures that the open space will not be developed.

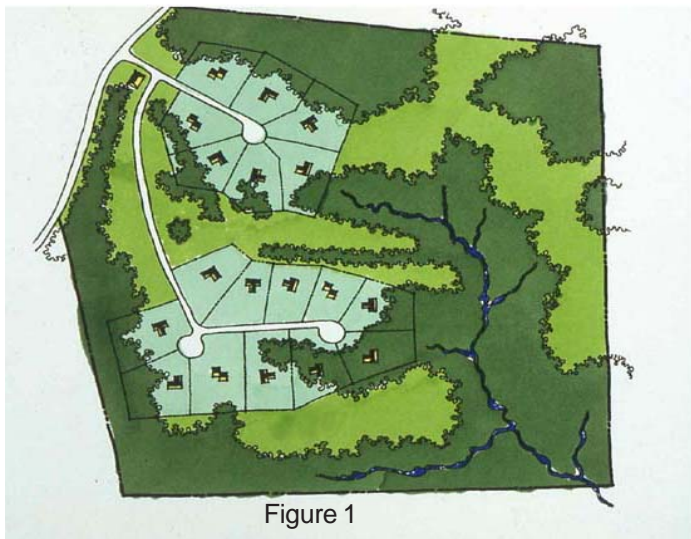


Figure 1

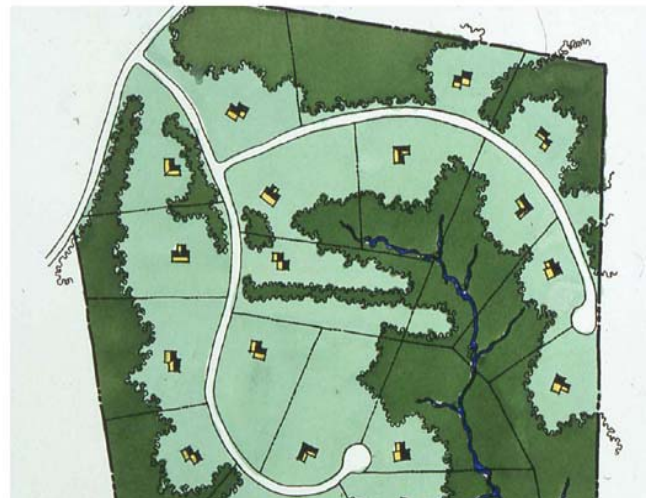


Figure 2

## Density

Conservation design yields the same number of homes on a given parcel as a conventional subdivision design. In Figure 1 and Figure 2, the same parcel is developed for 18 homes. The difference is the layout of the homes and lots, with the conservation design resulting in less pavement, shorter distances to run utilities, and greater open space preservation while still providing 18 home sites.

*(Diagrams reprinted with permission of The Countryside Program)*

## Benefits of Conservation Design

Conservation subdivision design offers benefits for developers, residents, local governments, and the environment. For developers, the plan review and approval process can be smoother because opposition to development based on concerns about loss of open space, scenic vistas, regional character and wildlife habitat are addressed in the conservation design.

The compact layout of the developed portion of the site provides multiple benefits to both the developer and the municipality. During the construction phase, the developer has shorter runs of utilities and roads to construct. The reduced pavement area reduces stormwater runoff, so there is less need for stormwater detention basins. The local government will benefit from the compact layout of the streets as well, with savings on pavement resurfacing and snow removal over the life of the development. In the sales and marketing phase, the developer has an advantage in marketing a conservation

subdivision as a unique community with plenty of open space and natural beauty, and a guarantee that the beautiful view of the open space will remain undeveloped. The local government may also benefit from the positive image of encouraging progressive projects that protect natural resources without limiting growth.

For home-buyers, the open space is a valuable amenity for aesthetic and recreational reasons, as well as for economic reasons. Homes in conservation subdivisions tend to appreciate faster than comparable homes in conventional subdivisions and to sell for higher prices than similar homes on larger lots in subdivisions without significant open space amenities. The environmental benefits of conservation subdivision design include reduced runoff and pollution, natural filtration through riparian buffers, habitat protection, preservation of corridors for wildlife migration and biodiversity.

**Potential benefits of conservation subdivisions**

	Developer	Municipality	Homeowner	Citizens
Smoother review/approval process <sup>1</sup>	x	x		
Reduced road construction and utility infrastructure costs resulting from compact layout <sup>1</sup>	x			
Reduced stormwater runoff; less need for stormwater management facilities <sup>1</sup>	x			
Reduced maintenance costs for roads (resurfacing, snow removal) and pipes <sup>1</sup>		x		
Built-in community identity and marketing strategy	x			
Reduced demand for new public parkland* <sup>1</sup>		x		
Access to active and passive recreation areas* <sup>1</sup>			x	x
Opportunities for community interaction <sup>1</sup>			x	
Adjacent property values are upheld <sup>1</sup>		x		x
CSD homes appreciate faster than homes in conventional subdivisions <sup>1</sup>			x	
CSD homes sell faster than homes in conventional subdivisions <sup>2</sup>	x		x	
CSD developments are more profitable than conventional subdivisions <sup>2</sup>	x			
Greenbelt linkages for wildlife and pedestrians at no cost to taxpayers <sup>1</sup>		x		x
Streams are buffered; pollution is reduced, water quality improves <sup>1</sup>		x		x

<sup>1</sup> Arendt, 1996; <sup>2</sup> Mohamed, 2006

\*These benefits for municipalities and citizens may be realized by granting public access to the subdivision's protected open space.

## Relationship of Conservation Subdivision Design to Other Strategies

**Low Impact Development (LID)** is a good complementary strategy for CSD. The reduction in impervious surfaces gained through compact layout and the protection of riparian buffers meet the LID goal of reducing stormwater impacts. The more open, rural character of a conservation subdivision and the minimal traffic flow allows for other LID techniques such as streets without curbs, grassed drainage swales and permeable pavement.

**New Urbanism/Neo-traditional neighborhoods** are the urban counterparts to suburban conservation subdivisions. Both involve compact arrangements of lots with designated open space as an integral part of the design. However, because New Urbanism works toward increasing density and supporting a pedestrian-oriented community, it is best suited for locations in town. Conservation subdivisions belong on the fringes of a community.

**Cluster Development** has conflicting meanings within land use planning and development professions. The American Planning Association has published a model ordinance for “Residential Cluster Development” that meets all the criteria for CSD. However, “cluster development” may also refer to a development technique that incorporates compact lots grouped together on a portion of the site, but does not necessarily involve the careful delineation of features to be protected. Yet another use of “cluster housing” refers to a type of ownership where the home is owned by an individual but the lot is owned in common.

## Establishing a Framework for Conservation Development

Conservation subdivisions are not appropriate for every site or every community. A community or a region should be assessed to identify where conservation subdivision design is an appropriate tool. Ideally, a comprehensive land use plan will identify areas where conservation design may be utilized, and zoning techniques such as overlay districts will reinforce and implement the plan. Conservation subdivisions may be developed under regulations for Planned Unit Developments or a community may adopt ordinances specific to conservation subdivisions. In any case, conservation design is one of many tools used to balance development and natural resource protection and should be applied on appropriate sites in accordance with local plans.

Imagine a community (or region) as a series of three concentric circles, like a bull’s-eye centered over the heart of the community. In the center ring, density should be maximized to maintain a vibrant town center. The outermost ring covers the rural areas beyond the reach of municipal water and sewer services, where agriculture is

the predominant land use. The middle ring, on the fringe between the established town and the undeveloped countryside, is the appropriate setting for a conservation subdivision. In this zone it is likely that development is imminent, and conservation design offers a reasonable middle ground between “no growth” and “wall to wall sprawl”.



Conservation subdivisions should be included in land use plans. There are several different ways to indicate that conservation subdivisions are allowed or encouraged. For some communities, adding a section of text describing conservation goals and the kinds of site features that are desired for open space protection within a conservation subdivision is sufficient.

Communities with more sophisticated resource inventories and mapping capability (such as Geographic Information Systems) may broadly delineate areas where conservation subdivisions are encouraged as part of a future land use map. For example, a municipality with significant areas of karst terrain and sinkholes - such as Monroe County or the City of Columbia - could plan for future land use in those areas to utilize conservation subdivision designs, with the goal of putting homes on the most stable sites while protecting groundwater and unique geologic features. Including conservation design areas on a future land use map makes a community's intentions clear to landowners and developers, so there are fewer surprises with proposed zoning changes. Fewer surprises allow development to proceed in a more predictable order, saving time and money for developers and local governments.

A community that is interested in conservation subdivisions may choose to offer some enticements to developers to outweigh the risks of a locally untested approach.



The enticements may include:

- offering bonus lots
- offering a streamlined review and permit process
- allowing pedestrian paths within the open space to substitute for sidewalk requirements
- allowing reduced road design standards

#### **Community Motivations**

- Lower impact to local water quality and natural environment
- Ability to retain significant local features and rural views
- Reduced infrastructure, reduced maintenance costs
- Room for negotiation with developers to address special site conditions of concern to the community

#### **Community Disincentives**

- Learning curve; need to be more educated in order to negotiate well
- Resistance to change in a long-established way of doing things
- Closer spacing of homes may be perceived as a density increase
- Criticism for exclusion; lack of affordable homes

#### **Developer Motivations**

- Potential to produce a quality product that will sell well
- Potential for reduced infrastructure costs
- Flexibility to develop in a way that avoids costly difficult building areas
- Possibility to increase number of homes, depending on regulations and bonuses

#### **Developer Disincentives**

- Extended approval process may be required
- Unknown elements of design approaches
- Depending on zoning and calculations, potential to decrease net number of homes permitted

## The Ideal Parcel

The main factors to look for in a potential conservation subdivision parcel are: 1) presence of a real estate market for higher-end homes, 2) presence of desirable site features to be protected, 3) progressive and cooperative leaders and planning staff in the local government.

A lot in a conservation subdivision is somewhat exclusive and includes significant amenities, so the lots (and the homes built on them) are likely to command a higher price and be marketed to a higher-end segment of the housing market. The concept of conservation subdivision development may seem to contradict any affordable workforce housing policies which a local community may have adopted. To be ultimately successful, both strategies require flexibility on the part of government and the developer, designer and lender. Because of that flexibility, these initiatives need not be mutually exclusive. A conservation subdivision could (and perhaps should) include affordable housing options and “starter homes”, but the most profitable market for conservation subdivisions tends toward the high end.

The second factor to consider when testing a parcel for conservation subdivision suitability is the presence of significant, aesthetically appealing site features to be preserved. Many kinds of features can be preserved as open space, but some are more marketable than others. In fact, the site features don't necessarily have to be preserved - they can be restored. However, a recent restoration project is a much harder sell than a well-established natural area. For example, former cropland that has been enrolled in a conservation program may be in the early stages of naturally regenerating to a woodland. In a few decades it may be a wonderful aesthetic and environmental amenity, but for now it appears unkempt and overgrown to a prospective home-buyer. The same could be said for a recently restored prairie. In short, aesthetics matter, and a mature woodland is more marketable than a recent restoration effort.

The third and perhaps most important factor to consider in conservation subdivision design is the jurisdiction in which the site is located. Without open-minded elected officials and planning staff, a conservation design will not

## Conservation Subdivision Design Handbook

move forward through the plan review process. Conversely, if no developer expresses an interest in conservation design, a municipality is not likely to establish ordinances allowing, encouraging, or rewarding the new approach. One innovative developer with a good working relationship with a progressive community could open the door to conservation subdivisions in our region.

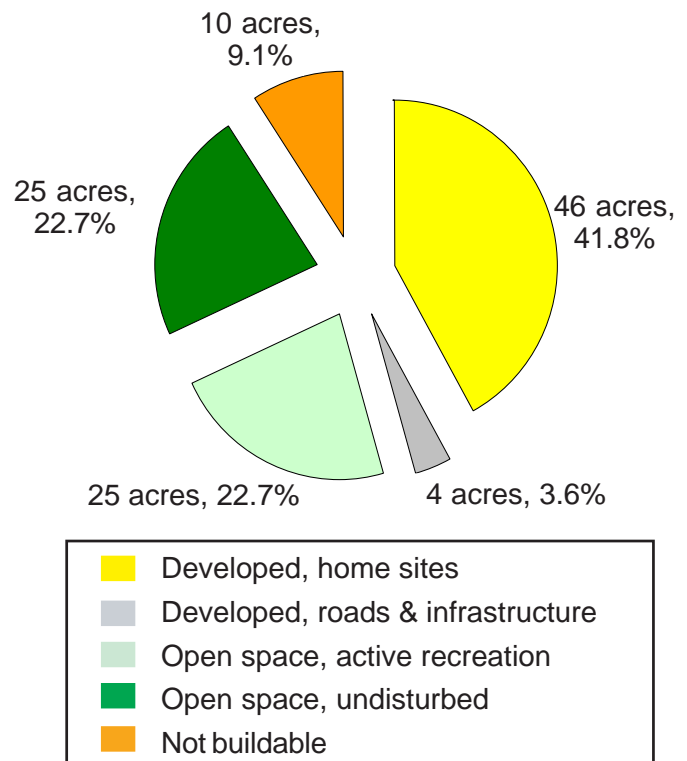
## The Process

The conservation design process starts with an inventory of the site to identify Primary Conservation Areas and Secondary Conservation Areas. Primary Conservation includes all the areas where building is prohibited by regulations or development constraints such as flood hazard areas, steep slopes and bluffs, wetlands, and unstable soils or geology. In addition to the typical development constraints, an inventory for a conservation development should include Secondary Conservation Areas. These are the potentially buildable lands that possess aesthetic or environmental attributes that cause them to stand out from the rest of the property. This may include specific features (old barns or outbuildings, sinkholes, rock outcrops) or more general features (scenic vistas, mature forests, prairie remnants, fencerows). External factors such as infrastructure, adjacent land uses and greenway connections should also be included in the inventory. Once the Primary and Secondary Conservation Areas are identified, the site designer can identify locations for homes and alignments for roads and trails to give residents the optimum visual and physical access to the site. For details on site design, please refer to Randall Arendt's *Conservation Design for Subdivisions*.

To determine how many lots are allowed on the parcel, subtract the Primary Conservation Area acreage from the total acreage of the parcel and apply the density (units per acre) specified in the zoning code. This is the number of lots that could be built using a conventional subdivision design. The same number of lots can be built using a conservation design, but the lots will be smaller to leave a significant portion of the site as open space. Typically, conservation subdivisions require 40% to 60% of the buildable land to be protected open space.

For example, on a 110 acre parcel there are 10 acres that are unsuitable for building, leaving 100 acres to be developed. The parcel is zoned for residential use at a density of up to 2 units per acre. Under a conventional subdivision design, the 100 acres would be developed into approximately 200 homes on lots slightly smaller than a half-acre, with some portion of the site designated for roads, sidewalks, and stormwater detention. Under a conservation design, 200 homes would be developed on smaller lots, with the size of the lots dictated by the percentage of protected open space required by municipal ordinance. If the conservation subdivision ordinance requires 50% of the buildable land to be protected as open space, approximately 50 acres of the site are developed and a 50 acre tract is left as open space. Infrastructure, such as roads, is included as part of the acres to be developed. Open space may be further divided into areas of active recreation (ball fields) and passive recreation (undisturbed land, pedestrian paths) with percentages specified by the conservation subdivision ordinance.

Acres and percentage of a 110 acre parcel

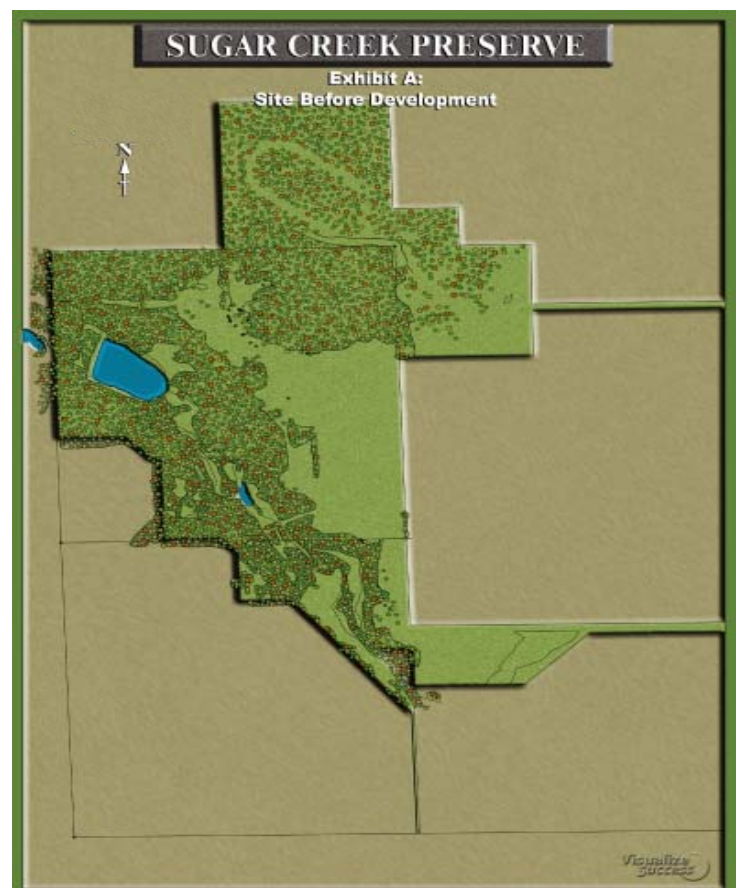


## Design Example

Sugar Creek Preserve is a 260 acre conservation community in Walworth County, Wisconsin. The site plan was developed by utilizing the 4 stage Conservation Design Process espoused by Randall Arendt:

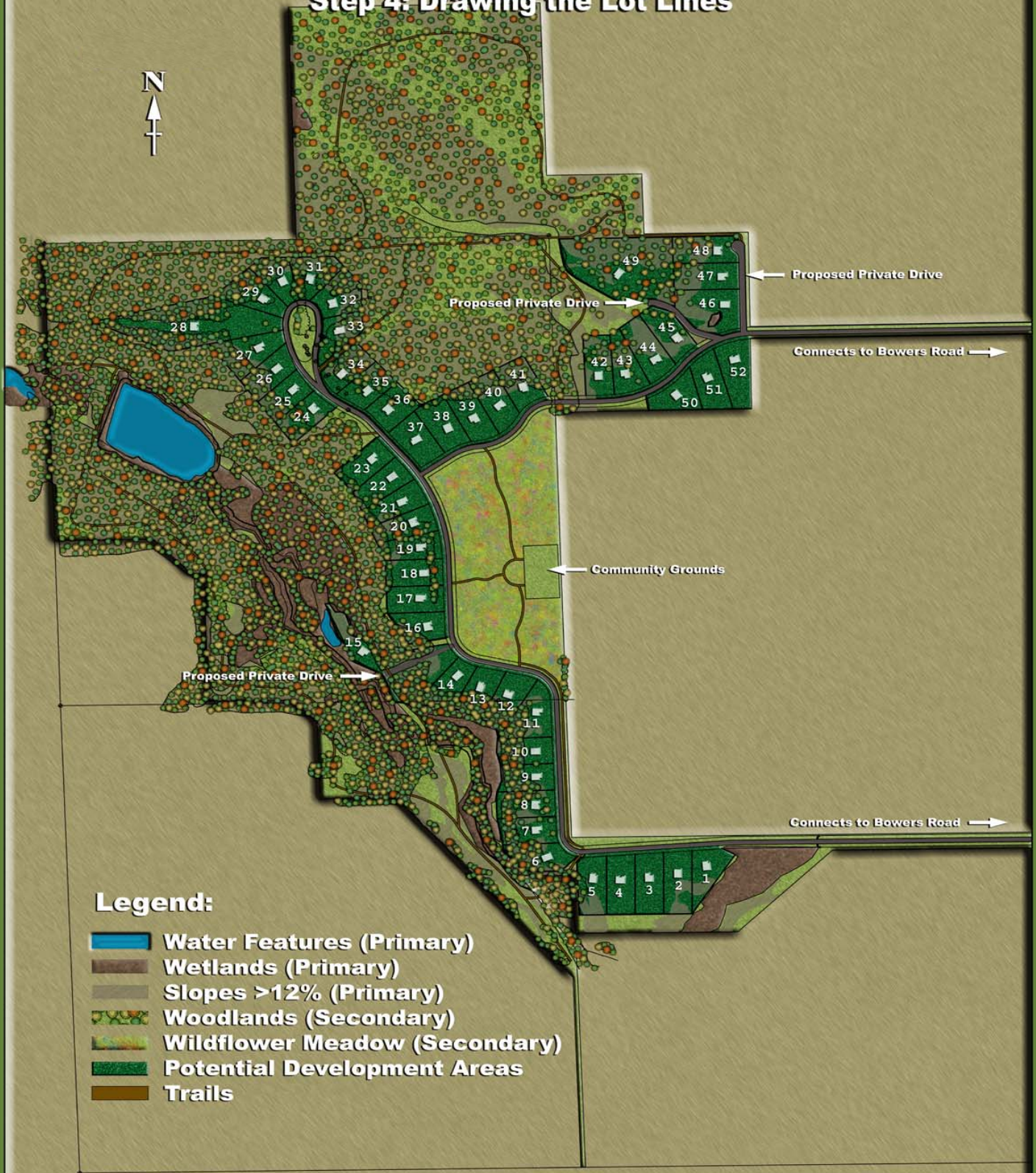
- Step 1: Identify Primary and Secondary Conservation Areas
- Step 2: Locate potential home sites
- Step 3: Align roads and trails
- Step 4: Draw the lot lines

The site design preserves approximately 177 acres, or over 69%, of the site as open space for the benefit of all homeowners. While the 52 home sites are “clustered” on lots ranging from 40,510 sq. ft. (.93 acres) to 187,448 SF (4.3 acres) with the average being 53,500 sq. ft. (1.3 acres), the proposed density yields 1 home site for every 5 acres of land. All open space will be owned by the Sugar Creek Preserve Homeowners Association. (Diagrams courtesy of Red Wing Land Company)



# SUGAR CREEK PRESERVE

## Exhibit E: Step 4: Drawing the Lot Lines



### Legend:

- Water Features (Primary)
- Wetlands (Primary)
- Slopes >12% (Primary)
- Woodlands (Secondary)
- Wildflower Meadow (Secondary)
- Potential Development Areas
- Trails

To achieve the maximum conservation benefits, the conservation subdivision should be designed to **complement a larger network of green infrastructure**. A well-designed conservation subdivision will maintain **contiguous blocks of open space** that connect to open space on adjacent parcels. The protected area should have **high resource conservation value**. This may include riparian corridors, greenways, prime agricultural land or scenic vistas.

Not all open space has equal conservation value. The goals of a community and a region should be considered when implementing conservation design. Open space that consists of mature woodlands or prairies offers water infiltration capacity as well as wildlife habitat and other ecosystem services. A community with broad goals of protecting wildlife habitat and biodiversity while encouraging development may choose to require open space that provides habitat benefits and water infiltration capacity, which includes woodlands and prairies but excludes sports fields.

Agriculture is acceptable as open space in a conservation design if the community is trying to preserve agricultural use for scenic, cultural, or economic reasons. However, some types of agriculture are better suited to conservation subdivisions than others. Noise, dust, chemicals, and odor are associated with many types of agricultural production and may not be acceptable to subdivision residents. Modern agriculture usually requires economies of scale to remain profitable, and smaller parcels within conservation subdivisions may be difficult to turn a profit on. Hayfields, orchards, Christmas tree farms, vegetable production operations, specialty crops and organic farming practices may be more compatible agricultural uses for conservation subdivisions than the corn and soybeans common in our region. In any case, it is important to make prospective homebuyers aware of the potential nuisances of a working farm and for the farm operators to have a reasonable expectation of what the subdivision residents will tolerate. Maintaining agricultural production within a conservation subdivision may be more challenging than maintaining an undisturbed natural area, but it provides an important tool for preserving agriculture while accommodating growth and should be available as an option.



### Open Space: What Does It Mean?

Open space is a term that is used frequently by land use planners, but is often poorly defined. For the purposes of this document, “open space” is broadly characterized as “unbuilt land or water areas dominated by naturally pervious surfaces”. This includes woodlands, prairies, pastures, cropland, orchards, wetlands, etc. It does not include stormwater detention basins (unless they are constructed as naturally functioning wetlands), boulevard medians, parking lot islands, etc. Any municipality considering conservation subdivisions or open space ordinances should specify their definition of “open space”.

For home-buyers unfamiliar with the jargon of land use planning, a conventional subdivision with large lots, few trees, and dispersed houses may feel more “open” - in the sense of “not enclosed” - than a conservation subdivision with a mature woodland. Referring to developments using a conservation design approach as “conservation subdivisions” instead of “open space subdivisions” is recommended to avoid this confusion. (Kaplan, Austin & Kaplan, 2004)

## Open Space: Protection and Maintenance

One of the most common concerns about setting aside open space in a conservation subdivision is the ownership, management and use of the common area. People want to know who will own it, who will maintain it, and who will have access to it. And then there is the “future” question: how do we know it will stay undeveloped forever? The answers to these questions can vary widely with different projects.

Ownership of the open space can be held in several different ways. In some cases, the original property owner chooses to retain ownership – to continue farming, for some other purpose, or simply to provide an adequate buffer around the original homestead. In some cases the land may be dedicated to the community for public use as a park or nature preserve. In most cases, the land is held by a homeowners’ association, for the exclusive use of the residents and their guests. Sometimes the homeowners’ association may lease the land back to the owner or some other party, for farming or some other use.

Management and insurance of the land are usually the responsibility of the owner or lessee of the land – and issues associated with that management are similar to those faced by any landowner. Limiting unauthorized access and encroachment, and natural resource management of erosion, creeks, trails, woodlands, and wildlife, must all be considered by anyone who desires to benefit from ownership of a large parcel of open land. Many developments are successfully using conservation easements to ensure that the open space remains undeveloped over the long term. Conservation easements are legal restrictions on the development of land that are recorded with the original deed. Conservation easements may be held by the owner(s) of the land in question; but increasingly, communities and developers are choosing to require that the easement be held by a third party, effectively setting up a “check and balance” on development of the land. Conservation easements may be held by municipal governments or non-profit land trusts. (This section reprinted from *Balancing Conservation & Development*, The Countryside Program.)

The goals of a community will determine the most effective combination of land protection

## Conservation Subdivision Design Handbook

tools on the site. If the conservation subdivision is expected to provide greenway linkages for people (i.e. trails) as well as wildlife, it may be best to carve out a ribbon of the open space as a right-of-way or as a separate parcel with a separate easement. Distinguishing between the publicly accessible corridor and the rest of the protected open space can simplify legal matters of liability, access and maintenance.

## Open Space: Ambiguities

There are some components of open space that don’t clearly fall into either “Primary Conservation” or “Secondary Conservation” categories. Flood hazard areas and known habitat for threatened or endangered species present special challenges to the otherwise simple calculation of the number of lots and the acres of open space in a conservation design. For example, if a certain portion of a site is known to be habitat for a threatened or endangered species, the habitat is clearly subject to regulations and can truthfully be called “unbuildable”. The landowner would not be able to sell it for development as a conventional subdivision. However, it is possible that the land could be developed as a conservation subdivision, with the sensitive habitat (and plenty of buffering) included in the protected open space. In that case, the habitat should probably be included as “buildable” for the purposes of calculating the number of lots allowed on the parcel, with the understanding that the sensitive habitat must be part of the protected open space. To identify the sensitive habitat as unbuildable/Primary Conservation is likely to leave such a small portion of the parcel to be developed that the development is no longer feasible.

A similar issue arises with flood hazard areas. Should acreage in the flood zone be counted as unbuildable, because a home can not legally be built in the flood zone (unless it is raised above the anticipated flood height)? Or should a portion of those acres be counted as buildable for the purposes of the calculations? In a large-lot subdivision (five to ten acre lots) there may be significant portions of the lot that are within the flood zone, but the lot is still marketable as long as the lot includes enough high ground for a home site. A developer may determine that it is more profitable to do a conventional large-lot

subdivision instead of a conservation subdivision because of the tendency for flood zones to skew the calculations. An alternative method for counting the flood zone acres could level the playing field for conservation subdivisions. For example, perhaps half of the flood zone acres could be considered buildable to make the calculations more reasonable. Another option is to use a riparian corridor designation based on a set distance from a stream instead of the flood zone when determining how much should be considered unbuildable. Or perhaps there are some parcels that a formula can't adequately address. Those parcels should be developed using more subjective criteria to meet the conservation goals of the community while generating a reasonable profit for the developer. The bottom line is that there will be special cases and exceptions to any simple formula. The goal is to balance conservation with development, and some flexibility and common sense will do more to achieve that goal than any number of calculations and ordinances.

## Is Conservation Design Profitable?

Recently published research comparing conservation subdivisions to conventional subdivisions indicates that lots in conservation subdivisions can provide higher profits to developers. The study, which was conducted in Rhode Island, concludes that lots in conservation subdivisions:

- **carry a price premium** - \$13,000 to \$18,000 per acre over conventional subdivision lots
- **are cheaper to build** - average of \$7,400 less to produce a lot
- **sell more quickly** - average selling time of 9.1 months, compared to 17.0 months for conventional subdivision lots

(From "The Economics of Conservation Subdivisions: Price Premiums, Improvement Costs, and Absorption Rates", by Rayman Mohamed. Published in *Urban Affairs Review*, January 2006. See page 15 for complete citation.)

A study of values and priorities in choosing a home site conducted in Michigan concludes that "nature view from home" was by far the highest priority for residents of conservation subdivisions and conventional subdivisions. The study also concludes that conservation subdivision residents had a far higher level of satisfaction with the nearby environment than their counterparts in conventional subdivisions. (From "Open Space Communities: Resident Perceptions, Nature Benefits, and Problems with Terminology", by Kaplan, Austin, and Kaplan. Published in the *Journal of the American Planning Association*, Summer 2004. See page 15 for complete citation.)

Successful conservation subdivisions exist in many parts of the country, including Illinois. One frequently cited example is Prairie Crossing, a 677-acre site near Chicago. The community was established more than 10 years ago, with 359 single family homes, 36 condominiums, an organic farm and ten miles of trails. More than 60% of the site is protected open space. ([www.prairiecrossing.com](http://www.prairiecrossing.com))

## Getting started with Conservation Subdivision Design in your community

1. Meet with local planning officials to introduce the concept and share information.
2. Discuss pros and cons of Conservation Subdivisions with local officials, developers, and interested citizens.
3. Research Conservation Subdivision ordinances.
4. Determine how the Conservation Subdivision concept can be applied to your community.
5. Identify your community's priorities for resources and natural features to protect.
6. Map the resources and natural features to be protected.
7. Use resource maps to update your community's comprehensive plan.
8. Implement Conservation Subdivisions in planning, zoning, and ordinances.

	<b>GOOD</b>	<b>BETTER</b>	<b>BEST</b>
<b><i>Open Space</i></b>			
Protection	Homeowners association agreement	Municipality holds a conservation easement	Third party holds a conservation easement
Maintenance	Homeowners association	Homeowners association follows a management plan developed and approved by a resource conservation professional	Homeowners association follows a management plan and is checked for compliance by a third party such as the easement holder, SWCD, or other appropriate professional
Access	Accessible to residents and their guests	Accessible to residents, guests, and adjacent landowners	Accessible to the public as part of a trail and greenway network
Conservation value	Athletic playing fields or manicured grass	Agricultural fields or recent restoration projects (ex. Conservation Reserve Program)	Established forest and prairie
<b><i>Municipal Regulations</i></b>			
Planning	Encouraging conservation design in initial meetings with developers	Establishing conservation design areas as part of a land use/comprehensive plan	Coordination of local land use/comprehensive plan with neighboring municipalities and county/regional greenspace plans
Zoning	Conservation development allowed as a conditional use	PUD or overlay zone to allow greater flexibility in developments	Establishment of a conservation subdivision zone
Ordinances	Conservation design is allowed under PUD framework	Conservation design is encouraged through incentives	Conservation design is required on sensitive areas as identified in the comprehensive plan
Design criteria	Number of lots determined by yield plan method; use objective standards hard numbers, measurements and percentages	Number of lots determined by formula; use objective standards but allow some exceptions; use ranges of numbers and percentages; allow some bonuses	Flexibility in the number of lots, close collaboration between municipal staff and developer, holistic review of the design for best use of the site

## Conclusion

Conservation subdivision design offers an important tool for balancing growth with resource protection. While it is not suitable for every parcel, conservation design is a useful strategy for developing land with significant or sensitive features that is on the edge of an established community. Conservation subdivisions offer benefits to developers, local governments, citizens and the environment through reduced infrastructure costs, increased property values and protection of green infrastructure. Each community should lay the foundation for conservation subdivisions by identifying important natural, cultural, and scenic resources in a comprehensive plan and using zoning and ordinances to shape conservation development. Studies have shown that conservation subdivisions are profitable for developers and popular with home-buyers. Conservation subdivision design is a development strategy that offers multiple benefits to our region. It is time for innovative developers and progressive communities to work together to balance residential development and resource conservation by utilizing conservation design techniques.

**Examples of conservation design communities in the Midwest**

Prairie Crossing, Grayslake, Illinois – <http://www.prairiecrossing.com>

The Sanctuary of Bull Valley, Woodstock, Illinois - <http://www.sanctuaryofbv.com/>

Sugar Creek Preserve, Walworth County, Wisconsin - <http://www.sugarcreekpreserve.com/>

Tryon Farm, Michigan City, Indiana - <http://www.tryon-farm.com/>

**Conservation subdivision design specialists**

Applied Ecological Services, Inc. - <http://www.appliedeco.com/>

Red Wing Land Company - <http://www.redwingland.com/>

Greener Prospects (Randall Arendt) - <http://www.greenerprospects.com/>

**Model Ordinances**

Arendt, Randall. Growing Greener Ordinance Language (Interactive CD-ROM). Offered for sale at <http://www.greenerprospects.com/>

University of Wisconsin Extension. *An Ordinance for a Conservation Subdivision*. Available as a free download at [http://www.doa.state.wi.us/dir/documents/conserv\\_subdiv\\_Model\\_ordinance\\_Feb2001.pdf](http://www.doa.state.wi.us/dir/documents/conserv_subdiv_Model_ordinance_Feb2001.pdf)

American Planning Association. *Smart Growth Codes*. The section of the code on “cluster” development can be downloaded at no cost at <http://www.planning.org/smartgrowthcodes/pdf/section47.pdf>

**Conservation Easements and Land Trusts**

The Land Conservancy, a division of Southwestern Illinois RC&D, Inc. <http://www.swircd.org/tlc.htm>

Great Rivers Land Trust. <http://www.greatriverslandtrust.com/>

The Trust for Public Land. <http://www.tpl.org>

**Identifying and Mapping Local Resources**

Southwestern Illinois RC&D, Inc. *Southwestern Illinois Resource Plan*. Available as a free download at [http://www.swircd.org/swircd/gis/swresource\\_plan.htm](http://www.swircd.org/swircd/gis/swresource_plan.htm)

Southwestern Illinois GIS Resource Center, a division of Southwestern Illinois RC&D, Inc. holds an extensive library of natural resource GIS data. <http://www.swircd.org/swircd/gis/gis.htm>

## References

Arendt, Randall. *Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks*. Washington, DC: Island Press, 1996.

Kaplan, Rachel, Maureen E. Austin, and Stephen Kaplan. "Open Space Communities: Resident Perceptions, Nature Benefits, and Problems with Terminology." *Journal of the American Planning Association* 70.3 (Summer 2004): 300-312.

Mohamed, Rayman. "The Economics of Conservation Subdivisions: Price Premiums, Improvement Costs, and Absorption Rates." *Urban Affairs Review* 41.3 (January, 2006): 376-399.

The Countryside Program of the Western Reserve Resource Conservation and Development Council (RC&D). *Balancing Conservation & Development in Northeast Ohio*. Painesville, OH.

## General Resources

Greener Prospects Web Site - <http://www.greenerprospects.com>

This home page for Randall Arendt's conservation design consulting firm offers a clearinghouse of free downloadable publications as well as ordering information on Arendt's well-known books and resources for conservation design.

The Countryside Program - <http://www.countrysideprogram.org>

This special program on conservation development offers resources such as model regulations, videos, case studies, and topical articles. Originally a special project of the Western Reserve RC&D, this program is now part of Cleveland State University's Planning Center in the College of Urban Affairs.

American Planning Association - <http://www.planning.org>

The APA offers several resources on conservation development, including the model ordinance listed above.

National Association of Home Builders - <http://www.nahb.org>

The NAHB magazine "Land Development" has published articles about open space and cluster development. Other resources are also available by navigating through the NAHB website: Home > Resources > Housing Issues > Land Development > Open Space/Cluster Development

## Southwestern Illinois Resource Conservation & Development, Inc.

The Southwestern Illinois RC&D, Inc. is a not-for-profit corporation formed in 1989 to address regional natural resource concerns to help find ways to solve regional issues and also to assist in the development of the natural resources for the betterment of the community.

Technical assistance is provided to the Southwestern Illinois RC&D, Inc. through USDA-NRCS.

The SWI RC&D works in the following program areas:

- Economic Development/Redevelopment
- Education & Outreach
- Environmental Resource Areas
- Natural Resource Management
- Outdoor Recreational Opportunities
- Regional Growth Management

## The Southwestern Illinois GIS Resource Center

The Southwestern Illinois GIS Resource Center, a division of Southwestern Illinois RC&D, Inc., is in place to assist in geo-referenced data, for the benefit of the residents of the region. A geographic information system (GIS) is a digital tool used to store geographic locations of features, such as natural resources, transportation routes, utilities, and parcel boundaries. These features can then be combined in many ways to create map products. GIS technology integrates powerful database capabilities with the unique visual perspective of a good old-fashioned map. GIS has become a common tool for providing a new level of analytical capability in diverse disciplines such as land use, transportation or natural resource planning, utility management and environmental assessment.

## The Land Conservancy (TLC)

The SWI-RC&D has expanded its activities to better address urban growth issues in the seven-county Metro-East area. Loss of agricultural land and open space is a major issue in this region and alternatives are needed to give landowners options for protecting their lands rather than selling for urban development. A land conservancy program has been developed within the SWI RC&D to give landowners viable options for protecting their lands while maintaining private ownership.

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