

# Land Use Tracker

A quarterly publication of the  
Center for Land Use Education



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OF WOODLAND  
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## DEVELOPING WISCONSIN'S FORESTS:

### HOW LANDOWNER ATTITUDES SHAPE COMMUNITY RESPONSE TO GROWING DEVELOPMENT THREATS

By Aaron Thompson, PhD, Center for Land Use Education

In Wisconsin, communities are required to address threats to forest health in their comprehensive plans. However, the plans often have no 'real teeth' to prevent parcelization even when implemented through zoning.<sup>1</sup> Forest fragmentation in the Northwoods typically comes in the form of parcelization, a process of subdividing the ownership of large tracts into smaller parcels, which is often accompanied by subsequent development.

This segmented ownership and development has the effect of reducing the quality of forests by changing land uses, reducing habitat connectivity, and disrupting contiguous forest management and timber practices. Taken individually, these impacts are locally detrimental to the forest. At the town or landscape scale, development of woodland property can significantly change the character of the community, decrease hunting quality, reduce wildlife abundance, and disrupt the local timber economy.

There have been many calls for more innovative or restrictive land use regulations to address threats to Wisconsin's forests. However, many factors prevent communities from making progress in this area. Planning for the protection of forest-based goods and amenities requires engaging with private landowners.<sup>2</sup> However, landowners are a diverse group, holding many beliefs and motivations for owning property. Public involvement in the planning process is necessary to produce the types of plans that have political and community support to enforce forest land use regulations. Yet, engaging the public can be expensive and takes significant time.<sup>1</sup> In response to these challenges, this study explores the attitudes of large, private forest landowners towards land use regulations to address forest parcelization.

### Policy Options

Large landowners in six northern Wisconsin towns (described in *Study Details* at right) were asked to evaluate the ten land use policies listed below. Each policy was described, along with the potential for development on a 40 acre wooded parcel.

1. **No Regulation** – allows landowners to develop as many new homes as they like.
2. **1-Acre Minimum Lot Size** – allows up to 40 new homes to be built on a property.
3. **10-Acre Minimum Lot Size** – allows up to 4 new homes to be built on a property.
4. **40-Acre Minimum Lot Size** – allows only 1 new home to be built on a property.
5. **No Development** – prohibits development of new homes on woodland property.
6. **1-Acre Maximum Lot Size** – allows up to 40 new homes to be built, but requires that lots be no larger than 1 acre.
7. **2-Acre Maximum Lot Size** – allows up to 20 new homes to be built, but requires that lots be no larger than 2 acres.
8. **10-Acre Clustered Development** – restricts development to no more than 10 acres of the property, requires new homes to be built close together, and leaves 30 acres undeveloped.
9. **20-Acre Clustered Development** – restricts development to no more than 20 acres of the property, requires new homes to be built close together, and leaves 20 acres undeveloped.
10. **Proximity to Existing Roads** – requires that new homes be built adjacent to existing roads, thereby limiting the number of new homes.

### STUDY DETAILS

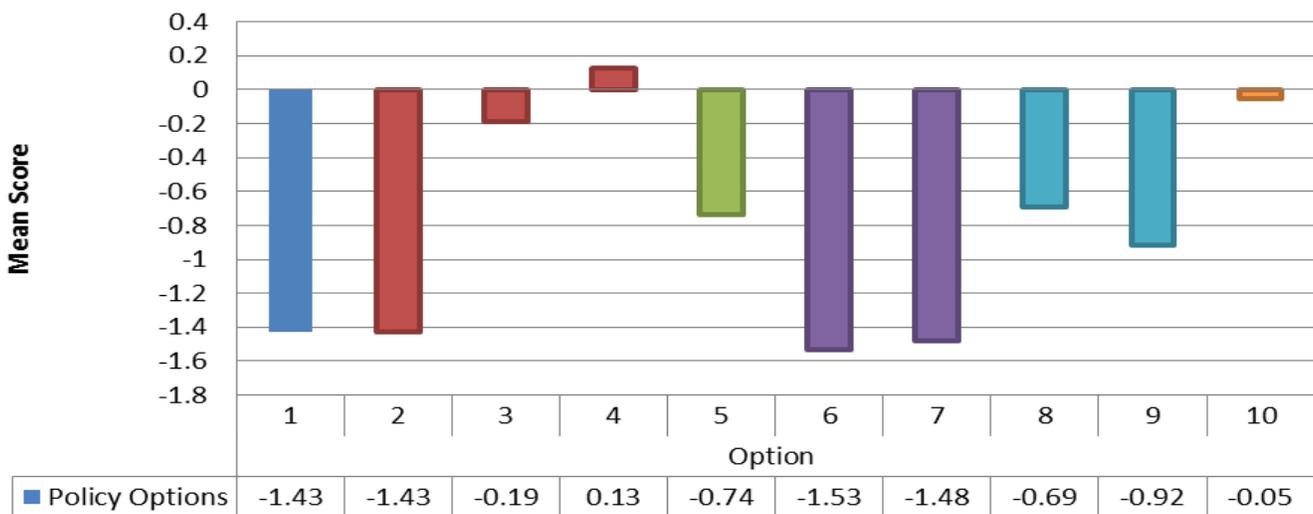
In the fall of 2012, CLUE researchers, led by Aaron Thompson, had the opportunity to ask 400 large forest landowners in six northern Wisconsin towns their thoughts on community options to address forest parcelization and development. The study sought input from landowners identified through parcel records as owning more than 60 acres in the Towns of Schley, Scott, and Skanawan in Lincoln County and the Towns of Kelly (Bayfield Co.), Saint Croix (Polk Co.), and Maple (Douglas Co.). We heard back from nearly 200 landowners with town-level participation rates ranging from 41 to 58 percent of those contacted. For more information access the technical report at: [www.uwsp.edu/cnr-ap/clue/Pages/surveyWork.aspx](http://www.uwsp.edu/cnr-ap/clue/Pages/surveyWork.aspx)

### Landowner Support for Policy Options

Respondents were asked to provide their level of support for each policy using a five point scale (-2 = strongly disagree, +2 = strongly agree). Lower values represent opposition to the policy, while higher values represent support. Landowner rankings of each policy are illustrated in Figure 1 and summarized below.

‘No regulation’ allows landowners to subdivide and develop their property without conforming to land use regulations. Survey respondents rated this option very negatively (mean = -1.43), showing that landowners are opposed to unrestricted land development.

Figure 1. Landowner Support for Policy Options (-2 = strongly disagree, +2 = strongly agree)



‘Minimum lot sizes’ restrict the size of lot needed to construct a new structure or residence. Respondents rated 1-acre minimums very negatively (mean = -1.43), 10-acre minimums slightly negatively (mean = -.19), and 40-acre minimums slightly positively (mean = +.13).

‘No development’ or conservancy zoning is the most restrictive form of land use regulation for protecting forests. This option was negatively rated by respondents (mean = -.74). However, landowners are more supportive of this option than many other policies, including ‘no regulation’.

‘Maximum lot sizes’ address fragmentation by limiting the lot size associated with each new structure or residence. The purpose is to more efficiently develop land while leaving larger parcels intact. Respondents were not supportive of 1-acre maximum lot sizes (mean = -1.53) or 2-acre maximum lot sizes (mean = -1.48).

‘Clustering’ seeks to limit the impact of new development by incentivizing density and open space preservation. Relative to other options, respondents were somewhat more favorable towards clustering. A 10-acre buildable area / 30-acre preserved area had slightly more support (mean = -.69) than the 20-acre buildable area / 20-acre preserved area (mean = -.92).

‘Proximity to existing roads’ requires placement of new construction within an approved setback from existing roads. This reduces interior disturbance of the forest, while also limiting new construction to areas already served by existing infrastructure. This option was among the most supported; however, the overall response is still slightly negative (mean = -.05).

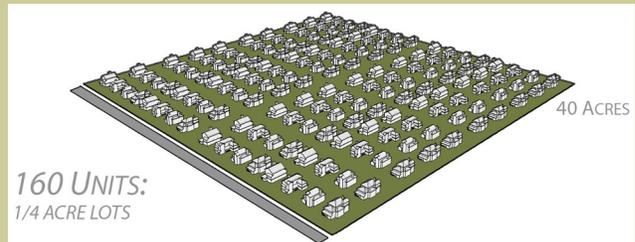
### How Should Communities Respond?

The call for new and innovative planning strategies to address forest fragmentation conflicts with private landowners who aren’t broadly supportive of these policies. Even though only one of ten policy options received positive support, important lessons can be drawn from the survey:

#### No Regulation

1

Not restrict development, which would allow landowners to develop as many new homes as they would like.



#### Minimum Lot Sizes

2

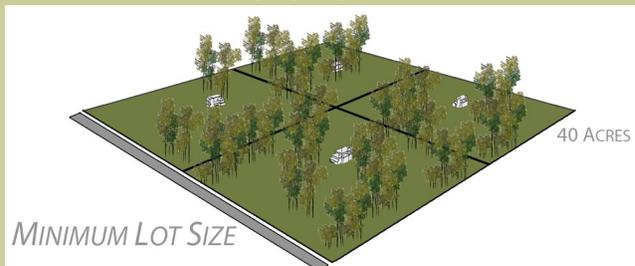
Require a minimum lot size of 1 acre, which would allow up to 40 new homes to be built on this property.

3

Require a minimum lot size of 10 acres, which would allow up to 4 new homes to be built on this property.

4

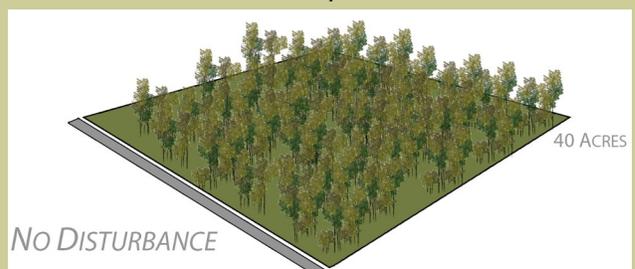
Require a minimum lot size of 40 acres, which would allow only 1 new home to be built on this property.



#### No Development

5

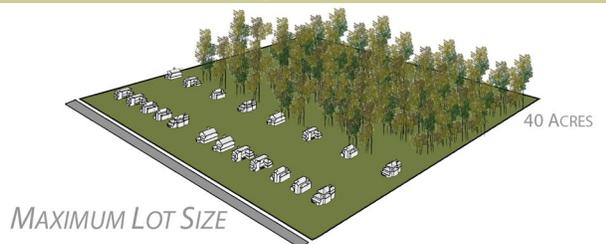
Not allow development of any new homes on woodland in the community.



### Maximum Lot Sizes

**6** Allow up to 40 new homes to be built on this property, but require that the lots for each are no larger than 1 acre.

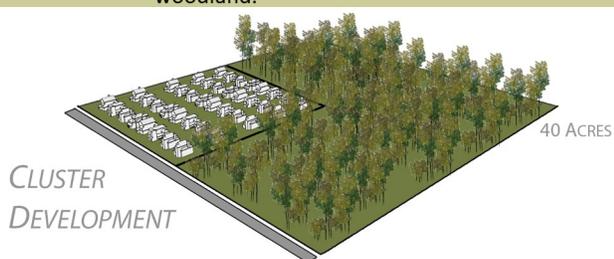
**7** Allow up to 20 new homes to be built on this property, but require that the lots for each are no larger than 2 acres.



### Clustering

**8** Require that any new homes be built clustered close together by restricting development to no more than 10 acres of the property, which would leave the remaining 30 acres as woodland.

**9** Require that any new homes be built clustered close together by restricting development to no more than 20 acres of the property, which would leave the remaining 20 acres as woodland.



### Proximity to Existing Roads

**10** Only allow new homes to be built adjacent to existing roads, which would limit the overall number of homes that could be built in the community.



- The ‘no regulation’ option was among the least supported of all policy options. This provides us with the knowledge that landowners recognize the need to address forest parcelization and development threats.
- The ‘40-acre minimum lot size’ was the only option that received positive support from landowners. While minimum lot sizes have their criticisms, this approach is relatively easy to integrate into most zoning ordinances.
- The ‘no development’ (or conservancy zoning) and ‘clustering options’ were rated somewhat more favorably than others, suggesting that they may be acceptable in limited geographic areas or under special circumstances.
- The ‘maximum lot size’ option, while often praised as a control on inefficient development, is not supported by landowners who responded to this survey.
- Policies regulating ‘proximity to existing roads’ are more acceptable than almost all other options. This suggests that policies designed to protect the interior of the forest, such as rules restricting driveway length, should also be considered.

### Conclusion

Current approaches that rely on state tax incentives (such as the Managed Forest Law) are important for protecting working forests. However, the success of these efforts depends, in part, on local land use regulations.<sup>2</sup> Lack of strong landowner support for the ten policy options presented in this study underscores the importance of pursuing an active dialogue with forest landowners. Comprehensive plan updates, currently underway in many Wisconsin communities, represent an opportunity for communities to engage with those who own and manage forestlands. In the future, planners will need to collaborate with landowners to design regulations that respond to the unique conditions driving parcelization and development in Wisconsin. Setting aside time and resources to build relationships with forest landowners and maintain ongoing dialogue will be critical to that process.

### References

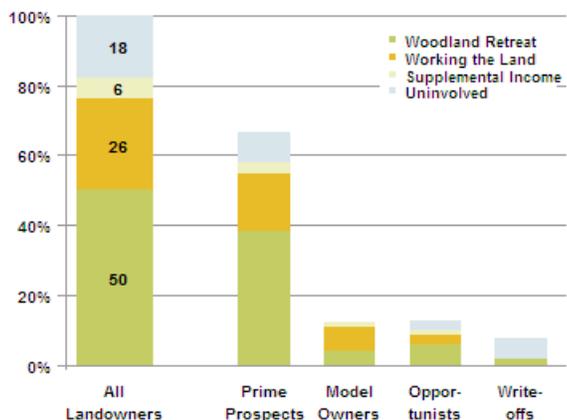
1. Gobster, P.H., Rickenbach, M.G. (2004). Private forestland parcelization and development in Wisconsin's Northwoods: Perceptions of resource-oriented stakeholders. *Landscape and Urban Planning* (69): 165-182.
2. Locke, C.M., Rissman, A.R. (2012). Unexpected co-benefits: Forest connectivity and property tax incentives. *Landscape and Urban Planning* (104): 418-425.

## OVERVIEW OF WOODLAND OWNERS IN WISCONSIN

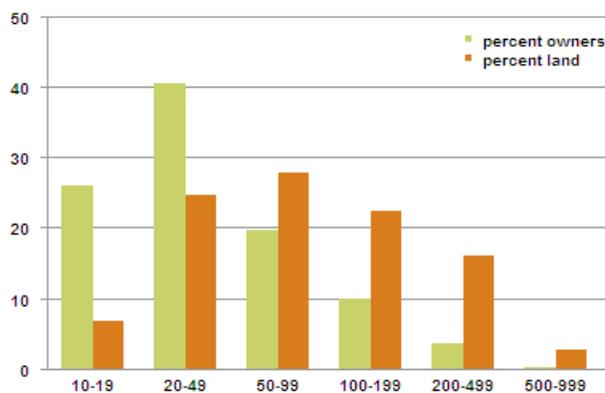
176,000 Woodland Owners

8,292,000 Woodland Acres Owned

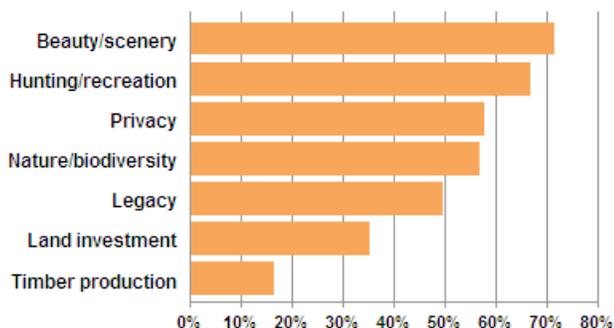
### Types of Landowners



### Size of Woodland Holdings (in acres)



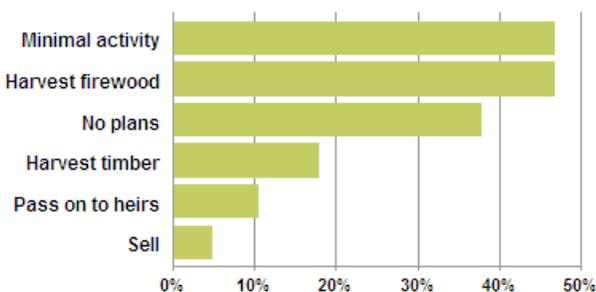
### Reasons for Owning



### Woodland Owner Activities

- 20% are new owners (acquired woodland less than 5 years ago)
- 40% are absentee owners (live more than 1 mile from their woods)
- 30% have a farm attached to their woodland
- 47% have removed trees for timber
- 33% have sought advice or information on woodland management
- 17% have a land management plan
- 3% have a conservation easement

### Five Year Plans



### Group Demographics

- Age:
- 14% are under 45
  - 55% are 45-64
  - 31% are over 65
- Education:
- 44% have a college degree or better
- Income:
- 45% earn less than \$50K per year
  - 37% between \$50K and \$99K per year
  - 18% earn \$100K or more per year

### Top 3 Concerns

1. Property taxes
2. Family legacy
3. Insects or plant diseases

These landowner profiles use data from the National Woodland Owner Survey (NWOS) conducted by the US Forest Service. They are based on a sample of 12,830 families and individuals that own between 10 and 999 acres of woodland in the contiguous United States. Data were collected between 2002 and 2006. For more information about the NWOS, visit [www.fia.fs.fed.us/nwos](http://www.fia.fs.fed.us/nwos).

## TYPES OF WOODLAND OWNERS

Woodland owners are a diverse mix of people who have many and varied reasons for owning land—they include rugged timbermen, country folk, urbanites, farmers, conscientious environmentalists, avid hunters, overworked professionals, and a host of other groups. We can identify four main “types” of woodland owners based on their motivations for owning land. How landowners value and manage land has important implications for how natural resource professionals reach out and communicate with them.

### Woodland Retreat Owners (50% of Wisconsin woodland owners)



### Working the Land (26% of Wisconsin woodland owners)



### Uninvolved (18% of Wisconsin woodland owners)



### Supplemental Income (6% of Wisconsin woodland owners)



## Key Motivations

- Natural beauty and wildlife protection
- Enjoyment of woods with family (walking, camping and fishing)
- Stewardship ethic
- Preserving ecological health and financial value of land
- Ethic of respectful and judicious land use
- Recreation, including hunting
- Investment value of land
- Reducing taxes and land management hassles
- Keeping land intact for heirs
- Timber income and investment
- Reducing taxes and other liabilities
- Keeping land intact for heirs

## Barriers

- Perception that woods manage themselves
- Fear of taking action that will damage woods
- Lack of knowledge and confidence about what actions to take
- Financial constraints
- Fixed ideas about what is good for their woods—they know best
- Mistrust of outside authority and expertise
- Mistrust of anyone who is promoting a particular ideology or interest
- Lack interest and knowledge to manage their woods
- Perceived value of woodland
- Perceived restrictions on land use rights
- Cost-benefit analysis of stewardship actions may not yield sufficient returns
- Perceived restrictions on land use rights

## How to Reach this Audience

- Challenge their belief that woods are best left alone
- Give them specific, easy, low-cost actions to achieve their objectives (e.g. attracting wildlife)
- Help them understand the ecological significance of all woods (even small parcels)
- Appeal to their sense of responsibility and stewardship
- Affirm their outdoorsy lifestyle and simple, traditional values
- Give them information but don't tell them what to do
- They actively seek information on land management and prefer to get information through word of mouth, relevant publications and direct mail
- Not an easy target for woodland management or conservation
- Messages should identify direct financial benefits
- May be more receptive to incentives and programs that benefit both farms and woods
- Can be reached by direct mail and other traditional channels
- Emphasize ways to enhance financial gains or maintain land value for future generations
- Willing to learn about land management if it yields immediate or long term financial benefits
- Most keyed in to the forest industry and "forestry" community, including landowner associations, trade publications, and events

These descriptions are based on data from the National Woodland Owner Survey and a series of focus groups conducted with woodland owners in Iowa, Illinois, and Indiana. To learn more about each landowner type and Tools for Engaging Landowners Effectively, visit: [www.engaginglandowners.org](http://www.engaginglandowners.org).

## SUSTAINABILITY AND COMMUNITY PLANNING

By Anna Haines, PhD, Center for Land Use Education

### Why Plan for Community Sustainability?

Just as community residents have an opportunity to make a difference in the daily decisions they make at home, at work, and when they purchase goods and services, local governments have an opportunity to make sustainable decisions when they craft local land use policies and implement those policies through day-to-day actions. A key tool that can guide local decision-makers in making decisions is a well-crafted community plan.

Planning allows a community to prepare for, adapt to, and mitigate the impacts of flooding, natural hazards, air and water pollution, fluctuating housing prices, property taxes, development in rural areas, and other issues faced by a community. The act of planning is proactive and forward thinking. It involves figuring out how to respond to issues, and establishing a vision for the community to guide local officials in their decision-making.

### How Do You Infuse Sustainability into a Community Planning Process?

Sustainability can be included in every step of the planning process. Chapter 3 of the Plan Commission Handbook lays out a simplified planning process. It contains the following steps:

- Analyzing: Where is our community now? How did we get here?
- Envisioning: Where do we want to be?
- Planning: How do we get there?
- Evaluating: What progress have we made towards reaching our goals?

The table on page 8 provides a set of questions to ask within each step of the process. The questions are framed through the lens of sustainability.

### Examples

A few Wisconsin communities have integrated sustainability into community planning efforts. Three examples are provided on page 9 to demonstrate integration with a comprehensive plan, a zoning ordinance, and a monitoring and evaluation strategy.

### KEY CONCEPTS

#### *What is sustainability?*

Sustainability can be defined as working to meet the needs of the present without compromising the ability of future generations to meet their needs (adapted from Brundtland Commission, 1987).

#### *What is a sustainable community?*

A sustainable community is a city, village, town, county or region, that aspires to develop an *ecologically, economically, and socially healthy community* for the long term through a highly participatory and democratic decision-making process. Sustainable communities aim to minimize imports from other places and maximize dollars and goods circulating and recirculating within the local economy; reduce their environmental and energy footprint; and ensure that all community residents have their basic needs met (such as food, clothing and shelter).

#### *What is a community plan?*

A long-term plan developed by and for the community (usually a local government) that addresses topics such as housing, economic development, agriculture, natural resources, transportation, and land use.

#### *How do you plan for sustainability?*

The American Planning Association's Policy Guide on Planning for Sustainability recommends a systematic, integrated approach that brings together environmental, economic, and social goals and actions directed at the following four objectives:

1. Reduce dependence on fossil fuels, extracted underground metals and minerals.
2. Reduce dependence on chemicals and other manufactured substances that can accumulate in nature.
3. Reduce dependence on activities that harm life-sustaining ecosystems.
4. Meet the hierarchy of present and future human needs fairly and efficiently.

**ANALYZING: Where is our community now? How did we get here?**

Over the past ten years:

- What is happening in our community that pertains to sustainability?
- Are there organizations (including local government) that are working on aspects of sustainability, such as:
  - connecting affordable housing with weatherizing homes?
  - developing renewable energy capacity?
  - preparing ordinance revisions to include community food production, higher density areas, and/or promoting walking and bicycling through better infrastructure and programs?

**ENVISIONING: Where do we want to be?**

Note: in this step the community is focused on developing a vision, goals and objectives. Some of these questions can also be used to guide inventory and analysis work.

Twenty years from now, where do we want to be in terms of:

- Energy – How much of our energy production should be focused on renewables?
- Local Food – Should our community produce food and encourage businesses to sell local food?
- Natural Infrastructure – Should our natural resources keep us resilient? Examples include flood abatement from wetlands and protecting groundwater resources for safe drinking water.
- Air Quality – Should we reduce carbon dioxide and other emissions, such as particulates, sulfur dioxide, etc.?
- Waste Stream – How much waste do we produce and what should happen to it?
- Community Health – How healthy are individuals in our community and can we be healthier?
- Sustainable Land Use – Where and how are we using our land resources?
- Balanced Transportation – How do people move around our community? Can biking and walking or other forms of transportation be a part of it?
- Greener Economy – What is the quality of our jobs and how do we increase the quality of our local economy?
- Sustainable Government – How do we ensure a financially stable and efficient government?

**PLANNING: How do we get there?**

Note: many of these questions are similar to the Envisioning questions. However, in this stage of the planning process the community is focused on identifying policies and programs (for example, zoning).

How can our community:

- Develop renewable energy capacity?
- Create opportunities for local food production?
- Minimize degradation of the natural environment and maximize ecosystem services?
- Reduce our energy footprint?
- Reduce the amount of waste produced?
- Create a healthier population?
- Minimize outward growth and maximize upward growth?
- Create opportunities for biking, walking, transit and rail?
- Minimize imports from other places and maximize dollars and goods circulating and recirculating within the local economy?
- Ensure that all community residents have their basic needs met?

**EVALUATING: What progress have we made towards reaching our goals?**

What are the key indicators that we can monitor over the next ten years?

See the STAR Framework for a rating system and technical guide:

[www.starcommunities.org/rating-system/framework/](http://www.starcommunities.org/rating-system/framework/)

### Eau Claire Comprehensive Plan

In April 2009, three years after initially adopting its comprehensive plan, the City Council decided to add a sustainability chapter. The 30-page sustainability chapter begins by identifying 10 issues related to economic, social and environmental sustainability (see box at right). Many of these are not typical considerations in a comprehensive plan. For example, Wisconsin's comprehensive planning law does not address energy, local food, atmosphere, or waste as separate elements in a plan. However, each of these issues could be embedded in the planning law's nine elements (for example, agricultural, natural and cultural resources, or utilities and community facilities). For each issue, the sustainability chapter states an objective and related policies. The chapter also includes an implementation program outlining a time frame for specific tasks. Actions are organized into the following categories: public information, continuous planning program, plans and studies, codes and ordinances, joint efforts (with other organizations), and capital improvements.

### Madison Zoning Ordinance

The City of Madison provides another example of a community that has attempted to integrate sustainability into its plans and codes. The City undertook a process to rewrite its zoning ordinance using sustainability principles. The ordinance went into effect in January 2013. The ordinance looks like any other zoning ordinance, but has sustainability characteristics embedded throughout. For example, the Intent and Purpose Section lists goals such as "(h) To address and mitigate the effects of climate change. (i) To remove obstacles and provide incentives for energy conservation and renewable energy. (o) To preserve productive agricultural land and provide opportunities for local food production."

The ordinance also lists some subtle goals that are critical to community sustainability. For example: "(c) To secure safety from fire, flooding, pollution, contamination and other dangers. (d) To maintain and promote safe pedestrian and vehicular circulation. (m) To encourage reinvestment in established urban neighborhoods while protecting their unique characteristics. (s) To encourage pedestrian-oriented development." Lastly, the ordinance contains permitted and conditional uses that support sustainability. For

### KEY ISSUES

1. **Energy:** What should the City do to foster local energy production, conservation, and efficiency, while increasing the use of renewable power?
2. **Local Food:** What should the City do to promote area food production, sales, and consumption while reducing food related waste?
3. **Environmental Conservation:** What should the City do to safeguard our ecosystems, trees, soil, and water resources?
4. **Atmosphere:** What should the City do to reduce our contribution to global warming and minimize air pollution?
5. **Managing Waste:** What should the City do to promote consumer product awareness, increase recycling rates, and reduce the amount of substances entering into landfills?
6. **Strong and Healthy Community:** How should the City continue to protect its citizens from disease, promote healthy living, civic engagement, cultural and ethnic diversity, while partnering with others to provide these activities?
7. **Sustainable Development:** How should the City guide and promote development so that buildings and neighborhoods incorporate sustainable features?
8. **Balanced Transportation:** How should the City increase mobility choices by enhancing other forms of transportation besides that for automobiles? How can transportation infrastructure be designed efficiently, safely, with the environment in mind, and be connected to other local and regional networks?
9. **Greener Economy:** How should the City bolster the local economy by attracting Green-collar jobs and encouraging businesses to become more sustainable?
10. **Sustainable Government:** What should the City do to provide good government and cost-effective services, meet the needs of our citizens, protect the environment, and cooperate with other governments?

(City of Eau Claire Sustainability Chapter)

example, each of the city's 15 residential districts allow bicycle-sharing facilities, mobile grocery stores, community gardens, keeping of chickens and honeybees, and solar energy systems as permitted uses.

## La Crosse Sustainability Indicators

The County and City of La Crosse adopted a strategic plan for sustainability in early 2009. The plan includes indicators to measure progress towards local sustainability goals. Eighteen indicators focus on community-wide issues such as improving social and economic conditions; reducing energy, water and solid waste; and creating more sustainable land use and transportation patterns. Seven indicators focus on making internal government operations more sustainable by reducing energy, water and office paper use, and using more green products. The indicators are listed at right.

## Conclusion

Many Wisconsin communities are figuring out how to infuse sustainability into local plans, ordinances, and indicators. This can be done, but it takes thoughtful discussion and creative thinking. As your community moves to address sustainability, we recommend starting with a list of key issues or questions. The communities highlighted in this article did not focus solely on one area of sustainability or follow a prescriptive process. Instead, they keyed in on topics that were locally relevant and found a process that worked for them. We encourage you to do the same.

## Recommended Resources

Policy Guide on Planning for Sustainability. American Planning Association. 2000. [www.planning.org/policy/guides/adopted/sustainability.htm](http://www.planning.org/policy/guides/adopted/sustainability.htm)

Toward a Sustainable Community: A Toolkit for Local Government (Volumes 1 and 2). University of Wisconsin Extension. [learningstore.uwex.edu/Business-and-Economic-Development-C45.aspx](http://learningstore.uwex.edu/Business-and-Economic-Development-C45.aspx)

Sustainable Communities Capacity Center. University of Wisconsin Extension. [www3.uwsuper.edu/sustainability](http://www3.uwsuper.edu/sustainability)

Living Green. Minnesota Pollution Control Agency. 2000. [www.pca.state.mn.us/index.php/living-green/index.html](http://www.pca.state.mn.us/index.php/living-green/index.html)

## La Crosse Sustainability Indicators

### Community-Wide Indicators

Energy	<ul style="list-style-type: none"> <li>• Electricity (KWh)</li> <li>• Natural Gas (Therms)</li> </ul>
Water	<ul style="list-style-type: none"> <li>• Water (Gallons)</li> </ul>
Land Use	<ul style="list-style-type: none"> <li>• Acres in Conservancy</li> <li>• Street-side Trees</li> <li>• Land Use</li> </ul>
Solid Waste	<ul style="list-style-type: none"> <li>• Solid Waste (Tons)</li> <li>• Recycling (Tons)</li> <li>• Landfilled (Tons)</li> </ul>
Social	<ul style="list-style-type: none"> <li>• Median Household Income</li> <li>• Poverty Rate</li> <li>• Unemployment Rate</li> <li>• Educational Attainment Rate</li> <li>• Crime Rate</li> <li>• Community Supported Agriculture (Number of Farms and Shares)</li> <li>• Affordable Housing Units Created</li> </ul>

### Governmental Indicators (City and County)

Energy	<ul style="list-style-type: none"> <li>• Electricity (KWh)</li> <li>• Natural Gas (Therms)</li> <li>• Diesel Fuel (Gallons)</li> <li>• Gasoline (Gallons)</li> </ul>
Water	<ul style="list-style-type: none"> <li>• Water (Gallons)</li> </ul>
Green Products	<ul style="list-style-type: none"> <li>• Green Products (Number and Type)</li> <li>• Office Paper (Cases)</li> </ul>

Sustainability. Minnesota Pollution Control Agency. 2008. [www.pca.state.mn.us/sustainability/index.html](http://www.pca.state.mn.us/sustainability/index.html)

Zoning for Sustainability: A Review and Analysis of the Zoning Ordinances of 32 Cities in the United States. Jepson and Haines. Journal of the American Planning Association. Vol. 80, Issue 3, 2014. <http://bit.ly/1Dk9mZx>

## References

City of Eau Claire, Comprehensive Plan Sustainability Chapter: 2005-2025, April 2009. [www.eauclairewi.gov/home/showdocument?id=968](http://www.eauclairewi.gov/home/showdocument?id=968)

City of Madison, Zoning Code Ordinance, January 2013. [www.cityofmadison.com/neighborhoods/zoningrewrite/documents/Chap28w1\\_13\\_amndts.pdf](http://www.cityofmadison.com/neighborhoods/zoningrewrite/documents/Chap28w1_13_amndts.pdf)

Sustainability Indicators Report, Sustainable La Crosse Commission, May 2012. [www.sustainablelacrosse.com/PDF/Sustainability%20indicators%20report%20FINAL.pdf](http://www.sustainablelacrosse.com/PDF/Sustainability%20indicators%20report%20FINAL.pdf)

## MORE THAN JUST A BIG MAP: MODERNIZING THE 1964 WISCONSIN LANDSCAPE RESOURCE INVENTORY

By Dan McFarlane, Center for Land Use Education

Over fifty years ago, Wisconsin Governor Gaylord Nelson recruited renowned landscape architect Phil Lewis to inventory the state's cherished cultural and natural resources. Under the Wisconsin Outdoor Recreation Act and through community meetings with organizations and citizens throughout the state, a team of landscape architect students compiled a list of significant community resources. The goal of the project was to help legislators prioritize which parcels of land the state should purchase for protection in order to meet the growing demand for outdoor recreation. The result of the project was an impressive 12-foot tall map that identified over 38,000 important landscape and cultural features, as well as environmental corridors—areas with steep topography, floodplains, and riparian areas.



*The original 12-foot tall map*

### Creating the Interactive Map

As a way to commemorate the fifty-year anniversary of the 1964 map, staff at the Center for Land Use Education (CLUE) decided to convert the Landscape Resource Inventory into digital format. The digital conversion was achieved by scanning, georeferencing, and digitizing original paper maps discovered deep in the Government Documents department of the UW-Stevens Point Library. County boundaries and major roads were used as control points for spatially adjusting the scanned maps into real world coordinates. Over 38,000 features were manually digitized and attributed in a GIS database. Cultural and environmental resource points were represented using Lewis' 220 original icons.

An interactive map makes the data easier to visualize and access. Users can now interact with

the data by turning layers on or off, and by clicking on points to view their meaning. Dan McFarlane, CLUE GIS Specialist, led the effort along with Bill Troolin, a CLUE student intern who digitized and entered the feature information.

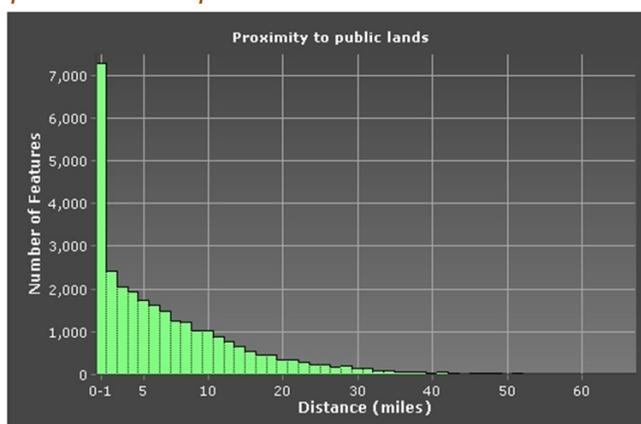
### Using the Interactive Map

The map can be used to measure implementation of the state's original Outdoor Recreation Plan adopted nearly fifty years ago. Using GIS, a proximity analysis reveals that a majority of public land acquisition has occurred in areas with dense concentrations of resource icons. The histogram below shows the results of this analysis. Planners at the local and regional levels can also benefit by comparing the map with their current and future land use maps.

The resource inventory process that Phil Lewis used could be re-created today with the goal of identifying community assets on a map. The existing map could also be updated by identifying what points still exist and adding to those points. This type of information would be useful in guiding state and local land use decisions, tourism, and land preservation efforts. Today's GIS, mobile, and web-based technology would make the process much more efficient and certainly less costly. Visit the interactive map at:

<http://arcg.is/1FPVSt>

### *Proximity analysis of mapped features and public land acquisition since 1964*



(Full link <http://uwsp.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=5347e18583624a7a88601e67ac188d5e>)

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**Submit an Article!**

If you would like to submit an article,  
please contact the managing editor,  
Rebecca Roberts. Your article should  
be 1,000 words or less, of statewide  
concern, and address a land use or  
community planning issue.

**CALENDAR OF EVENTS****APA-Wisconsin Conference**

**There's an App for That: Technology in Planning**

March 6, 2015 – Pfister Hotel, Milwaukee, WI  
[www.wisconsinplanners.org](http://www.wisconsinplanners.org)

**Wisconsin County Code Administrators Spring Conference**

March 26-27, 2015 – Stoney Creek Inn, Wausau, WI  
<http://buckyman00.wix.com/wcca#!spring-2015/c20fy>

**APA National Planning Conference**

April 18-21, 2015 – Seattle, WA  
<https://conference.planning.org/conference/>

**Wisconsin Lakes Partnership Convention**

**Healthy Watersheds, Lakes, People**  
April 23-25, 2015 – Holiday Inn, Stevens Point, WI  
[www.wisconsinlakes.org](http://www.wisconsinlakes.org)

**Land Information and Computer Graphics Facility Training**

March 24-26, April 15-17, May 11-13, 2015 – Getting to Know ArcGIS 10.3  
March 30-31, May 6-7, 2015 – Advanced ArcGIS Topics  
[www.lic.wisc.edu/training/schedule.htm](http://www.lic.wisc.edu/training/schedule.htm)

**Local Government Center Planning & Zoning WisLine Series**

March 11, 2015 – Case Studies in Local Non-Metallic Mining Regulation  
April 8, 2015 – Case Law and Legislative Update  
May 13, 2015 – Site Planning Fundamentals  
<http://lgc.uwex.edu>

**American Planning Association Audio/Web Conferences**

March 11, 2015 – Urban Design, Sustainability, and the Environment  
April 18, 2015 – Negotiation Skills for Planners  
April 19, 2015 – Planning and Climate Change Symposium  
April 20, 2015 – Assessing Existing Conditions with Census Data  
April 20, 2015 – Planning Commissioner Ethics  
[www.planning.org/audioconference](http://www.planning.org/audioconference)

**American Planning Association Chapter Webcasts**

February 27, 2015 – Millennials and Mobility in the Modern West  
March 13, 2015 – Responding to FCC's New Collocation Rules  
March 20, 2015 – Housing for People with Disabilities  
[www.utah-apa.org/webcasts](http://www.utah-apa.org/webcasts)

For more dates visit our online calendar of events:

[www.uwsp.edu/cnr-ap/clue/Pages/calendar.aspx](http://www.uwsp.edu/cnr-ap/clue/Pages/calendar.aspx)



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