

Project

Recreation, Development, and Land Use Change

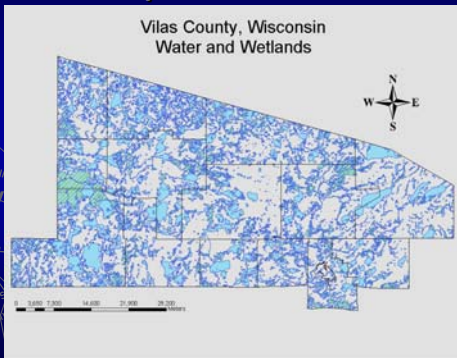
Exploring the use of Planning
Support Systems to model growth
in Vilas County, Wisconsin



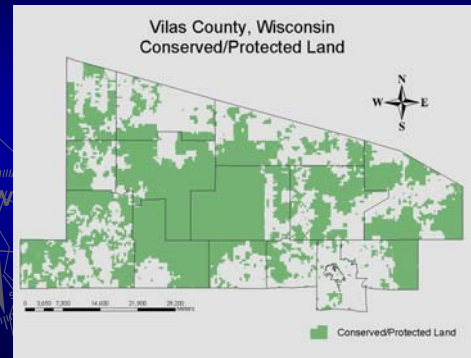
Research and Outreach Objectives

- ▶ Adapt a planning support system to meet the unique needs of a non-suburban growth context
 - Non-concentric, non-radial growth patterns
 - Seasonal housing-driven
- ▶ Develop and evaluate alternative planning scenarios that illustrate links between land use decisions and their environmental impacts
- ▶ Project future land use as associated with an adopted comprehensive plan
- ▶ Facilitate a dialogue that leads to stronger consensus, better informed decisions, and greater community support for land-use plans

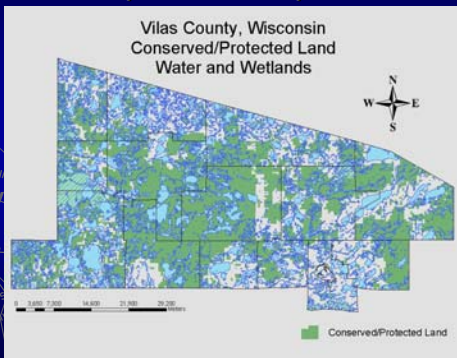
Vilas County-Water and Wetlands



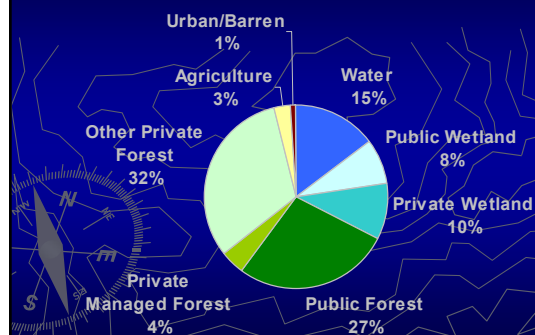
Conservation Land



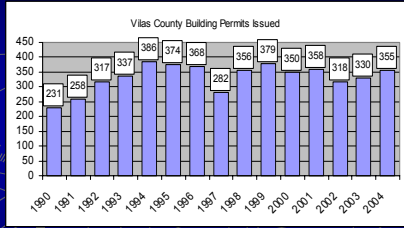
Water, Wetlands, Forests



Vilas County-Land Cover and Ownership

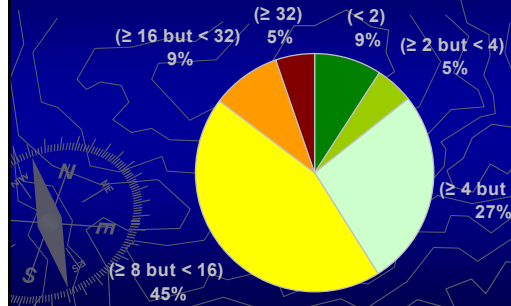


Housing Construction

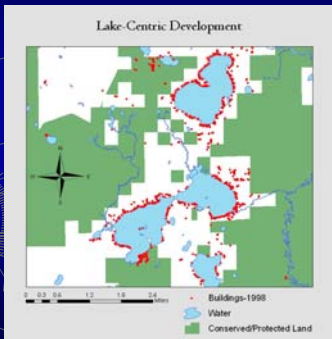


22,397 Total Housing Units, 12,693 Seasonal
57% Seasonal Homes

Vilas County - Housing Density in Private Forest Land (Units/km²)



Typical Development Pattern



Comprehensive Planning "Smart Growth" in Wisconsin

- ▶ Provision in the state's 1999-2001 biennial budget:
 - Requires that all municipalities submit comprehensive plans by 2010
 - Plans must address nine elements:
 - ▶ Issues and opportunities
 - ▶ Housing
 - ▶ Transportation
 - ▶ Utilities and community facilities
 - ▶ Agricultural/natural/cultural resources
 - ▶ Economic development
 - ▶ Intergovernmental cooperation
 - ▶ Land use
 - ▶ Implementation
 - Public participation is required in every phase of the planning process

Vilas County Planning and Zoning

- ▶ Vilas County completed its comprehensive plan in 2003. The plan includes exclusionary zoning and minimum lot sizes for 9 land uses.
- ▶ In 1999 Vilas County instituted a strict Shoreland Zoning Ordinance, which outlined specific regulations for lakes depending on their level of development and ecological sensitivity.

Vilas County Challenges

- ▶ Lack of infrastructure, such as municipal sewer, water, and even roads does not limit growth
- ▶ Inholdings of residential and/or developable land within public land
- ▶ State forestry programs are limited-term (25 or 50 years) and can be terminated early
- ▶ Lake-centric growth

Planning Support System: Function

Inputs:

- Existing land uses
- Suitability factors
 - ▶ Soil type
 - ▶ Slope
 - ▶ Riparian areas
 - ▶ Public lands
 - ▶ Infrastructure
- Suitability weights/ratings and permitted land conversions
- Household and employment projections and growth assumptions
- Scenario-specific land use controls

Outputs:

- Suitability rating for each parcel for each land-use
- Land-use projections
- Current and future land use maps and tabulations

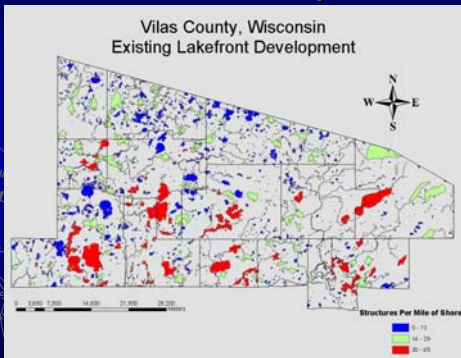
Adapting Vilas County to Planning Support Software: Capabilities

► Suitability/Allocation Controls:

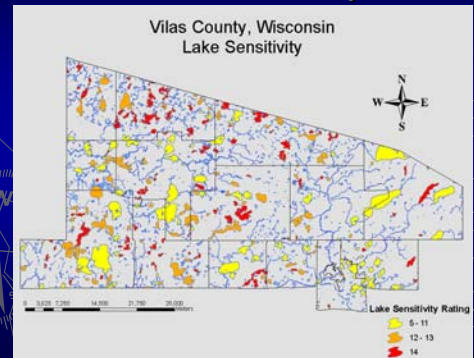
- Separate buffers for each lake classification
- Soil Suitability Factors
- Wetlands and Wetland Buffers
- Managed/Protected Areas

► Growth patterns from lake shores

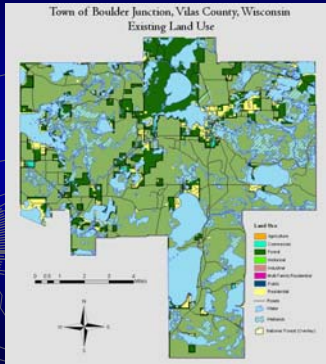
Lakefront Development



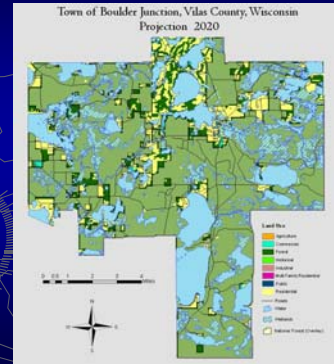
Lake Sensitivity



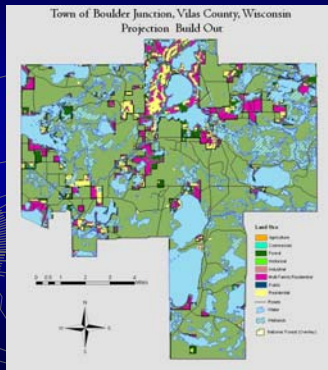
Residential Growth Scenario



Residential Growth Scenario



Residential Growth Scenario



Additional challenges for Projecting Future Land Use in Vilas County

1. Elaborate shoreland zoning
 - ▶ Keyholing
 - ▶ Minimum frontage
 - ▶ Non-conforming structures
2. Non-uniformity among municipal plans
3. Exogenous Forces
 - ▶ Non-resident landowners
 - ▶ Tourism/recreational home driven growth
4. Rural growth patterns

Conclusions

- ▶ Planning Support Software exhibits the potential to aid Vilas County in assessing its current land use restrictions and evaluating alternative development scenarios that might better protect its water resources. Because PSS has been designed for communities where suburban sprawl and economic expansion exert growth pressures, we must work to better adapt PSS to a rural context in which seasonal homes and tourism drive growth on limited land and amidst fragile aquatic ecosystems.

Future Research Directions

- ▶ Models using complementary software packages
- ▶ Defining the niche for public involvement with PSS
 - Interviews –Reflections on the Comprehensive Planning process
 - County Wide Survey
 - ▶ Who participates in Land Use Meetings?
 - ▶ What interests do they represent?
 - ▶ Who does not participate?
 - ▶ What interests are missing?
 - ▶ How might the distribution of PSS scenarios be used to facilitate future planning?
 - ▶ Scenario maps
 - ▶ Interactive scenario building