

Center for Land Use Education

THE LAND USE TRACKER

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COMPREHENSIVE PLANNING IN WISCONSIN: ARE COMMUNITIES PLANNING TO PROTECT THEIR GROUNDWATER? PART II

By Bobbie Webster, Chin-Chun Tang and Lynn Markham

This article is the second in a three-part series describing a project by CLUE staff that examines comprehensive planning efforts to protect and manage groundwater in Wisconsin. In the first article (see Spring 2005 Tracker), we summarized the purpose and background of the project and described our preliminary results. The following article includes the final results of the study, as well as observations and recommendations.

Following a preliminary review of 79 plans, we selected 29 plans for additional review from those that had mentioned groundwater the greatest number of times. Figure 1 shows the geographic distribution of the 29 communities whose comprehensive plans were reviewed. All of these communities rely on groundwater for drinking water. Seven communities represented by green dots have low susceptibility to contamination whereas the 22 communities represented by red dots have moderate to high susceptibility to contamination. The detailed review examined the types of goals and policies that are included in the plans, as well as the type and format of groundwater-related data and information. We also conducted in-depth interviews with five rural Wisconsin communities that have implemented groundwater protection or remediation measures.

RESULTS

Plan goals related to groundwater

A goal is a general statement describing a desired outcome in a community. The number of groundwater-related goals mentioned in these plans was limited. On average, each plan contained 1.4 groundwater-related goals. Twelve plans (41%) did not contain any groundwater-related goals.

Plan policies related to groundwater

Policies describe courses of action used to ensure plan implementation and to

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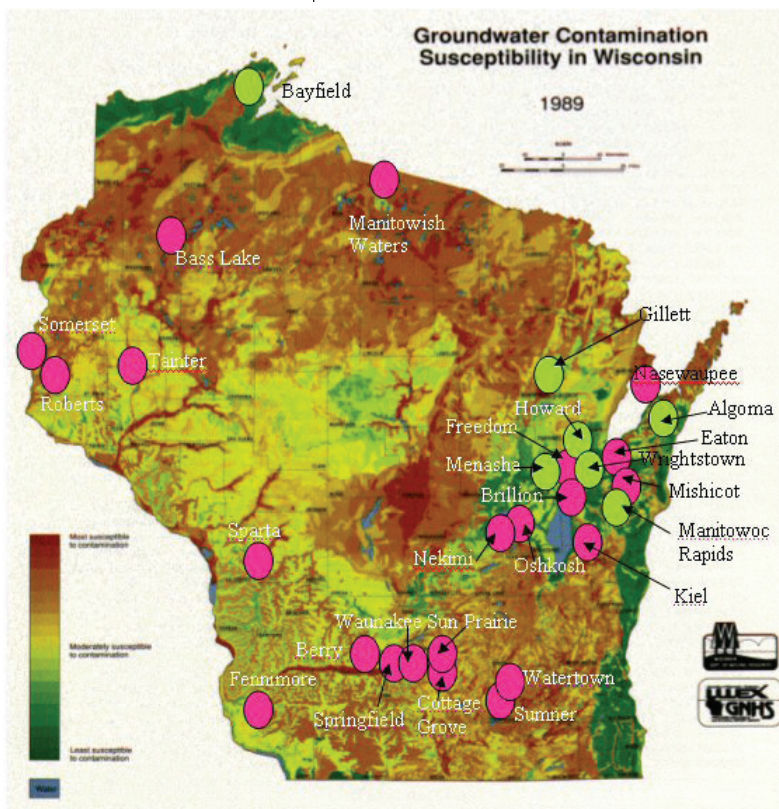


Figure 1: Map of Groundwater Contamination Susceptibility in Wisconsin (UWEX, 1989) showing the location of communities whose plans we reviewed in detail.

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CALENDAR OF EVENTS**IAP2 PLANNING FOR EFFECTIVE PUBLIC PARTICIPATION**

January 10-11, 2006
GEF2 Building, Madison, WI
www.iap2.org/

WISCONSIN COUNTY CODE ADMINISTRATORS SPRING CONFERENCE

March 29-30, 2006
Stoney Creek Inn, Wausau, WI
www.wccadm.com

WISCONSIN TOWNS ASSOCIATION COMPREHENSIVE PLANNING SEMINARS

Coming to southern Wisconsin March or April 2006!
www.wisctowns.com/

INTERNET TOOLS FOR NATURAL RESOURCES: LOCAL GOVERNMENT WEB CAST SERIES

Tuesdays 10:30 a.m. - noon
January 24, 2006 – Internet Tools for Finding Natural Resources Data and Soils Info
February 28, 2006 – Internet Mapping Tools for Water Resources
March 28, 2006 – Internet Mapping Tools for Land and Biological Resources
April 25, 2006 – Internet Modeling Tools for Predicting Land Use Impacts on Runoff
<http://dnr.wi.gov/org/es/science/landuse/CompTools/local.htm>

LOCAL LAND USE PLANNING AND ZONING WISLINE SERIES

Wednesdays 10:30 a.m. - 11:50 a.m.
January 25, 2006 – Siting Livestock Operations
February 22, 2006 – Recent Case Law
March 22, 2006 – Managing Impacts on Wetlands
April 26, 2006 – Endangered Resources and Community Planning
www.uwex.edu/lgc/program/pdf/landbro05-06.pdf

AMERICAN PLANNING ASSOCIATION AUDIO/WEB CONFERENCE TRAINING

January 18, 2006 – Introduction to the Planning Commission: Part I
February 15, 2006 – Zoning Clinic for Zoning Board of Adjustment/Appeals
March 22, 2006 – Introduction to the Planning Commission: Part II
www.planning.org/audioconference/

WISCONSIN CHAPTER OF THE AMERICAN PLANNING ASSOCIATION CONFERENCE

April 6-7, 2006
Chula Vista Resort and Conference Center, Wisconsin Dells, WI
www.wisconsinplanners.org/events/events.htm

For additional dates and information, visit the online calendar of events
www.uwsp.edu/cnr/landcenter/events.html

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accomplish goals. On average, each plan contained 8.5 groundwater-related policies. Figure 2 shows the number of policies and the number of plans in which they occurred.

The most common policy category was waste management; 25 of 29 plans had a total of 74 policies on waste management. The least common policy category was remediation; two plans of 29 contained three policies on remediation. Only a few of the plans had policies that provide clear information about who will implement the policy and by when.

Plan data related to groundwater

We also examined the plans for groundwater data. Figure 3 shows our findings. The most common groundwater data include surface watersheds, soil types, and groundwater susceptibility. The least common groundwater data include impervious surface inventory, changes in water table depth, and estimated community groundwater pumping rate.

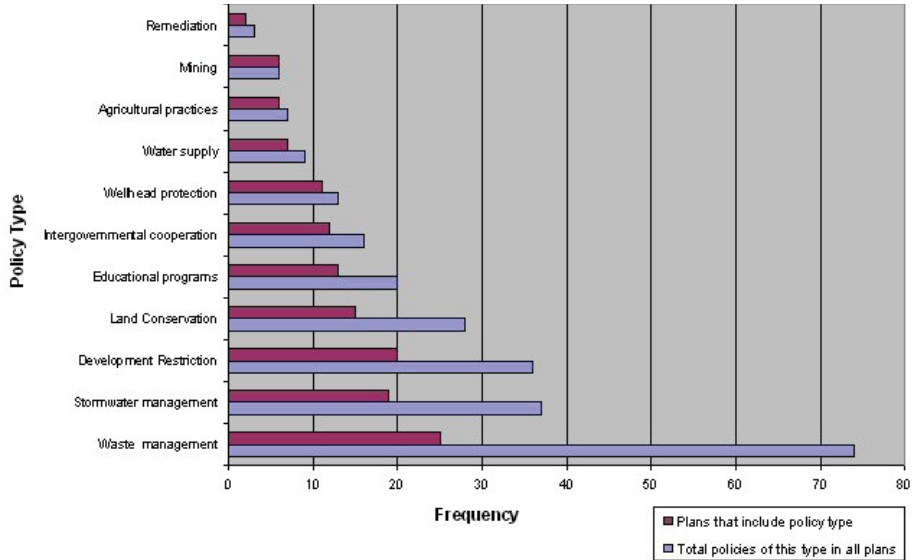
OBSERVATIONS

Importance of groundwater varies by community

The extent to which groundwater is addressed in comprehensive plans varies significantly. Some plans have extensive groundwater data and policies, while others have little. The type of data and policies in these plans are consistent across plans completed by the same plan writers.

Communities with moderate or high groundwater susceptibility had significantly higher groundwater goal scores than communities with low groundwater susceptibility. This fact suggests that communities with moderate or high groundwater susceptibility are aware of potential groundwater problems and want to protect their groundwater.

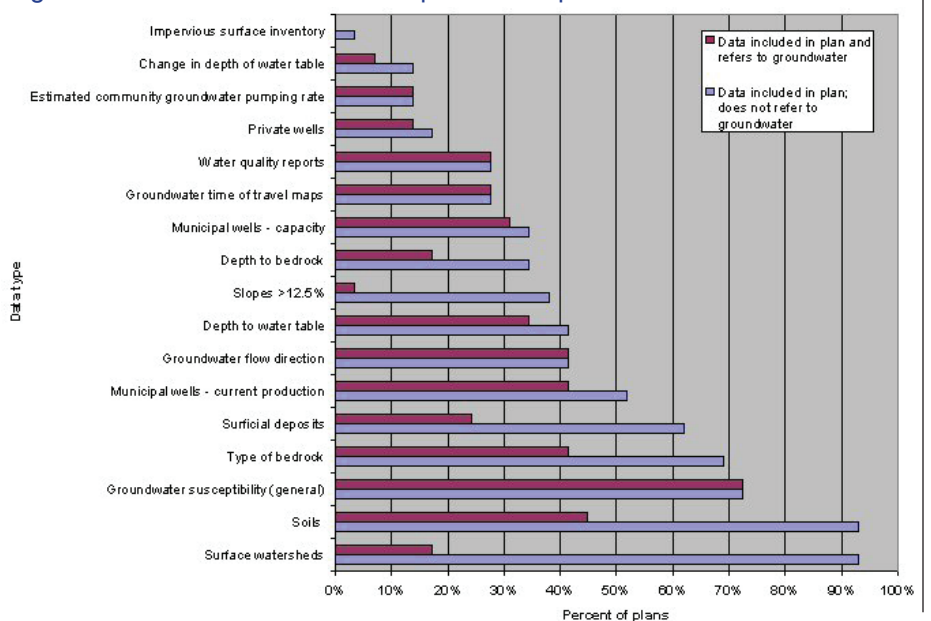
Figure 2: Policy appearance in plans.



However, the moderate and high susceptibility communities do not have higher policy scores. These scores suggest that communities with moderate or high groundwater susceptibility are aware of potential groundwater problems, yet they may be unsure how to achieve their goals, may perceive barriers to achieving their goals, or are unwilling to commit to policies in their plan.

Based on observations made while developing the case studies, nearly all communities that are engaged in groundwater protection efforts have had groundwater problems.

Figure 3: Groundwater data in comprehensive plans.



The full research report, including five community case studies highlighting rural Wisconsin communities that have implemented groundwater protection and/or remediation measures, is available at: www.uwsp.edu/cnr/landcenter/groundwater/

Availability of groundwater data and the ability to interpret it varies

The type, format, and extent of groundwater information in comprehensive plans is generally limited. When groundwater data or maps are included, little or no attempt is made to interpret the data. This may be explained by the fact that groundwater data are incomplete or inaccessible locally or on a state-wide level, or that plan preparers do not know how to interpret or process the data.

When available, communities generally made an attempt to incorporate groundwater data into local plans. We found, for example, that communities located in counties that have produced a groundwater protection plan incorporated more groundwater information in their comprehensive plans. Additionally, communities with municipal water systems (and therefore at least one person responsible for water testing and reporting) included significantly more groundwater data in their plans than communities without municipal systems.

Policy frequency depends on regulations and local land uses

Groundwater-related policies that are required by state or federal law appeared more frequently in local plans than other policies. For example, the Wisconsin administrative code Comm 83 requires inspection of private onsite wastewater treatment systems (POWTS) every three years, whereas the Wisconsin administrative code NR 216 requires larger municipalities to develop storm water plans. Conversely, policies that are resource or issue dependent, such as those related to remediation, mining, or agriculture appear less frequently. Communities that are not facing these issues are unlikely to include them in a local plan.

Weak linkages exist between data, goals and policies

The groundwater data scores did not correlate with goal or policy scores

achieved by local communities. This fact suggests that communities do not consistently require a minimum level of groundwater data before developing goals and policies. We also found that the groundwater goal scores do not correlate with the policy scores. Some communities are including groundwater goals but are not taking it to the next step by developing associated policies. At the opposite end of the spectrum, some plans include multiple groundwater policies yet include no groundwater goals.

These findings may result from the very expansive nature of comprehensive planning. Communities can easily overlook groundwater when developing their comprehensive plans, particularly if there is no local champion willing to speak out on groundwater. These findings may also be related to the fact that groundwater planning is complex and new to many communities and planners.

RECOMMENDATIONS

Based on our review of comprehensive plans, development of community case studies and discussions with key players in groundwater planning, we provide the following recommendations for improving the groundwater component of comprehensive plans in Wisconsin.

Increase citizen involvement to heighten the priority of groundwater in local communities

The development of a comprehensive plan is steered heavily by local participation. The only way to ensure that a comprehensive plan addresses groundwater issues is to invite residents with a strong interest in groundwater to actively participate in the process. Community involvement that brings attention to groundwater can spark effective goals and policies.

Hire local government staff and consultants that value groundwater

Groundwater protection measures achieved by many of the communities



featured in the case studies were spurred by a single individual that valued groundwater and persistently sought opportunities to provide education, funding and other resources to prevent and address groundwater issues. Groundwater protection and remediation efforts also depend on support from local government officials and their constituents.

Improve the accessibility of groundwater data to plan writers

Data collection during a comprehensive planning process may be overwhelming (imagine collecting information on all nine elements). Groundwater data that are convenient, easily accessible and in a format that can be directly utilized in a plan are much more likely to be included by plan writers and citizen planners. Increasingly, scientists will need to find ways to better translate scientific information into jargon-free language understandable by the public.

Provide education to help plan writers better interpret and use groundwater information

Most professional planners and community members lack training in groundwater planning. Outreach workshops designed to educate professional and citizen/volunteer planners on how to interpret and use groundwater information would address this need.

Provide funding assistance to support further groundwater studies

Based on the detailed plan review, groundwater data related to groundwater time of travel, impervious surfaces, and potential contaminants are lacking. These types of information require additional funding to research and investigate.

Provide education about the costs of groundwater contamination

Based on observations from the community case studies that groundwater protection is often not a high priority until problems become apparent, it may be beneficial to provide education illustrating

the costs of groundwater contamination and associated remediation. While the case studies illustrate this to a limited extent, a study of the fiscal impacts of contaminated groundwater in Wisconsin communities may be more effective to demonstrate the cost avoidance potential of groundwater protection measures.

In summary, the Wisconsin comprehensive planning law adopted in 1999 requires plans to include goals, objectives, policies, maps and programs for the conservation and effective management of groundwater. While most of the plans we reviewed contained limited groundwater-related data and some groundwater goals and policies, much remains to be done. Specifically, all plans should include data about current groundwater quality and quantity, groundwater flow direction and potential sources of contaminants. Based on this enhanced data set, local goals and policies should be developed to address local groundwater issues. Planning for groundwater is a long-term community endeavor with many valuable and indispensable benefits. ■

KNOW A COMMUNITY THAT WANTS TO LEARN MORE ABOUT ITS GROUNDWATER RESOURCES?

The Center for Land Use Education in collaboration with U.S. Geological Survey, Wisconsin Rural Water Association and others, is seeking towns, counties and villages to include in its community groundwater planning project. Following a consultation with community leaders, we will prepare a PowerPoint presentation and paper summarizing:

- Susceptibility of groundwater to contamination
- Current groundwater quality
- Changes in groundwater quantity
- Recommendations for groundwater protection or restoration

For more information contact Lynn Markham at Lynn.Markham@uwsp.edu or 715-346-3879.

REFERENCES

University of Wisconsin Extension (UWEX)
Wisconsin Geological and Natural History Survey, 1989. Groundwater Contamination Susceptibility in Wisconsin.
www.uwex.edu/wgnhs/gwmap.htm

ACKNOWLEDGEMENTS

We thank the University of Wisconsin System for funding this project through the Groundwater Research Program. We are also grateful to the advisory committee for their constructive advice and encouragement.

Reviewed by Anna Haines and Rebecca Roberts of the Center for Land Use Education, Kevin Masarik of the Central Wisconsin Groundwater Center, and Dave Lindorff of the Wisconsin Department of Natural Resources.



CLUE-IN ON TECHNOLOGY

L-THIA – THREE VERSIONS, THREE GROUPS, THREE PROJECTS

By R. Chris Welch, Natural Resource Educator, WDNR

Conventional methods of assessing hydrologic impacts evaluate how land use changes alter peak runoff rates. Peak runoff results produced by these models are used to design runoff and erosion control structures but do little to address water quality issues. The Long-Term Hydrologic Impact Assessment (L-THIA) model was developed to address the long-term, cumulative impacts that human activities have on stormwater runoff volumes and water quality. L-THIA is an ideal tool to assist in the evaluation of potential effects of land use change and to identify the best location of a particular land use so as to produce the minimum amount of negative impact on the local natural environment. Since L-THIA is available on the Internet it is accessible to anyone concerned about what impact a particular land use change might impose.

Based on community-specific climate data, L-THIA estimates changes in recharge, runoff, and nonpoint source (NPS) pollution resulting from past or proposed development. It estimates long-term average annual runoff for land use and soil combinations, based on actual long-term climate data for that area. By using many years of climate data in the analysis, L-THIA focuses on the average impact, rather than an extreme year or storm (Purdue Research Foundation, 2004).

There are multiple versions of L-THIA available. Basic Input L-THIA was developed for those new to land use planning. Detailed Input L-THIA gives the user more functionality and therefore is geared towards those with land use planning experience. GIS L-THIA runs within ESRI ArcView GIS software for those with GIS capabilities and skills.

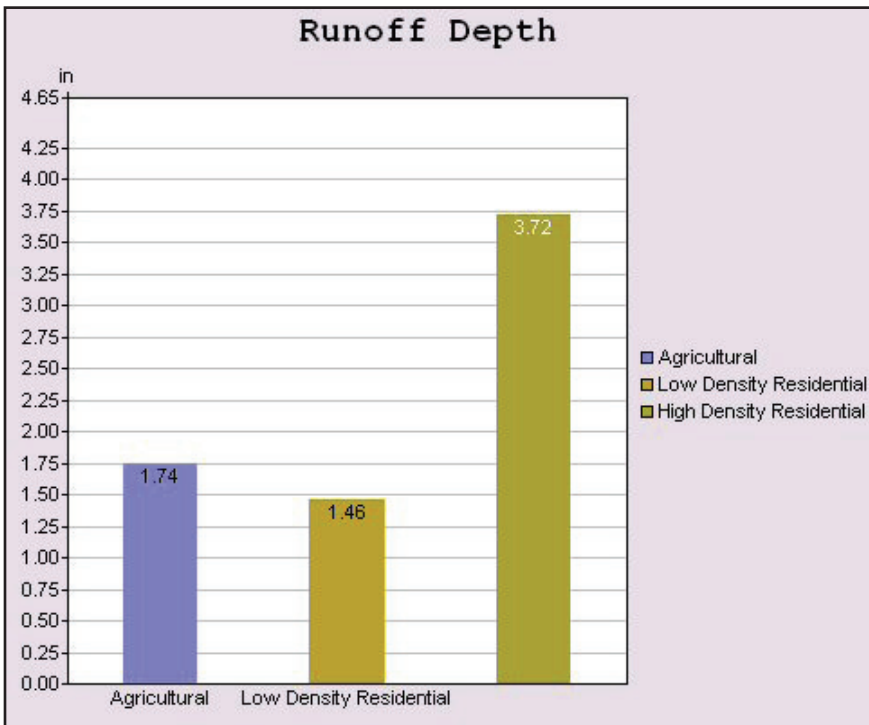
To demonstrate the different versions of L-THIA, this article will focus on three specific case studies. Each example explains how a specific group used a different version of L-THIA to assist with local planning projects.

BASIC INPUT L-THIA

Using web-based tools and photo visioning in the classroom to identify and map urban development and its contribution to stormwater runoff.

Three high schools in Washington County, Wisconsin, participated in a two-part stormwater and NPS pollution lesson as part of the stormwater pollution education campaign required by their municipality's NPDES Phase II permit.

Basic L-THIA will present you with tabular data, bar graphs, or pie charts showing how water quality is affected by land use change



The University of Wisconsin-Extension and MSA Professional Services, a Madison-based engineering and planning firm, collaborated to write and teach the two-part lesson.

In part one of the lesson, students learned about construction site erosion and other sources of urban runoff pollution. They learned specifically how excess soil in streams and rivers degrades fish habitat and overall water quality. Students learned that in urban areas, construction site erosion is a major contributor of sediment to local waterways. Using one of two Internet-based tools, the West Bend GIS Map Server or Wisconsin DNR WebView, students mapped four specific sites within their community where urban development is occurring. Using aerial photos, they estimated the area of these four sites. Students then headed into the field and used disposable cameras to photograph evidence of erosion or examples of best management practices at the sites they mapped.

In part two of the lesson, students compared the aerial photos of their sites (taken 5 years earlier) with the photos taken at each site the previous week. Students then placed their photographs on a larger map of their community, and identified patterns of urban development taking place within the city or village. They grouped the remainder of the photographs into categories and evaluated the success of the best management practices being utilized at the photographed construction sites.

Students utilized Basic Input L-THIA to estimate the impact of urban development identified in the last five years. With Basic Input L-THIA, students only needed to input their location, the hydrologic soil type found in the area of land use change, and the type and size of land use change that occurred. The model then generated estimated changes in runoff volumes and depths, and expected changes in NPS pollution loadings. Students produced

these results as tables, bar graphs, and pie charts. Through this lesson, students received a better understanding of how local land use decisions have affected stormwater quantity and quality.

DETAILED INPUT L-THIA

Using web-based tools to raise community awareness and understanding of local land use issues.

The Friends of Pheasant Branch (FOPB) is a dedicated group working to protect ecologically significant lands in the Middleton area of Dane County, Wisconsin. With a mission to “restore, preserve and understand the value of conservancy lands, other natural habitats, and cultural sites in the Pheasant Branch watershed for today and tomorrow” the FOPB has made it their priority that all land use decisions in the area are given the full attention of the group.

During the past year, the Middleton-Cross Plains Area School District made the decision to sell a 19.27-acre parcel of land in order to procure land in areas where the district is experiencing higher rates of growth. This parcel, the Highland Way parcel, is a partially wooded tract

The Highland Way parcel is a partially wooded tract surrounded by high-density residential development on two sides. Photo by Andy Adams.



surrounded by high-density residential development on two sides. The remaining two sides are adjacent to the existing Pheasant Branch Conservancy, located just inland of the northwest shore of Lake Mendota.

The Middleton-Cross Plains School Board has granted an option to the FOPB for its fair market value, \$3 million. Members of the group have been working on raising the funds needed to purchase the land. To be convincing, their grant applications and fund raising publications require the inclusion of hard data—facts that would make it obvious that preserving this parcel would be best for the community for both ecological and economical reasons.

The FOPB is utilizing Detailed Input L-THIA to help support their efforts in preserving the Highland Way parcel. Detailed Input L-THIA is similar to the Basic Input version but gives users the added ability to enter detailed and customized land uses. Basic Input L-THIA allows users to select from only eight land use choices.

waters. L-THIA makes it apparent that preservation of this parcel in its current state would be beneficial to the watershed. Not only would NPS pollutant loadings be less but the economic costs of handling the increased volume of runoff would be avoided.

With the results from L-THIA, the FOPB has been able to effectively communicate the importance of conserving the Highland Way parcel. The results from L-THIA will be useful for educating the community about alternative land uses and raising the funds necessary to protect the land.

GIS L-THIA

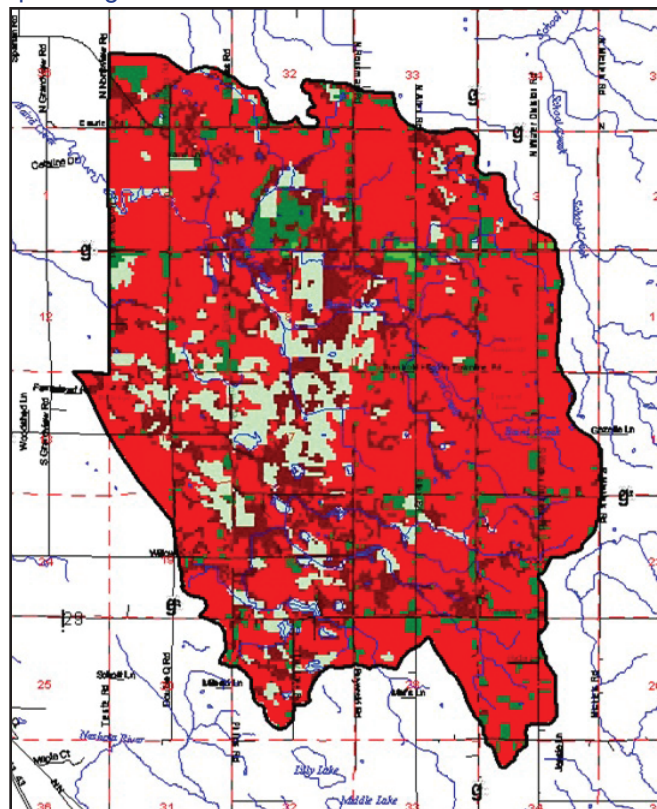
Using web-based tools to guide local decisions within a watershed.

Recently, the Bay-Lake Regional Planning Commission (BLRPC), in partnership with the Baird Creek Preservation Foundation, completed a study evaluating different land use scenarios and their impact on volume and quality of runoff within the rural portion of the Baird Creek watershed.

This was a BLRPC subsidized pilot project that received additional funding from the Baird Creek Preservation Foundation and supporting software from Wisconsin Coastal Management Program. BLRPC is looking at how L-THIA can be used in combination with other low-cost models to demonstrate the effects of different land uses on non-point source pollution.

Baird Creek is a subwatershed draining 25 square miles in the northeast corner of the East River watershed, near Green Bay, Wisconsin. The creek originates in agricultural lands and flows west 31.1 miles through wetland, park and urban areas. The lower 3.5 miles are perennial and classified as supporting warm water sport fish communities, with the upper 27.6 miles of intermittent stream designated as supporting warm water

The Baird Creek Preservation Foundation plans to use the digital maps created by GIS L-THIA during educational and planning activities.



The soils found in the Highland Way parcel are composed of Hydrologic Soil Group B – silt loams and loams with moderate infiltration rates. Preservation of this parcel would preserve the soils’ ability to infiltrate water. Conversely, development of the forested parcel into high-density residential use would significantly increase runoff and non-point source pollution loadings into Conservancy and Lake Mendota



forage fish. The predominant land use in the upper reaches of the watershed is agriculture but it is quickly being urbanized as the population of the Green Bay metropolitan area spreads eastward (Reyburn, 2003).

In general, water quality ranges from good in the upper reaches to poor in the lower urban reaches. The stream suffers from NPS pollution from barnyard runoff, stream bank and cropland erosion causing turbidity, nutrient problems, sedimentation and habitat loss (Reyburn, 2003).

The Bay-Lake Regional Planning Commission has been utilizing L-THIA GIS to develop a series of digital maps and corresponding databases for the Baird Creek Preservation Foundation. The map series depicts analysis estimates for the rural portions of the Baird Creek watershed planning area, including the Towns of Humboldt and Eaton in Brown County and a small area in the Village of Bellevue.

L-THIA, as with other hydrologic models, utilizes the United States Department of Agriculture, Soil Conservation Services curve number (CN) method. CN's are based on soil and land use characteristics for a given area. These values are used to empirically calculate surface runoff volumes for a given rainfall event (Engel, 2005).

Basic and Detailed Input versions of L-THIA use an average of CN values over a large area to calculate runoff, whereas L-THIA GIS uses a distributed method. The distributed method calculates runoff for all unique areas in the watershed, and then sums them, producing a more accurate result (Engel, 2005). L-THIA GIS also gives users the ability to display their results graphically through maps.

The first step in this project was the creation of a GIS base map for the Baird Creek watershed study area. The base map contains all pertinent information such as roads, county boundaries, civil

division boundaries, soils, updated land use, streams, swales, and drainage basins. 2002 land use data was updated by conducting on-the-ground visual inventories of current land uses in the study area.

After reformatting the soils and land use data, determining hydrologic soils groups, and converting the data into grids, the runoff scenarios are created. Using this information the model predicts NPS pollutant loadings. The digital maps produced by L-THIA will be used by the Foundation during planning and educational activities concerning the rural portions of the Baird Creek Watershed.

ADDITIONAL APPLICATIONS

L-THIA can also be used to assess the hydrologic impacts of a variety of projects, including:

- Impacts of a proposed land use change on downstream residents.
- Tourism / agriculture transition impacts on a coastal watershed.
- Past and future land use change in an urban-rural fringe watershed, including impact fee assessment.
- Watershed scale implications of land use change for NPS pollution.

L-THIA, along with more information and instructions on how to use the tool, is available at www.ecn.purdue.edu/runoff/lthianew/.

R. Chris Welch is a Forest Resource Educator/ Web Developer with the Department of Natural Resources Division of Forestry. He has done work with the DNR Bureau of Integrated Science Services Computer Tools for Planning, Conservation, and Environmental Protection technical assistance program. This program is an effort to increase awareness of Internet resources available to local governments, citizen planners, educators, and anyone else involved in land use planning. For more information, see: <http://dnr.wi.gov/org/es/science/landuse/CompTools/> ■

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Engel, B.A., 2005 Update, L-THIA NPS (Long Term Hydrologic Impact Assessment and Non-Point Source Pollutant Model, Version 2.3), Purdue University and U.S. Environmental Protection Agency. See also: www.ecn.purdue.edu/runoff/lthianew.

Purdue Research Foundation, 2004. L-THIA Model. Available: www.ecn.purdue.edu/runoff. Accessed 5 July 2005.

Reyburn, J., Aquatic Biologist. Wisconsin Department of Natural Resources, Baird Creek Watershed Management Study, 2003.

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Reviewed by Rebecca Roberts of the Center for Land Use Education.



IS MUNICIPAL FINANCING OF STORM WATER PROJECTS FAILING?

By Todd Ochsner B.S., SEH Community and Economic Development Specialist

INTRODUCTION: THE FINANCING DILEMMA

The cost of constructing, operating, and maintaining municipal storm water facilities continues to increase. Coupled with budget cuts, property tax limits, the enactment of the Clean Water Act, and National Pollutant Discharge Elimination System (NPDES) Phase II requirements, municipal storm water related costs are forecast to continue growing. Come budget time, the cost of funding storm water activities, such as storm water drainage improvements, water quality management, proper ordinance development, and wetland protection may create a volatile financial situation.

SELECTING THE BEST OPTION FOR FINANCING STORM WATER RELATED ACTIVITIES

Many communities utilize municipal property taxes and special assessments to finance storm water improvements. Increasingly, however, communities are exploring the use of user charges, which are traditionally used to finance municipal sanitary sewer and water systems, to finance storm water management activities. Implemented through the creation of a “storm water utility,” this approach is gaining recognition as the most equitable way to finance storm water management activities while allowing for development and growth in the municipality. The storm water utility is:

- **Fair** – charges are based on the quantity of runoff that a parcel of land contributes to the overall storm water problem rather than property values as is the case with general taxes.
- **Dependable** – the storm water utility is self financing. It does not compete with other governmental services for general revenues and it provides consistent funding which is kept in

separate dedicated funds and can be used for debt services. This provides more responsible government in that the municipality must use funds to pay for the outlined storm water projects for which they were collected.

- **Acceptable** – a regular small service charge is typically more acceptable to residents than a large one-time assessment or increased property taxes.
- **Simple and flexible** – storm water utility charges are similar to water and sewer charges.

HOW DOES A STORM WATER UTILITY WORK?

The storm water utility collects a service charge or fee based upon “use” just like sanitary or drinking water fees. The fee is typically charged against all developed parcels within a municipality based on the premise of “contributors pay.” The rate structure is based on land use type, density, parcel size, and the amount of runoff contributed by a particular parcel. Where land is in a natural state (pre-development), most rain soaks into the ground. Where development has occurred, rooftops, driveways, buildings, and parking lots (called impervious surfaces) prevent rainfall from soaking into the ground. The rain runs off into streets, ditches, ponds, and lakes, creating the need for drainage systems that protect the quality of our water resources and serve as flood control measures. Therefore, the fee is based on how much water runoff is contributed by a particular parcel.

A consistent, dependable revenue source provides a dedicated fund to manage the drainage system and water quality improvements without increasing property taxes or using special assessments. A



storm water utility also provides the means to handle increasing costs through small adjustments in the fee. Acceptance is based upon education of this process; it is imperative that the municipality undertaking such a project have an understanding of what the storm water utility is prior to the actual establishment of the utility. Studies, multiple internal/external meetings, and planning should be done to determine what projects need to be accomplished and why. The overall goal of the storm water utility is to reduce the quantity and increase the quality of the storm water that reaches the municipal system.

HOW WILL THE UTILITY BENEFIT THE MUNICIPALITY?

The development and implementation of a storm water utility requires a considerable amount of time and resources. Yet, from the perspective of elected representatives and municipal staff responsible for funding municipal storm water management programs, the benefits of storm water utilities include:

- **New funding source** – revenues generated by storm water utilities can be used as a new source of funds to supplement the municipality's current storm water management funding.
- **Sustainable revenues** – revenues generated by storm water utilities are constant, tend to increase with the municipality's growth, and can be gradually increased through rate hikes or special user fees.
- **Bondable revenue stream** – the municipality is no longer tied to using only general obligation debt to pay for storm water improvements. Bonds for capital improvements can be issued to facilitate constructing storm water management facilities and the revenues generated by storm water utilities can be used to pay back revenue bonds.

CONCLUSION

Storm water utilities are becoming more common and better accepted throughout

the State of Wisconsin. Whether a municipality is under the NPDES Phase II permitting process or wants to develop alternative methods of financing storm water projects, the storm water utility presents one alternative that communities may want to consider. To date, over 25 Wisconsin municipalities have implemented and are enjoying the benefits of a storm water utility.

ACKNOWLEDGEMENTS

Thanks to Andy Lamberson, Senior Storm Water Specialist at SEH Inc. I am grateful for his insight and continual knowledge of storm water.

Reviewed by Rebecca Roberts of the Center for Land Use Education.

Todd Ochsner, a member of the Community and Economic Development Group in Wisconsin for Short Elliott Hendrickson, Inc. (SEH), specializes in creating financing solutions for municipal projects. Mr. Ochsner has assisted multiple Wisconsin municipalities fund a variety of projects including water, sewer, fire stations, libraries, industrial parks, downtown renovations, streets, parks and trails. In addition, Mr. Ochsner provides guidance and counsel to help communities implement storm water utilities, tax increment finance districts and other innovative funding mechanisms. ■

RECENT PUBLICATIONS

Check out these recent journal articles chronicling CLUE's experience partnering with Ashland County on a comprehensive planning project!

- Miskowiak, Douglas and Chin-Chun Tang. "Fostering Outreach Education and Public Involvement with GIS: A Case Study from Wisconsin's Northwoods." Participation Quarterly. International Association for Public Participation. May 2005.
- Haines, Anna, Chin-Chun Tang, Lynn Markham and Kate Demorest. "Collaborative Planning in Wisconsin's Northwoods." CBCRC Journal. Community-Based Collaboratives Research Consortium. October 2005. www.cbrc.org/php-bin/news/cbrcJournal.php



Submit Articles!

Please submit an article to our newsletter.

It should be:

- 1,000 words or less,
- Informative,
- Of statewide concern,
- And address a land use issue.

The managing editor will review your submission and get back to you if any changes are necessary.

*Managing Editor
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LEGAL UPDATE

NEW QUORUM AND ALTERNATE REQUIREMENTS FOR ZONING BOARDS

By Rebecca Roberts

In August 2005, Wisconsin Act 34 changed the voting and membership requirements for zoning boards of adjustment and appeals. When a quorum is present, a zoning board of adjustment or appeals may now take action by a majority vote of the members present. This means that if only three members of a five-member zoning board are present, two concurring votes are sufficient to decide an issue, such as granting a variance. The prior law required a city, village or town board of appeals to take action by a vote of four out of five members, while a county board of adjustment could take action by a majority of all members.

Quorum – a majority of the total zoning board.

Alternate – a member of the zoning board required to act in the place of a regular zoning board member if a member is absent or has a conflict of interest.

In an attempt to ensure that a full complement of zoning board members is present when making a decision, the law also requires communities to appoint two alternate members to the zoning board. The designated “first alternate” is required to act with full powers of the zoning board when a regular member cannot vote due to conflict of interest or absence. The “second alternate” is required to act when the first alternate or multiple members of the zoning board are unable to vote. These changes aim to ensure that landowners and developers are provided with timely and unbiased decisions.

Reviewed by Jim Schneider of the Local Government Center and Lynn Markham of the Center for Land Use Education

