The Lakeshore Natural Resource Partnership, Inc.

Wisconsin Department of Natural Resources
River Planning Grant RP-152-08

Lakeshore Basin Partnership Initiative: Final Report

The Lakeshore Natural Resource Partnership (LNRP) received a DNR River Planning Grant that allowed us to build locally led seminars and a basin-wide newsletter.

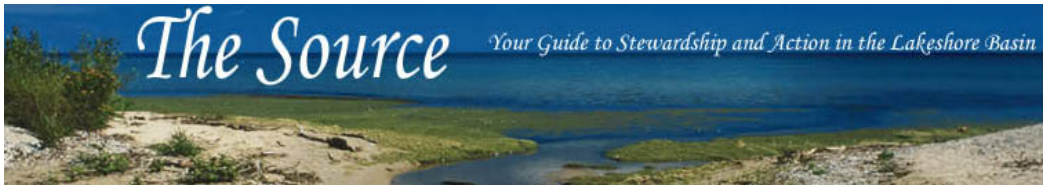
We began by creating a seminar series that built upon our education campaign funded by the Wisconsin Coastal Management Program, "We All Live on the Water. Life Depends on It. Protect It." that brings timely issues to the public for dialogue and debate. We called the series, the

"We All Live on the Water" Seminar Series

We used recommendations for topics that emerged out of discussions with our river basin partners and/or our basin and regional partners. We formed steering committees with local and regional partners for each of the seminars.

At the same time, we developed a newsletter format giving it the name:

"The Source: Your Guide to Stewardship and Action in the Lakeshore Basin"



We hired the Wisconsin Web Writer (Karen Grupe) to configure the newsletter and provide supporting materials on our website.

Each newsletter used the following template:

Stories

1. A Message from the Executive Director – Jim Kettler
2. News from the Director of Outreach – Julie Hein-Frank
3. Feature Story on a Local Champion – Jim Kettler
4. The Basin Educator Corner – Deb Beyer
5. Notes from the Seminar Series – Jim Kettler
6. Short Grantee Stories, LNRP Activities, Calls for Participation – Jim Kettler, Julie Hein-Frank, LNRP Board of Directors, Guests

On the right tab, we have a number of
Did you know?
LNRP facts
Basin facts
Board Member Profiles
Calendar of events

Lakeshore Basin Partnership Initiative: Summary of Deliverables

Five Seminars

Business and Natural Resources: Making the Lakeshore Grow
September 26, 2007
Wisconsin Maritime Museum, Manitowoc

Steering Committee
- Scott Gunderson, UW Extension
- Valerie Mellon, City of Manitowoc Engineering Department
- Russ Tooley, Centerville Cares
- Norma Bishop, Director, Wisconsin Maritime Museum
- Wendy Lutzke, Education Coordinator, Wisconsin Maritime Museum
- Lauren Rose Hofland, County of Manitowoc, Former Planning Department Staff Member
- Judy Goodchild, City of Two Rivers Parks and Recreation

Speakers
- Harvey Bootsma, UW Milwaukee WATER Institute
- Janet Sosnosky, City of Manitowoc Stormwater Coordinator
- Jim Reif, Owner of Reif Construction and Representative of the Home Builders Association
- Steve Hoffman, Crop Consultant

Further Outcomes
- Call for Phosphorus Ban by Manitowoc Herald Times Reporter
- Listening Session between Soaring Eagle and Centerville Care
    - January 10, 2008
    - Wisconsin Maritime Museum

Developing a Stewardship Ethic through Art
December 5, 2007
Woodland Dunes Nature Center, Two Rivers

Steering Committee

- Jim Knickelbein, Director, Woodland Dunes Nature Center

Speakers
- Bonnita Budysz, Painter
- Jean Beigun, Poet
- Kathryn Gahl, Poet
- John Roberts, Storyteller

Further Outcomes
- Formation of a new basin conservation group, the Water's Edge Artists
- Collaborative Creation of the Lakeshore Waterways Calendar

Lessons for Manitowoc County: Water Quality Studies from the Fox River and Discovery Farms
March 8, 2008
Wisconsin Maritime Museum, Manitowoc

Steering Committee
- Scott Gunderson, UW Extension
- Russ Tooley, Centerville Cares
- Janet Sosnosky, City of Manitowoc Stormwater Coordinator
- Wendy Lutzke, Education Coordinator, Wisconsin Maritime Museum

Speakers
- Vicky Harris, Sea Grant
- Eric Cooley, Discovery Farms

Further Outcomes
- Successful Application for River Planning Grant
    - Collaboration between Woodland Dunes, WI Maritime Museum, UWEX, and LNRP
- Phosphorus in Lake Michigan: A Forum for Exchange
    - Tuesday, November 18th
    - Wisconsin Maritime Museum

Sustaining Our Water – Our Health, Our Livelihoods
April 26, 2008
Farm Market Kitchen, Algoma

Steering Committee
- Bill Iwen, Tri-Lakes Association
- Jill Bussiere, League of Women Voters
- Mary Pat Carlson, Farm Market Kitchen
- Mark Walter, Bay Lake Regional Planning Commission
- Claire Thompson, Kewaunee County UWEX

Speakers
- Gary Becker, Mayor of Racine
- Jay Moynihan, UW Extension

- Pat Robinson, UW Extension
- Davina Bonness, Kewaunee Groundwater Guardians
- Andy Wallander, Kewaunee Land and Water Conservation Department
- Tom Konop, Local Farmer
- Kevin Naze, Local Commercial Fisherman
- Mike Toneys, Retired DNR Fisheries Biologist

Further Outcomes
- Second Seminar on Sustaining Our Food
- Andy Wallander joins the LNRP Board of Directors
- Successful Waterfront Development Award for the City of Kewaunee

Sustaining Our Food – Our Health, Our Livelihoods
October 4, 2008
Farm Market Kitchen, Algoma

Steering Committee
- Bill Iwen, Tri-Lakes Association
- Jill Bussiere, League of Women Voters
- Mary Pat Carlson, Farm Market Kitchen
- Aerica Opatik, Kewaunee County UWEX
- Claire Thompson, Kewaunee County UWEX

Speakers
- Fred Depies, Farm Fresh Atlas
- Gayle Coleman, UWEX
- Ken Kinstetter, Local Dairy Farmer Transitioning to Organic
- Karen Baudhin, Local 500-Cow Dairy Farmer
- Michael J. Flynn, Local Environmental Engineer
- Marion Retger, Director, Lakeshore Community Action Program
- Meg Naysmith, Local Gardner
- Peter Seely, Owner/Operator of Springdale Farm, a Community Supported Ag Operation
- Verge Temme, Founder, Door County 100 Mile Diet
- Bill Wright, UWEX, Farm to School Program

Further Outcomes
- Strategic Planning for a Food Policy Council with the Oneida Nation
- Fred Depies joins the LNRP Board of Directors

Seminar Series
Business and Natural Resources: Making the Lakeshore Grow
September 26, 2007
Wisconsin Maritime Museum, Manitowoc

LNRP hosted the first in the "We All Live on the Water" seminar series on Wednesday, September 26th at the Wisconsin Maritime Museum.

Our partners for the Manitowoc River basin were the Maritime Museum and Centerville Cares. We also had significant input from UW Extension (Scott Gunderson), Lauren Rose Hofland, the previous county planner, the cities of Manitowoc and Two Rivers, and the Manitowoc Homebuilders Association.

The seminar issue came out of a year-long process initiated by the DNR that created the Lake Michigan Stakeholders. From the steering committee review on Coastal Health, Cladophora was named as the "single" most important environmental issue facing the shoreline of Lake Michigan. The presence of Cladophora has been the cause of significant beach closings throughout the lakeshore. Although human health concerns are still not a primary concern, there are significant aesthetic and ecological impacts both of which are causing considerable concerns for landowners, municipalities, land management agencies, and the business community.

However, the Great Lakes Water Institute at UW Milwaukee now has a working model linking Cladophora & phosphorus loads into Lake Michigan. The model estimates that with a 50% reduction in phosphorus, Cladophora levels would remain under what is considered a "nuisance" level. Field data are supporting the model although not all feedback loops are yet accounted for. We invited the principle author the model, Harvey Bootsma to be the keynote speaker for the seminar.

His presentation included a simulation of the "Cladophora animation" model with information on phosphorus loading into Lake Michigan from Wisconsin river-basins. Manitowoc County had some of the more heavy loaded rivers in the State including the Manitowoc River, Fischer Creek, Point Creek, and the East and West Twin Rivers.

Key findings from the research showed:

- The primary factor responsible for the recent increase in Cladophora abundance appears to be increased water clarity, resulting from zebra and quagga mussel filtration.
- A secondary factor may be a moderate increase in nearshore dissolved phosphorus concentrations in the past decade. Mussels are the major source of dissolved phosphorus in the nearshore zone but agricultural lands are showing higher phosphorus in the same time frame.
- We may need to lower the nearshore target phosphorus concentration to compensate for increased light availability.
- The Cladophora model suggests that, at depths greater than 22ft, a 50% phosphorus reduction would result in a significant decline in Cladophora abundance. At shallower depths, the response is less certain.

Perhaps the most important message though was that reducing P concentrations in Lake Michigan is a long-term process, due to large stores of P in watershed soils, and the lake's long P residence time.

We followed Harvey's talk with a panel of speakers that provided insight on the best management practices. Sources of phosphorus were identified from homeowners, construction sites, and agricultural operations along with the best management practices in each area. Janet Sosnosky is the storm-water coordinator in Manitowoc and provided a municipal and homeowner perspective. In October 2006, the city received a storm water discharge permit and is now working to fully comply with the DNR regulations. Janet also spoke on the variety of things a homeowner can do to reduce phosphorus including keeping anything from running into storm drains, eliminating phosphorus from any lawn fertilizer or detergent product, and mulching leaves back into the lawns and gardens. Jim Reif represented the Home Builders Association providing a series of best management practices that are in place for many builders and promoted by the Association. Steve Hoffman is an agricultural consultant in Manitowoc county and shared practices that farmers are putting in place including buffer zones, nutrient management plans, and better manure management.

What followed was a lively discussion that illuminated the tensions between the agricultural and non-agricultural community. It is clear that the non-agricultural community is looking for results for lowering run-off and the implications to the cladophora problem being experienced on Lake Michigan. A number of participants felt that the majority of phosphorus is coming from agriculture, that there is a lack of enforcement, and that there are insufficient punitive damages for transgressions. Although there have been a number of nutrient management plans completed for farms in Manitowoc County, there are few dollars available for cost sharing in getting farmers to volunteer to do a nutrient management plan and even less for a comprehensive nutrient management plan.

We sent out invitations to the public via LNRP mailing lists and the Maritime Museum sent out an additional 82 flyers to landowners and businesses on the Manitowoc River. We have a working list of 72 attendees including names, addresses, and some email addresses.

An interesting outcome was a listening session offered by Soaring Eagle Dairy Farm to members of Centerville Cares. Enclosed here are the minutes from that session.

Seminar Series
Developing a Stewardship Ethic through Art
December 5, 2007
Woodland Dunes Nature Center, Two Rivers

We were able to attract approximately 45 individuals to this event that included Board members from Woodland Dunes, members from the Friends of the Branch, and members of a loosely defined group of plein air painters.

Each of these organizations has partnered with LNRP and the event helped further cultivate and in some ways galvanize the relationships.

Our audience came through the efforts of three LNRP partners:

1. Jim Knicklebine (Director, Woodland Dunes);
2. Tom Ward (a very active member of the Friends of the Branch) who took flyers and promoted the program at the most recent group meeting;
3. Bonnita Budysz who has met with Jim Kettler and Norma Bishop on several organizations leading to a long-term partnership that helped create the organization: Water's Edge Artists

The program began with introductions by Jim Kettler of the seminar series and newsletter initiative. Jim then read the bios of each of our panelists to help frame the panel for the audience.

John Roberts then spent a few minutes talking about what a stewardship ethic is to him using the story of rivers and his work in establishing the Lakeshore Natural Resource Partnership.

Bonnita Budysz shared her experience as a child growing up in the Silver Creek watershed, her development as an artist, and then her discovery of the plein air painting experience. She explained how plein air is painting with the elements to gather the winds, the colors, the smells into her art. We then went through a series of slides depicting her work on a number of waterways in the Lakeshore Basin, along the Mississippi, and the west coast.

Jean Biegun shared her journey from the angst of urban Chicago to the comforting environs of Two Rivers. Her writing in Chicago reflected the urban tensions until she took a writing class at a local community college (a Christmas gift to herself). Here she was introduced to poetry and shortly thereafter moved north to Two Rivers. She got involved with Woodland Dunes and became a contributor to the Dunesletter where she has honed her art as a nature writer. Jean read pieces that spanned the time between coming to Two Rivers and one just written in November.

Kathryn Gahl started her presentation with a reflection of her youth on a farm in Manitowoc County. She then read three of her works that spanned this memory from being caught with a high school sweetheart in the back seat of his car, to a night where the power went out and all was dark as night should be, to a piece that was a finalist in the 2007 Wisconsin People's and Ideas writing contest – "On Being a Farm Kid."

John returned us to a discussion of stewardship with some audience participation. He began first by wrapping the audience with a roll of duck tape to demonstrate the cohesiveness of community and the need to work together. Second, by having each audience member to write down their estimate of the number of people in the room and an estimate of the number of birds in the room

(note that there are 16 stuffed birds in the activities room at Woodland Dunes). These two numbers demonstrated the need to pay attention to where you are and where you live. A final number was asked of each audience member - how many live in their home? John used the final number to lead into the analogy of knowing one's home as one should know one's watershed and giving a better sense of what it means to be a steward. John finished the night with the story of his newly built house powered by wind and solar energy, how living rustically gets you in touch with the elements, and how he has explored the nooks and crannies of his local watershed to become a steward of his home.

We ended the formal session with a couple of questions from the audience. The evening ended with a number of small cluster conversations over hot cider and cookies. Many folks stayed until 9:00 or 9:15 pm.

Overall, the seminar seemed to be a great success. Comments from the panelist unanimously thanked LNRP for the opportunity. One interesting yet telling comment from an audience participant (the wife of a farm couple near Branch), "I've never been inspired to just stop in the woods behind the farm but always just walked through. Now, I'll stop for a while and see what happens."

Seminar Series
Lessons for Manitowoc County: Water Quality Studies from the Fox River and Discovery Farms
March 8, 2008
Wisconsin Maritime Museum, Manitowoc

As a follow-up to our September seminar with Harvey Bootsma, we held a seminar on March 8th with attendance between 40-42 individuals. Both Vicky Harris from UW Sea Grant and Eric Cooley from Discovery Farms did a good job although at times a bit too technical. Still, they both rounded out many of the outstanding questions and issues from the seminar in September. It was well appreciated through our reading of the evaluation and other feedback.

Vicky shared what has been learned about rural and urban pollution sources to the Fox River and the impact of phosphorus from these sources in the waters of Green Bay. She told us that the Fox River is the largest tributary source of phosphorus to Lake Michigan – more the 11% of the total load. Non-point sources are the largest part making up 75% and include soil erosion, livestock waste, fertilizers, and urban stormwater. Sewage and industrial wastewater make up the remaining 25% of the total phosphorus load. A large project is underway to set a total maximum daily load limit for phosphorus and suspended solids in the lower Fox River basin. Because there are similar land uses in Manitowoc County, the lessons from the Fox River are likely applicable here.

Eric presented a number of conclusions from Discovery Farms research. Discovery Farms are working farms that have agreed to be monitored and act as research sites. Findings have showed that basin waters are not meeting water quality standards. However, many farms are preparing nutrient management plans that limit the use of phosphorus based on phosphorus content of manure being applied to the field resulting in less phosphorus being applied and overall dollar savings for farmers. These plans were formerly based on nitrogen resulting on over-applying phosphorus. Soil testing shows many fields have saturated phosphorus levels resulting in more phosphorus than needed for plant uptake and growth. Eric is confident that as more farmers enroll in nutrient management plans, that agricultural run-off can be minimized.

The steering committee continued to meet and plan for a conference titled “Phosphorus in Lake Michigan: A Forum for Exchange” that was held on November 18th, 2008.

The Manitowoc River group – UW Extension, Woodland Dunes, the WI Maritime Museum, and LNRP successfully submitted a DNR River Planning Grant around the theme of “Rivers at Risk” which will bring together education dimensions, clean-up events, and capacity building elements.

Seminar Series
Sustaining Our Water – Our Health, Our Livelihoods
April 26, 2008
Farm Market Kitchen, Algoma

The leadoff speaker was Gary Becker, Mayor of Racine, Wisconsin. His illustrated talk was a testament to the proposition that all the stakeholders in any environmental problem can be brought together, encouraged to find solutions that are a "win-win" for everyone, and then supported as the solutions are implemented. Gary offered several examples of the extraordinary successes they have had in Racine. While he didn't talk about it specifically, it was clear to the audience that the attitude, positive approach, creativity, and optimism exercised by the Mayor in his leadership role were critical factors. The examples all had one common element: environmental stewardship measures that are well designed, based on good science, and faithfully implemented made money for the community over and above the aesthetic benefits that also were gained.

We then broke into breakout sessions followed by a wrap-up presentation and a wonderful locally grown and prepared meal. A brief description of each session is outlined below.

Davina Bonness, Water Quality Specialist, Kewaunee County; presented "Groundwater Issues, Testing, & Education in Kewaunee County"

Davina reviewed the water cycle with the group. In Kewaunee County, ground water contamination is linked to the karst topography, which is a landscape created when surface water dissolves the limestone sedimentary rock that lies just under the surface of the soil. As the limestone dissolves, sinkholes develop near the surface. The limestone bedrock is fractured vertically and horizontally with the result that contamination carried by water and unfiltered runoff finds its way along these karst features right through the limestone bedrock and into the aquifer. The aquifer is the source of our drinking water for every one who relies on a well – which is the majority of us.

Davina's program conducted water tests on 173 private wells. Eighteen percent tested unsafe for bacteria and 35% tested beyond the natural background for nitrate-nitrogen. The presence of bacteria makes the well water unsafe to drink. Wells testing positive for bacteria should conduct a retest, inspect the well and surrounding infiltration area for leaks from the surface, and then disinfect the well and re-test. Nitrogen can be harmful to young children and adults with health problems but more importantly nitrogen is an indicator of other contaminants. Water treatment systems are an alternative if you know the types of contaminants and choose a device approved by Wisconsin Dept. of Commerce for the problems found in your water.

Kewaunee County's program is assisted by a Ground Water Guardians Group that promotes stewardship and sound management of their groundwater resource through education and community involvement. They also conduct a Groundwater Festival that engages over 200 5th graders in groundwater activities.

It was inspiring for the seminar participants to get the sense of the involvement of the 5th graders. Clearly they were learning about the critical importance of safe drinking water for our health and for our livelihoods. The passion of these young people gives us some hope that the next generation will be committed to sustaining our water supply.

Patrick Robinson, UW Extension Environmental Restoration Specialist: presented "Our Landscape Legacy…Then and Now"

The Landscape Legacy addresses the changes of the landscape in Kewaunee County from pre-settlement to the present day. It is estimated that at least 90% of the landscape in the County before European settlement was a maple, hemlock, and yellow birch forest with some beech and white pine. It was inhabited by black bear, mountain lion and gray wolf, species now all extirpated.

By 1938 the percentage of forested land had fallen to 20%, with most of that being second growth, as the land had been cleared for farming and meeting the demand for lumber. Today Kewaunee County is only 15% forested with a mix of farmland, wetlands, and urban areas. Much of the remaining woodland is wetland forest with probably less than 10% in upland forest.

As a result of the loss of forested land, sediment and nonpoint pollution has impacted water quality. Watershed studies of the percent of land cover have demonstrated that at least 20% forest cover is the necessary minimum for a healthy stream. The lo**ss** of forest cover reduces shade, increasing stream temperatures for coldwater species. Loss of cover also increases storm water inputs and erosion. Fewer trees means less absorption of carbon dioxide and the storage of carbon in trees rather than in the atmosphere, thus impacting climate change.

The biggest threat to the current landscape, Pat Robinson believes, is rural sprawl and fragmentation of the landscape (creation of many small property parcels). Pat's slides clearly demonstrated the change in housing density from 1950 to 2,000. The good news is over 1 million trees have been planted annually in Door, Kewaunee, and Manitowoc Counties.

Andy Wallander, Kewaunee County Land & Water Conservation Department: presented "Kewaunee County's Groundwater Future - A Local 'Inconvenient Truth'"

Andy has been working as the Kewaunee County Conservationist for the last 19 years. One of the biggest challenges that the department faces is management of Karst soils.
The term "Karst" topography is used by geologists to describe areas where bedrock, usually limestone or dolomite, has been, or has the potential to be, easily dissolved by surface water or groundwater.

"Karst" topography may have deep bedrock fractures, caves, disappearing streams, springs and/or sinkholes. These features can be isolated or occur in clusters, and may be open, covered, buried, or partially filled with soil, field stones, vegetation, water or other debris.

One primary reason for the challenge is what is called the soil's Pollutant Attenuation Capacity. This is the capacity or ability of soil's chemical, physical and biological properties to utilize, breakdown or bind potential groundwater pollutants. The parameters affecting attenuation capacity include the depth to bedrock, the depth to groundwater, the texture and total depth of surface and subsoil horizon, the permeability of the soil layers, the soil organic matter content, and soil pH. The pollutant attenuation capacity works in the upper 3 to 5 feet of the soil profile. Where there is a low capacity there is high pollution susceptibility.

Farmers are mitigating the environmental impacts with the application of Best Management Practices or BMPs. These include better practices for soil erosion such as buffer systems and retention ponds, better manure management through barnyard runoff controls, animal waste storage, and nutrient management plans or NMPs. NMPs have become a very effective tool for

optimizing the overall resources on the farm. On-farm fertilizer requirements are balanced through nutrient analysis of manure and calculated application rates. Kewaunee County is one of the leaders in the State of Wisconsin with over 27% of the farmed land under nutrient management plans.

Local Kewaunee County farmer Tom Konop then joined Andy and gave an illustrated view of these best management practices including their own manure storage facility, the use of injected manure applications, no till and strip cropping, and waterway buffers.

It was encouraging for seminar participants to learn that some effective practices are being adopted by farmers that will protect the safety of our drinking water. However, there has to be wider participation, not just by farmers but by all of the rest of us in order to adequately protect our water resources.

Kevin Naze, Environmental Writer and Fisherman, and Mike Toneys, retired DNR Fisheries Specialist: presented "The State of the Lake Michigan Fishery"

An historical overview of Lake Michigan shows how much impact we've had in the last 50-100 years on fish populations and water quality. We've seen the Great Lakes move from one of the most traveled cargo routes in the world to becoming an internationally significant center of commercial and sport fisheries. The same transportation corridor has seen a series of invasive species enter the Great Lakes, acting as hitchhikers from upland canals to far distant places in Europe, Asia and even the east coast of the United States. Industries have followed suite with the iron and lumber belts creating ports of call that are now becoming economic centers of the tourist activities.

The Lake Michigan fishery has seen the same dynamic changes and in the last 25 years has dealt with incredible extremes from lamprey eels, explosion of alewive population to zebra mussel invasions, from bacterial kidney disease to Viral Hemorrhagic Septicemia (VHS), from the ups and downs of fish species such as Whitefish, Lake Perch, Chinook, and Coho Salmon.

The communities of Kewaunee and Algoma have moved from supporting large commercial fisheries to being major centers of the sport fishing, as well. Last year was a record year for Chinook salmon with a catch of over 400,000 in Lake Michigan and over 160,000 in Algoma alone. However, Chinook are at an all time low in terms of weight per 30 inches. Factors such as low populations of alewives and higher native reproduction rates may be the cause.

Two current challenges are the massive build up of quagga mussels and the battle against VHS. Quagga mussels have taken over the first step in the food chain by becoming the largest feeder of phytoplankton. The mussels are tolerant of all environmental conditions and have spread throughout Lake Michigan. Theuy are found at any depth the year around. They filter incredible amounts of water with each adult mussel capable of cleanly filtering 1-2 liters of water per day resulting in some of the best water clarity found in Lake Michigan in 100 years. VHS very recently came into the Great Lakes from Europe and the east coast. The difficult management challenge is that the virus morphed to a much more deadly freshwater form that can move through multiple pathways and therefore is very difficult to control.

The stories were not good and pointed to a very chaotic ecosystem where new exotics are now feeding on the managed exotics! Yet Kevin and Mike balanced their lack of optimism for the health of the fishery with a call to action –

Stay alert

Become informed
Get involved
Stay involved

The scenario that Kevin and Mike painted for the participants showed that the theme of this seminar – "Sustaining our water, our health, our livelihoods" – is being challenged severely by man's activities with respect to the water of the Great Lakes.

Jay Moynihan, UW-Extension CRD, Shawano County: presented "Sustainability: From the Uplands to the Lake"

Jay provided an interesting application of sustainability principles to the management and care of our waters. Sustainability has evolved from the Brundtland definition that emerged in the mid-1980's to a community-based engagement called the Natural Step which is finding study groups through the Lakeshore Basin.

The Brundtland Commission report to the U.N. defined sustainability as "meeting the needs of the present generation without compromising the ability of future generations to meet their own needs."

Sustainability principles need to be applied to whatever we do with respect to our water resources because, as Jay so eloquently stated, "the quality of water determines the quality of life."

Water is critical for all life. It allows organic compounds to react in ways that allow replication. It is vital both as a solvent in which many of the body's solutes dissolve and as an essential part of many metabolic processes within the body. Without water, essential metabolic processes would cease to exist.

Through the recognition of water as a critical to all life, sustainability and the Natural Step create the following ***Water Sustainability Concepts***:

- Reduce overall water use
- Solve water quality problems by prevention rather than treatment
- Consider human & ecosystem water needs in all community & business planning
- Match water quality with appropriate use
- Minimize adverse impacts on water
- Improve quality
- Engage all stakeholders

These are great lessons to take away from what was a very successful seminar! We estimate that 62 individuals attended and most stayed for lunch. A number of steering committee members have decided to forge ahead and create a sustainability series that would follow up on food, energy and the local economy.

Seminar Series
Sustaining Our Food – Our Health, Our Livelihoods
October 4, 2008
Farm Market Kitchen, Algoma

A collaborative group of UW Extension, the Farm Market Kitchen, League of Women Voters and the Lakeshore Natural Resource Partnership hosted a food forum and fest at the Farm Market Kitchen in Algoma on Saturday October 4th. The half-day seminar focused on food sustainability and was titled Sustaining Our Food – Our Health, Our Livelihoods. The seminar began with coffee and conversations, followed by a series of lectures and panel discussions.

Keynote speaker Fred Depies, organizer of the Farm Fresh Atlas, provided a broad framework for sustainability and the economic, social and environmental opportunities of a local food movement. An examination of sustainable market principles showed that consumers and farmers need working collectively can create viable local food systems. Four key elements required for sustainability are ecological wisdom, community-based economics, grassroots participatory democracy, and respect for diversity.

Our second keynote speaker Gayle Coleman from UW Extension Madison, addressed the broader social and economic issues that influence food choices in our country, looking at life cycle issues, cost factors and nutritional needs. Taste, nutrition, food safety, price, and convenience all influence consumer choices. Gayle showed how the importance of each depends on the socio-economic status of the individual as well as social influences such as religion, family, peers, and education.

The two lectures were followed by a series of panel discussions that included Moving Towards Sustainability in Agricultural Practices, Availability and Access to Sustainable Food Choices, and Supporting Local Food Systems

Key areas of discussion were what sustainable food alternatives are available to consumers? What can communities do to increase availability and access to sustainable food sources? What are challenges/barriers to employing sustainability on farms, restaurants, and grocery stores?

The agricultural panel included three producer/processors. Ken Kinstetter who owns Liberty View Dairy Farm described his transitioning to an organic 55-cow operation. Karen Baudhuin is a member of a family run 500-cow operation that has gone through Environmental Management System training. The five session of 3-hours each training program was funded by the same Joyce Foundation grant that formed the LNRP-coordinated Agricultural Watershed Improvement Network. Michael Flynn works for Green Quest that is developing alternatives to waste management that transform and optimize waste as a resource.

The food choices panel included Meg Naysmith, Peter Seely, and Marion Retger. Meg shared her enthusiasm for backyard gardening and shared a series of photos. Peter operates one of the larger community supported agriculture operations in Wisconsin. Each week, a basket of vegetables grown on or near Springdale Farm in Plymouth is delivered to over 600 subscribers. Peter shared the challenges of being both a grower and a distributor for a very complex local food system. Marion is the coordinator for the Kewaunee County Food Pantry that is looking for ways to access food surplus from farmer markets and other venues supporting local food systems.

The local food systems panel featured Virge Timme and Bill Wright. Virge is one of the founders of the 100-mile diet in Door County. She brought her fascinating story of preparing to depend totally on foods raised and processed no more than 100 miles from her home. Bill shared his perspectives on starting a farm to school program in Green Bay. Bill is also a Community Garden Coordinator for UW Extension.

After the seminar, participants were able to sample locally produced foods provided by a range of vendors including cheeses, meats, and other tasty morsels. Those that chose to were also provided a wonderful lunch created with local foods and prepared by the staff of the Farm Market Kitchen.