

Door County Land and Water Resource Management Plan 5 Year Plan Extension and Accomplishment Report



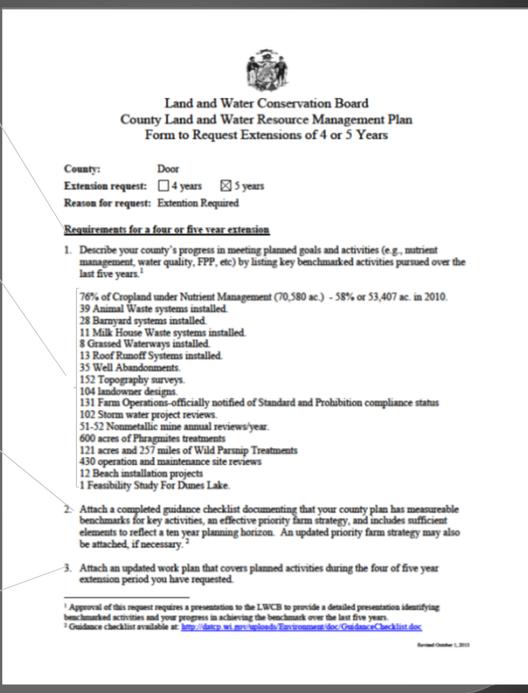
Door County Soil and Water Conservation
Department

Goals of the Door County Land and Water Resource Management Plan

- Identify the resource needs of Door County.
- Establish goals to meet the county's needs.
- Develop a strategy for implementation that emphasizes cooperation and integration of the public and various agencies to accomplish a common goal.
- Serve as a guide to streamline the decision-making process, coordinate program administration, and better utilize federal, state, and local funding.
- Provide versatility to allow for adaptation as changing laws are adopted and brought into practice.
- **Generate a plan with utility for the needs of Door County, not to simply satisfy state requirements**

Requirements for a five year Extension:

1. Judge us on our accomplishments and a plan that works. Compare us to any County in the State.
2. A completed checklist is in your packet that illustrates the pages within the plan where the measurable benchmarks are described – (All sites one by one from the most critical to least, through a farm sits and parcel prioritization effort.) Future slides will illustrate accomplishments, status and projected workload. Very successful approach that is difficult to extrapolate BMPs on the ground and at times very time consuming when enforcement action is needed.
3. An updated work plan has also been completed and is in your packet.



Land and Water Conservation Board
County Land and Water Resource Management Plan
Form to Request Extensions of 4 or 5 Years

County: Door
Extension request: 4 years 5 years
Reason for request: Extension Required

Requirements for a four or five year extension

1. Describe your county's progress in meeting planned goals and activities (e.g., nutrient management, water quality, FFP, etc) by listing key benchmarked activities pursued over the last five years.¹
 - 76% of Cropland under Nutrient Management (70,580 ac.) - 58% or 53,407 ac. in 2010.
 - 39 Animal Waste systems installed.
 - 28 Barnyard systems installed.
 - 11 Milk House Waste systems installed.
 - 8 Grassed Waterways installed.
 - 13 Roof Runoff Systems installed.
 - 35 Well Abandonments.
 - 152 Topography surveys.
 - 104 Landowner designs.
 - 131 Farm Operations-officially notified of Standard and Prohibition compliance status
 - 102 Storm water project reviews.
 - 51-52 Nonmetallic mine annual reviews/year.
 - 600 acres of Phragmites treatments
 - 121 acres and 257 miles of Wild Parsnip Treatments
 - 430 operation and maintenance site reviews
 - 12 Beach installation projects
 - 1 Feasibility Study For Dunes Lake.
2. Attach a completed guidance checklist documenting that your county plan has measurable benchmarks for key activities, an effective priority farm strategy, and includes sufficient elements to reflect a ten-year planning horizon. An updated priority farm strategy may also be attached, if necessary.²
3. Attach an updated work plan that covers planned activities during the four or five year extension period you have requested.

¹ Approval of this request requires a presentation to the LWCB to provide a detailed presentation identifying benchmarked activities and your progress in achieving the benchmark over the last five years.
² Guidance checklist available at: <http://dnrc.wisconsin.gov/landwater/Environment/Doc/OrdinanceChecklist.doc>

Revised October 13, 2010

Assessment of Progress

- Reflected by accomplishments of goals and objectives
- The SWCD will annually assess accomplishments and adjust workloads to facilitate progress toward goals (Short Term Goals)
- Programs will be updated as well as the LWRMP to reflect changes in resource needs and to take advantage of changing budgets and workload (Long Term Goals)
- In many cases, the SWCD will measure accomplishments in a specific program with respect to completing the tasks for 100% of the goal. Each year, an evaluation of positive progress will be made.

Door County's Fragile Resources

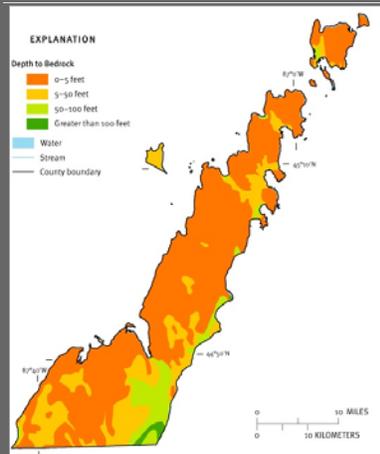


Door County's Fragile Resources

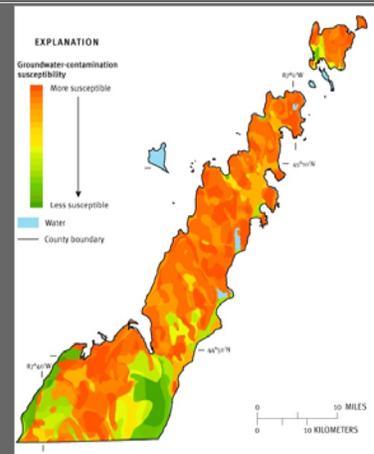


Door County's Fragile Resources

DEPTH TO BEDROCK



GROUNDWATER CONTAMINATION SUSCEPTIBILITY



Goals Addressing Door County Resource Concerns

Groundwater protection and improvement

Goal: To improve and maintain the drinking water supply for Door County to acceptable State standards.

Surface water protection

Goal: Protect and improve Door County's surface water resources from nonpoint source pollution and maintain acceptable State surface water quality standards.

Impacts of development on natural resources

Goal: Minimize the adverse effects of fragmentation, urban sprawl, construction site erosion, increased impervious areas and other development pressures on Door County's land and water resources.

Human waste management

Goal: Reduce the risks to water quality through proper repair/replacement of failing septic systems.

Animal waste management

Goal: Reduce the risks to water quality through proper storage, handling and disposal of animal waste.

Stormwater management

Goal: Reduce the risk to Door County's water quality and prevent flooding through proper stormwater runoff management.

Goals Addressing Door County Resource Concerns

Soil Erosion Control; agricultural and construction site

Goal: Reduce soil erosion rates on agricultural fields through proper soil conservation practices.

Goal: Reduce soil erosion from construction sites through proper soil erosion control measures.

Non-metallic mine reclamation

Goal: Reduce the impacts to Door County's water quality and other natural resources from nonmetallic mines through proper operation and/or reclamation procedures.

Invasive species

Goal: Protect the habitat and biodiversity of Door County's native fauna and flora through the control of aggressive, invasive non-indigenous species.

Beach Contamination

Goal: Protect the surface water resources of Door County through identification and abatement of beach contamination sources.

Agricultural Land Protection

Goal: Reduce the impacts of sprawl and fragmentation through preservation of farmland and other open spaces.

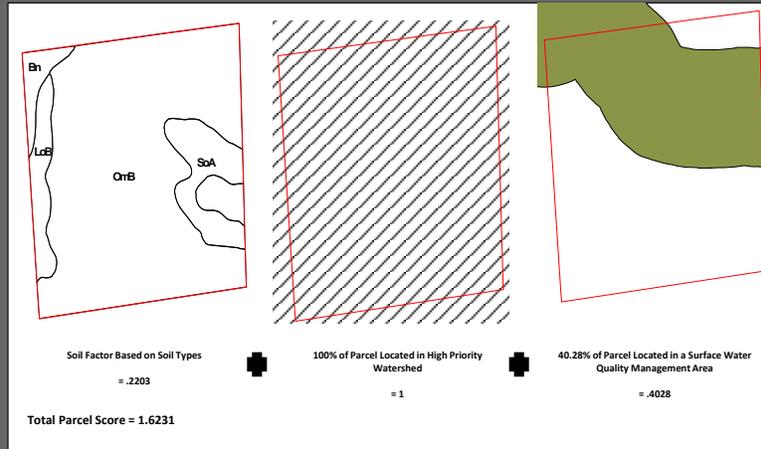
Lack of Education and Awareness of Environmental Issues and Sustainable Farming Practices

Goal: Increase awareness of sensitivity of Door County's resources and promote sound land use decisions.

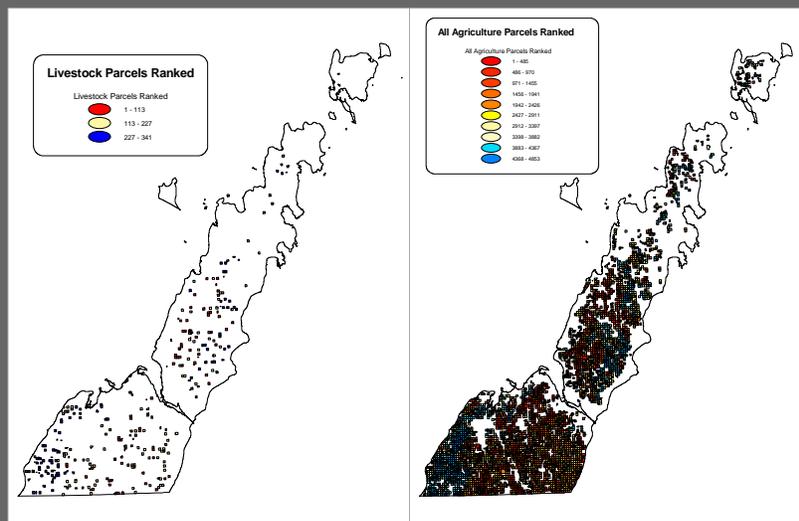
Strategy for Implementation of Agricultural Standards (Identification of Priority Farms)

- Voluntary Participation
- Required Landowners/Operators
- Working Lands Initiative
- Geographic Prioritization
- Geographic Prioritization Refinement
 - ✓ Number of Animal Units
 - ✓ Existing Manure Storage/Barnyard Facilities
 - ✓ Cropland Suitable for Winter Application of Manure
 - ✓ Management and Water Quality Complaints
 - ✓ Historical Water Quality/Pollution Concerns
 - ✓ Viability of Operation

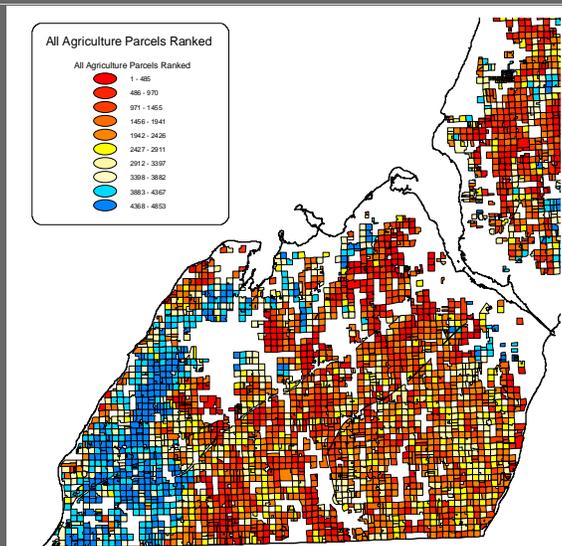
Geographic Prioritization



Geographic Prioritization



Geographic Prioritization



Shifting Agricultural workload

* ~70,580 acres under nutrient management plans (82% of total cropland)

* 8 grassed waterways installed



Cropland Conservation Leases

<http://map.co.door.wi.us/swcd/>

- > 50% of Door County Cropland is rented
- Standards and Prohibitions are not adequate to protect groundwater in Door County.

Sample Cropland Rental Agreement With Conservation Options

THIS DOCUMENT IS MEANT AS A SOURCE OF GENERAL INFORMATION ONLY AND SHOULD NOT BE CONSTRUED OR RELIED UPON AS LEGAL ADVICE. IT IS TO BE USED IN CONJUNCTION WITH, AND IS NOT INTENDED TO TAKE THE PLACE OF, THE ADVICE OF INDEPENDENT LEGAL COUNSEL.

Landowners interested in leasing their land to farmers should remember that farming involves a variety of activities and uses. It is important to talk to farmers who want to use your land to gain an understanding of the activities and uses they're planning for your land.

Many farm land lease arrangements never progress beyond a conversation and a handshake. Such oral farm land lease arrangements are risky ... as problems can arise with legal enforceability and disputes over rights and obligations.

A written farm land lease agreement, executed by the landowner and farmer, is a best practice. Such is a contract that provides legally binding rights, obligations and remedies ... and brings certainty to the farm land lease arrangement.

Exhibit B provides the landowner the opportunity to select additional permitted uses and use restrictions which are greater than the regulatory minimums and which may provide additional protection to the natural resources of the landowner's property.

The Sample Cropland Rental Agreement will be available on the Door County Soil & Water Conservation Department website: <http://map.co.door.wi.us/swcd/>. The SWCD website will include the Agreement as both a pdf document which can be printed and completed by hand and a document for completion in Microsoft Word.

<p style="text-align: center;">FARMLAND LEASE AGREEMENT</p> <p>This agreement is made and entered into this _____ day of _____, _____ by and between _____ ("Landowner") and _____ ("Farmer")</p> <p>Whereas, Landowner owns and controls Parcel Identification Number(s) _____, situated at _____, Wisconsin ("Land") and possesses the power and authority to grant certain rights and privileges with respect thereto, including those set forth in this agreement; and</p> <p>Whereas, Farmer desires to lease land from Landowner for the purpose(s) of soil cultivation and crop production; and</p> <p>Whereas, Landowner agrees to lease to Farmer and Farmer agrees to lease from Landowner the Land and the Leased Land as further described in Exhibit A (attached hereto and incorporated herein by reference as if set forth in full)</p> <p>NOW, THEREFORE, in consideration of the covenants, terms, and conditions set forth herein, the parties agree and covenant as follows:</p> <p>1. The term of this agreement shall be for a period of _____ (_____) years commencing on January 1, _____ and terminating on December 31, _____, unless sooner terminated in accordance with the terms of this agreement.</p> <p>This agreement may be renewed for an additional _____ (_____) year period upon the prior mutual written consent of the parties. Any such renewal may, at Landowner's option, include an upward adjustment of rent.</p> <p>2. Farmer shall pay Landowner the sum of \$ _____ per tillable acre in _____, respectively as and for rent. The tillable acre is _____ acres, and therefore the total rent for is \$ _____. Payment shall be made in advance and on or before the 1st day of January each year of the agreement's term. Payment, in the form of a check or money order payable to the "Landowner", must be mailed or delivered to the Landowner at _____, Wisconsin _____ on or before the due date. In the event payment is not made on or before the due date a late charge of \$ _____ shall be paid by Farmer to Landowner. In the event Farmer is delinquent for a period of thirty (30) days or more in paying to the Landowner any monies due and owing to the Landowner pursuant to this agreement, Landowner may, at Landowner's option, terminate this agreement. Farmer shall pay Landowner a returned check fee of \$ _____ for each of Farmer's returned checks. Farmer shall pay to Landowner interest thereon at the rate of eight (8%) per annum from the date payment was due until full payment is made for any amount due and owing after termination of this agreement.</p> <p>3. Landowner hereby grants Farmer the privilege of using the Land and for the purpose(s) of soil cultivation and crop production and _____ in accordance with the requirements set forth in Exhibit B (attached hereto and incorporated herein by reference as if set forth in full), and for no other purpose.</p>	<p style="text-align: center;">Exhibit B - Permitted Uses and Use Restrictions</p> <p>Select the practices that should be followed as a guideline to the operator for crop production purposes. If the option is not applicable to the agreement, check the box labeled N/A.</p> <p><u>Keep in mind that any practice that is selected in the checklist is an addition to all applicable regulations (e.g., Ch. 23, Door County Code, Ch's ATCP 50, NR 151 & NR 243, Wis. Adm. Code, NRCS 590) and does not eliminate any requirements of those regulations.</u></p> <p>Definitions of terminology utilized are available in the attached "Glossary" on page 9 & 10.)</p> <p>1. NUTRIENT APPLICATION PRACTICES</p> <p>a.) Acceptable Forms of Nutrients for Application (Check all that apply)</p> <table border="0"> <tr> <td><input type="checkbox"/> Animal Waste</td> <td><input type="checkbox"/> Industrial Waste</td> </tr> <tr> <td><input type="checkbox"/> Bio solids</td> <td><input type="checkbox"/> Commercial Fertilizer</td> </tr> </table> <p>2. ANIMAL WASTE PRACTICES</p> <p>a.) Acceptable Forms of Animal Waste for Application (Check all that apply)</p> <table border="0"> <tr> <td><input type="checkbox"/> Liquid</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Solid (dry-bedded)</td> <td></td> </tr> <tr> <td><input type="checkbox"/> None</td> <td></td> </tr> </table> <p>b.) Acceptable Times of Year for Animal Waste Application (Check all that apply)</p> <table border="0"> <tr> <td><input type="checkbox"/> April - June</td> <td><input type="checkbox"/> December - March</td> </tr> <tr> <td><input type="checkbox"/> July - August</td> <td><input type="checkbox"/> At no time when soils are frozen and/or snow covered</td> </tr> <tr> <td><input type="checkbox"/> September - November</td> <td></td> </tr> </table> <p>c.) Animal Waste Application Rates per Application</p> <table border="0"> <tr> <td><input type="checkbox"/> 590 standards/NR 243 standards</td> </tr> <tr> <td><input type="checkbox"/> No more than 75% of the 590/243 allowable rate</td> </tr> <tr> <td><input type="checkbox"/> No more than 50% of the 590/243 allowable rate</td> </tr> <tr> <td><input type="checkbox"/> No More than 25% of the 590/243 allowable rate</td> </tr> </table> <p>d.) 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Agricultural Threats



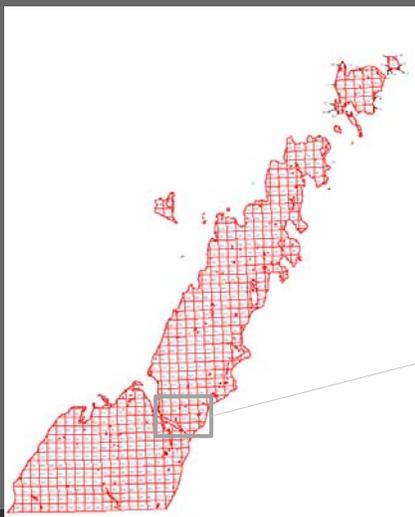
- * 39 animal waste systems installed
- * 28 barnyard system installed
- * 11 milk house waste systems installed



- * 430 operation and maintenance site reviews
- * 152 topographical surveys
- * 104 landowner designs

Human Waste Threats

* Geographic Prioritized inspections by the Sanitarian Department continues



130						
168	595	538	506	407	536	277
141						
	502	519	503	416	307	253
						150
	164	414	489	372	379	238
		154	254			
	126			263	338	110
	308	432		319	348	88
		103				

Threats to Door County Land and Water Resources



* 102 Storm water and land disturbance reviews



Recreational Threats

* Bacteria, virus's, storm water contaminants, excess cladophera, ...



12 Beach improvement projects installed

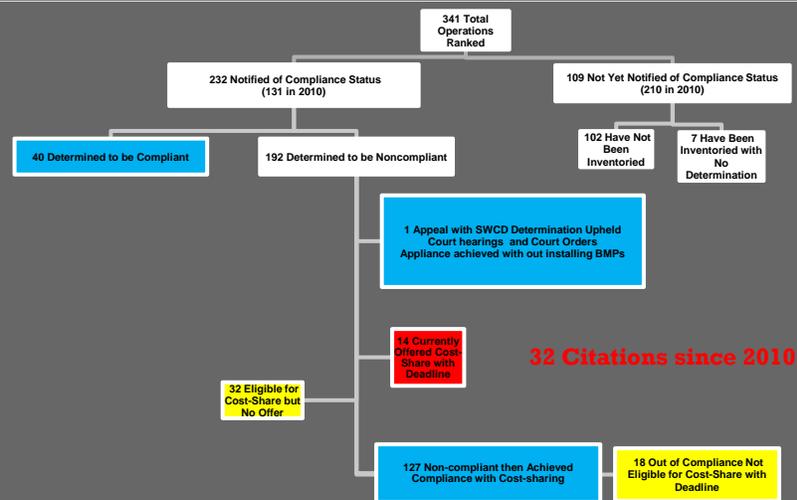
Direct Conduits to Ground Water

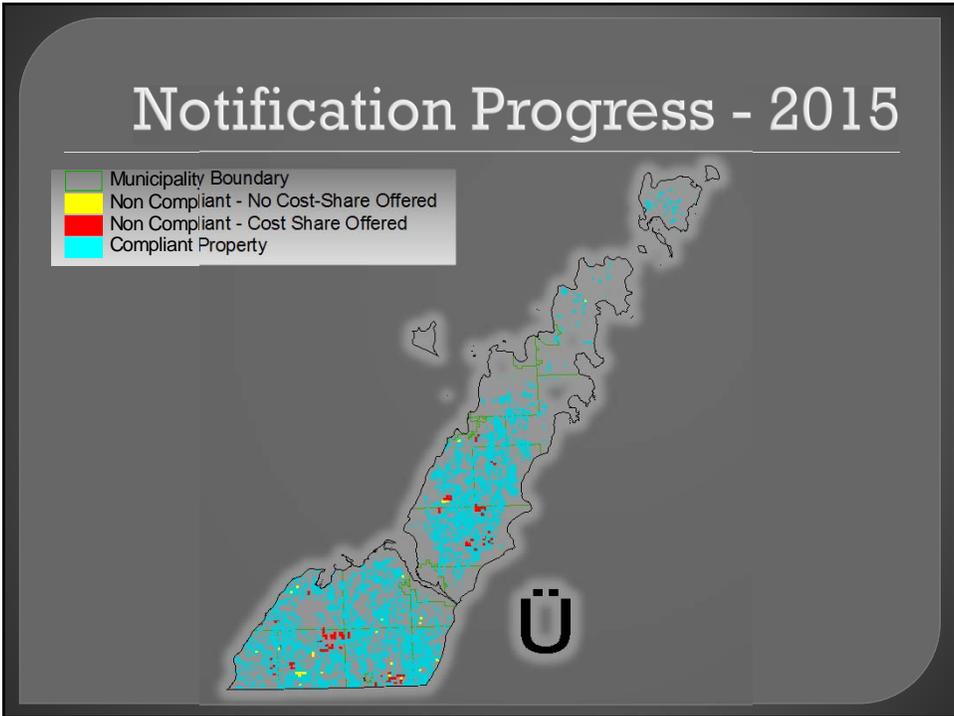
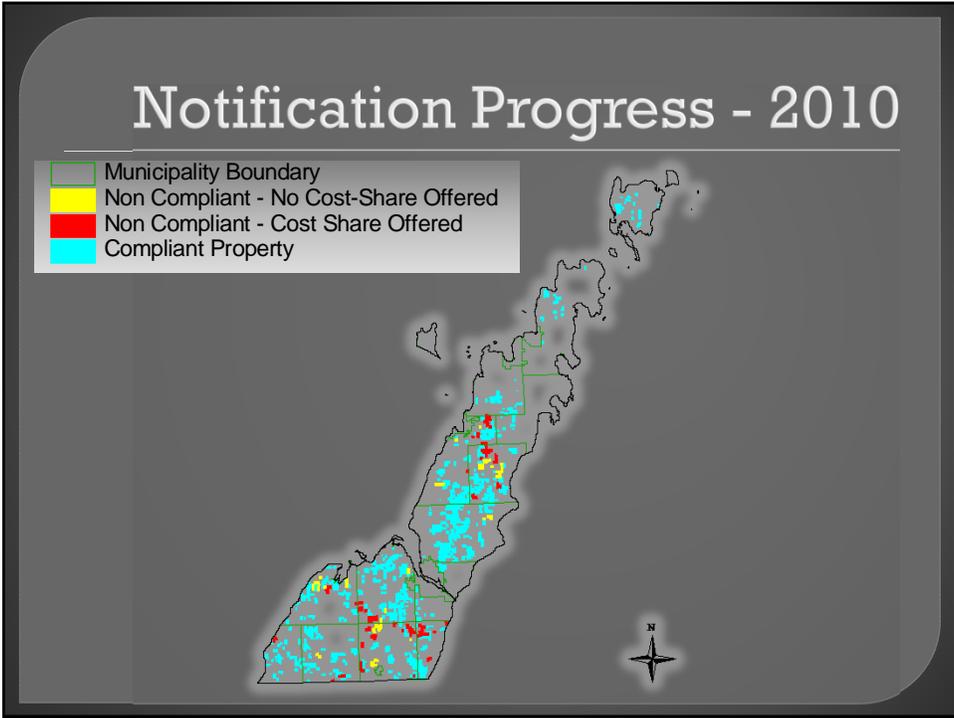


* 35 Well Abandonments



Status of Notifications through Geographic Prioritization





Beach Contamination Source Identification and Remediation

12 projects completed

Egg Harbor beach before

Egg Harbor beach after



Non metallic mining reclamation program

51+ mines inspected annually

6 sites reclaimed to date



Awarded Grants Since 2010

- 32 TRM Grants = \$3,762,390
- 6 SWRM Grants = \$322,489
- Nutrient Management/SEG = \$195,241
- County Cost Share = \$68,541
- Invasive Species = \$426,022
- Dunes Lake Study's = \$30,000
- Beach improvement Grants = \$1,002,300

Invasive Species Control Achievements

* 600 acres of Phragmites treatments along Door County shorelines and road right of ways



<http://map.co.door.wi.us/swcd/invasive>

* 257 miles of road right of ways and 121 acres of private land Wild Parsnip treated



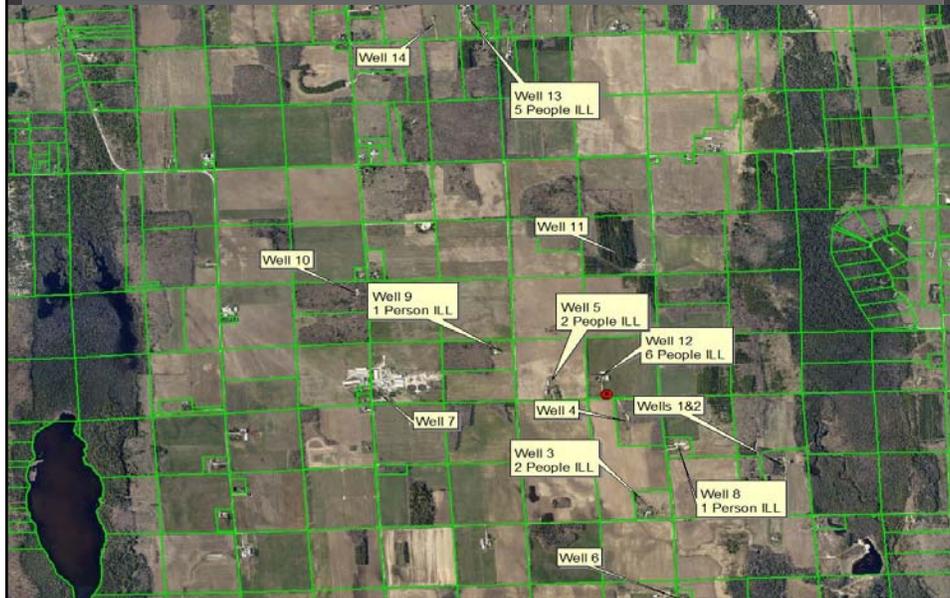
History of Groundwater Concerns

Just A Few Examples



- November 22, 1955 *Door County Advocate* story headline: “Local Geology is Illness Factor—Limestone Fissures let Wastes get into Wells”
- Historical seasonal agricultural “brown-water” events
- Late 1980s-1990 over 2,000 northern Door well samples results indicate bacteria contamination 35% of the time
- 2014 Jacksonport well contaminations and sick residents

Recent Case Study Well Contamination Fall 2014



Non compliant manure application
Obvious direct conduit to groundwater



The big picture?



Timeline of Events

- Mon. Sept. 8th & 9th - Liquid Manure spread on entire field including over a sinkhole.
- Mon. Sept. 8th - 6 month old hospitalized in Appleton – **visited area Sept. 6th & 7th.**
- Wed. Sept 10th - ~0.65” of rainfall
- Fri. Sept 12th DNR Warden contacted regarding brown water and illnesses.

Jacksonport Well Test Results

- Sept. 15th – Nov. 14.
 - ❖ 17 individuals reported illness.
 - ❖ Symptoms: Nausea, Vomiting, Diarrhea, Bloody Diarrhea, Stomach Cramps, Fever, Sweats, Chills, Headaches, Muscle & Body Aches & Fatigue.
- Sept. 29th – Microbial Source Tracking
 - ❖ 3 of 4 wells - Bovine Fecal Contamination.

NR 151.004 State targeted performance standards

“Implementation of the statewide performance standards and prohibitions in this chapter may not be sufficient to achieve water quality standards...”

“after substantial implementation of the performance standards and prohibitions. If the department finds...”

“water quality standards or groundwater standards will not be attained...”

“but the implementation of **targeted** performance standards would attain water quality standards or groundwater standards, the department shall promulgate the **targeted** performance standards by rule.”

State Standards should be consistent with the limitations of “Geo-Regions”

