

A photograph of a farm scene with a herd of cows in a green field. In the background, there is a red barn and some trees under a clear sky. The text is overlaid on the image.

Manure Runoff: It Can Happen to You Too!

Presented by Karl Klessig
Saxon Homestead Farm LLC

2006 Fertilizer, Aglime, and Pest Management Conference

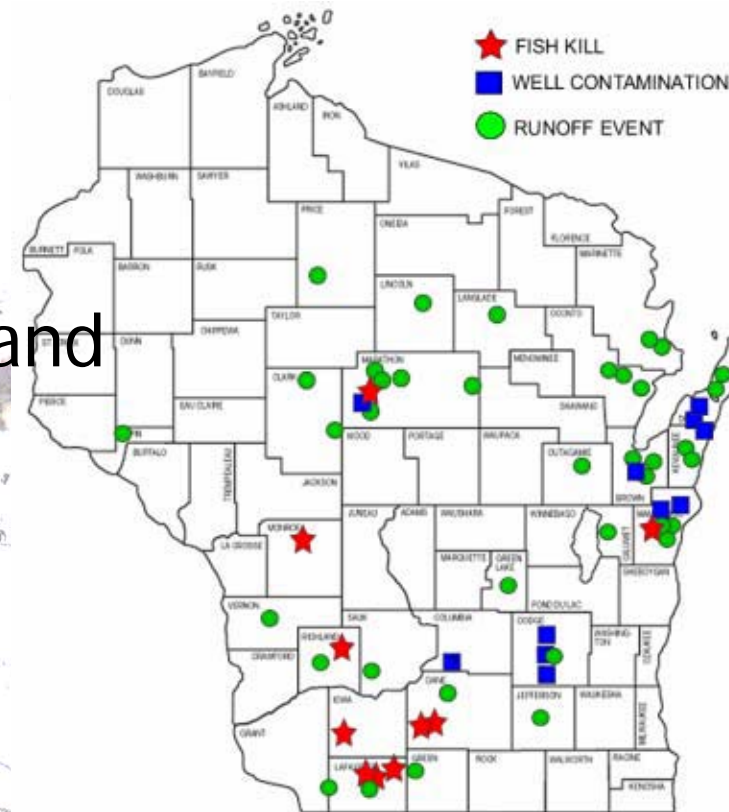
January 17th, 2006

Madison, Wisconsin

10/22/2003

Manure runoff events hurt badly!

- Manure spills damage the environment and are very costly.
- They occur far too frequently
- They erode the dairy/livestock farmer/community's credibility and reputation.
- They are avoidable!



Our manure runoff event happened on June 22, 2002

- How it happened
- Management errors and weather conditions
- How I handled the media
- Required management changes

JUN 25 2002

Saxon Homestead Farm, LLC



- Homesteaded in 1850
 - Karl and Liz Klessig, Robert and Kathleen Block-Klessig, Gerald and Elise Klessig-Heimerl and their families.
- Incrementally grew by 250 acres and 510 animal units since 1995

Our farm is a pasture-based, spring seasonal calving dairy consisting of 425 Holstein-based, cross-bred cows, 400 young stock, 200 feeder steers



Our livestock graze 600 acres
of permanent pastures; we produce alfalfa
and corn silage on 300 additional acres

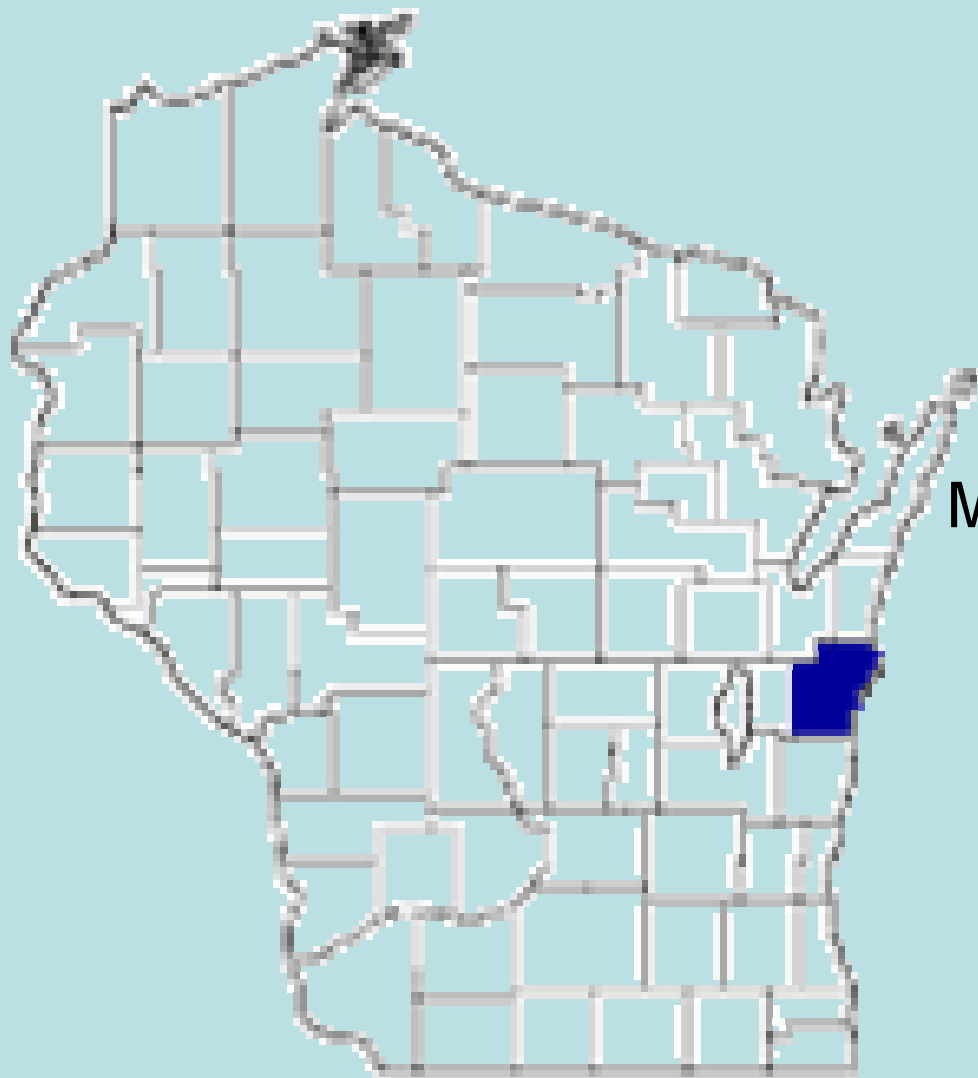


All animals seasonally spring calve

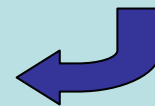


Our farming system encourages biological sustainability, animal comfort, and land stewardship





Manitowoc
County





So what happened????

- Follow NRCS 590 standards and Manitowoc County Animal Waste Ordinance Code
 - Surface application of liquid manure shall not exceed 6,000 gallons per acre on pastures
 - Must occur from June 1 to September 30
 - Restricted areas of manure application:
 - 300' from the intermittent stream Centerville Creek
 - Application of manure must stop whenever ponding or run-off occurs.

Weather conditions, events

- Start grazing in mid-April
- Completed first crop in second week of June
- Weather conditions:
 - June 2002 was wetter than normal
 - Sheboygan County airport recorded ~5" of rain
 - We had more than 5' of rain on our farm
 - more than one inch on June 3, 11, 21, and 22.
 - Soil was saturated

Management Errors--?????

- Let's get it applied ASAP
- Our liquid manure is very wet (moisture = 98.4%)
- On June 21 - surface applied manure
 - 8,500 gallons/acre on 70 acres
- It started to rain shortly after we finished
 - On our farm we recorded more than 2.0"
- On June 24 - surface applied manure
 - 8,500 gallons/acre on the same 70 acres
- Surface spread within the 300' creek corridor



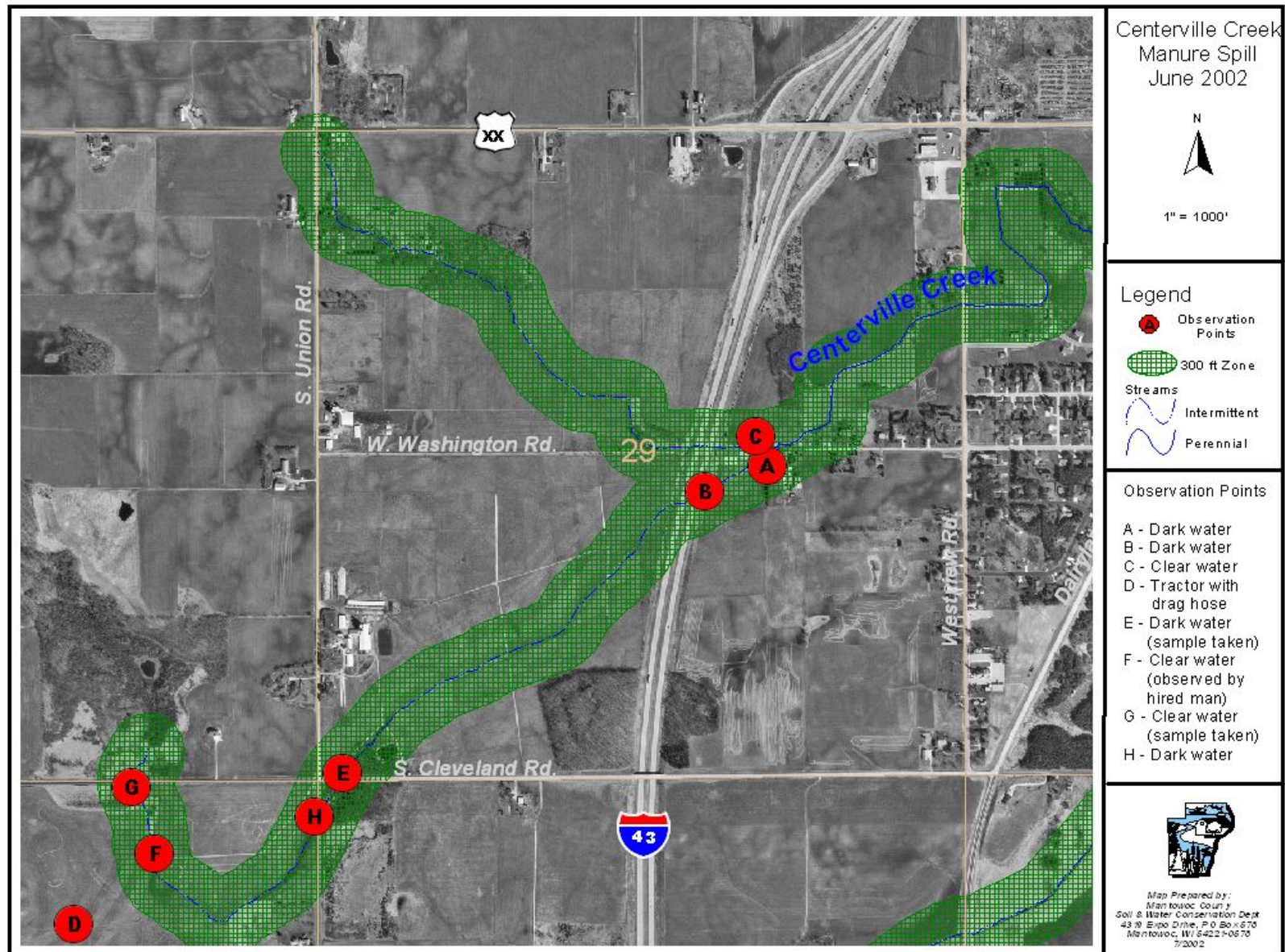


Who Noticed? - What Happened Next?

- Manitowoc LCD received an anonymous complaint that manure was in Centerville Creek at Lakeshore Technical College at 10:00 a.m. on June 25, 2002
- A Manitowoc County LCD technician followed up on the complaint
 - He checked Centerville Creek at a number of locations near our farm



The Centerville Creek was thoroughly checked.



- **At 2:30 p.m. on June 25, 2002, two DNR enforcement wardens and two DNR fisheries technicians arrived at the scene on our farm**
- **The wardens requested that immediate actions be taken to minimize environmental damage – they didn't mess around, they enforced the law!**

JUN 25 2002



Immediate Actions Included:

- Manure was mechanically incorporated along Centerville Creek
- About 10 loads of contaminated creek water were pumped
- Warden Scharbarth was courteous, professional, and DEMANDING!

JUN 25 2002

I Took Pro-active Steps to Minimize Negative Publicity

- Received call from warden Scharbarth
- Called the reporter
 - Who we were
 - Admitted to the mistake
 - Public apology
 - Corrective management actions taken



**Making the front page,
not what I ever imagined!**

Herald Times Reporter
CUMBERLAND COUNTY, WIS. WWW.HTRPNEWS.COM 10 cents

aturday
June 29, 2002

Manure spill kills fish

Farm waste flows into creek, Lake Michigan
BY PAT HANCOCK
Herald Times Reporter

CLEVELAND — An investigation is continuing into a liquid manure spill that wiped out much of the forage fish population in Cameronville Creek, which winds through the Cleveland area before flowing into Lake Michigan near Waukegan.

Dead fish in the creek included sunfish, chub, darters and suckers, along with four trout species, said John Schuchardt, a Department of Natural Resources conservation warden for Madison County.

Schuchardt said it is impossible to determine the exact number of fish killed because many of them are small and likely will be eaten by scavengers.

Committee approves new runoff regulations
By The Associated Press

MADISON — A legislative committee has approved a plan to reduce polluted runoff into Wisconsin waters that would require farmers to install buffer barriers in sloping fields.

The Wisconsin Senate Environmental Resources Committee approved the rules unanimously Thursday. The regulations, designed to limit polluted runoff from farm fields and urban areas such as parking lots and golf courses, have been in the works for years.

They would take effect July 1 unless the Assembly's Natural Resources Committee challenges them.

See REGULATION, A2

USTA TOURNAMENT
on-day tennis
very long, 101

Beliefs

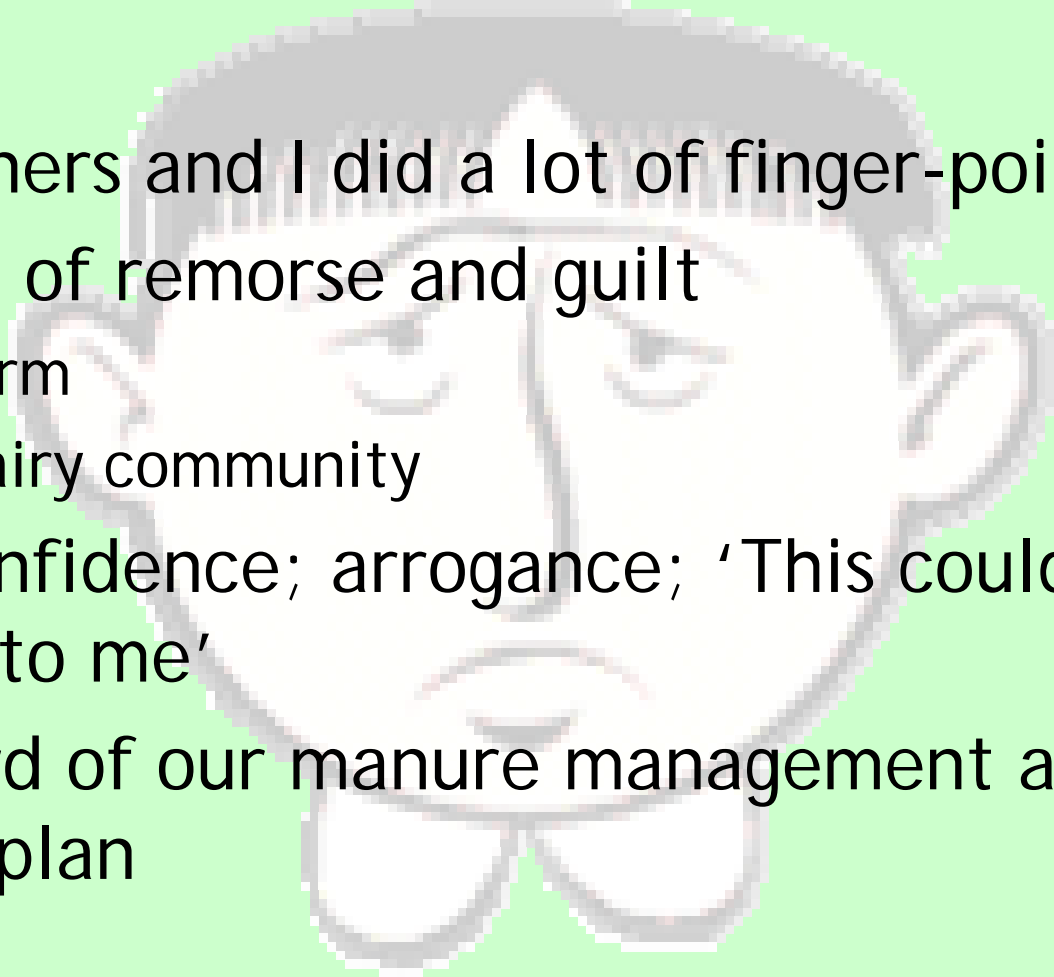
10 WORDS
art matches

Kevin Kolt, 13, Cleveland, made a sign Friday warning against swimming in an area where Cameronville Creek flows into Lake Michigan. The village posted the sign after a manure spill polluted the creek and virtually wiped out its forage fish population.

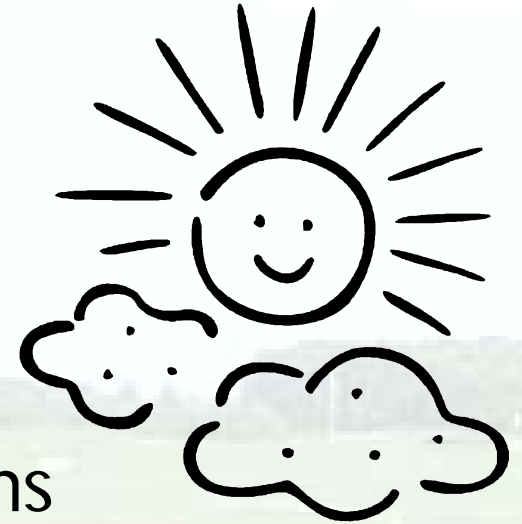


A Lot of Negative Energy

- My partners and I did a lot of finger-pointing
- Feelings of remorse and guilt
 - Our farm
 - The dairy community
- Over-confidence; arrogance; 'This could never happen to me'
- Disregard of our manure management and grazing plan



Corrective Actions and Management Changes



- DNR / Manitowoc County citations
- Manitowoc LCD worked with us
 - Keep us in business - no room for error!
- Review and update the existing grazing/manure management plan
- Develop phosphorus based Nutrient Management Plan
 - Hired crop consultant to assist

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- A photograph of a green field with a fence in the background, serving as the background for the text.
- Our nutrient management plan is now the cornerstone of our grazing management system, cropping program, and manure application program.
 - The transition was/is challenging but rewarding, both environmentally and financially.
 - From permanent pastures to some alfalfa and corn silage
 - Incorporation of manure.
 - Emergency Manure Management Plan.
 - Addresses growth and encourages planning
 - Continue to improve - Comprehensive Nutrient Management Plan

Manure, Manure, Manure!!

- Still surface apply, but more incorporation
- Tile line issue
- Cost of manure application has increased

• Year	Cost	Approximate acres
• 2002	\$11,581	75
• 2003	\$21,422	120
• 2004	\$25,920	175
• 2005	\$30,110	185



Moving Forward...



Exploring the Profit Potential of Cow Manure

First Annual Manure Bio-Conversion Technology Conference
Tuesday, January 31, 2006
Monona Terrace Convention Center - Madison

- Producing Value-Added Products
 - Manure Composting
 - Liquid/Solid Separation
- Producing Value-Added Energy
 - Digester overview
 - Other manure technologies



Call to Action to Prevent **ALL** Manure Spills & runoff events

- Manure spills and run-off events are the Achilles Heel of the dairy community
- It's a management issue! It's making good choices based upon a great management plan
- Environmental conditions
 - Rate, soil moisture content, weather forecast, etc.
- It's communicating with your team and custom hauler
- Have an emergency spill action plan in place

Moving Forward...



"Wisconsin urgently needs to help environmentally sound farms of all sizes produce more milk, or farms big and small risk losing milk processors, and the state risks losing our nearly \$20 billion-a-year dairy industry."

*Margaret Krome
Capital Times
November 12, 2003*

Thank you for the opportunity to present to you today!



07/21/2005