

Groundwater & Drinking Water Education Program Overview

Kevin Masarik
Center for Watershed Science and Education

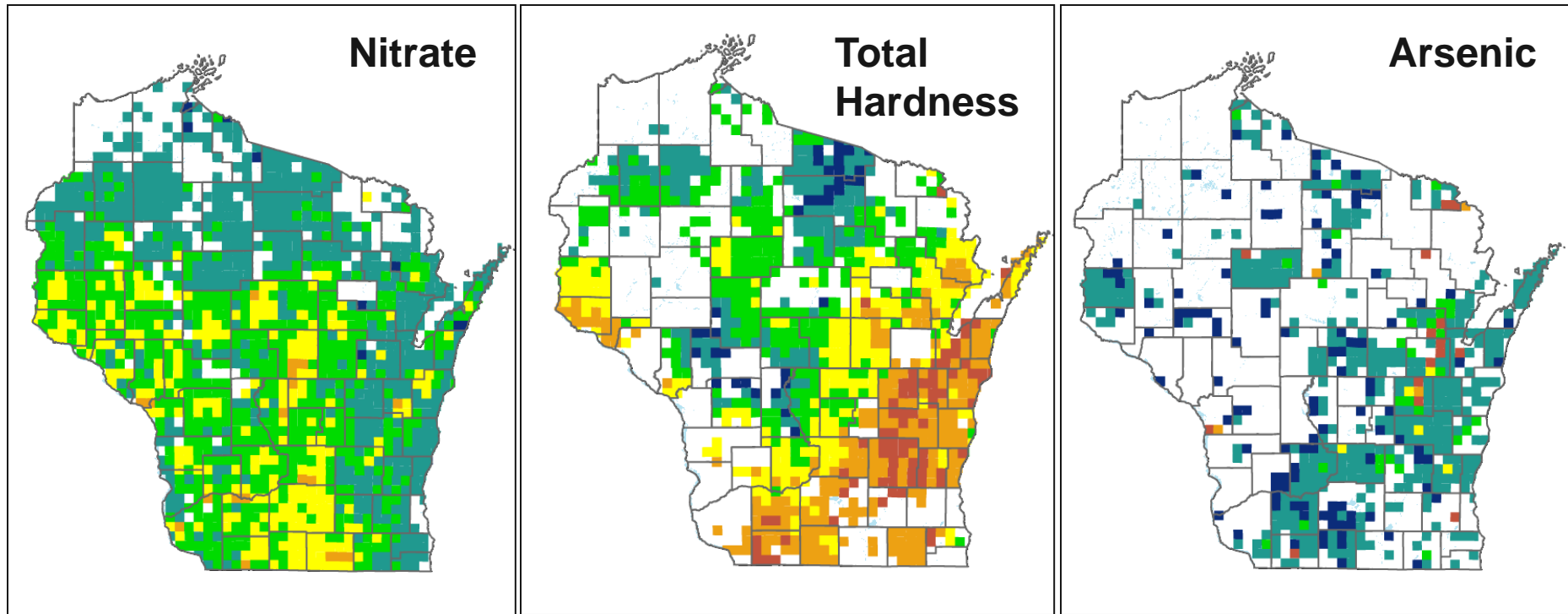


University of Wisconsin-Stevens Point
College of Natural Resources

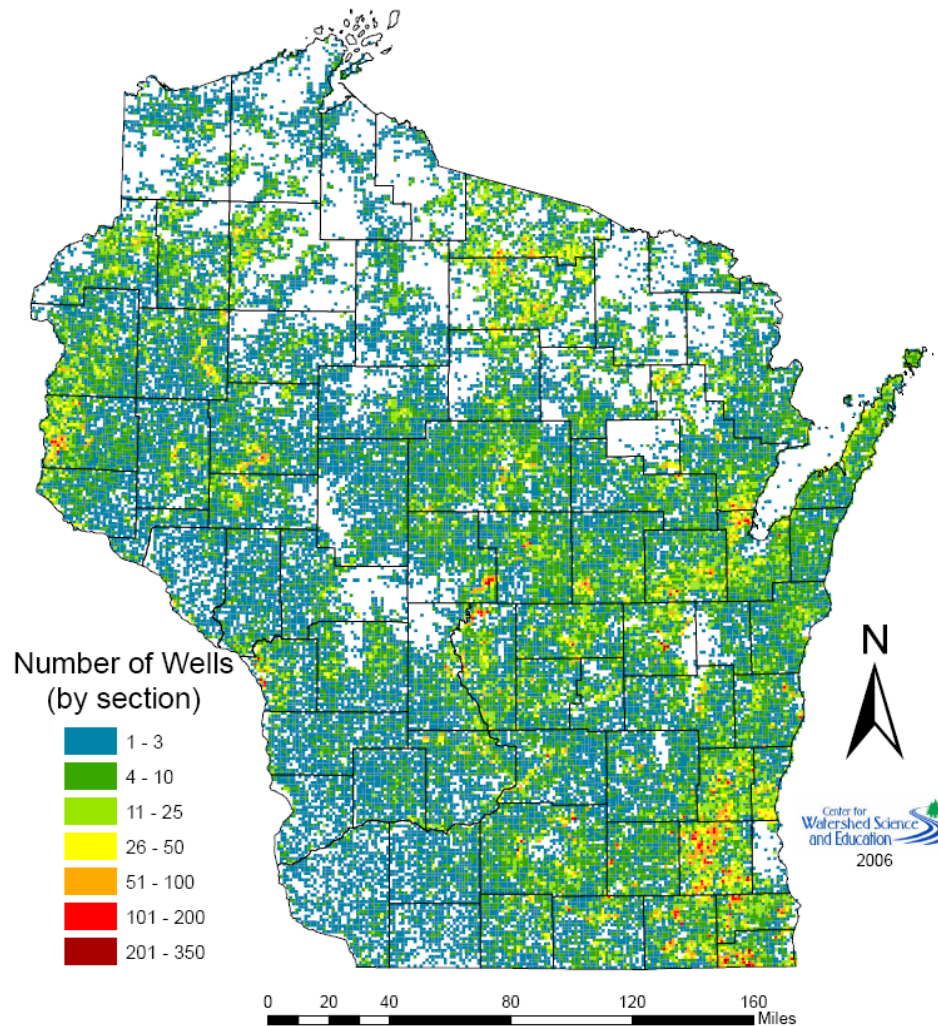


Through the University of Wisconsin-Extension, all Wisconsin people can access University resources and engage in lifelong learning, wherever they live and work.

What we know about groundwater quality in Northwestern Wisconsin



Wisconsin Well Construction (1988 - 2006)



Disclaimer: Map for educational purposes only. Represents all newly constructed wells in DNR Well Construction Database from 1988 to 2006. Does not distinguish between well types.



University of Wisconsin-Stevens Point
College of Natural Resources

UW
Extension
University of Wisconsin-Extension

Community Drinking Water Programs

- **Definition of Community**

- County, Town, Watershed, Lake Assoc.

- **Objectives**

- Offer homeowners a convenient opportunity to test their private well water
 - Educate community about groundwater:
 - Where does your drinking water come from
 - Connection between water quality, geology and land-use
 - Help well owners understand their drinking water quality results and options for improving water quality
 - Learn about condition of local groundwater quality



Community Drinking Water Programs



1. Advertising and bottle distribution



2. Sample collection and drop off.



3. Samples are analyzed at WEAL



4. Hold educational program for community.

How do I know which test(s) to perform?

There are 3 packages. You can choose to do any or all. The following information can be used to help you decide which to perform.

Package	What each package includes	Which wells should be tested
Homeowners \$49	Coliform Bacteria, Nitrate, Chloride, Hardness, Alkalinity, pH, Saturation Index	All Wells: <ul style="list-style-type: none">• This is the basic package, perform this set of tests if you are unsure which package to perform.• Includes the two most important tests to perform regularly on a well (bacteria and nitrate).
Metals \$45	Arsenic, Lead, Copper, Iron, Zinc, Calcium, Magnesium, Manganese, Sodium, Potassium, Sulfate	Consider this test package if: <ul style="list-style-type: none">• you've never had your well tested for arsenic .• previous tests indicated the presence of arsenic .• Your plumbing system has components that contain copper and/or lead
DACT Screen \$27	Tests for a breakdown component of atrazine type pesticides.	Consider this package if: <ul style="list-style-type: none">• your well is within ¼ mile of agricultural fields where corn has been grown.• previous tests indicated elevated nitrate levels that could be caused by fertilizer usage.

If you choose to perform all three the total is \$113, a discount of \$8 if performed individually.

Ashland - Iron Counties

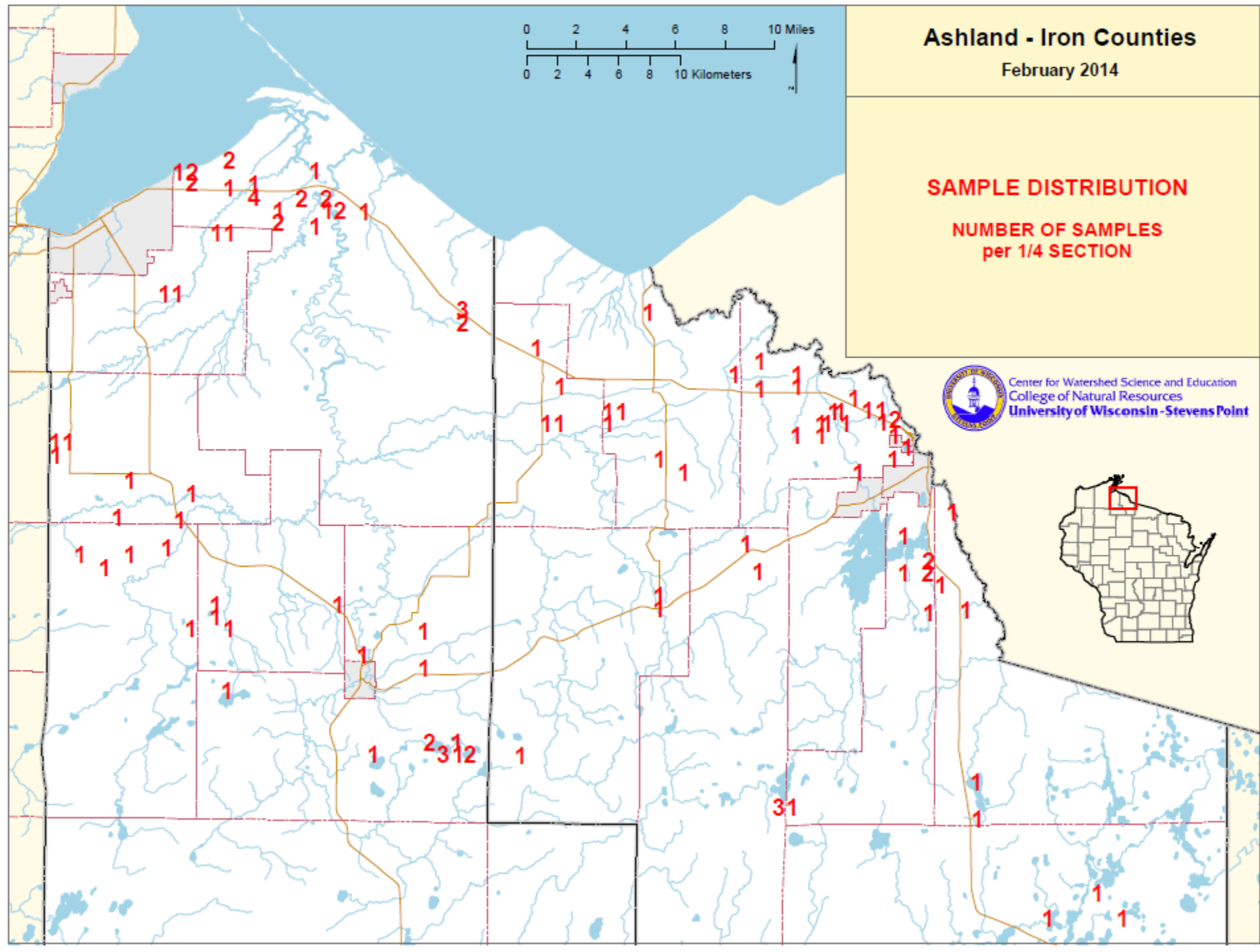
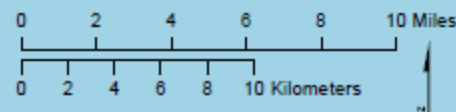
February 2014

SAMPLE DISTRIBUTION

NUMBER OF SAMPLES
per 1/4 SECTION



Center for Watershed Science and Education
College of Natural Resources
University of Wisconsin-Stevens Point



Well Construction

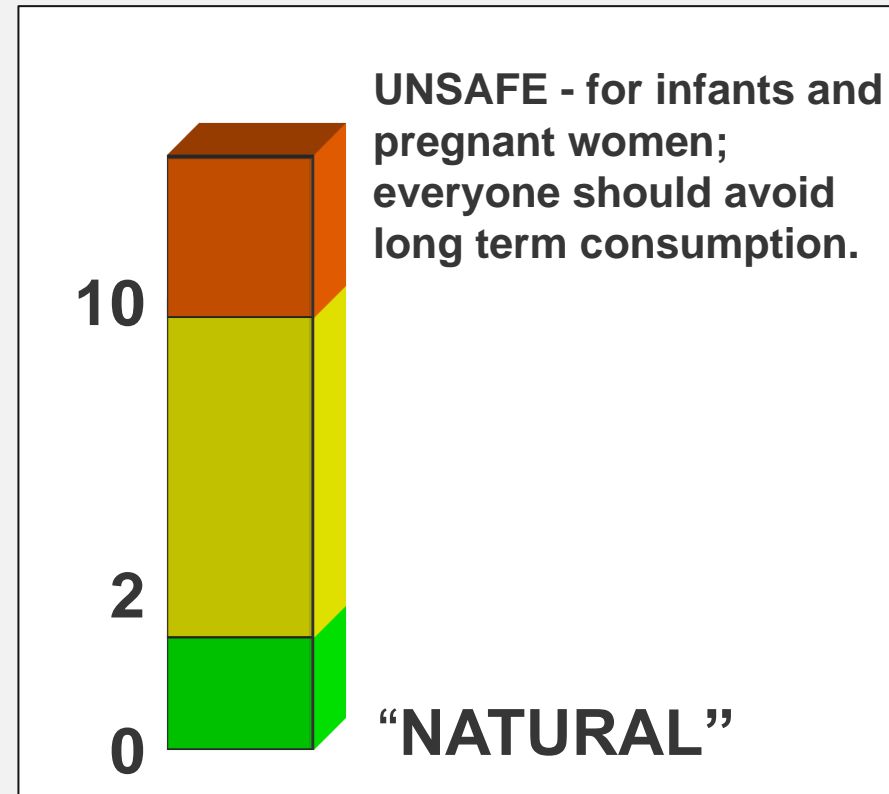


Photos courtesy of: Matt Zoschke

Test Important to Health

Nitrate Nitrogen

- **Greater than 10 mg/L**
Exceeds State and Federal Limits for Drinking Water
- **Between 2 and 10 mg/L**
Some Human Impact
- **Less than 2.0 mg/L**
“Transitional”
- **Less than 0.2 mg/L**
“Natural”



Ashland - Iron Counties

February 2014

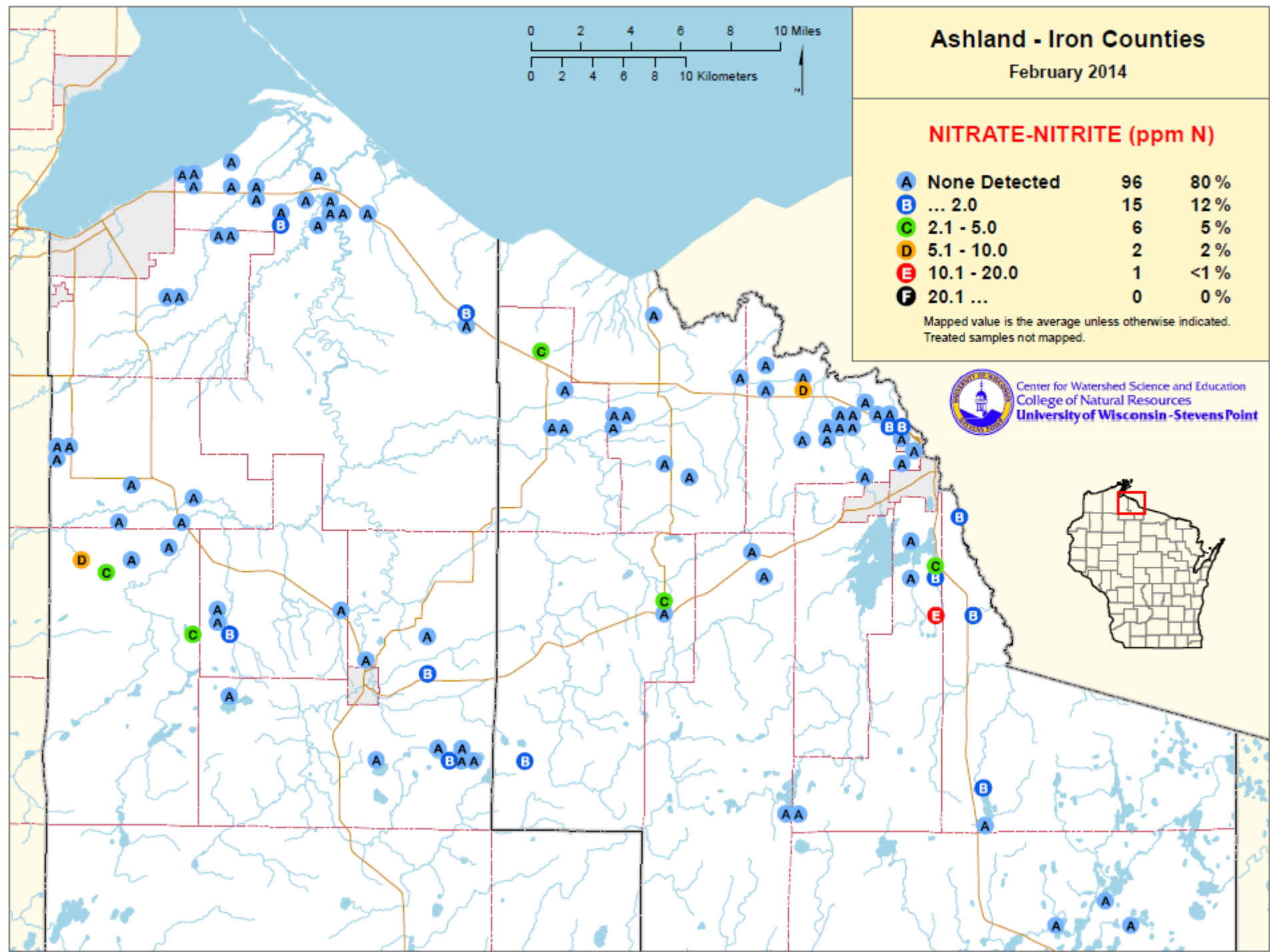
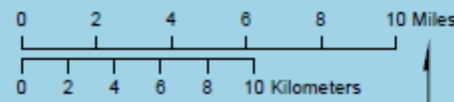
NITRATE-NITRITE (ppm N)

A	None Detected	96	80 %
B	... 2.0	15	12 %
C	2.1 - 5.0	6	5 %
D	5.1 - 10.0	2	2 %
E	10.1 - 20.0	1	<1 %
F	20.1 ...	0	0 %

Mapped value is the average unless otherwise indicated.
Treated samples not mapped.



Center for Watershed Science and Education
College of Natural Resources
University of Wisconsin-Stevens Point



Ashland - Iron Counties

February 2014

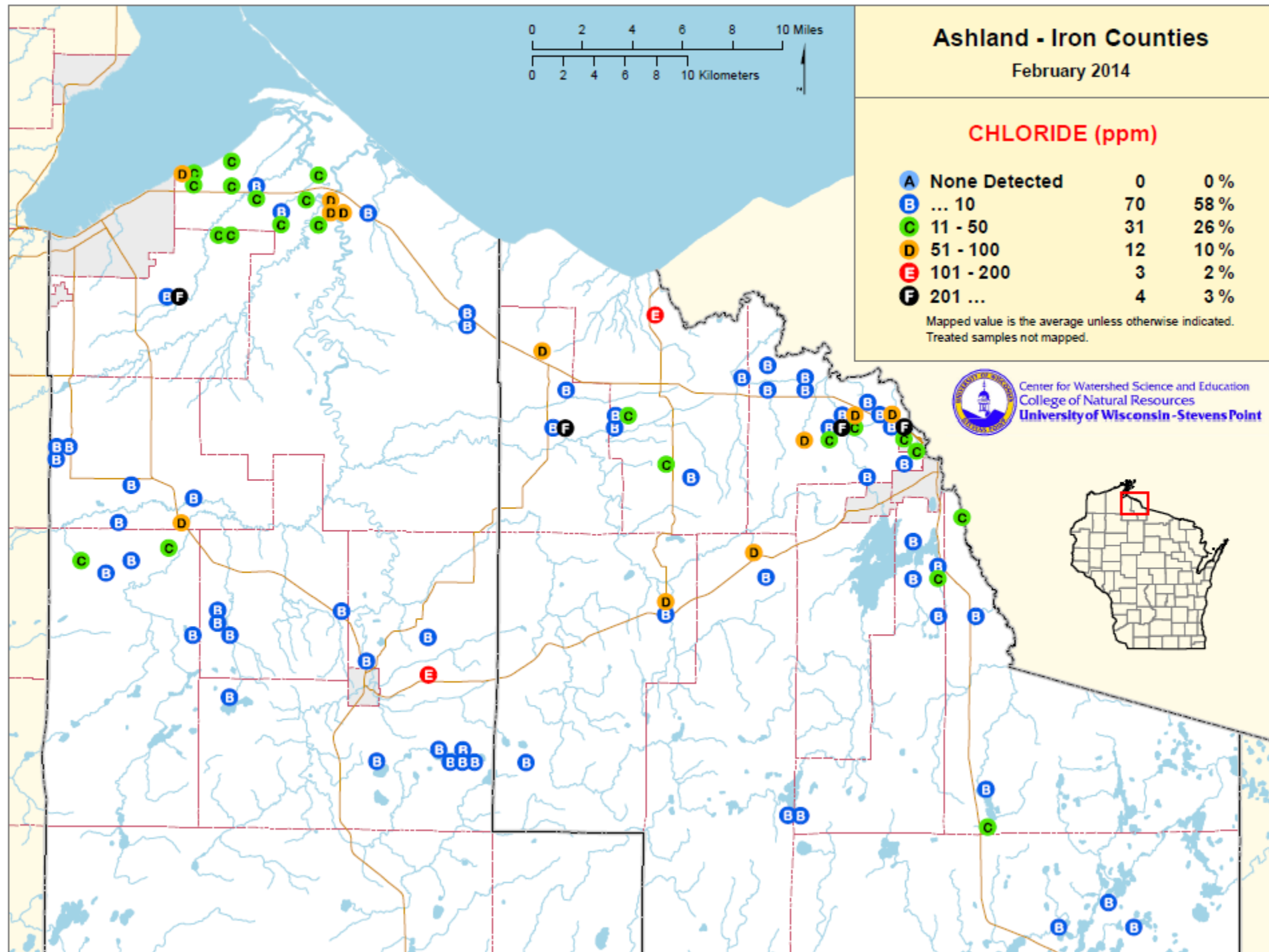
CHLORIDE (ppm)

A	None Detected	0	0 %
B	... 10	70	58 %
C	11 - 50	31	26 %
D	51 - 100	12	10 %
E	101 - 200	3	2 %
F	201 ...	4	3 %

Mapped value is the average unless otherwise indicated.
Treated samples not mapped.



Center for Watershed Science and Education
College of Natural Resources
University of Wisconsin - Stevens Point



Ashland - Iron Counties

February 2014

Phosphorus (mg/l)

- None Detected
- ... 0.025
- 0.026 - 0.050
- 0.051 - 0.075
- 0.076 - 0.100

Mapped value is the average unless otherwise indicated.
Treated samples not mapped.



Center for Watershed Science and Education
College of Natural Resources
University of Wisconsin-Stevens Point

