Environmental Health Initiatives Individual Well Water, Health Studies & Health Department Updates

PZI Institute Training

Tuesday, November 17th, 2015

Morrisville State College

Presentation by

Geoff Snyder

Director Environmental Health

Madison County Department of Health

Individual Water Supply

"IWS"

Goal of IWS: to provide safe and adequate water supply

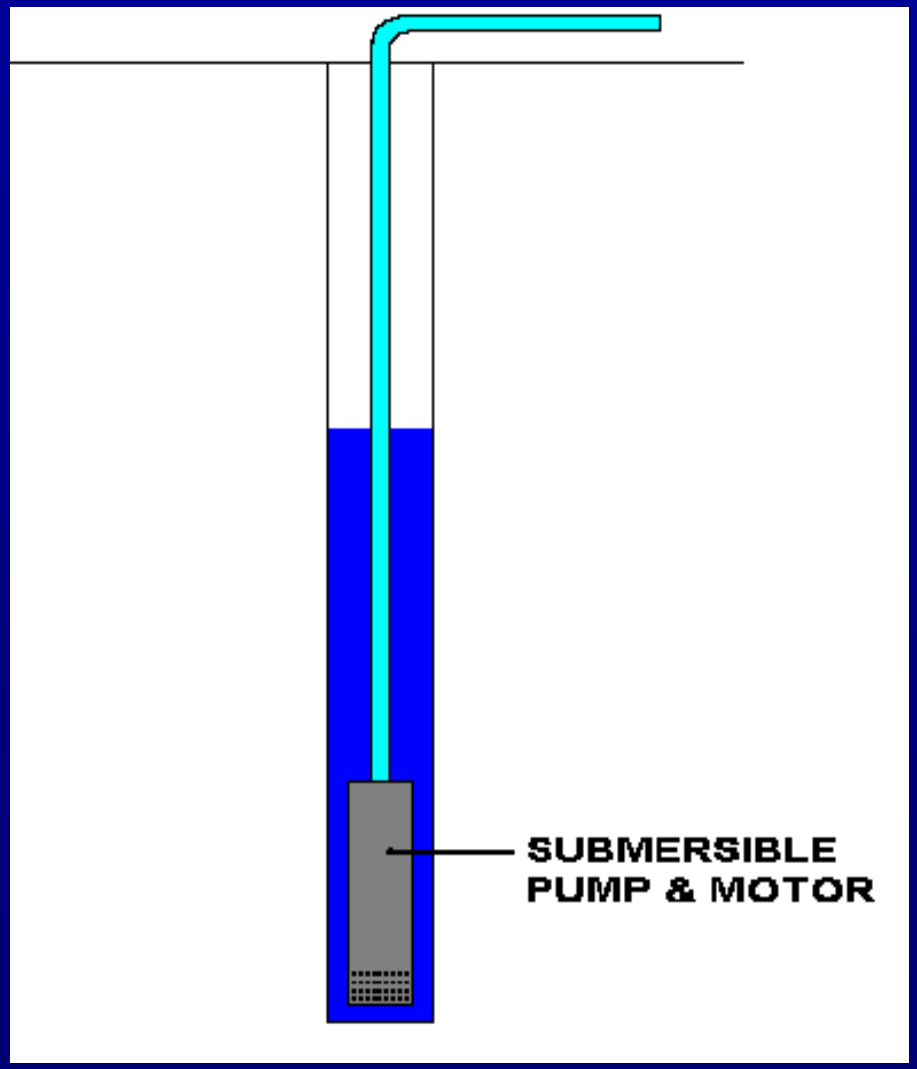
IWS Discussion Topics

- Madison County Water Supply Data
- Part 75 – Standards for Individual Onsite Water Supply & Individual Onsite Wastewater Treatment Systems
- Appendix 75-C; Statewide Water Quality Standards
- Susceptible water sources & concerns

IWS Discussion Topics

- Karst Geology & Water Resource Concerns
- Health Department IWS Initiatives As Part of Healthy Environment/ CHIP
- CDC IWS Grant
- Georgetown Gas Compressor Project Health Study

IWS "Fun Facts"

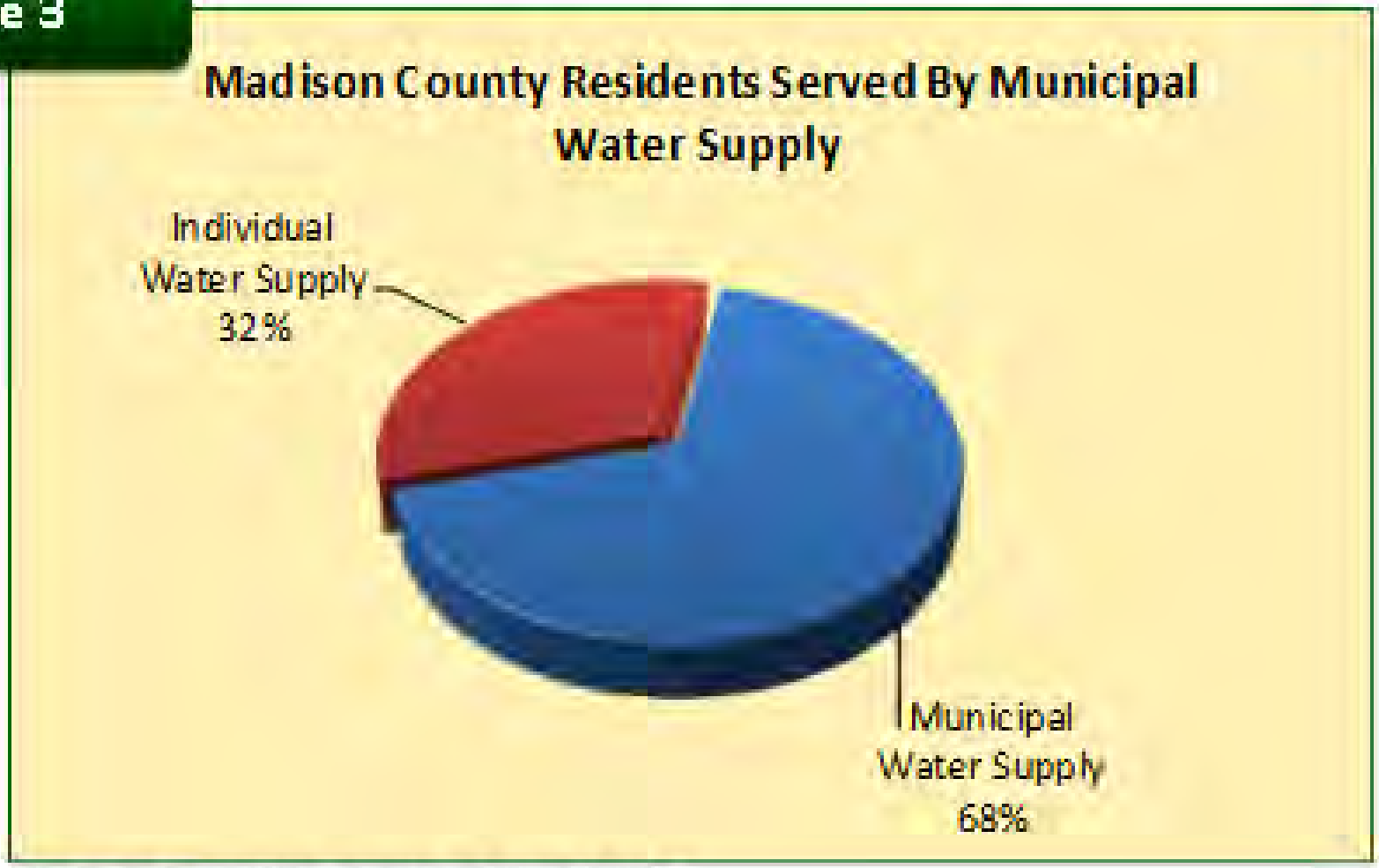


In New York State:

- Over 10,000 new wells installed per year
- Over 1.5 million homes rely on private wells
- About 25-33% of new homes use wells

- Over 2 *billion* people depend on groundwater world-wide
- 30% of Earth's population does not have access to sufficient supplies of potable water

Figure 3



Madison County Department of Health 2013

Madison County PWS Data

- 68% of Madison County residents are served by community water supplies, or approximately 49,940 persons.
- Community water systems are subject to State & Federal drinking water regulations, are treated to ensure safe delivery of drinking water, are regularly inspected, and water quality is frequently tested.

Madison County IWS Data

- 32% of Madison County residents rely on Individual Water Systems, or approximately 23,500 residents
- 46% of all residential properties, or approximately 10,650 parcels rely on IWS's.
- Other than for new well's or some housing transactions, there are no requirements for water quality testing for IWS's

IWS Water Quality Stds.pdf - Adobe Reader
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http://www.wadsworth.org/labcert/elap/elap.html or by contacting your Local Health Department (LHD).

Analysis *	Recommended MCL (1)(2)	Concerns
Coliform Bacteria	Any positive result is unsatisfactory	Indicator of possible disease causing contamination, e.g. Gastro-intestinal illness
Lead	0.015 mg/l	Brain, nerve and kidney damage (especially in children)
Nitrate	10 mg/l as N	Methemoglobinemia ("blue baby syndrome")
Nitrite	1 mg/l as N	Methemoglobinemia ("blue baby syndrome")
Iron	0.3 mg/l	Rust-colored staining of fixtures or clothes
Manganese	0.3 mg/l	Black staining of fixtures or clothes
Iron plus manganese	0.5 mg/l	Rusty or black staining of fixtures or clothes
Sodium	No designated limit (3)	Effects on individuals with high blood pressure
pH	No designated limit	Pipe corrosion (lead and copper), metallic-bitter taste
Hardness	No designated limit	Mineral and soap deposits, detergents are less effective
Alkalinity	No designated limit	Inhibits chlorine effectiveness, metallic-bitter taste
Turbidity	5 NTU	Cloudy, "piggybacking" of contaminants, interferes with chlorine and UV-light disinfection

(1) MCL means maximum contaminant level. The MCLs listed are based upon requirements for Public Water Supply systems and are also recommended for use on individual residential systems.

(2) mg/l means milligram per liter (parts per million); NTU means Nephelometric Turbidity Units.

(3) Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used by people on moderately restricted sodium diets.

***Individual Residential Well Water Supply Quality Testing/HUD Mortgage Requirements (July 27,1995)**

Additional tests are recommended for naturally occurring constituents that appear on a regional basis such as: arsenic, barium, fluoride, methane, radium, radon, and uranium. Additional tests may also be appropriate for contaminants associated with potential sources such as: oil storage facilities, junkyards, gasoline stations, landfills, industry, and active or historic agricultural use. Water samples from older existing residences or residences with corrosive water (i.e., pH less than 6.5) should be tested for lead and copper.

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IWS Regulations:

- **NYS Building Code**

  2602.1 General (i.e. when plumbing installed)
  - **shall connect to public services, if available**
  - **if public services not available then connect to residential IWS**

Individual water supply sources
- **IWS shall be installed by a Well Driller registered with DEC *and***
- **in compliance with Appendix 5-B of DOH Regulations**

APPENDIX 5-B
NYS ADOPTED STANDARDS FOR WATER WELLS

- Regulation applies to water wells used for drinking, culinary and/ or food processing purposes (all individual residential wells)
- Minimum standard for construction, renovation, development and abandonment of such water wells
- Specifies water well location and protection, and that well shall not be located subject to seasonal flooding or surface water contamination
- Water well construction requirements & pump systems
- Requirements for well yield and tests & flow rates

5B Separation Requirements.pdf - Adobe Reader
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Table 1
Required Minimum Separation Distances to Protect Water Wells from Contamination

Contaminant Source	Distance (Feet)[1]
Chemical storage sites not protected from the elements (e.g., salt and sand/salt storage)[2]	300
Landfill waste disposal area, or hazardous or radiological waste disposal area[2]	300
Land surface application or subsurface injection of effluent or digested sludge from a Municipal or public wastewater treatment facility	200
Land surface application or subsurface injection of septage waste	200
Land surface spreading or subsurface injection of liquid or solid manure [3]	200
Storage Areas for Manure piles [4]	200
Barnyard, silo, barn gutters and animal pens [5, 6]	100
Cesspools (i.e. pits with no septic tank pretreatment)	200
Wastewater treatment absorption systems located in coarse gravel or in the Direct path of drainage to a well	200
Fertilizer and/or pesticide mixing and/or clean up areas	150
Seepage pit (following septic tank) [5]	150
Underground single walled chemical or petroleum storage vessels	150
Absorption field or bed [5]	100
Contained chemical storage sites protected from the elements (e.g. salt and sand/salt storage within covered structures) [7]	100
Septic system components (non-watertight) [5]	100
Intermittent sand filter without a watertight liner [5]	100
Sanitary Privy pit [5]	100
Surface wastewater recharge absorption system constructed to discharge storm water from parking lots, roadways or driveways [5]	100
Cemeteries	100
Sanitary privy with a watertight vault	50
Septic tank, aerobic unit, watertight effluent line to distribution box	50
Sanitary sewer or combined sewer	50
Surface water recharge absorption system with no automotive -related Wastes (e.g., clear-water basin, clear-water dry well)	50
Stream, lake, watercourse, drainage ditch, or wetland	25
All known sources of contamination otherwise not shown above	100

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Specific Waivers

- Required for any deviations from 75-A or 5-B
- Only the local health department can issue specific waivers or approve deviations from the requirements
- Local boards of health/CEOs **DO NOT** have the authority to issue a specific waiver from 75-A or 5-B
- P.E./Well Driller should decide if a specific waiver is needed
- Lack of required separation distances are the primary reason for needing a specific waiver

NEW YORK STATE OF OPPORTUNITY. Department of Health

New: Appendix 75-C

- This is part of the Part 75/75-A rule revision package of Title 10 NYCRR. Comment period ended 5/4/15.
- Clarifies requirements related to Appendix 75-A, Standards for Individual Onsite Wastewater Treatment Systems, i.e. all Alternative OWTS's must be reviewed & approved by LHU
- **Package includes new Appendix 75-C: "Individual Onsite Water Supply Systems – Statewide Water Quality Standards"**
- DOH minimum standards and recommendations for private wells

NEW YORK STATE OF OPPORTUNITY. Department of Health

APPENDIX 75-C
INDIVIDUAL ONSITE WATER SUPPLY SYSTEMS-
STATEWIDE WATER QUALITY STANDARDS

TABLE 1 – The standards in Table 1 shall not be exceeded;

CONTAMINANT	STANDARD (1)
Coliform Bacteria	Any Positive Result (2)
Lead	0.015 mg/l
Nitrates	10mg/l as Nitrogen
Nitrites	1 mg/l as Nitrogen
Turbidity	5 NTU (3)
Arsenic	0.010mg/l

(1) mg/l means milligrams per liter (parts per million)
(2) A “positive result means that coliform bacteria are present; a “negative” result means that coliform bacteria are absent or are not present
(3) NTU means Nephelometric Turbidity Units

APPENDIX 75-C

TABLE 2

Exceeding the following standards may necessitate (1) installation and maintenance of water treatment devices,

CONTAMINANT	STANDARD (1)
Iron	0.3 mg/l (2)
Manganese	0.3 mg/l (2)
Iron plus Manganese	0.5 mg/l (2)
Hardness	150 mg/l as CaCO3 (2)
Alkalinity	100 mg/ as CaCO3 (2)
pH	6.5 – 8.5 (3)

(1) mg/l means milligrams per liter (parts per million)
(2) If standards are exceeded options for treatment should be evaluated
(3) If pH values are outside of this range (i.e. < than 6.5 or > than 8.5) options for treatment should be evaluated

APPENDIX 75-C
Table 2

Exceeding the following standards may necessitate (2) limited daily consumption of water by certain persons;

Contaminant	Standard (1)
Sodium	No designated limit (4)

(4) Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

Individual Water Supply Wells - Fact Sheet #5 - Adobe Reader
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NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection
Flanigan Square, 547 River Street, Troy, New York 12180-2216

INDIVIDUAL WATER SUPPLY WELLS - FACT SHEET #5

SUSCEPTIBLE WATER SOURCES

(Well Points, Dug Wells, Springs and Shore Wells)

Individual (residential) water supplies (IWS) need to provide adequate quantities of water fit for consumption and intended uses. A drilled well, located and constructed in accordance with 10NYCRR Appendix 5-B "Standards for Water Wells", should routinely be the water supply option selected. Well points, dug wells, springs and shore wells are susceptible to contamination from pathogens, spills, etc. and the effects from drought. These water sources may be considered only as a last resort with proper protective measures and, in most cases, will require approval by County or State health department officials through issuance of a specific waiver pursuant to Part 75 of the State Health Department's Administrative Rules and Regulations or via a county sanitary code waiver provision.

SPECIFIC INFORMATION FOR SUSCEPTIBLE WATER SOURCE TYPES

The following types of water sources typically utilize surface water bodies or shallow groundwater sources. Surface waters can contain bacteria, parasites, viruses and possibly other contaminants and shallow groundwater sources are also at significant risk of contamination. These water sources typically have distinguishing construction characteristics which do not comply with Appendix 5-B requirements and would therefore require a specific waiver or other county approval if utilized.

Well Points

A well point (or "driven point") is a special type of well installed using a drive point with a built-in screen fastened to the end of a small diameter pipe (usually 1-1/4 to 2 inches) and without a protective outer casing. Well points are installed by pounding, driving or excavating down to the water table. These wells are usually constructed in shallow aquifers with sandy soils, within 10 to 30 feet of the ground surface and use a suction pump to draw water. Single pipe driven point wells under suction are not in compliance with Appendix 5-B and should be avoided.

Dug Wells

A dug well is constructed by making a large diameter excavation into a shallow aquifer, by hand digging or backhoe and shoring the excavation with large diameter concrete rings. (Shoring constructed with stone or brick are not in compliance with Appendix 5-B and should be avoided.) Dug wells are typically less than 15 feet deep and usually use a suction pump to draw water.

Springs

Springs occur where an aquifer discharges naturally at or near the ground surface, and are broadly classified as either rock or earth springs. It is often difficult to determine the true source of a spring (that is, whether it truly has the natural protection against contamination that a groundwater aquifer typically has.) Even if the source is a good aquifer, it is difficult to develop a collection device (e.g., "spring box") that reliably protects against entry of contaminants under all weather conditions. (The term "spring box" varies, and, depending on its construction, would be equivalent to, and treated the same, as either a spring, well point or shore well.) Increased yield and turbidity during rain events are indications of the source being under the direct influence of surface water.

Shore Wells

"Shore wells" (also known as "infiltration galleries" or "cassion wells") are shallow wells influenced by surface water and are installed near a waterbody in a shallow aquifer that is directly connected to surface water. Shore wells can also be shallow subsurface devices adjacent to a water body, installed to collect water through a covered stone-filled trench or similar arrangement that drains surface water to a "storage" well or tank. Soils surrounding shore wells provide minimal filtration. The risk of contamination of these water sources can be similar to those of surface water sources.

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NEW YORK STATE
DEPARTMENT OF HEALTH

Concerns About Surface Water as a Drinking Water Source

Fact Sheet

The New York State Department of Health wants to remind people that there are risks from using water from any surface water source as drinking water, unless that water is properly filtered and disinfected. Water from rivers, lakes, ponds and streams can contain bacteria, parasites, viruses and possibly other contaminants. To make surface water fit to drink, treatment is required.

Remember, we use our drinking water in many different ways. We use it as a beverage, but also make ice cubes, mix baby formula, wash fruits and vegetables, and brush our teeth. If the water is contaminated, this may put you at risk. Depending on the kind of contamination, it may also be a concern to wash dishes, wash hands, shower or bathe.

Public water systems are required to treat, disinfect and monitor water quality for their customers. A public water treatment system is well designed and employs trained technicians to test and maintain water quality. If you are not on a public water system and use surface water as your water supply source, please contact your local health department* for advice. They can talk to you about developing another source of drinking water in your area. If there are no other choices, then they can discuss the treatment options for your surface water source. In the meantime, avoid the use of surface water for your drinking water needs. You should use bottled water or disinfect small batches of water by bringing it to a rolling boil for one – two minutes.

Although the New York State Health Department cannot recommend specific treatment systems or businesses that install them, we would be glad to talk to you about options. For general questions regarding drinking water, call 1-800-458-1158, extension 27650.

*You can find the number for the local health department in your phone book, or call the toll-free number listed above for help in locating the office nearest to you.

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The table below, Reasons to test your Water, is based upon the United States Environmental Protection Agency's (USEPA) publication: "Drinking Water From Household Wells", January 2002.
This table may also be used as a reference for determining additional testing.

Conditions or Nearby Activities:	Test for:
Recurring gastro-intestinal illness[1]	Coliform bacteria, e-coli
Household plumbing contains lead (older homes)	pH, lead, copper
Radon in indoor air or region is radon rich	Radon
Corrosion of pipes, plumbing	pH, lead, copper
Nearby areas of intensive agriculture	Nitrate, pesticides, arsenic, coliform bacteria
Coal or other mining operations nearby	Metals, pH
Gas drilling operations nearby	Sodium, chloride, barium, strontium
Dump, junkyard, landfill, factory, gas station, or dry-cleaning operation nearby	Volatile organic compounds, total dissolved solids, pH, sulfate, chloride, metals
Odor of gasoline or fuel oil, and near gas station or buried fuel tanks	Volatile organic compounds
Objectionable taste or smell	Hydrogen sulfide, pH, metals
Stained plumbing fixtures, toilet tanks or laundry	Iron, copper, manganese, hardness
Salty taste and seawater, or a heavily salted roadway nearby	Sodium, chloride, total dissolved solids
Scaly residues, soaps don't lather	Hardness
Rapid wear of water treatment equipment	pH
Water softener needed to treat hardness	Hardness, manganese, iron
Water appears cloudy, frothy, or colored	Color, detergents, turbidity, total dissolved solids
Reddish-brown films on fixtures or toilet tanks	Iron bacteria, iron, manganese

[1] Individuals with symptoms of gastro-intestinal illness should seek the attention of a medical physician.

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The Karst* Landscape of New York – Concerns for Water Resource Contamination

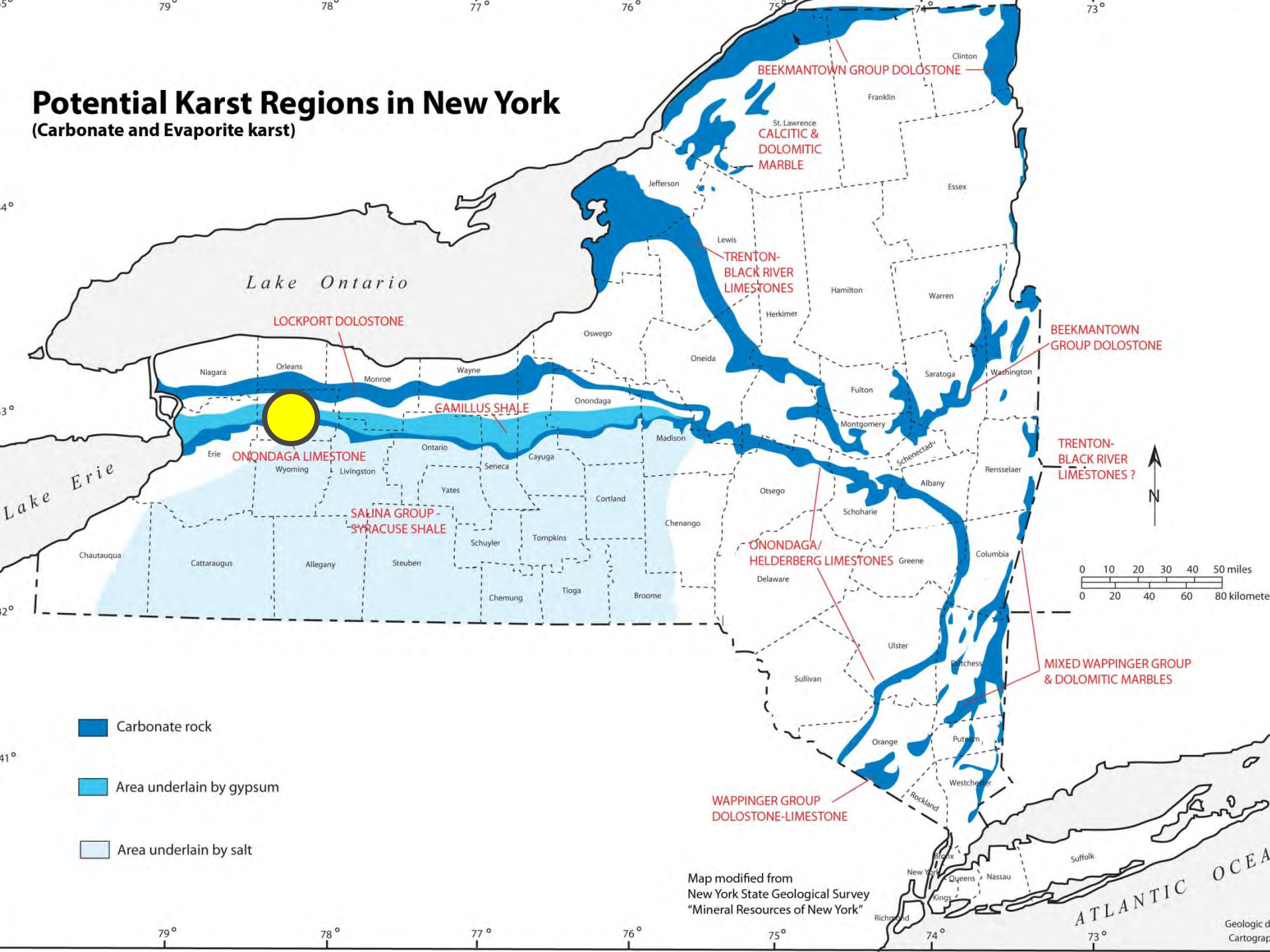
** Karst is a landscape formed from the dissolution of soluble rocks including limestone, marble, and dolostone, or from minerals within the rock, such as halite (salt) and gypsum. This landscape is characterized by sinkholes, caves, losing streams, springs, and underground, rapidly-moving, drainage systems.*

After a decade of investigating manure contamination over Karst – the manure is an indicator of the vulnerability of groundwater to <u>any form of contamination</u> in a Karst Landscape

aka – "Manure CSI"

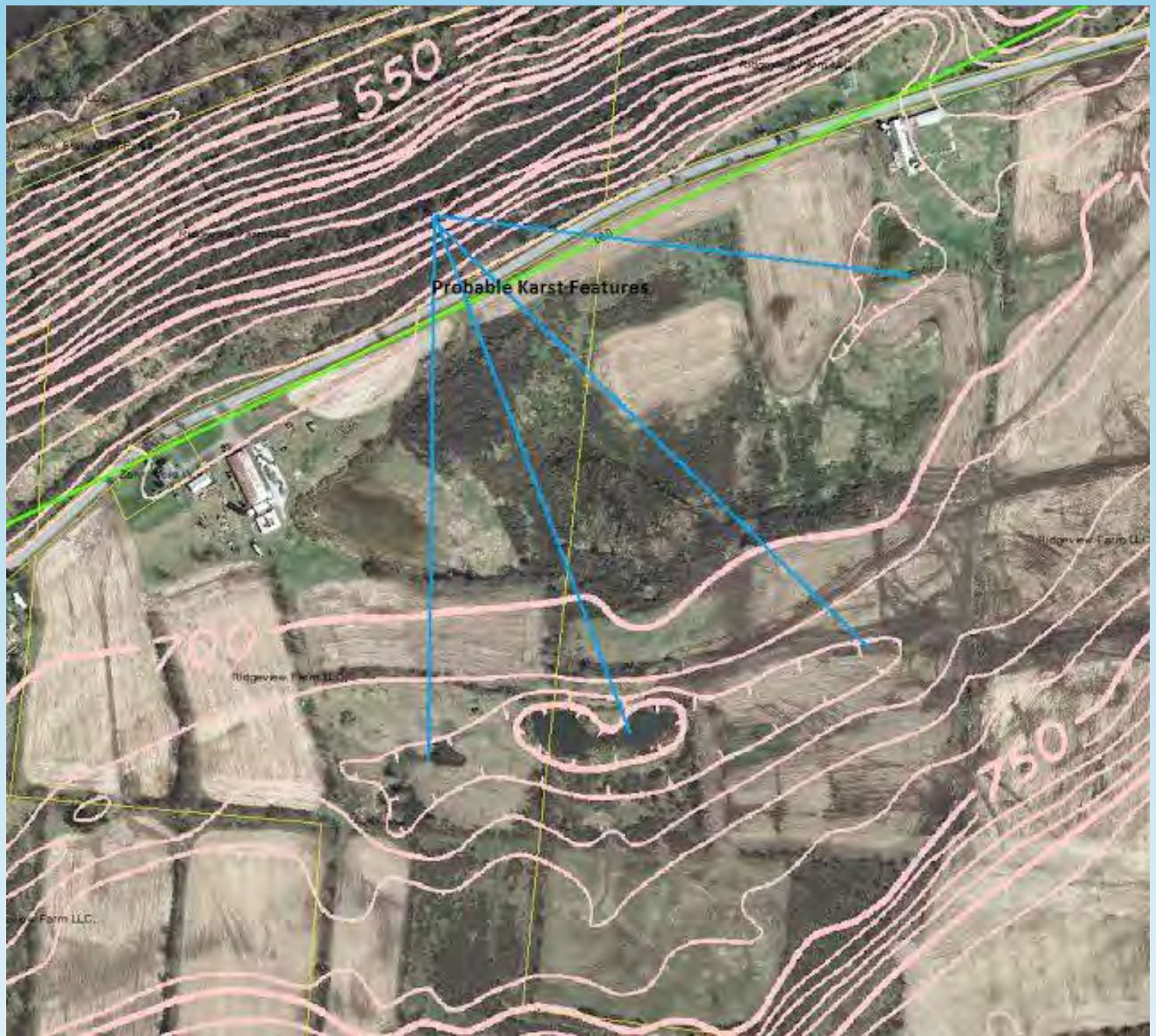
Potential Karst Regions in New York

(Carbonate and Evaporite karst)



Courtesy of Dr. P. Richards SUNY-Brockport

Closed depressions on the land surface



Agricultural Contamination of Groundwater – from Schoharie County SWCD report

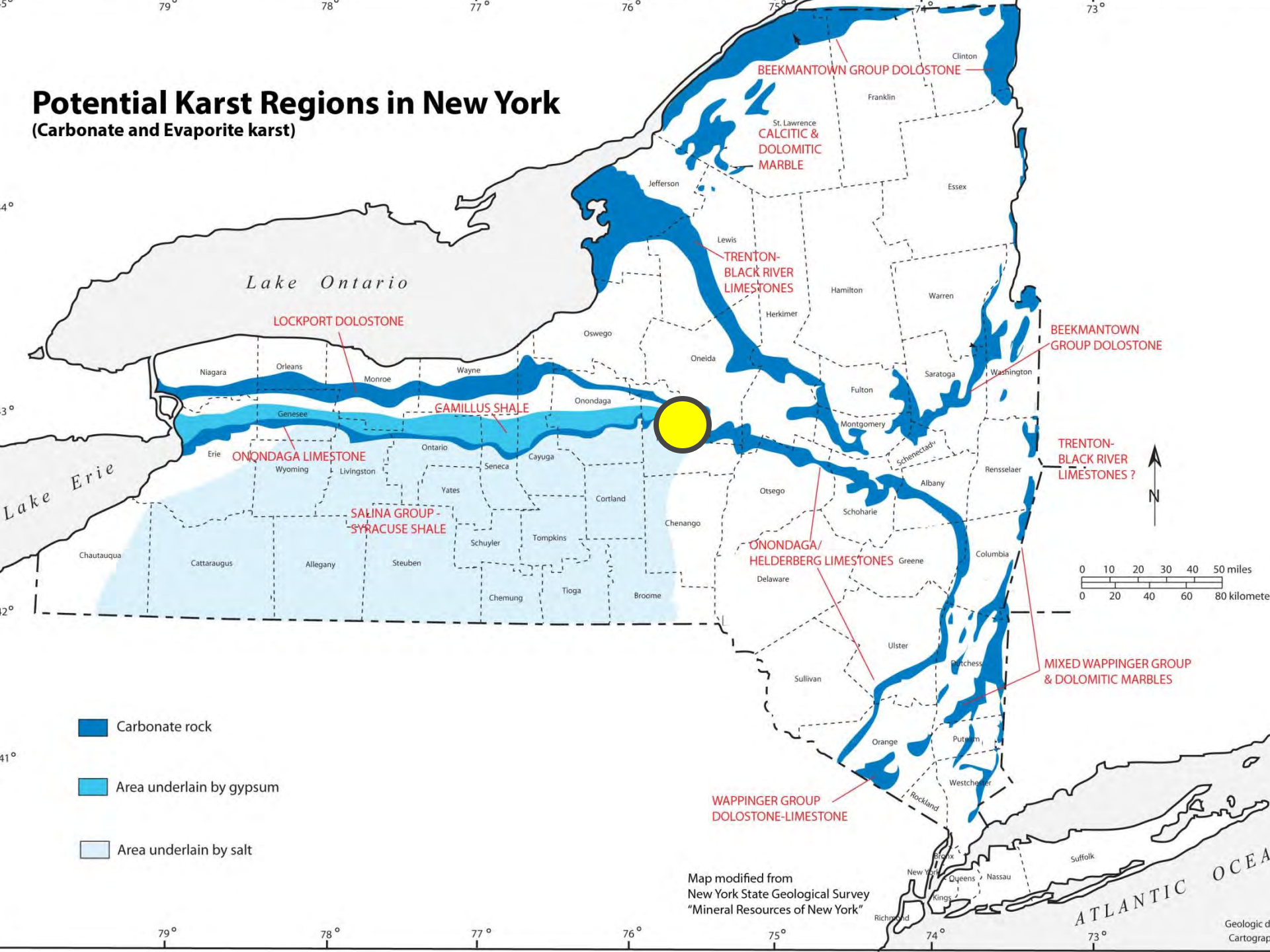
(Date - ?)

DISCUSSION

Of the 40 wells for which chemical analysis of the water was available, 87.5% showed some level of contamination from nitrates and 82.5% contained phosphates. None of the wells tested had concentrations of contaminants higher than the levels set by the Department of Health. It should be pointed out that the data presented in this report represent a short interval of time. Data collected over a longer period of time would provide a better baseline for comparisons in the future. Of the 43 wells tested for bacteria using a presence or absence test, 81.4% showed a presence. These figures indicate a strong degree of interaction of surface water with well water on the limestone plateau. All the wells located on the Cobleskill Plateau are located in an area where dairy farming is the number one industry. One of the wells, which had high nitrate levels, has had raw manure coming through the water system, ruining the clothes in the washing machine, as

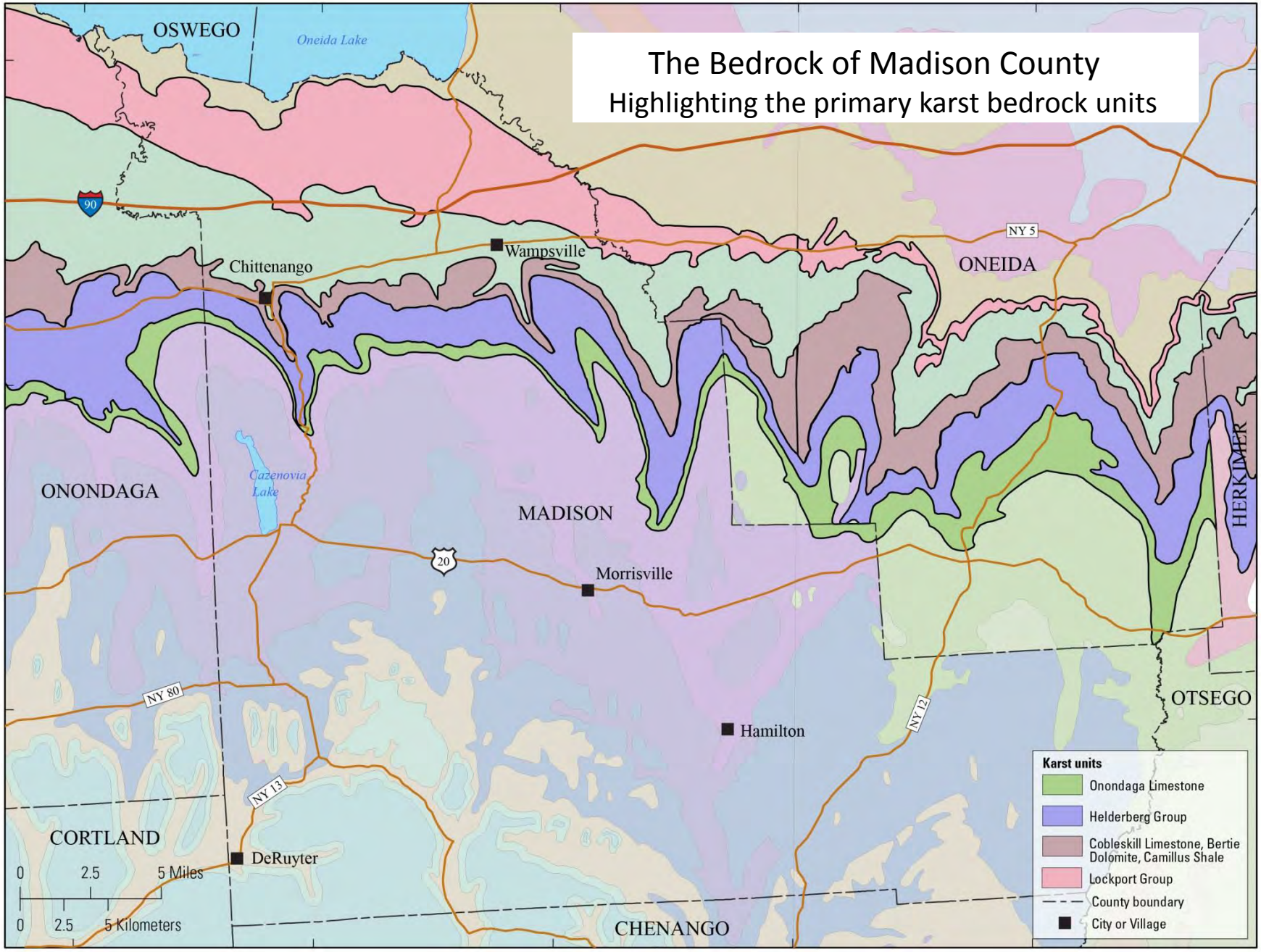
Potential Karst Regions in New York

(Carbonate and Evaporite karst)



The Bedrock of Madison County

Highlighting the primary karst bedrock units



Bedrock fracture pattern in limestone bedrock, adjacent to former quarry north of Perryville off Quarry Road.

Grassed swale off of Ridge Road

At the end of the grassed swale

Madison County –
Karst Pavement

Limestone bedrock with former joints (cracks) that have been solutioned by flowing water and widened to become open fractures.

Note where trees are growing…….

Bacteriological Tests From IWS Madison County 2009 - 2012

TABLE 9	Total # tested	Total Coliform Positive	E. Coli Positive
Total	40	10	2
Brookfield	1	0	0
Cazenovia	1	0	0
DeRuyter	2	1	0
Eaton	3	1	1
Lenox	13	6	0
Lincoln	17	1	0
Madison	1	1	1
Oneida	1	0	0
Smithfield	1	0	0

Madison County Department of Health 2013

Health Department IWS Initiative

- 2012 Madison County Community Health Improvement Plan
- Recognized key priority of the NYSDOH Prevention Agenda; Promote a Safe & Healthy Environment
- Data compiled as part of the CHI Plan noted higher 5 year incidence rates of giardia, cryptosporidiosis and campylobacher (all possible food or water borne illness) than NYS averages
- Water tests of IWS by Health Department noted 25% of wells tested positive for total coliform

Health Department IWS Initiative

- The Community Health Improvement Plan and incidents of well contamination attributed to agricultural activity motivated the Madison County Board of Health to direct the Environmental Health Division to engage in outreach and promotion intended to encourage IWS testing and source water protection measures.

Colgate Upstate Institute

- Partnering with the Upstate Institute Fellowship Program, a student intern with experience in GIS mapping began creating maps highlighting water supply issues and identifying potential source water contamination present in areas in the County.
- The following map products were developed and will eventually be posted on the MCDOH website; www.healthymadisoncounty.org

karst topography in mad county 8_3_15.pdf - Adobe Reader
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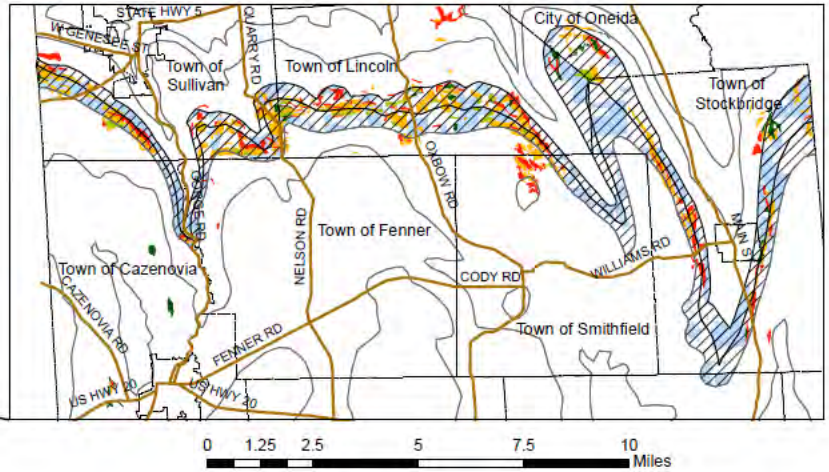
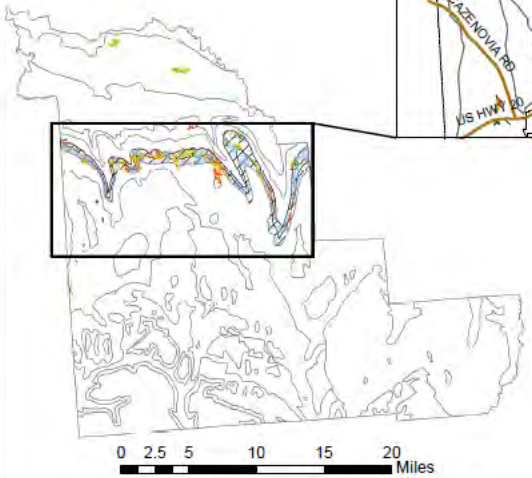
Karst Topography in Madison County

and the location of at risk private wells

Karst topography is characterized by the dissolution of soluble rocks which results in underground drainage. It is known to create rapid water flow with a lack of a natural filtration system. This can increase ground water contamination as contaminants flow quickly and undetected through the underground drainage. Private wells located on top of karst topography should be monitored regularly for they are at a greater risk of contamination.





Legend

- major roads
- geobedrock
- bedrock type 4
- bedrock type 5
- parcels w/ private wells
- town boundaries
- soil type FaB
- soil type WmA
- soil type WmB
- soil type WmC

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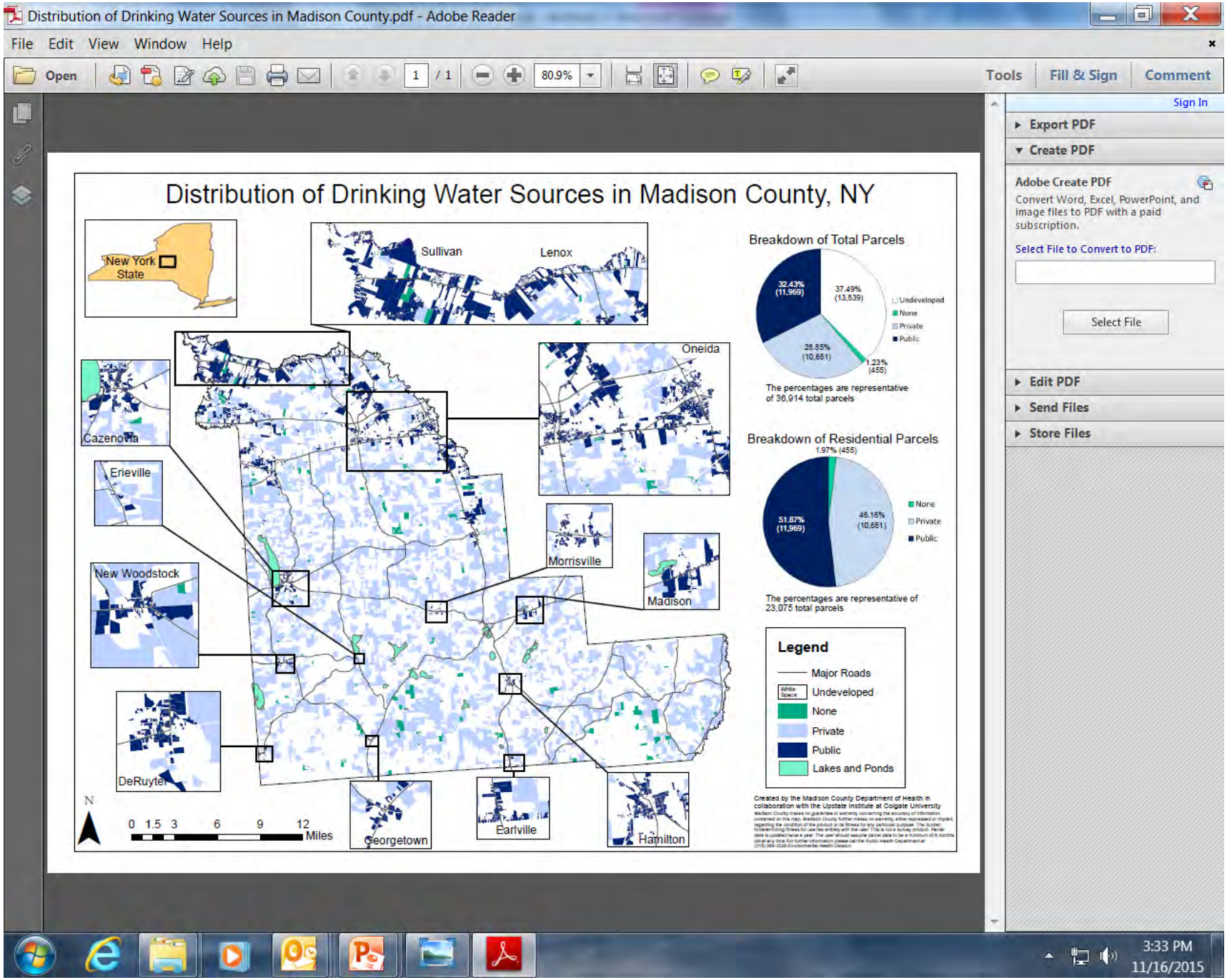
Distribution of Drinking Water Sources in Madison County.pdf - Adobe Reader
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Convert Word, Excel, PowerPoint, and image files to PDF with a paid subscription.
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Distribution of Drinking Water Sources in Madison County, NY
New York State
Sullivan
Lenox
Oneida
Cazenovia
Erieville
New Woodstock
Morrisville
Madison
DeRuyter
Georgetown
Earlville
Hamilton
N
0 1.5 3 6 9 12
Miles
Breakdown of Total Parcels
32.43% (11,969)
37.49% (13,839)
28.85% (10,651)
1.23% (455)
Undeveloped
None
Private
Public
The percentages are representative of 36,914 total parcels
Breakdown of Residential Parcels
1.97% (455)
51.87% (11,969)
46.16% (10,651)
None
Private
Public
The percentages are representative of 23,075 total parcels
Legend
Major Roads
Undeveloped
None
Private
Public
Lakes and Ponds
Created by the Madison County Department of Health in collaboration with the Upstate Institute at Colgate University
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Distribution of Drinking Water Sources in Madison County.pdf - Adobe Reader

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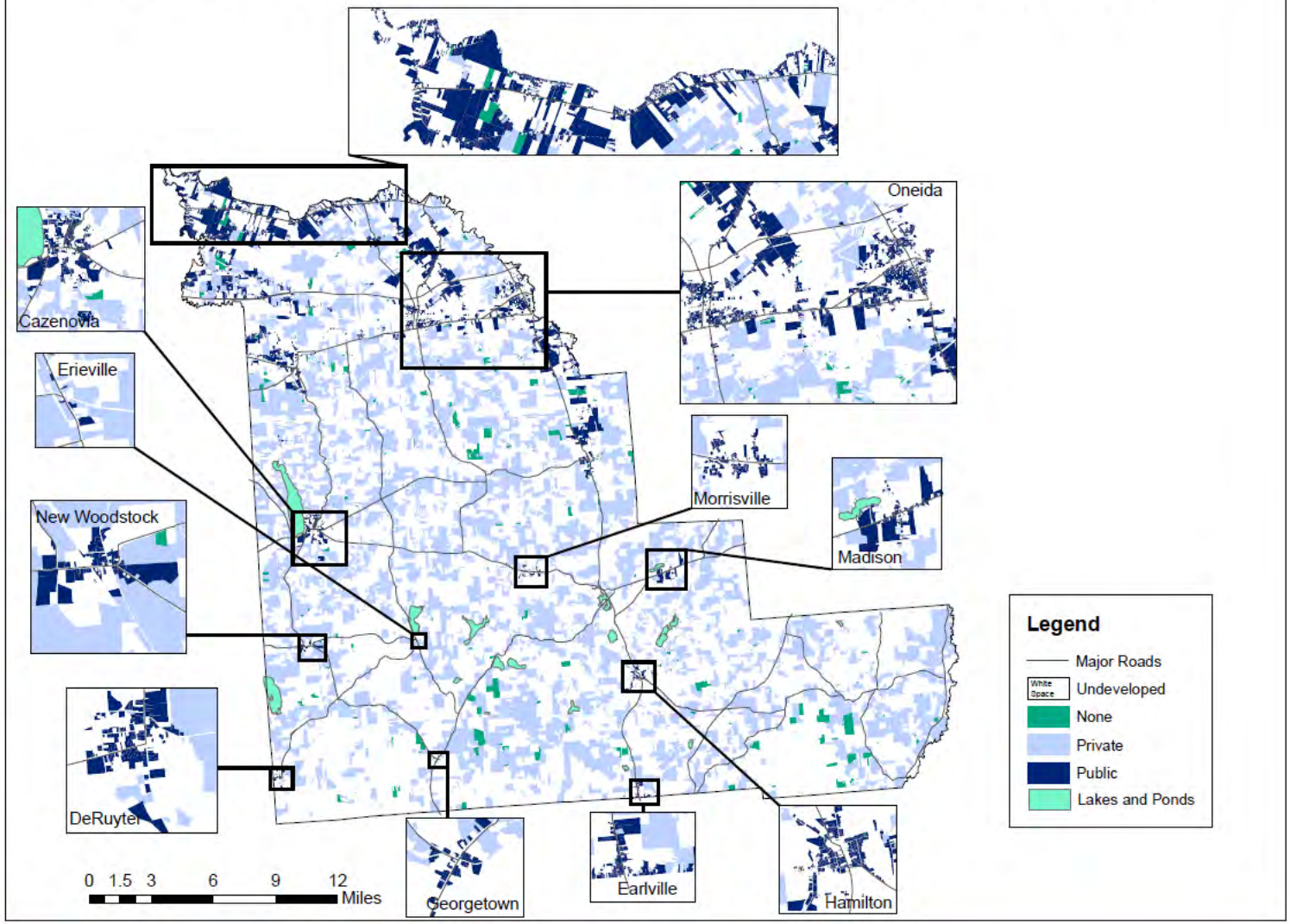
Distribution of Drinking Water Sources in Madison County, NY



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Potential environmental contamination sites throughout Madison County - Windows Photo Viewer

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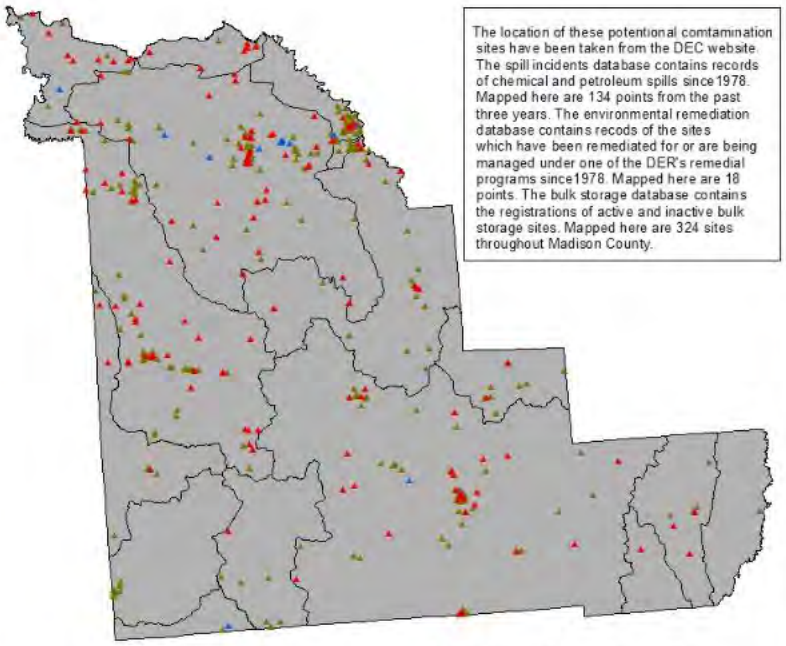
Potential Environmental Contamination Sites Throughout Madison County



The location of these potentional comtamination sites have been taken from the DEC website. The spill incidents database contains records of chemical and petroleum spills since1978. Mapped here are 134 points from the past three years. The environmental remediation database contains recods of the sites which have been remediated for or are being managed under one of the DER's remedial programs since1978. Mapped here are 18 points. The bulk storage database contains the registrations of active and inactive bulk storage sites. Mapped here are 324 sites throughout Madison County.

0 1.5 3 6 9 12 Miles

Legend

- Spill Incidents
- Environmental Site Remediation
- Bulk Storage
- Watersheds

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Distribution of Sewer Type in Madison County (map).pdf - Adobe Reader

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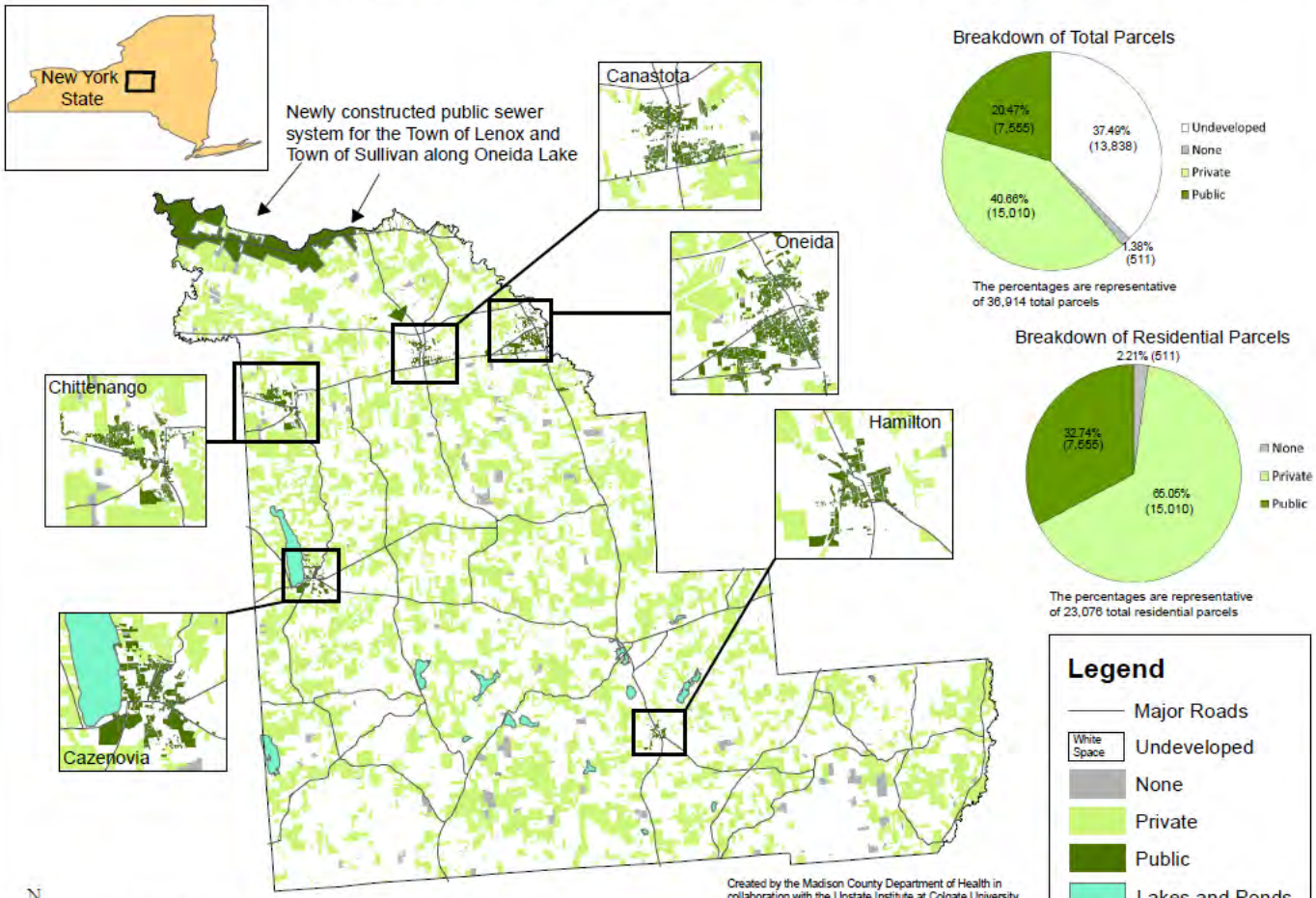
Distribution of Sewer Type in Madison County, NY



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IWS Initiative

- In addition to continuing our collaboration with Colgate's Upstate Institute…
- The Environmental Health Division continues to assist municipalities in Madison County in conducting water quality tests in areas with vulnerable IWS's to support extension of public water mains to serve areas found prone to contamination.
- Provide outreach and training to codes officials and design professionals on both OWTS & IWS requirements.

CDC IWS Grant

- To further our IWS Initiative, the Department applied for a grant from the Center for Disease Control & Prevention (CDC). Application for the *Environmental Health Services Support for Public Health Drinking Water Programs to Reduce Drinking Water Exposures grant* was submitted in June 2015.
- Notice of Award of the CDC Grant was made to the Madison County Health Department on September 17th, 2015

CDC IWS Grant Award

- Madison County was 1 of only 19 applicants awarded the CDC IWS Grant, and 1 of only 4 County Health Departments.
- Grant award is in the amount of $104,700 per year for a period of Five (5) years, for a total of $523,500
- Grant period began on September 30th, 2015

CDC IWS Grant Workplan

- The grant will fund a full time water resource position dedicated to individual and small water systems technical assistance & sampling
- Water quality sampling will be provided to 100 – 150 residences served by IWS's per year, with dedicated grant funds of $28,000 / year.
- Purpose of the IWS sampling is to assist homeowners to identify the safety of their water supply, become pro-active by taking measures to protect source of drinking water, and to identify areas in County where specific source contaminants may be present.

CDC IWS Grant Workplan

- Project includes engaging a workgroup of water professionals and interested officials (NYSDOH, DEC, MCWQCC, MC Soil & Water, NYSRWA, water treatment service providers and well drillers, etal.) to periodically meet to develop best strategies on furthering IWS initiatives, collaborate on engaging public awareness and empower IWS grant activities.
- Grant will further support an Annual IWS Symposium to provide education on drinking water topics, general source contaminant findings and ***Smart Growth***, as well as training for codes officials.

Georgetown Gas Compressor Project Health Study

- Also related to IWS Initiative & Public Health; the Health Department is engaged in a health study intended to address concerns of residents in the area of a Gas Compressor Station in Town of Georgetown. Start of construction is scheduled for Spring 2016.
- County BOS authorized a budget of $86,000 for the purchase of testing equipment and laboratory sampling expenses to conduct a baseline appraisal of baseline environmental conditions.

Georgetown Health Study
Environmental Sampling

- Sampling to be conducted at 15 – 18 homes
- Indoor / Outdoor Air Monitoring Includes;

✓ Particulate Matter; PM monitors deployed

✓ Volatile Organic Chemicals (VOC) associated with gas industry projects (BTEX)

✓ Formaldehyde; Badges deployed inside homes

✓ Radon; test canisters deployed in each home

✓ Methane Gas; Services contracted for study

Georgetown Health Study Environmental Sampling

- Drinking Water Supply Assessments & Field Tests;
- ✓ Alkalinity, Sulfate, Hardness, Fe, pH, Conductivity, TDS, temp measurements collected by staff in field
- ✓ Water samples collected for full certified laboratory analyses (> 34 contaminants)
- Surface Water Analyses; samples collected at min 3 locations, pond downwind, stream at site, creek downstream of site (BTEX, arsenic, methane, barium, strontium, glycol, bromides, bacteriological, styrene)

Georgetown Health Study Environmental & Human Health

- Noise Monitoring; Measurements taken Indoor/ Outdoor and Radial Noise Study (Using both purchased & rented equipment)
- Residents; Health Assessment and Lung Function Tests Being Conducted

- Follow up testing during construction phase and post construction proposed for 3 years planned using other grant funds

Questions