
Le Sueur County, MN

Tuesday, March 3, 2015

Board Meeting

Item 8

10:05 a.m. Darrell Pettis

RE: Le Center and Le Sueur Wellhead Protection Plans

RE: SSTS Bulletin

RE: Le Sueur Waseca Group Home Transfer from Misc. Revenues to Revenue

RE: State Aid Bond Resolution

RE: Board of Appeal and Equalization, June 20, 2015 Meeting Date

RE: CSAH 23 Project Final

Staff Contact:



THE CITY OF LE CENTER

Date: 1-29-15

To: Joe Doherty, Chairperson, Le Sueur County Board
Roger Ruhland, District Manager, Le Sueur Soil and Water Conservation District
Kathy Brockway, Director, Environmental Services Department
Lauren Klement, Water Plan Coordinator, Le Sueur County Environmental Services Dept
Andrew Nicolin, Le Sueur County Community Health
Glendon Braun, Chairperson, Le Sueur Soil and Water Conservation District
Nicole Griensewic, Exec. Director, Region 9 Development Commission
Pat Bailey, Planner, Source Water Protection Unit, Minnesota Department of Health
Trudi Witkowski, Source Water Protection Unit, Minnesota Department of Health
Robyn Hoerr, Groundwater Spec, MN Rural Water Association

From: Pat Kaderlik, City of Le Center

Re: Wellhead Protection Plan Amendment, Part 1, for the City of Le Center

The City of Le Center is in the process of amending our wellhead protection plan for its drinking water supply wells. As required by the Minnesota Wellhead Protection Rule (part 4720.5330, subpart 6), the Minnesota Department of Health approved Part 1 of the wellhead protection plan amendment for our system. This portion of the plan includes information pertaining to:

1. The delineation of the wellhead protection area,
2. The drinking water supply management area boundary, and
3. The well and drinking water supply management area vulnerability assessment.

Enclosed please find the items listed above. If you would like a complete copy of the amended Part 1 plan containing the technical information used to delineate the wellhead protection area, drinking water supply management area, and vulnerability of the wells and aquifer, please contact me at 507-340-7116

Consistent with the Wellhead Protection Rule (part 4720.5330, subpart 7), a Public Information Meeting has been scheduled during the City Council Meeting on 2-10-15 at 7:00PM Le Center City Hall 10 west Tyrone St 56057 to discuss issues and concerns with this portion of the plan amendment. We welcome your participation at this event.

If you have any questions concerning this matter, please contact me.

10 WEST TYRONE ST. ★ LE CENTER, MN 56057
507-357-4450

8.1 Assessment of Well Vulnerability

The vulnerability assessments for each well used by the city of Le Center are listed in Table 1 and are based upon the following conditions:

- 1) Well construction meets current State Well Code specifications (Minnesota Rules, part 4725), meaning that the well itself should not provide a pathway for contaminants to enter the aquifer used by the public water supplier;
- 2) The geologic conditions at the well site include a cover of clay-rich geologic materials over the aquifer that is sufficient to retard or prevent the vertical movement of contaminants; and
- 3) None of the human-caused contaminants regulated under the federal Safe Drinking Water Act have been detected at levels indicating that the well itself serves to draw contaminants into the aquifer as a result of pumping (Alexander and Alexander, 1989).
- 4) Water samples collected from the wells were analyzed for tritium, nitrate, chloride and bromide. No tritium or nitrate was detected in the samples, confirming the non-vulnerable nature of the well (Alexander and Alexander, 1989). In addition, the chloride and bromide results confirm that the well has not been impacted by land-use activities (Table 9).

Table 9 - Isotope and Water Quality Results

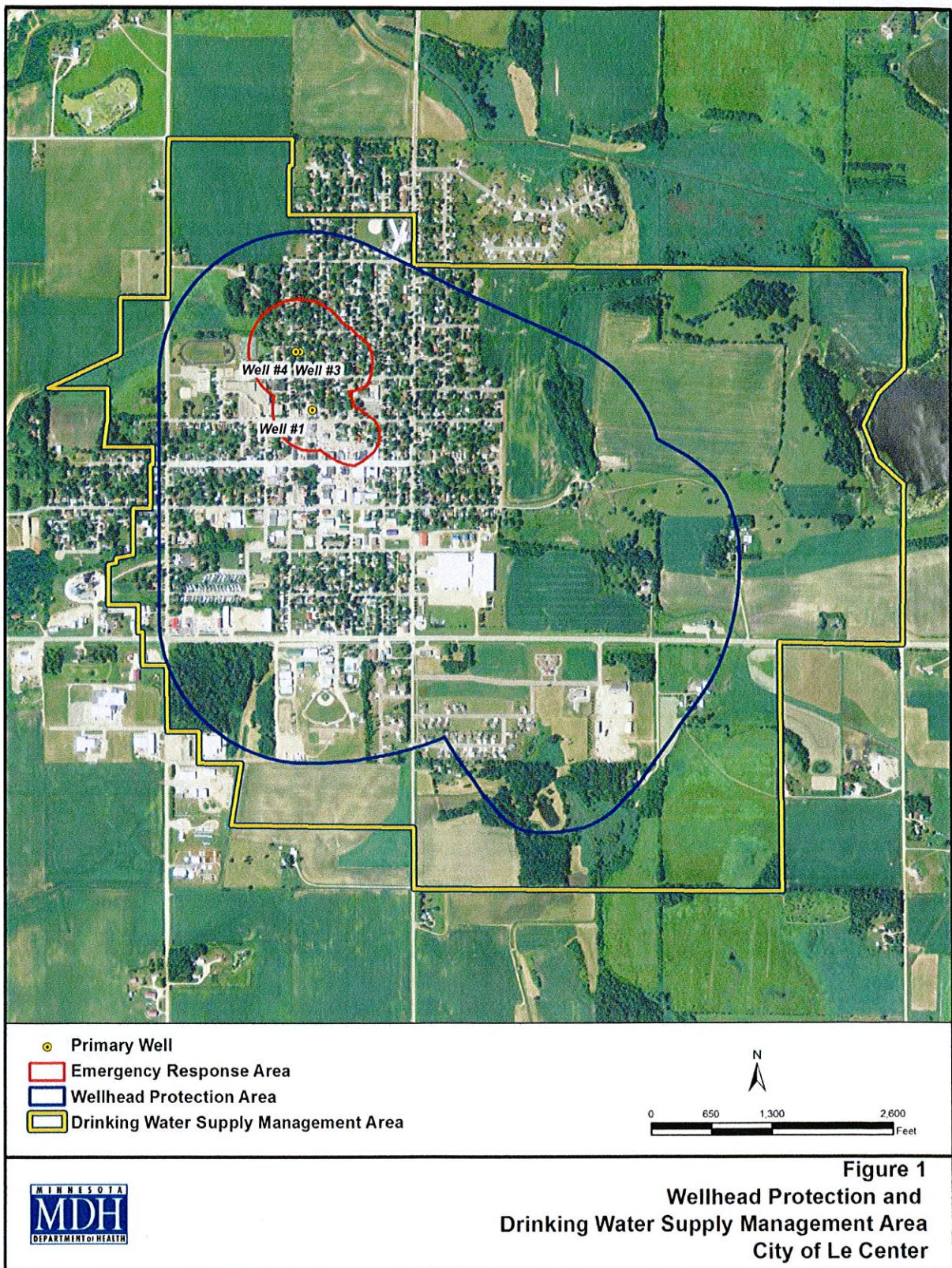
Well	Date	Tritium (TU)	Nitrate (mg/L)	Chloride/Bromide ratio	Chloride (mg/L)	Bromide (mg/L)
1 (218357)	7/29/2002	< 0.8				
"	8/2/2011			22.4	0.616	0.0275
"	5/20/2014		< 0.05			
3 (638489)	7/29/2002	< 0.8				
"	8/2/2011			30.5	0.861	0.282
"	5/20/2014		< 0.05			
4 (754822)	5/20/2014		< 0.05			

8.2 Assessment of Drinking Water Supply Management Area Vulnerability

The vulnerability of the DWSMA is based upon the following information:

- 1) Isotopic and water chemistry data from wells located within the DWSMA indicate that the aquifer contains water that has no detectable levels of tritium or human-caused contamination.
- 2) Review of the geologic logs contained in the CWI database and geological maps and reports indicate that the aquifer exhibits a low geologic sensitivity throughout the DWSMA and is isolated from the direct vertical recharge of surface water.

Therefore, the vulnerability of the DWSMA is low throughout the area.



Date: February 16, 2015

To: Pat Bailey, Principal Planner
Minnesota Department of Health
Source Water Protection Unit
18 Wood Lake Drive
Rochester, MN 55901

Robyn Hoerr, Groundwater Spec.
MN Rural Water Association
10641 184th Ct. NW
Elk River, MN 55330

Trudi Witkowski
MN Department of Health
Sourcewater Protection Unit
PO Box 64975
St. Paul, MN 55155

Nicole Griensewic, Executive Dir.
Region 9 Development Commission
P.O. Box 3367
Mankato, MN 56002

Joe Doherty, Chairman
Le Sueur County Board of Commissioners
30048 261st Avenue
Le Sueur, MN 56058

Glendon Braun, Chairman
Le Sueur County Soil and Water Conservation District
181 W. Minnesota Street
Le Center, MN 56057

Lauren Klement, Water Plan Coordinator
Le Sueur County Env. Services Dept.
88 S. Park Avenue
Le Center, MN 56057

Andrew Nicolin
Le Sueur County Community Health
88 S. Park Avenue
Le Center, MN 56057

Roger Ruhland, District Manager
Le Sueur County Soil and
Water Conservation District
181 W. Minnesota Street
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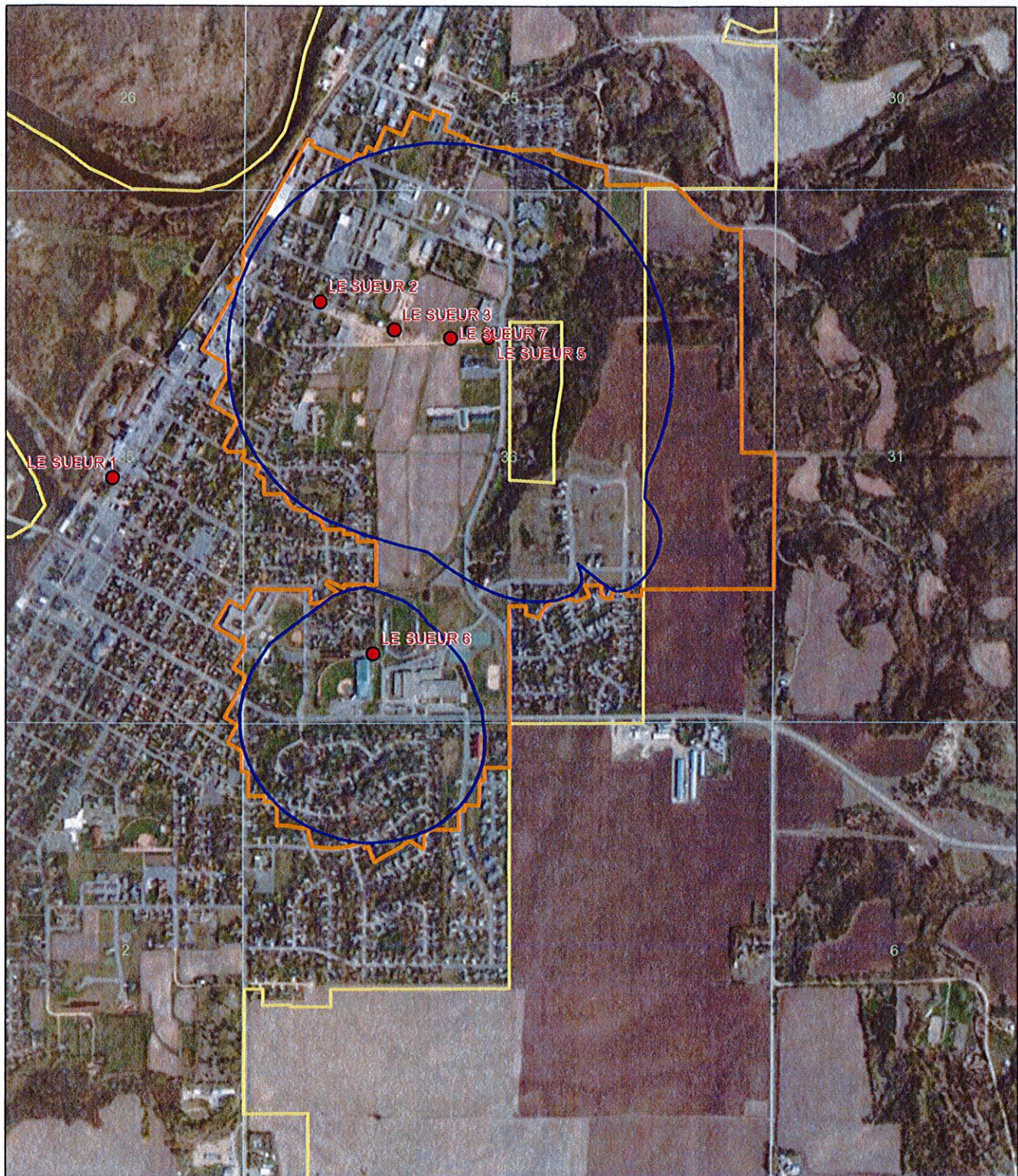
From: Greg Drent, City of Le Sueur

Re: Wellhead Protection Plan, Part 1, for the City of Le Sueur

The City of Le Sueur is in the process of developing a wellhead protection plan for its drinking water supply wells. As required by the Minnesota Wellhead Protection Rule (part 4720.5330, subpart 6), the Minnesota Department of Health approved Part 1 of the wellhead protection plan for our system. This portion of the plan includes information pertaining to:

1. The delineation of the wellhead protection area,
2. The drinking water supply management area boundary, and
3. The well and drinking water supply management area vulnerability assessment.

Enclosed please find the items listed above. If you would like a complete copy of the Part 1 plan containing the technical information used to delineate the wellhead protection area, drinking water supply management area, and vulnerability of the wells and aquifer, please contact me at 507-665-3338.



1038 Ruggles St., Roseville, MN 55113
Phone: (612) 354-2549
www.sourcewater-solutions.com

Legend

- WHPA (10 Yr. Capture Zone)
- DWSMA
- Municipal Boundary
- Municipal Wells
- Twshp Rnge Sec

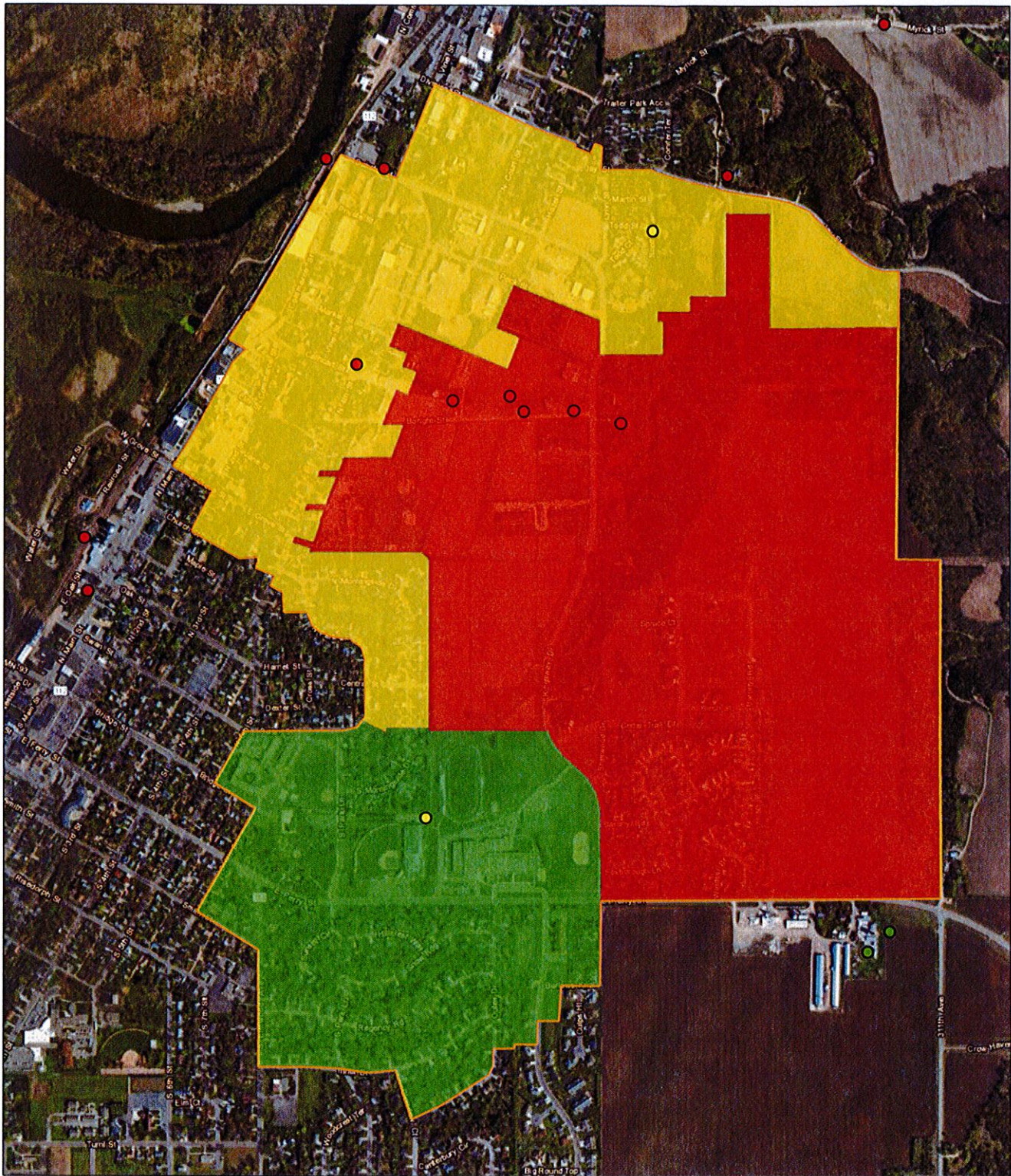


0 135 270 540 810 Meters

Figure 2

Drinking Water Supply
Management Area
(DWSMA)

Le Sueur Wellhead
Protection Plan



Phone: (612) 701-7343
www.sourcewater-solutions.com

Legend

L Score	Vulnerability
● 0	High
● 1 - 2	Moderate
● 3 - 16	Low



0 90 180 360 540 Meters

Figure 13

DWSMA
 Vulnerability

Le Sueur Wellhead
 Protection Plan

6.0 Delineation of the Drinking Water Supply Management Area

Boundaries used to delineate the Drinking Water Supply Management Area (DWSMA) are described above in Section 3.2. The DWSMA boundary was defined using the following features (**Figure 2**):

- public land surveys (including township, range, and section boundaries),
- roads, and
- property lines (Le Sueur parcel data).

A GIS shapefile of the DWSMA is provided in **Appendix D**.

7.0 Vulnerability Assessments

The Part I wellhead protection plan includes the vulnerability assessments for the public water supply wells and the DWSMA. These vulnerability assessments are used to help define potential contamination sources within the DWSMA and to select appropriate measures for reducing the risk that they present to the public water supply.

7.1 Assessment of Well Vulnerability

The vulnerability assessment for each well used by the public water supplier is listed in **Table 1** and is based upon the following conditions:

- 1) Well construction meets current state Well Code specifications (Minnesota Rules, part 4725) and the well itself does not provide a pathway for contaminants to enter the aquifer used by the public water supplier;
- 2) The geologic conditions at the well site include a cover of geologic materials over the aquifer that is sufficient to retard or prevent the vertical movement of contaminants;
- 3) None of the human-caused contaminants regulated under the federal Safe Drinking Water Act have been detected at levels indicating that the well itself serves to draw contaminants into the aquifer as a result of pumping.
- 4) Nitrate analysis of water from each well.

Results of the well vulnerability analysis – The MDH Source Water Protection (SWP) Vulnerability rating for Le Sueur’s municipal wells determined Wells 2 and 5 to be vulnerable and Wells 6 and 7 to be not vulnerable. There was no vulnerability analysis provided for Well 3.

The QWTA wells (Wells 2 and 5) have a very high geologic sensitivity rating and L scores of 0. Tritium samples have not been analyzed from Wells 2 and 5, however both wells have detectable levels of nitrate therefore, the wells have been designated as vulnerable. Based upon the well log and its proximity to Wells 2 and 5, Well 3 has also been designated as vulnerable.

The bedrock wells (Wells 6 and 7) have low and very low geologic sensitivity ratings respectively. Well 6 has an L score of 4 and no detectable nitrate. Well 7 has an L score of 9 and no nitrate detection. Both Wells 6 and 7 have been designated as not vulnerable. These L-scores and sensitivity ratings are based upon the overlying surficial geology and the presence of any protective confining units. The MDH scoring sheets are presented as **Appendix F**.

7.2 Assessment of Drinking Water Supply Management Area Vulnerability

The vulnerability of the DWSMA is shown in **Figure 13** and is based upon the following information:

Boring logs available for wells within, and near the DWSMA, were reviewed for the presence of clay thicknesses. Geologic cross-sections were developed and provided by the MDH and are included as **Figures 5, 6, and 7.**

MDH guidance (MDH, 1997) was followed in determining the DWSMA vulnerability. L-scores were calculated based upon DNR geologic sensitivity guidelines for wells within and around the DWSMA.

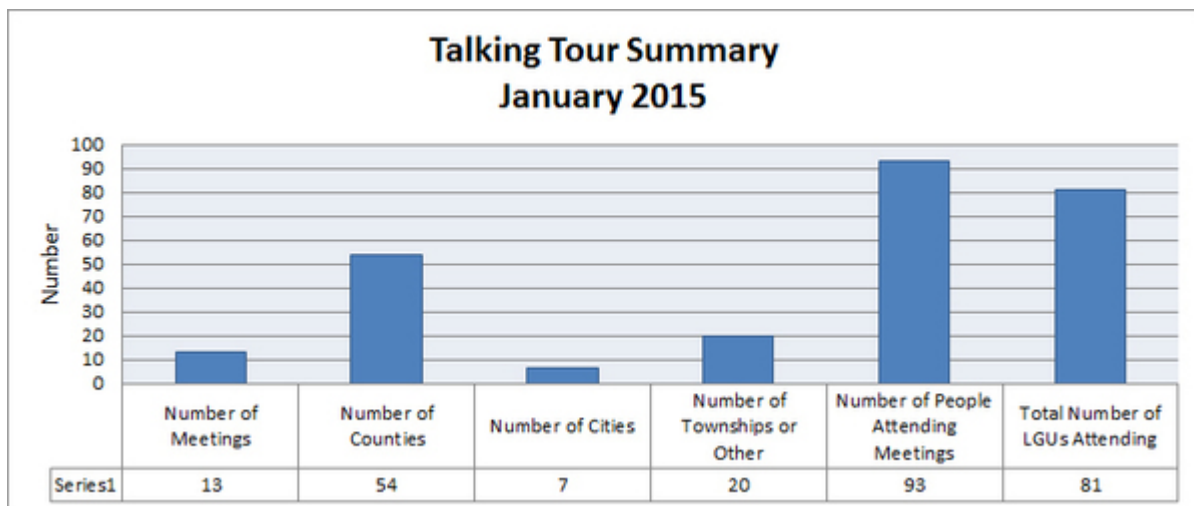
A review of the geologic logs contained in the CWI database and geological maps and reports indicate that the QWTA used by Wells 3 and 5, exhibits a high to moderate geologic sensitivity. The FIG and MTS aquifers used by Wells 6 and 7, exhibit a low geologic sensitivity. Boring logs available for wells within and near the DWSMA were reviewed for the presence of clay thicknesses and L-scores were calculated. Most of the wells in the northern portion of the DWSMA had L-scores of 0, meaning there were no continuous clay layers greater than 10 feet in thickness. L-Scores for wells in and near the southern portion of the DWSMA showed greater clay layer thicknesses.

Wells 3 and 5 use the high to moderately sensitive QWTA and are more vulnerable to surface contamination. The capture zones for Wells 3 and 5 were used to divide the northern portion of the DWSMA into moderate and highly vulnerable areas. The land surface above the capture zones for Wells 3 and 5 were assigned a high vulnerability rating and the surrounding areas of the northern part of the DWSMA were assigned a moderate vulnerability rating.

Based on the presence of the clay layers, and because the capture zones for the QWTA wells (Wells 3 and 5) did not extend into the southern portion of the DWSMA, the southern portion of the DWSMA was assigned a low vulnerability rating.



March 2015



SSTS Talking Tour draws 93 to 13 meetings across the state

The 2015 MPCA SSTS Talking Tour was again a success, drawing 93 SSTS stakeholders to 13 meetings across the state with members of the MPCA SSTS program. There were 81 Local Governmental Units represented out of a total of 259 that administer SSTS programs.

The MPCA holds these meetings to collect feedback and ideas on the Minnesota SSTS program from those who administer the program in counties, cities and townships. Participants shared 107 comments with the Talking Tour team. The majority of comments were addressed at the meetings with no further action required but some require some sort of followup.

For example, stakeholders have mixed feelings about the current tank installation fee of \$25 per tank installed. Some at the meetings felt the fee should be raised to \$35 and apply to the entire system. They cited the amount of book-keeping required to process these fees as well as the time spent in resolving dependencies between the number of tanks the professional reports and information from the reporting entity. Others felt it should not be changed since those who are having only one tank installed would be paying more per tank than those who are installing systems with more than one tank.



Others mentioned the need to find additional ways to help home owners replace faulty septic systems when the household does not have sufficient income to cover those costs without hardship. They said many medium-income families also have a difficult time affording a new septic system.

Thanks again to all who attended. We look forward to seeing all of you again next year.

Want to use a tank not on the MPCA list? Get the facts (sheet)

The MPCA maintains a List of Registered Sewage Tanks on [MPCA's website](#). If you want to install a new sewage tank, it needs to be on this list. But what if a tank you want to install is not on the list, then what?

The rules recognize that modifications to registered tanks or "one of a kind tank" are allowed provided a licensed Professional Engineer signs off that the tank meets certain rule requirements AND the local permitting authority accepts it. An MPCA [fact sheet](#) describes these requirements.

Here are a few examples of where non-registered tanks could be used according to the guidelines in the fact sheet:

- a large tank that is custom built for one system
- a registered tank that needs to have the inlet location changed to accommodate a specific installation
- a registered tank that needs to be repurposed from a septic tank to a pump tank or a pump tank to a holding tank or any other possible combinations
- a tank that is reinforced to allow vehicle traffic over the tank.

Have a tank-related question? Contact [Corey Hower](#) or 507-206-2603.



Helped by good record-keeping, Todd County SSTS inventory project finding, fixing bad septics in lake country



Todd County's SSTS inventory project is focused on finding, fixing bad septs in lake country in the southern end of the county.

An SSTS inventory project consists of evaluating every SSTS in a given area and then making sure that systems that pose a threat to water or human health get fixed or replaced within a certain timeframe. Counties have learned these inventory projects are one of the best ways to increase SSTS compliance rates.

Some counties prioritize this work by focusing their attention on systems located near lakes that could be impacted by deficient systems. That's the route being taken by Todd County just east of Alexandria.

Since beginning an inventory project in 2011, Todd County has evaluated 1571 systems on 13 lakes, including the largest lake in the county, Lake Osakis in the southwest, and smaller lakes in the southeast.

The compliance rate for 13 lakes inspected thus far is 94 percent. A total of 56 systems have been updated since the inventory began in 2011. Of the 1571 systems inspected, 99 still require updating. Four more lakes will receive sewer inspections in 2015.

Chris Arens (pictured at right) with the Todd County Planning and Zoning Department said conducting the inventory can be tricky in some areas where rocky soil makes it difficult to use an auger to get an accurate soil profile description, which is important when determining whether or not a system might be impacting ground water.



On the other hand, aiding the inventory project is the fact that Todd County has kept very good records since the late 1970s on septic installations and inspections. Arens said using this information makes it easier to determine where problem systems might exist based on date of installation. The records also aid in locating systems and determining the depth of the treatment area.

Extending courtesies helps with homeowner buy-in

Arens himself did the inspections for eight of the nine lake inventories since 2013 and says virtually all of the homeowners he worked with were friendly and accommodating. "I sent each of them a letter letting them know what I was planning to do and that they should let me know if they would like to be there when I performed the inspections," said Arens, who added many people appreciated learning about how their septic system works and the value of regular maintenance.

"One man told me he didn't think his tank had been pumped for maybe 10 years. I told him that getting his tank pumped on a regular basis, every three years or so, will help his drain field last longer and save him money in the long run," Arens said. "It's just like making sure you change the oil in your car on a regular basis if you want

it to last a long time."

A shout out to MOWA, contractor for Whispers of Hope work

Like furnaces and foundations, septic systems aren't the first thing people think about when remodeling. But working septic systems are critically important to our state's lakes and rivers and to protect our health from diseases in wastewater.

That's why a \$5,000 donation from the Minnesota Onsite Wastewater Association (MOWA) and services donated by Advanced Septic Solutions was such a big deal for Whispers of Hope, a rural Rice County women's shelter. Whispers of Hope is a residential and non-residential counseling ministry serving young women who are struggling with difficult issues in their lives.

The donation and equipment helped Whispers of Hope install a new septic system that was required to meet the needs of the seven-acre facility.

Located near Northfield, Whispers opened in 2014, and the first residents arrived last July. The MOWA donation and contractor services provided by Tom Wirtzfeld and his crew at Advanced Septic Solutions in Northfield paid for a new septic system that will keep the facility in compliance with local county septic system requirements and protect nearby ground and surface water. The new system allows them to combine the residential home, a counseling shed and an activities barn into one complete system.

For the generous donation and effort, MPCA thanks MOWA and Tom Wirtzfeld and his crew at Advanced Septic Solutions for going above and beyond to protect water!

This barn, built in 1919, has been renovated by Whispers of Hope to offer concerts, worship, conferences, group counseling, arts and crafts, and fitness opportunities for its residents. It's one of the facilities now being served by a new septic system built with donations of time and money.



Biscay replaces faulty septic systems with new community MSTS (Midsized Soil Treatment System)



The City of Biscay in McLeod County has a new MSTS (Midsized Soil Treatment System) which replaced 29 of the 51 septic systems in the city. Of the 29 septic systems that were replaced, 21 had been deemed as posing an imminent threat to health. The new system, installed in 2014, is designed for 9,500 gallons per day.

The system is composed of a collection system with a combination of grinder pumps and gravity sewer. There is 4,150 feet of force main pipe from the lift station to the soil treatment system, which is composed by a number of mounds.

A geotechnical study consisting of soil and site survey with groundwater investigation indicated nitrogen would not pose a risk, or impact groundwater.

Project funding was made possible via loan and grant funding from the Small Community Wastewater Treatment Program through the Public Facilities Authority, and SSTS Abatement grant funding from the Board of Water and Soil Resources. Project partners were the City of Biscay, McLeod County, Midwest Assistance Program, and project engineers, Wenck Associates.

SSTS Calendar

March 12 - SSTS Advisory Committee, 10 a.m. - 3 p.m., St. Cloud. Contact [Aaron Jensen](#) for information.

March 13 – SSTS Basic Design Exam Piloting. MPCA St. Paul office. Contact is [Nick Haig](#).

MPCA SSTS staff - who to call

Detailed contact information for MPCA SSTS staff is available on the [MPCA website](#). All MPCA staff can be reached at 651-296-6300 or toll-free at 1-800-657-3864. [Past editions of the SSTS Bulletin](#) are available on the MPCA website.

