

What We Have Done.

The Linn Sanitary District has worked hard to find the best sanitary waste management alternative for its residents while assuring a potable drinking water supply. The foundation of this effort is to protect Geneva Lake's surface and ground waters.

Since 2000, the District has completed a Sanitary Wastewater Facilities Study and several amendments (see <http://townoflinn.com/Sanitary.htm>). Over 1,300 Private On-Site Wastewater Treatment Systems (POWTS) were inspected with most bad systems upgraded to code. All POWTS in the Linn Sanitary District are now on a County three year maintenance program. With ongoing maintenance and repair, POWTS and private wells continue to be the best alternatives.

To assure that the POWTS are not impacting the groundwater quality over 400 wells were tested during the summer of 2014. The results of that testing will be discussed in this newsletter and at a public information meeting in June 2015.

On-going POWTS maintenance and **annual private water testing** are the best ways you can help to protect the groundwater that is so important to you and Geneva Lake. For information on testing your well call Walworth County Public Health at 262-741-3140

Interested in a Water Use Survey?

If you are interested in being involved in a short simple survey that identifies how much water is run down the drain while waiting for hot water to arrive at your faucet, contact the Linn Sanitary District/Geneva Lake Environmental Agency at 262-245-4532.



LINN SANITARY DISTRICT

P.O. Box 949
Lake Geneva, WI 53147
262-245-4532

<http://www.townoflinn.com/Sanitary.htm>

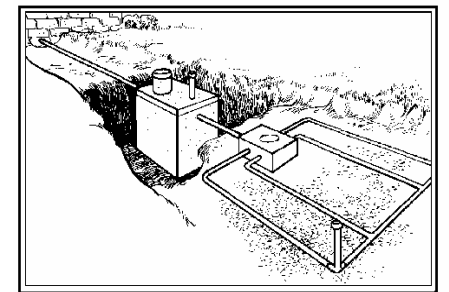
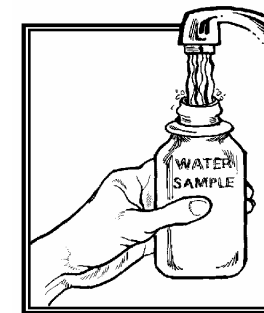
SPRING NEWSLETTER

- PRIVATE WELL TESTING RESULTS
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MAY 2015

FOR OUR HEALTH-

-AND GENEVA LAKE'S PROTECTION-



DON'T FORGET TO TEST YOUR WELL WATER ANNUALLY. CONTACT WALWORTH COUNTY PUBLIC HEALTH 262-741-3140

RESULTS OF THE 2014 PRIVATE WELL TESTING PROGRAM.

Hoping to get a couple hundred participants for our summer 2014 private well texting program, the response of over 400 interested parties was a pleasant surprise. Other than a bit of scheduling problems, the Linn Sanitary District, the Geneva Lake Environmental Agency, Walworth County Public Health and George Williams College, working together, completed the testing of 413 private wells. Wells were tested for total bacteria, nitrates and if the well was deeper than 175 ft. it was tested for arsenic. If a well tested positive for total coliform a follow up test for E- coli was conducted immediately.

Generally speaking the well test results were good, indicating no major groundwater quality issues (table 1). Twenty-three percent of the wells tested had some total coliform present. The public drinking water standard for total coliform is zero. Of the 90 wells that had total coliform only eight were confirmed as having E-coli. On site review of the wells at the time of sampling indicate that many of these wells also had issues with well casing, well caps or location. If there was a groundwater issue, one would expect higher E-coli results accompanied with high nitrates. Only two wells had nitrate levels exceeding the drinking water standard of 10 ppm. None of the wells that tested positive for E-coli had nitrates levels above 2 ppm.

Only wells that had a high likelihood of having arsenic were tested. Past testing and studies on the deep consolidated aquifer has showed a high probability of arsenic being present in water drawn from this aquifer. This consolidated aquifer is buried under approximately 200 ft. of sand and gravel. The source of arsenic is natural from the deep rock and not surface contamination.

PUBLIC INFORMATION MEETINGS ON WELL TEST RESULTS

North shore - 9:00 am, June 20, 2015, Chapel on the Hill
South Shore - 1:00 pm, June 20, 2015 Linn Town Hall

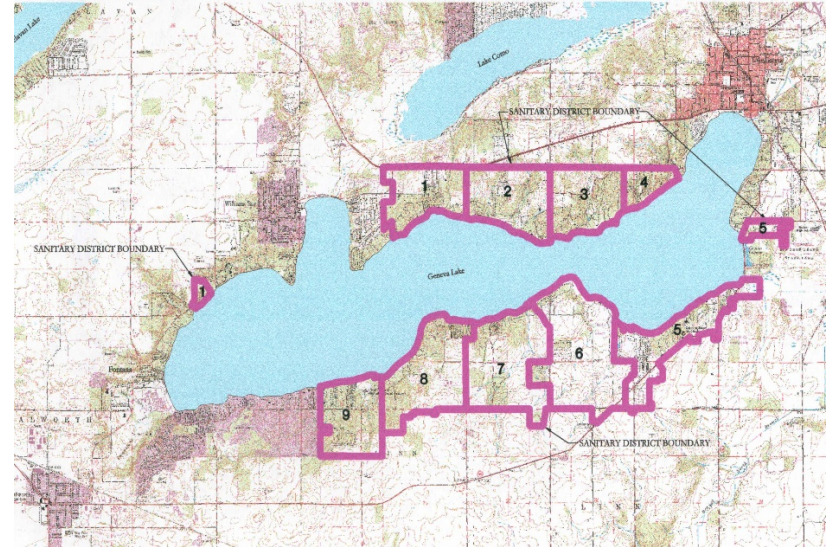
The following map shows the District's nine planning areas that

	Number	%
Wells Sampled for Total Coliform	400	
Wells Positive for Total Coliform	90	23.0
Wells Tested for E-coli	92	
Positive for E-coli	8	8.6
Wells tested for nitrate	404	
Wells that exceeded nitrate drinking water standard. (10 ppm)	2	0.5
Wells Tested for Arsenic	79	
Wells that exceeded arsenic drinking water standard. (10 ppb)	29	36.7

Source: Geneva Lake Environmental Agency
Linn Sanitary District, George Williams College
Walworth County Public Health

were used in the private on-site wastewater treatment systems (POWTS) inspection program. When the results of the well testing program are listed by the subarea with number of POWTS in each subarea that needed repair and the number of wells tested in that area with the test results (table 2), it appears that there is little if any impact of those POWTS on the wells tested. This may be due to the fact that many of the POWTS have been upgraded or replaced or that POWTS

inspected were not near the wells tested. More study of this relationship is needed.



POWTS Inspected		Well Testing 2014			
Subarea	Needed Repair	Wells Tested	Positive Total Coliform.	Positive E-coli	Avg. Nitrate (mg/l)
1	34	53	8	2	0.78
2	138	33	10	1	0.61
3	13	14	3	0	0.54
4	13	7	5	0	0.59
5	160	83	16	2	0.44
6	91	70	16	1	0.76
7	44	59	12	1	0.45
8	83	42	13	1	0.3
9	83	24	6	0	0.36
TOTAL	659	385	89	8	

Source: Linn Sanitary District, Geneva Lake Environmental Agency