

WATER QUALITY WELL TESTING PROGRAM FOR THE CITY OF AFTON MN

Draft 2

4/8/16

1. Introduction (Why)

Issues involving groundwater sources continue to arise, not only on supply but quality as well, it is the opinion of the Afton NRGCC to suggest that the opportunity exists to demonstrate the positive effect of the Subsurface Sewage Treatment System (SSTS) on the quality of the well water within the Old Village. It is also of opinion to test individual well water throughout the entire city to insure the overall health and welfare of Afton residents.

2. Method (How and Where)

The proposed plan is to gather existing well water data on water quality within the old Village as to quality and well depths. Where data does not exist, identify areas of non-complying septic systems or shallow wells near such septic systems that have the potential of affecting quality concerns. This collected data will then be used as a baseline to compare new data collected after the SSTS is up and running.

3. Timeline (When and Who)

Usually well testing takes place in the early spring when contaminated water seeps into well casings and into groundwater sources.

After a determined time of operation of the SSTS system, follow up sampling and testing will be initiated to generate new water quality data. Once the data has been developed and reviewed, a report will be written showing the overall results.

The second phase of the testing program to include all Afton residents will be initiated in the spring following the evaluation of the SSTS effect on water quality of the Village groundwater supplies. The overall testing program will be voluntary with non-regulatory involvement. Residents will have the opportunity to receive feedback as to what procedures are available in the event that wells have been compromised.

4. Costs

Testing and sampling costs will be determined by the number of wells tested and the test parameters that will be used for the water quality monitoring. It is anticipated that most of the sampling will be done by individual home owners with the testing completed through Washington County sources. Normal well water quality consists of Total Coliform Bacteria (Coliform) and Nitrate Nitrogen (Nitrates).

5. Action Items

A. Show and discuss historic data for Afton (twshp). I've obtained data from Woodbury, USGS, and MDH. I understand from your meeting with County Health, that more data may be coming.

B. Do water-quality sampling in the village before the changeover to the new treatment system so that we have data that reflect present conditions. Because cost is always a factor, we should at least if we can, determine total coliform and nitrate. Other parameters to consider are phosphorus, fecal coliform, fecal strep, iron, manganese, lead, and maybe more.

C. Water-quality sampling in the village after treatment system is operational. Periodic monitoring in the village about three times per year for the next 3-5 years; this would be spring, summer, and late fall. A couple of resamplings in the “township” during the next five years would be good; this would be a continuation of Pat Snyder’s project.

A budget, at least a conceptual but realistic one, would be helpful; the scope of the project depends on our financial resources.

6. Stages

A. Stage 1 identify some potential sampling sites based on past data for NO₃, Coliform, well depth, near the levee, etc...From this we can develop some sort of cost estimates for the initial study and go from there.

B. Stage 2 would be a follow up on each site and then expand to the rest of Afton as a C.

C. Stage 3 expand to the rest of Afton

D. Costs

Based on the results from Stage 1 and 2, develop several cost estimates over time rather than one lump sum.