



DATE: January 2, 2020  
TO: Victoria Solomon  
FROM: Kevin Masarik  
SUBJECT: Mid-year Progress Report of the Green County Groundwater Quality Trend Project for the period from July 1, 2019 – December 31, 2019

## Overview

Green County and the Center for Watershed Science and Education have initiated a five year project to gather information on well water quality that will allow for analysis of groundwater quality trends in the county. This project seeks to establish a network of private well owners to perform annual testing for a period of five years.

The goal of this information is to better understand whether groundwater quality is getting better, worse, or staying the same. If it is changing, the information will be used to analyze where and what factors may be contributing to those changes. A minimum of 15 wells per town (240 wells total for Green County) will be selected to become part of a long-term well monitoring network. The well network is intended to be representative of Green County (i.e. accounting for the wide variety of geology, soils, land-use, and well construction found throughout the area).

## Well Selection and Recruitment

A total of 778 wells were selected as part of the initial recruitment (Figure 1). This assumed a response rate of approximately 35%. Wells were selected utilizing a variety of datasets that included the Wisconsin Parcel Data Layer, Well Construction Records, Center for Watershed Science and Education Well Water Data, and others.

For the initial recruitment list, an attempt was made to locate and at least one well owner per section with a Wisconsin Unique Well Number and could be matched to a landowner from the parcel data layer. All things being equal, preference was given to those landowners that participated in previous Extension well testing efforts. Most wells on the list have well depth, well casing, and water table information. Of the landowners that were contacted, 114 submitted a previous sample through Extension programming.

Recruitment materials consisted of a recruitment letter describing why the landowner was being contacted along with additional information about the project. Landowners were asked to respond using a pre-paid postcard. Recruitment materials were mailed in early November. An example of recruitment materials is attached.

## Recruitment Response / Participants

A total of 388 landowners indicated their willingness to participate in the well monitoring program (Figure 2). This is a success rate of 49.8%, higher than our initial estimate of 35%. Anticipating a drop in participation over the 5 year period, we plan to sample all 388 wells the first year in hopes that we still have a minimum of 240 well samples by the end of the final year of the project.



Figure 1. Black triangles represent 770 well parcels that were mailed recruitment materials.

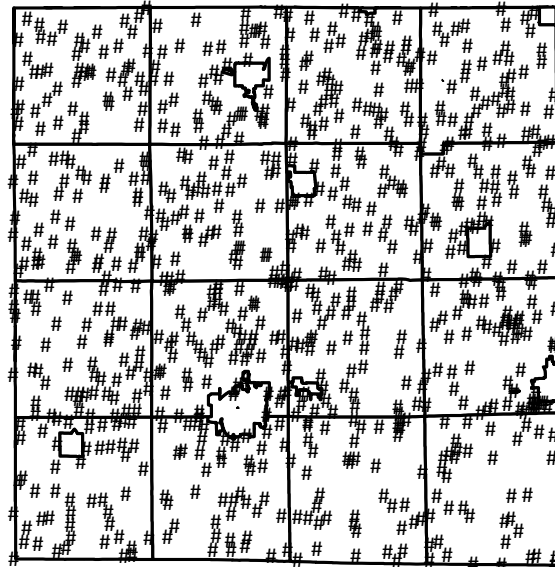
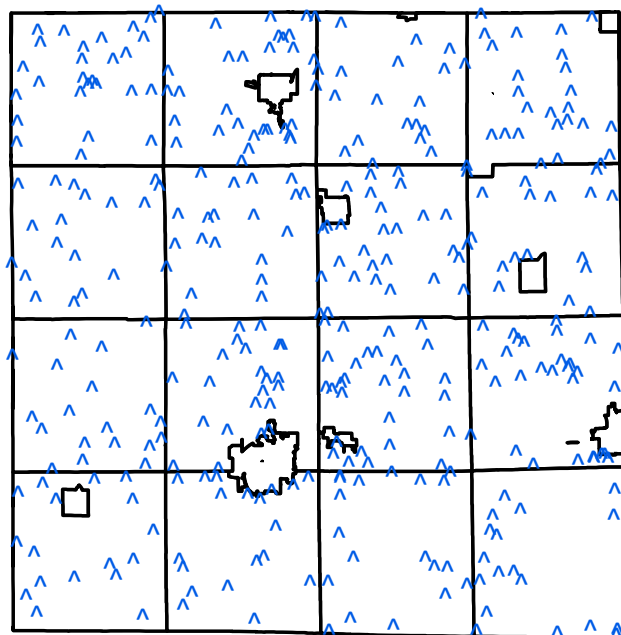


Figure 2. The blue stars indicate the location of well parcels (388 / 49.8%) that have agreed to participate.





## **Well Sampling**

Sampling kits are being assembled and will be mailed to participants in mid-late January. Each kit will include a sample bottle, sampling instructions, and a pre-paid mailer for participants to enclose materials in. Participants will simply need to drop their sample kit off at the nearest post office counter. Samples will be analyzed at the Water and Environmental Analysis Laboratory as they are received.

## **Results and Summary Report**

We anticipate most sampling kits will be returned by mid-February and analysis will be completed in early March. We anticipate that individual results and interpretive information will be mailed to participants by April. Following completion of results, work will begin on county-wide summary of the information for the annual report.

## **For questions regarding this information please contact:**

Kevin Masarik  
Center for Watershed Science and Education  
800 Reserve Street  
Stevens Point, WI 54481  
715-346-4276  
[kmasarik@uwsp.edu](mailto:kmasarik@uwsp.edu)