

Sauk County Groundwater Quality Trend Data Progress Report

July 1, 2019 – February 1, 2020

Overview

Sauk 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 300 wells/landowners will be selected to become part of a long-term well monitoring network. The well network is intended to be representative of Sauk County (i.e. accounting for the wide variety of geology, soils, land-use, and well construction found throughout the area).

Well Selection and Recruitment

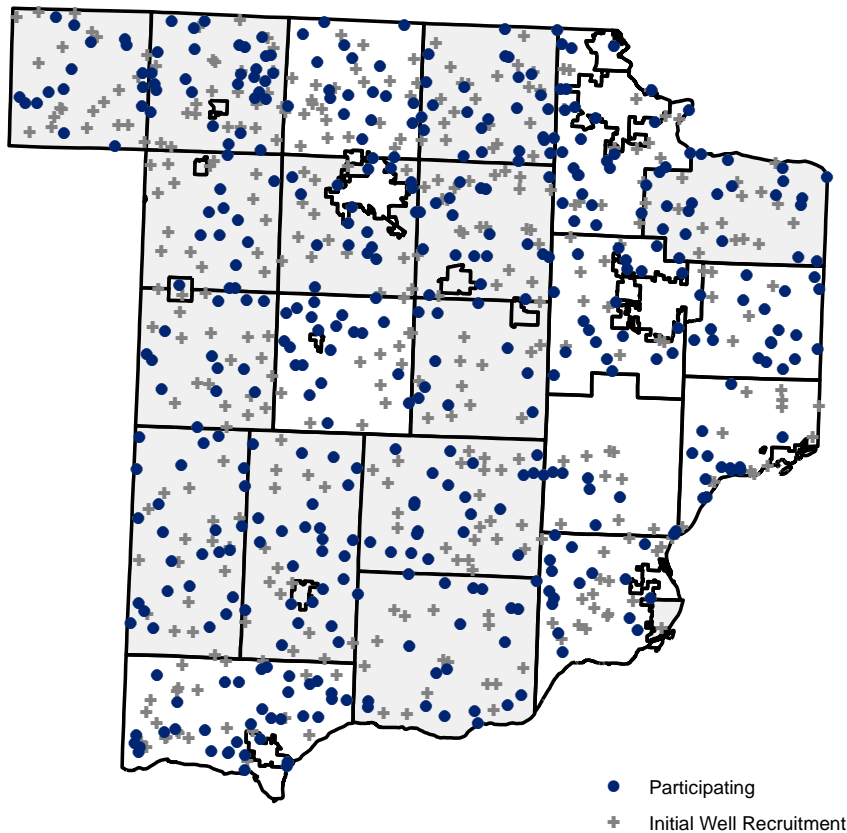
A total of 802 wells were selected as part of the initial recruitment (Figure 1). This assumed a response rate of approximately 35%. Wells were selected utilizing a variety of datasets that included the Wisconsin Parcel Data Layer, Well Construction Records, Center for Watershed Science and Education 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, 430 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 late-December. An example of recruitment materials is attached. **Recruitment Response / Participants**

A total of 438 landowners indicated their willingness to participate in the well monitoring program (Figure 2). This is a success rate of 55%, which is greater than our initial estimate of 35%. Anticipating a decline in participation over the 5 year period, we plan to sample all 438 wells the first year, with the goal of retaining a minimum of 300 well samples that have sampled in all 5 years by the end of the final year of the project.

Figure 1. Blue circles represent location of 438 landowners that are interested in participating, grey crosses are those that were sent recruitment materials and either did not return the postcard or declined to participate.



Well Sampling

Sampling kits are being assembled and will be mailed to participants in mid-February. 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 March and analysis will be completed in early April. We anticipate that individual results and interpretive information will be mailed to participants by May. 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:

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