

Congratulations and Welcome

EEL would like to recognize the following employees for their milestone anniversaries with the company:

5 Yrs: **Nadia Schweisthal, P.E., CPII**

Senior Project Engineer I

Colleen Jaltuch P.E., LEED AP BD&C

Project Manager

20 Yrs: **Josh Boatman**

Senior Project Technician II (Field)

Julie Morrison, P.E.

Senior Project Manager / Principal

25 Yrs: **Brad Sanderson, P.E.**

Chief Operating Officer / President

Welcome to our newest employees in our Municipal, Land Surveying and Environmental Groups:

Jenny Marten

Curt Dettmann, P.E.

Zack Gutierrez, E.I.

Joe Scheller

Chris Buckley, P.E., BCEE

Did You Know?

Jeff Freeman recently received the *ISAWWA Water Professional of the Year Award*. This award is presented to a professional in the water industry (engineer, lab analyst, designer, representative, educator, etc.) that has demonstrated dedication and has motivated others to pursue a career in the water industry, and is selected from nominations by Section Members. Congratulations, Jeff!



Enterprises Trivia Challenge

Q: How many years does it take for Comet NEOWISE to orbit the earth?

Send your answer to eei@eeiweb.com by August 31st to be entered in a drawing for a \$50 gift card!



Engineering Enterprises, Inc. (EEL), founded in 1974, is an award-winning consulting engineering firm providing services throughout northeastern Illinois. Our expertise includes water, wastewater, transportation, stormwater, construction management, land surveying, GIS and municipal consulting.

www.eeiweb.com



Source Water Protection in Illinois

*Outstanding Service
Every Client
Every Day*

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Source Water Protection in Illinois

Chairman's Corner

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Did You Know?

Enterprises Trivia Challenge

Last year the Illinois Pollution Control Board adopted the first major revisions to the rules governing Public Water Supplies since 1982 (35 Ill. Adm. Code, Subtitle F: Public Water Supplies). A new Part 604 is the centerpiece of the revised regulations. It is comprehensive, covering all phases of water production, treatment, and distribution. In addition, a new regulatory requirement is included in the new Part 604, Subpart C: Source Water Protection, which is the topic we'll examine in this article.



Spring /
Summer
2020

Enterprises

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Background

Source Water Protection is not a new concept. It is included in the Safe Drinking Water Act (SDWA) Amendments of 1986 as Wellhead Protection. The rationale for Wellhead Protection was an outgrowth of the water quality regulations of the original SDWA (1974). Water quality sampling mandated by the Act provided irrefutable evidence that drinking water from many water systems using groundwater as their source of supply included harmful contaminants. Further study revealed that the contaminants entered the drinking water system through the groundwater, which carried the contaminants from areas around the well to the wellhead. The EPA rightfully concluded that, even though water sampling could detect these contaminants and thus alert water supplies of the need for treatment, preventing them from reaching groundwater supplies was more cost effective than trying to remove the contaminants through water treatment.

In Illinois, Wellhead Protection was adopted as a policy by the Illinois Environmental Protection Agency (IEPA) in 1986. However, very few Illinois water systems took action to protect their groundwater supplies. Then, in 1996, the SDWA was amended again. The amendments expanded Wellhead Protection to include protection of surface waters used for drinking water. This new program, which covers all water sources, is called the Source Water Protection Program. In Illinois, the IEPA took the lead on this program and began performing source water assessments throughout the State. Fact Sheets describing these assessments are available at: <http://dataservices.epa.illinois.gov/swap/factsheet.aspx>

Rationale for Source Water Protection

Providing safe drinking water to our customers is our most important mission. The most effective way to ensure the safety of the drinking water we produce and deliver is to employ a multiple-barrier protection approach. We routinely use sampling and treatment in this approach, but far less often do we employ prevention. Source Water Protection represents this often-missed piece of our strategy to ensure we are providing safe drinking water.

We know that capital and operating costs for removing contaminants from source water can be significant. So, doesn't it make sense to expend a modest amount of resources to avoid the need for such treatment? Yes, we must treat for naturally occurring contaminants, that is a given. But, avoiding additional treatment to remove manmade contamination through protecting our source water should be a part of our strategy for providing affordable drinking water.

Source Water Protection Basics

The three basic steps for developing a Source Water Protection Program are:

1. Delineate the surface & subsurface areas that contribute to your source water,
2. Inventory the Potential Sources of Contamination (threats) within the delineated area; and,
3. Develop strategies and implement actions to reduce the risk to, and increase the resilience of, your system to those contaminants.

It is important to not get hung up on Step 3.

It may turn out that once you delineate the source water protection area and inventory the potential sources of contamination, you find that the risk of contamination is low. In such a case, the appropriate source water protection measures are modest and general. However, if you find that your risk is higher, it may be prudent to implement specific protection measures to reduce those risks. The bottom line is that unless you know your risk for contamination, you really don't know whether you need to implement protection measures nor what kind of measures are appropriate.

Evaluating the risk of source water contamination begins with understanding the origins and travel paths of your source water. For surface water supplies, this is straightforward, the area of source water contribution can be delineated with a topographic map. For groundwater sources, Source Water Protection Area delineation requires the use of expertise in hydrogeology and groundwater flow. This step is critical because misidentifying the origins of your source water will likely lead to an incorrect assessment of contamination risk, which in turn will likely result in the application of inappropriate protection measures.

Illinois Regulatory Requirements

Illinois has not required water systems to conduct Source Water Protection programs. Recent source water contamination incidents in Illinois may have provided motivation for requiring Source Water Protection in the Subtitle F revisions. Regardless, the new Part 604, Subpart C makes Source Water Protection mandatory in Illinois. The regulation can be found at: <https://pcb.illinois.gov/documents/dsweb/Get/Document-12134/>

The effective date of the new regulation is July 26, 2019. That date is important because the timetable for completing your Source Water Protection Program is tied to it, as shown below.

Population Served	Must Complete Within
> 50,000	3 Years (July 26, 2022)
> 3,000 < 49,999	4 Years (July 26, 2023)
< 3,000	5 Years (July 26, 2024)

To meet the regulatory requirements your Source Water Protection Program must include four elements pertaining to the Community Water Supply (CWS), which are summarized below.

- Vision Statement – the CWS's policy and commitment to protecting source water.
- Source Water Assessment - delineation of all sources of water used by the CWS.
- Source Water Protection Plan Objectives – the CWS's objectives for protecting source water.
- Action Plan - actions needed to achieve the CWS's source water protection objectives.

Conclusion / Assistance

A year has passed since the new regulations for Illinois Community Water Supplies were enacted. The regulations include a requirement for all Community Water Supply Systems to develop a Source Water Protection Program. Water Utility Managers should take this seriously and take action to incorporate Source Water Protection into their strategy for providing safe, reliable, and affordable drinking water to their community. EEI has the experience and knowledge to help you evaluate the best plan for your water system. Please contact **Tim Holdeman** at tholdeman@eeiweb.com to discuss your alternatives without obligation.



Peter G. Wallers, P.E., CFM

Virtual meetings love them or hate them they are here to stay.

GoToMeeting, Google Meeting, Zoom,

Skype, FaceTime, Video Messenger and the list of video conferencing products goes on and on. Before Covid we all had a basic understanding of these products and had done a few video meetings, but by now we are all immersed in the video meeting culture and it is second nature. Schools, businesses and government are carrying on and taking advantage of the technology. Using the mute and unmute button is a way of life, along with the occasional meeting bomber.

For better or for worse we will likely be continuing on with video conferences in the future. Yes, hopefully we will be able to resume normal life, but it may take longer than we expect.

While video is not the same as an in-person meeting, I must say I am enjoying the reduced travel time and I must confess that I have showed up to more than one meeting wearing shorts, in fact as time has gone on it is the norm not the exception.

As we all start back into our offices I suspect we will see a new normal when it comes to meetings and the video element may carry on even after we resolve this crisis. I can certainly see us be more willing to use the video platforms in the winter to avoid having to travel. I also believe we will have more combination video and in person meetings even after Covid. Don't get me wrong, I don't believe that video meetings are a substitute for in person meetings, but we all must adapt.

Recently I was able to attend a in person/ Zoom meeting. It was good to be back in person. What I realized is that catching up with friends and colleagues is what I really missed. Slowly but surely, we will fight our way back to normalcy. Regardless the video conference is here to stay.

I wonder what the next video marvel will be. When will holographic 3-D images replace our video screens?

