



Illinois Rural Water Association

Global Positioning System (GPS) is a navigation method made up of a network of 24 satellites placed into orbit by the United States Department of Defense. These satellites circle the globe twice a day in a very precise orbit, and transmit signal information back to earth. GPS receivers then take this information and use triangulation to calculate the user's exact location.

Geographic Information Systems (GIS) combine mapping software with database management tools to collect, organize, and share different types of information. GIS can store, display, and help your utility interpret virtually all the important attributes of your system.

Across the nation, many state rural water association affiliates of the National Rural Water Association, have already implemented programs using GPS receivers and technology. Mapping technicians work with system personnel to develop precise maps of their infrastructure. The data collected in the field will show the exact placement of water features such as master meters, main valves, hydrants, wells, storage tanks, pumping stations, as well as many other attributes. This is also true for wastewater systems in locating manholes, lift stations, treatment plants, etc. Additional details on these features can be added when gathering the data, such as line size, date of installation, or manufacturer. Incorporating this kind of data allows system personnel to monitor and evaluate their system at a whole new level.

Once locations are acquired and information documented, the state association staff then utilize GIS software programs to definitively log those system locations and create precise hardcopy and digital maps to the system's specifications. Those can be layered with overhead satellite views, topography maps, and several other types to provide a concise and good visual representation of the complete system.

Just as in states across the country, many water and wastewater utilities in Illinois lack good, clear, definitive, and useful maps of their systems. This is true of not only hard-copy maps they can view with clarity and confidence in their accuracy, but also having access to digital maps on

computers, that they can at least make some minimal changes to, to better their access to specific locations and lines. This is why more and more state rural water associations are instituting GPS/GIS mapping programs for the rural utilities they serve.

In that regard, IRWA is presently in the preliminary planning stages to possibly set up a similar affordable and economical, but effective program for all rural systems in Illinois, and especially to service our member utilities. We hope to be able to develop this program, and make it a good addition to the already numerous services that we provide utilities across the state. Initially, if it is implemented, the

program may take a conservative approach, in the number of systems that we can take on during the course of the first year, until we can develop a 'track record' of how the service is working and all the parameters we need to cover and address.

In my opinion, this is potentially a very good plan for IRWA and for all rural utilities throughout the state. We would like to get input from system personnel in regard to your overall feelings about IRWA beginning such a

program; and how, or if it would be, an asset to your utility. The initial implementation and ultimate continuation of such a GPS/GIS mapping program, depends on the need and demand of the rural water and wastewater systems that we serve. So, it's important that we hear back from all of you, with even a simple "yes" it's a good plan, or "no", it's not needed. It only takes a few minutes of your time to send in a comment, but the response we get is invaluable in the direction we take this potential new program.

Comments (via emails only please) about a GPS/GIS Mapping Program possibly being initiated by IRWA, can be emailed to: ilrwa@ilrwa.org

Illinois Rural Water Association appreciates your input, help and time in this matter. We hope to continually improve on the present services we provide, and look for new ways to assist rural water and wastewater systems across the state.

The data collected in the field will show the exact placement of water features.....

IRWA'S MISSION STATEMENT

"Protecting and preserving the water and wastewater resources of Rural Illinois through education, representation and on-site technical assistance"



ABANDONED WELLS **DON'T LET THEM BE YOUR "ROUTE" TO CONTAMINATION**

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By: Mark E. Mitchell Source Water Protection Specialist

Do you have wells that you are keeping for "emergency use"? "Just maybe, some day I might need that well." Actually that well may be the cause of your emergency! That abandoned improperly sealed well acts as a conduit to your aquifer that your active wells are utilizing, thus thwarting any natural protection from the natural attenuation of the soil above your aquifer. Any contaminants introduced at the land surface, can be introduced directly into your aquifer through this "pipe" into your aquifer.

An abandoned well is defined by the Illinois Environmental Protection Agency (IEPA) as a well which the original purpose and use of the well have been discontinued for more than thirty days.

A complete list of regulations can be obtained from The Illinois Water Well Construction Code (77 Illinois Administrative Code, Section 920.120)

Improperly sealed, abandoned wells are considered by the (IEPA) to be "potential routes" of contamination. A potential route is defined by IEPA as "abandoned and improperly plugged wells of all kinds, drainage wells, all injection wells, including closed loop heat pump wells, and any excavation for the discovery, development or production of stone, sand or gravel."

Now you may be asking yourself, "I understand I need to prop-

erly seal my abandoned well, but how do I do so?"

Water wells shall be sealed by a licensed water well driller. Unlicensed individuals may also seal a well, provided that they own or lease the property on which it is located and the well was used for farming or private drinking water uses. They must also provide notice to the local health department, or IDPH in the absence of a local approved entity, in advance of the sealing, which indicates how the well will be sealed and the materials to be used. The health department shall then grant approval when the methods are in compliance with Section 77 Illinois Administrative Code, Section 920.120.

As always those of us at Illinois Rural Water Association are eager to assist you with these types of projects. Give me a call if you need assistance getting started protecting your water supply from your own improperly sealed abandoned wells. Don't let that emergency back-up well be your "route" to contamination.

MEMBERSHIP DUES

It is membership renewal time again. Invoices for your annual membership dues will be in your mailbox soon!

Here are a couple reminders for you when you receive your dues. . .

Remember to complete and return the update form with your payment and make sure we have your e-mail address. It is becoming increasingly important to have this information for an additional form of contact.

Dues may be paid by credit card on-line—just go to our membership link and "Join IRWA" (just as you would for a new membership).

Voting members—if you have an update to your connections, you may make the changes on the invoice and refigure the amount owed and send in the correct amount.

Associate members—the update sheet is what is used to put your information in the upcoming Industry Contact Book—this is free advertising for your company as a benefit of being an Associate member—*take advantage of it.*

Thank you for your continued support of **your** Association!





It's that time of the year when operators start thinking about exercising valves and flushing hydrants. I thought I would offer some tips; turn the operating nut real fast until it stops, then turn it the other way even faster. If you do that while flushing hydrants, I guarantee that you will spend the rest of the summer fixing water leaks.

Although there are several brands of fire hydrants on the market and possibly in your system, they all work essentially the same way. Although they all share a lot in common, the operation specifications for hydrants are quite different. If you have not collected the following information on each hydrant, take along a note book and collect some information while waiting for the water to clear up.

Size and type of operating nut, is it a pentagon, square, 1.5" etc.

Direction of opening, left (counter-clockwise) or right (clockwise)

Size of hydrant valve opening: 4.5", 5.25" or 6.25"

Number and size of hose nozzles, don't forget the type of tread

Size of shoe connection: 4" 6" or 8"

Brand and model number

Flow rate, is it color coded

Year manufactured

The standard color coding of hydrants it is recommended that the top and the nozzle caps be painted according to the following.

Class AA: Light Blue- usually has a flow of 1500 gpm or more.
Class A: Green- usually has a flow of 1000 to 1500 gpm.
Class B: Orange- usually has a flow of 500 to 1000 gpm.
Class C: Red- usually has a flow of less than 500 gpm.

Now, on to exercising valves; typically there are two styles of gate valves used today. They are double disc and resilient seated. Double disc valves have two metal discs that when in the closed position, tighten against seats to shut off the flow. Double disc valves should be operated regularly, at a minimum annually, to remove buildup on the disc. Resilient seated valves have a coating on the single disc which aids in closing completely. When operating a valve you should count the turns. By doing so you can find out what size the valve is, also know if it is closing all the way. Common valve sizes along with the approximate number of turns for double disc valves. Sometimes the hardest part of exercising all the valves is finding them.

Valve Size	Number of turns
4"	14.5
6"	20.5
8"	27
10"	33.5
12"	38.5

If you can't find all the valves marked on your system map, call the office for assistance, a circuit rider would be happy to help you locate your valves. We also have valve exerciser machines, hydrant diffusers, hydrant flow testers and lots of other equipment to help make your job easier. Be safe out there.

QUOTES

Life is a grindstone; whether it grinds you down or polishes you up depends on what you're made of. - Jacob M. Braude

Your living is determined not so much by what life brings to you as by the attitude you bring to life. - John Homer Miller

Good character is more to be praised than outstanding talent. Most talents are, to some extent, a gift. Good character, by contrast, is not given to us. We have to build it piece by piece—by thought, choice, courage and determination. - John Luther

Tomorrow is the most important thing in life. Comes into us at midnight very clean. It's perfect when it arrives and it puts itself into our hands. It hopes we've learned something from yesterday. - John Wayne

You cannot do a kindness too soon, for you never know how soon it will be too late. - Ralph Waldo Emerson

Promises may get friends, but it is performance that must nurse and keep them. - Owen Feltham



Remember to check out our website, www.ilrwa.org, for the latest training sessions to register for!!

Upcoming Training Sessions

Water

**July 8, 2010—Water Works
101—Grand Tower**

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QUALITY ON TAP!



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Mark Your Calendars!

ILLINOIS RURAL WATER ASSOCIATION

7th Annual Golf Outing

**WHEN: FRIDAY, August 27, 2010
10:00 a.m. Shot Gun Start**

**WHERE: Piper Glen Golf Club
Springfield, Illinois**



Sponsorships will be available. Please look online at www.ilrwa.org or in your mailbox next month for more details. We look forward to seeing you there!!