

Protecting our water resources from infiltration has been a major concern for units of government for several years. Prompted by the Michigan Department of Environmental Quality, government officials have been working on wellhead and groundwater protection issues. Crystal Falls Township has been taking an active role in trying to educate the community about the importance of protecting the sources of our water supply. Township Trustee Diane Kut along with Terry Alexa and the well head committee have been working on the issue, and are here to explain the importance of the effort.

### **Why is protecting the groundwater so important?**

- As we all know, groundwater is the water beneath the surface of the earth. The Municipal wells in Iron County are a shallow depth with the suction inlet in the aquifer or water supply in Caspian at 66 feet, Iron River is 45 feet and Crystal Falls Township is 56 feet deep. The shallower wells are more vulnerable due to the shorter time of travel the contaminant has to reach the water table.

-Sandy, porous soils that are found throughout the area have a much greater acceptance to letting contamination through the soil than do soils of clay and rock.

How did you get involved in the effort?

-When Crystal Falls Township entered into the rural development contract to complete our water system improvements, grant monies was available to any community that was willing to accept the responsibility for protecting our well head areas and the surrounding land within the well head protection area.

-Crystal Falls Township applied for the grant monies which required:

- A 50 % match of township dollars

- A commitment to complete a work plan, identify contaminant source by researching, inventory and documenting all contamination sites.

- Develop a contingency Plan

- Incorporate the area into the township master plan and complete a well head ordinance.

- Identify locations where a new well may be constructed when the need arises.

- Develop a public education awareness program

## **What can be done to protect groundwater?**

-Everyone of us need to be informed of a potential source of contamination whether its chemicals, wastes, or other hazardous materials that are in our possession, stored, and may leak, spill, or be applied to the land surface.

-Areas where hazardous materials have been spilled or buried.

-Some potential sources of contaminations are:

-Aboveground and underground storage tanks

-Landfills, lagoons, and septic systems

-Places where hazardous materials are used or stored

-Industrial & manufacturing facilities

-over application of agricultural chemicals

-active or abandoned wells

-active or abandoned landfills

-areas of known groundwater contamination

Some reminders to our residents:

-never pour leftover hazardous products (such as used oil, gasoline and paint thinner) onto the ground or road, or into any stream, lake, river, floor drain, septic system or street sewer.

-Recycle used motor oil, transmission fluid, and antifreeze

-Pay attention to floor drains in automotive work areas.

-Report leaks and spill to each appropriate community.

-In Crystal Falls, contact the Department of Public works at 906-875-3290 or contact the Crystal Falls web site at [crystalfallstownship.org](http://crystalfallstownship.org).

What types of education will Crystal Falls Township undertake to make the community aware of the importance of groundwater protection?

Crystal Falls Township along with Caspian and, Iron River has developed well head area signs. Caspian, Iron River are blue and Crystal Falls Township are beige and will be installed in the spring. . Be aware as you are entering these areas of the potential risk to our groundwater.

-Crystal Falls Township has created a well head protection brochure that can be found in all 14 business locations throughout Iron County.

- Jay Barry from Telephone time will be hosting trivia questions from March 8 through the 14th allowing residents an opportunity to guess at the questions that have been compiled from each of the three communities.

-On March 11<sup>th</sup> at 6:00P.M. The Crystal Falls Township will host a well head presentation meeting at the township located at the corner of US2 & US Hwy 141 with Chuck Thomas from DEQ to give an update on the importance of our water. Aecom consultants, previously known as STS will review our Wellhead Protection Plan. The presentation should last about one hour with a question and answer period for the general public.

-Articles on our ground water meeting have appeared in the Reporter.

Lortie Plumbing and Heating was awarded the bid for installation of all residential and commercial water meters. The meters were mandatory with the funding we received from Rural Development. The meters that we purchased are SENSUS meters and one of the reasons we went with SENSUS is because our commercial accounts that were already metered starting back in the 60's mostly consisted of SENSUS meters and most of these meters were compatible to the new read system. All 630 meters are radio read. A receiver is placed in the Public works vehicle along with a laptop computer that runs the software for the meter program. The receiver picks up a signal transmitted by the white box or MXU that is located outside of the home or business.

Signal range depends on the location but we have noticed that we collect readings from about a 2 mile radius. After I drive the 100 and some mile route, I download the information from the laptop to a USB flash drive. The Utility Billing Clerk then enters the collected information from the flash drive into her computer and everything is printed out for usage and billing. The whole reading process from hook-up of equipment in the vehicle to downloading the flash drive takes 4.5 hours. **Another interesting aspect that occurred with the Water Project** has to do with radio also. Both water systems, the Lind and Townline were adapted to be controlled by radios several years ago. During the project we upgraded the system to do more than it used to. Each site (tanks, wells, valves etc.) has a control panel with a 5 watt radio which is licensed through the FCC. The water tanks send a signal to the well houses. When the water level gets to a pacific low water set point, the well turns on and fills the tank to the off set point. The master control panel for the water system is located the Public Works office where everything is monitored on a computer. We monitor well pumps, tank water levels, aquifer levels, water usage and water temperature for the Lind and Townline systems. We also monitor the City of Crystal Falls water tank level, the Twp. /City master valve and connection on Zavada Drive and a sewer lift station on US-2 which handles the sewage from the Iron County Medical Care Facility, Victorian Heights, Santi's trailer court and US-2 Rental. All this data is stored on the Public Works computer. We can look up data in an archive file to check on any changes that may be happening to the system even back as far as a year and a half ago when the new radio system was developed. These files have been downloaded on a CD and stored for future use. Crystal Falls Townships two water systems consist of 60 miles of water main serving a total of 1524 customers, (677 Twp. & 847 City).

Our larger water system, the Lind has two well fields. One of the well fields houses two pumps. Pump no. 4 produces 600 gpm and pump no. 5 produces 400 gpm. The second well house is pump no. 2 and it produces 200 gpm. The Lind System produces 300,000 gallons on an average per day. The water is pumped to the 500,000 gallon ground storage tank located on US-2 and Fire Tower road. This tank then gravity feeds to the new Bristol Location, Lind District area, Hwy 141 and Memory Lane area. There is also a booster station that draws water from the 500,000 gallon ground storage tank at a rate of 900 gpm which is located behind the 150,000 gallon elevated storage tank at the Medical Care facility which presently has a water temperature of 42 degrees Fahrenheit. The elevated tank serves the US-2 area, Tobin-Odgers location, City of Crystal Falls and the Fortune Lake area.

Our system on the Northern end of the Township is the Townline System. We have two wells with the main pump number 3 producing 450 gpm and a daily usage of 60,000 gallons. The system has a 75,000 gallon elevated storage tank located on East Townline Road. During the water project, 13 miles of water main was replaced. The largest water main in the Lind system is 16 inch. There were 112 fire hydrants installed with our total presently being 149 hydrants. Crystal Falls Township has provided water to its customers for 70 years.