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# Minnesota Well Management News



A Minnesota Department of Health Publication



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## 2012 License Renewals

The 2012 license renewal applications for explorer companies and registration renewal applications for monitoring well contractors were mailed in early November 2011. These licenses/registrations expired on December 31, 2011. The renewal applications for well contractors, individual contractors, elevator boring contractors, and limited well and boring contractors were mailed in early December 2011. These licenses (and associated representative/certifications) expire on January 31, 2012. A \$75 late fee must be paid for any renewals postmarked after the expiration date of the license/registration.

### Contractor License and Registration Renewal

Persons completing the renewal packet should read the instructions carefully to make sure the contractor license or registration renewal application and the representative certification are completed properly. Applicants must:

- Note the contractor license or registration type.
- Register any drilling machines and/or hoists in use.
- Enclose an original corporate surety bond or bond continuation certificate, unless a continuous bond is already on file.
- List the certified representative(s) and their certification number(s).
- Provide required information regarding worker's compensation insurance.
- Sign the renewal application and provide email address, business phone number, and fax number.
- Enclose the appropriate renewal fee (\$75 for monitoring well contractors, \$275 for well contractors; and \$82.50 for all other contractors).
- Provide Well and Boring Records, Well and Boring Sealing Records, and water-quality results for any outstanding notifications and permits.

### INSIDE:

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Fluoride in Minnesota Groundwater  
Well Drilling – A Dangerous Industry  
Vacancies on the Advisory Council

Well Sealing Funds from Legacy Amendment  
Continuing Education Calendar  
New Contractor Certifications

Note that the required amount for the corporate surety bond is \$25,000 for well contractors; \$10,000 for elevator boring contractors, monitoring well contractors, and limited well/boring contractors; and \$2,000 for pump installer contractors and well screen and pitless adapter contractors. Explorer companies do not provide a bond to the Minnesota Department of Health (MDH); however, a bond may be required by the Minnesota Department of Natural Resources.

## **Representative Certification Renewal**

For renewal of the representative's certification, the representative must:

- Note the certification types he/she holds.
- Identify the contractor that he/she represents and the contractor's license number.
- List the continuing education credits taken since the last renewal. List the course(s) attended, date(s) attended, course location, and credit hours awarded. All representatives must obtain two hours of MDH-provided or MDH-sponsored continuing education. Certified representatives of full well contractors, individual well contractors, and monitoring well contractors must obtain four additional hours of MDH-approved continuing education.
- Sign the renewal application. Provide email address, business telephone number and fax number.

Starting this year, the representative's certification renewal fee is \$75.

## **Fluoride in Minnesota Groundwater: Benefits and Concerns**

Dental caries (decay) is the most common chronic disease affecting children in the United States. It is five times more common than asthma and seven times more common than hay fever. If untreated, the dental caries process can progress to formation of cavities (and associated pain), cellulitis, tooth loss, and oral infections. New research links oral disease and infections to heart and lung disease, stroke, premature births, and diabetes.<sup>1</sup>

**Investigation History:** Early in the 20th century, dental decay was common in the United States. Treatment often resulted in tooth extraction. Tooth loss was inevitable for most people. Failure to meet the minimum standard of having six opposing teeth was the leading cause of rejection from military service in both world wars.<sup>2</sup>

In the 1920-1930's, dentists and researchers identified a link between mottling or discoloration of tooth enamel (also called fluorosis) with high levels of naturally-occurring fluoride in some drinking waters in certain areas around the country. However, significant reduction of dental caries was also noted for individuals consuming water with more moderate levels of naturally occurring fluoride. Researchers went on to identify optimum levels of fluoride in drinking water that provided protection from dental decay while avoiding the occurrence of fluorosis or more serious health complications.

In 1945, a study was initiated to determine the effect of fluoride in drinking water on the level of dental caries in the population served. Experts had observed lower dental caries and minimal fluorosis in communities where the natural fluoride level in the drinking water was approximately 1 milligram per liter (mg/L). Fluoride was intentionally added to drinking water in four cities in Canada and the United States in the 1.0-1.2 mg/L range. Four other cities with little or no fluoride in their drinking water were also included in the study and served as controls. Researchers compared the prevalence of dental caries in the cities with fluoride added to the water, with the level of dental caries in the cities without fluoride

and found that after 15 years, dental caries were 50-75 percent lower in the cities with the fluoridated water.<sup>2</sup>

**Public Health Response:** In 1962, in order to achieve maximum protection from dental decay while avoiding dental fluorosis, the U.S. Public Health Service and the American Dental Association recommended that the range of fluoride in drinking water should be 0.7-1.2 milligrams/liter (mg/L). With the 1986 revisions of the U.S. Safe Drinking Water Act, the U.S. Environmental Protection Agency (EPA) has set the Maximum Contaminant Level (MCL) of fluoride at 4 mg/L to prevent serious health complications from high levels of fluoride. Excessive levels of fluoride have been linked to stiffness of joints, fluorosis of bones (causing damage to bone structure), and calcification of ligaments. The EPA has also established a secondary maximum contaminant level of 2 mg/L fluoride to avoid dental fluorosis. The secondary standard is a recommended standard, but is not an enforceable regulatory standard.

In 1967, the Minnesota Legislature passed Minnesota Statutes, section 144.145 requiring fluoridation of community public water supplies, effective January 1, 1970. Approximately 80 percent of Minnesotans are served by community public water-supplies. Over 98 percent of those served by community public water supplies receive water with fluoride between 0.9 and 4.0 mg/L.

In 1999, the Centers for Disease Control and Prevention (CDC) recognized “Water Fluoridation” as one of the **Ten Great Public Health Interventions of the 20th Century**.<sup>3</sup>

While the only exposure to fluoride in the early 1960s was through drinking water and food, people are now exposed to additional fluoride through fluoridated dental products (toothpaste and mouthwash) and the application of gels, varnishes and sealants by dental professionals. The CDC and the EPA are currently reviewing recent information and reassessing fluoride exposures, with the likelihood of reducing the recommended maximum fluoride level in community water-supply systems to 0.7 mg/L.<sup>3</sup>

**Fluoride Occurrence in Minnesota:** Fluoride levels in Minnesota groundwater are generally low. The Minnesota Pollution Control Agency reports ambient levels in the range of 0.27-0.43 mg/L for all major aquifers in Minnesota. Scattered pockets of elevated fluoride in the range of 2.0-3.5 mg/L are found in west central Minnesota and appear to be associated with Cretaceous sedimentary deposits.<sup>4</sup> There are also reported instances of fluoride levels at or above 4 mg/L along the North Shore of Lake Superior, with some cases as high as 10 mg/L in the Duluth area.

**Minnesota Department of Health (MDH) Recommendations:** Most groundwater in Minnesota has low levels of fluoride, below the levels which cause mottling of teeth, and also below the beneficial level for prevention of cavities. The MDH recommends that all well owners have their well water tested at least once for fluoride, especially if children are using the water. This data will help dentists determine whether or not fluoride supplements might be advisable, especially for children and adolescents. Testing will also identify instances where the fluoride levels might be too high, which may cause discoloration of tooth enamel or other serious health concerns.

**Information Sources:**

1. Minnesota Department of Health, 2009, *Child and Teen Checkups Fact Sheet for Primary Care Providers – Dental Checkup*.
2. Centers for Disease Control and Prevention (CDC), 1999, *Morbidity and Mortality Weekly Report*, 48 (41) October 22, 1999.
3. Centers for Disease Control and Prevention, 2011, *Fact Sheet – Community Water Fluoridation: Questions and Answers*.
4. Minnesota Pollution Control Agency, 1999, *Chloride and Fluoride in Minnesota’s Ground Water*.

## Well Drilling – A Dangerous Industry

Whether you are a well drilling contractor, a well drilling contractor's employee, an inspector, a well owner, or just a casual observer, it is very important to be aware that the well drilling industry is very dangerous. Several recent accidents remind us of just how dangerous it is . . .

### **Drilling Accident Claims Life of Massachusetts Well Driller**

On October 10, 2011, Mr. Marty Petersen, brother of Minnesota licensed well contractor Mr. Norville Petersen from Virginia, Minnesota, was killed in Massachusetts in a well drilling accident. Marty worked for Stavens Brothers well drilling company and was drilling a well when the ground collapsed around the well. Marty fell in the collapsing hole to a depth of approximately 15 feet. Marty's coworker tried to get him out of the hole, but was unsuccessful. Rescue workers were called in and tried to stabilize Marty and get him out, but the collapse continued and rescue workers had to back off and wait for materials to stabilize the area near the collapse. The area continued to collapse until Marty was buried by soil and water.

### **Well Repair Accident Claims Life of Blooming Prairie, Minnesota Well Contractor**

On September 27, 2011, while in the process of replacing a submersible pump in a farm well in rural Blooming Prairie Township, Mr. Garry A. Wigham, a six year employee of Blooming Prairie Well Company, was accidentally killed. Mr. Wigham is survived by his wife, five children, and 15 grandchildren.

### **Well Contractor Survives Rig Crash**

On October 15, 2011, while driving his company's Ingersoll-Rand TH55 rotary drilling rig eastbound on Interstate Highway 94 east of St. Paul, Minnesota, Mr. Dan McCullough, with McCullough and Sons, Inc. well drilling company, had a front tire blow out, and lost control of the rig and crashed. The rig veered off the highway and tipped on its side. The front end of the mast dug into the ditch and the rig spun around 180 degrees so that it was facing west, on the south side of the highway. The drilling rods spilled out of the rod box onto the two east bound lanes of the highway. The cab, the windows in it, and the windshield were smashed. Dan was able to free himself and escape from the rig with only minor bumps and bruises. Fortunately, no other people were hurt and no other vehicles were involved in the accident. Inspection of the rig revealed that the front tire blow out was caused by a ½ inch diameter bolt that penetrated the tire tread.



**McCullough and Sons, Inc. Ingersoll-Rand TH-55 rotary drilling rig after crashing due to blown tire.**

## **76 Year Old Woman Falls Down Well**

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In October 2011, in the tiny town of Collins, New York, a 76-year-old woman accidentally stepped on the rotten wood cover on her well and fell 20 feet down the well. Speaking from her Buffalo, New York, hospital room, Ms. May Elliott said, "I went down pretty hard. I was shocked. I went straight down. I went underneath the water, and when I came back up, I was screaming. It's one of those crazy things you never expect to happen." Ms. Elliot reported that the well was constructed in 1900, the same year the house was built, and was functional, but not in use.

Fortunately for Ms. Elliot, her 70 year old next-door neighbor Mr. Ray Colpoys was home and ran over to help when he heard the commotion. Mr. Colpoys tried to pull Ms. Elliott out, but couldn't. He held onto her for as long as he could, and then secured her on a standpipe in the well while he ran across the street to get his neighbor, a volunteer fireman, for help. They called in the fire department and were able to hoist Ms. Elliot from the well. She was on the brink of hypothermia and was wrapped in blankets and taken to the hospital with a fractured femur. Ms. Elliot said that she plans on replacing the well's wood cover with a new metal one.

## **19-Year Old Dies in Trench Collapse**

On November 3, 2011, in Gilman, Wisconsin, 19 year old Mr. James Tilson, from River Falls, Wisconsin, entered a trench to help Gordy's Pump Service install a water service pipe when the trench collapsed and killed him. As reported in the Pierce County Herald, Mr. Tilson was not employed by Gordy's Pump Service; he was one of two people helping out.

These stories demonstrate just how dangerous the well drilling industry can be, and serve as a sobering reminder to all of us to always make safety our number one priority!

## **Vacancies on the Advisory Council on Wells and Borings**

The seats of three well contractor members, one elevator boring contractor member, one monitoring well contractor member, and one public member on the Minnesota Department of Health's Advisory Council on Wells and Borings will become vacant, effective January 2012. Information on the council, the application process, and membership can be found at:

[www.health.state.mn.us/divs/eh/wells/lwcinfo/advisory.html](http://www.health.state.mn.us/divs/eh/wells/lwcinfo/advisory.html).

The advisory council meets quarterly in St. Paul. Members are reimbursed for meals, travel, and lodging and also receive a \$55 per diem for each meeting attended. Council members who are certified representatives earn one hour of MDH-provided continuing education for each meeting attended. The council advises the Commissioner and the department on issues regarding the regulation of wells and borings. The council assists in the examination of well contractor license applicants; makes recommendations on Well Management Section policies, rule-making, and statutory initiatives; and provides technical review and information. The council also provides a forum for contractors to raise industry concerns.

If you are interested in applying for upcoming vacancies or if you have any questions about the council, you may contact Mr. Michael Convery at 651-201-4586. Appointments of new council members are anticipated to be made in February 2012.

## Minnesota Department of Health Receives Funds for Well Sealing from the Legacy Amendment

The Clean Water Land and Legacy Amendment was passed by voters in 2008, which increased the sales and use tax by three-eighths of 1 percent for 25 years and dedicated the proceeds to four funds: the Clean Water Fund, the Outdoor Heritage Fund, the Parks and Trails Fund, and the Arts and Cultural Heritage Fund. These funds must supplement traditional sources of funding and may not be used as a substitute to fund activities or programs. The Clean Water Fund was established with the purpose of protecting, enhancing, and restoring water quality in Minnesota lakes, rivers, and streams in addition to protecting groundwater and drinking water sources from degradation.

The Minnesota Department of Health (MDH) received \$500,000 from the Clean Water Fund for fiscal years 2012-2013 (\$250,000 for each year). The first \$250,000 was forwarded to the Board of Water and Soil Resources (BWSR), which has included these funds as part of their application process for Clean Water Fund Competitive Grants. It will be dedicated to local cost-share well sealing programs. The remaining \$250,000 will be administered by the MDH, and used to seal public water-supply wells and other wells near public water-supply wells in 2012-2013.

Governmental units eligible for the Well Sealing Grants through BWSR are soil and water conservation districts, watershed districts, watershed management organizations, counties, cities, and joint powers boards of these organizations. The applications for Well Sealing Grants require a 50 percent match from nonstate sources. BWSR received 11 applications for the Clean Water Fund monies. Two applications were considered ineligible because they did not meet the match requirements.

Applications were reviewed by the BWSR Senior Management Team, the Grants Program and Policy Committee, and the full BWSR Board. The approved list of grantees is included in the table below. Please contact the grant administrator for information about well sealing grants in these jurisdictions.

<b>Well Sealing Grant Recipient</b>	<b>Grant Administrator</b>	<b>Telephone Number</b>
Big Stone Soil and Water Conservation District	Blayne Johnson or Tammy Neubauer	320-839-6149, ext. 3
Crow Wing County Land Services Department	Mitch Brinks	218-824-1128
Hennepin County Department of Environmental Services	Greg Senst	612-348-4659
Mahnomen/Norman Soil and Water Conservation Districts	Curtis Borchert	218-584-5169
Martin Soil and Water Conservation District	Kathy Smith	507-235-6670
Mille Lacs Soil and Water Conservation District	Lynn Carter	320-983-2160, ext. 3
Rice County Environmental Services	Jenny Mocol Johnson	507-332-6113
Washington County Public Health and Environment	Pete Ganzel	651-430-6676
Yellow Medicine County Zoning Office	Jolene Johnson	320-669-7524

## Continuing Education Calendar

The Internet link to the Minnesota Department of Health (MDH), Well Management Section's, Continuing Education Calendar is: [www.health.state.mn.us/divs/eh/wells/lwcinfo/training.html](http://www.health.state.mn.us/divs/eh/wells/lwcinfo/training.html).

This calendar lists the upcoming continuing education courses that have been approved for renewal of certification for representatives of Minnesota licensed and registered well and boring contractors. The calendar also lists the number of credits available for each course. The calendar is updated monthly and, if you subscribe, you will be notified by email when this page changes (new classes added, changes to existing classes).

For additional information about any of these training opportunities, call the contact person listed for the program of interest. For general information about continuing education, more current CEU listings, or to request approval for other continuing education activities not listed, contact Mike Convery, Minnesota Department of Health, Well Management Section Operations Unit Supervisor, at 651-201-4586, or [michael.convery@state.mn.us](mailto:michael.convery@state.mn.us).



### **MINNESOTA WELL MANAGEMENT NEWS**

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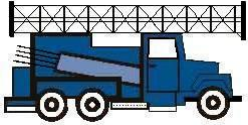
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## Minnesota Well Management News

### MINNESOTA DEPARTMENT OF HEALTH

#### WELL MANAGEMENT SECTION

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### New Contractor Certifications

#### **Monitoring Well Contractor**

Jacob J. Holthaus  
West Central Environmental Consultants  
Morris, Minnesota

Elliot G. Richards  
West Central Environmental Consultants  
Morris, Minnesota

Dusty C. Schroeder  
Midwestern Drilling, LLC  
Holloway, Minnesota

Dennis Zehnder  
STS Enterprises, LLC  
Young America, Minnesota

#### **Well Sealing Contractor**

Dusty C. Schroeder  
Midwestern Drilling, LLC  
Holloway, Minnesota

#### **Explorer**

Blake A. Borgeson  
Teck American, Inc.  
Babbitt, Minnesota