



## Signature of Primary Contractor

According to Missouri Revised Statutes, Section 256.607.3 of the Water Well Driller's Act, any person acting as a primary contractor in the construction, alteration, major repair or abandonment of any well shall be required to obtain a permit from the Missouri Department of Natural Resources and comply with all rules and regulations.

Missouri Code of State Regulations 10 CSR 23-1.050 states, "Persons who contract the drilling of wells, installation of pumps, or both but do not drill the wells or set the pumps must be a permitted well installation, heat pump installation, monitoring well installation, monitoring test-hole installation, or pump installation contractor, or any combination of these."

Permits for those who do not perform the work are known as "Restricted Permits." Per 10 CSR 23-1.090, "Restricted permits are issued to persons who only contract the work specific to the type of permit requested or to primary contractor on site drilling supervisors." This means, if you direct the work of a driller or pump installer, you must have a restricted permit. Examples of how the department applies this law and the regulations include the following:

- If you contract with a client to drill a well and install a pump and drill the well yourself but plan to sub-contract the pump installation, you must have a restricted pump installer's permit (at a minimum) since you are the primary contractor.
- If you are a consultant and your client needs a monitoring well(s) installed and you contract that work to another company, you must have restricted permit (at a minimum).
- If you install a ground source heat pump system(s) and hire a driller to drill the holes for the system, you must have restricted permit (at a minimum).

The signature of the primary contractor is required on all certification and registration records. This also is required by the driller, pump installer, and apprentice (when applicable). The contractor signature(s) on the record certify the activity performed was completed in accordance with Well Construction Code as defined in the Missouri Code of State Regulations, 10 CRS 23.

All records are required to be filled out completely, including signatures of all permittees involved in the work.

## A Special Thanks!

Often the only correspondence many well drillers and pump installers have received from us is when something is "wrong," or we need more information. So we would like to take this opportunity to tell you about some of the many things that you do "right" on a regular basis, but may not hear about from us. Several contractors are diligent when filling out the certification records. Some pump installers provide us with the reference number of the matching water well certification record for the

## Well Installation Board News

The Well Installation Board met in regular session on February 20, 2017, at the Ramada Hotel in Springfield, Mo. The meeting was held in conjunction with the Missouri Water Well Association's annual conference. Department staff presented updates regarding pending legislation, rule development and section activities. Rulemaking activities are suspended per the Governor's Executive Order 17-03. The department will review its regulations as stipulated in the Executive Order. Staff also presented down-hole videos of well construction issues and grouting techniques. The May 19, 2017, board meeting has been canceled. The next board meeting is scheduled to be held August 18, 2017, at 10 a.m. at the Missouri Geological Survey, 111 Fairgrounds Road, Rolla.

## Permit Requirement to Disconnect Wells

As new customers are connected to public water supplies and their old, private wells are disconnected from the distribution system, regulation 10 CSR 23-3.050 (F) and (G) state that a permitted well or pump installation contractor must perform all electrical wiring that impacts the pump or pumping systems related to the private well.

This permitting requirement also pertains to the installation or removal of all plumbing or water supply distribution from the private well to the point of entry. The permitted contractor must perform all plumbing that impacts the distribution of water from the well, through the pressure system to the point of entry inside or outside of the structure to the building being served. This includes pressure tanks, water treatment equipment and any other materials used in the initial installation of the private well's water system, inside and outside the structure. As some contractors will recall, this rule was tested in a court case in 1995 and was upheld.

The department has met with numerous public water suppliers and engineering firms in regard to water line extensions. The section is working to ensure all permit requirements are being met for anyone extending a water line and disconnecting a private well.

As always, a homeowner may disconnect their own private well at the time they hook up to a public utility. However, if they contract to have the work done, that person must be a permitted well or pump installation contractor.

pumps they install. Other contractors provide well numbers when a land owner drills more than one well, or provide other specific location and identification information, which enables us to match the well with the pump record more quickly.

Any time you provide us with "identifying" information, it makes our job of matching the well and pump certification records much easier. For this, we give our sincerest "thanks!"



## Breathing Wells

On Sunday, November 1, 1992, near Rocheport, the Romesbury family was in the final stage of moving from the home in which they had lived for 10 years. William “Willy” Romesbury, 16, was sent to the well house to go down into the well pit to turn off the pump. When Willy failed to emerge, his father, Gene Romesbury, entered the well house and pit to see what was keeping Willy. Gene too, never came out. Emergency personnel were summoned to the scene and extricated Gene and William from the well pit. They were still alive, but both died shortly after being rushed to an area hospital. The cause of death for both Willy and Gene was listed as “asphyxiation due to increased carbon dioxide in a confined space.”

This tragedy was caused by a phenomenon called a “breathing well.” Also known as “suckers and blowers,” these wells respond to changes in atmospheric pressure. As the atmospheric pressure rises, air flows into the well. When the atmospheric pressure falls, air flows out of the well.

This airflow can be nearly undetectable or it can be quite noticeable. The day of the accident, the investigating officer recorded hearing a sound like that of a gas leak coming from the well. Three weeks later, Department of Natural Resources personnel were conducting follow-up investigations and perceived a “consistent and continuing audible noise coming from around the seal of the wellhead and through the electrical wire access of the well cap.” Both the noise and smoke tests indicated the gases were being vented at a relatively high rate of speed.

## Save, Save, Save!

Most people like to save money when and where possible! Expenditures that easily can be avoided are fees assessed on late records. The solution to the late fee problem is quite simple.

The Wellhead Protection Section’s goal is to encourage timely compliance with the reporting requirements provided by law, thereby eliminating assessment of late fees. Ideally, everyone should turn in their paperwork on time and avoid late fees altogether. Submitting records in a timely manner reduces staff time spent tracking records that have not been received. We realize filling out paperwork may not be fun. However, it is a necessary part of the process in properly protecting and utilizing our groundwater resources. The record one driller creates has information that is often used by others who may drill in that same area.

The current late fee schedule is \$10 per month per record, beyond the 60-day grace period. The maximum late fee is \$240 per record. Late records can very quickly get expensive. It takes just a few minutes to complete a certification record. Helpful hints are listed below to get information needed to complete a record so it can be submitted on time.

1. Complete the certification record before leaving the work site.
2. Arrange with the owner to provide the location and address information when you arrive at the site. Doing so should save time and trouble in searching for this information later.

For reasons that are not well understood, sometimes the air that flows out of a breathing well can be extremely deficient in oxygen. An oxygen level of at least 19.5 percent is necessary to sustain human life. The oxygen level recorded on the day of the accident was 5 percent. Tests conducted by department personnel three weeks later showed oxygen levels of 8.5 percent.

Breathing wells are still somewhat of a mystery. The Romesburys had entered their well pit without incident many times during the 10 years they lived there. Yet suddenly, for some unknown reason, the well pit became deadly.

In 1999, in Alberta, Canada, two teenage girls entered their well pit, which was also used as a root cellar. Though they had entered their well pit many times before, this time it proved fatal. The oxygen level was very low, about 8 percent. The oxygen was displaced by a high level of nitrogen, causing asphyxiation.

As a result of the Canadian teenagers’ deaths, the Canadian Ground Water Association is conducting research into this previously little studied phenomenon. The Alberta government passed legislation preventing the placement of wells in pits and the use of well pits as root cellars.

Drillers, pump installers and owners need to be aware of the potential for danger in well pits and always use caution when entering a well pit. A well pit can become an unpredictable, effective killer.

3. If a contractor drills a well and is not certain they will set the pump, they should go ahead and submit a certification form for the drilling activity BEFORE the 60-day period ends. This will ensure no late fee will be assessed. If you hold a record, you could face high late fees in the event you do not get the job to install the pump. A pump record can be filled out at a later date on a separate form.
4. Water well and pump information can be submitted either on the same record, or submitted on separate records. If a well and pump contractor are working together, but independently on the same job site, it is wise for each contractor to submit a record for the work completed. This will help avoid confusion about whose responsibility it is to submit a record, and it will ensure late fees are not assessed to either or both contractors.
5. Most importantly, records may be submitted online 24/7. Go to our website at [dnr.mo.gov/mowells](http://dnr.mo.gov/mowells). It’s quick and efficient, and you receive confirmation that the record was received. The section provides one-on-one, in person assistance to help anyone learn how to use our online system.

[dnr.mo.gov/mowells](http://dnr.mo.gov/mowells)

# The Future of the Connection Newsletter

Beginning in 2018, *The Connection Newsletter* will only be available online. Also, this issue is the first of three that will be available in 2017, as we are moving to publishing the newsletter three times a year.

The newsletter is available online at [dnr.mo.gov/geology/geosrv/wellhd/wellpub.htm](http://dnr.mo.gov/geology/geosrv/wellhd/wellpub.htm). You may view, download and print past issues of the newsletter from 2009 to present.

Everyone is encouraged to sign up to receive notifications from GovDelivery, our online notification service that notifies subscribers via email when the newsletter is available online. GovDelivery also provides notifications about Well Installation Board meetings, when

items are added to the section's website, and about other topics related to water wells and drilling.

To get started, visit the Wellhead Protection section's webpage at [dnr.mo.gov/geology/geosrv/wellhd/wellsanddrilling.htm](http://dnr.mo.gov/geology/geosrv/wellhd/wellsanddrilling.htm) and click on the multi-colored "Get Updates on this Issue" envelope, enter your email address or sign in using your preferred social media account, follow the prompts by providing email address and establish a password. Questions regarding this feature should be directed to 573-368-2165.



## Welcome Apprentice Contractors

The following individuals are now part of the Missouri Department of Natural Resources' permitted apprentice contractor community:

- Brotcke Well & Pump – Adam Morton
- C & S Well Service – Cody Callaway
- Environmental Works – Nicholas Collins
- Garner Pump Service – Benjamin Brown
- Grand River Drilling – Jesse Wurtz
- Irrigation Central – Justin Brandon
- M & T Drilling – Chris McClanahand
- Maggards Pump – Jarrod Kleeman
- Richard Burton Drilling – Andrew Burton
- Ridge Runner – Patrick Mathes, Tyler Strain
- Sunbelt Environmental Services – Travis Fultz

## Welcome Contractors

The following individuals are now part of the Missouri Department of Natural Resources' permitted contractor community:

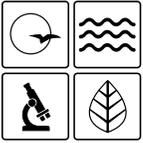
- Aerostar SES LLC – Timothy Cullen
- Apex Envirotech Inc – Theresa Goyette
- Current Heating & Air – Daniel Thomas
- Environmental Operations – Austin Luecke
- Foth Infrastructure & Env – Robert Meller, Daniel Davis
- GHD – Andrew Krein
- GSE – Blake Cabit
- Ingenae LLC – Francis Phillips
- Lafser & Associates – Susan Luksza
- Leggette, Brashears & Graham – Nicholas Larebel
- Mateco Drilling – John Pitsch
- MoDNR – Tandi Edelman, Kyle Anderson, Christopher Dudenhoeffer
- Sunbelt Environmental Services – Joaquin Genel
- Trower Pump Service – Neal Trower

## Farewell

The people addressed below are no longer permitted to operate as contractors according to the Water Well Drillers Act and Missouri Well Construction Regulations:

- Associated Drilling Inc – Wes Presley
- ATC Group Services – Jeff Glassbrenner, Matt Honerkamp, Marco Valotto
- Ball Plumbing – Thomas Ball
- Barry, Matthew
- Booth Heating & Air – Mike Berter
- Buffington Brothers – Gary Burke
- Capobianco, Michah
- Civil & Environmental – Corey Strain
- Clark Water Well Services – Matthew Heroux
- Custom Pump & Well Drlg – Anthony Baretich
- Cutbirth, Billy
- Dakota Geo Consultant – Duane Crawford
- Dakota Technologies – Micah Capobianco
- Douglas Pump Service – William Tate
- Dreyer, Robert
- Dwyer, Ryann
- Environmental Works – Christopher Meredith, Alberto Alaniz Jr.
- Feth Well Pump & Service – Michael Kluba, Vernon Feth
- Geosyntec Consultants – Cody Luebbering
- GHD – Patrick Umphenour, Kirk Hoeffner
- Golder Associates – Mark Haddock
- Gotto, Daniel
- Govro Plumbing – Wilfred Govro
- Ground Source Systems – Jon Paul Higdon
- Harper Drilling – Michael Mullaney
- Heise Heating & Cooling – Wayne Saupe
- Herst & Associates – John Regan, Andrew Wyatt, Ward Herst
- Hyndrich Brothers Pump & Well – Michael Hyndrich
- Industrial & Petroleum Env – James Clingman
- Jennewein, Arthur
- Jesse Yoakum Well Drlg – Daniel Yoakum

- Kennedy/Jenks Consultants – Meagan Henderson, Julie Westhoff
- Landmark Environmental – Joy Lueders
- Leggette, Brashears & Graham – Molly Ramsey
- M & M Well Drilling – Delmer Moore
- Mahurin, Leman
- Mash – Danny Leverenz
- McCrays Welding & Ditching – Mason Horstman
- MoDNR – Larry Erickson, Mitchell Roberts
- Moore, Tucker
- Multistate Env Response – Joseph Millikin
- Murray, Kyle
- Niebuhr Heating & Cooling – Bret Miller
- Nykodym, David
- Payne, Jonathan
- Peterson, Derek
- Pipe & Power – John Erwin
- Pogue, Scotty
- Pritchard, Jeffrey
- Pullum, Alex
- Ralls County Electric Co-Op – Joseph Alexander
- Scott Drilling – Colby Scott
- Shocklee, Kaleb
- Skaggs Heating & Cooling – Danny Skaggs
- Smith & Co. – Christopher Wirz
- Stantec Consulting Corp – Justin Olson
- Sunbelt Environmental – Kyle Davidson
- Tate, William
- Terracon – Joseph Cushing, Eric Gorman, Jon Truesdale, Mark Dierker
- US Geological Survey – Paul Brenden
- Vaughn Pump Sales & Service – Robert Vaughn
- Weber Pump Service & Supply – Ronald Weber
- Wicker Well Drilling – Rusty Shepard
- Williams, Joel



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