Are you a Primary Contractor?

A primary contractor is a person who supervises a well or pump installation contractor or provides guidance on well construction but does not do the physical work. A primary contractor is required to obtain a restricted permit. A few examples about how the department applies this law include the following:

- Drilling Company A contracts with a client to have a well drilled and a pump installed. Drilling Company A only drills the well but contracts the pump installation to Pump Company B. A person from Drilling Company A must hold at least a restricted pump permit to contract pump work to Pump Company B.
- Environmental Company XYZ has a client who needs monitoring wells installed. Environmental Company XYZ contracts work to a permitted monitoring well contactor Mr. Smith to install wells. A person from Environmental Company XYZ must hold at least a restricted monitoring well permit to contract work to Mr. Smith.
- ABC Heating Company installs ground source heat pump systems but needs to contract the drilling to Drill Right Drilling Company. ABC Heating Company must have a person holding at least a restricted heat pump permit to contract the drilling to Drill Right Drilling Company.

The person or company that contracts or subcontracts in all of the above examples is acting as a primary contractor. A primary contractor is equally responsible for well construction, plugging, pump installation, repairs and submission of forms and fees. The primary contractor and the well or pump installation contractor must both sign the well certification or registration report form when work is completed. These signatures certify that the activity performed is done in accordance with regulations.

Casing Depth Requests

High yield bedrock and high yield unconsolidated material wells greater than 200 feet deep require a minimum casing depth determination from the Well Installation section. The section recommends all casing depth requests be submitted using the casing depth request form to ensure all of the information necessary to process a request is included. This form is available online at dnr.mo.gov/forms/780-1426-f.pdf. A high yield casing depth letter will be mailed within five business days of receipt of the request. The letter can be mailed or emailed to all concerned parties, if requested. If you have questions about how to use the form, please contact the Well Installation section at 573-368-2165.

Well Installation Board and Rule Update

The Well Installation Board met in regular session at 10 a.m. Feb. 18, 2019, at the Ramada Hotel and Convention Center in Springfield, Missouri. The meeting was held in conjunction with the Missouri Water Well Association Annual Convention. Agenda items included legislative updates in particular the Governor’s Red Tape Reduction Initiative.

Well Installation section staff presented new impact areas for the Drilling Area 11 (formally Special Area 2) and the interactive map viewer for that area. The map viewer is accessible online at bit.ly/2HQamQG.

The Board also was informed Feb. 28, 2019, would be the effective date for the changes to the Missouri Well Construction Rules. The rules are available online at sos.mo.gov/adrules/csr/current/10csr/10csr.asp#10-23.

A summary of the rule changes was provided to conference attendees, and is available online at dnr.mo.gov/geology/geosrv/wellhd/documents/2019mwcr-update.pdf.

The next meeting is scheduled for 10 a.m., May 17, 2019, in Rolla at the Missouri Geological Survey.

Brad Mitchell, geologist with the Wellhead Installation section, demonstrates the downhole geophysical logging tool during the McCracken Core Library and Research Center open house, April 25, 2019.
Changes to Drill Area 11 (Formerly Special Area 2)

On Feb. 28, 2019, significant changes to the Missouri Well Construction rules became effective. For consistency, drilling areas have been sequentially numbered. This article summarizes changes specific to Drill Area 11.

Well installation contractors working in Drill Area 11 should consult the interactive map viewer for Drill Area 11 (dnr.mo.gov/geology/geosrv/wellhd/wellsanddrilling.htm) or the Drill Area 11 Impact Area Maps. Hard copies of these maps are available by calling 573-368-2165.

In each quarter-section that is not an impact area there are two numbers listed:

- The upper number is the maximum well depth allowed for a well completed in the upper aquifer.
- The lower number is minimum casing depth allowed for well completed in the lower aquifer.
- Impact areas will only have one number listed which is the minimum casing depth allowed.

Note: New wells completed in Newton and Jasper counties can no longer be open to both the upper (Springfield Plateau) and lower (Ozark) aquifers.

BEDROCK WELLS

WELLS CONSTRUCTED IN IMPACT AREAS:

- Minimum borehole diameter for the casing is 10 inches.
- Casing must be set to the minimum depth as designated on the digital geospatial dataset (map) for that impact area.
- Full length grout seal using cement slurry or high-solids bentonite slurry only.
- Grout methods are tremie pressure, pressure or positive displacement
- Liner may not substitute for casing.
- A water sample is not required to be taken.

Wells Constructed Outside Impact Area, In The Upper Aquifer:

- The maximum total depth of the well cannot penetrate the Ozark Confining Unit or exceed the upper depth indicated on the digital geospatial dataset (map).
- A minimum of 80 feet of casing set at least 30 feet into competent bedrock.
- A minimum borehole 8 5/8 inches.
- Lowermost 30 feet of the casing annular must be grouted.
- The grout materials and methods must be followed pursuant to 10 CSR 23-3.030(1) (C).
- All new upper aquifer wells shall be constructed with a sampling port within 20 feet of the well.
- Permitted pump installers and owners who self-install the pump are responsible for ensuring sampling is completed according to protocol and submitting sample results within 60 days of pump installation.

If an upper aquifer well contains levels of lead, cadmium, TCE or TCE degradation products that are above the Maximum Contaminant Level (MCL) or Action Lever (AL) the well shall be:

- Plugged full length with approved grout material;
- OR
- Reconstructed and sealed through the Ozark Confining unit.

Wells Constructed Outside Of Impact Areas, In The Lower Aquifer:

- Casing must be set to a point 10 feet below the Ozark Confining Unit or to the lower depth indicated on the digital geospatial dataset (map).
- A minimum borehole diameter of 8 5/8 inches for steel casing and 10 inches for plastic.
- Grout method by tremie pressure, pressure or positive displacement.
- A casing point request may be submitted to the department.
- Well installation contractors and homeowners are strongly encouraged to sample their wells for known contaminants of concern throughout the Drill Area.

Major Reconstruction Of Bedrock Wells:

- Major reconstruction (deepening) of bedrock wells in Drill Area 11 that involves exceeding the upper depth indicated in the interactive map viewer or penetrating the Ozark Confining Unit requires advanced written approval from the department.
Public Well Pump Test Requirements

An important part of the construction of a public water supply well is a pump test. These tests are analyzed to determine safe aquifer yields and potential interference between closely spaced wells. Pump test requirements were recently revised.

- For unconsolidated community wells, pump tests are REQUIRED for wells less than 300 feet in total depth, and wells greater than 300 feet in total depth with a casing diameter of eight inches or more.
- For consolidated community wells pump tests are REQUIRED for wells with a casing diameter of 8 inches or more.
- Pump tests are OPTIONAL for non-community public wells if the well yield is greater than the pump capacity reported on the Well Certification report. An exemption from the design standards pump test requirement may be requested by contacting the department's appropriate regional office. Locate regional offices online at dnr.mo.gov/regions.

If you have questions about pump test requirements for public wells contact Scott Kaden at mail to: scott.kaden@dnr.mo.gov or 573-368-2194.

Contractor and Apprentice Well and Pump Installation Testing Schedule

All tests begin at 9 a.m.

The following 2019 testing dates are scheduled at the Missouri Geological Survey, Buehler Building, 111 Fairgrounds Road, Rolla.

- May 15, 2019
- June 12, 2019
- July 17, 2019
- August 14, 2019
- September 18, 2019
- October 16, 2019
- November 13, 2019
- December 11, 2019

Testing dates may be modified if necessary.

Please bring a picture ID with you to the testing site.

If you are applying for a non-restricted permit, please be sure to bring your global positioning system (GPS) unit and operating manual to the test site. Your GPS unit should be programmed to read in degrees, minutes and seconds.

If you have questions concerning this schedule or testing please call 573-368-2165.

For your convenience, the apprentice and restricted exams may be completed online at dnr.mo.gov/mowells. Please contact the Well Installation section at 573-368-2165 to obtain a test ID.

Persons with disabilities who may require special services may contact Karen Smith at 573-368-2174.

Welcome

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

- Environmental Works – Nathan Patterson
- Geotechnology – Aaron Lewis
- Jay Marshall Pump – Landon Brattin
- JB Environmental – Ronald Fowler Jr
- Leigh Environmental LLC – Jansen Pilkington
- Mahan Drilling LLC – Levi Mahan
- Michael Woolsey Well Drlg – Jordon Wilkins
- Mr. Pump – Kasey Morris
- Palmerton & Parrish – Brandon Parrish
- Ridge Runner Drlg & Pump – Chandler Gray
- Robert Stevens Well & Pump – David Baird
- Sellers Pump Service – Ricky Counts
- Sunbelt Environmental Services – Anthony Eubanks
- Welker Drilling – Rodney Cook
- Williams Bros Well Drlg – Jaymee Jones
Welcome

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

- AECOM – Samuel Fisher
- AEI Consultants – Jacqueline Day
- Associated Environmental IND – Billy Graham
- Burns & McDonnell – Charles Balkenbusch
- Cameron Cole – Benjamin Fortson
- Cascade Drilling – Bill Beuning
- Cascade Technical Services – Mike Martin, Charles Coffindaffer
- Civil & Environmental Consultants – Emma Gibson
- Emery Sapp & Sons – Caleb Johnson
- Feezor Engineering Inc – William Abernathy
- Fishbeck, Thompson, Carr & Huber – Tim Patterson
- Geostock Sandia – Alan Mitsdarffer
- Geosyntec Consultants – Geoffrey Gadd, Elizabeth Olree
- Geotechnology – Aaron Lewis
- GHD – Melissa Hackenmueller
- Golder Associates – Eric Schneider
- Gredell Engineering – Zachary Tresser
- Hyde Environmental – James Lindemann
- Jacobs Engineering – Ethan Hogan
- Lafser and Associates – Jacob Gallegos
- Layne-Arkansas – Logan Scherm
- Missouri Department of Natural Resources – Mihai Lefticariu
- Olsson Associates – Rachael Reis
- Professional Environmental – Amanda Lupardus
- Stantec Consulting – Christopher Hatfield
- Terracon Consulting Engineers – Karen Rieken, Frank Phillips, Collin Zurweller, Jena Adkins, Kameron Long
- The Vertex Companies Inc – Jessica Korte
- Weaver Consultants Group – Mark Russell, Jennifer Holt, Daniel Pelikan

Farewell

The people addressed below are no longer permitted to operate as well or pump installation contractors in Missouri:

- Foster Pump Service – Stephen Foster
- Franson, Raymond
- Frischkorn, Nathan
- Garrett, Darrell
- Gipson, Larry
- Grandview Furnace Co – Terrance Sellers
- Greenwalt, Donald
- Harlans Well Drilling – Michael Harlan
- Holcomb Pump Service – Kerry Holcomb
- Howe, Don
- Huey Construction Co – James Huey
- ISGS – Jack Aud
- Jim Bryant Supply – Jim Bryant
- Johnson, John F
- Johnson, John L
- Jones, Derrick
- Jones, Thomas
- Kaler, David
- Kalmer, David
- Kaspzyk, Robert
- Kennamer, Thomas
- Kolb Grading LLC – Thomas Greiwe
- L Maurer – Lawrence Maurer
- Lang, Gregory
- Layne-Arkansas Co – Mark Bennett, Fred Helms
- Leidos – Gary Neutzling
- Loftus, Kyle
- Luecke, Austin
- Lytgen, Robert
- Lyon, Gregory
- Lyerla, William
- Mariuts, Radu

Continued on Page 5
Well Installation Section Staff
573-368-2165

- Kyle Rollins — Section Chief
  Management of section, regulations, policy and rulemaking.
  573-368-2171 • kyle.rollins@dnr.mo.gov

- Justin Davis — Investigation and Remediation Unit Chief
  Field investigation and remediation, variances, casing depths, well construction and abandonment information.
  573-368-2167 • justin.davis@dnr.mo.gov

- Karen Smith — Processing Unit Chief
  Information regarding pending enforcement letters, permitting and testing.
  573-368-2174 • karen.smith@dnr.mo.gov

- Malinda Bassett — Section Secretary
  General information, fee letters, requests for forms and publications.
  573-368-2165 • malinda.bassett@dnr.mo.gov

- Andrew Combs — Environmental Specialist
  Field investigation, well plugging, heat pump records.
  573-368-2159 • andrew.combs@dnr.mo.gov

- Airin Haselwander — Geologist
  Public Water Systems, pilot holes, casing depths and variances.
  573-368-2196 • airin.haselwander@dnr.mo.gov

- Jeannie Hoyle — Permitting Clerk
  Permitting, testing and apprentice information.
  573-368-2450 • jeannie.hoyle@dnr.mo.gov

- Lori Miller — Correspondence Clerk
  Matching of well and pump records, correspondence requesting information.
  573-368-2318 • lori.miller@dnr.mo.gov

- Brad Mitchell — Geologist
  Field investigation, well construction information, variances and casing depths.
  573-368-2116 • brad.mitchell@dnr.mo.gov

- Dan Nordwald — Technical Assistant
  Field investigation, well plugging, well construction, abandonment information.
  573-368-2451 • dan.nordwald@dnr.mo.gov

- Vacant — Geologist
  Field investigation, well construction, Special Area 2, variances and casing depths.

- Vacant — Environmental Specialist
  Regulations, enforcement, policy, rulemaking and legislation.

- Vacant — Technical Assistant
  Water well construction and certification information and abandonment registration information.

- Vacant — Office Support Assistant
  General information, data entry and receptionist.

The Connection is published by the Missouri Department of Natural Resources’ Missouri Geological Survey. Suggestions, ideas and comments concerning this newsletter are welcome. Send comments to: Missouri Department of Natural Resources’ Missouri Geological Survey, Well Installation Section, PO Box 250, Rolla, MO 65402-0250, phone: 573-368-2165 or fax: 573-368-2317.