

The Driller's Digest

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This newsletter is published as a service to certified well contractors and others in the groundwater industry. Suggestions for articles for publication in the newsletter are welcome.

Former Commission Chairman is Hall of Famer

By John Nykamp, WCCC

Former commissioner Greg Bright was inducted into the North Carolina On-site Water Protection Conference Hall of Fame on October 16, 2012. Although the Hall of Fame has existed since 1995, Greg is the first inductee whose credentials are primarily in the water well industry.

Greg was instrumental in establishing a Well Construction / Water Quality program when he worked for Franklin County. He later took his services to Nash County, where he again established a Well Construction / Water Quality program. Greg is currently the Groundwater Protection and Wells Supervisor with Wake County Environmental Services.

In 1998, the North Carolina Well Contractors Certification Commission was established and Greg was appointed as one of the first Commissioners. His fellow Commissioners selected him as

the first Chairman of the Commission. Greg has been appointed to multiple terms on the Commission, serving between 1998 and 2009. He served as Chairman for the majority of that time. When his Commission term expired in 2009, Greg started a new endeavor, serving on the North Carolina State Board of Environmental Health Specialist Examiners. As a member of the Education Committee, he reviews continuing education applications, taking particular interest in those from the field of On-Site Water Protection.



Joanne Rutkofske, WCCC Staff, presents Hall of Fame award to Greg Bright

The ABC's of Septic Systems (part 2)

By Trish Angoli, P.E., DHHS/DPH/On-Site Water Protection Branch

What exactly is a septic system? Last time the types of permits required for a septic system were discussed, but the specific components of a septic system have not yet been described. A septic system generally consists of two main parts: a septic tank and a drainfield. This article is going to focus on septic tanks.

The septic tank collects all the wastewater from the house. The wastewater is retained in the septic tank for at

least 24 to 48 hours. This allows the heavier solids in the wastewater to settle to the bottom of the tank and the lighter solids (toilet paper, grease, etc) to float to the top of the water level in the tank. The heavier solids at the bottom of the tank are called the sludge layer and the lighter solids that float on top of the wastewater are called the scum layer.

The septic tank has two compartments, with a baffle wall located approximately two-thirds from the inlet of the tank. The baffle wall helps keep more solids in the septic tank than a tank without a

(Continued on page 3)

Summary of Civil Penalty Assessments

Penalties for violations of NCGS Chapter 87, Article 7 & 7A vary depending upon the particular facts and circumstances present in each case. Note: only finalized uncontested cases or cases not seeking remission and at the collection stage are included in this list (payment of fines and corrections of violations may already have occurred).

No finalized cases to report at this time.

2C.0200 Injection Well Rules

by Thomas Slusser, L.G., DENR/DWQ/APS

Effective May 1, 2012, the State of North Carolina revised its well construction and permitting regulations applicable to injection wells, the most abundant of which are related to *in situ* soil/groundwater remediation and to closed-loop geothermal heating/cooling systems. The old rules were last revised in 1997, and revisions were needed to address changes in technology, incorporate current standards of practice, and reduce regulatory burden when applicable. Regulations were crafted with the help of environmental consultants, well drillers, HVAC contractors, and other interested parties. Four public hearings were held throughout the state within the public comment period that ran from October 2011 through January 2012. Economic impacts resulting from the rule revisions were estimated at \$850,000 worth of net savings for the State and regulated community, combined, in the first year of implementation.

Most of the cost savings are associated with permitting by rule for closed-loop geothermal and *in situ* remediation injection wells. This means that the NCDENR Division of Water Quality just needs notification prior to construction instead of requiring the issuance of an individual permit prior to well construction or operation. Many of the other rule revisions were specified in other articles featured in previous editions of the Driller's Digest, some of which include the following:

- All geothermal permit-by-rule notifications are processed via the seven regional offices.
- Closed-loop geothermal wells must be grouted the entire length of each boring.
- Bentonite and specialty grouts may be used to fill each borehole; the former regulations only allowed the use of cement-based grouts.
- Bentonite-based grouts cannot be used in ground water zones containing chloride concentrations of

1,500 mg/L or greater.

- Specific setbacks have been established for closed-loop geothermal wells, such as 15 feet from buildings/structures and 50 feet from septic systems. The former regulations required hydrogeologic computer modeling to determine appropriate setback distances from potential sources of groundwater contamination, which was considered overly burdensome.
- Hydraulic fracturing for enhanced *in situ* remediation is now allowed but requires a permit.
- Stormwater injection is now allowed, provided that the infiltration system is constructed in accordance with an approved stormwater program and that there is no direct emplacement of untreated stormwater into any aquifer.

This is merely a summary and is no substitute for reviewing the regulations firsthand, which can be found online at <http://portal.ncdenr.org/web/wq/aps/gwpro/rules-statutes> under the heading State, 15A NCAC 02C: Well Construction Standards. Applications for injection wells, including the notification form for injection wells permitted by rule, can be found online at <http://portal.ncdenr.org/web/wq/aps/gwpro/permit-applications>.

WCCC Disciplinary Committee

James Rogers-Effective 3/28/12

For violations of Subchapter 2C .0100 Well Construction Standards and .0300 Permitting and Inspection of Private Drinking Water Wells. The well contractor was given a letter of reprimand and a requirement for 1 hour of continuing education in proper well head completion.

Gary Honeycutt-Effective 4/25/12

For violations of Subchapter 2C .0100 Well Construction Standards and .0300 Permitting and Inspection of Private Drinking Water Wells. The well contractor was given a letter of reprimand and a requirement to properly complete the well heads and submit the required forms.

Randy Hill-Effective 5/22/12

For violations of Subchapter 2C .0100 Well Construction Standards. The well contractor was given a letter of reprimand and required to take a two hour continuing education class specific to grouting along with allowing the observation of construction of a non-permitted irrigation well.

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*WCCC Disciplinary Committee
(Continued from page 2)*

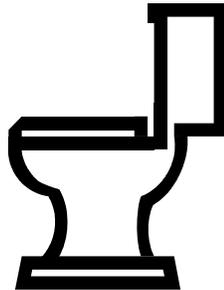
Roy G. Bland-Effective 6/1/12
For violations of Subchapter 2C .0100 Well Construction Standards and .0300 Permitting and Inspection of Private Drinking Water Wells. The well contractor was given a 6 month suspension and required to take a continuing education class specific to grouting.

*The ABC's of Septic Systems
(Continued from page 1)*

baffle wall.

Effluent exits the septic tank through an effluent filter. The effluent filter is located at the outlet end of the septic tank and keeps the scum layer in the tank. It also removes additional solids from the wastewater leaving the tank. The effluent filter needs to be pulled out from its housing unit in the tank and cleaned on a regular basis.

The septic tank will have two access openings in the top of the tank. These access openings allow the tank to be pumped out on a regular basis. The sludge and scum layers in the septic tank will accumulate over time and need to be removed. The septic tank should be pumped whenever the solids level in the tank is found to be more than one-third of the liquid depth in any tank compartment. When the septic tank is pumped, both compartments should be pumped out.



In North Carolina, septic tanks are made of concrete, plastic or fiberglass. The majority of the tanks installed in the ground in North Carolina are concrete. Plastic tanks are installed more frequently in the western part of the State, where it is not always easy to get a concrete tank and truck to a job site. Fiberglass tanks have most often been seen on systems with design flows over 3,000 gallons per day.

The size of the septic tank is specified in rule 15A NCAC 18A .1952(b). For a house with three bedrooms or less, the minimum septic tank size required is 900 gallons. A four bedroom house must have a septic tank with a capacity of at least 1,000 gallons.

Next time, What is a drainfield and how it works...

North Carolina Well Contractors Certification Commission

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- Casey Champion**, REHS, NCWC, **Chairman** -Oxford
- Chris Dickey**, NCWC, **Vice Chairman** -Murphy
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Certification Today

Total number certified.....	1153
Total number of applicants for certification.....	58
Certifications currently suspended.....	1

**NC Division of Water Quality
Aquifer Protection Section (APS)**

<http://portal.ncdenr.org/web/wq/aps>

<u>Asheville</u>	828-296-4500
<u>Fayetteville</u>	910-433-3300
<u>Mooreville</u>	704-663-1699
<u>Raleigh</u>	919-791-4200
<u>Washington</u>	252-946-6481
<u>Wilmington</u>	910-796-7215
<u>Winston-Salem</u>	336-771-5000

**NC Department of Health and Human Services(DHHS)
Division of Public Health
Environmental Health Section**

<http://www.deh.enr.state.nc.us>

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Online at www.wellcontractors.nc.gov

Supervisor Retires

By Layton Long, Director of the Environmental Health Section

Ted Lyon, REHS, current supervisor of the On-Site Water Protection Branch and Well Contractors Certification Unit, retired Oct. 31. Ted has spent nearly 35 years in dedicated service to the citizens of North Carolina working to protect the environment and the public's health.

Since beginning his career in 1977 he has worked at both the local and state level and has interacted with the public, industry, and multiple state and local agencies as a career professional who has brought credit to the State and himself. His career path includes over three years working as a soil scientist for the Department of Environment and Natural Resources (DENR) in the Land Quality Office, 10 years in Johnston County as an environmental health specialist for the Johnston County Health Department, almost 17 years as a supervisor with DENR Division of Waste Management and 5 years as the supervisor with the On-site Water Protection Branch with the Environmental Health Section.

Ted has served his State in an exemplary manner

and has striven to maintain the highest professional standards that has served as a model for others to emulate. North Carolina has been fortunate to have had Ted Lyon as one of its emissaries for so many years with such an outstanding career.



"I anticipate undertaking Ichthyological endeavors ..."

