This regulatory update highlights new federal and state rules that are to be implemented under the Safe Drinking Water Act and North Carolina’s Rules Governing Public Water Systems. As always, the Compliance Services Branch staff is available to answer any questions regarding the state’s drinking water regulations.

Electronic Reporting of Laboratory Analyses

The Public Water Supply Section encourages water systems to request their laboratories to report analytical results electronically. It is our intention to mandate electronic reporting of lab analyses in the near future.

Electronic reporting provides immediate data entry, which will be beneficial to systems and the state. Analytical results will be posted on the PWSS Web site where systems can review their compliance status and analytical results via “Drinking Water Watch” within 24 hours of submittal from the lab. Attentive systems that wish to sample early in the compliance period and view their analytical results online may be able to identify discrepancies.

The system may still have time to contact their laboratory and the PWSS before the end of the compliance period to correct any discrepancies before a violation is issued. Electronic reporting will also allow the state to more quickly track and resolve compliance issues.

Drinking Water Watch: Its Location

The Drinking Water Watch feature can be used to obtain current information concerning your water system and your system’s compliance. There are two ways to locate Drinking Water Watch.

**Method 1:** Go to the Public Water Supply Section’s Web site at [http://www.deh.enr.state.nc.us/pws/](http://www.deh.enr.state.nc.us/pws/). Click on “New Drinking Water Watch” near the top of the page, under the colored banner.

The next page displays the Online Data Review Disclaimer. After reading the disclaimer, click on the "Drinking Water Watch" link at the bottom of the page, which will open the Drinking Water Watch search Web page. Drinking Water Watch provides several different methods to locate a specific water system - even if the water system ID number is not known.

**Method 2:** Due to the transition of Drinking Water Watch from our local server to the World Wide Web in July 2007, Drinking Water Watch can now also be found using search engines on Web sites, such as Google or Yahoo. In the search window, just type in N.C. Drinking Water Watch, and you will be directed to the PWSS Web site. Once on the PWSS Web site, follow the directions listed in Method 1.
**Lead and/or Copper Action Level Exceedances**

If your 90th percentile exceeds the lead and/or copper action level, you must perform all of the following:

- collect Water Quality Parameters samples before the end of the monitoring period,
- collect source water samples for lead and copper analysis within six months of the exceedance,
- distribute public education within 60 days of the lead action level exceedance, and provide the state proof of distribution within 70 days (including your PWSID number, system name and compliance period in which the exceedance occurred on the documentation) and
- complete a corrosion control treatment recommendation within six months of the exceedance.

Keep in mind that WQPs and source water sample results must be obtained before the CCT recommendation can be completed. An approval letter must be obtained from the state.

Any system that has had a previous exceedance and returned to compliance on the basis of sampling results that has a subsequent exceedance must next install the approved treatment within 24 months (see Section 141.81(c)). Send in the installation certification statement that comes with the approval letter following the installation of any required treatment. If your system serves more than 50,000 persons, you have additional requirements that must be completed (see Section 141.81 of the Lead and Copper Rule).

**Attention Schools and Child Care Facilities**

The EPA has developed a free-of-charge DVD entitled “What Your School or Child Care Facility Should Know About Lead in Drinking Water.” Details to order the DVD can be found at:

http://www.epa.gov/safewater/schools/guidance.html.

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**2007 Enforcement Actions for Non-Compliance**

This year, the PWSS has more frequently issued administrative penalties and administrative orders to non-compliant systems to improve compliance with the drinking water regulations and ensure that public water supply systems are providing quality water to the citizens of North Carolina. The Department of Environment and Natural Resources has recently established a Collections Group to aid in the collection of penalties issued. Continuously non-compliant systems are referred to the Attorney General’s office for further action - even if payment for the penalties has been received.

**Monitoring Violations:** Penalties are issued approximately one month after the Notice of Violation letter date for any unresolved monitoring violation. Penalties have been issued for each monitoring period missed for each contaminant group not analyzed. Since all systems have to monitor for total coliform, this contaminant group has generated the most penalties.

**Maximum Contaminant Level Violations (MCL):** Generally, administrative orders are initially issued to systems that fail to provide their consumers with drinking water that meets the MCL requirements. Most of the administrative orders issued this year have been for radionuclide and disinfection byproducts MCL violations. Each administrative order specifies a compliance deadline and requires submittal of a written plan and quarterly status reports. The status reports must list the actions (including dates) taken to resolve the contamination. If a system feels they cannot meet the compliance deadline specified in the order, they must contact the rule manager to discuss the situation. An extension of the deadline may be granted, if warranted. Unresponsive systems or those that do not move toward permanently reducing the amount of contamination in a timely manner will be issued an administrative penalty.

**Treatment Technique and Other Violations:** Systems obtaining treatment technique or other types of violations have been issued either an administrative order or administrative penalty, depending on the frequency and severity of the violations. This year, treatment technique violations have generated the largest individual penalty amounts. Numerous penalties have also been issued for failure to submit a CCT Recommendation or perform lead public education as required by the Lead and Copper Rule.
Ground Water Rule

The final Ground Water Rule was published on Nov. 8, 2006. The compliance date for the rule requirements is Dec. 1, 2009. The EPA promulgated this rule to provide for increased protection against microbial pathogens - specifically viral and bacterial pathogens that can occur in fecal contaminated drinking water. The GWR establishes a risk-targeting approach to identify ground water systems susceptible to fecal contamination, to identify those systems that are at higher risk of fecal contamination, and then to further target those systems that must take corrective action to protect public health.

Risk-targeting strategies includes the following:

- regular ground water system sanitary surveys to check for significant deficiencies in eight key operational areas;
- a flexible program for identifying higher risk systems through existing Total Coliform Rule monitoring and state determinations; and
- ground water source monitoring to detect fecal contamination in response to a total coliform positive routine sample at ground water systems that do not provide 4-log treatment of viruses.

Measures to protect public health include the following:

- treatment technique requirements to address sanitary survey significant deficiencies and fecal contamination in ground water and
- compliance monitoring to ensure that 4-log treatment of viruses is maintained where it is used to comply with this rule.

Ground water systems with a significant deficiency or evidence of source water fecal contamination must consult with the state and implement one or more of the following corrective action options:

- correct all significant deficiencies;
- provide an alternate source of water;
- eliminate the source of contamination; or
- provide treatment that reliably achieves at least 99.99 percent (4-log) treatment of viruses (using inactivation, removal or a state-approved combination of 4-log virus inactivation and removal) for each ground water source.

Each of these corrective actions is intended to remove all or nearly all fecal contamination. In addition, the system must inform its customers of any uncorrected significant deficiencies or fecal indicator-positive ground water source samples.

New Consumer Confidence Report (CCR) Requirements

Beginning in 2008, the EPA will require the following health effects language to be included in all CCRs:

“If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [NAME OF UTILITY] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [http://www.epa.gov/safewater/lead].”

The CCR template that is available on the PWSS Web site will be updated to reflect this addition.
Lead and Copper: Short-Term Regulatory Revisions and Clarifications

The EPA has published the Short-Term Regulatory Revisions and Clarifications to the Lead and Copper Rule. The final rule became effective on Dec. 10, 2007. The compliance date for the provisions of this rule is April 7, 2008.

Minimum number of samples required - The EPA has reiterated that systems with fewer than five water taps that can be used for human consumption must collect at least one sample from each tap. These systems must also collect additional samples from those taps on different days during the monitoring period in order to meet the required minimum number of sites sampled. States will have the discretion to allow water systems that have fewer than five taps to collect one sample per tap. A written request must be submitted to the PWSS, and the Section will respond in writing. LCR compliance would then be determined by comparing the highest sampling result with the action levels. Any sample result above an action level would trigger corrosion control treatment requirements and possibly public education compliance actions. The PWSS is currently studying the possible implementation of this change to monitoring requirements and action level compliance determination. Until our review has been completed, water systems with less than five sampling locations must still sample from a minimum of five locations during each scheduled monitoring period.

Reduced monitoring criteria - A water system cannot continue on a reduced monitoring schedule unless the system meets both the lead action level and state-approved water quality parameters. Corrosion control must be both effective and reliable.

Clarification of timing of compliance actions after an action level exceedance - Compliance determinations and timing for actions to be completed after an action level exceedance are based on the end date of a monitoring period. Water systems on a triennial monitoring schedule must monitor every three calendar years within the four-month monitoring period, from June 1 through Sep. 30.

Advanced notification and approval requirements - Water systems are required to obtain prior approval from the state before adding a new source of water or making any long-term changes to water treatment processes. A written request to implement changes to treatment must be submitted to the LCR manager a minimum of 60 to 90 days prior to implementing the changes. Examples of treatment changes requiring prior approval include the addition of a new treatment process or modification of an existing treatment process, such as dose changes to existing chemicals if the system is planning long-term changes to its finished water pH or residual inhibitor concentration. Chemical dose fluctuations associated with daily raw water quality changes will not require prior approval. Examples of modifications requiring prior approval include switching secondary disinfectants (e.g., chlorine to chloramines), switching coagulants (e.g., alum to ferric chloride) and switching corrosion inhibitor products (e.g., orthophosphate to blended phosphate).

Consumer notice of lead tap water monitoring results - Water systems must provide consumers who occupy homes or buildings that are part of the system’s monitoring program with the testing results when their drinking water is tested for lead. Notification must be completed within 30 days after the system learns of the tap monitoring results and must include the following: lead results for the taps that were tested, health effects of lead, steps consumers can take to reduce exposure to lead in drinking water, system contact information, the MCL goal, action level for lead and definitions for these terms. This notice is in addition to the special notification requirements under the Public Notification Rule.

Public Education - All community water systems must include an educational statement about lead in their Consumer Confidence Reports (see p. 3). Also, water systems will have more flexibility to tailor the public education materials to their particular situation. The EPA will be developing guidance documents and public education templates. In addition to the agencies to which distribution of public education materials is already required, systems will be required to make a good faith effort to distribute the materials to additional agencies even if the agencies are not located within the water system’s service area. These additional agencies include licensed child care centers, public and private preschools, obstetricians-gynecologists and midwives. The good faith effort will require the water system to contact local public health agencies by phone or in person to ensure that public education materials are delivered to all potentially affected customers or water system users.

Re-evaluation of lead service lines - The Short-Term Revisions and Clarifications require water systems to reevaluate lead service lines classified as “replaced through testing” if they resume lead service line replacement programs. This requirement applies to a water system that (1) initiated a lead service line replacement program, (2) discontinued the program and (3) subsequently resumed the program.

This has been a short summary of the major points contained in the Short-Term Regulatory Revisions and Clarifications to the LCR, which was published in the Federal Register on Oct. 10, 2007. Water systems are strongly encouraged to visit the EPA Web site at http://www.epa.gov/safewater/lcrmr/index.html to more thoroughly familiarize themselves with the requirements of the Short-Term Revisions and Clarifications.
**LT2 Enhanced Surface Water Treatment Rule: Dates to Remember**

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Population</th>
<th>Submit Sampling Schedule or Intent to Grandfather</th>
<th>Initial Round of Source Water Monitoring</th>
<th>Cryptosporidium Bin Classification</th>
<th>Treatment Requirements</th>
<th>Second Round of Source Water Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>&lt;10,000 and monitor for <em>E. coli</em></td>
<td>7/1/2008</td>
<td>10/1/2008 – 9/30/2009</td>
<td>N/A</td>
<td>10/1/2014</td>
<td>10/1/2017</td>
</tr>
</tbody>
</table>
| 5        | <10,000 and monitor for *Cryptosporidium* | 1/1/2010                                 | 4/1/2010 – 3/31/2011 (for 2 samples/month) or 4/1/2010 – 3/31/2012 (for 1 sample/month) | 10/1/2011 (for 2 samples/month) or 10/1/2012 (for 1 sample/month) | 10/1/2014 | 4/1/2019

**Disadvantaged Community Program**

A new option is available for public water supply systems that do not have the ability to maintain compliance with the requirements of the Safe Drinking Water Act. The North Carolina Disadvantaged Community Program can make a principal forgiveness loan to the most appropriate eligible public water system having capacity (as defined by the SDWA) that is willing to take over a system that lacks capacity. The PWSS will identify these projects and secure agreements from both systems on a case-by-case basis.

**Special Notice for Distribution System Samples**

Special Notification requirements for distribution system samples became effective Oct. 1, 2006. Special notification to a person authorizing a water supplier to take water samples from property not owned or controlled by the water supplier is required if that water sample tests positive for coliform bacteria or exceeds an action level, maximum contaminant level or maximum residual disinfectant level. Rule 15A NCAC 18C .1523 (c) requires a water supplier to inform - in writing - the person authorizing the sample about their water quality results and the potential health effects. Once notified, informed consumers can then take any precautionary measures they feel are necessary to further protect their health.

Depending on the type of contaminant, notice must be provided within 24 or 48 hours of the supplier’s receipt of the analytical results.

- For a contaminant listed as Tier 1 in Appendix A to 40 C.F.R. 141, Subpart Q, notice shall be provided by telephone within 24 hours of receipt of analytical results and shall be followed by written notice by mail or direct delivery within 48 hours of receipt. The written notice shall include the analytical results and appropriate health effects language.
- For a contaminant listed as Tier 2 in Appendix A to 40 C.F.R. 141, Subpart Q, notice shall be provided within 48 hours of receipt of analytical results. Written notice shall be provided by mail or direct delivery to the person authorizing the sample and shall include the analytical results and appropriate health effects language.

The supplier of water must also submit a copy of the written notice and certification of delivery to the Public Notification Rule manager within 10 days of completing notification. If the person authorizing the water sample does not wish to receive the special notification, that person may waive the requirement in writing. Please note that the waiver applies only to that specific sampling location. A signed waiver is valid for five years. The waiver form and special notice template are available on our Web site.
Four Different Public Notice Requirements

Requirements under the Public Notification Rule (15A NCAC 18C Section .1523):

Public Notice: All public water systems must give notice for all violations of the national primary drinking water regulations (except for reporting violations). These violations include violations of the maximum contaminant level, maximum residual disinfection level, treatment technique, monitoring requirements and testing procedures. The ‘Notice to the Public’ form tells customers that the water system has violated a drinking water regulation and explains what the system is doing to correct the situation and what the customers can do in the meantime until the corrective action is completed.

Special Notice: Whenever a water sample that is collected from the distribution system and from property not owned or controlled by the water supplier tests positive for coliform bacteria or exceeds an action level, maximum contaminant level or maximum residual disinfectant level, the water system must inform the person authorizing the sample about their water quality results and the potential health effects, in writing. Once notified by ‘Special Notice,’ informed consumers can then take any precautionary measures they feel are necessary to further protect their health.

Requirements under the Lead and Copper Rule (15A NCAC 18C Section .1507):

Public Education for Lead: A water system with a 90th percentile exceedance of the lead action level, based on tap water samples collected in accordance with Section 141.86 of the LCR, shall deliver public education. The ‘Public Education on Lead in Drinking Water’ form describes the health effects of lead exposure and the steps water system customers can take in their homes to reduce their exposure to lead in drinking water.

Public Notice of Lead Monitoring Results: The new Lead and Copper Short-Term Regulatory Revisions and Clarifications Rule, effective Dec. 10, 2007, requires water systems to provide the individual lead tap monitoring results to the occupants of the residence where the tap was tested - even if lead is not detected or if the action level was not exceeded. Along with the analytical results, the consumer notice must provide the maximum contaminant level goal, action level for lead and definitions of these two terms. The notice must also include an explanation of the health effects of lead, list steps consumers can take to reduce exposure to lead in drinking water and provide contact information for the water utility.

In summary, systems must perform:

- Public Notice – when any drinking water regulation is violated.
- Special Notice – when individual distribution sample results exceed specific levels.
- Public Education – when the lead action level is exceeded at the 90th percentile.
- Public Notice of Lead Monitoring Results – when any water sample is tested for lead.

The PN Rule and the Lead and Copper Short-Term Regulatory Revisions and Clarifications Rule, provide further detail on the timing, delivery and content of the required notices. The Compliance Services Branch section of the PWSS Web site contains most of the necessary forms mentioned above. The ‘Notice to the Public’ templates (for various types of violations) and a ‘Special Notice’ template (for individual homeowner notification) are available under the Public Notice Rule. The Public Education on Lead in Drinking Water form and associated guidance is available under information regarding lead and copper. A template for the new Public Notice of Lead Monitoring Results is not yet available.

New 2008 Laboratory Forms

New laboratory analysis report forms have been developed for 2008. Your system’s facility ID numbers and sample point IDs are required information on these new forms. The Compliance Services Branch staff recently mailed a letter to each system specifying the IDs to be used on the lab forms. You can also find your system’s facility ID numbers and sample point IDs on Drinking Water Watch.

Volatile Organic Chemical and Synthetic Organic Chemical Annual Monitoring — Clarification on Quarterly Sampling

Systems that are granted an annual sampling schedule following a quarterly schedule due to a detection of a Volatile Organic Chemical (VOC) or a pesticide/synthetic organic chemical (SOC) must collect the annual sample during the quarter of the highest historical detect. (See NC’s Rules Governing Public Water Systems Section .1515 [141.24 (f)(11)(iii) for VOCs and 141.24 (h)(7)(iii) for SOCs]. The VOC sample analysis must include all the contaminants on the VOC lab form. The SOC sample analysis must include all the contaminants identified by the method used to test for the detected contaminant.

Public Water Supply Section Mission

To promote public health by ensuring that safe, potable water is available in adequate quantities to the residents and visitors of North Carolina served by public water systems by assuring that such systems are properly located, constructed, operated, and maintained.
Deadlines for Stage 2 Disinfectants and Disinfection Byproducts Rule

Notice to Schedule 4 Water Systems:

If you are a Schedule 4 water system that did not qualify for a Very Small System Waiver, April 1, 2008, is a very important day for you! Remember, Schedule 4 water systems must have developed and submitted a Standard Monitoring Plan, 40/30 Certification Letter or System Specific Study to the EPA by April 1, 2008!

Notice to Schedule 3 Water Systems:

If you are a Schedule 3 water system, your Standard Monitoring Plan, 40/30 Certification Letters and System Specific Studies were due on Oct. 1, 2007. Contact your Regional Office and submit your IDSE option immediately. Failure to complete and submit one of the IDSE options may subject your water system to enforcement actions. Do not wait for correspondence notifying you of a violation for failure to submit this required documentation.

Radionuclides

Approaching Deadline for Initial Monitoring

Community public water systems that have not yet completed initial monitoring for radionuclides are required to complete this monitoring (four consecutive quarters) for each entry point to the distribution system by Dec. 31, 2007 (see 15A NCAC 18C Section .1519). Future monitoring schedules will be based on the average of these four consecutive quarters. The PWSS currently displays these monitoring schedules on its Drinking Water Watch Web site.

Considerations for Installation of Treatment

The PWSS reminds those systems exceeding radionuclide MCLs and having to install treatment to comply with an administrative order that certain restrictions may apply to wastewater discharges and solid waste streams containing radionuclides. Consult your permit issuing authority (sewer authority, solid waste management service provider or Division of Water Quality) for more information. In addition, the N.C. Radiation Protection Section may require permitting of certain radionuclide treatment systems dependent upon the type of contaminant and activity levels. It should also be noted that any facility applying treatment must sample the analyte being treated annually, at a minimum. More frequent testing may be required as a condition of a permit or by the regulatory agencies.

Remember:

Changes in Population May Trigger Changes to Your Sampling Requirements!

Monitoring requirements for some contaminant groups such as total coliform, lead and copper, and disinfectants and disinfection byproducts are based on your system’s population. Changes to your system’s population may trigger changes to your monitoring requirements. It is the responsibility of public water systems to keep track of their population changes and adjust their sampling schedules accordingly to avoid violations.

The required number of distribution samples based on population are specified in 15A NCAC 18C. For Total Coliform samples, see Section .1534 (141.21). For Lead and Copper samples, see Section .1507 [141.86 (c)] and for Disinfectants and Disinfection Byproducts, see Section .2008 (141.132).

N.C. Drinking Water State Revolving Fund Revisions

Revisions to the North Carolina Drinking Water State Revolving Fund rules 15A NCAC .01N became effective Dec. 1, 2007. These revisions implement S.L. 2005-454 by removing the priority criteria that has been incorporated into a revised Capitalization Grant Operating Agreement with the EPA and make minor technical changes. The significant change to the priority criteria in the OA as part of this process is the establishment of four categories for public health and compliance. These categories were also incorporated in 2006 revisions to the state loan and grant program rules 15A NCAC .01J.

See the bottom of page 158 of the following:
http://www.ncoah.com/rules/register/Volum e22Issue03August12007-2.doc
### COMPLIANCE SERVICES BRANCH

<table>
<thead>
<tr>
<th>Rule</th>
<th>Rule Manager</th>
<th>Team Leader</th>
</tr>
</thead>
</table>
| Arsenic | Joseph Anthony (919)-715-7554  
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(919) 715-3221  
Dave.McCartney@ncmail.net |
| Asbestos | | |
| Inorganic Chemicals | | |
| Radionuclides | | |
| Surface Water Treatment Rules (SWTR, iESWTR, LT1ESWTR, LT2ESWTR) | Rebecca Sadosky (acting)  
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Rebecca.Sadosky@ncmail.net | |
| Turbidity | | |
| Filter Backwash Rule | | |
| Volatile Organic Chemicals | Tom Lyne  
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Tom.Lyne@ncmail.net | |
| Synthetic Organic Chemicals/Pesticides, PCBs and Dioxin | | |
| Total Coliform Rule—Non-community Systems | Derek Lewis  
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Derek.Lewis@ncmail.net | Alex Gorbounov  
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Alex.Gorbounov@ncmail.net |
| Nitrates/Nitrites | | |
| Total Coliform Rule—Community and NTNC Systems | Alex Gorbounov (acting)  
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Rebecca.Sadosky@ncmail.net |
| Ground Water Rule | | |
| Disinfectants and Disinfection By-Products Rules [includes Trihalomethanes, Haloacetic Acids, MRDLs, Treatment Techniques] | James Coats  
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Boris.Hrebeniuk@ncmail.net |
| Public Notification Rule/Consumer Confidence Reports | Beth Goodwin  
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Bethany.Goodwin@ncmail.net | |
| Lead and Copper: Asheville, Fayetteville, Raleigh and Washington Regions | Jim Coor  
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Jimmy.Coor@ncmail.net | |
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