Drinking Water Program Update

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Environmental Health Protection Section
and Health & Human Services
Regulatory and Licensure Program staff
Upcoming Regulations – Tentative Effective Dates for Systems

- Consumer Confidence Report (CCR) _______ October 1999
- Capacity Development New Systems _______ October 1999
- Unregulated Contaminant Monitoring __________ January 2001 (small systems)
- Operator Certification __________________________ No later than February 2001
- IESWTR ____________________________ Surface water >10,000 January 1, 2002
- D/DBP ________________ SW>10,000 January 1, 2002
- Public Notification ____________ early 2002*
- LT1/Filter Backwash (ESWTR) ____________ November 2002*
- Arsenic ________________________ January 2003
- Groundwater Rule ___________________________ November 2003*
- Radionuclides ___________________________ November 2003*
- D/DBP __________________________________ Small systems – January 2004*
- LT 2 __________________________________ May 2004*
- Sulfates ___________________________________ 2005???
- Radon __________________________________ Initial Monitoring February 2005*

* Exact date will be determined by the date of the final rule
The Proposed Arsenic Rule
Figure 3. Counties with arsenic concentrations exceeding possible new MCLs in 10 percent or more of ground-water samples.
**Type and Number of PWSs Potentially Affected by Proposed Arsenic Rule**

<table>
<thead>
<tr>
<th>SYSTEM SIZE</th>
<th>TOTAL</th>
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<tr>
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<tr>
<td>5 ug/L</td>
<td>320</td>
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<td>10 ug/L</td>
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<td>20 ug/L</td>
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<tr>
<th>TYPE</th>
<th>&gt;10,000</th>
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<th>≤2,000</th>
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Effective Dates of Proposed Arsenic Rule

• Three years after promulgation (June 22, 2004)
  – All community water systems (CWS) serving >10,000 people
  – All NTNC water systems

• Five years after promulgation (June 22, 2006)
  – All other CWS ‘s serving ≤10,000 people
Proposed Maximum Contaminant Level (MCL)

- EPA is proposing to lower the current MCL of 50 ug/L to 5 ug/L.
- In addition to the proposed 5 ug/L, EPA is requesting comment on 3, 10, and 20 ug/L.
- NTNC water systems would not be required to comply with the revised MCL.
Proposed Radon and Radionuclide Rule
Proposed Radon Rule

- Maximum contaminant level (MCL) of 300 pCi/l
- Alternate MCL of 4,000 pCi/l linked to Multimedia Mitigation (MMM) Program
- Applies only to community water systems
- Final rule might include non-transient non-community water systems
Compliance Dates

• Initial sampling starts within 4 years after rule becomes final (anticipated February – June 2001)
• Statewide MMM program is implemented within 4 years
MMM Program Plan

• Prepared by the Department of Health and Human Services Regulation and Licensure
• Based on the existing State Indoor Radon Program
• Goal: Reduce public health risk by an amount comparable to that achieved by treating drinking water to the 300 pCi/l MCL
MMM Program Components

- Public participation
- Development of risk reduction goals
- Strategic plan to achieve goals
- Method(s) for tracking results
Radionuclides

- Gross alpha screen (name may change)
- Radium 226 & 228
- Uranium (includes different forms)
- Beta particles & photon emitters (primarily man-made radionuclides; only vulnerable systems)
Uranium

- All forms of uranium combined
- *Three proposed MCLs:
  - 20 µg/l (20 pCi/l); preferred by USEPA
  - 40 µg/l (40 pCi/l); acceptable to USEPA
  - 80 µg/l (80 pCi/l); unlikely to be chosen
- *Final MCL may be different from these proposed MCLs
Uranium Risk

- 20 $\mu g/l$ is the “no effect level” for kidney toxicity
  - most protective of human health
  - cellular damage; kidney disease link not known
- 40 $\mu g/l$ has a risk of $1 \times 10^{-4}$
  - other regulated substances also have a calculated risk of $1 \times 10^{-4}$
Uranium in Nebraska

- Most systems in Nebraska can meet a MCL of 40 pCi/l
- Approximately 50 systems identified to date that may have problems meeting the 20 pCi/l MCL
- Systems in the North Platte, Platte and Republican River Valleys are more likely to have higher uranium concentrations
Proposed Groundwater Rule Requirements
Ground Water Rule Basics

• Final Rule issued later this year and effective in 2003, three years after the Final Rule issue Date.

• Who will be potentially affected: ALL Community and NTNC Systems which use non-disinfected groundwater or 99% of all systems in Nebraska.
Proposed GWR Requirements

• Sanitary Survey Requirements
  – Increased Frequency – For Nebraska once every three years.
  – Expanded coverage – Looks more in depth at all areas of the PWS
  – In Nebraska this type of Sanitary Survey will go into effect for all Systems as of January 1, 2001.
Proposed GWR Requirements

• Hydrogeological Assessments of Source Wells:
  – Proposed sensitive types include Karst, Gravel, and fractured bedrock.
  – Assessments are a one-time effort shared by the Systems and the State and must be completed within 3–5 years after the rule is effective.
Proposed GWR Requirements

• Source Water Monitoring for *E. coli*:
  – Monthly if Sanitary Survey finds significant deficiencies, or
  – Monthly source water testing if the aquifer is sensitive and no barrier exists, or
  – Monitoring can be triggered with immediate source samples every time a total coliform positive occurs in the distribution system.
Proposed Required GWR Corrective Actions

• If *E.coli* is detected at the source or a Sanitary Survey shows significant deficiencies then one or more of the following apply:
  – The PWS must correct the deficiency within a specific time frame,
  – Eliminate the source of contamination
  – Disinfect to 4-log standard (All water to storage for adequate detention time prior to first customer)
  – Provide alternate supply of water
Expected GWR Impact in Nebraska

- Good news: Few, if any, of the proposed sensitive aquifers exist in Nebraska.
- Bad news: EPA may include sandy aquifers as sensitive in the final rule. This would mean all aquifers in Nebraska are sensitive.
- Most systems will be required to do triggered monitoring.
“Wild Card” issues with the Proposed GWR

- No one knows if sandy aquifers will be determined as sensitive.
- EPA is still considering a requirement to provide routine disinfection until the source is proven safe (Guilty until proven innocent)
- EPA may still define what is a significant deficiency
- No consensus on how source will be defined for Systems with multiple wells
“Wild Card” Issues with Proposed GWR

- Any consensus by EPA on the previous issues can cause the rule to go from having a relatively small impact on Nebraska to a \textbf{HUGE} regulatory monster that has significant regulatory and fiscal impact on Nebraska PWS(s).
Field Area Designations

State of Nebraska
Department of Health and Human Services
Regulation and Licensure

Field Personnel:

Field Area #1
Russell Topp
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P. O. Box 95007
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(308) 360-2071 (cellular)

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Joslyn Castle
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Omaha, NE 68131
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Field Area #8
Tony Martinez
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(308) 530-4651 (cellular)
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<td>Coliform via Membrane Filter</td>
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<tr>
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* w/o digestion  * * Contracted Tests