

Groundwater Quality Rules NR 140 Cycle 10 Rulemaking Stakeholder Meeting

Bruce Rheineck

Groundwater Section Chief

Drinking Water & Groundwater Bureau

July 21, 2020



Navigation bar with icons for back, forward, and a grid of participants. Names listed: Jim Zellmer, fossd, Bruce. A phone icon is present with the number 14142173342.



Zoom meeting control bar. From left to right: Unmute (muted), Start Video (video off), Invite, Participants (9), Share Screen, Chat (circled in red), Record, Reactions, and Leave Meeting.

Participants list window titled "Participants (9)". It includes a search bar "Find a participant" and a list of participants with their initials and status icons (mute, video, chat). At the bottom, there are buttons for "Unmute Me" and "Raise Hand" (circled in red).

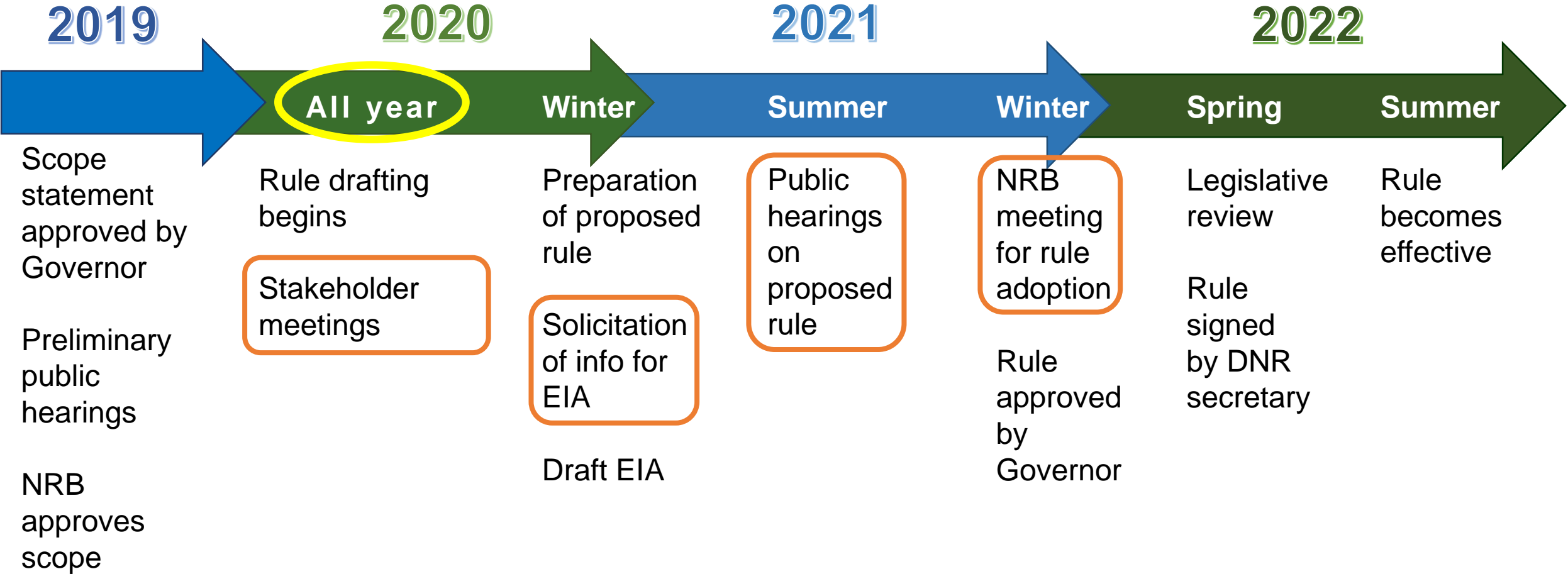
Initials	Name	Mute	Video	Chat
AD	Adam DeWeese (Me)	Muted	Off	Off
BJ	Ben Jaster (Host)	On	On	Off
JZ	Jim Zellmer	Muted	Off	Off
MW	Meghan Williams	Muted	Off	Off
F	fossd	Muted	Off	Off
BS	Bart Sponseller	Muted	Off	Off
B	Bruce	Muted	Off	Off
KM	Kristi Minahan	Muted	Off	Off
	14142173342	Muted	Off	Off



Today's Presentations

- Introduction – overview of rulemaking timeline
- Request to update Volatile Organic Compounds (VOCs) standards
- Basis for Recommended groundwater standards
- Comments

Rulemaking process and timeline



NR 140 Stakeholder Meetings

- PFAS
 - March 23, 2020
- Metals and Metalloids
 - June 9, 2020
- Volatile organic compounds (VOCs) ←
 - July 21, 2020
- Pesticides
 - August 25, 2020
- Bacteria
 - September 30, 2020

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Published under s. 35.93, Wis. Stats., by the Legislative Reference Bureau.
DEPARTMENT OF NATURAL RESOURCES

NR 140.03

Chapter NR 140
GROUNDWATER QUALITY

Subchapter I — General
NR 140.01 Purpose.
NR 140.02 Regulatory framework.
NR 140.03 Applicability.
NR 140.04 Definitions.

Subchapter II — Groundwater Quality Standards
NR 140.10 Public health related groundwater standards.
NR 140.12 Public welfare related groundwater standards.
NR 140.14 Statistical provisions.

NR 140.16 Monitoring and laboratory data requirements.
NR 140.20 Evaluation and Response Procedures.
NR 140.22 Point of standard application for design and compliance.
NR 140.24 Responses when an enforcement action limit is attained or exceeded.
NR 140.27 Responses when an enforcement standard is attained or exceeded at a location other than a point of standard application.
NR 140.28

NR 140.01 Purpose. The purpose of this chapter is to establish groundwater quality standards for substances detected in or having a reasonable probability of entering the groundwater resources of the state; to specify scientifically valid procedures for determining if a numerical standard has been attained or exceeded; to specify procedures for establishing points of standard application, and for evaluating groundwater monitoring data; to establish ranges or responses the department may require for exceedances for facilities the department may require for exceedances for facilities, practices and activities regulated by this chapter, if those actions are necessary to protect public health and welfare or prevent a significant damaging effect on groundwater or surface water quality for present or future consumption or non-consumptive use; whether or not an enforcement standard or non-enforcement action limit for a substance has been adopted under this chapter. Nothing in this chapter authorizes an impact on groundwater quality which would cause surface water quality standards contained in ch. NR 102 to 105 to be attained or exceeded.

History: Cr. Register, September, 1983, No. 337, eff. 10-1-83.

NR 140.02 Regulatory framework. (1) This chapter supplements the regulatory authority elsewhere in the statutes and administrative rules. The department will continue to exercise the powers and duties in those regulatory programs, consistent with the enforcement standards and preventive action limits for substances in groundwater under this chapter. This chapter provides which is established elsewhere in the statutes and administrative rules, and does not create independent regulatory authority.

(2) The department may adopt regulations which establish specific design and management criteria for regulated facilities or activities, if the regulations will ensure that the regulated facilities or activities will not cause the concentration of a substance in groundwater affected by the facilities or activities to exceed the enforcement standards and preventive action limits under this chapter at a point of standard application. The department may adopt more stringent regulations under authority elsewhere in the statutes based on the best currently available technology for regulated activities and practices which ensure a greater degree of groundwater protection or when necessary to comply with state or federal laws.

(3) Preventive action limits serve to inform the department of potential groundwater contamination problems, establish the level of groundwater contamination at which the department is required to commence efforts to control the contamination and provide a basis for design and management practice criteria to controlling new releases of contamination as well as to restoring groundwater quality cases of contamination by past releases of contaminants. Although a preventive action limit is not intended to always require remedial action, activities affecting groundwater must be regulated to minimize the level of substances to the extent technically and economically feasible, and to maintain compliance with the preventive action limits unless compliance with the preventive action limits is not technically and economically feasible.

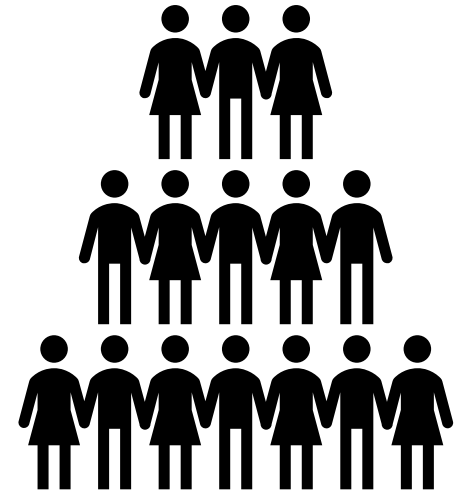
(4) The department may take any actions within the context of regulatory programs established in statutes or rules outside of this chapter.

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Register January 2020 No. 709

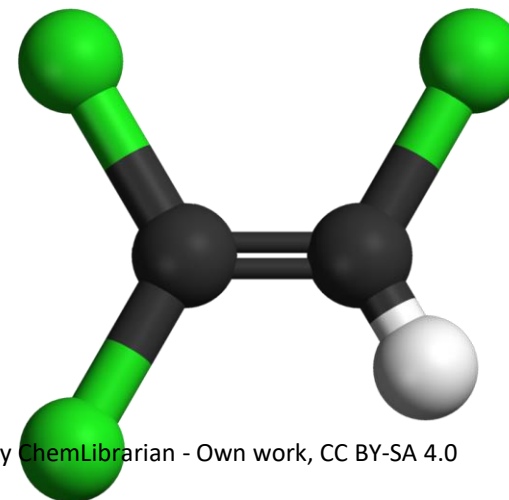
NR 140 Stakeholder meetings

- Information on upcoming meetings will be on the NR 140 update website.
 - [NR140 rule webpage](#)
- Formal comment period for draft rule will occur in 2021



NR 140 Stakeholder meetings

- Volatile organic compounds (VOCs)
 - Trichloroethylene
 - Tetrachloroethylene
 - 1,2,3-trichloropropane
 - 1,1-dichloroethane
 - 1,4-dioxane





NR 140 Cycle 10 Rulemaking Stakeholder Meeting

Remediation and Redevelopment Program

Judy Fassbender

July 21, 2020



Common Sources

Trichloroethylene (TCE)

- Solvent for extraction, waterless drying, and finishing
- Solvent in adhesives, lubricants, paints, varnishes
- PCE breakdown product

Tetrachloroethylene (PCE)

- Dry cleaning solvent
- Metal degreasing solvent

1,2,3-Trichloropropane (1,2,3-TCP)

- Chemical manufacturing
- Industrial solvent
- Paint and varnish remover
- Cleaning and degreasing agent

1,1-Dichloroethane (1,1-DCA)

- Manufacture of 1,1,1-trichloroethane
- Solvent for cleaning and degreasing
- Manufacture of plastic wrap, adhesives, fibers
- Breakdown product of chlorinated compounds

1,4-Dioxane


- Chlorinated solvents as a stabilizer – discontinued
- Solvent in paints, varnishes, adhesives, detergent
- Cosmetics
- Pesticides



Wisconsin Administrative Code NR 700

Regulations for addressing Hazardous Substance Discharges and Environmental Pollution

- Key components to consider
 - NR 706 – Hazardous Substance Discharge Notification Requirements
 - NR 716 – Site Investigations
 - NR 720 – Soil Cleanup Standards
 - NR 722 – Standards for Selecting Remedial Actions
 - NR 726 – Case Closure



NR 706 – Hazardous Substance Discharge Notification Requirements

- Notification of Discharge required regardless of standard
- Few exceptions for requirement to report
 - Diminimus
 - None affected by proposed standard changes





NR 716 – Site Investigations

Determine nature and extent of impacts

- No change in methods or requirements

Evaluate all potentially affected media

- Soil
- Groundwater
- Surface water
- Sediment
- Vapor Intrusion

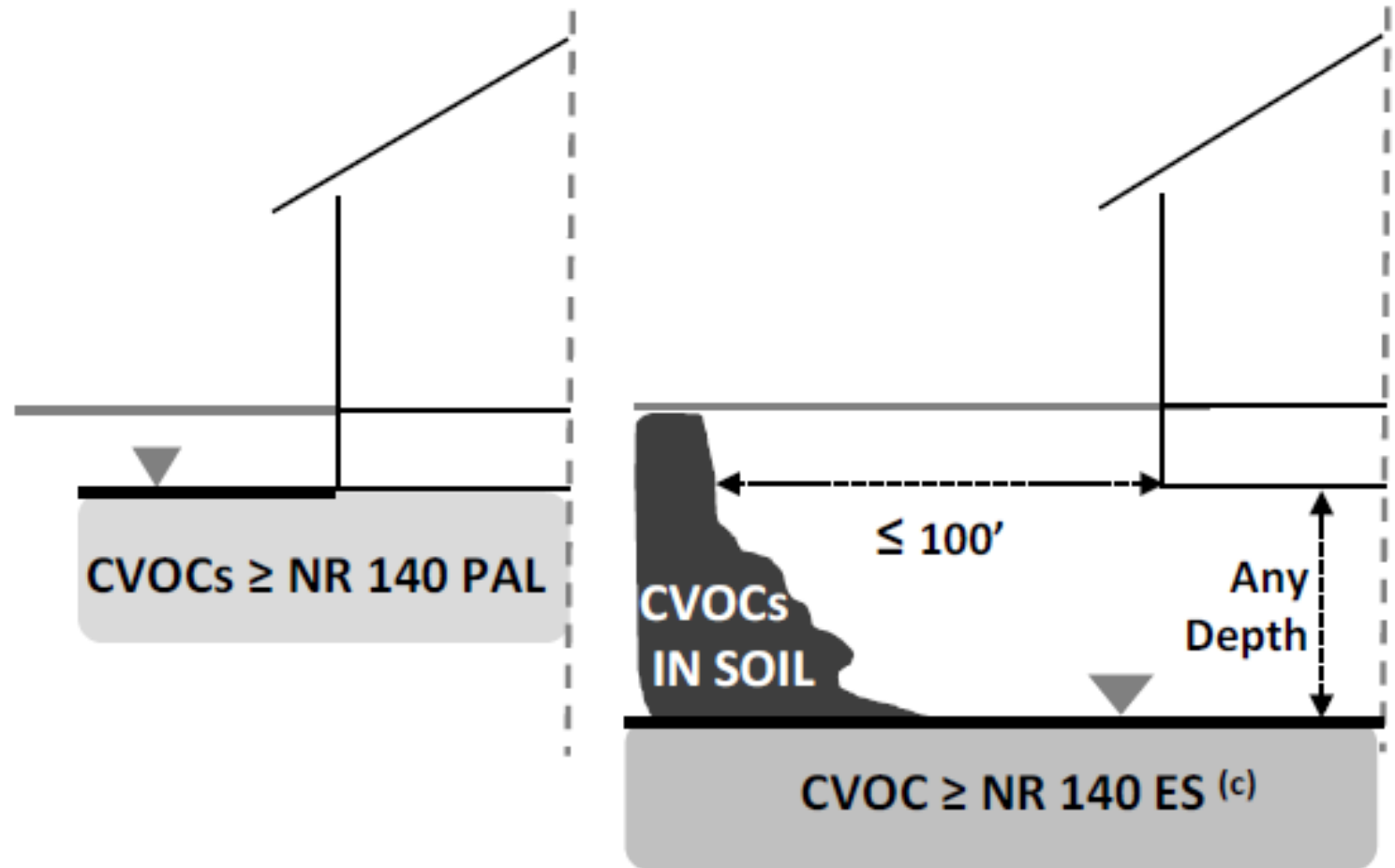


Vapor Intrusion

- Vapor intrusion evaluation
 1. Screening
 - Uses ES and PAL directly in DNR screening guidelines
 2. Assessment
- Increase in sites assessed for TCE
- Decrease in sites assessed for PCE
- No change for other compounds unless Vapor Action Level (based on inhalation) is modified.

Vapor Intrusion Screening

Situations where
vapor sampling is
recommended





NR 720 Soil Standards

1. Direct Contact based on U.S. EPA Regional Screening Levels (RSLs)
 - A. Nonindustrial land use
 - B. Industrial land use
 - No change based on revised NR 140 standards
2. Groundwater Protective RCLs
 - Will change based on revised NR 140 standards





NR 720 – Soil Cleanup Standards

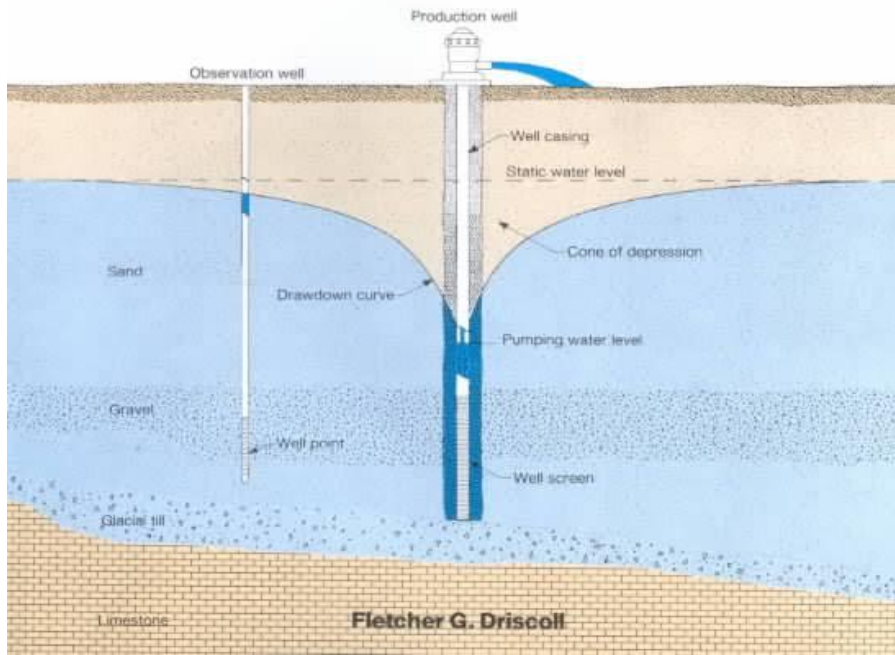
Compound	Current NR 720 RCL Groundwater Pathway (ppb)	NR 720 RCL GW Pathway based on DHS Recommended ES (ppb)
Trichloroethylene (TCE)	3.58	0.356
Tetrachloroethylene (PCE)	4.54	18.2
1,2,3-Trichloropropane (1,2,3-TCP)	51.9	0.26
1,1-Dichloroethane (1,1-DCA)	483	483
1,4-Dioxane	1.23	0.144

NR 722—Standards for Selecting Remedial Actions

Groundwater and Wells

Second Edition

A comprehensive study of groundwater and the technologies used to locate, extract, treat, and protect this resource.



- NR 140 used for groundwater cleanup target

NR 726 – Case Closure



- Standards in place at the time of closure are applied.
 - Soil
 - Groundwater
 - Vapor Intrusion

Questions





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Insert Sarah's slides here

Questions or Comments

