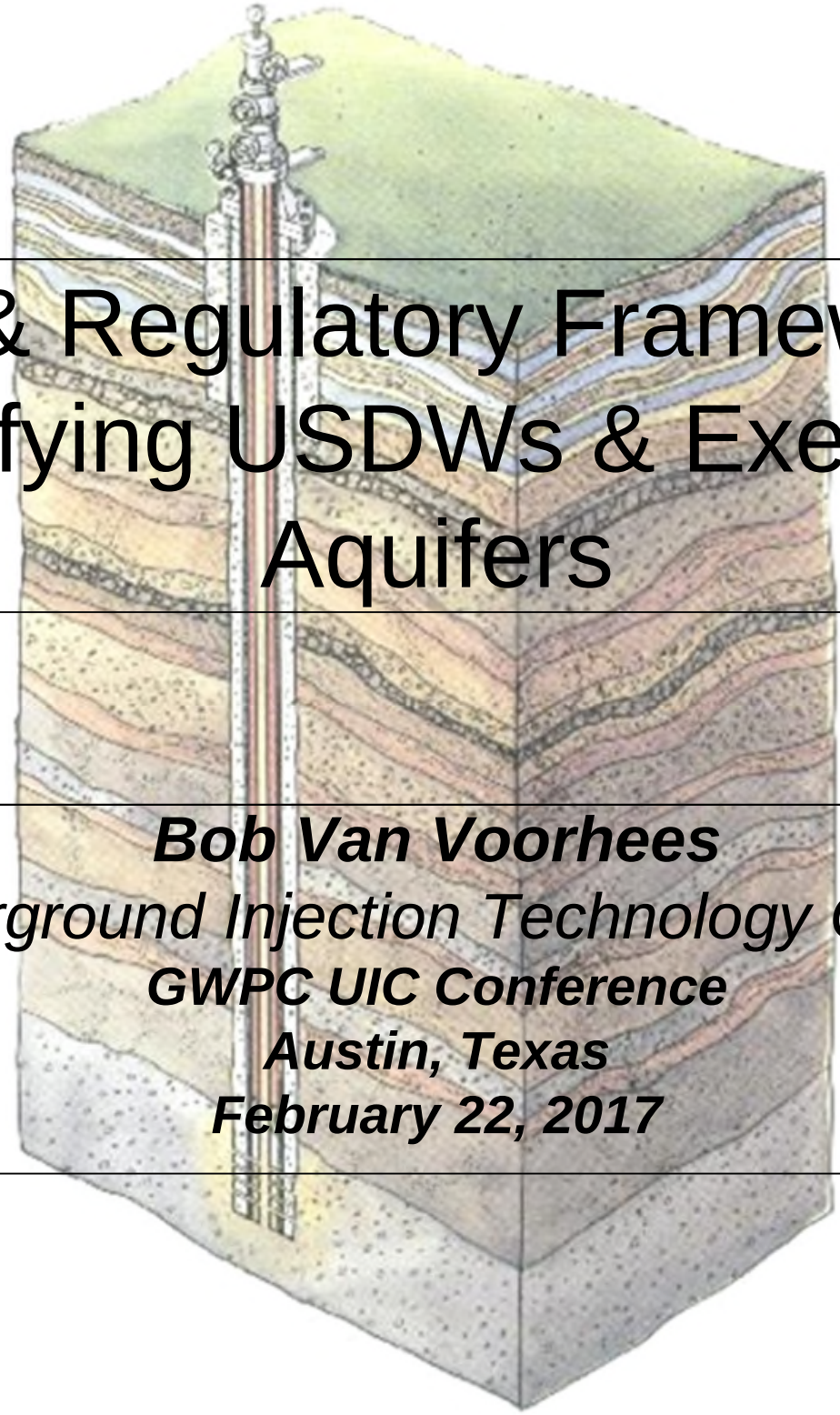

Legal & Regulatory Framework for Identifying USDWs & Exempted Aquifers

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Underground Sources of Drinking Water (USDWs)

"Underground injection endangers drinking water sources if such injection may result in the presence in underground water which supplies or can reasonably be expected to supply any public water system of any contaminant, and if the presence of such contaminant may result in such system's not complying with any national primary drinking water regulation or may otherwise adversely affect the health of persons."

42 USC §300h-1(d)(2)

Definition of USDW

An aquifer or its portion:

(1)(i) Which supplies any public water system; or

(ii) Which contains a sufficient quantity of ground water to supply a public water system; and

(A) Currently supplies drinking water for human consumption; or

(B) Contains fewer than 10,000 mg/l total dissolved solids; and

(2) Which is not an exempted aquifer.

40 CFR § § 144.3 & 146.3

Identifying USDWs

- The Safe Drinking Water Act (SDWA) directed EPA to develop regulations “to prevent underground injection which endangers drinking water sources.” 42 U.S.C. § 300h(b)(1).
- EPA promulgated the underground injection control (UIC) program regulations authorizing state UIC program directors to “identify aquifers and portions of aquifers which are actual or potential sources of drinking water” by applying criteria relating to the ability of a geologic formation to produce water that can reasonably be expected to supply a “public water system” as defined by rule. 40 CFR §§ 144.1(g) & 146.4(c).

Two-Step Process

- The UIC regulations established a two-part process under which the term “underground source of drinking water” is defined
  - (i) by using overly-inclusive criteria to identify aquifers that are potentially capable of producing water for drinking water use, and then
  - (ii) by using the process for identifying exempted aquifers excluded from identification as USDWs because they have “no real potential to be used as drinking water sources.” 40 CFR § 144.1(g).

Exempted Aquifers

- A UIC Director may designate ‘‘exempted aquifers’’ using the criteria in 40 CFR § 146.4.
- Such aquifers are those which would otherwise qualify as ‘‘underground sources of drinking water’’, but which have no real potential to be used as drinking water sources.
- **Therefore, they are not USDWs**.
- No aquifer is an exempted aquifer until it has been affirmatively designated under § 144.7.
- Aquifers which do not fit the definition of ‘‘underground source of drinking water’’ are not ‘‘exempted aquifers.’’ They are simply not subject to the special protection afforded USDWs. 40 CFR § 144.1(g)

Regulatory Background

- EPA's approach to identifying USDWs and exempted aquifers was promulgated in a 1980 rulemaking.
- EPA determined that without aquifer exemptions, certain beneficial uses of underground injection for energy production, solution mining, and waste disposal would be severely limited.
- EPA originally proposed a broad definition of covered underground waters with exceptions to allow such activities to continue.
- The original proposal would have required UIC program Directors to identify all USDWs to be protected from endangerment.
- The final rule presumed aquifers to be USDWs if they could produce water <10,000 ppm TDS sufficient to supply a PWS and changed the exceptions to criteria for exempted aquifers that are not USDWs.

GWPC Workgroup

- EPA says it participated with some states in a Ground Water Protection Council workgroup
- Purpose was to
  - Review issues associated with more complex aquifer exemption requests
  - Make recommendations on steps to improve the review process
- “EPA and participating states agreed on a number of steps to enhance coordination and communication between EPA regions and state UIC programs regarding proposed aquifer exemptions”

Complications

- The EPA memo may suggest more agreement than is the case
- Primary concern is over how EPA views its role in the process for designating exempted aquifers vis-à-vis primacy states
- There is also concern over the way EPA wants states to establish current and potential future aquifer use
- That approach is a departure from previous practice

EPA Aquifer Exemption Role

- “EPA is responsible for the final review and approval of all aquifer exemption requests, based on the regulatory criteria in 40 CFR 146.4” Mem. 1.
- UIC permit applicants typically delineate the proposed exempted area and submit the delineation to the primacy agency
- States review to determine if the information submitted supports an aquifer exemption, make a designation, provide for public comment and submit a request to the EPA Region for approval of **a UIC program revision**

WDD Memorandum

Aquifer Exemption Approval

- EPA notes that approval of complex cases will be by Regional administrators for non-substantial program revisions and by the EPA Administrator for substantial program revisions
- But EPA treats its review of program revisions as if it is conducting a *de novo* review of the exempted aquifer designation
- Program revision reviews should be to ensure that a primacy state followed the appropriate procedures, considered the appropriate factors and made a decision that is not clearly unreasonable
- States should be making the decisions on appropriate state resource uses, including groundwater

“Does Not Serve” Criterion

- EPA must first find that the state or the applicant, has demonstrated that the aquifer or the portion of an aquifer identified by the state as exempt "does not currently serve as a source of drinking water"
- EPA has determined that water that currently serves as a source of drinking water includes water that is being withdrawn in the present moment and water that will be withdrawn in the future by wells currently in existence.
- EPA says this type of evaluation would ensure that “water from the exempted area of the aquifer ‘does not currently serve as a source of drinking water’ for nearby drinking water wells as required by 40 CFR 146.4(a).” Mem. 3.

Changes in EPA Policy

- EPA approach to projecting what water will be withdrawn in the future by wells that are currently in existence is a departure from its established and reasonable interpretation of “current use”
- This approach is also inconsistent with EPA’s regulatory responsibilities under the UIC program.

Projected Water Use

- EPA considers future water withdrawal in the abstract without including the effects of the proposed project.
- For example, 40 CFR 144.7(c)(1) requires that EPA and primacy states consider “the mining plan for the proposed project”
- The mining plan could significantly modify the gradient of water flow and change the water that will be withdrawn by an existing well.

“Will Not Serve” Criterion

- EPA must determine either
  - That an aquifer cannot now and will not in the future serve as a source of drinking water for a public water system or
  - That the total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system

Not Reasonably Expected

- Include information about the quality and availability of water from the aquifer proposed for exemption.
- Also, the exemption request must analyze the potential for public water supply use of the aquifer:
  - A description of current sources of public water supply in the area;
  - A discussion of the adequacy of current water supply sources to supply future needs, population projections, economy, future technology; and
  - A discussion of other available water supply sources within the area.

Aquifer Exemption Checklist item 6

Local Orientation

- Identification and designation of exempted aquifers is necessarily a local decision based on
  - "geologic, hydrological, or historical conditions in different States and in different areas within a State"
  - adequacy and availability of water sources to meet potential drinking water needs as an alternative to aquifers that would require varying, and possibly substantial and costly levels of treatment.
- States should be taking the lead in making these decisions.

Rulemaking Petition

- March 2016 - rulemaking petition by NRDC, CWA and 2 other groups
- Petition requested EPA to:
  - Impose immediate moratorium on designation of exempted aquifers
  - Change the definition of USDW
  - Change the criteria for exempted aquifers
  - Fully review previous “exemptions”
  - Treat petition as comment on all future proposed “aquifer exemptions”

Citizen Petition to Repeal or Amend the EPA’s Aquifer Exemption Regulations to Protect Underground Sources of Drinking Water (March 23, 2016)

Interim EPA Response

EPA provided an “interim response” indicating:

- EPA is already making addressing exempted aquifer concerns
- EPA is “reviewing each of [the petition’s] requests”
- No immediate moratorium because that “would have a significant impact on the oil, gas and minerals industries by effectively shutting down the permitting process at many sites.”
- Petition will not be treated as universal comment because each exempted aquifer designation is site specific and typically initiated by primacy state
- EPA wants “to meet with [petitioners] to better understand the basis of your concerns and discuss the agency's current work on aquifer exemptions.”

Letter from Anita Thompkins, Director, Drinking Water Protection Division, Office of Ground Water and Drinking Water (May 5, 2016).

Further Response

UITC sent a letter to EPA in October 2016

- Expressed concern over misunderstanding of the provisions for identification of USDWs and exempted aquifers
- Highlighted the necessity of local evaluations of water use and aquifer designations
- Supported the effectiveness of the existing criteria for exempted aquifer designations
- Expressed concern for unwarranted changes in policy that conflict with UIC regulations and the underlying intent
- Supported EPA's commitments to
  - work with states and stakeholders
  - promote a consistent and predictable process for the review
  - avoid decisionmaking delays
- Supported improved data management and public transparency
- Supported EPA's interim petition response

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