Washington State Department of Health

Underground Injection Control (UIC) Wells

Processes, Concerns, and Desired States

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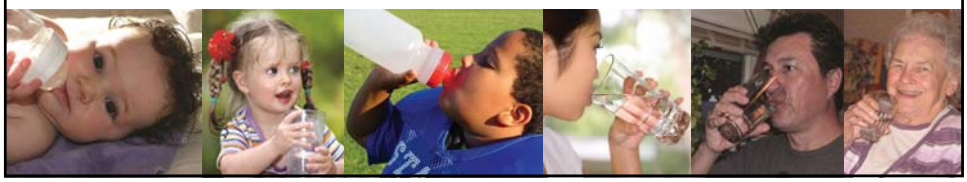
PUBLIC HEALTH
ACTIVELY WORKING FOR A SAFER AND HEALTHIER COMMUNITY



Current Processes

- **Local authorities (cities, counties, ports) operating under an NPDES permit:**
  - Permitted entities have authority to approve *rule authorized* UIC wells.
- **Local authorities (cites, counties, ports) operating without an NPDES permit:**
  - NPDES treatment , design and source control practices, groundwater quality standards and UIC program's best management practices (BMPs) govern UIC well siting, design, and construction.
  - Well approval decisions fall under local building permit decisions or regional Ecology office review.

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Stormwater Permit Areas

Washington State Municipal Stormwater Permit Areas
Map courtesy of Department of Ecology

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Current Processes

- **Ecology's BMPs and requirements for rule authorization and well registration include:**
  - 100 foot setback from drinking water sources which is consistent with well construction standards in WAC 173-160-171(3).
  - Minimum vertical separation ranges from 5 to 25 feet (based on stormwater quality and vadose zone grain size).
  - Consistent with local requirements under programs such as critical aquifer recharge areas (CARA) or local wellhead protection ordinances.

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Concerns

- **Working assumption of UIC program is that wells constructed using BMPs protect groundwater and therefore drinking water sources.**
- **Current processes and BMPs may not protect particularly vulnerable drinking water sources.**

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Concerns (cont.)

- **100 foot setback doesn't always reflect our sanitary control area (SCA) or wellhead protection area (WHPA).**
  - SCAs require water systems to actively *control* risks within minimum radius of 100 feet from wells and 200 feet from springs.
  - WHPAs require utilities to *identify* risks in recharge areas surrounding the well—often at distances greater than 100 feet and extending beyond the area controlled by the water system.

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Concerns (cont.)

- **Utilities attempting to address the siting of UIC well near vulnerable drinking water sources have been:**
  - Told the application met BMPs and was in total compliance—*no further action needed or required.*
  - Left with limited notification, consultation, and appeal options.

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Desired State

- **Drinking water sources are not impacted by UIC wells.**
  - Vulnerable sources have adequate and appropriate BMPs.
  - Utilities with vulnerable supplies are informed and consulted when stormwater projects using UIC wells are developed in critical wellhead areas.
  - No UIC wells are sited in SCAs without utility approval.

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Potential Actions

1. No changes to current requirements.

- No global BMPs or special requirements to protect vulnerable public water sources.
- The utility has the responsibility to either negotiate appropriate local stormwater UIC practices or respond to individual projects.
- No notification or formal appeal process for public water utilities of pending stormwater project in vulnerable wellhead areas.

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Potential Actions (cont.)

2. Non-regulatory improvements.

- Update UIC BMPs and guidance(s) to address vulnerable drinking water sources when siting UIC stormwater well.
- Establish a utility-based stormwater UIC vulnerability rating for public water supply wells and incorporate it into our current source water protection mapping tool.

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Potential Actions (cont.)

3. Non-regulatory improvements.

- Update UIC BMPs and guidance(s) to:
  - Require consultation with a utility potentially impacted by the siting of UIC well.
  - Identify additional BMPs needed to protect vulnerable water supply wells from stormwater discharge impacts.

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Potential Actions (cont.)

4. Statutory and regulatory changes.

- Require coordination and concurrence with utilities when siting UIC stormwater wells near vulnerable water supply well.
- Approaches may include:
  - Prohibit UIC wells within specific time of travel zones.
  - Monitor conditions at the UIC site (responsibility of the UIC well owner).
  - Require SEPA review and/or state waste discharge permit for UIC wells within 1 year time of wellhead zones of vulnerable water supply wells.

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Moving Forward

- **What is next?**
- **How do we achieve the desired state?**
  - Protect all public water supply wells.
  - Support efficient and cost effective management of stormwater.
  - Ensure effective communication and coordination between water supply operators and stormwater managers.

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