Proposed West Ada Area of Drilling Concern

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Regulatory Authority

• Idaho Code 42-238 (15)
  – Authorizes the Director to designate, “Areas of Drilling Concern” (ADC) to protect the ground water resources
  – ADC provides for additional requirements to protect public health and prevent waste of water when drilling and completing a well
  – ADC defines how wells are completed and can include specific drilling methods
  – Applies to both new wells and wells deepened or modified within the ADC
Regulatory Authority

• Specific Requirements in Idaho Code Include:
  – Additional Bonding Requirements - the driller must have at least a $10,000 bond posted with their drilling company license.
  – Additional Experience and Knowledge in drilling wells encountering warm water or pressurized aquifers as required by the rules.
  – Document that any specialized equipment needed or required is available to the driller.
Regulatory Authority

• Long form permit only - subject to conditions
• Requires a notice of intent to drill, deepen or modify a well.
• Submit plans and specifications
• Submit drilling methods that will be used
• Receive written approval of the Director before commencing to drill, deepen or modify any well in a designated ADC.
Regulatory Authority

• Prior to designating an ADC, the Director must
  – Conduct a Public Hearing in the area to determine public interest
  – Publish notice in two consecutive weekly issues of a newspaper of general circulation in the area prior to the hearing. May 19th and 26th.
  – In addition to the above requirements, the Department has posted the notice and related documents on the Department Website.
Public Outreach

The Department notified:

– Building Contractors Association
– Association of Idaho Realtors
– Idaho Association of Commerce and Industry
– Local elected officials
– Idaho Ground Water Association
– Department Website provides all of the documents including the staff memorandum, and the full Meridian report.
Public Outreach

• IGWA sent the public notice to all email addresses they have for the drilling industry.

• Meridian provided public outreach through social media sites including Facebook, Twitter and Nextdoor.

• Meridian has also notified other major water providers, Suez (formerly United Water) and City of Kuna.
Areas of Drilling Concern

• Currently Idaho has two (2) designated areas of drilling concern:
  – Bunker Hill Superfund Site near Kellogg, Idaho. Ground water is contaminated with Heavy Metals
  – West Boise Area of Drilling Concern. Ground water contamination from a perchlorethylene (Perc) plume
City of Meridian Request

• Meridian has proposed a West Ada Area of Drilling Concern to protect ground water quality
• Meridian has conducted a detailed hydrogeologic study regarding the aquifers beneath and near Meridian
• The study has identified both naturally occurring and human caused ground water contamination and poor well construction
Contamination in the Aquifers

- Anthropogenic contamination is present generally in the upper aquifers.
  - DEQ has designated a Nitrate Priority Area in portions of the proposed WAADC
  - A perchlorethylene (PERC) plume as a result of a leaking chemical tank is present on the eastern portion of the WAADC. (Boise Mall)
  - Shallow ground water generally is susceptible to surface contamination including bacteria, septic tank effluent, leaking underground storage tanks, fertilizers, pesticides and other chemicals
Contamination in the Aquifers

• Meridian hydrogeologic study has identified naturally occurring contamination in the subsurface.
• Arsenic and uranium were detected in certain aquifers or production zones
• Depth discrete sampling has shown that different aquifers have different pressures and chemistries
• Sampling also defined a zone between approximately 200 and 300 feet that is contaminated with uranium above drinking water standards.
Contamination in the Aquifers

- The deeper aquifer (below 500 feet) generally has better water quality.
- The City of Meridian wants to protect the deeper aquifer where their municipal wells are constructed to obtain water.
- An ADC in the Meridian area could help provide source water protection for current and future water needs.
Drilling Methods

• Most wells in the area are drilled with either air rotary or cable-tool drilling methods
• Both of these methods can cause large voids to form around the well casing during drilling
• These voids allow for comingling of aquifers of different pressures and chemistries to be mixed
• Contaminated water from one aquifer can contaminate other aquifers and production zones
Proposed Management Practices

• Require a long form drilling permit, eliminate the use of start-cards
• Require a drilling prospectus with each permit application regarding drilling methods and well completion
• Require approved drilling contractors
• Require mud-rotary drilling methods
• Require additional documentation and reporting forms
Proposed Management Practices

• Require full depth casing seals to the production zone
• Require pumped grout annual seals
• Require PVC plastic or high-strength/low-alloy steel well casing
• Require installation of stainless steel well screens
• Require water quality sampling of new wells
• Require special well decommissioning procedures
Proposed Management Practices

- Recommend borehole geophysical logging of new wells
- Recommend hydraulic testing of all new wells
- Recommended camera inspection of all new wells
- Recommended installation of monitoring tubes on each new well
- Recommended well head security
Summary

• City of Meridian has submitted a request to the Department for an ADC
• The purpose of the ADC is to protect ground water quality by requiring better well construction
• Department prepared a staff memorandum which found sufficient technical data to consider an ADC in the Meridian area
Summary

- The Department is requesting any verbal or written testimony from stakeholders and the public regarding the proposed ADC.
- The Public hearing tonight provides an opportunity to provide testimony regarding the proposed ADC.
- The Department will accept written comments until June 15, 2016.