

Proposed West Ada Area of Drilling Concern

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Resources

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.

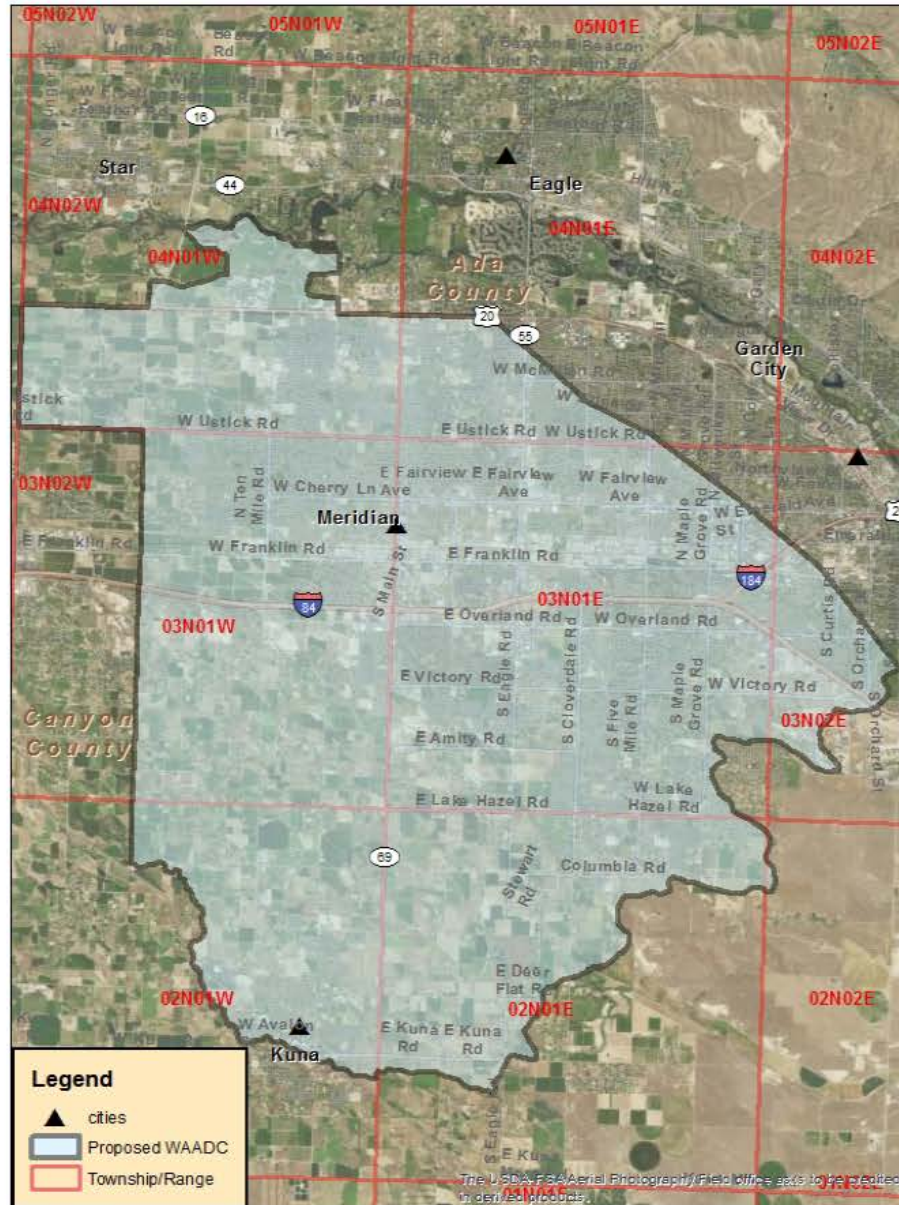
Areas of Drilling Concern

- 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

Proposed West Ada Area of Drilling Concern



The USDA FSA Aerial Photograph/Field Office sets to be credited in derived products.

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 annular 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

