

**BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO**

IN THE MATTER OF THE PROPOSED)	
CREATION OF A WEST ADA AREA OF)	PRELIMINARY ORDER
DRILLING CONCERN)	
_____)	

The City of Meridian (“Meridian”) has petitioned the Idaho Department of Water Resources (“Department”) to designate an Area of Drilling Concern (“ADC”) in west Ada County pursuant to Idaho Code § 42-238(15). *City of Meridian Request to the Director of the Idaho Department of Water Resources for Designation of a West Ada Area of Drilling Concern. Barry, T. and Squires, E. April 22, 2015* (“Petition”). Meridian requests the designation “in order to protect its residents and the ground water resource on which it depends.” *Id* at 1. Specifically, Meridian seeks to prevent the spread of both human caused and naturally occurring contaminants attributed to the “construction of inadequately sealed wells in and around the City of Meridian.” *Id* at 2. Meridian has completed a detailed ground water investigation to document the hydrogeologic and contaminant conditions in the Meridian area. A comprehensive report summarizing the ground water investigation is included with Meridian’s Petition.

On June 1, 2016, the Department conducted a public hearing in Meridian, Idaho to determine the public interest concerning the designation of the proposed West Ada Area of Drilling Concern (“WAADC”). At the hearing, some participants voiced concerns that the Department did not take action, beyond that required in statute, to fully notify the public of the hearing. In response, the Department issued a press release providing details of the proposed WAADC and extending the deadline for written comments from June 15 to July 15, 2016.

After examining the information submitted with the Petition and other information available to the Department and considering the public interest concerning the designation, the Department finds, concludes and orders as follows:

FINDINGS OF FACT

City of Meridian Petition and Hydrogeologic Investigation

1. Meridian submitted its Petition to the Department on September 22, 2015, requesting designation of the WAADC to protect municipal and private wells. The Petition included a detailed ground water investigation report (“Hydro Logic Report”) which included the following:
 - A. The boundaries of the WAADC proposed by Meridian were established based on the ground water source area for municipal wells in the Meridian area. The boundaries consist of hydrologic boundaries including the Boise River on the north and the New York Canal on the south and southeast, and non-hydrologic boundaries including the West Boise Area of Drilling Concern (“WBADC”) to the east and the Ada/Canyon

County boundary to the west. A map of the proposed WAADC is included in the Petition. The Petition requests the ADC “include Meridian’s Area of Impact and other adjacent areas of Boise, Kuna, and Ada County upstream in [the] ground water flow path.” *Petition* at 3.

- B. The upper 300 to 400 feet of the geologic section underlying the proposed WAADC consists primarily of sand with thin layers of silt, clay and gravel. Low permeability zones consist of thin clay-silt layers, buried soil horizons, cemented sands, and clay bearing sands. *Petition* at 11.
 - C. The majority of wells in the proposed WAADC have been drilled with either a cable tool rig or an air-rotary rig using “drill and drive” methods. Most wells in the area have only the minimum well surface seal. Wells constructed using drill and drive methods disrupt the natural layering of the sediments, create large voids outside the well casing and allow comingling of different aquifers. *Petition* at 8. Minimum seal depths prior to 2009 were 18 feet below ground surface. Since 2009, the minimum seal depth for well construction is 38 feet below ground surface. Some wells require deeper seals depending on the hydrogeologic conditions. IDAPA 37.03.09.025
 - D. The WBADC is included within the proposed WAADC and forms a portion of the east WAADC boundary. The WBADC was established in 2001 based on perchlorethylene (“PERC”) contamination of the aquifer from a leaking above-ground storage tank. PERC, a chlorinated solvent, is heavier than water and often sinks to deeper depths as the plume spreads, especially if the plume intercepts unsealed annular space in existing wells. Meridian states in its Petition that “the same contamination addressed in the WBADC continues to move toward Meridian and the City’s Well #20 in the ground water flow path.” *Petition* at 10.
 - E. Water quality data collected by Meridian indicates that ground water beneath Meridian, between approximately 200 and 300 feet below ground surface, contains elevated concentrations of uranium. *Petition* at 18.
 - F. Water quality sampling and analysis have documented anthropogenic ground water contamination in the area. For example, the Idaho Department of Environmental Quality (“IDEQ”) has designated the Ada-Canyon County Nitrate Priority Area which overlies much of the proposed WAADC. *Petition* at 16
 - G. Current and historic well construction practices within the proposed WAADC result in comingling of ground water between different aquifer units and the spread of contaminants from one aquifer to another. *Petition* at 3.
2. Elevated nitrate, pesticides, arsenic, uranium, and alpha radiation are documented in the aquifer system of the Treasure Valley, as reported by:
- Boyle, Linda, Howarth, Rob, and Bahr, Gary, 1997, Ground Water Investigation of Nitrate and Pesticides in Northwest Ada County, Idaho: Ground Water Technical Report No. 10.

- Cosgrove, D. and Taylor, J., 2007, Preliminary Assessment of Hydrogeology and Water Quality in Ground Water in Canyon County, Idaho; Idaho Water Resources Research Institute, Technical Report 07-001.
 - Hagan, Edward F., 2004, Ground Water Quality Technical Brief, Statewide Ambient Ground Water Quality Monitoring Program Arsenic Speciation Results (2002 and 2003); Idaho Department of Water Resources, Technical Summary (website).
 - Hanson, Brian, Benner, Shawn, Schmitz, Mark and Wood, Spencer, 2011, Isotopic and Geochemical Investigation into the Source of Elevated Uranium Concentrations in the Treasure Valley Aquifer, Idaho; Department of Geosciences, Boise State University.
 - Neely, Kenneth W., 2002, Arsenic Results from the Statewide Program, 1991 – 2001: Idaho Department of Water Resources, Technical Summary (website).
 - Neely, Kenneth W., 2001, Nitrate Results from the Statewide Program, 1991 – 2001: Idaho Department of Water Resources, Technical Summary (website).
 - Neely, Kenneth W., 2008, Trend Analyses for Idaho's Nitrate Priority Areas, 1994 - 2007: Idaho Department of Water Resources, Water Information Bulletin, No. 50, Part 7.
 - Neely, Kenneth W. and Crockett, Janet K., 1999, Nitrate in Idaho's Ground Water; Idaho Department of Water Resources, Technical Results Summary Number 1.
3. Department staff reviewed Meridian's Petition and Hydro Logic Report. A staff memorandum, dated May 4, 2016, was prepared which concluded that Meridian's request to the Director had sufficient technical data to support consideration of an ADC.
 4. Meridian's Petition "requests enhanced enforcement of" the following "primary well drilling/construction/abandonment practices" in the proposed ADC:
 - A. Require the direct mud-rotary drilling method for all domestic wells drilled deeper than 200 feet within the ADC;
 - B. Require full-depth, continuous casing seals from land surface to the top of the specific sub-aquifer unit where the well will draw from;
 - C. In domestic wells, the screened and/or filter packed interval open to the water-bearing section should not exceed a maximum "spread" of 20 feet;
 - D. Require plastic casing or high-strength/low-alloy steel casing made in the USA;
 - E. Require perforation and pressure grout abandonment of the annular spaces of existing and future wells when they are replaced or decommissioned; and
 - F. In place of the current driller Start Card system, which would no longer be allowed inside the ADC, all new wells to be drilled will require the drilling contractor or its consultant to submit a prospectus of the proposed drilling depth and details of well construction to the Idaho Department of Water Resources for review and approval prior to the commencement of drilling.

Petition at 4.

5. Meridian states that “changes to existing statewide well drilling and construction rules are not needed” to implement Meridian’s recommended well drilling, construction and abandonment practices in the proposed ADC “because the provisions necessary to protect the [Meridian sub-surface] hydrogeologic setting already exist within the rules.” *Petition* at 3.

Public Hearing

6. The Department scheduled a public hearing as required under Idaho Code § 42-238(15). The hearing was advertised in the Idaho Statesman on May 19 and May 26, 2016 in accordance with Idaho Code § 42-238(15). Written notice of the public hearing was sent to local elected officials, the Idaho Ground Water Association, the Idaho Building Contractors Association, the Idaho Association of Realtors, and the Idaho Association of Commerce and Industry. Meridian contacted the Cities of Boise and Kuna and local public water providers. Meridian also used several social media platforms to notify the general public.
7. A public hearing was held on June 1, 2016, at the Mountain View High School auditorium in Meridian, Idaho. Jeff Peppersack, Water Allocations Bureau Chief, presided as the hearing officer concerning designation of the WAADC proposed by Meridian. Hearing Officer Peppersack commenced the hearing by explaining the purpose of the hearing and the Department’s hearing process.
8. Department representative Tom Neace, Ground Water Protection Section Manager, delivered a presentation describing the proposed request, the regulatory process for establishing an ADC and the findings presented in Meridian’s ground water investigation. The presentation highlighted the problems with unsealed annular space between the well casing and the sedimentary formations resulting in comingling of aquifers with different temperature, pressure and/or quality. Water quality and hydraulic pressures of the various aquifers within the proposed WAADC differ. Some aquifers underlying the Meridian area are contaminated by naturally occurring arsenic and uranium, as well as anthropogenic contamination including nitrate, pesticides, herbicides, chlorinated solvents, bacteria and other pathogens. Mr. Neace explained that Meridian’s ground water investigation also identified uranium concentrations in excess of the drinking water standards at depths between approximately 200 and 300 feet.
9. Kyle Radek, Assistant Engineer for Meridian, delivered a presentation regarding the protection of the Meridian municipal wells which are completed into the deep aquifer. Mr. Radek also discussed the detailed monitoring data collected during drilling, modification and decommissioning of wells in the area. Monitoring data show both human caused and naturally occurring contaminants in some of the aquifers beneath Meridian. Mr. Radek described current and historical construction practices which cause comingling of aquifers and spreading of contaminants.
10. Discussion from the audience provided a number of comments directed at the Department and Meridian regarding new requirements if an ADC is designated, the proposed boundaries of the ADC, notification of the public meeting, water chemistry of the aquifers, and naturally occurring uranium and arsenic contamination in some aquifers.
11. The hearing officer allowed time for oral testimony from hearing participants.

12. Tom Barry, Public Works Director for Meridian, and Ed Squires, Hydrogeologist with Hydro Logic, Inc. and consultant to Meridian, testified in favor of the designation of the WAADC in order to protect local ground water resources and the investment Meridian has made to its public drinking water system. Details of both naturally occurring and human caused contamination were presented. Problems were described with unsealed well casing and large voids created by drilling with air rotary and cable tool drilling methods, and how those methods promote comingling of water between aquifers.
13. George Post, driller for Post and Sons Drilling, testified in favor of requiring full length seals. Mr. Post testified that constructing wells in the sedimentary artesian aquifers of the Treasure Valley using mud-rotary drilling methods allows for installation of full length annular seals from the production zone to the surface. These full length seals protect against comingling of aquifers.
14. Andy Clark, driller with Coonse Drilling, testified that full length seals are a good idea, but he did not like or support the ADC designation process.
15. Drillers Dave Adamson (Adamson Pump and Drilling), Jim Hutchings (Jim's Well Drilling) and Tony Hackett (Down Right Drilling and Pump) testified that requiring mud-rotary drilling would increase the cost of a well to approximately 2.5 times the cost of a well drilled with air rotary or cable tool methods. These drillers drill wells using mud-rotary and air-rotary methods and equipment. They testified that requiring mud-rotary drilling only was too restrictive and in some cases not appropriate.
16. State Representative John Vander Woude testified that the hearing notice did not fully inform the general public. Representative Vander Woude also stated that the ADC designation should not be used for this particular situation and that the boundaries of the area proposed were too large.
17. State Representative Tom Dayley testified that the Department should take additional time to further notify the public. Representative Dayley stated that the Department should require appropriate well construction through the current regulations. Representative Dayley also stated that additional monitoring needed to be done and that the Department was given funding for evaluating the Treasure Valley aquifer so designating an ADC in the area may be premature.
18. Lynn Tominaga, representing the Idaho Ground Water Association (IGWA), testified in opposition to the ADC designation. Mr. Tominaga testified that IGWA was not opposed to better well construction and deeper well seals as required by the rules, but the ADC was not necessary to protect the ground water. Mr. Tominaga stated that the Department could suspend Start Card permits in the Meridian area and condition long form permits to assure wells are constructed properly, similar to how the Department currently permits wells in Island Park (Eastern Idaho) and Lemhi County.
19. Hearing Officer Peppersack concluded the record and stated that written comments would be accepted until June 15, 2016.

20. Via press release dated June 15, 2016, the Department presented information about the Petition and extended the public comment period until July 15, 2016, to provide the public with additional time to evaluate the proposed WAADC.
21. Twenty-nine (29) letters were received during the public comment period concerning the proposed WAADC. Four letters oppose the WAADC. Two of the opposition letters are from private citizens, one from a licensed well drilling contractor and one from IGWA. Those opposed generally cite increased cost of wells, lack of public input, too large of an area for the ADC, and a need for more monitoring data. The IGWA letter points out that the well construction rules already provide regulatory authority by restricting Start Card permits and allowing approval conditions for long form permits. Twenty-five (25) letters were submitted in support of designation of the WAADC (two were follow-up letters from Meridian). Six of the supporting letters are from ground water professionals, seven letters are from cities (excluding Meridian), water providers and the Central District Health. The cities of Nampa, Caldwell, Kuna, and Eagle all support Meridian in designating the WAADC. Ten private citizens wrote in support of the WAADC, seven by form letter citing similarities to recent issues in Flint, MI. Those supporting the WAADC generally cite support for proper well construction and the need to protect ground water supplies from current and future contamination.

GOVERNING LAW

1. Idaho Code § 42-238(12), provides as follows:

The water resource board shall adopt minimum standards for new well construction, modification and abandonment of existing wells, low temperature geothermal resource well construction and geothermal well construction in this state under the provisions of chapter 52, title 67, Idaho Code. Such standards shall require each well to be so constructed as to protect the ground water of the state from waste and contamination and may include additional requirements for wells drilled in "areas of drilling concern" as designated in accordance with subsection (15) of this section. Every licensed well driller will be furnished a copy of the adopted standards by the director, and will be required to construct or abandon each well in compliance with the adopted standards.

2. Idaho Code § 42-238(15), provides, in part:

The director of the department of water resources may designate as he determines necessary, "areas of drilling concern" on an aquifer by aquifer basis within which drillers must comply with the additional requirements of this section. The director shall designate "areas of drilling concern" to protect the public health and to prevent waste or contamination of ground or surface water because of factors such as aquifer pressure, vertical depth of the aquifer, warm or hot ground water, or contaminated ground or surface waters. It is unlawful for any person not meeting the requirements of this subsection to drill a well for any purpose in a designated "area of drilling concern." Any person drilling a new well or deepening or modifying an existing well for any purpose in an "area of drilling concern" as designated by the director as herein provided shall comply with the following additional requirements:

- a) Additional bonding requirements as determined by the director, to insure that the well is constructed or abandoned in compliance with the adopted standards for well construction.
- b) Additional experience and knowledge in drilling wells encountering warm water or pressurized aquifers as required by rules adopted by the water resource board.
- c) Document that specialized equipment needed to drill wells in "areas of drilling concern," as determined by the director, is or will be available to the driller.
- d) Provide a notice of intent to drill, deepen or modify a well, submit plans and specifications for the well and a description of the drilling methods that will be used, as required by the director, and receive the written approval of the director before commencing to drill, deepen, or modify any well in a designated "area of drilling concern."

3. Idaho Code § 42-238(15), further provides that:

Prior to designating an "area of drilling concern," the director shall conduct a public hearing in or near the area to determine the public interest concerning the designation. Notice of the hearing shall be published in two (2) consecutive weekly issues of a newspaper of general circulation in the area prior to the date set for hearing.

4. Section 40.01.c of the Well Construction Standards Rules (IDAPA 37.03.09) ("Well Construction Rules") states the following:

The designation of an area of drilling concern can include certain aquifers or portions thereof while excluding others. The area of drilling concern may include low temperature geothermal resources while not including the shallower cold ground water systems.

5. Idaho Code § 42-235, states in pertinent part that:

Prior to beginning construction of any well, or changing the construction of any well, the driller or well owner shall obtain a permit from the director of the department of water resources to protect the public health, safety and welfare and the environment, and to prevent the waste of water or mixture of water from different aquifers.

6. Idaho Code § 42-230(b) defines a "Well" as "an artificial excavation or opening in the ground more than eighteen (18) feet in vertical depth below land surface by which ground water of any temperature is sought or obtained."

7. "Drilling or Well Drilling" is defined as the act of constructing a new well or modifying, changing the construction of, or abandoning an existing well. See Section 10.18 of the Well Driller Licensing Rules (IDAPA 37.03.10) ("Well Driller Rules") and Section 10.69 of the Well Construction Rules.

8. "Start Card" is defined as an expedited drilling permit process for the construction of cold water, single family residential wells. See Section 10.29 of the Well Driller Rules, and Section 10.52 of the Well Construction Rules.

9. Section 45.01.c of the Well Construction Rules states, in part, that “[t]he Director may allow the use of a start card permit or give verbal approval to a well driller for the construction of cold water single family domestic wells.”
10. Section 45.01.e of the Well Construction Rules states that “[t]he Director will not give a verbal approval or allow the use of a start card permit for wells constructed in a designated Area of Drilling Concern, Critical Ground Water Area, or Ground Water Management Area.”
11. Section 25.07 of the Well Construction Rules requires that “[w]ell casings must be sealed in the required annular space with approved material to prevent the possible downward movement of contaminated surface waters or other fluids in any annular space around the well casing. Proper sealing is also required to prevent the movement of groundwater either upward or downward from zones of different pressure, temperature or quality within the well or outside the casing.”
12. Section 25.07.b of the Well Construction Rules specifies that well “[s]eals are required at depths greater than thirty-eight (38) feet in artesian wells or to seal through confining layers separating aquifers of differing pressure, temperature, or quality in any well.”
13. Section 25.08 of the Well Construction Rules states the following:

Sealing requirements described herein are minimum standards that apply to all wells. The Director may establish alternative minimum sealing requirements in specific areas when it can be determined through detailed studies of the local hydrogeology that a specific alternative minimum will provide protection of the ground water from waste or contamination.

14. Section 25.09.a of the Well Construction Rules states the following:

When artesian water is encountered in unconsolidated formations, the production zone or open interval must be limited to zones of like pressure, temperature, and quality. Water encountered in oxidized sediments must not be comingled with water encountered in reduced sediments. Well casing must extend from land surface into the lower most confining layer above the production zone, and must be sealed...

15. Section 25.16 of the Well Construction Rules requires well owners to maintain and properly decommission wells in a manner that will prevent waste or contamination of ground water. Additionally, the person decommissioning the well must submit a report to the Director describing the procedure. Decommissioning must adhere to the following (Section 25.16.c):
 - i. Cased wells and boreholes without a continuous seal from the top of the intakes or screen to the surface. The well driller must use one (1) of the following methods as applicable:
 - (1) The Director may require that well casing be perforated every five (5) feet from the bottom of the casing to within five (5) feet of the surface. Perforations made must be adequate to allow the free flow of seal material into any voids outside the well casing. There must be at least four equally spaced perforations per section circumference. Approved grout must be pressure pumped to fill any voids outside of

the casing. A sufficient volume must be used to completely fill the well and annular space; or

(2) Fill the borehole with approved seal material as the casing is being removed.

- ii. Cased wells and boreholes with full-depth seals. If the well is cased and sealed from the top of the screen or production zone to the land surface, the well must be completely filled with approved seal material.
- iii. Uncased wells must be completely filled with approved seal material.
- iv. Dry hole wells or wells from which the quantity of water to meet a beneficial use cannot be obtained must be decommissioned with cement grout, concrete or other approved seal material in accordance with these rules.

CONCLUSIONS OF LAW

1. Meridian's ground water investigation was limited to the Meridian area and the up-gradient source water area for Meridian's municipal water supply. Yet the eight technical reports, listed in Findings of Fact 2, provide evidence that the hydrogeologic conditions are similar throughout the Treasure Valley both within the proposed WAADC boundary and beyond the boundary. Likewise, contamination within the proposed WAADC is also present to some extent beyond the boundary of the proposed WAADC. However, water quality data and hydrogeologic conditions from these adjacent areas were not part of the Petition. The lack of data and understanding of conditions in the adjacent areas creates uncertainty in designating an ADC boundary. More data is necessary to evaluate the adjacent areas before designating an ADC. Designation of the proposed WAADC is therefore premature.
2. Designation of the proposed WAADC is also unnecessary at this point because the regulatory provisions necessary to protect the ground water within the proposed WAADC already exist. Idaho Code, the Well Construction Rules and the Well Drilling Rules establish the requirements to properly seal wells in unconsolidated formations with separate aquifers having different temperature, pressure or water quality. From the Hydro Logic Report and the eight technical reports listed in Findings of Fact No. 2, the Department determines that specific alternative minimum standards are necessary to protect ground water from waste and contamination. Further, by Idaho law, the Director is authorized to establish those alternative minimum sealing requirements and take other action as needed to protect the ground water from contamination.
3. The Hydro Logic Report includes detailed hydrogeologic data that justify better well construction practices consistent with existing law. The Well Construction Rules require installation of proper well seals to prevent comingling of different aquifers, like those within the proposed WAADC boundary, protecting the ground water resource.
4. Although designation of the proposed WAADC is premature, the Director may nonetheless act to protect the ground water resource against contamination by implementing the following actions and standards within the proposed WAADC boundary, excluding the existing WBADC, as shown on Attachment A:
 - A. Suspend the use of pre-approved drilling permits or "Start Cards" for all new domestic wells, and require the use of long form permit applications for all wells including cold water, single-family residential wells, so that applications are reviewed and permits are

conditioned to require installation of well seals in accordance with the Department's regulatory framework. Require a drilling prospectus, prepared and signed by the driller, to ensure the driller can address the alternative specific well seal requirements. The drilling prospectus shall show all pertinent well dimensions including well depth, and a narrative describing the construction materials and methods, including well seal methods, to be used in the drilling operation;

- B. Limit domestic wells, including cold water, single-family residential wells, to a depth of less than 200 feet below ground surface unless adequate yield is not present within the depth limit or upon approval of the Director. Limiting domestic wells to less than 200 feet will minimize production from the 200 to 300 foot zone of elevated uranium contamination. Also, require any well drilled and installed deeper than the surface gravel aquifer to be sealed through the surface gravel aquifer and into the first clay layer in the underlying layered sedimentary aquifer;
 - C. Require all wells drilled deeper than 200 feet below ground surface to install full length annular seals from the production zone to ground surface with pumped grout annular seals from the bottom up. This requirement will prevent comingling and spread of contamination;
 - D. Require wells to be constructed with stainless steel or PVC well screens to control sand production. Screened interval should be limited to 20 feet, unless it can be shown that additional screened intervals are necessary and are within the same aquifer;
 - E. Require appropriate well decommissioning procedures for wells within the proposed WAADC boundary to prevent comingling of different aquifers and potential spreading of contaminants. Also, require submittal of a prospectus with each proposed decommissioning, describing the methods, materials and procedures to be used. Also, require the well casing to be decommissioned using a tremie pipe or pressure grouting procedure to place a high solids bentonite grout or a neat cement grout, from the bottom of the well to the top. If the casing is to be left in place, the prospectus shall include procedures to assure that bentonite grout or neat cement fills the annular space behind the casing to prevent vertical movement of water; and
5. The Hearing Officer recommends that the Director consider requiring water quality sampling and analyses for nitrate, arsenic and uranium for all wells within the proposed WAADC boundary that are not already required to sample for those contaminants by IDEQ. The well owner should be responsible for sampling and analysis and reporting to the Department following development of the well and installation of the pump. The analyses would ensure that the end user is aware of the water quality conditions of the ground water they divert and increase the Department's understanding of the ground water chemistry and distribution of contamination.
6. Other specific drilling methods recommended in the Petition are not required at this time. Each well will require a prospectus which will provide the Department the information necessary to determine if the driller is capable of properly constructing wells in the area and if the method of drilling is best suited for the conditions.

ORDER

IT IS HEREBY ORDERED AS FOLLOWS:

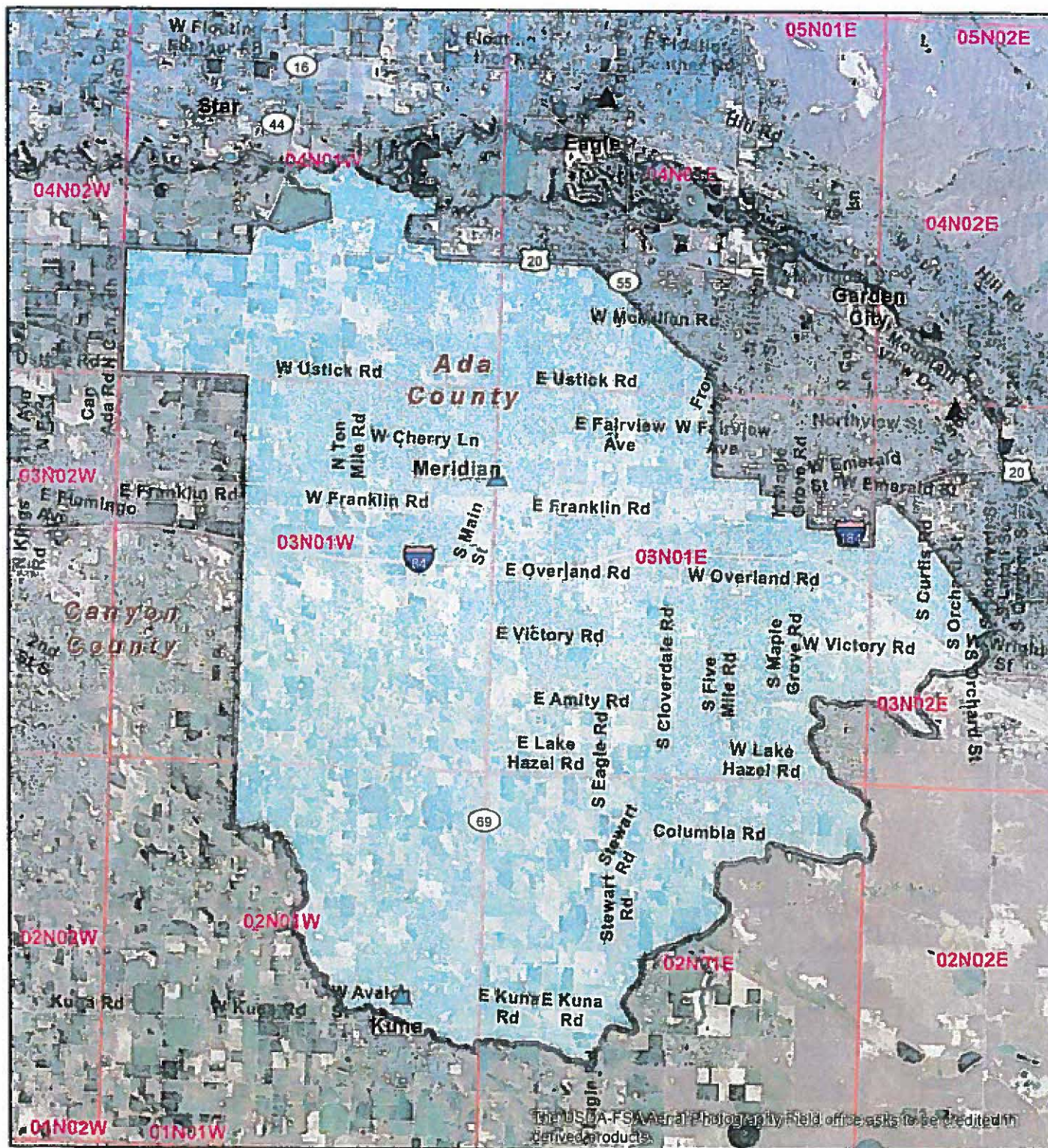
1. Meridian's Petition for designation of the WAADC is denied. Formal designation of the WAADC is premature. Additional data and evaluation of hydrogeologic conditions in the areas surrounding the proposed WAADC is necessary to establish boundaries of a designated ADC.
2. Consistent with the Department's duties to protect public health and prevent waste or contamination of ground or surface water, effective November 1, 2016, the Department shall implement the following procedures and standards for well construction permits within the proposed WAADC boundary, excluding the WBADC, as shown in Attachment A:
 - A. Start Cards shall be suspended for all new domestic wells; a long form permit application shall be required for all wells, including a drilling prospectus, prepared and signed by the driller. The drilling prospectus shall show all pertinent well dimensions including well depth, and a narrative describing the construction materials and methods, including well seal methods, to be used in the drilling operation;
 - B. Domestic wells shall be limited to a depth of less than 200 feet below ground surface unless adequate yield is not present within the depth limit or upon approval of the Director. Appropriate well seals shall be installed to prevent comingling of different aquifers. Domestic wells drilled less than 200 feet below ground surface must be sealed through the surface gravel aquifer to prevent comingling of the upper surface gravel aquifer from the underlying oxidized layered sedimentary aquifer;
 - C. Wells drilled deeper than 200 feet below land surface shall have full length annular seals installed from the production zone to the ground surface with pumped grout annular seals from the bottom up.
 - D. All wells, whether drilled deeper or shallower than 200 feet below ground surface, shall be constructed with stainless steel or PVC well screen to control sand production. Screened intervals shall be limited to 20 feet, unless it can be shown that additional screened intervals are necessary and are within the same aquifer; and
 - E. Prior to decommissioning wells within the proposed WAADC boundary, a drilling prospectus shall be prepared and signed by the driller and submitted to the Department. The prospectus shall include the details of the decommissioning procedures. The well casing shall be decommissioned using a tremie pipe or pressure grouting procedure to place a high solids bentonite grout or a neat cement grout, from the bottom of the well to the top. If the casing is to be left in place, the prospectus shall include procedures to assure that bentonite grout or neat cement fills the annular space behind the casing to prevent vertical movement of water.

Dated this 30 day of September, 2016.



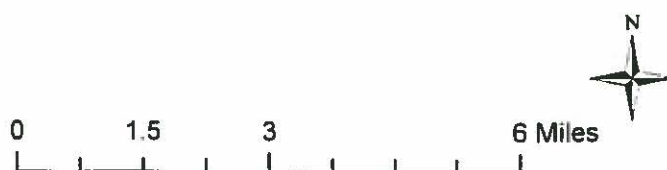
Jeff Peppersack, Hearing Officer

Proposed West Ada Area of Drilling Concern Boundary (Excluding the West Boise Area of Drilling Concern)



Legend

- West Ada Area of Drilling Concern Proposed Boundary
- ▲ cities
- Township/Range



CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 30th day of September 2016, the above and foregoing document was served on each individual or entity on the service list for this matter on file at the Idaho Department of Water Resources, 322 East Front Street, Boise, Idaho and www.idwr.idaho.gov. Each individual or entity on the service list was served by placing a copy of the above and foregoing document in the United States mail, postage prepaid and properly addressed.

Documents served: **Preliminary Order in the Matter of the Proposed Creation of a West Ada Area of Drilling Concern**

A handwritten signature in black ink, appearing to read "Sarah Shaul", is written over a horizontal line.

Sarah Shaul
Technical Records Specialist
Idaho Department of Water Resources

EXPLANATORY INFORMATION TO ACCOMPANY A PRELIMINARY ORDER

(To be used in connection with actions when a hearing was held)

The accompanying order is a **Preliminary Order** issued by the Idaho Department of Water Resources (Department) pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the Department unless a party petitions for reconsideration or files an exception and brief as further described below:**

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the hearing officer within fourteen (14) days of the service date of the order as shown on the certificate of service. **Note: the petition must be received by the Department within this fourteen (14) day period.** The hearing officer will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after: (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding to the Director. Otherwise, this preliminary order will become a final order of the agency.

If any party appeals or takes exceptions to this preliminary order, opposing parties shall have fourteen (14) days to respond to any party's appeal. Written briefs in support of or taking exceptions to the preliminary order shall be filed with the Director. The Director retains the right to review the preliminary order on his own motion.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, request for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with Rules of Procedure 302 and 303.

FINAL ORDER

The Department will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The Department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

Unless a different date is stated in a final order, the order is effective fourteen (14) days after its service date if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

- (a) The petition for reconsideration is disposed of; or
- (b) The petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

- i. A hearing was held,
- ii. The final agency action was taken,
- iii. The party seeking review of the order resides, or
- iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.