

SERIES SAFETY REGULATIONS

609. STATEWIDE GROUNDWATER BASELINE SAMPLING AND MONITORING:

Except coalbed methane wells, which are subject to Rule 608, new Oil and Gas Locations shall be subject to the following groundwater baseline sampling and monitoring requirements:

a. **Sampling locations:** Initial baseline samples and subsequent monitoring samples shall be collected from two (2) groundwater sources or springs within a one (1) mile radius of the proposed Oil and Gas Location. Sampling locations shall be selected by the operator based on the following criteria:

- (1) Proximity to the proposed Oil and Gas Location. Water features closest to the proposed Location are preferred.
- (2) Type of water feature. Domestic water wells are preferred over other water features. Springs may be sampled when no water wells are available.
- (3) Local topography and hydrogeology. Groundwater and surface water flow directions should be assessed in selecting sampling locations.
- (4) Orientation of locations with respect to the Oil and Gas Location. Where possible, the sampling locations should be on opposite sides of the Oil and Gas Location.
- (5) Multiple identified aquifers available. Where multiple defined aquifers are present, the sampling locations should attempt to sample from different aquifers when possible.
- (6) Existing sample locations. Water wells for which the Commission has existing data may be selected.

b. **Denial of access to sampling locations.** Where the owners of all suitable sampling locations refuse to grant access despite an operator's best efforts to obtain consent to conduct sampling, the Director may modify or waive the requirements of this Rule 609.

c. **Timing of initial sampling:** Initial sampling shall be conducted:

- (1) Prior to commencement of drilling or, on Oil and Gas Locations where no wells are planned, prior to commencement of installation of an Oil and Gas Facility on the Location; and
- (2) Prior to re-stimulation of a well if more than twelve (12) months have passed since the initial, pre-drilling sampling event or the most recent re-stimulation sampling event was conducted.

d. **Subsequent monitoring sampling:** Subsequent monitoring sampling shall be conducted:

- (1) Not less than 12 months, nor more than 18 months, following any well completion or facility installation; and
- (2) Not less than sixty (60) months, nor more than seventy-eight (78) months, after the last sampling event performed pursuant to Rule 609.d.i(1).
- (3) Additional "post-completion" test(s) may be required if changes in water quality are identified during follow-up testing.

- (4) The Director may require further water well sampling at any time in response to complaints from water well owners.

e. Sampling procedures and analytical:

- (1) Sampling and analysis shall be conducted in conformance with an accepted industry standard as described in Rule 910.b.(2).
- (2) The initial baseline testing described in this section shall include pH, specific conductance, total dissolved solids (TDS), dissolved gases (methane, ethane, propane), alkalinity (total bicarbonate and carbonate as CaCO₃), major anions (bromide, chloride, fluoride, sulfate, nitrate and nitrite as N, phosphorus), major cations (calcium, iron, magnesium, manganese, potassium, sodium), other elements (barium, boron, selenium and strontium), presence of bacteria (iron related, sulfate reducing, slime and coliform), total petroleum hydrocarbons (TPH) and BTEX compounds (benzene, toluene, ethylbenzene and xylenes). Hydrogen sulfide shall also be measured using a field test method. Field observations such as odor, water color, sediment, bubbles, and effervescence shall also be included. The sample location shall be surveyed in accordance with Rule 215. COGCC recommends that the latest version of EPA SW 846 analytical methods be used where possible and that analyses of samples be performed by laboratories that maintain state or national accreditation programs.
- (3) If free gas or a dissolved methane concentration greater than 1.0 milligram per liter (mg/l) is detected in a water well, gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen – ¹²C, ¹³C, ¹H and ²H) shall be performed to determine gas type. If test results indicated thermogenic or a mixture of thermogenic and biogenic gas. If the methane concentration increases by more than 5.0 mg/l between sampling periods, or increases to more than 10. mg/l, the operator shall notify the Director and the owner of the water well immediately.
- (4) Copies of all test results described above shall be provided to the Commission and the water well owner within three (3) months of collecting the samples. The analytical data and surveyed well locations shall also be submitted to the Director in an electronic data deliverable format.

318A(I). GREATER WATTENBERG AREA SPECIAL WELL LOCATION, SPACING AND UNIT DESIGNATION RULE (EXCEPT THE CITY AND COUNTY OF BROOMFIELD)

The provisions of Rule 318A(I), recited below, pertain to those lands within the Greater Wattenberg Area defined herein, excepting those lands within the City and County of Broomfield, Colorado as it existed on August 8, 2011.

- a. **GWA, GWA wells, GWA windows and unit designations.** The Greater Wattenberg Area ("GWA") is defined to include those lands from and including Townships 2 South to 7 North and Ranges 61 West to 69 West, 6th P.M. In the GWA, operators may utilize the following described surface drilling locations ("GWA windows") to drill, twin, deepen, or recomplete a well ("GWA well") and to commingle any or all of the Cretaceous Age formations from the base of the Dakota Formation to the surface:
- (1) A square with sides four hundred (400) feet in length, the center of which is the center of any governmental quarter-quarter section ("400' window"); and,
 - (2) A square with sides eight hundred (800) feet in length, the center of which is the center of any governmental quarter section ("800' window").
 - (3) Absent a showing of good cause, which shall include the existence of a surface use or other agreement with the surface owner authorizing a surface well location outside of a GWA window, all surface wellsites shall be located within a GWA window.
 - (4) Unit designations.
 - A. 400' window. When completing a GWA well in a 400' window to a spaced formation, the operator shall designate drilling and spacing units in accordance with existing spacing orders.
 - B. 800' window. When completing a GWA well in an 800' window, whether in spaced or unspaced formations, the operator shall: (i) designate drilling and spacing units in accordance with existing spacing orders where units are not smaller than a governmental quarter section; or (ii) form a voluntary drilling and spacing unit consisting of a governmental quarter section; or (iii) where designating a drilling and spacing unit smaller than a governmental quarter section, secure waiver(s) from the operator or from the mineral owners (if the operator is also the holder of the mineral lease) of the lands in the governmental quarter section that are not to be included in the spacing unit; or (iv) apply to the Commission to form an alternate unit or to respace the area.
 - C. Unspaced areas and wellbore spacing units. When completing a GWA well to an unspaced formation, the operator shall designate a drilling and spacing unit not smaller than a governmental quarter-quarter section if such well is proposed to be located greater than four hundred sixty (460) feet from the quarter-quarter section boundary in which it is located. If a well is proposed to be located less than four hundred sixty (460) feet from the governmental quarter-quarter section boundary, a wellbore spacing unit ("wellbore spacing unit") for such well shall be comprised of the governmental quarter-quarter sections that are located less than four hundred sixty (460) feet from the wellbore regardless of section or quarter section lines.
 - D. Horizontal GWA well. Where a drilling and spacing unit does not exist for a horizontal well, a horizontal wellbore spacing unit shall be designated by the operator for each proposed horizontal well. The horizontal wellbore spacing unit may be of different sizes and configurations depending on lateral length and

orientation but shall be comprised of the governmental quarter-quarter sections in which the wellbore lateral penetrates the productive formation as well as any governmental quarter-quarter sections that are located less than four hundred sixty (460) feet from the portion of the wellbore lateral that penetrates the productive zone regardless of section or quarter section lines. However, if the horizontal component of the horizontal wellbore is located entirely within a GWA window, the operator shall designate a drilling and spacing unit in accordance with subsections a.(4)A. and a.(4)B. of this rule. A horizontal wellbore spacing unit may overlap portions of another horizontal wellbore spacing unit or other wellbore spacing unit designated in accordance with subsection a.(4)C. GWA horizontal wells and horizontal wellbore spacing units shall be subject to the notice and hearing procedures as provided for in Rule 318A(I).e.(6).

b. **Recompletion/commingling of existing wells.** Any GWA well in existence prior to the effective date of this rule, which is not located as described above, may also be utilized for deepening to or recompletion in any Cretaceous Age formation and for the commingling of production therefrom.

c. **Surface locations.** Prior to the approval of any Application for Permit-to-Drill submitted for a GWA well, the proposed surface well location shall be reviewed in accordance with the following criteria:

- (1) A new surface well location shall be approved in accordance with Commission rules when it is less than fifty (50) feet from an existing surface well location.
- (2) When the operator is requesting a surface well location greater than fifty (50) feet from a well (unless safety or mechanical considerations of the well to be twinned or topographical or surface constraints justify a location greater than fifty (50) feet), the operator shall provide a consent to the exception signed by the surface owner on which the well is proposed to be located in order for the Director to approve the well location administratively.
- (3) If there is no well located within a GWA window but there is an approved exception location well located outside of a GWA window that is attributed to such window, the provisions of subsections (1) and (2) of this subsection c. shall be applicable to such location.

d. **Prior wells excepted.** This rule does not alter the size or configuration of drilling units for GWA wells in existence prior to the effective date of this rule. Where deemed necessary by an operator for purposes of allocating production, such operator may allocate production to any drilling and spacing unit with respect to a particular Cretaceous Age formation consistent with the provisions of this rule.

e. **GWA infill.**

- (1) **Interior infill wells.** Additional bottom hole locations for the "J" Sand, Codell and Niobrara Formations are hereby established greater than four hundred sixty (460) feet from the outer boundary of any existing 320-acre drilling and spacing unit ("interior infill wells"). Pursuant to the well location provisions of subsection a., above, interior infill well locations shall be reached by utilizing directional drilling techniques from the GWA windows.

- A. If a bottom hole location for an interior infill well is proposed to be located less than four hundred sixty (460) feet from the outer boundary of an existing drilling and spacing unit, a wellbore spacing unit as defined in a.(4)C., above, shall be designated by the operator for such well.

- B. If a bottom hole location for an interior infill well is proposed to be located greater than four hundred sixty (460) feet from an existing 80-acre or existing 320-acre drilling and spacing unit, the spacing unit for such well shall conform to the existing 80-acre or existing 320-acre drilling and spacing unit.
- (2) **Boundary wells.** Additional bottom hole locations for the "J" Sand, Codell and Niobrara Formations are hereby established less than four hundred sixty (460) feet from the outer boundary of a 320-acre governmental half section or from the outer boundary of any existing 320-acre drilling and spacing unit ("boundary wells"). A wellbore spacing unit as defined in a.(4)C., above, shall be designated by the operator for such well.
- (3) **Additional producing formations.** An operator wanting to complete an interior infill well or boundary well in a formation other than the "J" Sand, Codell, or Niobrara Formations ("additional producing formation") must request an exception location prior to completing the additional producing formation. The spacing unit dedicated to the exception location shall comply with subsections (1) or (2), above, as appropriate.

(4) Water well sampling. Sampling shall be performed pursuant to Rule 609.

~~The Director shall require initial baseline testing prior to the first well proposed within a governmental section. The following shall be used as guidance for the Director in establishing initial baseline testing:~~

- ~~A. Within the governmental quarter section of the proposed well, the closest water well ("water quality testing well") completed in the Laramie/Fox Hills Aquifer shall be sampled.~~
- ~~B. If no Laramie/Fox Hills water wells are located within the governmental quarter section, then the deepest representative water quality testing well within the governmental quarter section of the proposed well shall be sampled.~~
- ~~C. If no water wells are located within the governmental quarter section, a water quality testing well (preferably completed in the Laramie/Fox Hills Aquifer) within one-half (1/2) mile of the proposed well shall be selected.~~
- ~~D. If there are no water quality testing wells that meet the foregoing criteria, then initial baseline testing shall not be required.~~
- ~~E. Initial baseline testing shall include laboratory analysis of all major cations and anions, total dissolved solids, iron and manganese, nutrients (nitrates, nitrites, selenium), dissolved methane, pH, and specific conductance.~~
- ~~F. If free gas or a methane concentration level greater than 2 mg/l is detected in a water quality testing well, compositional analysis shall be performed to determine gas type (thermogenic, biogenic or an intermediate mix of both). If the testing results reveal biogenic gas, no further isotopic testing shall be required. If the testing results reveal thermogenic gas, carbon isotopic analyses of methane carbon shall be conducted. The Director may require further water well sampling at any time as a result of the laboratory results or in response to complaints from water well owners.~~
- ~~G. Copies of all test results described above shall be provided to the Director and the landowner where the water quality testing well is located within three (3) months of collecting the samples used for the test. Laboratory results shall also be submitted to the Director in an electronic format.~~

- (5) Existing production facilities. To the extent reasonably practicable, operators shall utilize existing roads, pipelines, tank batteries and related surface facilities for all interior infill wells and boundary wells.
- (6) Notice and hearing procedures. For proposed boundary wells, wellbore spacing units, and additional producing formations provided by this subsection e., and for proposed horizontal wells and horizontal wellbore spacing units as provided by 318A(l).a.(4)D., the following process shall apply:
 - A. Notice shall be given by certified mail by the operator of a proposed boundary well, wellbore spacing unit, horizontal well or horizontal wellbore spacing unit to all owners in the proposed wellbore spacing unit. Notice shall be given by certified mail by the operator of a proposed additional producing formation to all owners in cornering and contiguous spacing units of the requested completion and the proposed spacing unit; if the additional producing formation is unspaced only the owner in the proposed spacing unit needs to be notified. Notice for a boundary well, wellbore spacing unit, horizontal well or horizontal wellbore spacing unit shall include a description of the wellbore orientation, the anticipated spud date, the size and shape of the proposed wellbore spacing unit (with depiction attached), the proposed surface and bottom hole locations, identified by footage descriptions, and the survey plat. For proposed horizontal wells and horizontal wellbore spacing units, the operator shall also identify by footage descriptions, the location at which the wellbore penetrates the target formation.
 - B. Each owner shall have a thirty (30) day period after receipt of such notice to object in writing to the operator. The written objection must be based upon a claim that the notice provided by the operator does not comply with the informational requirements of subsection A., above, and/or a technical objection that either waste will be caused, correlative rights will be adversely affected, or that the operator is not an "owner", as defined in the Act, of the mineral estate(s) through which the wellbore penetrates within the target formation. Specific facts must form the basis for such objection. The objecting party shall provide a copy of the written objection to the Director.
 - C. If an objection pursuant to subsection B. is timely received, the operator may seek a hearing before the Commission on the objection. The objecting party will bear the burden of proving that the notice provided by the operator does not comply with the informational requirements of subsection A., above, that the operator is not an owner, as defined by the Act, and/or the approval of the boundary well location, wellbore spacing unit, horizontal well, horizontal wellbore spacing unit or additional producing formation would either create waste or adversely affect the objecting party's correlative rights. The objection may be first presented to the hearing officer of the Commission and such hearing officer, based on the facts, may recommend to the Commission that such objection shall stand or be dismissed.
 - D. If the objection stands, the Commission may either enter an order approving or denying the proposed boundary well location, wellbore spacing unit, horizontal well location, horizontal wellbore spacing unit or additional producing formation, with or without conditions. Such conditions may be requisites for the Application for Permit-to-Drill, Form 2, if the operator chooses to proceed with an Application for Permit-to-Drill, Form 2, relative to the proposed boundary well, wellbore spacing unit, horizontal well, horizontal wellbore spacing unit or additional producing formation. If the objection is dismissed, the operator shall treat the objection as withdrawn and otherwise proceed with subsection E. below.

E. Absent receipt of a timely objection pursuant to subsections A. and B., above, the Director may administratively approve the boundary well, wellbore spacing unit, horizontal well, horizontal wellbore spacing unit or additional producing formation. A location plat evidencing the well location, wellbore spacing unit, or additional producing formation and applicable spacing unit shall be submitted to the Director together with copies of any surface waivers and a certification that no timely objections were received. An Application for Permit-to-Drill, Form 2, specifically identifying that a boundary well, wellbore spacing unit, horizontal well, horizontal wellbore spacing unit or additional producing formation is proposed, shall also be filed with the Director in accordance with Rule 303. within ninety (90) days of the expiration of the thirty (30) day notice period or such notice shall be deemed withdrawn. Should such notice be withdrawn or deemed withdrawn, the proposed operator shall not submit another notice for the same well or wellbore spacing unit within forty-five (45) days of the date the original notice is withdrawn or deemed withdrawn.

f. **Limit on locations.** This rule does not limit the number of formations that may be completed in any GWA drilling and spacing unit nor, subject to subsection c., above, does it limit the number of wells that may be located within the GWA windows.

g. **GWA water sampling.** The Director may apply appropriate drilling permit conditions to require water well sampling near any proposed GWA wells in accordance with the guidelines set forth in ~~subsection e.(4).~~ [above Rule 609.](#)

h. **Waste Management.** In conjunction with filing an Oil and Gas Location Assessment, Form 2A, the operator shall include a waste management plan meeting the general requirements of Rule 907.a.

i. **Exception locations.** The provisions of Rule 318.c. respecting exception locations shall be applicable to GWA wells, however, absent timely objection, boundary wells, wellbore spacing units, and additional producing formations shall be administratively approved as provided in subsection e.(6) above.

j. **Correlative rights.** This rule shall not serve to bar the granting of relief to owners who file an application alleging abuse of their correlative rights to the extent that such owners can demonstrate that their opportunity to produce Cretaceous Age formations from the drilling locations herein authorized does not provide an equal opportunity to obtain their just and equitable share of oil and gas from such formations.

k. **Supersedes orders and policy.** Subject to paragraph d. above, this rule supersedes all prior Commission drilling and spacing orders affecting well location and density requirements of GWA wells. Where the Commission has issued a specific order limiting the number of horizontal wells permitted in a drilling and spacing unit, the well density in such unit shall be governed by that order.

l. The ~~landowner-OGLA notice-Notice~~ provision for the owner(s) of surface property within five hundred (500) feet of the proposed ~~oil and gas location-Oil and Gas Location~~ under Rule 305.e. shall not apply to any such locations that are subject to the provisions of this subsection 318A(l).

m. **Minimum intrawell distance.** No horizontal wellbore lateral shall be located less than one hundred fifty (150) feet from any existing or permitted oil or gas wellbore as illustrated in the directional survey for drilled wellbores or as illustrated in the deviated drilling plan for permitted wellbores or as otherwise reflected in the COGCC well records. This requirement may be waived in writing by the operator of the encroached upon well.

318A(II). GREATER WATTENBERG AREA SPECIAL WELL LOCATION, SPACING AND UNIT DESIGNATION RULE (THE CITY AND COUNTY OF BROOMFIELD)

The provisions of Rule 318A(II)., recited below, pertain to those lands within the Greater Wattenberg Area within the City and County of Broomfield, Colorado as it existed on August 8, 2011.

- a. **GWA, GWA wells, GWA windows and unit designations.** The Greater Wattenberg Area ("GWA") is defined to include those lands from and including Townships 2 South to 7 North and Ranges 61 West to 69 West, 6th P.M. In the GWA, operators may utilize the following described surface drilling locations ("GWA windows") to drill, twin, deepen, or recomplete a well ("GWA well") and to commingle any or all of the Cretaceous Age formations from the base of the Dakota Formation to the surface:
- (1) A square with sides four hundred (400) feet in length, the center of which is the center of any governmental quarter-quarter section ("400' window"); and,
 - (2) A square with sides eight hundred (800) feet in length, the center of which is the center of any governmental quarter section ("800' window").
 - (3) Absent a showing of good cause, which shall include the existence of a surface use or other agreement with the surface owner authorizing a surface well location outside of a GWA window, all surface wellsites shall be located within a GWA window.
 - (4) Unit designations.
 - i. 400' window. When completing a GWA well in a 400' window to a spaced formation, the operator shall designate drilling and spacing units in accordance with existing spacing orders.
 - ii. 800' window. When completing a GWA well in an 800' window, whether in spaced or unspaced formations, the operator shall: (i) designate drilling and spacing units in accordance with existing spacing orders where units are not smaller than a governmental quarter section; or (ii) form a voluntary drilling and spacing unit consisting of a governmental quarter section; or (iii) where designating a drilling and spacing unit smaller than a governmental quarter section, secure waiver(s) from the operator or from the mineral owners (if the operator is also the holder of the mineral lease) of the lands in the governmental quarter section that are not to be included in the spacing unit; or (iv) apply to the Commission to form an alternate unit or to respace the area.
 - iii. Unspaced areas and wellbore spacing units. When completing a GWA well to an unspaced formation, the operator shall designate a drilling and spacing unit not smaller than a governmental quarter-quarter section if such well is proposed to be located greater than four hundred sixty (460) feet from the quarter-quarter section boundary in which it is located. If a well is proposed to be located less than four hundred sixty (460) feet from the governmental quarter-quarter section boundary, a wellbore spacing unit ("wellbore spacing unit") for such well shall be comprised of the four (4) governmental quarter-quarter sections nearest to the wellbore regardless of section or quarter section lines.
- b. **Recompletion/commingling of existing wells.** Any GWA well in existence prior to the effective date of this rule, which is not located as described above, may also be utilized for deepening to or recompletion in any Cretaceous Age formation and for the commingling of production therefrom.

c. Surface locations. Prior to the approval of any Application for Permit-to-Drill submitted for a GWA well, the proposed surface well location shall be reviewed in accordance with the following criteria:

- (1) A new surface well location shall be approved in accordance with Commission rules when it is less than fifty (50) feet from an existing surface well location.
- (2) When the operator is requesting a surface well location greater than fifty (50) feet from a well (unless safety or mechanical considerations of the well to be twinned or topographical or surface constraints justify a location greater than fifty (50) feet), the operator shall provide a consent to the exception signed by the surface owner on which the well is proposed to be located in order for the Director to approve the well location administratively.
- (3) If there is no well located within a GWA window but there is an approved exception location well located outside of a GWA window that is attributed to such window, the provisions of subsections (1) and (2) of this subsection c. shall be applicable to such location.

d. Prior wells excepted. This rule does not alter the size or configuration of drilling units for GWA wells in existence prior to the effective date of this rule. Where deemed necessary by an operator for purposes of allocating production, such operator may allocate production to any drilling and spacing unit with respect to a particular Cretaceous Age formation consistent with the provisions of this rule.

e. GWA infill. This subsection applies to the following area of the GWA: Township 1 North, Ranges 66 West through 68 West; Township 1 North, Range 69 West: E½; Township 2 North, Ranges 64 West through 68 West; Township 2 North, Range 69 West: E½; Township 3 North, Ranges 64 West through 67 West; Township 4 North, Ranges 63 through 67 West; Township 5 North, Ranges 63 West through 67 West; Township 6 North, Ranges 63 West through 66 West, 6th P.M.

(1) **Interior infill wells.** Additional bottom hole locations for the "J" Sand, Codell and Niobrara Formations are hereby established greater than four hundred sixty (460) feet from the outer boundary of any existing 320-acre drilling and spacing unit ("interior infill wells"). Pursuant to the well location provisions of subsection a., above, interior infill well locations shall be reached by utilizing directional drilling techniques from the GWA windows.

A. If a bottom hole location for an interior infill well is proposed to be located less than four hundred sixty (460) feet from the outer boundary of an existing drilling and spacing unit, a wellbore spacing unit as defined in a.(4)C., above, shall be designated by the operator for such well.

B. If a bottom hole location for an interior infill well is proposed to be located greater than four hundred sixty (460) feet from an existing 80-acre or existing 320-acre drilling and spacing unit, the spacing unit for such well shall conform to the existing 80-acre or existing 320-acre drilling and spacing unit.

(2) **Boundary wells.** Additional bottom hole locations for the "J" Sand, Codell and Niobrara Formations are hereby established less than four hundred sixty (460) feet from the outer boundary of a 320-acre governmental half section or from the outer boundary of any existing 320-acre drilling and spacing unit ("boundary wells"). A wellbore spacing unit as defined in a.(4)C., above, shall be designated by the operator for such well.

(3) **Additional producing formations.** An operator wanting to complete an interior infill well or boundary well in a formation other than the "J" Sand, Codell, or Niobrara Formations

("additional producing formation") must request an exception location prior to completing the additional producing formation. The spacing unit dedicated to the exception location shall comply with subsections (1) or (2), above, as appropriate.

- (4) **Water well sampling.** Sampling shall be performed pursuant to Rule 609. ~~The Director shall require initial baseline testing prior to the first interior infill well or boundary well ("proposed GWA infill well") drilled within a governmental section. The following shall be used as guidance for the Director in establishing initial baseline testing:~~
- ~~A. Within the governmental quarter section of the proposed GWA infill well, the closest water well ("water quality testing well") completed in the Laramie/Fox Hills Aquifer shall be sampled.~~
 - ~~B. If no Laramie/Fox Hills water wells are located within the governmental quarter section, then the deepest representative water quality testing well within the governmental quarter section of the proposed GWA infill well shall be sampled.~~
 - ~~C. If no water wells are located within the governmental quarter section, a water quality testing well (preferably completed in the Laramie/Fox Hills Aquifer) within one-half (½) mile of the proposed GWA infill well shall be selected.~~
 - ~~D. If there are no water quality testing wells that meet the foregoing criteria, then initial baseline testing shall not be required.~~
 - ~~E. Initial baseline testing shall include laboratory analysis of all major cations and anions, total dissolved solids, iron and manganese, nutrients (nitrates, nitrites, selenium), dissolved methane, pH, and specific conductance.~~
 - ~~F. If free gas or a methane concentration level greater than 2 mg/l is detected in a water quality testing well, compositional analysis shall be performed to determine gas type (thermogenic, biogenic or an intermediate mix of both). If the testing results reveal biogenic gas, no further isotopic testing shall be required. If the testing results reveal thermogenic gas, carbon isotopic analyses of methane carbon shall be conducted. The Director may require further water well sampling at any time as a result of the laboratory results or in response to complaints from water well owners.~~
 - ~~G. Copies of all test results described above shall be provided to the Director and the landowner where the water quality testing well is located within three (3) months of collecting the samples used for the test. Laboratory results shall also be submitted to the Director in an electronic format.~~
- (5) Existing production facilities. To the extent reasonably practicable, operators shall utilize existing roads, pipelines, tank batteries and related surface facilities for all interior infill wells and boundary wells.
- (6) Notice and hearing procedures. For proposed boundary wells, wellbore spacing units, and additional producing formations provided by this subsection e., the following process shall apply:
- A. Notice shall be given by certified mail by the operator of a proposed boundary well or wellbore spacing unit to all owners in the proposed wellbore spacing unit. Notice shall be given by certified mail by the operator of a proposed additional producing formation to all owners in cornering and contiguous spacing units of the requested completion and the proposed spacing unit; if the additional producing

formation is unspaced only the owner in the proposed spacing unit needs to be notified.

- B. Each owner shall have a twenty (20) day period after receipt of such notice to object in writing to the operator to such well location, proposed spacing unit, or additional producing formation. If a timely objection is received, the matter shall be set on the docket at the next available Commission hearing. Absent receipt of an objection by the operator from an owner within such twenty (20) day period, the Director may administratively approve the boundary well, wellbore spacing unit, or additional producing formation, provided that it does not exceed eight (8) producing completions in the "J" Sand, Codell or Niobrara Formations in the 160-acre governmental quarter section as set forth in subsection f. below. A location plat evidencing the well location, wellbore spacing unit, or additional producing formation and applicable spacing unit shall be submitted to the Director together with copies of any surface waivers and a certification that no timely objections were received. An Application for Permit-to-Drill, Form 2, specifically identifying that a boundary well, a wellbore spacing unit, or an additional producing formation is proposed, shall also be filed with the Director in accordance with Rule 303.

- (7) The Commission shall review the effectiveness of this subsection e. no later than March 1, 2008 and may require operators to submit data related to infill drilling performed under this subsection.

- f. **Limit on locations.** This rule does not limit the number of formations that may be completed in any GWA drilling and spacing unit nor, subject to subsection c., above, does it limit the number of wells that may be located within the GWA windows. However, absent Commission order otherwise, there shall be no more than eight (8) producing completions in the "J" Sand, Codell or Niobrara Formations in any 160-acre governmental quarter section.

- g. **GWA water sampling.** The Director may apply appropriate drilling permit conditions to require water well sampling near any proposed GWA wells in accordance with the guidelines set forth in ~~subsection e.(4), above~~ [Rule 609](#).

- h. **Exception locations.** The provisions of Rule 318.c. respecting exception locations shall be applicable to GWA wells, however, absent timely objection, boundary wells, wellbore spacing units, and additional producing formations shall be administratively approved as provided in subsection e.(6) above.

- i. **Correlative rights.** This rule shall not serve to bar the granting of relief to owners who file an application alleging abuse of their correlative rights to the extent that such owners can demonstrate that their opportunity to produce Cretaceous Age formations from the drilling locations herein authorized does not provide an equal opportunity to obtain their just and equitable share of oil and gas from such formations.

- j. **Supersedes orders and policy.** Subject to paragraph d. above, this rule supersedes all prior Commission drilling and spacing orders affecting well location and density requirements of GWA wells and supersedes and replaces the "Policy on Staff Administrative Application of the Greater Wattenberg Area Well Location Rule 318A.," dated April 26, 1999.

- k. The ~~landowner notice~~[OGLA Notice](#) provision for the owner(s) of surface property within five hundred (500) feet of the proposed ~~oil and gas location~~[Oil and Gas Location](#) under Rule 305.e. shall not apply to any such locations that are subject to the provisions of this subsection 318A(II).