

SERIES SAFETY REGULATIONS

609. STATEWIDE GROUNDWATER BASELINE SAMPLING AND MONITORING:

a. Definitions:

ACTIVE DRILLING AND COMPLETION shall mean the period of time beginning with the commencement of drilling the initial well on a multi-well site and during which drilling or completion activities are occurring, with no more than a 12-month period of continuous inactivity in drilling or completion.

AVAILABLE WATER SOURCE shall mean a water source for which the water well owner, owner of a spring or a land owner, as applicable, has given consent for sampling and testing under this section and has given consent for the results of the sampling and testing to be posted on the COGCC website.

MULTI-WELL SITE shall mean a common well pad from which multiple wells may be drilled to various bottom-hole locations.

WELL SITE shall mean the areas that are directly disturbed during the drilling and subsequent operation of, or affected by production facilities directly associated with, any oil well, gas well, or injection well and its associated well pad.

WATER SOURCE shall mean water wells that are registered with Colorado Division of Water Resources, including household, domestic, livestock, irrigation, municipal/public and commercial wells, permitted or adjudicated springs, and monitoring wells other than monitoring wells that are drilled for the purpose of monitoring water quality changes that are not associated with oil and gas activities.

REASONABLE EFFORTS shall mean a notice that shall be included as part of the Form 2A notice and at least two letters sent by certified mail to any landowner or owner of water source eligible for sampling and testing under this program, as applicable. If a landowner or water source owner does not respond to the 2A notice or the first letter within 30 days, the operator shall send the second letter. Whether or not the landowner or water source owner does not respond to the second letter within 30 days, the operator shall be considered to have made a reasonable effort.

b. Applicability

Except coalbed methane wells, which are subject to Rule 608, new oil and gas well sites and multi-well sites shall be subject to the groundwater baseline sampling and monitoring requirements contained in this section.

c. Sampling

1. Initial baseline samples and subsequent monitoring samples shall be collected from all available water sources within a one-half (1/2) mile radius of the well site or multi-well site.
2. If at least one up-gradient and two down-gradient water sources are not available within the ½ mile radius of the well site or multi-well site, samples from additional water sources within a radius of up to one mile from the well site or multi-well site shall be collected until samples from a total of at least one up-gradient and two down-gradient water sources are collected. Operators should give priority to the selection of water sources closest to the well site or multi-well site. Where multiple defined aquifers are present, the sampling locations should attempt to sample from the different aquifers when possible.
3. Prior to the collection of samples, the operator shall obtain the consent of the owner of the water source to (1) access the water source for collection of baseline and monitoring samples and (2) submit the results of the testing of the samples to the Commission for public posting on the Commission website.
4. If, after reasonable efforts, the operator is unable to locate and obtain permission to access at least one up-gradient and two down-gradient water sources for sampling within one mile of the well site or multi-well site, no additional sampling is required. The operator shall submit to the Commission a signed certification from the authorized agent of the operator that reasonable efforts to locate and access the required water sources were undertaken by the operator, but that such efforts were unsuccessful. The certification shall include details noting the dates on which letters were sent to the landowner or owner of the water source, as applicable, and shall note any additional measures that were taken to secure consent, such as phone calls, in-person contact, etc. If an operator is given permission to sample a water source and identifies the water source as being unsuitable for sampling and testing, the operator shall detail the relevant conditions of the water well that render it unsuitable for sampling and shall include that information in the certification.

5. All sampling shall be conducted pursuant to the requirements and protocols of the Sampling and Analysis Plan (SAP) contained in Appendix XX, unless the operator receives approval from the Director to deviate from such requirements and protocols after submitting a request for deviation in writing citing the circumstances that render compliance with the SAP technically infeasible or demonstrating that a deviation would improve the quality of the data collected. If during the course of conducting sampling activities an operator or its agent encounters conditions in the field that require deviation from the SAP, prior approval from the Director for deviation from the SAP shall not be required. In such cases, the operator shall note such deviations on Form XYZ.
6. An operator may rely on existing groundwater sampling data collected from any water source within the radii described above, provided the data was collected within the 12 months preceding the commencement of drilling the well, the data includes measurement of all of the constituents measured pursuant to the SAP attached hereto as Appendix XX and samples were collected and analyzed in a manner consistent with such SAP, and there has been no significant oil and gas activity within a one-mile radius in the time period between the original sampling and the commencement of drilling the well.
7. Operators are not required to take samples from water sources that are determined to be improperly maintained, nonoperational or otherwise unsuitable for sampling and testing.
8. Nothing in this section shall prohibit an operator from collecting samples from additional water sources or from sources that do not meet the requirements of this section, including samples for which a landowner or water source owner will not consent to public posting of the sampling and testing data; provided, however, that any collected samples that do not meet all of the requirements of this section, including requirements for public posting of data, shall not count toward satisfying the requirements of this section.

d. Alternative Compliance Measures

1. Operators may propose, for prior approval by the Director, an alternative sampling program in the event that there is an exceptionally large number of available water sources within a ½ mile radius of the well site or multi-well site or if other conditions exist that would justify a modification in order to improve the efficacy of the

sampling program. In such cases, the Director shall ensure that any modifications to the sampling program:

- i. Take into account hydrogeologic conditions and ensure that an adequate number of suitable water sources are sampled upgradient and downgradient from the well in order to assure that any significant changes in water quality will be detected; and
- ii. Provide opportunities for landowners or owners of water sources, as applicable, who are similarly located with respect to the well site or multi-well site to be included in the sampling and testing program.

e. Timing of Sampling

1. Well Sites:

- a. Initial collection and testing of baseline samples from available water sources shall occur within 12 months prior to the commencement of drilling a well, or within 12 months prior to the re-stimulation of an existing well for which no samples were collected and tested during the previous 12 months.
- b. Post-stimulation samples of available water sources shall be collected and tested pursuant to the following time frame:
 - i. One sample between 6 and 12 months after completion; and
 - ii. One sample between 60 and 72 months after completion.

2. Multi-Well Sites:

- a. Initial collection and testing of baseline samples from available water sources shall occur within 12 months prior to commencement of drilling the first well.
- b. Collection and sampling from available water sources shall occur annually during active drilling and completion.
- c. Post-completion samples of available water sources shall be collected and tested pursuant to the following time frame:
 - i. One sample between 6 and 12 months after completing the final well; and
 - ii. One sample between 60 and 72 months after completing the final well.

3. Results from sampling and testing shall be provided to landowners and water sources owners, as applicable, and to the Commission pursuant to the schedule established in Appendix XX.

4. Additional sampling may be required by the Director in response test results that show changes in water quality or in response to complaints from landowners or water source owners, as applicable, of a distinct or measureable change in water quality, such as a change in odor, color, taste or turbidity. Nothing in this section shall be construed to limit existing Commission authorities.

f. Liability

This section shall not be interpreted to create, impute to or limit the liability of, operators for changes in the constituents and concentrations in samples from water sources collected and tested pursuant to this section. A decision to use the results of tests conducted pursuant to this section in an administrative or legal proceeding shall be subject to existing administrative rules and rules of evidence.