

Mandatory Baseline Water Testing: Existing State Models

State	Provision	Baseline Sampling Locations & Timing	Follow Up Tests	Identity of Tester	Required Reporting and Public Access to Data	Exemptions from Testing
AK	20 Alaska Admin. Code 25.283(a)(4), (j) (effective 4.15.15)	Location: Wells within a ½ mile radius of the current or proposed wellbore trajectory.	The commission may require water sampling of water wells within a one-half mile radius of the wellbore trajectory after hydraulic fracturing. Methods, parameters, and analysis must be similar to those done for the baseline analysis.		Reporting: Within 90 days after a sample is collected, the operator shall provide a copy of the results and sample location to the state in printed and electronic form. The operator shall notify the state within 24 hours if results contain (1) thermogenic or a mixture of thermogenic and biogenic gas; (2) an increase in methane concentration of more than 5.0 mg/l between sampling periods; (3) a methane concentration at or above 10 mg/l; or (4) total petroleum hydrocarbon, BTEX isomers, gasoline range organics, or diesel range organics.	Testing is not required if a surface owner denies permission for baseline sampling or disclosure of the results. The operator must document the reasonable and good-faith efforts to secure permission; and need not test those wells after hydraulic fracturing.
CO	2 Colo. Code Regs. § 404-1:317B(c)-(e) (surface water near wells) § 317B(f) (surface water near existing wells)	“Classified water supply segments” ¹ immediately down gradient of oil and gas wells within 301-2640 feet.	A follow-up sample must be collected three months “after the conclusion of any drilling activities and operations or completion.”	“[A]nalyzes must be performed by laboratories that maintain state or nationally accredited programs.”	Copies of all test results shall be provided to the state and the potentially impacted Public Water System(s) within 3 months of collecting the samples. Results and surveyed sample locations shall be submitted to the Commission as electronic data.	Testing is not required where sufficient water does not exist.
CO	2 Colo. Code Regs. § 609(b) (ground-water near wells permitted after 5.1.13) § 318A (ground-water in Greater Wattenberg Area/Front Range – permitted after 5.1.13) Colorado Oil and Gas Conservation Commission Model Sampling and Analysis Plan .	Location, generally: Up to 4 water sources within ½ mile radius of a proposed well, the first well on a site, or drilling of a dedicated injection well. If there are more than 4 sources, samples shall be prioritized based on proximity, type of water source, orientation, and depth. Timing, generally: Within 12 months prior to setting conductor pipe in a	Generally: Subsequent sampling shall be conducted at the initial sample locations (1) 6-12 months, and (2) 60-72 months, following completion of the well or dedicated injection well, or the last well on a multi-well site. The Director may require additional sampling if changes in water quality appear in subsequent monitoring.	The COGCC SAP requires samples to be sent to a laboratory accredited by NELAP generally and for the analytes of concern.	Copies of laboratory results shall be provided to the state and the water well owner or landowner within 3 months of collecting the samples. The results, the surveyed sample locations, and the field observations shall be submitted to the state as electronic data. The Director shall make the results available by posting on the Commission web site or through another means announced to the public. The operator shall notify the state and the owner of the water well immediately if (1) test results indicate thermogenic or a mixture of thermogenic and biogenic	Testing is not required when there are no available (or suitable) water sources; or, the owners of all suitable water sources refuse to grant access despite an operator’s reasonable good faith efforts to obtain consent to conduct sampling. Operator must document efforts to obtain access. GWA: In

¹ A classified water supply segment is a perennial or intermittent stream classified as being suitable or intended to become suitable for potable water supplies by the Colorado Water Quality Commission. No operations may take place within 300 feet from a classified water supply segment unless a waiver issues.

	v. 1 (5.1.13) (incorporated by reference into rules)	well or drilling a dedicated injection well. Location, GWA: One water source in the governmental quarter section where the well is located, or in a previously unsampled governmental quarter section within ½ mile. Timing, GWA: Within 12 months prior to setting conductor pipe or drilling a dedicated injection well.	GWA: A followup sample 6 - 12 months after well completion.		gas; (2) the methane concentration increases by more than 5.0 mg/l between sampling periods; or (3) the methane concentration is detected at or above 10 mg/l. The operator shall notify the Director immediately if BTEX compounds or TPH are detected in a water sample.	addition, testing is not required for water sources determined to be improperly maintained, non-operational, or have other physical impediments to sampling that would not allow a representative sample to be safely collected or would require specialized sampling equipment.
IL	225 Ill. Comp. Stat. 732/1-80	At least 3 samples shall be collected from each water source within 1,500 feet of the well site.	Applicable water sources must be sampled and tested in the same manner 6, 18, and 30 months after the high volume horizontal hydraulic fracturing operations have been completed.	Samples must be collected by an “independent third party, under the supervision of a professional engineer or professional geologist”. An independent testing laboratory must analyze them.	The permittee shall submit the results to the state or to the owner of the water source under a non-disclosure agreement within 7 calendar days of receipt of test results. The Department shall post the results on its website within 7 calendar days after receipt.	Sampling of private water wells or ponds is not required where the property owner declines in writing to provide access or permission. If the property owner won’t provide a written refusal, the operator shall provide the Department evidence as to the good faith efforts that were made to secure the required documentation. Property owners may condition access or permission for sampling with a non-disclosure agreement.
MI	Rule 324.1404 (effective 3.11.15)	Location: Up to 10 water sources within a ¼ mile radius of the well location. If there are more than 10 sources, samples shall be prioritized based on proximity, depth, and orientation. Timing: 7 days to 6 months prior to		Samples shall be collected by a qualified professional and analyzed by a state certified laboratory.	The permittee shall provided copies of all final laboratory results to the state and the well owner or landowner within 45 days of collecting the samples. The permittee shall notify the state immediately if BTEX compounds are detected.	

		initiation of drilling operations.				
NV	Nev. Admin. Code Ch. 522-9.1 (effective 10.24.14)	<p>Location: Up to 4 available water source within the “sampling area” (within a radius of 1 mile of a proposed oil/gas well and any surface projection of any lateral component of the well proposed for hydraulic fracturing).</p> <p>If more than 4 water sources are located in the sampling area, sample shall be prioritized based on proximity, depth, and orientation. The Administrator may require additional samples and testing.</p> <p>Timing: During the 12 month period immediately preceding hydraulic fracturing.</p>	Subsequent sampling shall be taken (1) between 6-12 months and (2) between 60-72 months after commencement of hydraulic fracturing.	The testing of a water sample must be conducted by a laboratory certified under Nevada law.	<p>An operator shall provide copies of test results to the state and to the owner of the water source not later than 30 days after receipt of the results. The Division will, upon request, make the test results available to the public for inspection at the Carson City office.</p> <p>An operator shall immediately notify the state and the owner of an available water sources if results indicate the presence of BTEX or hydrogen sulfide in excess of the specified MCL set forth in the primary and secondary standards for drinking water, or if a subsequent sample reveals a change indicative of a degradation in water quality.</p>	Testing is not required for water sources the Administrator determines to be improperly maintained, non-operational, or have other physical characteristic which would prevent the safe collection of a representative sample or would require nonstandard sampling equipment; or, when available (or suitable) water sources are not present; or, when owners of all suitable water sources refuse to grant access and the Administrator finds the operator made a reasonable and good faith effort to obtain consent.
NC	N.C. Gen. Stat. §113-423(f) (requires a testing clause in oil/gas leases) 15A NC Admin. Code 05H.1704, 1706, 1707 (proposed) (appears to require permittee to undertake testing)	<p>5,000 feet from a wellhead, at least 30 days prior to initial drilling</p> <p><i>All water supplies located within a 5,000 foot radius of the proposed oil or gas wellhead, prior to initial drilling activities.</i></p>	<p>At least five follow-up tests at 6, 12, 18, and 24 months after production has commenced and a test within 30 days after completion of production activities at the site.”</p> <p><i>Subsequent testing shall occur (1) between 6-12 months and (2) 24 months after production has commenced until all wells on a pad have been completed. The Department may require additional testing if the most recent data show an increase in concentration from the previous data.</i></p>	<p>A surface owner shall use an independent third party to sample and a NC-certified laboratory. The operator shall pay the reasonable costs. All sample analyses shall be made by a laboratory certified in accordance with NC law.</p>	<p>All results shall be shared with the state within 30 days of testing and shall constitute a public record. The Department shall post results on its website within 30 days.</p> <p><i>The permittee shall share the test results with the state and the surface owners, and the owners of the water supply within 30 days of receipt of the results, on a form signed and sealed by a licensed geologist or professional engineer. The Department shall maintain baseline and subsequent analytical data, which shall be available to the public through the Department.</i></p>	
OH	Ohio Rev. Code 1509.06(A) (8)(b)-(c))	1500 feet for all horizontal wells and (b) 300 feet for all non-horizontal		The Best Management Practices require that		If a property owner refuses access to a domestic water

	<p>Ohio Admin. Code 1501:9-1-02(F) (repeats urban testing requirement) Best Management Practices for Pre-Drilling Water Sampling, 9.20.12 (incorporated by reference into the statute)</p>	<p>wells in urban areas</p>		<p>the testing be done by a laboratory certified by the OH EPA or NELAP for each parameter to be tested.</p>		<p>well, Ohio will require proof of refusal.</p>
WY	<p>Wyo. Admin. Code Oil & Gas Cons. Comm'n ch. 3, § 46 (effective date: 3.1.14) Rule App. K, Sampling & Analysis Procedures for Groundwater Baseline Sampling, Analysis, and Monitoring Program.</p>	<p>Location: Up to four water sources are within a ½ mile radius of the location for a proposed gas well.</p> <p>If there are more than four sources, samples shall be prioritized based on factors proximity, source/aquifer and orientation.</p> <p>Timing: “initial sampling and testing shall be conducted within the twelve (12) month period prior to spudding the well or the first well on a multi-well pad.”</p>	<p>Subsequent sampling shall occur (1) 12-24 months after setting the production casing and (2) 36-48 months after setting the casing (and at least 24 months after the first followup sampling).</p>	<p>Samples shall be collected by properly trained field personnel under the supervision of a state licensed Professional Engineer or Professional Geologist. Samples shall be analyzed by labs that are accredited by NELAP.</p>	<p>Test results shall be shared with the state within 3 months, and are made available to the public unless confidential. Data shall be provided to the Director in electronic format.</p> <p>The operator shall provide verbal and written notification to the state and water source owner within 24 hours if results reveal thermogenic or a mixture of thermogenic and biogenic gas; the dissolved methane concentration increases by more than 5.0 mg/L between sampling periods; the dissolved methane concentration is detected at or above 10.0 mg/L; or BTEX compounds or TPH is detected at or above Department of Environmental Quality action levels.</p>	<p>An operator may seek a variance if no water sources are located in the area; available water sources are determined to be improperly maintained, non-operational, or unable to provide a representative sample; or the owner of a water source declines to grant access or requires payment for access, despite an operator's reasonable efforts (notice, final notice by certified mail, and a lapse of 30 days) to obtain consent.</p>
Com-pare with ID	<p>IDAPA 20.07.02.055.01(m).</p>	<p>A permit applicant must submit an affidavit stating that all home owners, water well owners, and owners of a public drinking water system within 1/4 mile of the well were notified by certified mail of the proposed treatment. The notification will offer to have the owner/ operator sample and test the water, at the owner or operator's cost, before and after the well is treated.</p>				