



**Encino’s Baseline Sampling Program FAQs**

**Does Ohio have drinking water standards?**

Yes. Private drinking water standards are established through the Ohio Department of Health (ODH). If citizens have concerns with their water quality, contact **ODH’s Private Water Systems program at 614-644-7558**, or the local health Department, i.e. **Columbiana County General Health District at 330-424-0272**.

**Are there regulations to protect water?**

Yes. The federal government has enacted a number of acts and laws to protect the air, water, communities and workers. These acts and laws include: Clean Air Act, Clean Water Act, Safe Drinking Water Act and Right-To-Know Laws. The natural gas and crude oil industry is NOT exempt from these acts and laws. In addition, the State of Ohio also requires pre-drilling water sampling.

[https://ohiodnr.gov/wps/wcm/connect/gov/b96130b2-e5e5-43f7-9870-7a3d06f56ae2/dog-bmps-groundwater-sampling.pdf?MOD=AJPERES&CONVERT\\_TO=url&CACHEID=ROOTWORKSPACE.Z18\\_K9I401S01H7F40QB\\_NJU3SO1F56-b96130b2-e5e5-43f7-9870-7a3d06f56ae2-newvL9b](https://ohiodnr.gov/wps/wcm/connect/gov/b96130b2-e5e5-43f7-9870-7a3d06f56ae2/dog-bmps-groundwater-sampling.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_K9I401S01H7F40QB_NJU3SO1F56-b96130b2-e5e5-43f7-9870-7a3d06f56ae2-newvL9b)

<http://www.oogeep.org/wp-content/uploads/2016/02/As-a-Matter-of-Fact-ACTS-AND-LAWS.pdf>

**Does Encino go beyond state and federal standards?**

Yes. Encino’s Baseline Sampling Program documents water quality conditions prior to the development of oil and natural gas wells and goes beyond applicable federal, state and/or local pre-drill baseline water sampling requirements. Below is a table of recommended parameters for the State of Ohio (ODNR) for baseline sampling related to Oil and gas activities.

<b>Parameters to be Analyzed</b>	<b>Preferred Method*</b>
pH	SM 4500H+B
Specific Conductance	SM 2510B
Turbidity**	SM2130B / EPA 180.1
Anions: Bromide, Chloride, Sulfate	EPA 300 / SW-846 9056
Carbonate, Bicarbonate, Total Alkalinity	SM 2320B
Total Dissolved Solids (TDS)	SM 2540C
Total Suspended Solids (TSS)	SM 2540D
Metals Analysis: (As, Ba, Ca, Fe, Li, K, Mg, Mn, Na, Pb, & Sr) and field filtered Dissolved Ba and Dissolved Fe	SW-846 6010 / 6020
Total Hardness (calculated by Ca & Mg values)	SM 2340B
BTEX (Benzene, Toluene, Ethylbenzene & total Xylenes)***	SW-846 8260

Parameters to be Analyzed	Preferred Method*
Light Gas Analysis [C1-C3 are required (C4-C6 may be required in some areas)]	RSK-175
*An equivalent method may be substituted if approved by Encino Baseline Water Sampling Team or local Encino Field Representative.	
**If field turbidity reading is >10 NTU, also collect Dissolved Fe & Mn. The samples should be field filtered and analyzed by Method 6010 / 6020.	
***For BTEX Only – Analyze Trip Blank only if BTEX detected in sample.	

Below is additional information on our baseline program that may helpful (note wells within MWCD jurisdiction have additional considerations).

Encino identifies actively used water sources for domestic purposes within a 2,500-foot radius of a well pad (as a best management practice [BMP]/landowner relations-related consideration), ODNR-DOGRM requires only a 1,500-foot sampling radius. Encino, as an additional BMP, has directed its baseline consultants to collect samples within 2,500 feet of well pad center.

These pre-drill sample results are provided to landowners and Encino also submits information to ODNR-DOGRM (in accordance with Ohio’s pre-drill regulations). Identification of other water sources (i.e., in addition to potable water sources) within a defined radius may be requested on an as needed basis; other Encino staff may be consulted if additional review &/or lease review warrants additional decision making prior to baseline testing.

Baseline sampling activities are initiated at approximately 6 months before spud date. Submittal of results to ODNR is approximately 2 months before anticipated spud date.

Encino’s goal is to have its pre-drill consultants deliver the baseline reports to landowners living within 1,700 feet of the subject pad within 45 days of sample collection and to landowners beyond 1,700 feet within 60 days (the actual length of time to report delivery may be less than these target timeframes or it may be more, depending on several factors, e.g., how many landowner parcels were sampled and if any sample integrity or data validation issues were encountered).

All new pad locations and infill sites that were sampled more than five years earlier will have the applicable landowner water sources sampled, analyzed, reports generated and submitted to ODNR-DOGRM, and mailed to landowners as described above. For infill drilling locations, that were sampled between five & two years earlier and in accordance with ODNR-DOGRM guidance, Encino’s pre-drill consultants will perform a baseline sampling re-evaluation. This type of baseline of sampling event includes only properties with water sources purchased by new landowners during this period &/or properties with same owner, but with new sources established during this time. Finally, for infill sites that were pre-drill sampled less than two years ago, Encino’s baseline consultants will complete a desktop review (including a review of ODNR’s online water well log database) to determine if there are any landowners with new water wells drilled during this period; if any new wells are identified, the landowners will be offered pre-drill sampling.