

Shale Oil and Gas Well Site Checklist

Disclaimer: Ohio EPA developed this checklist as a tool for drilling companies to identify potential compliance/permitting issues associated with locating a drill pad. This checklist is only a starting point and one tool to help you. It should not be your only source of information about Ohio's regulations, nor should it serve as an alternative to seeking assistance from experienced consultants and/or legal counsel to help you fully understand and achieve compliance with Ohio's laws and regulations.

This checklist does not cover all applicable regulations and permitting requirements, including the full scope of regulations for drilling operations covered by the Ohio Department of Natural Resources, Division of Oil and Gas Resources Management (ODNR-DOGARM). A general overview of Ohio EPA's and ODNR's regulations for oil and gas drilling operations is included in "Ohio's Regulations: A Guide for Operators Drilling in the Marcellus and Utica Shales," available at www.epa.state.oh.us/shale.aspx.

Answers highlighted in yellow indicate areas where there may be a compliance issue that requires follow-up and further coordination with the agencies identified in the narrative sections following the questions below.

Assessing Wetlands and Streams/Authorization for Impacts to Waters of the State

1. Have you conducted an evaluation to identify wetlands or streams on the property? Yes No

Wetlands are identified through a careful examination of the site for the presence of wetland indicators. Wetlands do not need to contain standing water in order to be regulated by Ohio EPA or the U.S. Army Corps of Engineers (USACE). Ohio EPA recommends that you hire an experienced wetland consultant to delineate wetlands and streams on the property.

2. Will streams, wetlands or other waters be impacted by construction activities associated with the drill site? Examples of such activities include, but are not limited to: Yes No

- a) excavating or placing fill material in a wetland or stream to construct the pad site, access road, water lines, or production lines;
- b) rerouting or straightening a stream, or routing piping through a stream to construct the pad site;
- c) dredging a wetland area; and
- d) culverting streams to construct roadways, water or wastewater piping.

If yes, you must obtain a permit from USACE (for jurisdictional waters) under Section 404 of the Clean Water Act (CWA) and a Water Quality Certification (WQC) from Ohio EPA under Section 401 of the CWA. Depending on the extent of the impacts, your project may be authorized under Nationwide Permit (a general permit) or an individual permit.

3. If the answer to Question 2 is yes, have you submitted a wetlands delineation report to USACE for review and a jurisdictional determination? Yes No

Your wetland consultant will complete a delineation report and submit this to USACE for a formal jurisdictional determination. USACE will determine whether the wetlands are jurisdictional and subject to coverage under the CWA, or isolated and subject only to state law. USACE will document this in a formal jurisdictional determination (JD) letter.

4. Has USACE determined if the proposed project will require a CWA Section 404 Permit? Yes No

USACE will determine whether the project qualifies for coverage under a Nationwide Permit (NWP) or requires an individual 404 permit and 401 WQC. This determination is also included in the JD letter.

5. If the answer to Question 4 is yes, will you be seeking coverage under USACE Nationwide Permit 39 for your project? Yes No

Nationwide Permit 39 authorizes impacts to streams and wetlands associated with oil and gas well construction up to 0.5 acres of Category 1 and 2 wetlands and 300 linear feet of streams.

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6. Will the project impact: Yes No

- a) any category 3 wetlands;
- b) greater than 0.5 acres of Category 1 or 2 wetlands; or
- c) greater than 300 linear feet of stream

If the project impacts exceed 0.5 acres of Category 1 or 2 wetlands, impact any Category 3 wetlands, or impact greater than 300 linear feet of stream, you will be required to apply for an individual 404 permit and 401 WQC.

7. Will isolated wetlands on the property be impacted by construction/operation? Yes No

Isolated wetlands are not connected to other surface waters. For this reason, USACE does not classify these as waters of the United States; however, they are regulated by Ohio EPA. If the project will impact isolated wetlands, you must obtain an isolated wetland permit from Ohio EPA's Division of Surface Water (DSW).

For more information on Ohio EPA's 401 program, see www.epa.state.oh.us/dsw/401/WQC.aspx. For information on Ohio EPA's Isolated Wetland Permit program, see www.epa.ohio.gov/dsw/401/IWP.aspx. For more information about USACE 404 permits, see www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx.

Identifying Potential Impacts to Source Water Protection Areas and Sensitive Resources

8. Will the proposed drill pad be located in a public water supply source water protection area? Yes No

Contact Ohio EPA's Division of Drinking and Ground Waters (DDAGW) to determine if the drill pad will be located in a source water protection area. Whenever possible, these areas should be avoided. If you intend to locate the drill pad in a source water protection area, ODNR-DOGRM may require additional permit conditions to ensure protection of water resources.

9. Do you intend to locate the drill pad within: Yes No

- a) the limits of waste placement at a solid or hazardous waste disposal facility;
- b) the limits of a scrap tire disposal facility;
- c) the limits of debris placement at a construction/demolition debris disposal facility; or
- d) an area subject to a federal or state closure or remediation requirement?

Contact Ohio EPA's Division of Materials and Waste Management (DMWM) on any applicable prohibitions and/or controls under Ohio EPA's regulations related to siting a drill pad in these areas. This is in addition to any special permit conditions that may be required by ODNR-DOGRM for the proposed drill pad location.

Identifying Sources and Management of Water/Fluids for Hydraulic Fracturing

10. Please identify the source(s) of water to be used for hydraulic fracturing.

a) Will you be withdrawing water from a fresh water resource (e.g., stream, river or lake)? Yes No

You are required to register with ODNR's Division of Soil and Water Resources (ODNR-DSWR) for any facility, or combination of facilities, with the capacity to withdraw water at a quantity greater than 100,000 gallons per day (about 70 gallons per minute).

Note: The Great Lakes–St. Lawrence River Basin Water Resources Compact (Great Lakes Compact) is a binding agreement among the eight states that border the Great Lakes. The compact has been enacted into Ohio law and carries the force of Federal law and specifically prohibits any new or increased diversions of water out of the Lake Erie Basin. For more information, visit ODNR's website at www.dnr.state.oh.us/tabid/23941/Default.aspx

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- b) Do you intend to connect your drill site to an existing public water system for your source of hydraulic fracturing water? Yes No

You are required to have a proper backflow prevention device at the point of connection to protect the public water system in accordance with Ohio EPA's requirements (OAC Chapter 3745-95). If construction activities associated with running a pipe will have an impact on streams, wetlands or other waters, this may also require 401/404 authorization.

- c) Will the site receive hauled water from an authorized public water system fill station for hydraulic fracturing? Yes No

All potable water haulers must be registered with the Ohio Department of Health (ODH). Potable water trucks cannot haul non-potable water.

- d) Do you intend to install a non-potable water well for hydraulic fracturing water? Yes No

The well must be constructed in accordance with Ohio Administrative Code (OAC) Chapter 3745-9. A well log must be submitted to ODNR-DSWR within 30 days.

- e) Do you intend to use alternative fluids such as wastewater treatment plant effluent for hydraulic fracturing? Yes No

Contact Ohio EPA, DMWM and ODNR-DOGRM on the use of alternative fluids for hydraulic fracturing. ODNR-DOGRM must authorize the use of alternative fluids. For Ohio EPA, contact Jeff Mayhugh, DMWM at 614-644-2950. For ODNR-DOGRM contact information, see www.ohiodnr.com/mineral/shale/tabid/23415/Default.aspx.

Sanitary Waste Management and Drinking Water

12. How will sanitary services be provided to employees at the drill site?

- a) Portable toilets. Yes No

- b) On-site trailers with self-contained restrooms and/or holding tank. Yes No

Contact ODNR-DOGRM.

- c) On-site system such as a septic tank/leach field or package plant. Yes No

Contact ODNR-DOGRM. For discharging systems, also contact Ohio EPA's Division of Surface Water (DSW).

13. What is the source of drinking water for site employees?

- a) Hauled water from a public water supply. Yes No

Must be delivered from an Ohio EPA-approved source, by a hauler registered with ODH. Contact Ohio EPA, Division of Drinking and Ground Waters (DDAGW) and ODH.

- b) Connecting the site to an existing municipal public water plant. Yes No

Contact Ohio EPA, DDAGW.

- c) Constructing and operating a new water well/system to service the site. Yes No

You will need to get approval from the ODH or Ohio EPA, DDAGW, depending on whether the system is classified as a private water system or public water system (based on number of service connections and people served). For Ohio EPA, DDAGW contact information, see <http://www.epa.ohio.gov/ddagw>. For ODH contact information, see <http://www.odh.ohio.gov/>.

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Off-Site Management of Drill Cuttings and Fluids

14. Will drill cuttings that have come into contact with drilling muds, oils or other contaminants be shipped off-site for disposal? Yes No

Ohio EPA regulates contaminated cuttings sent off-site as solid waste. Solid waste must be sent to a licensed solid waste landfill for disposal. ODNR-DOGRM must approve disposal of drill cuttings at the drill site.

15. Do you intend work with an entity that proposes to beneficially reuse drill cuttings off-site? Yes No

Anyone interested in beneficially reusing drill cuttings off-site must get prior authorization for this activity from Ohio EPA-DMWM.

16. Will you send brine and other well field fluids off-site for disposal at a permitted Class II injection well? Yes No

The direct discharge of brine into waters of the state is prohibited. Disposal of brine at municipal sewage plants in Ohio is not authorized. Brine disposed of in Ohio must be sent to an ODNR-permitted Class II injection well, unless granted an exemption by ODNR. Where feasible, recycling and reuse of fluids is strongly encouraged.

Air Emission Sources Associated with Production Operations

17. Are you aware of your requirement to obtain an air permit from Ohio EPA before constructing and operating the units that are associated with production at the well site? Yes No

Ohio EPA has developed an air general permit for production operations at shale oil and gas well sites. This general permit covers a variety of emission sources found at most well sites, including internal combustion engines; generators; dehydration systems; storage tanks; and flares. Ohio EPA has also developed an air general permit for paved and unpaved roadways and parking areas. General permits contain emission limits; operating restrictions; and monitoring and reporting requirements. Applicants meeting the qualifying criteria can apply for the general permit(s). Businesses can file electronically for a permit through Ohio EPA's eBusiness Center. For more information, see www.epa.ohio.gov/dapc/airservices.aspx.

18. If the well is currently in production, have you received either an air general permit or individual air permit from Ohio EPA? Yes No

Unless air emission sources at the site qualify for Ohio EPA's de minimis exemption (OAC rule 3745-15-05), or other rule-based exemption under the OAC, you are required to obtain a permit. If you are claiming a de minimis exemption for any air emission source, you are not required to notify Ohio EPA, however you must keep records demonstrating that the source meets the exemption.

19. Are you aware of your requirement to comply with U.S. EPA's New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) for the oil and gas industry related to hydraulic fracturing and well sites? Yes No

For more information, see U.S. EPA's website <http://yosemite.epa.gov/oepi/rulegate.nsf/byRIN/2060-AP76>.

Agency Links/Resources

Ohio EPA, Shale Oil and Gas Website - www.epa.state.oh.us/shale.aspx

ODNR, Division of Oil and Gas Resources Management - www.ohiodnr.com/mineral/shale/tabid/23415/Default.aspx

ODNR, Division of Division of Soil and Water Resources - www.dnr.state.oh.us/soilandwater