

INSTRUCTIONS FOR OIL AND GAS FLOODPLAIN DEVELOPMENT
No development can occur in the floodplain until permit is issued.

Fill out and sign the permit application form.

Include with permit application:

- A cover letter outlining the project, any studies completed, and any additional permits obtained. A detailed set of plans and specifications, including flood protection measures designed by a **licensed engineer must also be included**. Upon completion of flood-proofing measures, a written notification from a **licensed engineer stating flood protection measures were built and installed according to plans and specifications (“As-Built”) is required**.
- Copies of other required permits including those from the Corporation Commission (permit to drill when it becomes available), Kingfisher County Road Crossing Permit (if a pipeline crossing), Letter of Map Revision from FEMA (if needed), and a 404 permit and/or a Nationwide Permit from the US Army Corps of Engineers (if needed.)
- Copy of Spill Prevention and Counter Measure Plan (optional).
- Emergency Evacuation Plan (optional).

All structures and pieces of equipment in the 1% chance/100-year floodplain must be designed in a manner to reduce or eliminate flood damage, e.g. anchoring, or elevated.

Flood protection measures must include the following:

1. **Tank batteries and other equipment** installed **below the Base Flood Elevation** at the site in the floodplain shall be tied down to prevent flotation and lateral movement. See FEMA Instruction 348 and the Floodplain Administrator for guidance. Each tank, to include oil heaters, compressors, and any other components will be anchored with engineer specified steel cable capable of preventing floatation and lateral movement, equivalent size steel turnbuckles, thimbles, and wire rope clips, attached to 36 inch auger type anchors from three equally spaced points from the top to the ground.
2. **Tank batteries and other equipment** installed on compacted fill to **raise above the Base Flood Elevation 1ft** will require a Hydraulics and Hydrology (H&H) Study performed by a licensed individual to determine a “No-Rise” certification. A Conditional Letter of Map Revision (CLOMR) based on Fill, may need to be submitted to FEMA and copies of the H&H study and the completed CLOMR to be submitted to this office with the County Permit Application if a rise in the Base Flood Elevation is determined – Note, a Letter of Map Revision (LOMR) will also need to be obtained from FEMA once construction is complete if a rise in BFE of more than one (1) foot is determined.

Wellheads and valve sites must be barricaded against flowing water and floating debris. Barricades, at a minimum must be as tall as the well head, be at least two sided, positioned to face the upstream flow, and be angular in design to deflect debris. Structurally, the barricades at a minimum should be constructed of 2 and 3/8 inch OD pipe. Upright posts anchored in the ground. Horizontal pipe spaced and welded **12** inches center-to-center (**NO lite-duty gates, tee posts, or welded wire panels**) – Note, barricades may be made to

be removed for well servicing but must still be strong enough to withstand flowing water and striking debris.

3. Pipelines must be buried at least 48 inches, 72 inches under rivers and creeks and the depth of cover maintained. A Statement of Burial Depth Compliance is required. Boring is the preferred method under creeks and streams. Boring will eliminate the need for most USACE permitting concerning blue line streams. Trenching a creek or stream will automatically require you to provide a copy of the USACE application for a Nationwide Permit with your County Floodplain application. NOTE: you may self-certify USACE permits for trenching operations of blue line streams if your impact will be less than 0.1% of an acre.
4. A closed pit system is required.

Any material stored on the site that is highly volatile, flammable, explosive, toxic, or water reactive should be protected to at least the level of the 500-year flood.

Drill site pad and road to well do not need to be elevated but should not obstruct the natural flow of water (i.e. install culverts and flood control devices as needed). A culvert must be provided and installed in the barrow ditch where the lease road meets the county road.

Contact the County Commissioner as a courtesy concerning the county roads that you or your contractors will be using.

This office must be notified if equipment is added after completion. If site is sold or assigned this office must be notified. A secondary drill on an existing site will only need a permit if new production equipment is added to an existing site.

EXCEPTIONS:

Any construction outside of this guidance should be submitted, in writing, to the Kingfisher County Floodplain Board for consideration.