

## CITY COUNCIL OVERSIGHT COMMITTEE MINUTES

September 18, 2014

The City Council Oversight Committee of the City of Norman, Cleveland County, State of Oklahoma, met at 5:03 p.m. in the City Council Multi-Purpose Room on the 18th day of September, 2014, and notice and agenda of the meeting were posted in the Municipal Building at 201 West Gray 48 hours prior to the beginning of the meeting.

PRESENT:	Councilmembers Holman, Williams, and Chairman Miller
ABSENT:	Councilmember Jungman
OTHERS PRESENT:	Mayor Cindy Rosenthal Mr. Jeff Bryant, City Attorney Ms. Susan Connors, Planning and Community Development Director Mr. Terry Floyd, Development Coordinator Mr. Steve Lewis, City Manager Ms. Leah Messner, Assistant City Attorney Mr. Shawn O'Leary, Director of Public Works Ms. Linda Price, Revitalization Manager Mr. David Woods, Oil and Gas Inspection Ms. Syndi Runyon, Administrative Technician IV

Item 1, being:

CONTINUED DISCUSSION REGARDING OIL AND GAS WELL REGULATIONS IN THE LAKE THUNDERBIRD WATERSHED.

Chairman Miller said tonight the Oversight Committee will be discussing oil well regulations pertaining specifically to the Lake Thunderbird Watershed. She said water quality and oil and gas wells are two environmental topics taking the forefront in the news today especially problems oil wells may present to water pollution. She said the Committee previously discussed safety of oil well sites in regards to fencing. She said Staff has worked very hard gathering information for the Committee's review and researched Norman's, Oklahoma City's (OKC), and the Oklahoma Corporation Commission's (OCC) regulations regarding oil and gas drilling in watershed areas. She said OCC's Order No. 90123 was issued in 1972 at the request of the Oklahoma Master Conservancy District (COMCD) to make changes in regulations pertaining to drilling in watershed areas. She said the good news is that Norman already has a lot of good regulations regarding oil wells, zoning rules in terms of watershed areas, and floodplain permitting processes that include special zoning for that area. She said the oil companies have stepped up the last few years to change processes when drilling near watersheds as well.

Mr. Terry Floyd, Development Coordinator, said the Oversight Committee will be focusing on surface protection and runoff from oil well sites. He said a joint City Council Oversight and Finance Committee meeting was held on April 30, 2014, to review regulations of watershed drilling and best practices were listed as a topic for future discussion. He said Lake Thunderbird water drainage basin (watershed) protections are mentioned specifically in Norman's Oil and Gas Ordinance and are identified in OCC's Order No. 90123 regarding drilling operations in the Lake Thunderbird drainage basin. He said OKC has a specific subset of ordinances that deal with oil and gas drilling in watershed areas.

Mr. Floyd said there are 78 existing wells and one recently permitted well located within the Lake Thunderbird watershed area. He said Norman has 167 existing or proposed wells that are in the completion phase within its city limits. He said there are four injection wells inside the Lake Thunderbird watershed. He said an injection well is a deep well in which pressurized fluids are injected for waste disposal or to improve the recovery of petroleum; however, only two injection wells are active today. He said no oil and gas drilling is allowed on State, Federal, or Tribal property around Lake Thunderbird so there are protections simply by ownership.

Item 1, continued:

Mr. Floyd highlighted Norman's Oil and Gas Ordinance and Floodplain Ordinance. He said Norman's Oil and Gas Ordinance identified specific protection for oil and gas operations within the Lake Thunderbird drainage basin that include:

Protections for Oil and Gas Drilling with Lake Thunderbird Draining Basin

- Only allowing metal tanks/vessels for use as circulation pits and mud pits (no earthen pits)
- No placement of chemicals or substances in the pit that were not approved as part of the mud program in the drilling permit
- Mud pit contents must be hauled from site to a disposal facility upon drilling completion.

Mr. Floyd said Norman's Floodplain Ordinance includes drilling and pipeline regulations within the Floodplain areas that include:

Drilling and Pipeline Regulations with Floodplain Areas

- Reserve pits are prohibited in the floodway
- Equipment must be raised above Base Flood Elevation
- Equipment that can be damaged by floodwaters must be anchored and certified by an engineer
- Pipelines that cross rivers, streams, creeks channels must be bored a minimum of ten feet below the bed with higher grade pipe or twice the pipe wall thickness
- There can be no surface disturbance within 50 feet of a river, stream, or channel bank. Mayor Rosenthal clarified that the floodway is much narrower than a floodplain.

Chairman Miller asked who is responsible for making sure these regulations are met and Mr. Shawn O'Leary, Director of Public Works, said if application for a drilling permit is obtained through the Floodplain Committee, City Staff follows up on every installation. He said many times an elevation certificate must be submitted to confirm and certify that elevation requirements have been met. Chairman Miller said if there is erosion or washing away of soil does Staff oversee that as well and Mr. O'Leary said that falls under the purview of the City's Oil and Gas Inspector in terms of ongoing maintenance of the operation.

Mr. Floyd said the OCC Order No. 90123 identifies specific regulations related to oil and gas drilling operations in the Lake Thunderbird drainage basin and includes what is currently being applied by the Oil and Gas Inspector as part of oil and gas drilling within the drainage basin. He said regulations include the prohibition of earthen slush/reserve pits; removal of drilling mud operations upon completion of well; removal of oil/condensate from the well site as a result of operations; specifications related to retaining walls; specifications related to blowout preventers; and well site conditions (clear of refuse, removal and disposal of waste products from site, containment of contaminants, and underground line depth).

Mr. Floyd highlighted OCC requirements that consist of surface casing requirements; production casing requirements; wellhead equipment standards; tubing specifications; tank construction and specifications; and salt water disposal. He said exceptions from regulations are reported to the City of Norman, Midwest City, Del City, and COMCD. He said there has never been an exception granted to his knowledge.

Surface Casing Requirements

- 150 feet below fresh water strata encountered in well
- Field print of an electrical log 1,000 feet below surface casing submitted to COMCD for inspection and approval upon completion of drilling operations
- Operator may set 1,200 feet of surface casing and circular cement in lieu of above requirements

Item 1, continued:

OCC Requirements continued:

Production Casing Requirements

- Set no higher than the top of the producing formation and cemented with a sufficient amount of cement to obtain a minimum of 500 feet of annular fill-up above the base of the casing
- Tested in accordance with OCC General Rule 3-206(f)

Tank Construction and Specifications

- Construction to prevent leakage
- Retaining wall construction with capacity of 1 1/2 times the liquid capacity of tanks in contained area

Saltwater Disposal

- Collected in tanks and hauled from site
- Disposal beyond watershed or subsurface disposal

Mr. Floyd highlighted OKC's watershed drilling regulations that apply to water reservoirs, areas near reservoirs, and areas near Lake Arcadia. He said Lake Arcadia reservoir is similar to Lake Thunderbird's because the lake collects its water from a watershed. He said regulations include prohibition of earthen reserve and circulation pits; inclusion of deleterious substance spill contingency plan; retaining wall capacities; blowout preventer specifications; casing standards; storage of toxic chemicals in original containers.

Retaining Wall Capacities

- Requirement of retaining walls with enclosed area of at least 1 1/2 times liquid capacity of tanks/equipment in the storage area

Production Casing

- All production casing and related equipment have working pressure rating sufficiently in excess of highest formation encountered in the well
- Testing standards and centralizer placement specifications

Intermediate Casing

- Set when required by well conditions
- Depth determined by strength of the exposed formation below the surface casing shoe

Surface Casing

- Set at 200 feet below the base of treatable water zones
- Additional casing and rate standards and testing requirements

Conductor Casing

- Depth of 40 feet

Chairman Miller asked about if OKC's ordinance includes restrictions on how close a well can be drilled to the sedimentation basin and Mr. Floyd said yes, OKC regulations speak to distances beyond the flood pool elevation and conservation pool elevation of the lake. The OKC ordinance states drilling is prohibited within 660 feet of the flood pool or conservation pool. He said since Lake Thunderbird's conservation pool is located on state land, drilling is prohibited. Chairman Miller said OKC has specific language in their ordinance prohibiting drilling within a specific number of feet, which Norman's ordinance does not have and may not need because of other regulations, but it is an issue that has been discussed.

Item 1, continued:

Comparison of Norman, OKC, and OCC Regulations

Mr. Floyd highlighted the similarities/differences in requirements of Norman, OKC, and OCC. He said none of the three entities allow an earthen reserve or circulation pit; however, Norman does allow for a temporary emergency earthen pit in the event of a catastrophic event. Mayor Rosenthal asked the logic behind allowing a temporary emergency earthen pit and Ms. Leah Messner, Assistant City Attorney, said language is in the ordinance in case of a catastrophic event that might necessitate that type of pit. Mayor Rosenthal asked if the City has ever approved one or used one and Mr. Floyd said no, but that is a provision in the ordinance.

Mr. Floyd said for drilling operations, Norman's ordinance requires maps showing the means to be used for diverting surface water from the drilling site while OKC requires retaining walls at least 1 1/2 times the liquid capacity of tanks/equipment in the storage area. OCC requires retaining walls during drilling operations be of adequate size for the terrain involved or level with the top of wellhead connections on completed well. Rainwater drains are allowed with proper controls through fire walls and dikes.

Chairman Miller asked if there is a preferred way to handle surface water and Mr. Floyd said surface water can be contained or diverted and Norman allows surface water to be diverted away from the well site during the drilling operations versus containing it onsite.

Mayor Rosenthal felt diverting surface water does not do anything to protect the watershed. She said it sounds like two different ways to deal with surface water and OKC is clearly sensitive to the fact drilling is occurring in the watershed. She said Norman's ordinance has never been updated to reflect watershed concerns. Ms. Susan Connors, Director of Planning and Community Development, said under Norman's ordinance surface drainage water goes around the site so it is not touching the site. Mayor Rosenthal said OKC speaks about retaining surface water in an enclosed area of at least 1 1/2 times the liquid capacity of what is on the site and Ms. Connors said that language is more about a spill, not surface water. She said OKC requires retaining walls to retain anything that happens at the drilling site to prevent leakage to the watershed. They do not divert their surface water so surface water is running into the watershed. Mayor Rosenthal said it seems these are two fundamentally different things 1) containing surface water onsite and 2) diverting rainwater around the site. She asked if Norman requires retaining walls around the site to contain liquid and Ms. Connors said absolutely. Ms. Messner said Norman diverts surface water around the site and requires construction of metal containment or earthen containment around the tank(s).

Mr. Floyd said Norman and OKC have requirements regarding surface casing below surface or below treatable water zones or strata, but Norman's requirement goes a little beyond OKC's regulations to provide additional protection to the watershed.

Mr. Floyd said Norman and OKC do not address saltwater disposal in their ordinances, but OCC requires saltwater to be collected in tanks and hauled from the site to be disposed of beyond watersheds or sub-surfaces.

Mayor Rosenthal asked if Norman requires a Deleterious Spill Contingency Plan and Mr. Floyd said it is not specifically addressed in the ordinance, but there is information provided during the permitting process such as emergency contact information in case of a spill. Mayor Rosenthal felt a Spill Contingency Plan should be required by ordinance.

Mayor Rosenthal said the City requires \$1 million for pollution insurance and asked if Staff researched other cities pollution insurance requirements and Mr. Floyd said he researched newer ordinances in Texas and some of them require \$5 million.

Item 1, continued:

Comparison of Norman, OKC, and OCC Regulations, continued

Mr. Floyd said all three entities have some type of sub-surface regulations, but intermediate casing is not addressed in Norman's ordinance or OCC's order.

Mr. Floyd said possible ordinance revisions for drilling wells within the Lake Thunderbird watershed are:

- Allow steel containment walls with liners for storage tanks
- Require a Deleterious Spill Contingency Plan as part of drilling permit application (as outlined in OKC regulations)
- Require storage of toxic chemicals in their original containers (as outlined in OKC regulations)

Chairman Miller said if drilling companies are bringing toxic chemicals for use at the well site, they should not be storing them for long periods of time and Mr. Floyd said chemicals are only stored onsite for the amount of time needed to complete whatever process is occurring at the time. He said chemicals are not permanently stored onsite.

Mr. Floyd said Staff will want to have discussions with people in the oil and gas industry regarding additional regulations. Staff will also want to have discussions on how these regulations would be implemented from a practical standpoint.

Chairman Miller felt the ordinance needed specific language regarding the well's distance from groundwater whether it is the sedimentation basin, flood pool, etc. Mr. Floyd said there could be additional setbacks added for distances from the flood pool as reflected in OKC's regulations.

Councilmember Williams asked if existing earthen berms would be replaced by steel walls since earthen berms may not be effective at preventing spill absorption into the ground. Mr. Floyd said earthen berms are required to have a compaction level standard and the City inspects berms to ensure compaction remains adequate; however, steel containment or liners are less likely to be damaged. Ms. Connors said earthen berms have to be maintained so the Oil and Gas Inspector checks them regularly to ensure they are being maintained. She said the purpose of earthen berms is to contain spills from tanks, not for diversion of water.

Mayor Rosenthal felt problems could be more easily avoided by looking at the entire floodplain not just the floodway and/or prohibition on further drilling in the floodplain. She said the Water Quality Protection Zone (WQPZ) extends beyond the floodplain and not just the floodway and she would like additional discussion regarding that.

Mayor Rosenthal said even though Norman's insurance amounts are the same as OKC, she thinks they are too low. She said 50% of Norman's water supply comes from Lake Thunderbird and she would like Staff to research other communities as well as reviewing a possible differential amount based on the well's location. She said if drilling is not done within a WQPZ or watershed then the insurance requirements could be less. She said the City could also consider engineering solutions that meet additional protections similar to requirements for WQPZ, but the City has never let anyone construct anything within 25 feet of the floodplain.

Public Questions/Comments

Ms. Cindy Rogers, 633 Reed Avenue, asked if the City could add language that states chemicals must be stored in original containers as well as be used per manufacturer's instructions. She said manufacturers are usually pretty clear on what is safe and what is not.

Item 1, continued:

Public Questions/Comments, continued

Ms. Rogers asked if “spill remediation” means the location has to be in pristine condition, back to its original condition, just good enough, or would be remediated through a lawsuit and Chairman Miller said language in the current ordinance states original condition. Ms. Rogers said many times lawsuits are involved over what is considered original condition and Chairman Miller said language in a Spill Contingency Plan could specify expectations to avoid a lawsuit. Mr. Casey Holcomb, interested citizen, asked if a remediation plan could also address coordination with local emergency planning agencies.

Mr. Mike Rainer, 4705 Augusta, said most oil and gas operators have Spill Contingency Plans in place and it would be easy to obtain a copy. He said most of the items discussed tonight are addressed in those plans or should be addressed in those plans. He said contingency plans must be approved by a registered engineer. He said drilling companies must file hazardous substance information with the Department of Environmental Quality (DEQ) as well as with Local Emergency Planning Committees (LEPC’s).

Mr. Rainer said it is a good idea to move away from earthen containment because although a spill may be contained, some of the spill may leech into the ground possibly making its way into the local water supply. He said earthen berms deteriorate over time so steel or fiberglass would be a better containment alternative.

Chairman Miller asked if Mr. David Woods, Oil and Gas Inspector, looks for different kinds of substances when inspecting oil well sites for spills/leakage and Mr. Woods said yes, but most operators clean up small leaks and spills immediately so there are very few issues. He said oil does not do as much damage as saltwater and that is what he looks for the most. Mr. Rainer asked if saltwater tanks are required to be steel or fiberglass in the watershed and Ms. Connors said that is not specifically addressed. Mr. Woods said existing steel water tanks are currently being replaced, if needed, with fiberglass. Mr. Woods said operators do not want leaks or spills any more than the City and do a lot of things that are not required by ordinance.

Mr. Holcomb said he agrees with the Mayor that regulations should be looked at in context with the WPQZ Ordinance as well as best practices recommended in the Stormwater Master Plan (SWMP) regarding stormwater runoff. He asked how close the City is to implementing discharge permits for total dissolved solids for construction or industrial sites. He said there needs to be a way to assess the cumulative impact of multiple drilling sites along the Little River Corridor and the Lake Thunderbird watershed because the more sites, the more total dissolved solids are going to accumulate and the Total Maximum Daily Load (TMDL) requires the City to address that. Mr. O’Leary said the TMDL Compliance Plan is in the early stages of development and Council will review that Plan within the next twelve months or so. He said the TMDL Compliance Plan will address total solids much better than the SWMP. He said the City currently regulates containment of all runoff and all erosion from all construction sites that are one acre or larger, but that is not specific to oil and gas sites. Chairman Miller said that is something Staff will need to follow-up on since there seems to be no exact answer.

Mr. Stephen Ellis, 633 Reed Avenue, said Norman has an ordinance that requires a bermed area around oil tanks for crude oil to be 1 1/2 times the volume of the tank, but it is hard to tell where each bermed area is located. He asked if it would be possible to require plans reflect where berm areas are located. Ms. Connors said the decision of where the tanks are located is not determined at the time the permit is issued because the City is permitting to drill so until the well is in production, the City does not know where the tanks will be. Chairman Miller asked if pictures are taken of the site and Ms. Connors said Staff does take pictures of the site once they have developed.

Ms. Helen Duchon, 747 Nancy Lynn Terrace, asked if there is any reason at all to allow drilling within the watershed and Chairman Miller said a lot of the land is privately owned and property rights come into play.

Item 1, continued:

Public Questions/Comments, continued

Mr. Holcolm said many people have private water wells that need to be protected as well so they have some incentive to protect their property in that respect. He said the City could look into establishing wellhead protection zones, which limit drilling in close proximity to private and public water wells. He said best practices recommend 1,000 to 2,000 foot setbacks from groundwater wells.

Mr. Rainer said the City needs to separate surface protection from sub-surface protection. He does not disagree that setbacks should be further from watersheds given the fact that horizontal directional drilling is more prevalent today so there is no need to snug up against a creek. He said as far as sub-surface protection, by and large, most oil and gas companies do an excellent job in respect to protecting the sub-surface water strata. He said the biggest issue will be runoff from potential spills on the surface.

Items submitted for the record

1. Memorandum dated September 15, 2014, from Terry Floyd, Development Coordinator, thru Steve Lewis, City Manager
2. Map of active wells
3. PowerPoint entitled, "Oil and Gas Well Drilling/Production Regulations in the Lake Thunderbird Watershed," City Council Oversight Committee, September 18, 2014
4. Chapter 22, Section 429.1(4)(D): Special Requirements for Drilling Oil and Gas Wells in a Special Flood Hazard Area (SFHA)
5. Report of the Corporation Commission of the State of Oklahoma, Order No. 90123
6. Comparison Chart – City of Norman Oil and Gas Ordinance, OKC Watershed Regulations, and Oklahoma Corporation Commission Order No. 90123

Item 2, being:

MISCELLANEOUS DISCUSSION.

None

ADJOURNMENT.

The meeting adjourned at 6:08 p.m.