

Town Council Work Session October 15, 2009

Produced Water Pipelines and
Centralized Tank Facilities

Gas Well Drilling, Pipeline, and Land
Use Regulations

Produced Water Pipelines

- Produced water or production fluid and flowback water is the fluid or wastewater resulting from the drilling, completion, and production processes.
- The produced water has a high saline content and contains other constituents and additives associated with the drilling and production processes.
- The composition of flowback and produced water varies and the additives/constituents are not required to be disclosed.

Produced Water Pipelines

- The Town's regulations allow for produced water pipelines on permitted gas well pad sites for storage and removal from the same permitted pad site.
- Wastewater hauling trucks remove the produced water from the site as necessary.

Produced Water Pipelines

- Staff received a proposal for a produced water gathering and storage system.
- The system would transport produced water from other pad sites/locations to a central storage location for removal by wastewater hauling trucks.
- The Town's regulations do not address the gathering system and will not allow the centralized collection facility as proposed.
- Amendments to the oil and gas well drilling and pipeline regulations would be required to establish standards for a gathering and storage system.

Centralized Facilities

● Centralized Tank Battery

- Typical configuration of storage tanks is two tanks per gas well.
- A centralized facility would divert the wastewater from the pad sites to a central location.
- The current number of storage tanks would not be necessary on the gas well sites; tanks would be relocated to a centralized tank battery.
- Centralized facilities may provide for a reduction in the total number of tanks.
- It is unknown if there would be a net reduction in truck traffic on Flower Mound roads if a facility is located within the Town; traffic is essentially diverted from one location to another.

Centralized Facilities

- “Gas Lift” facilities and the associated gas lift pipelines have also been discussed relative to regulating centralized facilities.
- Gas lift is a method of injecting gas into a completed well to enhance production; it is often conducted on an as needed and temporary basis for wells.
- A centralized gas lift facility and pipeline system would consist of a centralized compressor utilized to transport the gas to off-site gas wells.

Gas Wells – No Tank Battery



Gas Well and Tank Battery



Tank Battery

18 Tanks (2 rows of 9 tanks)



Ordinance Amendments

- Ordinance amendments would be necessary to effectively address the installation and operation of produced water pipeline systems and centralized collection and distribution systems.
 - Chapter 34 “Natural Gas Well Drilling and Operations”
 - Chapter 34 “Oil and Gas Pipeline Standards”
 - Chapter 98 “Zoning”

Gas Well Drilling and Pipeline Ordinance History

- Initial drilling ordinance was adopted in 2003.
- Minor amendments occurred in 2005.
- In 2005, the ordinance review process began with the formation of a stakeholder group.
- Following numerous stakeholder meetings, public meetings, and Town Council meetings, ordinance amendments were adopted in 2007.
- Pipeline standards ordinance adopted in 2007.
- Fees were updated in 2009.

Permit History

	Gas Well/Pad Site Permits Issued	Pipeline Permits Issued
2003	0	0
2004	2	0
2005	5	0
2006	1	0
2007	2	0
2008	5	2
2009	3	2

Gas Well Drilling Regulations

- Amendments to the current gas well drilling regulations to address produced water and centralized facilities may include:
 - amend definitions to address centralized tanks and associated facilities;
 - amend pad site requirements for storage tanks as it would apply to centralized facilities and the off-site gas well pad sites, emergency or secondary storage;
 - amend the applicable waste disposal requirements in the drilling and operations regulations.

Pipeline Regulations

- Amendments to the current pipeline regulations may include:
 - add new definitions for produced water and produced water pipelines;
 - add construction standards and specifications for produced water pipelines;
 - add leak detection and prevention regulations;
 - enhance the liability insurance requirements to address pollution coverage.

Land Use / Zoning Issues

- A gas well pad site is allowed in any zoning district.
- A centralized collection and storage facility may have other structures and facilities located on it other than storage tanks.
- The centralized collection and storage use does not fit any uses described in the Zoning Ordinance.

Land Use / Zoning Issues

- The Town's Zoning Ordinance describes in detail the uses that are permitted on agriculturally zoned land and those uses which require a specific use permit.
- Agriculturally zoned property does not support the contention that a centralized collection and storage facility is permitted in such zoning classification.
- A central collection facility is more of an industrial use.
 - None of the listed uses or specific uses for either the Industrial-1 (I-1) or Industrial-2 (I-2) districts is applicable either.

Land Use / Zoning Issues

- A use shall be classified into the use category that most closely portrays the overall nature of such activity. Any use that cannot be so classified shall not be permitted in any district. Code of Ordinances, § 98-952(b).
- A centralized collection and storage facility is neither a permitted use nor a specific use under any zoning classification in the Town.

Land Use / Zoning Issues

- A central collection facility could require up to three of the following approvals:
 - an amendment to the Zoning Ordinance to permit the produced water central collection facility as a permitted use or specific use in a zoning district;
 - an amendment to the zoning on the tract;
 - a Master Plan amendment.
- Additionally, potential platting requirements would be reviewed before any permits could be issued.

Review Process and Direction

- Continue to administer the current gas well drilling/pipeline regulations and zoning regulations; centralized collection and storage facilities would be prohibited.
- Initiate an ordinance review process and subsequent public meetings.
- Proceed with concurrent amendments to the drilling and pipeline regulations and the zoning regulations to address produced water system/facilities.

Public Input Options

- Conduct public meetings to review the current issues.
 - Two to three month process at a minimum depending on feedback and direction.
- Utilize an existing board or commission as a stakeholder group.
 - Three to six month process depending on group feedback and direction.
- Form a new stakeholder group.
 - Eight to twelve month process depending on group formation, feedback, and direction.

Review Timeline

- Expedited Zoning ordinance amendments:
 - P&Z Work Session (November or December)
 - P&Z Public Hearing (December or January)
 - Town Council Work Session (January)
 - Town Council Public Hearing (February)
- Public meetings, potential stakeholder review, and feedback throughout the process may affect timelines; the previous comprehensive ordinance review process involved approximately one year of stakeholder review and public meetings prior to Town Council review.
- The review of Ch. 34 (Drilling and Pipeline regulations) and potential ordinance amendments may follow a similar timeline as the Zoning review process.

Other Items for Consideration

- Annual ordinance review
- Air quality
- Setback distance review

Discussion / Questions