

# Operator Agreements and BMPs

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# Why do OA?

- ▶ Provide comprehensive planning for oil and gas development and residential development
- ▶ Require BMPs that exceed current local, state and federal requirements

# Structure

- ▶ City Council approves of known well site locations at a public hearing
  - ▶ Neighborhood meeting at time of OGP application
- ▶ 5 year development term
  - ▶ For Axis, all wells approved under this OA will be drilled by 12/31/2024.
  - ▶ For COP, term well sites only
- ▶ Streamlined permit review process
  - ▶ City to ensure permits comply with BMPs.

# Air Quality BMPs

BMPs	CDPHE/COGCC
Continuous monitoring	Not required
Monthly/Quarterly/Semi-annual LDAR for well sites with tanks	LDAR tiers range from annual to monthly
Electric drill rigs	Not required
Electrified production facilities	Not required
Ozone action days	Not required
Air modeling	Not required
Telemetry	Not required
Notice of maintenance venting	Not required
Reduction of pipeline venting	Not required

# Groundwater Monitoring

BMP	COGCC
Baseline sampling from “all” available water sources w/in ½ mile	Limited to up to 4
Drill monitoring well if no available water source	No requirement to sample if no available water source
Annual post-stimulation sampling	1 sample 6-12 months after stimulation Second sample 60-72 months
Testing of organics, VOCs, SOCs, Radionuclides, 2ndy Maximum contaminant levels, PFOAS and PFOs, major ions, general water quality, metals, dissolved gases	Testing limited to certain analytes
If degradation, must mitigate to baseline levels	Not required

# Water Quality Protections (1 of 2)

BMPs	COGCC
Closed loop drilling	Only required in areas close to people/sensitive environmental resources.
Banned frack chemicals	No restrictions
No use of produced water for dust suppression	Allowed in certain instances, outside sensitive areas, with surface owner consent. R. 907
No injection inside City or within 4 mile buffer, with 1 exception	No restrictions
Anchoring	Only in geological hazard areas and floodplains
2ndry containment/Specific construction requirements	Only required in locations near populated areas, sensitive environmental resources, or homes.

# Water Quality Protections (2 of 2)

BMPs	COGCC
Notification of all spills w/ reportable spill quantity	Only spills of spills of 1 barrel or more of oil or E&P waste if spilled <i>outside</i> berms or 2ndary containment or spills that impact or threaten to impact waters of the state, residences, occupied structures, livestock or public byway; and  Spills > than 5 barrels inside 2 <sup>nd</sup> containment.
Setbacks <ul style="list-style-type: none"><li>• 1 mile from reservoirs</li><li>• 500 ft from critical buried infrastructure and floodways</li></ul>	Only if within 300 feet of drinking water source

# Pipelines/Flowlines

## COGCC does not require use of pipelines

- ▶ Both operators will have pipelines for natural gas and crude oil in place prior to construction
  - ▶ COP carve out for wells drilled prior to 1/1/2020
  - ▶ Axis carve out for select lease holding wells (less than 5)
- ▶ COP to provide as-built GIS maps of off-location pipelines
  - ▶ Axis OA does not apply to flowlines or pipelines. To be addressed by Elevation OA.
- ▶ Axis/Elevation to use produced water pipelines
  - ▶ To be addressed in separate OA
  - ▶ COP contractor safety requirements



# Odors

BMPs	COGCC/CDPHE
24 hr response to complaints	Not required
Closed loop system	Not required
Wipe down pipe	Not required
Use filtration system to prevent or minimize odors	Not required
Contain fumes from drilling muds	Not required
Increase additive concentrations during peak hours	Not required

# Noise Mitigation

- Conditioned on being close to occupied structure or if located in certain areas where residential development is allowed/planned

BMPs	COGCC
Max DB's are > of COGCC residential/agriculture or 4 DB above background	COGCC limits tied to zoned area. Industrial limits are 25 DBs higher than residential/ag
Berming/walls/bails required during construction	Not required
Quiet completions technology (Axis)	Not required

# Insurance

BMPs	COGCC
<u>General Liability:</u> \$2 m per occurrence/ 4\$ M aggregate (COP)	\$1 million
\$5 M. Environmental liability (Axis)	None

# Safety

BMPs	COGCC
PHA-Hazard and Operability study	Not required
Automatic Safety Protective Systems and Surface Safety Valves and testing of valves	Not required
Operator to provide or pay for foam equipment and foam	Not required

# Visual

BMPs	Code
Low profile tanks (16')	Not required
Fencing	Per code
Landscaping plan	Per code
Lighting	Per code