



EXHIBIT 07  
GROUNDWATER QUALITY MONITORING PLAN  
RUSH NORTH

**Niobrara**

**Water Quality Monitoring Plan**

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## 1. Purpose

The purpose of this plan is to provide the necessary information for meeting Water Quality Monitoring requirements as required by the Oil and Gas Operator Agreement between ConocoPhillips Company (COPC), a Delaware corporation, and its subsidiaries, and Burlington Resources Oil & Gas Company LP, a Delaware limited partnership, and the City of Aurora, Colorado, a municipal corporation. Water quality monitoring is an integral component of the Best Management Practices in order to avoid causing degradation to surface or ground waters with the City of Aurora and to wetlands within the City of Aurora.

ConocoPhillips Company has a proud history of environmental awareness and sustainable development in the State of Colorado. COPC seeks to be to the preferred oil and gas exploration and production company in every community in which we operate. One of the many ways to achieve this is to minimize our impact on the environment.

## 2. Scope

This Water Quality Monitoring Plan details the requirements related to water quality management for the Niobrara Operations that are required to satisfy Federal, State, and Local regulations. Certain aspects of the requirements set forth by the City of Aurora are consistent with the COGCC rules and regulations. If ConocoPhillips needs to seek a variance from a COGCC requirement, then an approved COGCC variance will apply to the Operator Agreement upon notice of such variance from ConocoPhillips to the City of Aurora.

## 3. Objectives

The following objectives are applied to the management of water quality monitoring:

- Compliance with the Oil and Gas Operator Agreement, Best Management Practices, and relevant regulations and requirements for the management of water quality.
- Provide an early indication of potential issues that can be managed prior to a non-conformance.
- Provide guidance on the monitoring and reporting requirements including assignment of responsibilities.

## 4. Responsibilities

### 4.1. Asset Leadership

- Reinforce adherence to the Oil and Gas Operator Agreement, Best Management Practices, and relevant regulations.
- Provide resources for effective implementation of this Water Quality Monitoring Plan.
- Monitor compliance with the Water Quality Monitoring Plan through periodic reviews.

### 4.2. Line Supervision

- Ensure compliance with and promote implementation of the Water Quality Monitoring Plan.
- Provide resources for effective implementation of the Water Quality Monitoring Plan.
- Ensure compliance with federal, state, and local laws and regulations and with company standards
- Ensure training is provided such that employees have the skills, knowledge, and understanding of the Oil and Gas Operator Agreement, Best Management Practices, and relevant regulations.

### 4.3. Health, Safety, and Environmental

- Provide advice, support, technical resources, and tools related to the Water Quality Monitoring Plan.
- Overall responsibility for coordination of environmental matters associated with water quality monitoring.
- Submission of required regulatory reports.
- Manage Incident and non-conformance reporting.
- Review and report on pertinent matters arising from water quality monitoring reports
- Ensure the Water Quality Monitoring Plan is audited on a regular basis.

### 4.4. Niobrara Employees and Contract Designees

- Adhere to this Water Quality Monitoring Plan.
- Monitor the performance of the facility equipment.
- Notification to Operations/Maintenance Superintendents and Environmental staff of any potential non-conformances.
- Provide relevant resources to enable completion of water quality monitoring.

### 4.5. Contractors and Third-Party Emissions Monitoring Company

- Adhere to this Water Quality Monitoring Plan.
- Perform groundwater monitoring in accordance with this Plan.

## 5. Process

### 5.1. Overview

ConocoPhillips Company is committed to ensuring that environmental impacts are to be minimized and managed from our operations. As an operator in Colorado, COPC is required to comply with its obligations under the State of Colorado and City of Aurora. These obligations include:

- Applying the relevant regulatory requirements to monitor the environmental performance of COPC facilities.
- Reporting on environmental compliance as required by the Plan.
- COPC must also comply with its own corporate requirements related to water quality.

### 5.2. Legal Requirements

The Colorado Oil and Gas Conservation Commission (COGCC) Rule 609 requires Groundwater Baseline Sampling and Monitoring for Oil and Gas Well for which application for Permit to Drill is required.

All Niobrara operations must ensure that processes and procedures are developed and implemented to ensure that all regulatory requirements related to water quality are complied with.

## 6. Best Management Practices

This section describes the Best Management Practices for ConocoPhillips Company Niobrara operations related to:

- General Requirements
- Baseline Water Quality Testing

- City Easement Well
- Post Stimulation Samples
- Existing Groundwater Monitoring Sampling Data
- Enhanced Water Quality Testing
- Well Integrity and Aquifer Protection
- Compliance

## 6.1. General Requirements

To protect water quality, the following General Requirements will apply:

- Baseline Water Quality Testing will be conducted for the analytes listed in Table 1.
- Enhanced Water Quality Testing, if required, will be conducted on a yearly basis of the analytes in Table 2.
- ConocoPhillips shall follow standard industry procedures in collecting samples, consistent with the COGCC model Sampling and Analysis Plan.
- ConocoPhillips shall report the location of the water source using a GPS with submeter resolution.
- ConocoPhillips shall report results of field observations including reporting on damaged or unsanitary well conditions, adjacent potential pollution sources, odor, water color, sediment, bubbles, and effervescence.
- ConocoPhillips shall provide copies of all test results described above to the City, the COGCC, and the water source owners within 30 days after receiving the analytical results.

## 6.2. Baseline Water Quality Testing

For each New Well, ConocoPhillips shall implement a water quality monitoring and well testing plan, using records of the Colorado Division of Water Resources, as follows:

- If four or fewer available water sources exist within a one-half mile radius of the location of a proposed New Well, ConocoPhillips shall collect a sample from each available water source. Operator shall collect initial testing of baseline samples from Available Water Sources prior to the commencement of drilling a New Well. For purposes of this provision, an "Available Water Source" is a properly and well-maintained domestic water source.
- If more than four available water sources exist within the one-half mile radius, ConocoPhillips shall submit a plan for approval to the City for selecting the Available Water Sources based on the following criteria:
  - Available Water Sources closest to the location of the proposed New Well are preferred.
  - Sample locations must be chosen in a radial pattern around the New Well if possible.
  - Where Available Water Sources are completed in different aquifers, a sample must be collected from each aquifer.
  - If groundwater flow direction is known or can be reasonably inferred, Operator shall collect samples from both up-gradient and down-gradient Available Water Sources.
- ConocoPhillips may request a variance from the requirements of this provision by submitting a request to the City along with necessary supporting documentation. The City may approve a variance based on the following criteria:
  - No Available Water Sources exist within a one-half mile radius of the New Well; or
  - Water sources are determined to be unsuitable, improperly maintained, non-operational, or other issues exist that would not allow ConocoPhillips to collect a representative sample. ConocoPhillips is seeking a variance under this section shall document the condition of the Available Water Source and state why it is unsuitable; or

- The owner of a water well declines to grant access or requires payment for access despite Operator's reasonable efforts to obtain consent to conduct sampling. For purposes of this section, reasonable efforts mean:
  - ConocoPhillips provides notice to owner of an Available Water Source of its desire to collect a sample.
  - If ConocoPhillips' attempts to obtain access fail, ConocoPhillips shall provide final notice by certified mail to the owner.
  - If the owner of the Available Water Source does not respond within 30 days, ConocoPhillips is deemed to have made a reasonable effort.
  - ConocoPhillips shall document these efforts and submit to City when seeking a variance.
- If the City takes no action on the variance request from ConocoPhillips in 10 business days then the requested variance will be deemed approved and the City shall not delay ConocoPhillips' OGP application.
- If no Available Water Source exists, the City may request that ConocoPhillips drill and construct a monitoring well sufficient to test the domestic groundwater source near the New Well ("Requested Well"). The Requested Well should be on or near the Well Site and down gradient from the New Well. ConocoPhillips and the City shall agree on the location and design of the Requested Well. The Requested Well must be drilled to adequate depths in order to allow for testing all available aquifers down to and including the Laramie Fox-Hill.
  - If ConocoPhillips does not have the rights to drill the Requested Well, ConocoPhillips shall make reasonable efforts to obtain rights from the surface owner.
    - ConocoPhillips shall send a request to drill and construct the Requested Well to the surface owner by certified mail. If the surface owner denies the request, requests money for the right, imposes conditions, or does not respond within 30 days, then ConocoPhillips shall not be required to drill the Requested Well.
    - If ConocoPhillips is unable to obtain the rights to drill a monitoring well as described above, ConocoPhillips shall submit documentation to the City when seeking a variance.

### 6.3. City Easement Well

If ConocoPhillips is unable to obtain the rights to drill a Requested Well, the City may request that ConocoPhillips drill a monitoring well capable of testing all available aquifers down to and including the Laramie Fox-Hill on one of the City's existing easements within a half mile radius of the New Well ("City Easement Well"). The City may assign rights to the ConocoPhillips to drill and construct a City Easement Well on an existing easement that is suitable to place a monitoring well chosen by the City. ConocoPhillips shall be responsible for any cost associated with drilling and monitoring a City Easement Well, except for the cost associated with obtaining the easement.

- Upon identification of an easement by the City, ConocoPhillips shall drill the City Easement Well so that sampling may be performed as described in the Baseline Water Quality Testing provision of this Agreement.
- If the City has not obtained an easement prior to ConocoPhillips beginning Drilling Operations, then the City may request ConocoPhillips drill the City Easement Well anytime during the Drilling, Completions, or Production Phase of a New Well, once the City has obtained an easement suitable for a monitoring well.

- When ConocoPhillips no longer needs to utilize the City Easement Well, ConocoPhillips shall offer the City Easement Well to the City. City may elect to take over the City Easement well and shall execute appropriate transfer documents.
- The City's request to drill a City Easement Well is outside of the OGP application process. The City shall not delay the OGP application process if the City chooses to request that ConocoPhillips drill a City Easement Well. The City shall process ConocoPhillips' OGPs once ConocoPhillips has complied with or received a variance regarding the Baseline Water Quality Testing or has agreed to drill a Requested Well.

#### **6.4. Post-stimulation Samples**

Post-stimulation samples of previously sampled water sources must be collected and tested annually until the Reclamation Phase is completed for the Well Site. The representative water source locations will be mutually agreed upon by the City and ConocoPhillips.

#### **6.5. Existing Groundwater Monitoring Sampling Data**

ConocoPhillips may rely on existing groundwater sampling data from any water source within the radii described above that was collected in accordance with accepted City standards, provided the data was collected within the 12 months preceding the commencement of Drilling Phase for such Well Site, the data includes measurement of all of the constituents measured in Table 1 below and there has been no significant oil and gas activity within a one-mile radius in the time period between the original sampling and the commencement of the Drilling Phase for such Well Site.

#### **6.6. Enhanced Water Quality Testing**

If sampling shows degradation of water quality, additional measures may be required including:

- If free gas or a dissolved methane concentration level greater than one milligram per liter (mg/l) is detected in a water source, determination of the gas type using gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen).
- If the test results indicate thermogenic or a mixture of thermogenic and biogenic gas, an action plan to determine the source of the gas.
- Immediate notification to the City, the COGCC, and the owner of the water well if the methane concentration increases by more than five mg/l between sampling periods, or increases to more than 10 mg/l.
- Immediate notification to the City, the COGCC and the owner of the water well if BTEX and/or TPH are detected as a result of testing. Such detections may result in required subsequent sampling for additional analytes.
- Further water well sampling in response to complaints from water source owners.
- Timely production and distribution of test results in electronic deliverable format to the City, the COGCC and the water source owners.
- Qualified Independent Professional Consultant. All water source testing must be conducted by the Operator or, if requested by a surface owner, by a qualified independent professional consultant.

- If ConocoPhillips identifies degradation to water quality as a result of its oil and gas development, Operator shall be responsible to mitigate the degradation of water quality to the applicable regulatory standards.

Table 1: Baseline Water Quality Testing Analytes

<b>Inorganic Chemicals:</b>	
<b>Contaminant</b>	<b>MCL (mg/L)</b>
Antimony	0.006
Arsenic	0.010
Asbestos	7 Million Fibers/liter (Longer than 10 µm)
Barium	2
Beryllium	0.004
Cadmium	0.005
Chromium	0.1
Cyanide (as free Cyanide)	0.2
Fluoride	4.0
Mercury	0.002
Nitrate	10 (as Nitrogen)
Nitrite	1 (as Nitrogen)
Total Nitrate and Nitrite	10 (as Nitrogen)
Selenium	0.05
Thallium	0.002
<b>VOCs:</b>	
<b>Contaminant</b>	<b>MCL (mg/L)</b>
Vinyl chloride	0.002
Benzene	0.005
Carbon tetrachloride	0.005
1,2-Dichloroethane	0.005
Trichloroethylene	0.005
Para-Dichlorobenzene	0.075
1,1-Dichloroethylene	0.007
1,1,1-Trichloroethane	0.2
cis-1,2 Dichloroethylene	0.07
1,2-Dichloropropane	0.005
Ethylbenzene	0.7
Monochlorobenzene	0.1
o-Dichlorobenzene	0.6
Styrene	0.1
Tetrachloroethylene	0.005
Toluene	1
Trans-1,2 Dichloroethylene	0.1
Xylenes (total)	10
Dichloromethane (methylene chloride)	0.005
1,2,4-Trichlorobenzene	0.07
1,1,2-Trichloroethane	0.005

<b>SOCs</b>	
<b>Contaminant</b>	<b>MCL (mg/L)</b>
Aalachlor	0.002
Aldicarb1	0.003
Aldicarb sulfoxide	0.004
Aldicarb sulfone	0.002
Atrazine	0.003
Carbofuran	0.04
Chlordane	0.002
Dibromochloropropane	0.0002
2,4-D	0.07
Ethylene dibromide	0.00005
Heptachlor	0.0004
Heptachlor epoxide	0.0002
Lindane	0.0002
Methoxychlor	0.04
Polychlorinated biphenyls	0.0005
Pentachlorophenol	0.001
Toxaphene	0.003
2,4,5-TP (Silvex)	0.05
Benzopyrene	0.0002
Dalapon	0.2
Di(2-ethylhexyl)adipate	0.4
Di(2-ethylhexyl)phthalate	0.006
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Endrin	0.002
Glyphosate	0.7
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Oxamyl (Vydate)	0.2
Picloram	0.5
Simazine	0.004
2,3,7,8-TCDD (Dioxin)	3 x 10 <sup>-8</sup>
<b>Radionuclides</b>	
<b>Contaminant</b>	<b>MCL (mg/L)</b>
Combined radium-226 and radium-228 <sub>1</sub>	5 pCi/L
Gross alpha particle activity (including radium-226 but excluding radon and uranium)	15 pCi/L
Beta particle and photon radioactivity <sup>2</sup>	4 mrem/yr <sup>3</sup>
Uranium	30 µg/L
<b>Secondary Maximum Contaminant Levels</b>	
<b>Contaminant</b>	<b>Level</b>
Aluminum	0.05 to 0.2 mg/L

Chloride	250 mg/L
Color	15 color units
Copper	1.0 mg/L
Corrosivity	Non-corrosive
Fluoride	2.0 mg/L1
<i>When the fluoride level exceeds the SMCL of 2.0 mg/L, cubic notification is required per the applicable regulations.</i>	
Foaming agents (surfactants)	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Odor	3 threshold odor number
pH	6.5-8.5
Silver	0.1 mg/L
Sulfate	250 mg/L
Total dissolved solids (TDS)	500 mg/L
Zinc	5 mg/L
<b>PFOA and PFOS</b>	
<b>General Water Quality</b>	
Alkalinity, Conductivity & TDS, pH, Dissolved Organic Carbon (or Total Organic Carbon), Bacteria, and Hydrogen Sulphide	
<b>Major Ions</b>	
Bromide, Chloride, Fluoride, Magnesium, Potassium, Sodium, Sulfate, and Nitrate + Nitrite as N	
<b>Metals</b>	
Arsenic, Barium, Boron, Chromium, Copper, Iron, Lead, Manganese, Selenium, Strontium, Mercury, Uranium, and Radium	
<b>Dissolved Gases and Volatile Organic Compounds</b>	
Methane, Ethane, Propane, BTEX as Benzene, Toluene, Ethylbenzene and Xylenes, Total Petroleum, and Hydrocarbons (TPH)	
<b>Other</b>	
Water Level, Stable isotopes of water (Oxygen, Hydrogen, Carbon), Phosphorus	

Table 2: Enhanced Water Quality Testing Analytes

<b>General Water Quality</b>
Alkalinity, Conductivity & TDS, pH, Dissolved Organic Carbon (or Total Organic Carbon), Bacteria, and Hydrogen Sulphide
<b>Major Ions</b>
Bromide, Chloride, Fluoride, Magnesium, Potassium, Sodium, Sulfate, and Nitrate + Nitrite as N
<b>Metals</b>
Arsenic, Barium, Boron, Chromium, Copper, Iron, Lead, Manganese, Selenium, Strontium, Mercury, Uranium, and Radium
<b>Dissolved Gases and Volatile Organic Compounds</b>
Methane, Ethane, Propane, BTEX as Benzene, Toluene, Ethylbenzene and Xylenes, Total Petroleum, and Hydrocarbons (TPH)
<b>Other</b>

Water Level, Stable isotopes of water (Oxygen, Hydrogen, Carbon), Phosphorus
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## 6.7. Wellbore Integrity and Aquifer Protection

ConocoPhillips shall protect fresh water producing zones from the intrusion of hydrocarbons or water from other formations that are penetrated by the New Well. ConocoPhillips shall comply with applicable COGCC regulations regarding well bore integrity and testing. The casing and cement for each New Well must prevent oil, gas, and water from migrating from one formation to another behind the casing.

Where the depth of water producing formations are clearly established, ConocoPhillips shall set and cement casing in a manner sufficient to protect fresh water aquifers.

### Surface Casing

- All surface casing must be cemented with a continuous column from the bottom of the casing to the surface. Surface casing must be cemented to a depth to protect alluvial (surficial) aquifer.
- If cement does not circulate to surface, Operator shall perform a cement bond log to determine top of cement. Operator shall follow COGCC procedures to ensure cement is to the surface and that integrity is managed.

### Production Casing

- Cement must be pumped behind the production casing 200 feet above the top of the shallowest uncovered known commercial producing horizon.
- ConocoPhillips shall follow COGCC regulations regarding protecting any fresh water aquifers that are below the depth of the surface casing.

### Integrity Testing and Monitoring

- During the Drilling Phase, ConocoPhillips shall run temperature or cement log if surface casing cement is not circulated to the surface in order to ensure integrity.
- ConocoPhillips shall test the production casing to adequately test for the conditions anticipated during completion operations.
- ConocoPhillips currently installs pressure transmitters on surface and production casing and Operator shall monitor casing pressures during the Production Phase.
- ConocoPhillips shall perform Bradenhead tests on all wells at all Well Sites during the Completions Phase and the annually during the Production Phase of the well.

## 7. Compliance Assurance

As required by COPC Lower 48 Compliance Assurance Manual, Environmental staff will develop action plans with tasks and applicable dates to implement the Operator Agreement and Best Management Practices. The requirements will be communicated to impacted personnel supporting the Niobrara operations.

Requirements of the Operator Agreement and Best Management Practices will be incorporated into compliance plans. A list of tasks and/or roles and responsibilities will also be developed to ensure compliance with obligations. Personnel responsible for completing tasks will be made aware of their responsibilities and be trained appropriately. Defined tasks will be incorporated into Niobrara

processes such as SAP. To ensure timely compliance of requirements and tasks, periodic reviews will be conducted to assess compliance status associated with these compliance activities.

## 8. References

- Oil and Gas Operator Agreement
- Best Management Practices