



COGCC Interim Form 2B: Cumulative Impacts Data Identification Part 2: Location and OGDG Information

Operator Training

January 21, 2021



COLORADO
**Oil & Gas Conservation
Commission**

Department of Natural Resources

Overview

- Location Information Sections
 - Water Resources
 - Terrestrial and Aquatic Wildlife Resources and Ecosystems
 - Air Resources
 - Public Health
- OGD Scale Information
- Beneficial Impacts



Follow-up From Interim Form 2B Part 1

- Submitting Interim Form 2B
 - eForms
 - ◆ DO: attach the Interim Form 2B to the Form 2C in eForms (as excel spreadsheet format) with the label INTERIM FORM 2B
 - Hearing Application
 - ◆ DO: State in your OGD eFiling Hearing Application that the Interim Form 2B is attached to the Form 2C instead of providing Form 2B doc#
 - ◆ DO NOT: upload any eForms (Form 2A, 2B, or 2C) with your OGD eFiling Hearing Application.

Form 2B - Oil & Gas Location #XX Info tab

Multiple sections grouped by topic

- Oil & Gas Location Information section
- Water Resources section
- Terrestrial and Aquatic Wildlife Resources and Ecosystems section
- Public Welfare section
- Air Resource section
- Public Health section
- Existing Oil and Gas section



Form 2B - Oil & Gas Location #XX Info tab

Water Resources section

- YES/NO: Sensitive area for water resources or within 2,640 feet of Surface Water of the State?
 - Should match answers on submitted Form 2A
 - If an existing location, make sure the answers apply to current rules
- Planned on-location storage: # of tanks and volume
 - Oil, condensate, produced water, other
 - Describe in text box at the end the 'other' fluids and their individual volumes



Form 2B - Oil & Gas Location #XX Info tab

Water Resources section

- Potential Impacted Surface Water Resources
 - Riparian Corridor, Wetland, Surface Waters of the State
 - Distance, Direction, and Evaluation of Baseline condition
 - ◆ Evaluation may be through field observation or talking to landowners to get a complete answer
- Potential Impacts to Public Water Resources
 - Public Water System Intake
 - Distance, Direction, Evaluation of Potential Impacts
- Note on distance measurement
 - Measurements should be along the contaminant pathway to the given feature, not a straight line



Form 2B - Oil & Gas Location #XX Info tab

Water Resources section

- Estimated Water Usage

- Volume in bbls estimated to be used during drilling & completions

- Sources of water

- ◆ Surface water, Groundwater, Recycled, Unspecified (provide description of unspecified source)

- Recycled (Produced Water) - produced water from oil and gas

- Recycled (non-Produced Water) - non-oil and gas source

- ◆ Total volume

- ◆ Percentage recycled = Total recycled divided by total volume

- Whole number; round to nearest whole number (65.7% rounds to 66%)

- Evaluation of measures to reduce fresh water usage



Form 2B - Oil & Gas Location #XX Info tab

Terrestrial and Aquatic Wildlife Resources and Ecosystems section

- All HPHs within one mile of working pad surface
 - HPH name, distance, and amount of HPH acreage disturbed by construction of the proposed oil and gas location
 - ◆ If the location is partially or entirely within a HPH, distance is '0'
- Acreage disturbed during construction & interim-reclamation
 - Total for location and total for HPH



Form 2B - Oil & Gas Location #XX Info tab

Terrestrial and Aquatic Wildlife Resources and Ecosystems section

- Existing Land Use within one mile around the location, not the land use of the location itself

Form 2B eForms mockup

		Existing Acreage		Existing Acreage		Existing Acreage		Existing Acreage
Crop Land:	Irrigated	<input type="text"/>	Non-Irrigated	<input type="text"/>	Conservation Resource Program (CRP)	<input type="text"/>		
Non-Crop Land:	Rangeland	<input type="text"/>	Forestry	<input type="text"/>	Recreation	<input type="text"/>	Other	<input type="text"/>
Subdivided:	Industrial	<input type="text"/>	Commercial	<input type="text"/>	Residential	<input type="text"/>		

- Helpful to make a map and draw a one mile radius
- One mile radius circle is approximately 2010 acres
- If no land use of a given type, indicate '0'
- If land use is other, provide description
- If land use is industrial, provide description



Form 2B - Oil & Gas Location #XX Info tab

Terrestrial and Aquatic Wildlife Resources and Ecosystems section

- If the PROPOSED oil and gas location includes Rangeland, Forestry, or Recreation, identify the disturbed acreage of the plant communities

Form 2B eForms mockup

	Estimated Disturbed Acreage		Estimated Disturbed Acreage		Estimated Disturbed Acreage		Estimated Disturbed Acreage
Disturbed Grassland	<input type="text"/>	Shrub Land	<input type="text"/>	Mountain Riparian	<input type="text"/>	Wetland Aquatic	<input type="text"/>
Native Grassland	<input type="text"/>	Plains Riparian	<input type="text"/>	Forest Land	<input type="text"/>	Alpine	<input type="text"/>

- Note: the amount of plant community disturbed should make sense with the total acreage disturbance of the oil and gas location
- Provide a qualitative evaluation of incremental adverse impacts to ecosystems
- Soil Resources
 - Soil Map Unit Name and acreage disturbed



Form 2B - Oil & Gas Location #XX Info tab

Air Resources section

- Pollutants: NO_x, CO, VOCs, Methane, Ethane, CO₂, N₂O
 - Pre-production and production equipment lists were derived from the APCD Oil and Natural Gas Operations Emissions Inventory sheets
- Recommended sources for estimating emissions
 - Gas Sample or Stack Testing data from an equivalent site
 - AP-42: Compilation of Air Emissions Factors (EPA)
 - 40 CFR 98 Subpart W (GHGRP-EPA)
 - Manufacturer provided data or Literature Review
- APCD Oil and Natural Gas Operations Emissions Inventory sheet instructions contain additional useful information



Form 2B - Oil & Gas Location #XX Info tab

Air Resources section

- Diesel Vehicle Road Miles
 - Largest mobile sources
 - Stages of operations: construction, drilling, completions, interim reclamation, production
 - Not personal vehicles, but large trucks used for Mobilization/de-mob of equipment and delivery of materials and supplies
 - Many contractors include mileage as a line item, charge for fuel use by mile, or identify the mileage traveled in activity reports



Form 2B - Oil & Gas Location #XX Info tab

Public Health section

- Pollutants: benzene, toluene, ethylbenzene, xylenes, n-Hexane, 2,2,4-Trimethylpentane (2,2,4-TMP), Hydrogen sulfide (H₂S), formaldehyde, methanol
- Be sure the emission estimation method being used is appropriate for the type of equipment, examples:
 - Storage Tanks: samples from equivalent site or default emission factors in PS Memo 05-01
 - Separators: samples from equivalent equipment or known emission factors
 - Loadout: default emission factors are located in PS Memo 14-02
 - Non-Road Internal Combustion Engines: engine manufacturer, AP-42, or other APCD published emission factors
- Other sources for estimating HAP emissions
 - AP-42: Compilation of Air Emissions Factors (EPA)
 - Manufacturer provided data
 - APCD approved emission calculation methodologies



Form 2B - Oil & Gas Location #XX Info tab

Public Health section

- Qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of pre-production and production emissions
- Dust Impacts
 - Vehicle trips
 - ◆ Monthly and annual/total
 - ◆ Construction, drilling, completions, interim reclamation, production stages
 - Proppant: estimated pounds to be used during completions, type, and evaluation of proppant management system

Overview

- Location Information Sections
 - Water Resources
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 - Air Resources
 - Public Health
- OGD Scale Information
- Beneficial Impacts



Form 2B - OGDGDP-Scale Data tab

- All HPHs estimated to be disturbed via construction of new roads, including access roads, pipelines, and utilities for this OGDGDP
 - Name and amount of acreage disturbed for each specific HPH
- Total acreage disturbed during construction & interim-reclamation
 - new roads, including access roads, pipelines, and utilities for this OGDGDP
- Number of miles of existing lease road planned to be used



Form 2B - Beneficial Impacts tab

- Equipment and Facility Removal
 - Wells to be plugged and abandoned
 - Locations, pits, tanks estimated to be closed or removed
 - ◆ Acres to be reclaimed through final reclamation
 - Truck trips to be avoided from facility closures
- Qualitative evaluation of the direct and indirect incremental beneficial impacts to the surrounding community
- Qualitative evaluation of the direct and indirect incremental beneficial impacts to the surrounding wildlife and ecosystems



Form 2B - REQUIRED data fields note

- In the “What is this?” column, many data fields are labeled as REQUIRED
- REQUIRED means an answer needs to be provided
 - Answer could be ‘0’ or ‘None’ or ‘N/A’
 - Field may NOT be blank
- OPTIONAL means the data field may be left blank or filled as Operator needs



Interim Form 2B - Where to find it



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All	Pending Permit Transition Timeline	January 14, 2021	Jane Stanczyk	jane.stanczyk@state.co.us
All	Permitting Scenarios	January 14, 2021	Jane Stanczyk	jane.stanczyk@state.co.us
All	Form Releases and Staff Contacts	January 14, 2021	Jane Stanczyk	jane.stanczyk@state.co.us
Hearings Application	Hearings and Applications Process Guidebook	January 14, 2021	Jon Peskin	jon.peskin@state.co.us

2A	Form 2A Modifications	January 12, 2021	Doug Andrews	doug.andrews@state.co.us
2B	Form 2B Overview	December 15, 2020	Stephen Schwarz	stephen.schwarz@state.co.us
2B	Cumulative Impacts Data Identification	January 19, 2021	Stephen Schwarz	stephen.schwarz@state.co.us
2B	Interim Form 2B	January 19, 2021	Stephen Schwarz	stephen.schwarz@state.co.us
2C	Form 2C Overview	December 15, 2020	Brian Christopher	brian.christopher@state.co.us

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