

State of Colorado
Energy & Carbon Management Commission

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CUMULATIVE IMPACTS DATA IDENTIFICATION

Per Rule 303, this form and all required components and attachments will be submitted for any Oil and Gas Development Plan.

Form Type: OGDP Partial 2B - Rule 803.b.(2).A UIC Conversion

OPERATOR INFORMATION

OGCC Operator Number: <u>96850</u>	Contact Name and Telephone:
Name of Operator: <u>TEP ROCKY MOUNTAIN LLC</u>	Name: <u>Jeff Kirtland</u>
Address: <u>1058 COUNTY ROAD 215</u>	Phone: <u>(970) 263-2736</u>
City: <u>PARACHUTE</u> State: <u>CO</u> Zip: <u>81635</u>	Email: <u>jkirtland@terraep.com</u>

OIL & GAS DEVELOPMENT PLAN INFORMATION

Oil & Gas Development Plan Name: TR 32-28-597

Oil & Gas Development Plan Docket #: 230500188 Oil & Gas Development Plan ID #: Data not required

This OGDG is included in a Comprehensive Area Plan. CAP ID #: _____

OIL & GAS LOCATION DATA

1 Oil & Gas Location Name: Chevron Number: TR 32-28-597 Status: Active, built

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 403369764

Loc ID#: 324040

Oil & Gas Location: QTRQTR: SWNE Sec: 28 Twp: 5S Rng: 97W Meridian: 6

Total number of wells planned: 18

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 9

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 19

Number of planned drilling occupations to drill all planned wells for this Oil & Gas Location: 1

Estimated total number of weeks to complete all planned wells for this Oil & Gas Location: 33

Number of planned completions occupations to complete all planned wells for this Oil & Gas Location: 1

Will there be simultaneous drilling and completions operations occurring at this Oil & Gas Location? No

Estimated total number of months the Oil & Gas Location will be active, prior to abandonment and reclamation: 360

Noise Impacts

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

Pre-production (short-term) activities are typically shorter in nature and emit a higher noise level than long-term production operations. Noise from these activities could have impacts on surrounding receptors if located within close proximity of the proposed WPS.

No residential or other building units are located within 2,000 feet of the TR 32-28-597 location and the nearest residential or other building units are more than 1 mile from the location; therefore, noise impacts to members of the public are expected to be minimal during pre-production operations (short-term) and production operations (long-term). Because no residential building units are present within 1 mile, it is unlikely for noise generated during pre-production or production operations to adversely impact members of the public (see Cultural Distance Map – Form 2A).

TEP reviewed HPH within 1 mile of the TR 32-28-597 pad. The Oil and Gas Location is located within Greater Sage-Grouse Priority Habitat Management Area and Greater Sage-Grouse General Habitat Management Area. During the pre-application consultation process, TEP and CPW discussed potential noise impacts to greater sage-grouse. TEP stated that the Oil and Gas Location is located 1.57 miles from the nearest lek site and because well completion operations would be conducted from a location over 3 miles from the nearest lek site, impacts to greater sage-grouse would be negligible. Additionally, the TR 32-28-597 pad is located along a ridge line approximately 200 feet higher in elevation than the lek site further minimizing potential impacts to greater sage-grouse. TEP also stated that all planned operations would be compliant with applicable noise standards under COGCC Rule 423. CPW agreed that a noise mitigation plan would not be necessary for this location based on the siting condition and operational compliance with noise standards. CPW informed TEP that noise impacts to wildlife are not anticipated for this Oil and Gas Location.

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

Because no residential building units are present within 1 mile, it is unlikely for noise generated during pre-production or production operations to adversely impact members of the public (see Cultural Distance Map – Form 2A).

TEP reviewed HPH within 1 mile of the TR 32-28-597 pad. The Oil and Gas Location is located within Greater Sage-Grouse Priority Habitat Management Area and Greater Sage-Grouse General Habitat Management Area. During the pre-application consultation process, TEP and CPW discussed potential noise impacts to greater sage-grouse. TEP stated that the Oil and Gas Location is located 1.57 miles from the nearest lek site and because well completion operations would be conducted from a location over 3 miles from the nearest lek site, impacts to greater sage-grouse would be negligible. Additionally, the TR 32-28-597 pad is located along a ridge line approximately 200 feet higher in elevation than the lek site further minimizing potential impacts to greater sage-grouse. TEP also stated that all planned operations would be compliant with applicable noise standards under COGCC Rule 423. CPW agreed that a noise mitigation plan would not be necessary for this location based on the siting condition and operational compliance with noise standards. CPW informed TEP that noise impacts to wildlife are not anticipated for this Oil and Gas Location.

Light Impacts

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

Pre-production activities are typically shorter in nature and require sufficient lighting to ensure the safety of employees and contractors. All lighting used during the pre-production phase of development would be directed downward and inward towards the operation to minimize light pollution in the vicinity of the location. Lighting from these activities could have minimal impacts on surrounding receptors if located within close proximity of the proposed WPS.

During planning of the TR 32-28-597 pad, TEP determined through on-site surveys and review of available aerial imagery that there are no residential building units within 2,000 feet of the proposed WPS. The nearest residential building unit is located over 1 mile from the WPS. Because no residential building units are present within 2,000 feet it is unlikely for on-site lighting generated during pre-production operations to adversely impact members of the public (see Cultural Distance Map – Form 2A).

TEP reviewed HPH within 1 mile of the TR 32-28-597 pad. The pad is located within Greater Sage-Grouse Priority Habitat Management Area and Great Sage-Grouse General Habitat Management Area. During the pre-application consultation process, TEP and CPW discussed potential lighting impacts to greater sage-grouse. The Oil and Gas Location is located 1.57 miles from the nearest lek site and because well completion operations would be conducted from a location over 3 miles from the nearest lek site, impacts to greater sage-grouse would be negligible. Additionally, the TR 32-28-597 pad is located along a ridge line approximately 200 feet higher in elevation than the lek site further minimizing potential impacts to greater sage-grouse. All planned operations would be compliant with applicable lighting standards under COGCC Rule 424 and all lighting fixtures would be directed downward and inward to minimize light pollution from planned activities.

CPW agreed that a light mitigation plan would not be necessary for this location based on the site conditions and operational compliance with lighting standards. CPW informed TEP that lighting impacts are not anticipated for this Oil and Gas Location.

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

TEP is not currently planning to have any onsite lighting during long-term production operations and does not anticipate conducting any nighttime well maintenance operations requiring temporary lights. Therefore, light impacts to members of the public and wildlife resources are expected to be nonexistent during production operations (long-term).

Odor Impacts

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

Pre-production and production activities have the potential to generate odors. During planning of the TR 32-28-597 OGD, TEP determined through on-site surveys and review of available aerial imagery that there are no residential building units within 2,000 feet of the proposed WPS. The nearest residential building unit is located more than 1 mile from the WPS of the Oil and Gas Location.

No residential building units are present within 2,000 feet, it is unlikely for odor generated during pre-production operations (short-term) or production operations (long-term) to adversely affect members of the public (see Cultural Distance Map – Form 2A).

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

No residential building units are present within 2,000 feet, it is unlikely for odor generated during pre-production operations (short-term) or production operations (long-term) to adversely affect members of the public (see Cultural Distance Map – Form 2A).

WATER RESOURCES

This Oil & Gas Location is listed as a sensitive area for water resources.

This Oil & Gas Location is within 2,640 feet of a surface Water of the State.

Estimated depth to groundwater: 100

Estimated total planned on-location storage capacity of the Oil & Gas Location for:

	Number of Tanks	Total Volume (bbls)
Oil	<u>0</u>	<u>0</u>
Condensate	<u>3</u>	<u>1500</u>
Produced Water	<u>7</u>	<u>3500</u>
Other volumes of stored fluids, hydrocarbons, chemicals, or E&P Waste Fluids	<u>5</u>	<u>15</u>

List, with volumes, the "Other" fluids planned to be stored on the Oil & Gas Location, including, but not limited to: hydrocarbons, chemicals, or E&P Waste fluids.

- 4 - Chemicals, 12 bbls
- 1 - Chemicals, 3 bbls

Potential Impacted Surface Water Resources

Provide the distance and direction of the contaminant migration pathway from the Oil & Gas Location to the nearest downstream riparian corridors, wetlands, and surface Waters of the State. Also provide an evaluation of the baseline condition of the nearest downstream riparian corridors, wetlands, and surface Waters of the State.

Enter 2,640 for distances greater than 1/2-mile. Distances are measured along the migration pathway, not a straight line from the edge of the Oil & Gas Location.

	Distance	Direction	Evaluation of Baseline Condition
Riparian Corridor	<u>2640</u>	<u>SE</u>	<u>Distance is greater than half a mile from location</u>
Wetland	<u>1639</u>	<u>SE</u>	<u>NWI: Intermittent/Ephemeral Stream NW of Oil and Gas Location</u>
Surface Waters of the State	<u>1106</u>	<u>SE</u>	<u>Intermittent/Ephemeral Stream NW of Oil and Gas Location</u>

Potential Impacts to Public Water Resources

Provide the distance, direction, and evaluation of potential impacts to the nearest Public Water System Intake. Enter 5,280 for distances greater than 1-mile.

	Distance	Direction	Evaluation of Baseline Condition
Public Water System Intake	<u>2640</u>	<u>E</u>	<u>No PWS intakes within 1 mile of the working pad surface (WPS)</u>

Estimated Water Usage

Provide the estimated total volumes of the following that are anticipated to be used during the drilling and completions stage of the Oil & Gas Location activity.

Water Source	Volume (bbls)		Volume (bbls)		Volume (bbls)		Percentage	
Surface Water	<u>79500</u>	Recycled Water (Produced Water)	<u>204000</u>	Unspecified Source	<u>0</u>		<u>96</u>	<u>%</u>
			<u>0</u>					
Ground Water	<u>0</u>	Recycled Water (non-Produced Water)	<u>0</u>	Total Water Usage	<u>211950</u>			
					<u>0</u>			

If an unspecified water source is planned to be used, provide a description of the source.

NA

Evaluate the measures being taken to reduce freshwater use, including reusing and recycling produced water.

Fresh water required for drilling operations (surface, intermediate, and production casing) and dust control, would be transported by truck from the Trail Ridge Fresh Water Pond and Parachute Creek Fresh Water Takeout. The Trail Ridge Fresh Water Pond is located approximately 1.57 miles north of the TR 32-28-597 pad along Trail Ridge Road. The Parachute Creek Fresh Water Takeout is located along Parachute Creek on TEP property west of County Road 215. Water trucks would utilize existing county and lease roads and would follow existing truck routes where applicable. The intake on the water pumps at the source locations would be fitted with a quarter-inch (0.25") mesh screen to prevent impacts to aquatic wildlife. TEP estimates that approximately 4,500 bbls of fresh water would be used for drilling operations and dust control per well.

ECOSYSTEM & WILDLIFE RESOURCES

List High Priority Habitats (HPH) that occur within one mile of the Oil & Gas Location and list the distance from working pad surface. If the location is partially or entirely within a HPH list the distance as '0' and provide the estimated acreage disturbance of that HPH by the location construction.

High Priority Habitat (HPH) Name:	Distance	Estimated Acreage Disturbed
Aquatic Native Species Conservation Waters	1647	0
Greater Sage-Grouse Priority Habitat	0	5.265
Greater Sage-Grouse General Habitat	0	0.513

List total size of disturbed acreage and disturbed High Priority Habitat (HPH) area (in acres) during the Oil & Gas Location construction and after interim reclamation.

	Total Acreage (acres)	Total HPH Acreage (acres)	Provide any further information regarding the location's HPH disturbance.
Construction	5.778	5.778	TR 32-28-597 Oil and Gas Location is located within Greater Sage Grouse Priority Habitat (HPH) and Greater Sage Grouse General Habitat (HPH).
Post-interim Reclamation	1.192	1.192	

Provide the acreage of the existing land use types that occur within one mile of the Oil & Gas Location. Note: a circle with a one mile radius is approximately 2010 acres.

	Existing Acreage	Existing Acreage	Existing Acreage	Existing Acreage			
Crop Land: Irrigated	0	Non-Irrigated	0	Conservation Reserve Program(CRP)	0		
Non-Crop Land: Rangeland	2232	Forestry	0	Recreation	0	Other	0
Subdivided: Industrial	0	Commercial	0	Residential	0		

If any land use is industrial, provide a description of the use or operation of the industrial facilities.

NA

If any land use is "Other", provide a description of the land use.

NA

If any portion of the land use for the proposed oil and gas location includes Rangeland, Forestry, or Recreation, provide a list of the plant community or communities and estimated acreage disturbed for each:

	Estimated Disturbed Acreage	Estimated Disturbed Acreage	Estimated Disturbed Acreage	Estimated Disturbed Acreage			
Disturbed Grassland	0	Shrub Land	5.778	Mountain Riparian	0	Wetland Aquatic	0
Native Grassland	0	Plains Riparian	0	Forest Land	0	Alpine	0

Provide a qualitative evaluation of incremental adverse impacts to ecosystems, including any plant communities, as a result of Oil and Gas Operations associated with the proposed Oil & Gas Location.

The loss of mature mountain shrubs, including Gambel oaks, would be long-term, but these species are common throughout the region, and the loss would be negligible at both a Project and regional level. Gradual re-establishment of a portion of the affected shrubland is likely following reclamation. TEP has designed the Project to incorporate existing infrastructure to minimize impact to the ecosystem and wildlife that rely on available habitats in the vicinity surrounding the existing TR 32-28-597 pad. As a result of incorporating existing infrastructure into the development plan, impacts to existing wildlife habitat would be minimal and impacts on wildlife would be reduced compared to less developed or undeveloped areas because some habituation of the animals to oil and gas operation and other human activities would be expected (see Wildlife Plan – Form 2A for detailed BMPs proposed to minimize impacts to wildlife). To minimize traffic during operations, TEP would install buried natural gas and produced water pipelines. As mentioned above, disturbance associated with pipeline construction would be promptly revegetated with native species consistent with CPW’s recommended seed mix when the pipeline is completed. TEP would utilize remote telemetry equipment to minimize well site visitation reducing the vehicles traveling on dirt/gravel roads. When feasible, TEP would limit post-development operations to daylight hours when wildlife activity is minimal. To minimize the potential for wildlife related traffic accidents, TEP would implement speed restrictions for all roads and would require that all TEP employees and contractors adhere to posted speed limits. TEP has scheduled reconstruction of the TR 32-28-597 pad and installation of infrastructure during October of 2023 outside the migratory nesting season for migratory birds (April 1 to August 31). However, if construction operations are accelerated or delayed into the migratory bird nesting season, TEP would either implement hazing prior to April 1st, or a pre-construction migratory bird survey would be conducted during the nesting season to determine if nesting migratory birds are present within the Project area. If any active nests are located, TEP would provide work zone buffers around those active nests as allowed under Rule 1202.a.(8). TEP would implement a weed management program to minimize the potential spread and infestation of invasive, non-native plants within areas used for expansion of the TR 32-28-597 pad and installation of infrastructure that could degrade wildlife habitat and out-compete native vegetation. This includes control or reduction of invasive weeds and non-native populations that have been established in the TR 32-28-597 OGD prior to development, as well as invasive plant species that may be introduced during Project development and reclamation activities. Interim and final reclamation of disturbed areas would use seed mixes that are certified to be weed-free. Reclamation would be monitored annually until reclamation is successful, and if noxious weeds are documented, a certified weed sprayer would be dispatched to inspect the site and take action to treat the noxious weeds. These measures would minimize impacts on existing vegetation communities within the Project area as well as maintain native vegetation for the continued use of wildlife in the Project area.

Soil Resources

List all soil map units that occur within the Oil & Gas Location and list the estimated total area (in acres) disturbance of each soil map unit.

NRCS Map Unit Name:	Estimated Disturbed Acreage
55 - Parachute-Irigul complex, 5 to 30 percent slopes	4.836
56 - Parachute-Irigul-Rhone association, 25 to 50 percent slopes MLRA 48A	0.942

PUBLIC WELFARE

This Oil & Gas Location lies within a Disproportionately Impacted Community as defined in the 100-series rules.

Building Units within 1-mile

0'-2,000' 2,001'-5,280'

Total number of Residential Building Units:	0	0
Total Number of non-school AND non child care center High Occupancy Building Units:	0	0
Total number of School Facilities:	0	0
Total number of Child Care Centers:	0	0

Recreation and Scenic Value

List all State Parks, State Trust Lands, or State Wildlife Area within 1-mile of the Oil & Gas Location.

There are no State Parks, State Trust Lands, or State Wildlife Areas within 1 mile of the TR 32-28-597 per COGCC mapping.

List all Designated Outdoor Activity Areas within 1-mile of the Oil & Gas Location.

There are no Designated Outdoor Activity Areas within 1 Mile of the Oil and Gas Location.

List all mapped trails that support any of the following recreational activities within 1-mile of the Oil & Gas Location: Hiking, Biking, Horseback Riding, Motorcycle Riding, ATV Riding, OHV, Nordic Skiing, Snowmobiling, or Snowshoeing.

There are no trails within 1 mile of the TR 32-28-597 pad. TEP reviewed BLM Transportation layer and Colorado Trails Explorer to evaluate existing trails in the vicinity of the Oil and Gas Location.

AIR RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in tons) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Criteria Pollutants by equipment type.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Process Heaters or Boilers	0.76	0.64	0.04	0.02	0.02	915.18	0.02

Storage Tanks	0	0	0	0	0	1.04	0
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	146.43	121.08	6.41	32.9	2.68	13472.83	0
Drill Mud	0	0	0	0	0	0	0
Flowback or Completions	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated full facility equipment emissions (in tons) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Criteria Pollutants. The table should be filled out based on ONE year of operation.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Stationary Engines or Turbines	0	0	0	0	0	0	0
Process Heaters or Boilers	1.32	1.1	0.07	0.03	0.04	1578.09	0
Storage Tanks	0.77	3.5	3.82	3.56	1.73	956.22	0.02
Dehydration Units	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0
Fugitives			0.14	0.94	0.13	0	
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0
Loadout	0.02	0.11	0.09	0.08	0.04	29.37	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Well Bradenhead	0	0	0	0	0	0	0
Well Maintenance	0	0	0.57	3.78	0.52	0.01	0

Diesel Vehicle Road Miles

Complete the following chart for diesel vehicle road miles during each stage of oil and gas location operations.

During Construction: 6674 During Completions: 22443
 During Drilling: 45356 During Interim Reclamation: 835
 During Production: 590

PUBLIC HEALTH RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Hazardous Air Pollutants (HAP).

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Process Heaters or Boilers	0	0	0	0	0	0	0	1.14	0	1.14
Storage Tanks	0.08	0	0	0	0.09	0	0	0	0	0.17
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	222	103	6	51	58	0	0	3058	0	3498
Drill Mud	90	122	5	55	122	0	0	0	122	516
Flowback or Completions	0	0	0	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Hazardous Air Pollutants (HAP). The table should be filled out based on ONE year of operation.

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Stationary Engines or Turbines	0	0	0	0	0	0	0	0	0	0
Process Heaters or Boilers	0	0	0	0	0	0	0	2	0	2
Storage Tanks	40	0	0	0	159	0	0	0	0	199
Dehydration Units	0	0	0	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0	0	0	0
Fugitives	1	0	0	0	4	0	0	0	0	5
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Loadout	1	0	0	0	3	0	0	0	0	4
Well Bradenhead	0	0	0	0	0	0	0	0	0	0
Well Maintenance	6	9	0	4	38	4	0	0	0	61

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated total pre-production hazardous air pollutant emissions.

As part of an air quality assessment performed for the Balzac Gulch EA (BLM 2017b), individual HAP emissions from pre-production operations were quantified. The total HAPs emissions, 0.20 tpy include benzene, toluene, ethylbenzene, xylenes, n-hexane, and formaldehyde emissions of 0.08, 0.04, 0.0005, 0.02, 0.04, and 0.007 tpy, respectively. These HAP emissions are of similar magnitude to the level of TR 32-28-597 OGDG pre-production HAP emissions (benzene, toluene, ethylbenzene, xylenes, n-hexane, and formaldehyde) presented above (0.16, 0.11, 0.01, 0.05, 0.09, and 1.53 tpy, respectively).

Impacts from pre-production HAP emissions were not estimated or analyzed as part of the Balzac Gulch EA (BLM 2017b) given that the emissions from pre-production activities are from short-term activities and do not occur over the lifetime of the project. Also, these HAP emissions are less than those which could occur from production activities. As part of the Balzac Gulch EA (BLM 2017b) impacts from production HAP (benzene, toluene, ethylbenzene, xylenes, n-hexane, and formaldehyde) emissions in the vicinity of the well pads were analyzed and the potential maximum acute (short-term; 1-hour) and long-term (annual) HAP concentrations were estimated to be well below applicable health thresholds for these HAPs. Therefore, it is estimated the HAP emissions resulting from the reconstruction of the TR 32-28-597 well pad and drilling of 17 natural gas wells would not cause or contribute to any potential acute or chronic, short- or long-term incremental impacts to public health.

2,2,4-trimethylpentane, hydrogen sulfide, and methanol HAP emissions from pre-production activities were estimated. These emissions are estimated as 0.0, 0.0, and 0.06 tpy, respectively. Although these HAPs were not specifically modeled in the Balzac Gulch EA (BLM 2017b), the emissions levels are less than the project benzene emissions (which were modeled). Given that the applicable short-term; (1-hour) and long-term (annual) health thresholds for these HAPs are above the levels applicable to benzene it is estimated the short-term and long-term concentrations for these HAPs would be well below applicable health thresholds.

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated annual production hazardous air pollutant emissions.

As part of an air quality assessment performed for the Balzac Gulch EA (BLM 2017b), individual HAP emissions from production operations were quantified. The total HAPs emissions, 1.01 tpy include benzene, toluene, ethylbenzene, xylenes, n-hexane, and formaldehyde emissions of 0.16, 0.23, 0.01, 0.09, 0.48, and 0.04 tpy, respectively. These HAP emissions are of similar magnitude to the level of project production HAP emissions (benzene, toluene, ethylbenzene, xylenes, n-hexane, and formaldehyde) presented above (0.02, 0.005, 0.0, 0.002, 0.10, and 0.001 tpy, respectively).

As part of the Balzac Gulch EA (BLM 2017b), impacts from production HAP emissions (benzene, toluene, ethylbenzene, xylenes, n-hexane, and formaldehyde) in the vicinity of the well pads were analyzed and the potential maximum acute (short-term; 1-hour) and long-term (annual) HAP concentrations were estimated to be well below applicable health thresholds for these HAPs. In addition, long-term exposures to emissions of suspected carcinogens (benzene, ethylbenzene, and formaldehyde) were evaluated based on estimates of the increased latent cancer risk over a 70-year lifetime. The estimated cancer risk from these HAPs was shown to be below acceptable cancer risk levels. Therefore, it is estimated the HAP emission resulting from the production activities from 17 natural gas wells on the TR 32-28-597 OGDG pad would not cause or contribute to any potential acute or chronic, short- or long-term incremental impacts to public health.

2,2,4-trimethylpentane, hydrogen sulfide, and methanol HAP emissions from production activities were estimated. These emissions are estimated as 0.002, 0.0, and 0.0 tpy, respectively. Although these HAPs were not specifically modeled in the Balzac Gulch EA (BLM 2017b), the emissions levels are less than the project benzene emissions (which were modeled). Given that the applicable short-term (1-hour) and long-term (annual) health thresholds for these HAPs are above the levels applicable to benzene, it is estimated that the short-term and long-term concentrations for these HAPs would be well below applicable health thresholds.

Dust Impacts

The following are the estimated number of truck trips traveling on or off the Oil & Gas Location.

Total	During Construction	During Drilling	During Completions	During Interim Reclamation	During Production
Monthly	188	808	348	77	18
Annual	376	3583	2666	77	220

Estimated total pounds (lbs) of proppant to be used during completions activities. 0

Provide the type of proppant(s) that are planned to be used during completions activities.

NA

Provide an evaluation of the proposed proppant management system that will be used to minimize dust during completions activities, including the estimated amount of silica dust that will leave the Oil & Gas Location.

TEP is not pumping proppant on these wells.

EXISTING OIL & GAS

Total number of oil & gas locations within 1-mile of the Oil & Gas Location:

	Total Number of Locations	Total Number of Wells
Active, built	3	30
Permitted by COGCC, unbuilt	0	0
Permitted by Relevant Local Government & not COGCC, unbuilt	0	17
Proposed	0	0

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 15.08

Source for acreage total:

- Field Observation/Measurement
- COGCC Location Files
- Aerial Photos/Other
- Other

If "Other" is selected, please describe the source use to determine the acreage total for construction disturbance of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

NA

Total permitted capacity of on-location storage (in number of pits and tanks) of the active and proposed oil & gas locations within 1-mile of the Oil & Gas Location :
NOTE: providing the existing number of pits and tanks on surrounding existing locations is optional.

Source for storage totals:	Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
<input checked="" type="checkbox"/> Field Observation/Measurement	Oil <u>0</u>	<u>0</u>
<input checked="" type="checkbox"/> COGCC Location Files	Condensate <u>6</u>	<u>6</u>
<input type="checkbox"/> Aerial Photos/Other	Produced Water <u>12</u>	<u>12</u>
<input type="checkbox"/> Other	Pits <u>5</u>	<u>1</u>

If "Other" is selected, please describe the source use to determine the tank totals for the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

NA

OIL & GAS DEVELOPMENT PLAN-SCALE DATA

List High Priority Habitats (HPH) that are estimated be disturbed by the construction of new roads, including access roads, pipelines, and utilities for this OGDG, along with the estimated disturbed acreage of each HPH.

High Priority Habitat (HPH) Name	Estimated Acreage Disturbed
Greater Sage Grouse Priority	0.134
Greater Sage Grouse General	0
Aquatic Sportfish Management Waters	0

List the total estimated of disturbed acreage and the total disturbed High Priority Habitat (HPH) area (in acres) during construction and the acreage that will remain disturbed after interim reclamation of the following for the entire OGDG:

	Construction		Post-interim Reclamation	
	Total Acreage (acres)	Total HPH Acreage (acres)	Total Acreage (acres)	Total HPH Acreage (acres)
New roads, including access roads	0	0	New roads, including access roads	0
Pipelines	0.134	0.13	Pipelines	0.025
Utilities	0	0	Utilities	0

Provide any further information regarding the HPH disturbance from the construction of new roads, including access roads, pipelines, and utilities for this OGDG.

The existing access road and newly proposed gas, water, and temp frac pipeline corridors are within Greater Sage-Grouse High Priority Habitat. The pre-application consultation meeting with CPW was necessary to ensure TEP's planned operation would be protective of wildlife and to discuss BMPs that TEP would implement to avoid and/or minimize impacts to wildlife, a detailed summary can be found in TEP's Wildlife Mitigation Plan.

Number of miles of the existing lease road that are planned to be used to access these location(s): 52.35

BENEFICIAL IMPACT INFORMATION

Equipment and Facility Removal

Total number of existing wells that are planned to be plugged and abandoned as part of this OGDG: 0

Total number of tanks planned to be removed from existing locations through the approval of this OGDG:

Total number of existing locations that are planned to be closed and undergo final reclamation as part of this OGDG: 0

Oil Tanks: 0

Total number of acres that are planned to be reclaimed through the closing of existing locations: 0

Condensate Tanks: 0

Total number of existing pits that are planned to be closed and undergo final reclamation as part of this OGDG: 0

Produced Water Tanks: 0

Estimated number of vehicle trips that are planned to be prevented from the above mentioned facility closures and equipment upgrades (on an annual basis): 0

Provide a qualitative evaluation of any incremental beneficial impacts to the surrounding community directly and indirectly from this OGDG.

The communities of Rifle and Parachute would benefit most notably from the employment and tax revenues generated by the proposed development plan. In addition to the direct jobs created by the Project, the development plan would support jobs in local businesses that support the Project and its employees, including retail trade, lodging and eating establishments, construction, real estate, and other services.

Taxes paid by TEP on production would support infrastructure and community services in Rifle and across the county. In Garfield County ad valorem (property) taxes on production fund local governments; education and health care facilities; and fire protection, water conservation, and sanitation services including the City of Rifle, Garfield School District No. Re-2, Rifle Downtown Development District, Grand River Hospital, West Divide Water Conservancy District, Rifle Branch of the Garfield County Public Library District, and Colorado River Fire Rescue.

In addition to ad valorem taxes, Rifle and other Garfield County residents would receive a portion of state severance taxes paid on production in the OGDG through services provided. Severance tax on oil and gas production in Colorado is progressive, starting at 2% and increasing with sales volume. Half of severance taxes paid to the state is returned to local governments impacted by oil, gas, and mineral production.

While production-based taxes would produce the greatest benefits to local governments, Garfield County and the City of Rifle would also receive tax revenues from property taxes paid on physical assets and sales and use taxes paid on equipment purchases associated with the development plan.

Provide a qualitative evaluation of any incremental beneficial impacts to the surrounding wildlife and ecosystems directly and indirectly from this OGD.

A detailed discussion of the benefits to surrounding wildlife and ecosystem is included above under the section titled "Terrestrial and Aquatic Wildlife Resources and Ecosystems." As discussed above, TEP would minimize impacts to wildlife and surrounding ecosystems by using existing infrastructure, recycling produced water thereby reducing truck trips, installation of buried pipelines, coordination with CPW, ground clearing outside of migratory bird habitat restrictions, and implementation of a weed management program. In addition, TEP has agreed to pay the habitat mitigation fees associated with direct and indirect impacts to greater sage-grouse from the construction and long-term operation of the proposed wells at the TR 32-28-597 pad. As an alternative to payment of the compensatory mitigation fees, TEP and CPW have agreed to evaluate potential mitigation projects within the northwest region of Colorado that could be used to off-set direct and indirect impacts to greater sage-grouse (see Wildlife Mitigation Plan – Form 2A for additional information regarding compensatory mitigation).

MITIGATION INFORMATION

No Mitigation Measures Listed

OPERATOR COMMENTS AND SUBMITTAL

Print Name: Melissa Luke

Title: Regulatory Specialist

Email: mluke@terraep.com

Date: 06/09/2023

Based on the information provided herein, this Cumulative Impacts Data Identification Form 2B complies with COGCC Rules and is hereby accepted into the Cumulative Impacts Data Evaluation Repository (CIDER database).
Contact OGLA Staff for consultation.

COGCC Approved: _____

Director of COGCC

Date: _____

Attachment Check List

Att Doc Num **Name**

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Total Attach: 0 Files

General Comments

User Group **Comment** **Comment Date**

OGLA	Returned to DRAFT to allow the operator to address completeness issues	10/16/2023
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Total: 1 comment(s)