

## **Cumulative Impacts Plan**

**for the**

**TEP Rocky Mountain LLC  
Federal RG 22-24-299  
Oil and Gas Development Plan**

**Prepared by**

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## INTRODUCTION

Edge Environmental, Inc. (Edge) was asked by TEP Rocky Mountain LLC (TEP) to prepare a Cumulative Impacts Plan pursuant to Colorado Oil and Gas Commission's (COGCC's) Rule 304.c.(19). This plan documents how the Operator (TEP) would address cumulative impacts to resources identified pursuant to Rule 303.a.(5).

This Cumulative Impacts Plan for the Federal RG 22-24-299 Oil and Gas Development Plan (OGDP) was prepared based on the preliminary Oil and Gas Location Assessment (Form 2A) and Cumulative Impacts Data Identification (Form 2B) documentation provided by TEP. The Federal RG 22-24-299 Oil and Gas Development Plan (OGDP) is a 520-acre OGDP consisting of 5.304-acres of Surface Lands and 520-acres of Federal injection lands (including 251.33 acres of Federal pore space) located within SE $\frac{1}{4}$ SW $\frac{1}{4}$  and SW $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 13 and NE $\frac{1}{4}$ , NW $\frac{1}{4}$ NE $\frac{1}{4}$ , S $\frac{1}{2}$ NE $\frac{1}{4}$ , and SE $\frac{1}{4}$  of Section 24, Township 2 South, Range 99 West, 6th P.M., Rio Blanco County, Colorado. The Federal RG 22-24-299 OGDP includes construction of the new Federal RG 22-24-299 pad to support drilling, completion, and injection operations for two new directionally drilled injection wells, construction of a new access road, and installation of associated water pipeline infrastructure.

The proposed Federal RG 22-24-299 pad is a new Oil and Gas Location, located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$  of Section 24, Township 2 South, Range 99 West, 6th P.M., on Federal land managed by the Bureau of Land Management (BLM), which overlies Federal minerals. The Oil and Gas Location is located approximately 31 miles southwest of the Town of Meeker, Colorado. The land on which the pad would be located is classified as non-crop land, rangeland, and recreational. The two proposed injection wells planned for development on this location would be directionally drilled and completed into the underlying Federal pore space for underground water injection. The proposed pad elevation would be constructed to 7,090.4 feet.

The Federal RG 22-24-299 well pad will be constructed to accommodate the development of the Federal RG 943-24-299D and the Federal RG 921-24-299D injection wells. The newly proposed access road will be constructed from Rio Blanco County Road 68. In addition, TEP will install one 4-inch FlexSteel produced water line (approximately 794 feet) from the proposed injection wells, located on the proposed Federal RG 22-24-299 pad, to TEP's existing water pipeline system tie-in point, located northeast of the proposed pad in the SW $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 24, Township 2 South, Range 99 West, 6th P.M.

Existing roads, including private lease roads and public roads, will be utilized during construction, drilling, well completion, and injection operations of the two injection wells on the proposed Federal RG 22-24-299 well pad. The newly proposed access road to the Federal RG 22-24-299 pad will be constructed from Rio Blanco County Road 68 (CR 68) to accommodate drilling and well completion operations. In addition, minor road maintenance may be performed along the existing county roads prior to construction to ensure the existing road is in good working condition for the proposed well location activities. TEP will coordinate with Rio Blanco County Road and Bridge on any access permits and road maintenance activities required along CR 68. Stormwater controls will be installed along the proposed access road between CR 68 and the site entrance during construction. Additional controls may be evaluated with the Federal surface owner during construction and implemented as needed.

TEP will stage well completion operations for the new injection wells on location with water provided from the proposed 3-inch water pipeline, which ties back into TEP's existing water management system. TEP will pump recycled produced water from the Mautz Ranch Multi-Well Pit (Pit 22-19-298; Loc ID: 422672) (Mautz Ranch), which is located on TEP's surface in the SE $\frac{1}{4}$ NW $\frac{1}{4}$  of Section 19, Township 2 South, Range 98 West, 6th P.M, to the Federal RG 22-24-299 pad. Flowback equipment will be placed on location during completions operations only to process any returned flowback fluids during drill outs. Flowback fluids will flow through flowback separation equipment. Water will be delivered to temporary tanks on location and will be pumped from the tanks through existing pipeline infrastructure to Mautz Ranch for recycling or injection.

Following completion of well construction, and subsequent approval of injection permits, produced water from existing producing wells within the Ryan Gulch and Barcus Creek Development Areas will be pumped or trucked to Mautz Ranch for temporary storage and treatment. Incoming produced water will be further processed through existing equipment (i.e., gun barrels) to remove any residual hydrocarbons in the water before entering the multi-well pit. Produced water will then be pumped from Mautz Ranch via the existing electric 600 hp centrifugal pump through existing and proposed water pipelines to the Federal RG 943-24-299D and the Federal RG 921-24-299D injection wells for disposal.

TEP is currently proposing to begin construction on the Federal RG 22-24-299 pad in April 2024. Pad construction is estimated to take 9 weeks to complete. Drilling and completions operations are currently scheduled to occur in October 2024. Interim reclamation of the Federal RG 22-24-299 pad would begin within 6 months following completion of operations for the Federal RG 943-24-299D and the Federal RG 921-24-299D injection wells. Interim reclamation activities would take approximately 3 to 6 weeks to complete. Development may be accelerated or delayed based on market conditions and company constraints.

## **SUMMARY OF RESOURCE IMPACTS**

### **Air Resources**

Air emissions produced during the pre-injection and injection phases of development have been evaluated based on the scale and scope of the proposed Federal RG 22-24-299 OGDG for the following pollutants: oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), volatile organic compounds (VOCs), methane (CH<sub>4</sub>), ethane (C<sub>2</sub>H<sub>6</sub>), carbon dioxide (CO<sub>2</sub>), and nitrous oxide (N<sub>2</sub>O).

A quantitative evaluation of the incremental increase in pollutants has been estimated for the entire proposed Federal RG 22-24-299 OGDG. The emissions estimate includes both stationary and mobile sources of emissions during all pre-injection activities (see Table 1) and both stationary and mobile sources of emissions for the first year of injection based on all proposed wells and equipment (see Table 2). Pre-injection activities are expected to occur from April 2024 through December 2024 and injection would occur beginning in December 2024. Diesel vehicle miles for various project activities have also been estimated (see Table 3).

**Table 1**  
**Pre-Injection Pollutant Emissions (tons) for the Federal RG 22-24-299 OGD**

Component	NOx	CO	VOCs	CH <sub>4</sub>	C <sub>2</sub> H <sub>6</sub>	CO <sub>2</sub>	N <sub>2</sub> O
Process Heaters or Boilers	0.26	0.22	0.01	0.01	0.01	307.62	0.01
Storage Tanks	0.00	0.00	0.00	0.00	0.00	1.04	0.00
Venting or Blowdowns	-	-	-	-	-	-	-
Combustion Control Devices	-	-	-	-	-	-	-
Non-road Internal Combustion Engines	12.75	9.86	0.68	2.2	0.18	1,516.63	0.00
Drill Mud	-	-	1.47	--	-	-	-
Flowback or Completions	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Loadout	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Emissions</b>	13.01	10.08	2.16	2.21	0.19	1,825.29	0.01

**Table 2**  
**One Year Injection Pollutant Emissions (tons) for the Federal RG 22-24-299 OGD**

Component	NOx	CO	VOCs	CH <sub>4</sub>	C <sub>2</sub> H <sub>6</sub>	CO <sub>2</sub>	N <sub>2</sub> O
Stationary Engines or Turbines	-	-	-	-	-	-	-
Process Heaters or Boilers	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Storage Tanks	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dehydration Units	-	-	-	-	-	-	-
Pneumatic Pumps	-	-	-	-	-	-	-
Pneumatic Controllers	-	-	-	-	-	-	-
Separators	-	-	-	-	-	-	-
Fugitives	-	-	0.01	0.04	0.01	0.00	-
Venting or Blowdown	-	-	-	-	-	-	-
Combustion Control Devices	-	-	-	-	-	-	-
Non-Road Internal Combustion Engines	-	-	-	-	-	-	-
Loadout	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Well Bradenhead	-	-	-	-	-	-	-
Well Maintenance	-	-	0.00	0.00	0.00	0.00	-
<b>Total Emissions</b>	0.00	0.00	0.01	0.04	0.01	0.00	0.00

**Table 3**  
**Diesel Vehicle Miles for the Federal RG 22-24-299 OGD**

Activity	Miles
Construction	33
Drilling	47
Completion	125
Interim reclamation	4
Injection (1 <sup>st</sup> year only)	3
<b>Total</b>	<b>212</b>

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The maximum total criteria pollutant emissions (NO<sub>x</sub>, CO, and VOCs) for the Federal RG 22-24-299 OGDG pre-injection and injection activities are estimated as: 13.01, 10.08, 2.17 tons per year (tpy), respectively. These total emissions conservatively assume that all pre-production emissions could occur in a one-year period. Project emissions of the greenhouse gases CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O from pre-injection and injection activities are quantified in terms of CO<sub>2</sub> equivalents (CO<sub>2</sub>e). Greenhouse gases (GHGs) have various capacities to trap heat in the atmosphere, which are known as global warming potentials (GWPs). GWPs are related to different time intervals to fully account for the gases' ability to absorb infrared radiation (heat) over their atmospheric lifetimes. Carbon dioxide has a GWP of 1, so for the purposes of the analysis, a GHG GWP is generally standardized to a CO<sub>2</sub>e, or the equivalent amount of CO<sub>2</sub> mass the GHG would represent. Methane has a current estimated GWP between 28 (gas alone) and 36 (with climate feedbacks). N<sub>2</sub>O has a GWP of 298. The total pre-injection and injection GHG emissions (sum of CH<sub>4</sub>, CO<sub>2</sub>, and N<sub>2</sub>O emissions reported as CO<sub>2</sub>e in units of million metric tons [MMT]) are estimated as 0.002 MMT.

The Colorado Air Resource Management Modeling Study – version 2.0 (CARMMS) (BLM, 2017a) can be used to estimate reasonably foreseeable future near-field air quality conditions for the area surrounding the proposed project. The CARMMS analysis included cumulative air emissions for year 2015 and future year emissions of NO<sub>x</sub> and VOCs from increased total (Federal and non-Federal) oil and gas development/operations through year 2025 (post-2015) in the area surrounding the proposed project, which includes the Federal RG 22-24-299 OGDG NO<sub>x</sub> and VOC emissions. Emissions of ethane (C<sub>2</sub>H<sub>6</sub>) are estimated by the CAMx model from project VOC emissions and gas speciation profile data and were used in estimating ozone concentrations for the project.

The CARMMS analysis predicted that, in year 2025, the contributions to cumulative air quality from Federal project-specific maximum potential annual emissions (full development plus one full year of production occurring in the same year) would be above applicable project-level Significant Impact Levels (SILs) for ozone, PM<sub>10</sub>, PM<sub>2.5</sub> and NO<sub>2</sub> would be exceeded. However, predicted ozone, PM<sub>10</sub>, PM<sub>2.5</sub> and NO<sub>2</sub> concentrations are expected to be below the National Ambient Air Quality Standards (NAAQS) and Colorado Ambient Air Quality Standards (CAAQS).

In addition, as part of air quality assessment performed for a BLM Environmental Assessment (EA) of a nearby TEP oil and gas project (BLM 2017b), CO and NO<sub>x</sub> emissions from pre-production and production operations were quantified. The project (Balzac Gulch – Phase I Master Development Plan), included the drilling and development of 66 new Federal wells, and the EA resulted in a Finding of No Significant Impacts (FONSI). The total CO and NO<sub>x</sub> emissions from the EA, 92.3 and 131.2 tpy respectively, are much higher than the level of project emissions presented above (CO – 10.1 tpy and NO<sub>x</sub> – 13.0 tpy).

Air quality modeling was performed to estimate near-field impacts of CO and NO<sub>2</sub> concentrations from project activities. Predicted CO and NO<sub>2</sub> concentrations were estimated to be below the applicable NAAQS and CAAQS. Therefore, it is estimated that the CO and NO<sub>x</sub> emissions resulting from the construction of the Federal RG 22-24-299 well pad, and the drilling and operations of two injection wells on the well pad would not cause or contribute to any exceedance of the CO and NO<sub>2</sub> ambient air quality standards.

### Cumulative Impacts

The BLM Colorado State Office air resource specialists prepared an Annual Report (Version 2.0) as a comprehensive assessment tool to assist in the preparation of project level NEPA for oil and

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gas development projects (BLM 2022). The Annual Report 2.0 provides up-to-date information on oil and gas development (current regulations, rates for drilling and production, emission inventories, etc.) and the state of the atmosphere (air pollutant concentration trends, air quality related values, etc.) for each applicable Colorado field office or planning area. The report also places this information in the context of the CARMMS, which provides cumulative analyses for multiple projected oil and gas development scenarios in Colorado through year 2025 for CARMMS 2.0 (BLM 2017a).

Section 4.8 of the BLM Annual Report presents data for cumulative emissions from new Federal oil and gas development within the BLM White River Field Office (WRFO) as compared to the emissions scenarios analyzed by CARMMS and qualitatively scales the CARMMS projected impacts to the cumulative report year emissions (year 2020) to provide a context for the current cumulative impacts. This section is referenced to set the context for the project's current cumulative impacts at field office scales. As described in the BLM Annual Report, WRFO specific contributions to cumulative air quality concentrations and air quality related values (visibility, deposition, etc.) for sensitive areas around the region (except for Dinosaur National Monument) are predicted to be minimal and insignificant with respect to accepted impact thresholds for new foreseeable Federal oil and gas development post-2015 through year 2025. However, in year 2025 data indicates that the nitrogen deposition impacts are exceeding the project level deposition analysis threshold (DAT) (0.005 kilogram per hectare per year [kg/ha-yr]) at Dinosaur National Monument (0.006 kg/ha-yr).

No adverse project impacts to air resources are anticipated as a result of construction (short-term) and injection (long-term) operations for the Federal RG 22-24-299 OGD. Adverse cumulative impacts are not expected as a result of project implementation.

### Specific Measures Taken to Avoid or Minimize Cumulative Adverse Impacts

Implementation of BMPs and the Dust Mitigation Plan provided in the Form 2A, as well as the implementation of an Air Monitoring Program as required by CDPHE avoids and minimizes project impacts to air resources and therefore, no adverse cumulative impacts are expected.

### Measures to Mitigate or Offset Cumulative Adverse Impacts

As mentioned above, no project or cumulative adverse impacts to air resources are anticipated from the implementation of the Federal RG 22-24-299 OGD and therefore, no mitigation or offsets are proposed.

### **Public Health**

A quantitative evaluation of the incremental increase in total hazardous air pollutant (HAPs) emissions (benzene, toluene, ethylbenzene, xylene, 2,2,4-trimethylpentane, hydrogen sulfide, formaldehyde, and methanol) and for specific HAPs emissions with known health impacts were estimated for the entire proposed Federal RG 22-24-299 OGD. The emissions estimate includes both stationary and mobile sources of emissions during all pre-injection activities (see Table 4). HAPs emissions estimates are zero for both stationary and mobile sources of emissions for the first year of injection based on all proposed wells and equipment. The estimated number of vehicle trips is listed in Table 5.

**Table 4**  
**Pre-Injection Hazardous Air Pollutants Emissions (lbs) for the Federal RG 22-24-299 OGD**

<b>Component</b>	<b>Benzene</b>	<b>Toluene</b>	<b>Ethyl benzene</b>	<b>Xylenes</b>	<b>n-Hexane</b>	<b>2,2,4-Trimethylpentane</b>	<b>Hydrogen sulfide</b>	<b>Formaldehyde</b>	<b>Methanol</b>	<b>Total HAPs</b>
Process Heaters or Boilers	-	-	-	-	-	-	-	0.39	-	0.39
Storage Tanks	0.08	-	-	-	0.09	-	-	-	-	0.17
Venting or Blowdowns	-	-	-	-	-	-	-	-	-	-
Combustion Control Devices	-	-	-	-	-	-	-	-	-	-
Non-road Internal Combustion Engines	22.00	10.00	0	6.00	4.00	-	-	214.00	-	256.00
Drill Mud	-	106.00	144.00	6.00	106.00	-	-	-	106.00	468.00
Flowback or Completions	-	-	-	-	-	-	-	-	-	-
Loadout	-	-	-	-	-	-	-	-	-	-
<b>Total Emissions</b>	<b>22.08</b>	<b>116.00</b>	<b>144.00</b>	<b>12.00</b>	<b>110.09</b>	<b>0.00</b>	<b>0.00</b>	<b>214.39</b>	<b>106.00</b>	<b>724.55</b>

**Table 5  
Estimate Number of Vehicle Trips for the Federal RG 22-24-299 OGDP**

<b>Activity</b>	<b>Vehicle Trips (monthly)</b>	<b>Vehicle Trips (annually)</b>
Construction	185	371
Drilling	776	828
Completion	735	735
Interim reclamation	59	59
Injection	18	220
<b>Total</b>	<b>1,773</b>	<b>2,213</b>

Qualitative Evaluation of Potential Acute or Chronic, Short- or Long-Term Incremental Impacts

*Pre-Injection.* As part of an air quality assessment performed for a BLM EA of a similar nearby TEP project (BLM 2017b), HAP emissions from pre-production operations were quantified.

Impacts from pre-production HAP emissions were not estimated or analyzed as part of the 2017 BLM EA given that the emissions from pre-production activities are from short-term activities and do not occur over the lifetime of the project. In addition, as part of the 2017 BLM EA, HAP emissions from production operations were quantified and impacts were estimated. 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 total HAP emissions are larger than the maximum level of project pre-injection total HAP emissions presented above in Table 4 for year 2024 (724.56 lbs/year or 0.36 tpy). 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, in contrast, it is estimated the HAP emissions resulting from construction of the Federal RG 22-24-299 well pad and the drilling of two injection wells on the Federal RG 22-24-299 pad would not cause or contribute to any potential acute or chronic, short-or long-term incremental impacts to public health since there are no producing wells on the pad.

2,2,4-trimethylpentane, hydrogen sulfide, and methanol HAP emissions from pre-injection activities were estimated and are shown in Table 4. The maximum emissions are estimated as 0.0, 0.0, and 0.05 tpy, respectively. Although these HAPs were not specifically modeled in the BLM 2017 study, 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.

*Injection.* No HAP emissions are expected to occur during well injection activities. Therefore, injection activities associated with two injection wells on the Federal RG 22-24-299 pad would not cause or contribute to any potential acute or chronic, short-or long-term incremental impacts to public health.

Cumulative Impacts

No applicable cumulative (regional) HAP modeling analyses are available for the area to estimate cumulative HAP impacts. However, as described above, the HAP emissions for the Balzac Gulch EA (BLM 2017b) are larger than the Federal RG 22-24-299 OGDP HAP emissions. Impacts from

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the Balzac Gulch 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, no adverse project impacts to public health are anticipated as a result of construction (short-term) and injection operations (long-term) at the Federal RG 22-24-299 pad. Adverse cumulative impacts are not expected as a result of project implementation.

### Specific Measures Taken to Avoid or Minimize Cumulative Adverse Impacts

Implementation of BMPs included in the Form 2A and the Dust Mitigation Plan attached to the Form 2A, as well as the implementation of an Air Monitoring Program as required by CDPHE avoids and minimizes project impacts to public health and therefore, no adverse cumulative impacts are expected.

### Measures to Mitigate or Offset Cumulative Adverse Impacts

As mentioned above, no project or cumulative adverse impacts to public health are anticipated from implementation of the Federal RG 22-24-299 OGD and therefore, no mitigation or offsets are proposed.

### **Water Resources**

There is no planned on-location storage of oil, condensate, produced water, and other hydrocarbons, chemicals, and waste fluids at the Federal RG 22-24-299 location.

The Hydrology Map, attached to the Form 2A, shows the presence and distance to surface water and groundwater features (see Table 6). The closest downgradient intermittent drainage is 2,657 feet northwest of the Federal RG 22-24-299 location. Surface waters are not located within 500 feet of the proposed pad and therefore, this pad location is not designated as a sensitive area for water resources (see Sensitive Area Determination, attached to the Form 2A for a detailed summary of this classification). Although the drainage is downgradient of the proposed location, the diffused pathway to the unnamed drainage lacks a defined bed and bank flow path promoting sheet flow rather than concentrated flow thus diminished potential for offsite migration to the drainage. The intermittent drainage eventually discharges to Stake Springs draw approximately 2 miles north which flows to Yellow Creek approximately 3 miles to the northeast. Site grading would provide control measures minimizing potential fluid migration off site.

The nearest spring, located 3,710 feet southwest in Ryan Gulch, is located on the other side of a topographic divide relative to the proposed Federal RG 22-24-299 pad and would not be impacted from a potential spill release. No wetlands were identified within the immediate vicinity of the proposed Federal RG 22-24-299 pad location. Best Management Practices (BMPs) would be installed during site construction which would eliminate preferential pathways for offsite depression flow using earthen berms and diversion ditches. All newly constructed BMPs would be closely monitored and maintained to ensure complete on-site containment of a potential release.

**Table 6  
Distance to Nearest Downgradient Surface Waters  
and Public Water Systems for the Federal RG 22-24-299 OGD**

<b>Description</b>	<b>Distance (feet)</b>	<b>Direction</b>	<b>Baseline Condition</b>
Riparian Corridor	>2,640	S	No Riparian Corridor within 2,640 feet of oil and gas location
Wetlands	>2,640	NW	NWI: Intermittent/Ephemeral Stream NW of oil and gas location
Surface Waters of the State	>2,640	NW	Intermittent/Ephemeral Stream NW of oil and gas location
Public Water System Intake	>2,640	N	No PWS intakes within 1-mile of the working pad surface (WPS)
<b>Additional Information</b>			
Sensitive Area	No		
Estimated Depth to Groundwater	>180 feet		
Evaluation of the potential impacts to the Public Water System Intake within 5,280 feet of the WPS	None, No PWS intakes within 1 -mile of WPS.		

TEP has implemented and maintains a Spill Prevention, Control and Countermeasure Plan (SPCC), which is a basin wide emergency spill response plan as required by Title 40, Code of Federal Regulations, Part 112 (40 CFR 112) as administered by the EPA. This plan describes measures implemented by TEP to prevent discharges from occurring and also, describes response measures to mitigate the impacts of a potential discharge. TEP has also implemented and maintains a Drilling and Workover Facilities Integrated Spill Prevention, Control, and Countermeasures Plan, as required by 40 CFR Part 112.10, which describes measures to prevent spills and releases during drilling, completions, and workover operations.

The working pad surface (WPS) of the Federal RG 22-24-299 pad is not within 2,640 feet of a Groundwater Under the Direct Influence of Surface Water (GUDI) well, a Type III Well as defined by Rule 411.b.(1).B and 411.b.(1).D, or a surface water feature segment that is 15 miles or less upstream from a Public Water System intake. TEP overlaid the available GUDI well and Type III Well data from the COGCC to determine if the proposed operations would be within 2,640 feet of these wells. Additionally, TEP identified the Public Water System intake locations downstream of the Federal RG 22-24-299 pad and determined that all proposed operations would not fall within 1 mile of an active Public Water System intake.

Colorado State Engineers Office and U.S. Geological Survey (USGS) records were reviewed indicating only domestic irrigation well (permit no. 176293) located 6,094 feet east-southeast of the Federal RG 22-24-299 pad. The well was drilled for irrigation water targeting an alluvial aquifer approximately 180 feet deep in the Uintah Formation. The well has an expired well permit. It occurs on the other side of a topographic divide physically isolated from potential impacts from the proposed well pad. Depth to shallow groundwater residing in alluvial aquifers adjacent to perennial streams is greater than 80 inches (6.67 feet) based on National Resources Conservation Service (NRCS) soil properties and qualities for Redcreek-Rentsac complex mapped soil unit occurring at the site. Potential impact to groundwater resources is deemed to be low based on the site hydrogeology.

The use of fresh water would be limited to that used for drilling and for dust control. Water use would be reduced by recycling produced water for completion operations. It is estimated that approximately 6,000 barrels of fresh water would be used for drilling operations and dust control

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per well (12,000 barrels for two wells). In addition, 200,000 barrels of water (recycled produced water) would be required for completion of a single well (400,000 barrels for two wells). Fresh water required for drilling operations (surface, intermediate, and injection casing) and dust control, would be transported by truck from the Mautz Ranch Fresh Water Pond which is located along Ryan Gulch on TEP property north of County Road 86. Water trucks would utilize existing county and lease roads and would follow existing truck routes where applicable. Water for well completion would be sourced from recycled produced water. Estimated water usage is listed in Table 7. A total of 97 percent of the total water used for drilling and completion would be recycled.

**Table 7  
Drilling and Completion  
Estimated Water Usage for the Federal RG 22-24-299 OGD**

Type	Volume (barrels)
Surface water	12,000
Groundwater	0
Recycled water (produced water)	400,000
Recycled water (non-produced water)	0
Unspecified source	0
<b>Total</b>	<b>412,000</b>
<b>Percentage recycled</b>	<b>97</b>

Based on the project design and implementation of the measures described above, potential impacts to surface water and groundwater are deemed to be low.

### Cumulative Impacts

No adverse impacts to water resources are anticipated as a result of construction (short-term) and injection (long-term) operations for the Federal RG 22-24-299 OGD. Adverse cumulative impacts are not expected as a result of project implementation.

### Specific Measures Taken to Avoid or Minimize Cumulative Adverse Impacts

Implementation of the measures described above and those included in the Stormwater Management Plan (attached to the Form 2A) to avoid and minimize project impacts to water resources would also avoid and minimize cumulative impacts and therefore, no adverse cumulative impacts are expected.

### Measures to Mitigate or Offset Cumulative Adverse Impacts

As mentioned above, no project or cumulative adverse impacts to water resources are anticipated from the development of the Federal RG 22-24-299 OGD and therefore, no mitigation or offsets are proposed.

### **Terrestrial and Aquatic Wildlife Resources and Ecosystems**

The proposed Federal RG 22-24-299 pad is not located within any High Priority Habitat (HPH) boundaries; however, the closest wildlife impact area is Aquatic Sportfish Management Waters, which is 2,546 feet to the south, and Elk Production Area, which is 4,670 feet to the southwest (see Table 8 and Wildlife Habitat Drawing attached to the Form 2A).

**Table 8**  
**High Priority Habitats within 1 Mile of the Federal RG 22-24-299 Working Pad Surface**

<b>Type</b>	<b>Distance (feet) from WPS</b>	<b>HPH Disturbed (acres)</b>
Aquatic Sportfish Management Waters	2,546	0.00
Elk Production Area	4,670	0.000

COGCC Rule 309.e.(2).A states that consultation is required if a “proposed Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within High Priority Habitat...”. In the interest of limiting impacts to wildlife, TEP invited Colorado Parks and Wildlife (CPW) to the initial scoping onsite held with the BLM and Rio Blanco County on May 24, 2022 and also completed a pre-application consultation meeting with CPW on February 6, 2023. During the pre-application consultation meeting, TEP updated CPW on the status of the Federal RG 22-24-299 OGDG and reviewed the Wildlife Protection Plan (see Wildlife Protection Plan attached to the Form 2A for a detailed summary of CPW consultation). TEP’s Wildlife Protection Plan addresses the implementation of the operational requirements outlined under COGCC Rule 1202.a. It provides an assessment of wildlife impacts from the proposed oil and gas activities, compliance with the applicable operating requirements under Rule 1202, CPW consultation, and BMPs that would be implemented to avoid, minimize, and mitigate impacts to wildlife from the proposed oil and gas activities. TEP does not have plans to install any new flowlines or utilities across perennial streams identified as Aquatic High Priority Habitat.

The proposed Federal RG 22-24-299 pad is located within Non-Crop Land – Rangeland. When applying a 1-mile buffer to the proposed Oil and Gas Location there are approximately 2,232 acres of existing rangeland. A quantitative vegetative assessment (WestWater Engineering 2022) was conducted for the project area during July 2022 following the methodology described in the National Park Service Fire Monitoring Handbook (USDI National Park Service 2003) and Monitoring Manual for Grassland, Shrubland, and Savanna Ecosystems, Volume I: Core Methods (Herrick et al 2015) to assist with interim and final reclamation.

After well development is complete, TEP would reclaim the area surrounding the wellhead and facilities not required for long-term injection operations. The area would be reclaimed using species and methods described in TEP’s Reclamation Plan, which is attached to the Form 2A. Reclamation would comply with State, and local reclamation standards and would occur within 6 months following completion of well construction. Composition of species used for reclamation would also consider the vegetative assessment (WestWater Engineering 2022). Construction and Interim Reclamation disturbance acreages are show in Table 9.

**Table 9**  
**Disturbance by Component for the Federal RG 22-24-299 OGDG**

<b>Component</b>	<b>Total Short-Term (acres)</b>	<b>Total Long-Term (acres)</b>
Federal RG 22-24-299 pad	4.701	0.603
Proposed Access Road	0.584	0.370
Proposed 3-inch Water Pipeline	0.639	0.00
<b>Total</b>	<b>5.924</b>	<b>0.973</b>

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The loss of mature mountain shrubs 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 proposed Federal RG 22-24-299 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 Protection Plan attached to the Form 2A for detailed BMPs proposed to minimize impacts to wildlife).

Hydraulic fracturing operations would use recycled produced water pumped through an existing buried water collection system avoiding use of truck traffic to deliver water for well completions and avoiding potential wildlife impacts. TEP would also install a 4-inch FlexSteel water pipeline. Disturbance associated with pipeline construction would be promptly revegetated with native species consistent with CPW's recommended seed mix when the pipeline is completed (see Reclamation Plan attached to the Form 2A). TEP would utilize remote telemetry equipment to minimize well site visitation reducing the vehicles traveling on dirt/gravel roads. 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 construction of the Federal RG 22-24-299 pad and installation of pipeline infrastructure and access road beginning April 2024, which is within the nesting season for migratory birds (April 1 to August 31). If vegetation removal occurs during the nesting season, TEP would implement hazing or other exclusionary measures prior to April 1 to avoid take of migratory birds. Alternatively, TEP may conduct a migratory bird survey prior to vegetation removal as required by COGCC Rule 1202.a.(8) to avoid take of migratory birds. If any active nests are located, TEP would provide work zone buffers around those active nests as allowed under COGCC Rule 1202.a.(8). Additionally, TEP would conduct raptor surveys within 0.25 mile or 0.5 mile of proposed well development activities prior to construction and implement appropriate buffers around active nests during the species' nesting seasons to avoid impacts.

To minimize the potential spread and infestation of invasive, non-native plants within areas used for construction of the Federal RG 22-24-299 pad and installation of infrastructure that could degrade wildlife habitat and out-compete native vegetation, TEP would implement a weed management program. This includes control or reduction of invasive weeds and non-native populations that have been established in the Federal RG 22-24-299 OGDG 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. 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.

### Cumulative Impacts

No adverse impacts to terrestrial and aquatic wildlife resources and ecosystems are anticipated as a result of construction (short-term) and injection (long-term) operations for the Federal RG 22-24-299 OGDG. Adverse cumulative impacts are not expected as a result of project implementation.

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## Specific Measures Taken to Avoid or Minimize Cumulative Adverse Impacts

Implementation of the measures described above and those included in the Wildlife Plan (attached to the Form 2A) and the Reclamation Plan (attached to the Form 2A) to avoid and minimize project impacts to terrestrial and aquatic wildlife resources and ecosystems would also avoid and minimize cumulative impacts and therefore, no adverse cumulative impacts are expected.

## Measures to Mitigate or Offset Cumulative Adverse Impacts

As mentioned above, no project or cumulative adverse impacts to terrestrial and aquatic wildlife resources and ecosystems are anticipated from implementation of the Federal RG 22-24-299 OGDG and therefore, no mitigation or offsets are proposed.

## **Soil Resources**

Construction of the Federal RG 22-24-299 pad and associated access road and pipeline corridor would require 3.738 acres of Redcreek-Rentsac complex, 5 to 30 percent slopes and 3.159 acres of Piceance fine sandy loam, 5 to 15 percent slopes for a total of 6.897 acres (Table 10). After drilling and completion, 5.924 acres would be reclaimed leaving 0.973 acre disturbed during long-term injection.

**Table 10**  
**Soil Types Disturbed by Construction of the Federal RG 22-24-299 OGDG**

<b>Map Unit Number</b>	<b>Soil Type</b>	<b>Federal RG 22-24-299 Pad (acres)</b>	<b>Access/Utilities (acres)</b>	<b>Total (acres)</b>
70	Redcreek-Rentsac complex, 5 to 30 percent slopes	3.064	0.674	3.738
64	Piceance fine sandy loam, 5 to 15 percent slopes	2.240	0.919	3.159
<b>Total</b>		<b>5.304</b>	<b>1.593</b>	<b>6.897</b>

TEP has prepared and would follow their Topsoil Protection Plan (attached to the Form 2A) to address compliance with State and local requirements regarding topsoil management and preservation. TEP has also prepared and would follow a Reclamation Plan (attached to the Form 2A). Proper management of topsoil during initial site construction would ensure topsoil is preserved for site reclamation following construction and to ensure adequate organic material is available for re-establishment of desirable vegetation at reclamation. During construction of the Federal RG 22-24-299 pad and construction of the proposed pipeline infrastructure and access road, topsoil stripped during initial construction of these project components would be managed according to use and duration of development. Prior to separation and storage of the topsoil horizon, or top 8.75 inches, from the well pad facility, pipeline corridor, and access road, woody vegetation would be mulched and stormwater control measures properly installed to control erosion and sedimentation during precipitation events (see Stormwater Management Plan attached to the Form 2A). When separating soil horizons, TEP would segregate each horizon based upon noted changes in physical characteristics, such as organic content, color, texture, density, or consistency. To the extent feasible, stockpiled soils would be protected from degradation due to contamination, compaction, and from wind and water erosion during drilling and injection operations. Surface roughening, temporary seeding and mulching, erosion control

blankets, or soil binders would be used as needed, and BMPs implemented, to prevent weed establishment and to maintain soil microbial activity.

During construction of the Federal RG 22-24-299 well pad, TEP's excavation contractor would strip the topsoil horizon within the proposed limits of disturbance. Topsoil would be stripped to a depth no less than 8.75 inches and stockpiled north of the proposed well pad. The topsoil volume disturbed for the constructed well pad is estimated at 5,580 cubic yards. Topsoil would be segregated from all other subsurface materials disturbed during well pad construction and no topsoil would be used for building the location or left in place and covered by subsoil in a cut and fill situation. Wattles would be placed around the base of the topsoil stockpile to control sedimentation and a metal sign would be placed on the south and/or west sides of the stockpile area. Upon completion of well pad construction activities, hydro-seed/mulch would be applied to topsoil stockpiles to stabilize the soils and promote the growth of desirable plants until interim reclamation can be completed.

During construction of the proposed access road, TEP's excavation contractor would strip the topsoil horizon between the top of road cut and toe of road fill. Topsoil would be stripped to a depth no less than 8.75 inches and windrowed above the top of cut and below the toe of fill of the proposed access road. Topsoil would be segregated from all other subsurface materials disturbed during access road construction and no topsoil would be used for building the location nor will be left in place and covered by subsoil in a cut and fill situation. The topsoil volume disturbed for the proposed access road is estimated at 1,122 cubic yards. The topsoil would be stripped from the access road right-of-way and windrowed along either side of the right-of-way.

During construction of the proposed pipeline corridor, TEP's pipeline installation contractor would strip the topsoil horizon within the 50-foot construction pipeline right-of-way width and place the material along the downhill side. Topsoil would be segregated from subsurface materials excavated during pipeline installation and stockpiled upslope of the trench. When construction is complete and the pipeline right-of-way has been re-contoured to pre-construction slopes, stripped topsoil would be uniformly replaced across the disturbance. The topsoil volume disturbed for the proposed pipeline corridor is estimated at 751 cubic yards. The topsoil would be stripped from the pipeline right-of-way and windrowed along the downhill side of the right-of-way.

### Cumulative Impacts

No adverse impacts to soil resources are anticipated as a result of construction (short-term) and injection (long-term) operations for the Federal RG 22-24-299 OGD. Adverse cumulative impacts to soil resources are not expected as a result of project implementation.

### Specific Measures Taken to Avoid or Minimize Cumulative Adverse Impacts

Implementation of the measures described above, and the measures included in the Topsoil Protection Plan (attached to the Form 2A) and Reclamation Plan (attached to the Form 2A) to avoid and minimize project impacts to soil resources would also avoid and minimize cumulative impacts and therefore, no adverse cumulative impacts are expected.

### Measures to Mitigate or Offset Cumulative Adverse Impacts

As mentioned above, no project or cumulative adverse impacts to soil resources are anticipated from implementation of the Federal RG 22-24-299 OGD and therefore, no mitigation or offsets are proposed.

## Public Welfare

This section considers a qualitative evaluation of incremental adverse impacts to public welfare (noise, light, odor, dust, and recreation and scenic values) as a result of pre-injection operations (short-term) and injection operations (long-term) of the Federal RG 22-24-299 OGD. Pre-injection activities associated with construction of the Federal RG 22-24-299 pad include pad construction, drilling, and completion operations and installation of pipeline infrastructure and construction of the access road. Injection activities associated with the proposed Federal RG 22-24-299 pad include standard injection well and facility maintenance operations and inspection activities.

During initial site planning of the Oil and Gas Location, TEP evaluated receptors for noise, light, and odor where members of the public or wildlife resources may be located and impacted from the proposed activities. These receptors include public roads, railroads, building units, residential building units, high occupancy building units, school property or facilities, designated outdoor activity areas, childcare centers, disproportionately impacted communities, trails, and wildlife habitat.

As provided in the Cultural Distance section of the Form 2A and in Table 11 below, there is one residential building within 1 mile of the proposed Federal RG 22-24-299 WPS. The residential building is TEP's Mautz Ranch House, which is approximately 5,236 feet away from the proposed Federal RG 22-24-299 WPS. No other building units exist within 1 mile of the proposed Federal RG 22-24-299 WPS.

**Table 11**  
**Building Units from the Edge of the Federal RG 22-24-299 Working Pad Surface**

Type	Number
Residential building units (0 to 2,000 feet)	0
Residential building units (2,001 to 5,280 feet)	1
Non-school and non-childcare center high occupancy building units (0 to 2,000 feet)	0
Non-school and non-childcare center high occupancy building units (2,000 to 5,280 feet)	0
School facilities (0 to 2,000 feet)	0
School facilities (2,000 to 5,280 feet)	0
Childcare centers (0 to 2,000 feet)	0
Childcare centers (2,000 to 5,280 feet)	0

TEP reviewed HPH within 1 mile of the proposed Federal RG 22-24-299 pad and associated pipelines and access road. HPH identified within 1 mile of the proposed Federal RG 22-24-299 WPS includes Aquatic Sportfish Management Waters and Elk Production Area (see Wildlife Habitat Drawing attached to the Form 2A). After review of the HPH layers and discussions with CPW regarding the pad location, it is unlikely either pre-injection or injection operations would adversely affect wildlife resources.

*Noise.* Pre-injection activities (short-term) are typically shorter in nature and emit a higher noise level than long-term injection 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 proposed Federal RG 22-24-299 location (see Table 11); therefore, noise impacts to members of the public are expected to be minimal during pre-injection operations (short-term) and injection operations (long-term).

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The nearest residential building unit is located approximately 5,236 feet from the WPS. Because no residential building units are present within 2,000 feet, it is unlikely for noise generated during pre-injection or injection operations to adversely impact members of the public (see Cultural Distance Map – Form 2A).

The proposed Federal RG 22-24-299 pad is not located within High Priority Habitat (HPH) listed under Rule 1202.c.(1) or Rule 1202.d; however, TEP reviewed HPH within 1 mile of the proposed Oil and Gas Location and found that the Elk Production Area boundary is located approximately 4,670 feet southwest from the Federal RG 22-24-299 WPS. Due to the topography of the area between the Oil and Gas Location and the boundary, as well as the overall distance from the Elk Production Area boundary, it is unlikely noise from operations on the location would impact elk within this area. Please refer to the Wildlife Habitat Drawing showing HPH within 1 mile of this location. 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, operational compliance with noise standards, and the low priority for habitat within the vicinity of this oil and gas location. CPW informed TEP that noise impacts are not anticipated for this oil and gas location.

### Cumulative

Adverse cumulative noise impacts to members of the public and wildlife are not expected given that noise impacts from the project are expected to be nonexistent or minimal.

*Light.* Pre-injection activities are typically shorter in nature and require sufficient lighting to ensure the safety of employees and contractors. All lighting used during the pre-injection phase of development would be directed downward and inward towards 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.

No residential or other building units are located within 2,000 feet of the proposed Federal RG 22-24-299 location (see Table 11); therefore, impacts from lighting to members of the public are expected to be minimal during pre-injection operations (short-term). The nearest residential building unit is located approximately 5,236 feet from the WPS. Because no residential building units are present within 2,000 feet, it is unlikely for lighting during pre-injection operations to adversely impact members of the public (see Cultural Distance Map – Form 2A).

TEP reviewed HPH within 1 mile of the Federal RG 22-24-299 pad. The proposed Federal RG 22-24-299 pad is not located within HPH listed under Rule 1202.c(1) or Rule 1202.d; however, the Elk Production Area boundary is located approximately 4,670 feet southwest from the Federal RG 22-24-299 WPS. Due to the topography of the area between the Oil and Gas Location and the boundary, as well as the overall distance from the Elk Production Area boundary, it is unlikely light from operations on the location would impact elk within this area. All planned operations would be compliant with applicable lighting standards under COGCC Rule 424 and that 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 siting condition, operational compliance with lighting standards, and the low priority for habitat within the vicinity of this oil and gas location. CPW informed TEP that lighting impacts are not anticipated for this oil and gas location.

TEP does not plan to install any on-site lighting during injection operations (long-term) and does not anticipate conducting any nighttime well maintenance operations requiring temporary lights.

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Therefore, light impacts to members of the public and wildlife resources are expected to be nonexistent during injection operations (long-term).

### Cumulative

Adverse cumulative light impacts are not expected given that light impacts from the project are expected to be nonexistent or minimal.

*Odor.* Pre-injection and injection activities have the potential to generate odors. Potential sources of odors during drilling operations include drilling rig generators, third-party vehicles, drying shaker assembly and centrifuge solids, drill cuttings storage, water base/bentonitic drilling mud, and mud tanks. Potential sources of odors during completion operations include frac pumps, bender, and frac tanks. Potential sources of odors during flowback operations include separators and tanks. Since there is no equipment on location during injection operations, odors are not expected.

No residential or other building units are located within 2,000 feet of the proposed Federal RG 22-24-299 location (see Table 11); therefore, impacts from odors to members of the public are expected to be minimal during pre-injection operations (short-term) and injection operations (long-term). The nearest residential building unit is located approximately 5,236 feet from the WPS. Because no residential building units are present within 2,000 feet, it is unlikely for odor generated during pre-injection operations (short-term) or injection operations (long-term) to adversely impact members of the public (see Cultural Distance Map – Form 2A).

### Cumulative

Adverse cumulative odor impacts are expected to be nonexistent or minimal given that odor impacts from the project are expected to be nonexistent or minimal.

*Dust.* TEP has prepared a Dust Mitigation Plan as required by COGCC Rule 304.c.(5) based on the requirements outlined in COGCC Rule 427. Fugitive dust is created during construction and from vehicular travel on dirt or gravel roads. Table 5 provides a list of the estimated vehicle trips during construction and operation. Fugitive dust can also be propagated from disturbed areas during high wind events. TEP would implement the BMPs outlined in the Dust Mitigation Plan including application of fresh water during construction, application of fresh water on road surfaces, and speed restriction.

With implementation of the measures outlined in the Dust Mitigation Plan and described above, no adverse impacts related to dust are anticipated as a result of construction (short-term) and injection operations (long-term) under the proposed Federal RG 22-24-299 OGD.

### Cumulative

The BMPs in the Dust Mitigation Plan would be applied to the proposed Oil and Gas Location and proposed pipeline corridor and access roads. Adverse cumulative dust related impacts are expected to be minimal and not adverse with proper implementation of the BMPs included in the Dust Mitigation Plan (attached to the Form 2A).

*Recreation and Scenic Values.* No State Parks, State Trust Lands, or State Wildlife Areas exist within 1 mile of the proposed Federal RG 22-24-299 pad. Additionally, there are no Designated Outdoor Activity Areas within 1 mile of the proposed Federal RG 22-24-299 location. TEP reviewed the BLM Transportation layer and Colorado Trails Explorer to evaluate existing trails in

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the vicinity of the Oil and Gas Location. There are no trails within 1 mile of the proposed Federal RG 22-24-299 pad.

No adverse impacts to Recreation and Scenic Values are anticipated as a result of construction (short-term) and injection operations (long-term) of the proposed Federal RG 22-24-299 OGDP.

### Cumulative Impacts

No adverse project or cumulative impacts to recreation and scenic values are expected as a result of project implementation.

### Specific Measures Taken to Avoid or Minimize Cumulative Adverse Impacts

Implementation of the measures described in TEP’s Plan of Development and the Dust Mitigation Plan (attached to the Form 2A) to avoid and minimize project impacts to public welfare would also avoid and minimize cumulative impacts and therefore, no adverse cumulative impacts are expected.

### Measures to Mitigate or Offset Cumulative Adverse Impacts

As mentioned above, no project or cumulative adverse impacts to public welfare are anticipated from the development of the Federal RG 22-24-299 OGDP and therefore, no mitigation or offsets are proposed.

## **SURROUNDING OIL AND GAS IMPACTS**

This section provides a baseline evaluation of the existing landscape level impacts within the area surrounding the proposed Federal RG 22-24-299 pad. This information is required per COGCC Rule 303.a.(5).C and is necessary when evaluating cumulative impacts. The information provided below gives context to existing and proposed activities within the vicinity of the proposed Oil and Gas Location.

The proposed Federal RG 22-24-299 pad is located within the Piceance Basin. There are two active Oil and Gas Locations within 1 mile of the proposed Federal RG 22-24-299 WPS as listed in Table 12. The total disturbance acreage for the active Oil and Gas Locations not including the proposed Federal RG 22-24-299 pad is 10.53 acres. A breakdown of the acreage by facility is provided in Table 12.

**Table 12**  
**Existing Oil and Gas Locations within 1 Mile of the Federal RG 22-24-299 Working Pad Surface**

O&G Location Name	Operator	COGCC Location ID	Status	Disturbance Acreage	Source Information
Federal 62S99W 23NESE	TEP Rocky Mountain LLC	316421	Active/Built	2.38	Field Observation
Mautz Ranch Multi Well Pit	TEP Rocky Mountain LLC	422672	Active/Built	8.15	
<b>Total</b>				<b>10.53</b>	

TEP reviewed the COGCC database to compile a list of the existing and/or permitted wells within 1 mile of the proposed Federal RG 22-24-299 pad. There is one active producing injection well

within 1 mile of the proposed Federal RG 22-24-299 WPS as shown in Table 13. The wells proposed on the Federal RG 22-24-299 pad are not listed in Table 13.

**Table 13  
Existing/Proposed Wells within 1 Mile  
of the Federal RG 22-24-299 Working Pad Surface**

<b>Well Status</b>	<b>Count</b>
Active	1
Permitted but Not Drilled	0
Proposed	0
Plugged and Abandoned	0
<b>Total</b>	<b>1</b>

TEP reviewed COGCC location files and permitting documents to determine the permitted storage capacity of each Oil and Gas Location within 1-mile of the proposed Federal RG 22-24-299 OGD (Table 14). TEP also reviewed available aerial imagery and facility diagrams prepared following recent site visits to determine the existing storage capacity for each Oil and Gas location within 1-mile of the proposed Federal RG 22-24-299 OGD (Table 14).

**Table 14  
Permitted/Existing Storage Capacity within 1 Mile  
of the Federal RG 22-24-299 Working Pad Surface**

<b>Storage</b>	<b>Count</b>	<b>Source of Count</b>
Permitted storage capacity (oil)	0	COGCC
Permitted storage capacity (condensate)	0	COGCC
Permitted storage capacity (water)	10	COGCC
Permitted storage capacity (pits)	2	COGCC
Existing storage capacity (oil)	3	FO/Inspection
Existing storage capacity (condensate)	0	FO/Inspection
Existing storage capacity (water)	12	FO/Inspection
Existing storage capacity (pits)	0	FO/Inspection
COGCC=Colorado Oil & Gas Commission - Records/Permits FO=Field Observation		

As described above, there are existing landscape level impacts associated with oil and gas development (i.e., existing Oil and Gas Locations, wells, and fluid storage facilities) present on the landscape within the vicinity of the proposed Federal RG 22-24-299 pad. Furthermore, there are existing access roads and pipeline infrastructure supporting oil and gas operations for these locations and facilities in the vicinity of the proposed Federal RG 22-24-299 OGD. No adverse impacts to resources are expected from construction of the proposed Federal RG 22-24-299 pad.

**OTHER INDUSTRIAL IMPACTS**

Per COGCC Rule 303.a.(5).D, the operator is required to identify existing industrial facilities within 1 mile of the proposed Oil and Gas Location. During review of this location no industrial facilities were identified within 1 mile of the pad location. The Federal RG 22-24-299 pad is in a remote area of Rio Blanco County, Colorado with oil and gas development and grazing activities.

## BENEFICIAL IMPACTS

The proposed Federal RG 22-24-299 OGDG does not include any proposed direct incremental beneficial impacts associated with the development of the proposed wells on the Federal RG 22-24-299 pad, as summarized in Table 15, Beneficial Impacts List (Form 2B). However, there are indirect beneficial impacts associated with the development the proposed location which include broader benefits to the community and the environment. A qualitative evaluation of beneficial impacts to the local community and to the environment is provided below.

**Table 15**  
**Beneficial Impacts List for the Federal RG 22-24-299 OGDG (Form 2B)**

Total number of existing wells that are planned to be plugged and abandoned as part of this Oil and Gas Development Plan (OGDP).	0	Estimated number of truck trips that are planned to be avoided from the above-mentioned facility closures and equipment upgrades (on an annual basis).	0
Total number of existing locations that are planned to be closed and undergo final reclamation as part of this OGDG.	0	Total number of <b>Oil Tanks</b> planned to be removed from existing locations through the approval of this OGDG.	0
Total number of acres that are planned to be reclaimed through the closing of existing locations.	0	Total number of <b>Condensate Tanks</b> planned to be removed from existing locations through the approval of this OGDG.	0
Total number of existing pits that are planned to be closed and undergo final reclamation as part of this OGDG.	0	Total number of <b>Produced Water Tanks</b> planned to be removed from existing locations through the approval of this OGDG:	0

### Beneficial Impacts to Surrounding Community

Rio Blanco County and the town of Meeker would benefit most notably from the employment and tax revenues generated by the proposed development plan. Some of these benefits would be likely to extend to the City of Rifle, in Garfield County, which acts as a service center for regional oil and gas activity and is located approximately 38 miles southeast of the Project Area. In addition to the direct jobs created by the project, the development plan would support jobs in regional businesses that support the project and its employees, including retail trade, lodging and eating establishments, construction, real estate, and other services.

The Federal RG 22-24-299 OGDG is for injection wells which will aid in the continued production of existing and future production wells. Taxes paid by TEP on production and equipment would support infrastructure and community services in Rio Blanco County. In the tax district where the Federal RG 22-24-299 OGDG is located (Tax District 8), ad valorem (property) taxes on production fund Rio Blanco County government, Meeker RE1 and Rangely RE4 school districts, hospitals and medical centers in Meeker and Rangely, and special districts, including county-wide fire protection, cemetery, library, parks and recreation, Colorado River Water Conservation District, Piceance Creek Pest Control, and White River Soil Conservation District.

Rio Blanco County would receive a portion of state severance taxes and Federal mineral royalties paid on production. The severance tax rate on oil and gas production in Colorado ranges from 2% to 5% on a graduated scale based on sales volume. Half of severance taxes paid to the state is returned to local governments impacted by oil, gas and mineral production. The Federal mineral

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royalty rate on existing oil and gas leases is 12.5% of production value. Nearly half (49%) of Federal mineral royalties are returned to Colorado, a portion of which is allocated to local governments and school districts impacted by mineral development.

Rio Blanco County would also receive tax revenues from property taxes paid on physical assets in the Project Area and sales and use taxes paid on equipment purchases associated with the development plan.

### **Beneficial Impacts to Surrounding Wildlife and Ecosystems**

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. If vegetation removal must be scheduled between April 1 to August 31, hazing or other exclusion measures would be implemented prior to April 1 to avoid take of migratory birds or a pre-construction nesting migratory bird surveys would be conducted prior to vegetation removal during the nesting season and if active nests are located, work zone buffers would be provided around active nests.

### **REFERENCES**

- Bureau of Land Management. 2017a. Colorado Air Resource Management Modeling Study (CARMMS), 2025 CAMx Modeling Results for the High, Low, and Medium Oil and Gas Development Scenarios. CARMMS 2.0 Final Report. Prepared by Ramboll Environmental. Accessed online at: <https://www.blm.gov/programs/natural-resources/soil-air-water/air/colorado>.
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- \_\_\_\_\_. 2022. Annual Report 2.0 - 2020. BLM Colorado State Office. Accessed online at: <https://www.blm.gov/programs/natural-resources/soil-air-water/air/colorado>. Accessed February 15, 2022.
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