U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 8
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
STATEMENT OF BASIS

PERMITTEE:	U. S. Department of the Interior Bureau of Land Management
FACILITY NAME AND ADDRESS:	Park Center Well BLM Front Range District Office 3028 East Main Street Cañon City, Colorado 81212
PERMIT NUMBER:	CO-0035017
RESPONSIBLE OFFICIAL:	Cathy Cook, District Manager 719-269-8599
FACILITY CONTACT:	Cathy Cook, District Manager
PERMIT TYPE:	Minor Permit (New)
TYPE OF TREATMENT:	None
FACILITY LOCATION:	SW ¼ SW ¼ Section 34, Cooper Mountain Quadrangle, Fremont County, Colorado Latitude 38.52128, Longitude -105.214424
RECEIVING STREAM:	Fourmile Creek

1. INTRODUCTION

This statement of basis (SoB) is for the first issuance of the National Pollutant Discharge Elimination System (NPDES) Permit for the discharge operated and owned by the Bureau of Land Management (BLM), Front Range District known as the Park Center Well. It explains the nature of the discharges, and the EPA's decisions for limiting the pollutants in the wastewater, and the regulatory and technical basis for these decisions.

The EPA Region 8 is the permitting authority for Colorado federal facilities and provides implementation of federal and state environmental laws within Colorado.

2. BACKGROUND INFORMATION

The Park Center Well is located approximately 10 miles north of Cañon City, Colorado. The BLM – Front Range District owns and manages the Park Center Well. The well is a high pressure artesian well that flows from the Fountain aquifer; water produced from the well is leased to the Park Center Water District (Public Water System ID: CO0122600) for municipal water supply to approximately 4,000 residents in the water district.

Under Colorado Water Law, the BLM has a water exchange provision with the Town of Cripple Creek and a requirement to provide water to residents of the Park Center Water District. Under this water exchange provision, the BLM is required to return a minimum of 25-acre feet of water annually to Fourmile Creek, and supply 275-acre feet to the Park Center Water District.

The discharge from the Park Center Well, Outfall 002, is designed to flow to a concrete weir box prior to entering the Fourmile Creek. Fourmile Creek headwaters begin in the Town of Cripple Creek and travel down through Cañon City joining with the Arkansas River.

In establishing the need and limits for this NPDES permit, the EPA reviewed the CDPHE Water Quality Policy (WQP)27 for guidance on Low Risk Discharges and took into account the water law requirements for discharge to Fourmile Creek, drinking water supply needs from the Park Center Water district, and the ability of the Facility to control discharge volumes for this high pressure well. The EPA determined that the BLM discharge does not meet the definition of a naturally occurring hot springs contained in CDPHE WQP27 that states, "…waters that are abstracted (pumped or drawn) from wells are not surfacing under natural conditions and do not meet the definition of natural hot springs".

The water discharged from the aquifer via the well includes the naturally occurring pollutants; heat and arsenic. The limitations in this NPDES Permit are being specified in compliance with Colorado Water Quality Standards for Fourmile Creek.

2.1. Facility Description

2.1.1. History

The Park Center Well was originally drilled around 1924-1927 as a test well by the Mutual Oil and Development Company. When exploration struck the Fountain Aquifer (approximately 3,000-foot

depth) and not oil, the well was acquired by the General Land Office[1] under the authority of the Mineral Leasing Act. In 1968 a water lease was signed with the Park Center Water District to supply water for the Park Center area. Approximately 20 years later in 1988, a Colorado Supreme Court Decision awarded the water right to the Bureau of Land Management (BLM). The BLM has managed the site since this time.

In 2008 the BLM signed a new 25-year lease with the Park Center Water District. Noting leaks around the well casing, the BLM initiated plans for well repairs. In 2010, construction began to update the failing existing wells and the new well was drilled. The BLM, unknowingly utilized a non-pressurized drilling rig and due to the high pressure of the Fountain Aquifer (believed to be 250 pounds per square inch at the surface), the new well failed during drilling.

The failure caused water to flow into Fourmile Creek at approximately 8,000-10,000 gallons per minute, with sediments and elevated temperatures (~98º F) causing downstream scouring and a fish kill. The leak at the newly drilled well was stopped in October of 2012. After reporting of the incident, the BLM and EPA voluntarily entered into a Federal Compliance Agreement (FCA) to ensure the necessary Clean Water Act objectives "to restore and maintain the chemical, physical and biological integrity of the Nations Waters" were met. See section 101(a) of the CWA. 33 U.S.C. Final repairs of the new well took place in 2015.

2.1.2. Service and Treatment Process

The Park Center Well has been utilized as a drinking water source for the Park Center Water District, which treats and supplies approximately 4,000 homes with drinking water. The BLM also has a water exchange provision/agreement in place with the Towns of Cripple Creek and Victor which stipulates the annual return of 25-acre feet to Fourmile Creek. The BLM utilizes the aquifer discharge to Fourmile Creek to assist the Towns of Cripple Creek and Victor with water demands and Fourmile Creek recharge.

The BLM has no treatment available for the water discharged to Fourmile Creek, and has requested permitting based on flow metering to control the known contaminants of temperature and arsenic discharged into Fourmile Creek. The EPA is using this permitting approach to control pollutant discharges to 4-mile Creek based on limiting discharge volume.

With completion of the new well, flow controls were constructed to enable the BLM to regulate flow to Fourmile Creek via Outfall 002 at the weir box. The well site also has a locked valve for filling fire control and dust mitigation vehicles. Discharges from this valve and discharges to the Park Center Water District are not covered by this NPDES Permit.

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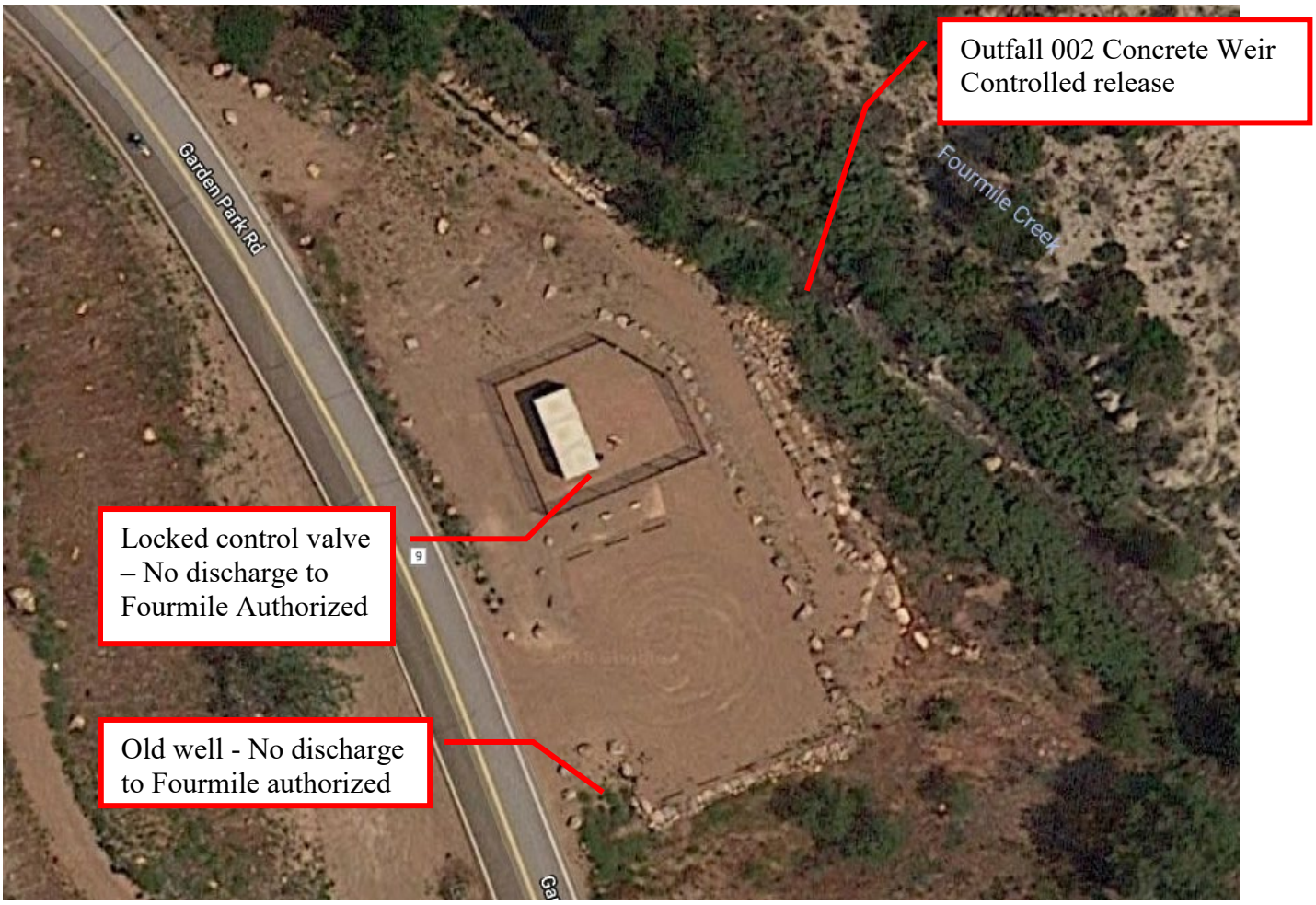
[1] The General Land Office (GLO) was an independent agency of the United States government responsible for public domain lands in the United States. The GLO was merged with the United States Grazing Service (established in 1934) to become the Bureau of Land Management on July 16, 1946.

2.1.3. Chemicals Used

No chemicals are added to the aquifer or the discharge water. The water contains naturally occurring high temperature and arsenic.

Figure 1 - Aerial image of Park Center Well site.



3. WATER QUALITY CONSIDERATIONS

3.1. Description of Receiving Water

The Colorado Department of Environment and Health (CDPHE) Regulation 32 - Classifications and Numeric Standards for Arkansas River Basin (amended 12/11/17, effective 1/31/18) lists Fourmile Creek (Segment 20b. Mainstem of Fourmile Creek, including all tributaries and wetlands, from the confluence with Long Gulch to the confluence with the Arkansas River) as having the following uses: Aquatic Life Cold 1, Recreation E, Water Supply, and Agriculture.

Classifications and numeric standards for Segment 20b - COARUA20B, are provided below.

Figure 2 – CDPHE Segment 20b Table.

20b. Mainstem of Fourmile Creek, including all tributaries and wetlands, from the confluence with Long Gulch to the confluence with the Arkansas River.

COARUA20B	Classifications
Designation	Agriculture
Reviewable	Aq Life Cold 1
	Recreation E
	Water Supply

Qualifiers:

Other:

Temporary Modification(s):

Arsenic(chronic) = hybrid

Expiration Date of 12/31/2021

*Sulfate(chronic) = Dissolved standards applicable at the point of withdraw.
*Manganese(chronic) = Dissolved standards applicable at the point of withdraw.

Physical and Biological

		DM	MWAT
Temperature °C	11/1 - 2/29	13	9.4
Temperature °C	3/1 - 10/31	28.1	22

	acute	chronic
D.O. (mg/L)	---	6.0
D.O. (spawning)	---	7.0
pH	6.5 - 9.0	---
chlorophyll a (mg/m^2)	---	---
E. Coli (per 100 mL)	---	126

Inorganic (mg/L)

	acute	chronic
Ammonia	TVS	TVS
Boron	---	0.75
Chloride	---	250
Chlorine	0.019	0.011
Cyanide	0.005	---
Nitrate	10	---
Nitrite	---	0.05
Phosphorus	---	---
Sulfate	---	WS*
Sulfide	---	0.002

Metals (ug/L)

	acute	chronic
Aluminum	---	---
Arsenic	340	---
Arsenic(T)	---	0.02
Beryllium	---	---
Cadmium	TVS(tr)	TVS
Chromium III	---	TVS
Chromium III(T)	50	---
Chromium VI	TVS	TVS
Copper	TVS	TVS
Iron	---	WS
Iron(T)	---	1000
Lead	TVS	TVS
Manganese	TVS	TVS/WS
Mercury	---	0.01(t)
Molybdenum(T)	---	160
Nickel	TVS	TVS
Selenium	TVS	TVS
Silver	TVS	TVS(tr)
Uranium	---	---
Zinc	TVS	TVS

CDPHE currently has adopted a temporary modification for arsenic for segment 20b (expiring 12/31/2021). While the temporary modification is in effect the arsenic requirement is "maintain current condition" for discharges existing on or before 6/1/2013.

Additionally, CDPHE regulations require an anti-degradation review for new or increased water quality impacts. The Park Center Well is considered a new permit and requires a significance determination as stated in Regulation No. 31 at section 31.8(3)(a).

The EPA reviewed the Colorado Antidegradation Significance Determination Guidance and has determined that this facility has extensive site-specific data and a situation that does not match the guidance and is therefore provided a special situation assessment with documentation to support that decision, as provided by the guidance Question and Answers #Q20[2] and #Q22[3]. This determination is explained further in the Section 5. In summary while a temporary modification of the arsenic standard is in place for this segment, antidegradation-based limits for arsenic for this segment are not applicable.

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[2] Q20: What if my facility has extensive site-specific data or a situation that doesn't match this guidance?
A20: This guidance document is just that, "guidance", for implementing the antidegradation regulations. It is designed as a framework to provide a documented methodology and to ensure consistency among permits and those conducting the antidegradation reviews. Special situations will be assessed on a case-by-case basis; and will be adequately documented as an attachment to this guidance.

[3] Q22: What happens if the calculated BWQ exceeds the water quality standard?
A22: If the calculated BWQ exceeds the water quality standard, there is no baseline available increment to be protected. In this case, the ADBAC cannot be calculated. Antidegradation-based limits would not apply since the water quality is already degraded. The Division will then further evaluate the waterbody for 303(d) Listing.

Fourmile Low Flow Analysis

Colorado Regulations specify the use of low flow conditions when establishing water quality based effluent limitations, specifically the acute and chronic low flows. To determine the low flows available to the Park Center Well, U.S. Geological Service (USGS) gage station 07096250 (Fourmile Creek Below Cripple Creek Near Victor, CO) was used. Data from the USGS was obtained from the period of 12/1/2014 to 11/31/2017. See Appendix A for summary.

While the arsenic temporary modification is in place, the temperature criterion will be the most stringent permit condition. If the temporary modification for arsenic expires in 2021, the underlying arsenic standard will determine the most stringent permit conditions and discharge volumes will need to be further restricted. The permit contains limitations for both options as described below.

Upon discussions with the BLM staff, the EPA was informed by the BLM engineer that the wellhead at the Park Center Well is designed to handle high pressure flows and to safely maintain the valve and security of personnel, the valve is best managed by utilizing flows at a minimum of 100 gallons per minute on a short-term basis. Hence, instream volumes must be sufficient to receive a discharge of 100 gallons per minute while attaining the applicable water quality standards.

Permit Conditions Under the Arsenic Temporary Modification Water Quality Standard: While the temporary modification standard for arsenic is in place, a 40:1 instream to discharge volume must be achieved to meet the temperature criterion. To meet this requirement, the EPA has provided the BLM with a flow control limit in the permit which will require real-time daily monitoring of stream volume during periods of discharge to ensure compliance with the established permit limitations. BLM will need to discharge batch volumes into Fourmile Creek when stream flows provide at least a 40:1 dilution ratio (stream volume to discharge volume) for a 100 gallon per minute discharge.

Permit Conditions Under the Underlying Arsenic Water Quality Standard: If/when the arsenic temporary modification ends, effluent limits for the Facility will be based upon the calculated low flows for Fourmile Creek (see Table 1). Low flow values were determined for the 1E3, 7E3, and 30E3 scenarios; these values were used to determine the flow rate and limiting factors for the Facility discharge limitations as a monthly calculation and as specified in Table 2.

Table 1 - Fourmile Creek Low Flows

USGS station 07096250 (Fourmile Creek Below Cripple Creek Near Victor, CO). Data period of 12/1/2014 to 11/31/2017 Low Flow (cfs)	
Acute Low Flow, 1E3	2.27
7-day average low flow, 7E3	3.39
Chronic low flow, 30E3	3.42

4. PERMIT HISTORY

This is the first NPDES Permit issuance for the BLM - Park Center Well, and as such there are no previous permit effluent limitations. Data provided under the FCA and with the application were utilized

in assessing reasonable potential. Staff review of CDPHE receiving water quality standards, water quality characteristics, and monitoring requirements and data collected under the provisions of the FCA for the facility during the uncontrolled discharge were used to support current reasonable potential determinations.

5. PROPOSED PERMIT LIMITATIONS AND MONITORING

The BLM does not treat the water discharged from the Park Center Well. The water reaching the surface comes from the Fountain Aquifer which contains naturally occurring arsenic and high thermal temperatures. A review of all physical and biological standards and permitting assumptions are provided below. See Appendix A for additional details.

5.1. Physical and Biological Standards

5.1.1. Temperature

Due to the CDPHE temporary modification for arsenic, temperature is the limiting factor for the Park Center Well. Flows for the facility will be limited to 40:1 dilution as controlled by utilizing USGS stream flow data. This flow limitation will allow the BLM to utilize real-time Fourmile stream flows to determine the highest levels of stream flow in order to meet the Extreme Dilution Streamlined Assessment Criteria[4] for Industrial Sources, which requires a flow rate of 40:1 or greater. Monitoring and reporting for temperature will be required daily during any discharge to verify consistent dilution ratios throughout any discharge event.

5.1.2. Dissolved Oxygen

In consultation with CDPHE staff, no limitations are implemented in this permit. While CDPHE WQS do require limitations for DO, based on data submitted in the application there does not appear to be reasonable potential to cause or contribute to an exceedance of the water quality standards.

5.1.3. pH

While not anticipated to exceed water quality standards based on data supplied, pH monitoring and limitations will be required in this Permit to assure protection of aquatic life and to assess if any changes occur in the Fountain Aquifer water. pH limitations will be set at 6.5 – 9.0.

5.1.4. Chlorophyll, Escherichia coli

In consultation with CDPHE staff, no limitations on chlorophyll or *E. coli* are being implemented in this permit. While there are CDPHE WQS for *E. coli*, based on the nature of the discharge and lack of additional constituents or wastes in the discharge, there is no reasonable potential or expectation that recreational WQS limits will be exceeded.

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[4] WQP-23 Procedures for Conducting Assessments for Implementation of Temperature Standards in Discharge Permits

5.2. Inorganic Standards

5.2.1. Ammonia, Boron, Chloride, Chlorine, Cyanide, Nitrate, Nitrite, Phosphorus, Sulfate and Sulfide

For the listed inorganic constituents, data analysis supplied under the FCA and Permit application data were reviewed. The review of the data provided no indication of reasonable potential for the listed inorganic contaminants.

5.3. Metals Standards

5.3.1. Arsenic

The Park Center Well was required under the FCA to monitor Fourmile creek to assess ambient conditions for arsenic upstream of the Facility. Instream arsenic data collected during the 4th quarter of 2013 from the upstream point (UP1) was reported at 1.0 µg/L. The CDPHE WQSs for Segment 20b for arsenic are an acute limit of 340 µg/L and a chronic limit of 0.2 µg/L. Due to the naturally existing arsenic in the receiving stream, the CDPHE currently has a temporary modification in place for arsenic for segment 20b (expiring 12/31/2021). While the temporary modification is in effect the arsenic requirement is "maintain current condition" for discharges existing on or before 6/1/2013.

Nine data points from the Facility discharge were reported for Park Center Well, these ranged from 1.3 µg/L to 2.1 µg/L with an average number of 1.6 µg/L. Based on information submitted to the EPA, the arsenic present in the water from the Facility does have reasonable potential to exceed the existing standard. Therefore, for the Permit, calculations were performed using the current temporary modification criteria, as well as the established water quality standard for arsenic. With the temporary modification, prior to the 12/31/2021, temperature is the limiting factor for the return flows to Fourmile Creek from the Facility. After 12/31/2021, if the temporary modification for arsenic is not continued, the 0.02 µg/L chronic arsenic standard will be the limiting factor for the Facility.

Because the Park Center Well has no arsenic treatment options available, two sets of flow limitations for the discharge from the Park Center Well are being established in the permit. These limitations will be effective under the temporary modification scenario, and subsequently under an established conditions scenario.

5.3.2. Monthly Arsenic Calculations

Mass balance – Calculations are based on supplied data and assuming complete and instantaneous mixing[5].

7E3 low flow values were calculated to determine conditions for the BLM to discharge to Fourmile Creek, see Table 2. However, under the temporary modification conditions,

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[5] The threshold for exclusion, according to the mixing zone regulations, is a ratio of 2:1 for effluent to receiving water: when the effluent is more than twice the volume of the receiving water at chronic low flow, permits can be prepared on the basis of a fully mixed condition. CDPHE Mixing Zone Policy

temperature is the limiting factor for the Park Center Well discharge. If the temporary modification for arsenic is not extended beyond the 12/31/2021 date, the established arsenic limitation of 0.02 µg/L will become the limiting factor for the discharge and the limits in Table 2 will apply. Due to this temporary modification, the Permit for the Park Center Well will be established with two sets of Permit limitations, which will be based on the arsenic temporary modification expiration date.

Table 2 – Calculated Monthly values based on Arsenic standard

Month	7E3 in CFS	Daily flow limit MGD
Jan	3.761428571	0.020243
Feb	2.8	0.015069
Mar	3.822857143	0.020574
Apr	10.91714286	0.058753
May	12.05714286	0.064888
Jun	20.11428571	0.108249
Jul	12.71428571	0.068425
Aug	12.54285714	0.067502
Sep	11	0.059199
Oct	8.068571429	0.043423
Nov	4.495714286	0.024195
Dec	3.898571429	0.020981

5.3.3. Cadmium, Chromium III, Chromium VI, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, and Zinc

The EPA reviewed data submitted as required by the FCA, as well as application data submitted for the Park Center Well facility. A quantitative review of the data indicated no reasonable potential for the Facility to exceed the limitations for the above listed contaminants.

5.4. Effluent Limitations

Flow limitations established to limit the flow based on the temperature requirement, until 12/31/2021, are provided below in Table 3., and are specific to any discharge from the concrete weir, listed as Outfall 002. No other discharges are permitted by the Permit.

Table 3 - Effluent Limitations - Outfall 002 (Until 12/31/2021)

Characteristic	Daily Maximum a/
Flow	Flow shall be limited to 40:1 dilution or less, as calculated from USGS gage station 07096250 (Fourmile Creek Below Cripple Creek Near Victor, CO).
The pH of the effluent shall not be less than 6.5 or greater than 9.0 at any time.	

a/ See Definitions, Part 1.1., for definition of terms.

b/ The volume of wastewater discharged to Fourmile Creek shall be limited to control flows based on the 40:1 temperature variance. The flow, as a unit of measurement, shall be reported in million gallons per day and shall not exceed the daily ratio maximum at any time based on real-time USGS stream gage data.

Flow limitations for the Park Center Well after 12/31/2021, are provided below in Table 4, and will be required unless CDPHE extends the current temporary modification for arsenic. Limitations are specific to any discharge from the concrete weir, listed as Outfall 002. No other discharges are permitted by the Permit.

Table 4 - Effluent Limitations - Outfall 002 (After 12/31/2021)

Characteristic	Daily Maximum a/
Flow	Million Gallons per Day (MGD)
January	0.020243
February	0.015069
March	0.020574
April	0.058753
May	0.064888
June	0.108249
July	0.068425
August	0.067502
September	0.059199
October	0.043423
November	0.024195
December	0.020981
The pH of the effluent shall not be less than 6.5 or greater than 9.0 at any time.	

a/ See Definitions, Part 1.1., for definition of terms.

b/ The volume of wastewater discharged to Fourmile Creek shall be limited to control arsenic. The flow, as a unit of measurement, shall be reported in million gallons per day and shall not exceed the daily maximum for the month at any time.

6. MONITORING REQUIREMENTS

6.1. Self-Monitoring Requirements - Outfalls 002

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 unless another method is required under 40 CFR subchapters N or O. The permittee must select a test procedure that is Sufficiently Sensitive for all monitoring conducted in accordance with this Permit.

Table 4 Monitoring Requirements – Outfall 002

Effluent Characteristic	Frequency	Sample Type a/
Flow, gallons per day, b/	Daily	b/
Temperature, degrees °C	Daily	Instantaneous
pH, units	Daily	Instantaneous
Arsenic, µg/L c/	Quarterly	Grab

a/ See Definitions, Permit Part 1.1., for definition of terms.

b/ Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained. The average flow rate (in million gallons per day) during the reporting period and the maximum flow rate observed (in mgd) shall be reported.

c/ Arsenic values will be required once per quarter when discharges occur.

Table 5 Monitoring Requirements – USGS Gage Data

Effluent Characteristic	Frequency	Sample Type a/
Flow, gallons per day, b/	Daily	b/

a/ See Definitions, Permit Part 1.1., for definition of terms.

b/ Flow measurements shall be taken daily from U.S. Geological Service (USGS) gage station 07096250 (Fourmile Creek Below Cripple Creek Near Victor, CO). The average flow rate (in million gallons per day) during the reporting period and the maximum flow rate observed (in mgd) shall be reported.

7. FACILITY INSPECTION REQUIREMENTS

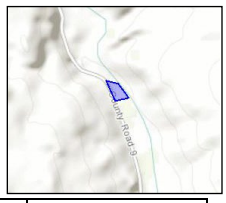
The Permit requires the Permittee to perform monthly inspections of the Park Center Well. The inspection requirements include; checking the flow, checking the integrity of the well head, well housing, and weir box. The interior of the weir box shall be examined to ensure no obstruction of flow has occurred and to ensure no change in the flow has occurred.

8. REPORTING REQUIRMENTS

Reporting of Monitoring Results: With the effective date of this Permit, the Permittee must electronically report monthly discharge monitoring reports (DMR) on a quarterly frequency using NetDMR. Electronic submissions by permittees must be uploaded to EPA Region 8 no later than the 28th of the month following the completed reporting period. The Permittee must sign and certify all electronic submissions in accordance with the signatory requirements of the Permit. NetDMR is accessed from the internet at https://netdmr.zendesk.com/home.

9. ENDANGERED SPECIES CONSIDERATIONS

The U. S. Fish and Wildlife Information for Planning and Conservation (IPaC) website program was utilized to determine Federally-Listed Endangered and Threatened Species for Fremont County, CO. The IPaC Trust Resource Report findings are provided below.



Species	Scientific Name	Status
Mexican Spotted Owl	*Strix occidentalis lucida*	T
Canada Lynx	*Lynx canadensis*	T

Symbols/Acronyms: T = Threatened, E = Endangered

Conclusion

The EPA has concluded that the proposed NPDES Permitted discharge action will have "No effect" on listed species. The U.S. FWS IPaC Trust Resource Report specifies that no critical habitat is found within the Park Center Well location. Additionally, review of the threatened species listed in the county indicate habitat conservation, or destruction of habitat, as the reason for their declines and listing.

The Colorado office of the U.S. FWS was informally consulted on this determination and agreed with the conclusion. The "No effect" determination does not require the EPA to initiate formal consultation with the FWS and therefore obligations under Section 7 are complete.

10. NATIONAL HISTORIC PRESERVATION ACT REQURIEMENTS

Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470(f) requires that federal agencies consider the effects of federal undertakings on historic properties. Information provided by the National and State Register of Historic Places was researched, as well as the History Colorado-Office of Archaeology and Historic Preservation. No historic properties were listed in the project area. The EPA does not anticipate any impacts on listed/eligible historic properties or cultural resources as a result of this permit issuance and discharge related activities.

MISCELLANEOUS

The effective date of the permit and the permit expiration date will be determined upon issuance of the permit. This NPDES Permit shall be effective for a fixed term not to exceed 5 years.

Permit Writer: VelRey Lozano, Wastewater Unit, 303-312-6128 August 2018

APPENDIX A

Summary of US Geological Survey, Water Resources Data - USGS 07096250 FOURMILE CREEK BELOW CRIPPLE CREEK NEAR VICTOR, CO

Month	**7E3 in CFS**	**Flow min/max***
January	3.55	3.32 min/8.07 max
February	2.69	2.27 min/10.4 max
March	3.61	2.94 min/26.10 max
April	10.22	8.92 min/52 max
May	19.39	15.2 min/314 max
June	19.67	15.2 min/173 max
July	12.17	11.3 min/162 max
August	12.16	10.4 min/559 max
September	10.16	8.78 min/55.9 max
October	7.90	7.21 min/34.2 max
November	4.50	4.22 min/19.8 max
December	3.89	3.86 min/8.09 max

*Flow min data is also 1E3 data for Fourmile Creek

Flow data was downloaded from the USGS website for the period of January 1, 2015 to December 31, 2017. Data was separated by month, stacked, and sorted to determine the average of the lowest 7 days over the three-year time period. Values are provided in the table above.

Federal Compliance Agreement Data 2013-2015 Uncontrolled discharge data Summary										
	JAN-MAR	OCT-DEC	JULY-SEPT	APR-JUNE	JAN-MAR	OCT-DEC	JULY-SEPT	APR-JUNE		
	2015 1st qtr.	2014 4th qtr.	2014 3rd qtr.	2014 2nd qtr.	2014 1st qtr.	2013 4th qtr.	2013 3rd qtr.	2013 2nd qtr.	2013 March	
001										
Flow-min (gallons per minute)	246876	205885	175785	246875	219101	186100	219086	219100	239120	
Flow-max (gallons per minute)	268849	246546	232657	268202	268868	233300	402627	276000	275958	
temp-min (degrees Celsius)	27	27.5	28.8	28.8	30	30	30	30	30	RP
temp-max (degrees Celsius)	28	27.8	30	30	30.6	30.2	30.8	30	30	RP
color		0	0	0	0	0	0	0	0	No RP
pH (s.u.)	6.69	6.5	6.73	6.8	6.98	6.97	6.97	6.86	7.18	No RP but standard limitation
pH (s.u.) max	6.74	6.9	6.91	6.9	7.21	7.23	7.06	6.9	7.18	No RP but standard limitation
TSS 30 day (mg/L)	>5	>5	>5	>5	>5	>5	>5	>5	<5	No RP
TSS 7 day (mg/L)	>5	>5	>5	>5	>5	>5	>5	>5	<5	No RP
Arsenic 30 day (ug/L)	1.5	1.4	1.7	1.3	2.1	1.6	2	1.6	1.65	RP
Arsenic daily max (ug/L)	1.5	1.4	1.7	1.3	2.1	1.6	2	1.6	1.7	RP
Turb min (NTUs)	0.43	0.2	0.69	0.36	0.38	0.47	0.25	0.1	0.18	No RP
Turb max (NTUs)	0.64	1.9	1.92	0.75	0.54	0.88	1.41	0.71	0.18	No RP
Chromium (mg/L)									<.0005	No RP
Nickel (mg/L)									<.0006	No RP
Silver (mg/L)									<.0005	No RP
Uranium (ug/L)	51	41.6	45.8	44.2	45.6	44.7	46.5	46.5	47.3	
gross alpha (pCi/L)	32	32	22	30	31	32	26	25	37	

EPA Form 2E Facilities Which Do Not Discharge Process Water				
IV. Effluent Characteristics				
Pollutant or Parameter	(1) Maximum Daily Value *(include units)*		(2) Average Daily Value *(last year)* *(include units)*	
	Mass	Concentration	Mass	Concentration
Biochemical Oxygen Demand (BOD)	0	0	0	0
Total Suspended Solids (TSS)	<54 lbs.	<5.0 mg/l	<11 lbs.	<5.0 mg/l
Fecal Coliform *(if believed present or if sanitary waste is discharged)*	N/A	N/A	N/A	N/A
Total Residual Chlorine *(if chlorine is used)*	N/A	N/A	N/A	N/A
Oil and Grease	0	0	0	0
*Chemical oxygen demand (COD)	N/A	N/A	N/A	N/A
*Total organic carbon (TOC)	N/A	N/A	N/A	N/A
Ammonia *(as N)*	<1.1 lbs.	<.1 mg/l	< .23 lbs.	<.1 mg/l
Discharge Flow	Value 2.0 CFS (1,292.544 GPD)		.42 CFS (272,000 GPD)	
pH *(give range)*	Value 6.86-7.18		6.99	
Temperature *(Winter)*	31.00 °C		30.00 °C	
Temperature *(Summer)*	31.00 °C		30.00 °C	

ADDENDUM:

PUBLIC NOTICE AND RESPONSE TO COMMENTS

The permit and statement of basis were public noticed in the Canon City Daily Record on September 21, 2018. No comments were received during the public notice period.