



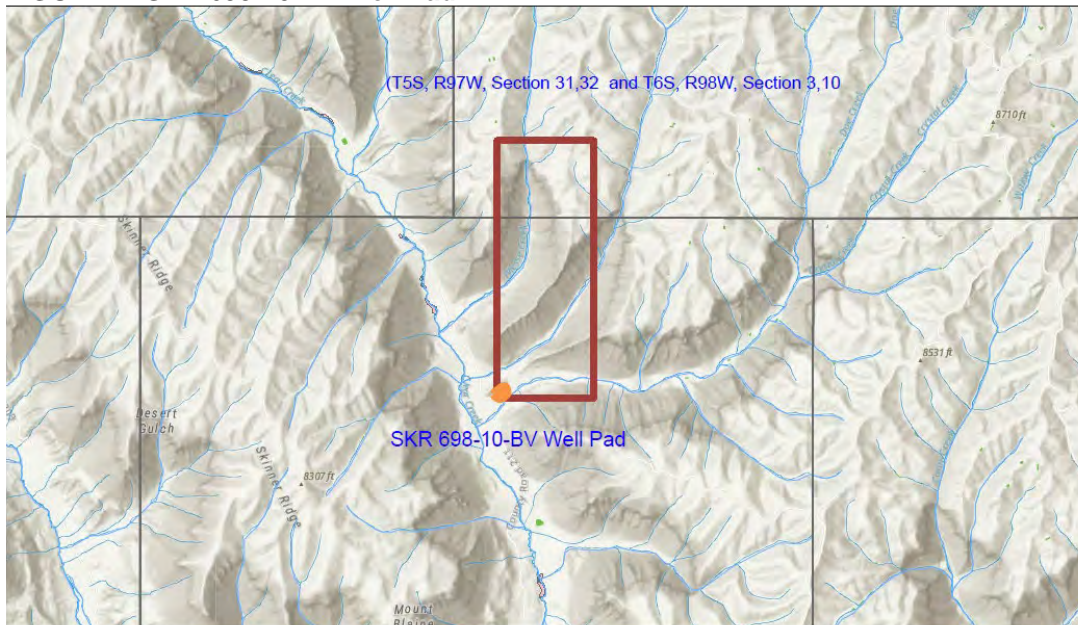
**Chevron Rockies Business Unit**  
Chevron Energy, Inc.  
2001 16<sup>th</sup> Street, Suite 900  
Denver, Colorado, 80202

## **ECMC Wildlife Mitigation Plan- Skinner Ridge OGDG SKR 698-10-BV Drill Pad**

Per the Colorado Energy and Carbon Management Commission (ECMC) 300 Series and 1200 Series Rules for the protection of wildlife and habitat, Chevron is presenting this Wildlife Mitigation Plan for the proposed Skinner Ridge OGDG SKR 698-10-BV drill pad. The OGDG SKR 698-10-BV drill pad includes a single existing pad with the potential to drill up to two wells with a collocated gas production facility, and lies within T6S, R98W, Section 15 (NW/NW) and Section 10 (SW/SW) (Figure 1). The evaluations herein are submitted in support of the ECMC 2A permitting process, and specifically the SKR 698-10-BV drill pad, and pursuant to Rule 304.c.(17) Wildlife Mitigation Plan (WMP), and Rule 1201.b for an Oil and Gas location inside High Priority Habitat (HPH). It should be noted that figures supporting this WMP are schematic representations used for approximate presentation of environmentally sensitive habitat in the project area, and that full design drawings should be referenced for detailed location placement and analysis.

### **Environmental Summary**

Chevron's SKR 698-10-BV project will utilize an existing drill pad that was permitted for Oil and Gas development under O&G Location ID Number 336056 but was never used for oil and gas purposes. The pad has been dedicated for equipment/materials staging and storage, as permitted through Garfield County. The proposed development pad will include a collocated gas processing facility on pad. The entire well pad lies within 500' of the Ordinary High Water Mark (OHWM) of Deer Park Gulch (aka Tom Creek) designated as 1202.c.(1).S Sportfish Management Waters HPH, and approximately ½ of the pad lies within 300' of the OHWM. The proposed development pad also lies entirely within 1202.d.(2) Elk Winter Concentration Area HPH and Elk Severe Winter Range HPH, with a protective timing stipulation between December 1<sup>st</sup> and April 15<sup>th</sup>.

**FIGURE 1- SKR 698-10-BV Well Pad**

As stated, the Deer Park Gulch drainage is identified as a Sportfish Management-protected HPH, and Chevron pre-consulted with CPW pursuant to the potential need for a request to the Commission for approval of a Rule 502 Variance as it relates to Rule 1202.c(1).S. (i.e., Sportfish management waters not identified by CPW as “Gold Medal” (within 500 feet of OHWM)).

CPW Northwest Energy liaison Taylor Elm reviewed the SKR 698-10-BV location and determined that although the location does fall within Rule 1202.c(1).S. HPH, the applicability of waiver provisions of Rule 309.e.(5).D.ii.bb would be appropriate to Deer Park Gulch. The Rule provision allows for CPW to grant a waiver for an intermittent drainage anywhere within the 500-foot Aquatic HPH buffer area, instead of within 300 to 500 feet of the OHWM, as would be the case if Deer Park Gulch were a perennial waterway. The waiver request was reviewed and approved by CPW on 11/16/23 and Chevron committed to the Best Management Practices (BMPs) documented in the waiver request and reiterated below under the Field Hydrology Review section.

All upgrades, with the exception of a slight expansion to the pad, will remain within the approved disturbed area (DA) and avoid any direct impact to water way features; a flowline to the existing gas processing plant is in-place along CR211 (Clear Creek Road) just southwest of the SKR 698-10-BV DA and the gas tie-in (approximately 90 feet in length) will not impact any sensitive water way or wetland features classified as 1202.c.(1) Q,R or S HPH. The liquid line tie-in will be installed within the existing Clear Creek Road pipeline ROW up to the SKR 698-09-AV pad approximately 4981 feet to the north (Figure 2).

**FIGURE 2- Liquids (Red) and Gas (Yellow) Flowline Tie-in; SKR 698-10-BV Well Pad to the SKR 698-09-AV Well Pad**

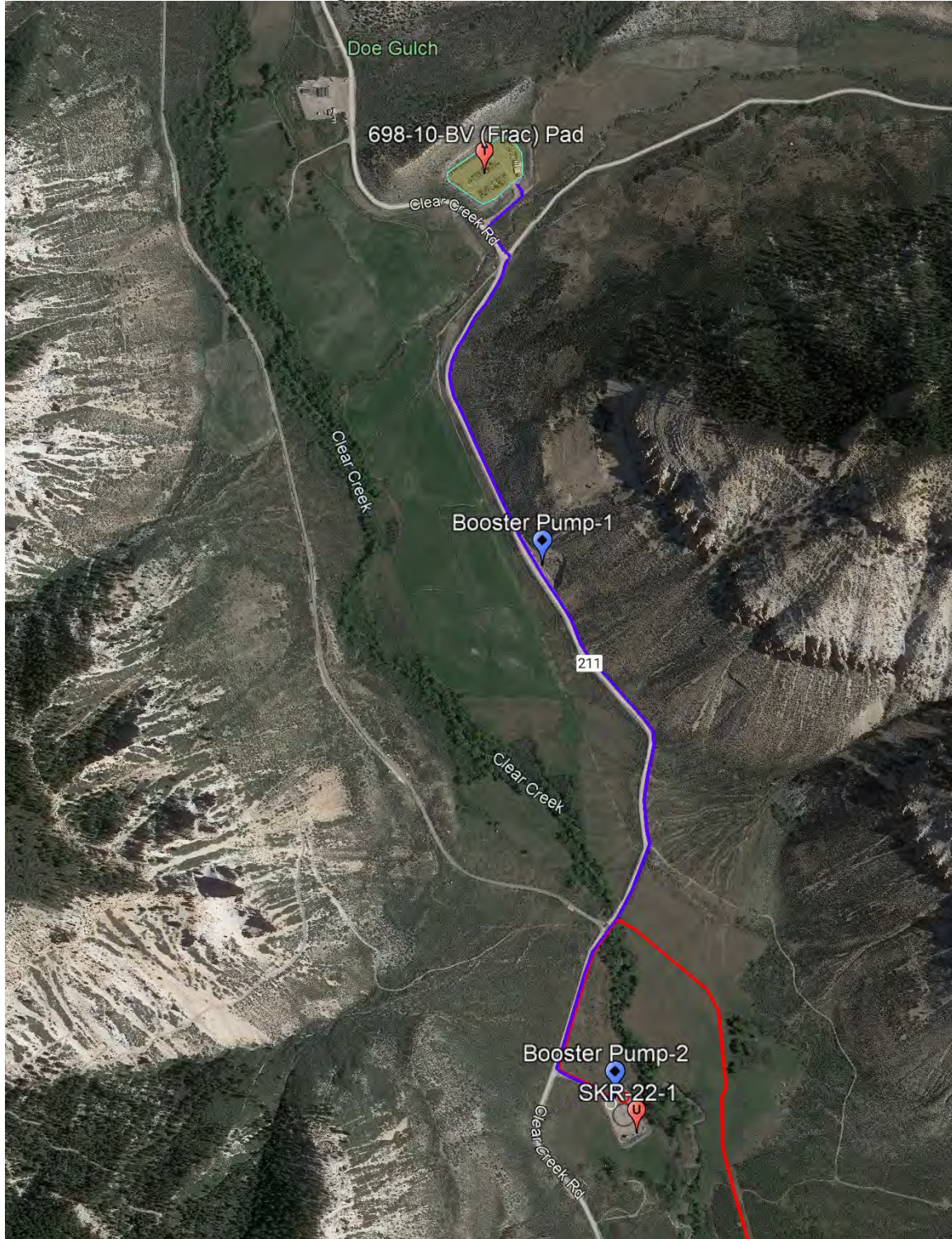


The extent of the proposed activities also includes freshwater sourcing from the Colorado River. Source water for drilling and completion activities will be pumped from the Kobe Water Facility and along a federal Right-of-Way (ROW) evaluated and approved by the Bureau of Land Management (BLM) in 2023 for earlier well completion activities in Skinner Ridge and initiated in August 2023. The temporary ROW authorization (COC-80860) is good for a three-year term and will be utilized for Chevron's well drilling under this project as well. The temporary source water flowline will include approximately 12 miles of surface flat-lay flowline and pump stations along existing water diversion and access road disturbances, up to the Skinner Ridge 66S98W/22NENW water staging pad (Location ID# 324358, aka SKR 22-1) and then to the SKR 698-10-BV well pad by means of a surface-lay line and two booster pumps (Figure 3). The SKR 22-1 will utilize a Modular Large Volume Tank (MLVT) on the pad working surface for fresh water staging in support of well completion activities. The SKR 22-1 pad and proposed surface-lay freshwater line to the SKR 698-



10-BV pad are located within the Clear Creek Sportfish Management Waters HPH 500-foot offset. Water sourcing activities were included in the CPW waiver request document for the project.

**FIGURE 3- Fresh Water Sourcing from the SKR 22-1 Pad to the SKR 698-10-BV Well Pad**





## Field Hydrologic Review

Hydrologic field review (Aquatic Resource Inventory) of the SKR 698-10-BV project was performed by a SWCA Environmental Services Professional Wetland Scientist (PWS) the week of July 21<sup>st</sup>, 2023. Survey activities were performed based on existing hydrologic features identified in the field including National Wetland Inventory (NWI)-mapped wetlands, National Hydrography Dataset (NHD) delineations, and the features presented on the SKR 698-10-BV Well Pad Hydrology Map submitted with the 2A application packet to ECMC. As depicted on Figure 4, SWCA confirmed that Deer Park Gulch (aka Tom Creek and dry at the time of inspection) which can seasonally hold water and has a defined OHWM is identified as Sportfish Management Waters HPH, and is located  $\pm 150$  feet southeast of the pad's permitted DA. Also, an agricultural ditch (holding water at the time of inspection) was identified  $\pm 343$  feet southwest of the pad's DA. No other associated wetlands, water features or hydrophytic plant or soil indicators were identified within 500 feet of the pad's DA.

**FIGURE 4- SKR 698-10-BV Well Pad proximity to Deer Park Gulch (aka Tom Creek)**



The recent hydrology field investigation suggests that per Rule 1202.a.(3), long-term well and facility operations will place the maintenance tank in the northeast portion of the pad within 500 feet of Deer Park Gulch to the southeast and the agricultural ditch to the southwest. Chevron requested CPW Waiver approval to Rule 1202.a.(3) for this location in protection of these potential aquatic resources and received CPW approval on 11/16/23 (attached to this submittal). Chevron committed to institute the following BMPs to be protective of Deer Park Gulch and the agricultural ditch:

- Stormwater management design protections during drilling and completion operations that include a perimeter collection channel around the entire pad circumference while routing stormwater flow to two dedicated detention ponds on the south and west sides of the pad.
- Interim reclamation for long-term well production and facility operation will reduce the original location disturbed area (DA) from 6.16 acres to 2.35 acres, re-establishing approximately 3.81 acres of habitat to the area.
- Post interim reclamation will maintain diversion channels on the south and west side of the reclaimed pad area to route surface flows to the permanent sediment pond(s).
- Per post-interim reclamation, the facility pad area will include a permanent raised berm between the facility maintenance tank and Deer Park Gulch.
- The facility maintenance tank (example picture below) will be constructed within an impervious, geosynthetic-lined under base, anchored into a metal-sided secondary containment system capable of containing up to 50% of the tanks capacity and any spill or leak from the storage vessel;



- Permanent, post-interim reclamation stormwater controls will route flow from the facility area to perimeter collection channels and to stormwater sediment ponds located between the pad and downgradient aquatic features;

- All surficial activities performed by Chevron during production operation activities will be protective of the environment. All vessels, totes, valves and flow lines associated with well production activities will be inspected daily for damage or leaks while in service;
- Telemetric and automation technology will be utilized to monitor any variations in facility pressures and fluid gauges which could indicate a leak and provide remote shut-in capabilities of the facility in the event of any discharge or emergency;
- A dedicated Spill-Response trailer with spill containment equipment will be staged full time at the SKR 698-10-BV well pad throughout well drilling activities and well completion operations.
- The proposed activities will not utilize any pits. Fresh water will be temporarily stored in the Harpoon MLVT (Modular Large Volume Tank) structure on the SKR 22-1 pad to the south and will be covered to protect wildlife and treated for WNV larvae.

The complete Aquatic Resource Inventory Report for the SKR 698-10-BV drill pad is attached to this Wildlife Mitigation Plan.

## **Operating Requirements**

Pursuant to Rule 1202.a operating requirements, and the additional operating and mitigation requirements in Rules 1201.b.(1)-(4), 1202 and 1203, Chevron commits to the following Operational Requirements in protection of the OGDPA SKR 698-10-BV drill pad environment.

### **1202.a. Operating Requirements**

- Black Bear Habitat 1202.a.(1)- The proposed SKR 698-10-BV drill pad is not within black bear habitat.
- Water Transportation 1202.a.(2)- Chevron will follow appropriate protocols for disinfecting water collection and transportation equipment and thereby protecting any surface water sources utilized by Chevron operations.
- Refueling/Chemical Storage Areas 1202.a.(3)- Deer Park Gulch is located approximately 150 feet south-southwest of the existing pad surface. As described above under Field Hydrologic Review, a Professional Wetland Scientist (PWS) provided full hydrologic review of surface waterway, wetlands, irrigation channel, and riparian areas potentially impacted by the SKR 698-10-BV drill pad and operations (full reporting is attached to this plan). Based on this detailed review, Chevron will be potentially situating new staging, refueling, or chemical storage areas within 500 feet of the Ordinary High-Water Mark (OHWM) of Deer Park Gulch. Chevron has requested a 1202.a.(3) Waiver from CPW and received approval on 11/16/23.
- Wildlife Exclusions 1202.a.(4)- Chevron will implement appropriate wildlife exclusion devices for drilling, completion and production operations. Chevron will not construct or utilize drilling pits or production pits on location. Permanent medium or large volume secondary containment structures are not anticipated for the project. However, fresh water

may be stored on location or at an adjacent pad in Minion Tanks during well drilling/completion activities. These tanks are completely netted to protect wildlife and are treated for WNV and larvae control.

The following wildlife exclusion devices will be installed:

- Fencing may be installed and maintained around the pad perimeter following drilling and completion activities and in coordination with surface landowner preferences.
  - Netting will be installed and maintained on all small-volume secondary containment structures that may hold precipitation and liquids.
  - Drip pans will have functional lids and be kept closed, when applicable.
  - Bird exclusion devices will be installed on the vent stacks for all separation and combustion devices, if applicable.
  - All produced water and water collection vessels will be close-topped, and all access ports will be sealed or netted.
  - Administrative Controls- daily inspections and good housekeeping practices will be followed for early prevention/detection of wildlife-related issues.
- 
- Trenching 1202.a.(5)- Any flowline/pipeline trenches left open for more than five consecutive days will have wildlife escape ramps at a minimum of one ramp per ¼ mile of trench.
  - Reclamation and Seed Mix 1202.a.(6)- While conducting interim and final reclamation activities (pursuant to 1000 Series Rules), Chevron will use an appropriate seed mix (mitigation seed mix for Elk habitat) when consistent with the Surface Owner's approval and any Soil Conservation District requirements.
  - Fencing 1202.a.(7)- Chevron will use CPW-recommended fence designs when consistent with the Surface Owner's approval and any relevant Local Government requirements.
  - Migratory Birds 1202.a.(8)- Chevron will conduct all vegetation removal necessary for Oil and Gas Operations outside of the established nesting season for migratory birds (April 1- July 31). For any vegetation removal activities performed between April 1 and July 31, Chevron will conduct pre-construction nesting surveys within the proposed disturbance area prior to vegetation removal. Should active nests be located, Chevron will establish appropriate work zone buffers.
  - West Nile Virus (WNV) and Mosquito Larvae Control 1202.a.(9)- Chevron will not utilize drilling or production pits. However, fresh water may be stored on location in Minion Tanks during well drilling/completion activities. These tanks are completely netted to protect wildlife and are treated for WNV and larvae control.
  - 1202.a.(10) Best Management Practices for activities in Proximity to Aquatic HPH 1202.c.(1).Q-S- Chevron is proposing activities within 500-1000 feet from 1202.c. Aquatic HPH areas for the SKR 698-10-BV drill pad development. The pad is already constructed and committed BMPs for proposed activities under this development are detailed in the Field Hydrologic Review section.



**1201.b.(1)-(4) Operating and Mitigation Requirements**

- (1) Pre-Application Consultation with CPW- Chevron has provided this document to CPW for pre-application consultation for the SKR 698-10-BV drill pad, per Rule 309.e.. CPW (Taylor Elm) was provided the document and its content on 11/7/23 and provided review comments (incorporated into this version) and final plan approval on (11/13/23). CPW review/approval documentation is attached to this submittal.
- In addition to this Wildlife Mitigation Plan and pursuant to Rule 304.b.(2).B.viii, an Alternative Location Analysis (ALA) in the form of Chevron's Wells Ranch Siting Rational for SKR 698-10-BV appraisal well drill pad has been provided with the application packet. Please reference the ALA document for specific locations and details.
- (2) Best Management Practices- The following BMPs are committed under this Wildlife Mitigation Plan.
  - Chevron will pre-clear all proposed disturbances according to CPW guidance meeting Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA) and Endangered Species Act (ESA) laws in protection of active nesting activities, observe CPW/USFWS requested protected buffers for active nesting species, and consult with CPW/USFWS as warranted.
  - Chevron will install and maintain bird-deterrent devices on all open-vent exhaust stacks on production equipment to discourage perching, roosting and nesting activities.
  - Employ Chevron's Stormwater Management Program to protect soil resources, minimize erosion, identify pollutants, apply pollutant control measures, and conduct regular inspections.
  - Although the project is using an existing pad, as necessary all interim and final reclamation areas will be contoured and re-vegetated to a stable condition to restore natural habitats for wildlife species.
  - Chevron will meet weed management targets during construction, drilling, production and reclamation lifecycles.
  - Chevron commits to employ Noise, Light, Dust and Odor mitigation efforts meeting ECMC Series 400 Rules in the protection of Wildlife Resources. A general summary of wildlife BMP commitments under the Series 400 aesthetic rules and incorporated by this WMP include:
    - Prior to the commencement of Drilling/Completion or Production Operations, Chevron will take all necessary and reasonable precautions to ensure that lighting, dust, noise and odor from the Oil and Gas Location does not unnecessarily impact the health, safety, and welfare of Wildlife occupying any High Priority Habitat within 2,000 feet of the Oil and Gas Location. For permanent facilities this includes:
      - Survey and document all active nests and dens potentially impacted by production operations. Documentation will be available for review.
      - Conduct a daily walkthrough of the location to ensure no wildlife have built nest(s) in/around lighting or noise sources. If nest(s) are found, HSE reporting will be issued to appropriate personnel to either remove the nest and/or temporarily abandon the lighting source until nest is abandoned.
    - Inform and educate all field employees and contractors on wildlife conservation practices, including no harassment or feeding of wildlife.
    - Utilization of telemetry equipment for remote monitoring to limit in-person visitation by production operations personnel.
  - Institute the Chevron safety program meeting Operational Excellence Management System initiatives and "Stop Work" authority.

- Construction of pipeline infrastructure to provide takeaway of oil, natural gas, and fresh and produced water from the development, eliminating truck traffic and emissions associated with hauling product from the oil and gas development and limiting vehicle/wildlife interactions.
- Any encroachment of wetlands or active water ways potentially considered Waters of the United States (WOTUS) will be reviewed and/or protected under USACE Nationwide or General Permit processes.

#### **1202.b. Flowline Mitigation-**

Chevron will not encounter any aquatic HPH perennial streams that would require bore techniques for flowline/utility line installation. CPW has reviewed the applicability of Rule 1202.c.(2).C and concurred that flowline installation within the Aquatic Sportfish Management HPH buffer is appropriate (10/25/23 concurrence from CPW attached to this document and flowline BMP commitments are detailed under the SKR 698-10 BV Waiver Request, also attached).

#### **1202.c. High Priority Habitat- No Surface Occupancy**

The SKR 698-10-BV drill pad development does potentially lie within 1202.c. HPH within or offset to its disturbance footprint. Chevron requested and received CPW waiver to Rule 1202.c.(1).S. for proposed activity within the No Surface Occupancy (NSO) within 500 feet of the OHWM of Deer Park Gulch designated as Sportfish Management Waters HPH. The waiver request approval is attached to this WMP.

#### **1202.d. High Priority Habitat- Density Exceeding One Per Square Mile**

The development does lie within an area where Oil & Gas location densities exceed 1 per square mile. The proposed SKR 698-10-BV drill pad lies within Elk Severe Winter Range (SWR)/Winter Concentration Area (WCA) HPH.

In addition to the above committed mitigation measures, Chevron will commit to the following mitigation efforts specific to Elk SWR/WCA as a 1202.d.(2) HPH.

- Chevron plans to schedule all construction, drilling, and completion activities outside of Elk WCA protective timing stipulations (between April 16<sup>th</sup> and November 30<sup>th</sup>). If Chevron is unable to complete all operations between April 16<sup>th</sup> and November 30<sup>th</sup>, the operator will provide notice as soon as practical indicating that activities may be occurring within Elk SWR/WCA season (December 1<sup>st</sup> thru April 14<sup>th</sup>) through direct communication with CPW. Communication will include an estimated duration of the planned operations within the HPH. Should Elk be identified in the area during construction activities, Chevron will have a biologist on site periodically to monitor herd response and determine any potential negative impacts from development activities and discuss with CPW any mitigation efforts that could reduce these impacts.
- Chevron will limit the placement of extensive linear barrier features (i.e. fencing, surface lines, berms) that may impact Elk movement and migration.
- Fencing used will be 3 or 4 strand to a maximum height of 42-inches.

- Chevron will quickly excavate, install, and reclaim linear pipeline features that may impact Elk movement and migration.

### 1203. Compensatory Mitigation for Wildlife Resources

The SKR 698-10-BV drill pad is within Elk SWR/WCA HPH.

#### 1203.b. Direct Impacts Mitigation

Chevron anticipates that approximately 0.31 acres of long-term disturbance (following interim reclamation) will be established by the SKR 698-10-BV drill pad development:

- SKR 698-10-BV drill pad – 0.21 acre initial disturbance for the construction of long-term stormwater detention basins, with an existing pad disturbance of 6.16 acres; 0.10 acre for additional access road construction (permanent disturbance); and a final post-interim reclamation pad disturbance of 2.35 acres. Also, the existing pad will be slightly expanded by 0.49 acres to allow inclusion of stormwater perimeter channels.

Temporary flowline construction is estimated at approximately 9.48 acres (approximately 3.02 acres in Aquatic HPH and the entire length in Elk SWR/WCA HPH) of temporary disturbance.

#### 1203.c. Direct Impact Mitigation Fee Calculation

Chevron commits to the following compensatory mitigation for direct impacts to Elk SWR/WCA HPH, associated with development of the SKR 698-10-BV well drill pad. Direct Impact Mitigation Fees will be paid to CPW at least 30 days prior to submittal of Form 42 construction notification.

Established Fee (since <10.99 acres)	Proposed pad disturbance acreage (detention Basins and slight expansion to include perimeter channels)	Access Road disturbance acreage	Flowline disturbance acreage	Total proposed acreage	Total mitigation costs
Temporary disturbance	0.49	0.00	9.48	9.97	
Permanent disturbance	0.21	0.10	0	0.31	
<b>Total</b>	0.70	0.10	9.48	10.28	<b>\$13,750.00</b>



1203.d. Indirect Impacts Mitigation

The proposed SKR 698-10-BV well drill pad is an existing pad with an existing access road. The current use of this pad as an equipment storage area resulting in regular vehicle traffic and activity on the site. It is not anticipated that the new wells on the pad will result in significantly increased long-term indirect impacts. CPW has reviewed the need to off-set the unavoidable adverse indirect impacts and decided that they will not recommend compensatory mitigation for the reasons mentioned. If the winter seasonal timing limitation cannot be fully adhered to, Chevron will consult with CPW regarding potential mitigation to off-set the one-time indirect impacts occurring from development activities within the winter timing limitation period. If additional mitigation is necessary, Chevron will amend the Form 2A application via sundry to correct the compensatory mitigation amounts being provided.

Respectfully submitted.

Michael Keller- Lead Environmental Specialist (970-415-2631)

## **Wildlife Mitigation Plan References and Sources**

### **State of Colorado Rulemaking in support of Sensitive and Protected Species/Habitat:**

Document references to ECMC Rules in support of this Wildlife Mitigation Plan include:

- 300 Series Rules:
  - Rule 304: Form 2A: Oil and Gas Location Assessment Application
  - Rule 309: CPW Consultation
- 400 Series Rules:
  - Dust, Light, Noise and Odor Mitigation
- 500 Series Rules:
  - 529: Rulemaking Proceedings
- 1200 Series Rules: Protection of Wildlife Resources

Source: [ECMC Regulation \(state.co.us\)](https://state.co.us/ecmc/regulation)

### **Colorado Parks and Wildlife:**

Colorado Parks and Wildlife High Priority Habitat maps in support of ECMC Rule Making and supporting this Wildlife Mitigation Plan:

Source: [ECMC Maps \(state.co.us\)](https://state.co.us/cpw/maps)

Colorado Parks and Wildlife, Department of Natural Resources- Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (2020):

Colorado Parks and Wildlife, Department of Natural Resources- Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls (revised 4/6/21):

Source: [Colorado Parks and Wildlife \(state.co.us\)](https://state.co.us/cpw)

### **U.S. Endangered Species Act (ESA):**

“Take” (as defined by ESA) of a federally-protected threatened and endangered species is illegal without permit. The project analysis must take into consideration threatened and endangered species as well as candidate and/or petitioned species. Species information may be obtained by contacting a local U.S. Fish and Wildlife field office with project information and/or accessed via the source below:

Source: <https://ecos.fws.gov/ipac/>

### **Critical Habitat under ESA**

Critical habitat are specific areas deemed essential to the conservation of (ESA) endangered and threatened species and may need special management or protections. Projects must be evaluated for the presence of critical habitat.

Source: <https://www.fws.gov/southeast/endangered-species-act/critical-habitat/>

**Migratory Bird Treaty Act (MBTA):**

The MBTA prohibits intentional take of federally-protected birds without permit. Projects shall be evaluated for risk of take of MBTA-listed species, focusing on those species listed Birds of Conservation Concern (BCC) and Birds of Management Concern (BMC). This information may be obtained by contacting a local U.S. Fish and Wildlife field office with project information and/or may be accessed at the source below:

Source: <https://ecos.fws.gov/ipac/>

**Bald and Gold Eagle Protection Act (BGEPA):**

"Take" (as defined by BGEPA) of federally protected eagles is illegal without permit. Projects shall be evaluated for risk of take of bald and golden eagles. Species information may be obtained by contacting a local U.S. Fish and Wildlife office with project information and/or may be accessed at the source below:

Source: <https://ecos.fws.gov/ipac/>

**Clean Water Act (CWA):**

The CWA regulates the discharge of pollutants into the Waters of the United States and quality standards for surface waters. CWA makes it unlawful to intentionally or negligently discharge any pollutant from a point source into navigable waters, unless a permit is obtained.

**Waters of the United States (WOTUS):**

The Department of the Army, acting through the U.S. Army Corps of Engineers, has authority to permit the discharge of dredged or fill material in waters of the U.S. under Section 404 of the CWA, and permit work and the placement of structures in navigable waters of the U.S. under Sections 9 and 10 of the Rivers and Harbors Act of 1899. Projects resulting in impacts to WOTUS are subject to federal permitting requirements. Projects shall be evaluated for risk of impacts to jurisdictional Waters of the United States.

In addition to the use of topographic maps, the following information is useful for WOTUS determinations:

**National Hydrography Dataset (NHD)/Watershed Boundary Dataset:**

Source: [https://nhd.usgs.gov/NHD\\_High\\_Resolution.html](https://nhd.usgs.gov/NHD_High_Resolution.html)

**USFWS National Wetland Inventory (NWI) Mapper:**

Source: <https://www.fws.gov/wetlands/>

**NOTE:** National Resource Conservation Service (NRCS) Soil and Topography Data (see section below) must be utilized to ascertain presence of hydric soils and flood risk.

**National Historic Preservation Act (NHPA)/Colorado Historical, Prehistorical and Archaeological Resources Act of 1973):**

Projects shall be evaluated for presence of cultural resources and historical artifacts.

**NOTE:** Archaeological investigations must be performed or supervised by an archaeologist who meets the U.S. Secretary of the Interior's Professional Qualification Standards for Archaeology (48FR 22716 or 36 CFR Part 61); or meets the requirements for Principal Investigator defined in 8 CCR 1405-7.



**Federal Emergency Management Administration (FEMA) Floodplain;**

Projects constructed in floodplains may require additional permitting. Projects shall be evaluated for potential impacts to floodplains and flood risk.

Source: <https://msc.fema.gov/portal>

**NOTE:** If floodplain maps are not available (i.e. "unmapped"), NRCS Soil and Topography Data must be used for planning purposes (See NRCS data below).

**Attachments**

- Aquatic Resources Inventory Report for the Proposed Development of the Skinner Ridge 10 Pad, Garfield County, Colorado
- ECMC – CPW – Deer Park Gulch Sportfish Management Waters High Priority Habitat Rule Waiver Request
- CPW Approval Documentation for Deer Park Gulch Sportfish Management Waters High Priority Habitat Rule Waiver Request



# Aquatic Resources Inventory Report for the Proposed Development of the Skinner Ridge 10 Pad, Garfield County, Colorado

JULY 2023

PREPARED FOR

**Chevron Rockies Business Unit**

PREPARED BY

**SWCA Environmental Consultants**





# **AQUATIC RESOURCES INVENTORY REPORT FOR THE PROPOSED DEVELOPMENT OF THE SKINNER RIDGE 10 PAD, GARFIELD COUNTY, COLORADO**

Prepared for

**Chevron Rockies Business Unit**  
1625 Broadway Street, Suite 2200  
Denver, Colorado 80202

Prepared by

**SWCA Environmental Consultants**  
295 Interlocken Boulevard, Suite 300  
Broomfield, Colorado 80021  
(303) 487-1183  
[www.swca.com](http://www.swca.com)

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# 1 INTRODUCTION

On behalf of Chevron Rockies Business Unit (Chevron), SWCA Environmental Consultants (SWCA) completed an aquatic resources inventory, commonly referred to as a wetland delineation, for the proposed development of the Skinner Ridge 10 Pad in Garfield County, Colorado (Figure A-1 in Appendix A). SWCA evaluated and delineated wetlands and other aquatic resources that are within 500 feet of the proposed pad area (survey area). The approximate center point of the proposed development is at latitude 39.540314°, longitude -108.321892 ° (see Figure A-1). The goal of this aquatic resources inventory is to identify aquatic resources containing an ordinary high-water mark (OHWM) or wetland within 500 feet of the proposed development in order to comply with the Energy & Carbon Management Commission's (ECMC's; formerly Colorado Oil and Gas Conservation Commission) Rule 1202(3).

The aquatic resources inventory included the identification and recording of features that may be determined to be waters of the United States (WOTUS) by the U.S. Army Corps of Engineers (USACE). WOTUS include waterbodies, such as rivers, creeks, streams, arroyos, lakes, and associated wetlands that have connectivity to downstream navigable waters or tidal seas. Under the Clean Water Act, wetlands are aquatic resources that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE 1987). Non-wetland waters are generally identified and delineated by the presence of an OHWM, which is a defined boundary on the shore or bank of an aquatic resource established by water fluctuations and movement.

## 2 METHODS

The aquatic resources inventory included a desktop review of existing data and a field survey. The following sections provide a summary of the methods used to collect data and generate aquatic resource mapping.

### 2.1 Desktop Review

SWCA conducted a desktop review of existing spatial data prior to the field survey to identify areas with the greatest potential for aquatic resources. Sources used during the desktop review included U.S. Geological Survey (USGS) 7.5-minute quadrangles, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps (USFWS 2023), the National Hydrography Dataset (NHD) (USGS 2023), the USGS StreamStats tool (Version 4.14.0) (USGS 2020), Natural Resources Conservation Service (NRCS) soil survey maps (NRCS 2023a), and historic and current aerial photographs of the survey area (Google Earth 2023; NETROnline 2023).

### 2.2 Field Survey

SWCA conducted the aquatic resources field survey on July 21, 2023. SWCA biologists performed formal wetland and waterbody delineations within 500 feet of the proposed oil and gas location on accessible parcels crossed by the proposed development. The following sections provide a summary of the methods used during the field survey to collect data and generate aquatic resource mapping.

#### 2.2.1 Mapping

A handheld global positioning system (GPS) receiver with sub-meter accuracy was used to record delineated wetland and waterbody boundaries and geographically reference data points during the field

survey. Geographic information system (GIS) software was used to analyze recorded features, calculate areas, and generate the survey area maps. When potential wetland or non-wetland waters within the survey area were located on adjacent land for which Chevron did not have access permission or extended outside of accessible parcels, SWCA visually confirmed these resources from available access points and digitized boundaries using the best available aerial imagery.

## **2.2.2 Wetlands**

The presence/absence of wetlands was determined in the field using delineation methods provided in the *Corps of Engineers Wetlands Delineation Manual* (Manual) (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Great Plains Region (Version 2.0)* (Regional Supplement) (USACE 2010). Data at each potential wetland were recorded on the Regional Supplement wetland determination data forms. Determination of wetland habitat (type) is based on the classification system developed by Cowardin et al. (1979). Per the Manual and Regional Supplement, wetlands are present in areas where three wetland parameters (i.e., wetland hydrology, hydric soils, and hydrophytic vegetation community) are present under normal circumstances. The presence of these wetland parameters is determined using the indicators provided in the Regional Supplement. One data point is recorded within each potential wetland (or wetland type for proximate, similar wetlands) along with a corresponding upland data point. These data provided the basis for mapped wetland-upland boundaries.

## **2.2.3 Non-wetland Waters**

The presence and extent of non-wetland waters (e.g., constructed ditches and reservoirs, active channels, and ponds) was determined in the field using the guidance and methods provided in the USACE Regulatory Guidance Letter No. 05-05 (USACE 2005) and the USACE's *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008) (Technical Guidance). An OHWM is the line on a shore established by fluctuations of water and is typically identified by physical characteristics, such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas. The spatial extent of non-wetland waters is delineated using the identified OHWM for each feature.

Non-wetland waters were characterized hydrologically as ephemeral, intermittent, or perennial waters. Ephemeral features flow only in direct response to precipitation or snowfall and flow for a brief period of time. Intermittent waters have prolonged flow that is sustained (at least in part) by melting snowpack or a groundwater source. Perennial waters flow continuously but may have periods of less flow. According to the USACE Manual and Technical Guidance (USACE 1987, 2008), erosional features that lack an OHWM or a continuous OHWM are not WOTUS.

# **3 RESULTS**

The results of the desktop review and field survey for the Skinner Ridge 10 pad are presented in the following sections. Maps of the survey area are provided in Appendix A, representative photographs of the survey area are provided in Appendix B, and the NRCS soil report for the survey area is provided in Appendix C.

### 3.1 General Observations and Desktop Review

The Skinner Ridge 10 pad survey area is in the Colorado Headwaters-Plateau (14010005), roughly 5,840 feet above sea level (see Figure A-1). The survey area terrain is flat, generally sloping to the southwest, and primarily consists of oil and gas development (Figures B-1–4). Based on data provided by the USGS StreamStats tool, the survey area is in an approximately 99.5-square-mile drainage basin that receives approximately 20.6 inches of mean annual precipitation (USGS 2020).

The survey area is not located within a 100-year floodplain. The closest 100-year floodplain is associated with Roan Creek, approximately 12.6 miles southeast of the pad boundary (ECMC 2023; Federal Emergency Management Agency 2023). Geologic mapping for this area indicates that the survey area is in the lower part shale, sandstone, marlstone, and limestone known as the Green River Formation (Tweto 1979). According to the NRCS soil surveys for Garfield County, Colorado, none of the soil map units within the survey area have the potential to fulfill the hydric soil criteria (NRCS 2023b). The dominant soil map units present within the survey area are Cumulic Haploborolls, 1 to 3 percent slopes, Happle very channery sandy loam, 3 to 12 percent slopes, Happle-Rock outcrop association, 25 to 65 percent slopes, and Tosca channery loam, 25 to 80 percent slopes MLRA 48A; all of these are described as well drained and have recorded depths to groundwater greater than 80 inches (NRCS 2023a) (see Appendix D).

The latest NHD and NWI maps indicate that there is one potentially jurisdictional stream feature within the survey area of the proposed Skinner Ridge 10 pad (USFWS 2023). The mapped stream feature is southeast of the proposed development, with the closest segment of the stream approximately 150 feet southeast of the proposed pad. No aquatic resources were mapped or identified within the disturbance boundary of the proposed pad.

Based on SWCA’s review of available data and observations made at the time of the survey, hydrologic conditions in the vicinity of the survey area are generally representative of typical conditions for this time of year. The recorded rainfall amounts for May to July 2023 are compared with normal rainfall amounts for these months in Table 1. According to data obtained from Weather Underground (2023), in the 3-month period preceding SWCA’s site visit, the survey area received less-than-normal rainfall, with less-than-normal precipitation in all 3 months assessed.

**Table 1. Monthly Recorded Precipitation at the Grand Junction, Colorado, Weather Station**

Month	Recorded Rainfall (inches)	Normal Rainfall (inches)	Difference (inches)
May 2023	0.04	0.88	0.84
June 2023	0.23	0.46	0.23
July 2023	0.04	0.61	0.57
<b>Total</b>	<b>0.31</b>	<b>1.95</b>	<b>1.64</b>

Sources: U.S. Climate Data (2023); Weather Underground (2023).

### 3.2 Field Survey

Qualified SWCA biologists conducted the on-site field survey on July 21, 2023. SWCA biologists performed formal wetland and waterbody delineations within 500 feet of the proposed oil and gas location on accessible parcels crossed by the proposed development; visual wetland assessments followed

by desktop delineations are conducted on parcels not crossed by a project for which Chevron does not have permission for pedestrian access.

### **3.2.1 Wetlands**

SWCA identified no wetlands within the Skinner Ridge 10 pad survey area, and no further action is required.

### **3.2.2 Non-wetland Waters**

SWCA identified and delineated approximately 0.24 acre of a non-wetland waterbodies within the survey area (Table 2, Figure A-2). Table 2 lists the size of each delineated waterbody feature within the survey area and the distance from each feature to the proposed Skinner Ridge 10 pad.

**Table 2. Waterbodies Identified within the Survey Area**

Waterbody ID	Size within the Survey Area (acres)	Distance to Pad (feet)	Direction to Pad
WB01	0.187	383.68	Northeast
WB02	0.050	150.51	Northwest

#### **3.2.2.1 AGRICULTURAL DITCH (WB01)**

SWCA delineated approximately 0.19 acre of an agricultural ditch containing an OHWM. The ditch is an intermittent drainage feature that flows generally north to south and crosses the western portion of the survey area, continuing south and draining into WB02 (Figures B-5 and B-6 in Appendix B; see Figures A-2). The ditch receives waters primarily from upstream reservoirs and aquifers. The waterbody is located slightly downgradient of the proposed Skinner Ridge 10 pad, with the closest segment of the ditch approximately 384 feet southwest of the proposed development.

#### **3.2.2.2 INTERMITTENT STREAM (WB02)**

SWCA delineated approximately 0.05 acre of unnamed stream feature containing an OHWM. The stream is an intermittent drainage feature that is a tributary to Clear Creek (Figures B-7 and B-8; see Figure A-2). The stream receives waters primarily from runoff from the snowpack melt. The waterbody is located slightly downgradient of the proposed Skinner Ridge 10 pad, with the closest segment of the stream feature approximately 150 feet southeast of the disturbance boundary of the proposed Skinner Ridge 10 pad.

## **4 SUMMARY AND RECOMMENDATIONS**

Two waterbodies, totaling 0.237 acre, were recorded within the proposed Skinner Ridge 10 pad survey area. Based on NWI and NHD maps, field surveys, and proximity of the proposed development to the nearest aquatic resources, disturbance from construction is not anticipated to impact potentially jurisdictional aquatic resources; therefore, proposed production facility construction is not expected to trigger permitting under Section 404 of the Clean Water Act (U.S. Environmental Protection Agency 2008).

ECMC permitting is still expected to include consultation regarding Rule 1202(3) because the proposed Skinner Ridge 10 pad will likely include chemical storage facilities within 500 feet of an aquatic resource.

It is assumed that a variance application will be required. The current process requires operators to submit a variance request through a formal hearings application. Variance applications must demonstrate the following under Rule 502.c: 1) that the operator has made a good faith effort or is unable to comply with the rule; 2) that the requested variance will not violate the basic intent of the Act; 3) that the requested variance is necessary to avoid an undue hardship; 4) that granting the variance will result in no adverse impact to public health, safety, welfare, the environment, or wildlife resources; and 5) that the requested variance contains reasonable mitigation measures to avoid, minimize, or mitigate adverse impacts to public health, safety, welfare, the environment, and wildlife resources. Based on SWCA's experience, reasonable mitigation measures include an engineering design incorporating protective berms and stormwater management to avoid and minimize risk of potential impacts.



## 5 LITERATURE CITED

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. FWS/OBS-79/31. Washington, D.C.: U.S. Fish and Wildlife Service.
- Energy & Carbon Management Commission (ECMC). 2023. ECMC Interactive Map. Available at: <https://ecmc.state.co.us/maps.html#/gisonline>. Accessed July 2023.
- Federal Emergency Management Agency. 2023. FEMA Flood Map Service Center. Available at: <https://msc.fema.gov/portal/home>. Accessed July 2023.
- Google Earth. 2023. Available at: <https://www.google.com/earth/>. Accessed July 2023.
- Natural Resources Conservation Service (NRCS). 2023a. Soil Survey of Garfield County Northern Part, Colorado. Available at: <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed July 2023.
- . 2023b. Natural Resources Conservation Service, National Lists of Hydric Soils (December 2015). Available at: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>. Accessed July 2023.
- NETROnline. 2023. Historic Aerials. Historic Aerial Image Database Viewer. Available at: <https://www.historicaerials.com/viewer>. Accessed July 2023.
- Tweto, O. 1979. Geologic Map of Colorado: U.S. Geological Survey Special Geologic Map, scale 1:500,000. Available at: [https://ngmdb.usgs.gov/Prodesc/proddesc\\_68589.htm](https://ngmdb.usgs.gov/Prodesc/proddesc_68589.htm). Accessed July 2023.
- U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. Vicksburg, Mississippi: U.S. Army Engineers Waterways Experiment Station.
- . 2005. *Regulatory Guidance Letter No. 05-05, Subject: Ordinary High Water Mark Identification*. Signed by Major General Don T. Riley, Director of Civil Works.
- . 2008. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*, edited by R.W. Lichvar and S.M. McColley. ERDC/CRREL TR-08-12. Hanover, New Hampshire: U.S. Army Engineer Research and Development Center.
- . 2010. *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Great Plains Region (Version 2.0)*, edited by J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-12. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center.
- U.S. Climate Data. 2023. Climate Grand Junction – Colorado. Available at: <https://www.usclimatedata.com/climate/grand-junction/colorado/united-states/usco0166>. Accessed July 2023.
- U.S. Environmental Protection Agency. 2008. 2008 Rapanos Guidance and Related Documents under CWA Section 404. Available at: <https://www.epa.gov/cwa-404/2008-rapanos-guidance-and-related-documents-under-cwa-section-404>. Accessed July 2023.

U.S. Fish and Wildlife Service (USFWS). 2023. National Wetlands Inventory. U.S. Fish and Wildlife Service Ecological Services. Available at: <http://www.fws.gov/wetlands/Data/State-Downloads.html>. Accessed July 2023.

U.S. Geological Survey (USGS). 2020. StreamStats Web Tool. Available at: <https://streamstats.usgs.gov/ss/>. Accessed July 2023.

———. 2023. National Hydrography Dataset. Available at: <http://nhd.usgs.gov/index.html>. Accessed July 2023.

Weather Underground. 2023. Forecast for Grand Junction, CO. Available at: <https://www.wunderground.com/history/monthly/us/co/grand-junction/KGJT/date/2023-7>. Accessed July 2023.

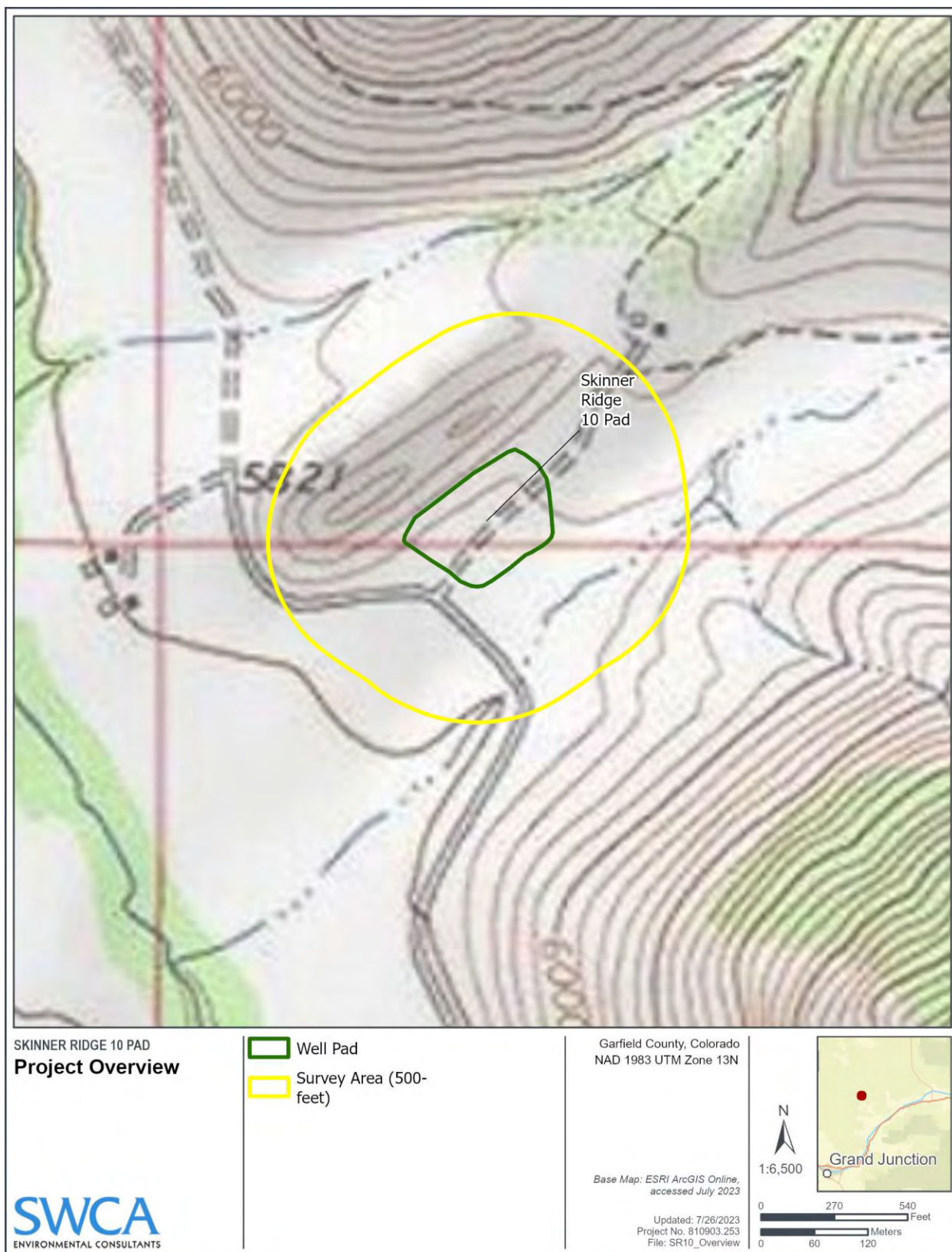
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## **APPENDIX A**

### **Aquatic Resources Inventory Maps**

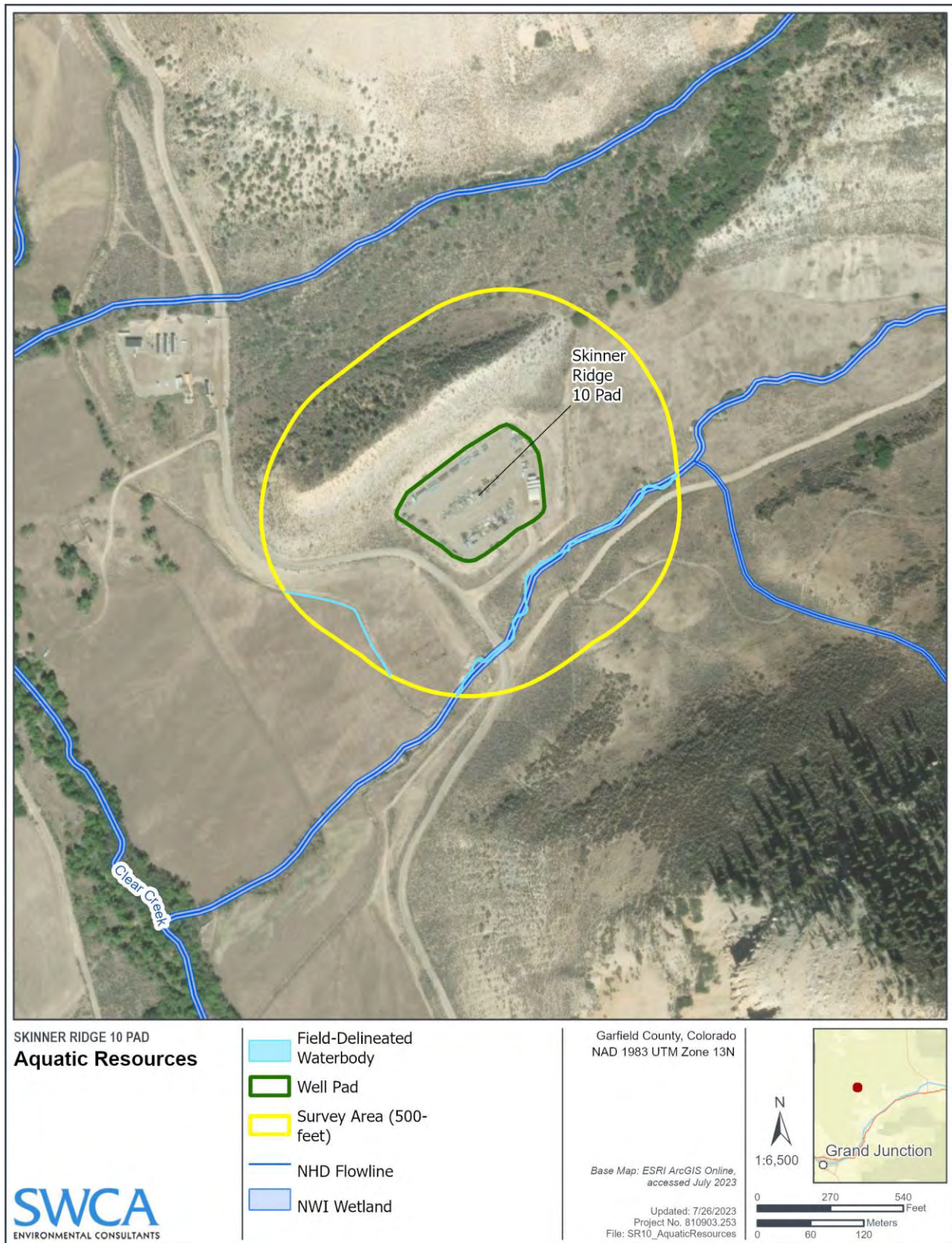






**Figure A-1. Overview of the Skinner Ridge 10 pad survey area.**





**Figure A-2. Aerial overview of the Skinner Ridge 10 pad survey area.**

## **Appendix B**

### **Photographs of the Survey Area**







**Figure B-1. Overview of the proposed Skinner Ridge 10 pad location; view facing southwest from berm.**



**Figure B-2. Overview of the proposed Skinner Ridge 10 pad location; view facing west-southwest from northeast portion of pad.**





**Figure B-3. Overview of the proposed Skinner Ridge 10 pad location; view facing northeast from western portion of pad.**



**Figure B-4. Overview of the proposed Skinner Ridge 10 pad location; view facing east from western portion of pad.**





**Figure B-5. Overview of the agricultural ditch (WB01); view facing northwest.**



**Figure B-6. Overview of the agricultural ditch (WB01); view facing southeast.**





**Figure B-7. Overview of the intermittent stream (WB02); view facing northeast.**



**Figure B-8. Overview of the intermittent stream (WB02); view facing southwest.**

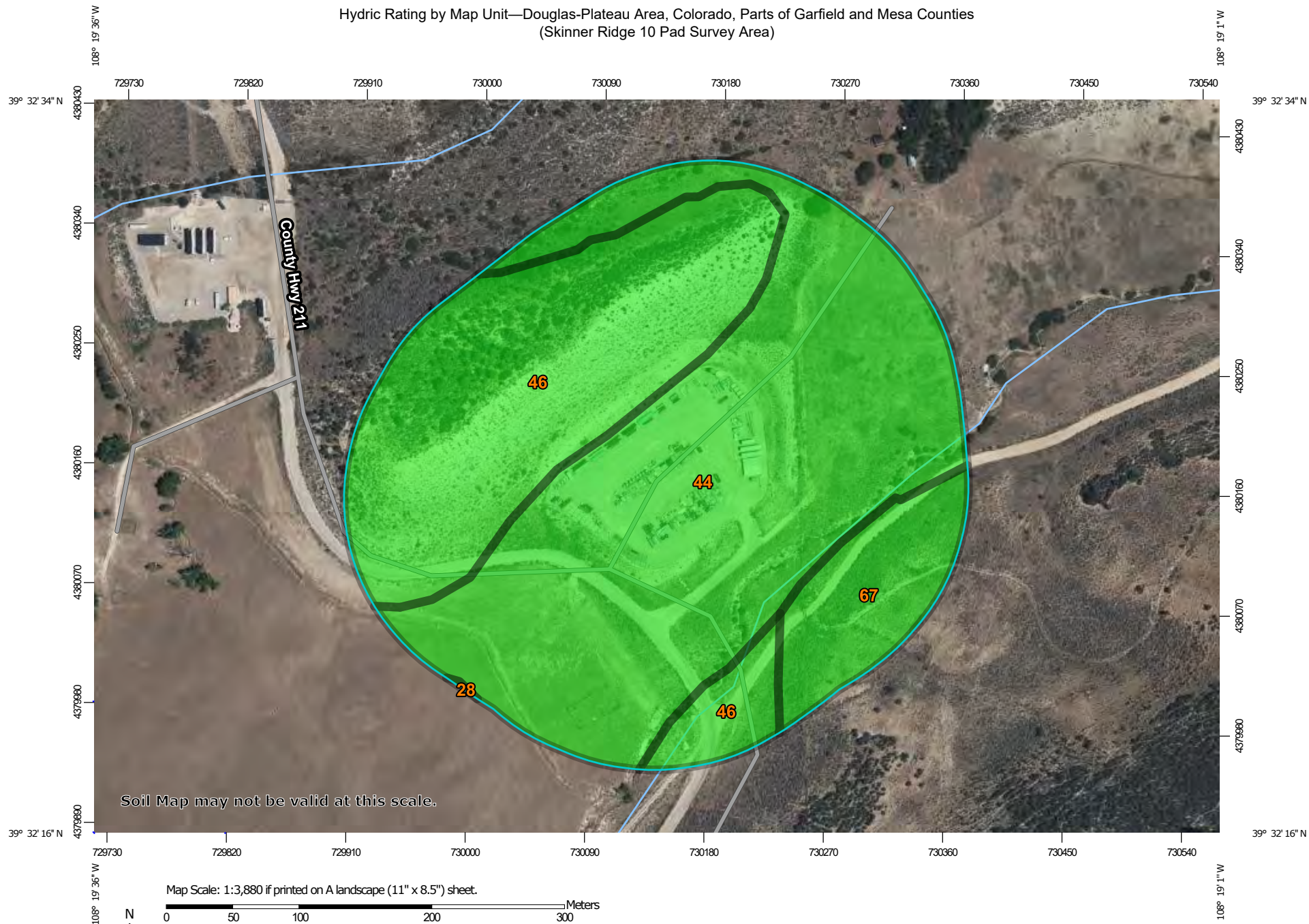
## **APPENDIX C**

### **Natural Resources Conservation Service Soil Report for the Survey Area**



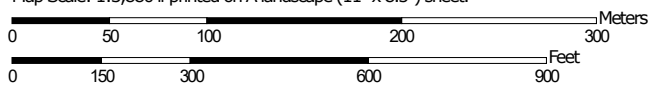


# Hydric Rating by Map Unit—Douglas-Plateau Area, Colorado, Parts of Garfield and Mesa Counties (Skinner Ridge 10 Pad Survey Area)



Soil Map may not be valid at this scale.

Map Scale: 1:3,880 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84



**Natural Resources  
Conservation Service**

Web Soil Survey  
National Cooperative Soil Survey

7/31/2023  
Page 1 of 5

# Hydric Rating by Map Unit—Douglas-Plateau Area, Colorado, Parts of Garfield and Mesa Counties (Skinner Ridge 10 Pad Survey Area)







## MAP LEGEND

### Area of Interest (AOI)







 Area of Interest (AOI)

### Soils







#### Soil Rating Polygons

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


#### Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available





#### Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

### Water Features

 Streams and Canals

### Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Douglas-Plateau Area, Colorado, Parts of Garfield and Mesa Counties  
Survey Area Data: Version 15, Sep 6, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 24, 2020—Jul 8, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
28	Cumulic Haploborolls, 1 to 3 percent slopes	0	0.0	0.0%
44	Happle very channery sandy loam, 3 to 12 percent slopes	0	22.4	56.0%
46	Happle-Rock outcrop association, 25 to 65 percent slopes	0	14.1	35.2%
67	Tosca channery loam, 25 to 80 percent slopes MLRA 48A	0	3.5	8.8%
<b>Totals for Area of Interest</b>			<b>40.0</b>	<b>100.0%</b>



**ECMC – CPW – Deer Park Gulch Sportfish Management Waters High Priority Habitat Rule  
Waiver Request**



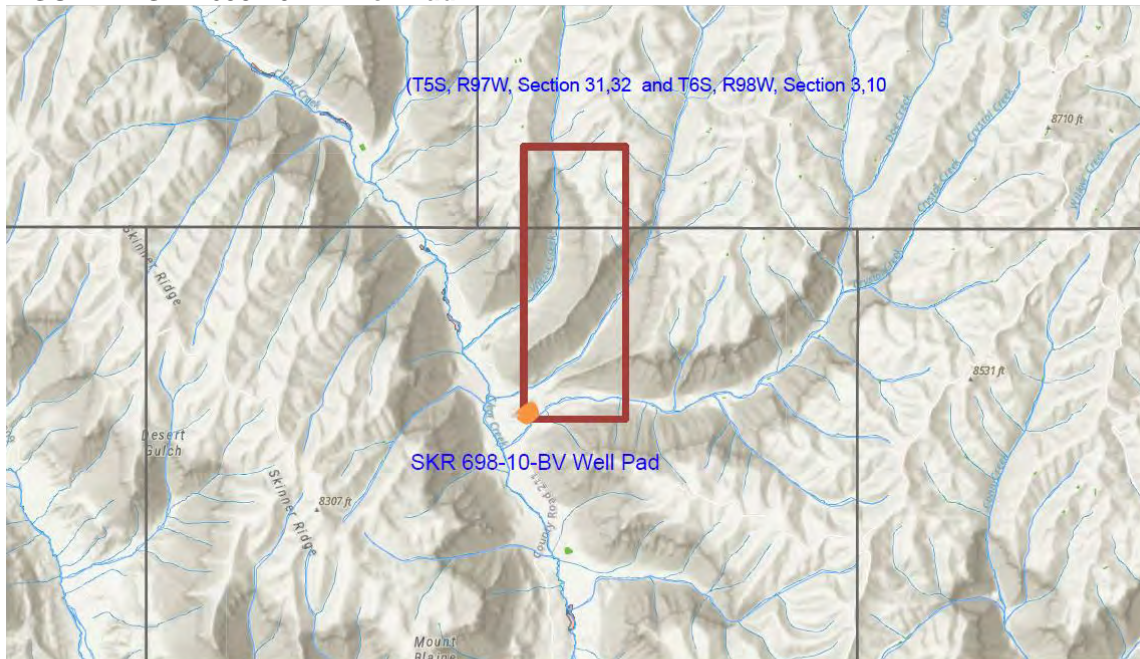
**Chevron Rockies Business Unit**  
2001 16<sup>th</sup> Street, Ste 900  
Denver, Colorado, 80220

## **Energy and Carbon Management Commission- Colorado Parks and Wildlife- Deer Park Gulch Sportfish Management Waters High Priority Habitat Rule Waiver Request**

Pursuant to the Colorado Energy and Carbon Management Commission (ECMC) 1200 Series Rules for the protection of wildlife and habitat, Chevron USA Inc. (Chevron) is presenting this request to ECMC and Colorado Parks and Wildlife (CPW) for consideration of the following for the SKR 698-10-BV OGD. CPW Northwest Energy Liaison Taylor Elm, reviewed and approved this waiver request document on 11/16/23. Mr. Elm's approval email is attached to the OGD submittal.

- Waiver to Rule 1202.c.(1).S. (waiver under 309.e.(5).ii) *"For Perennial Streams, if the Operator adheres to the following Best Management Practices for any new ground disturbance that meets the criteria of Rule 1202.c. between 300 feet and 500 feet from the OHWM of Sportfish Management Waters"*
- Waiver to Rule 1202.a.(3) *"At new and existing Oil and Gas Locations, Operators will not situate new staging, refueling or Chemical storage areas within 500 feet of the Ordinary High-Water Mark (OHWM) of any river, perennial or intermittent stream, lake pond or wetland"*
- Review and acceptance of Rule 1202.c.(2).C: *"Access road construction and Flowline/utility corridor clearing and installation activities within the High Priority Habitat identified in Rules 1202.c.(1).Q–S in association with an approved Form 2A may be allowed subject to Best Management Practices or other avoidance measures agreed to in consultation with CPW"*

Chevron is proposing the use of an existing pad in our SKR 698-10-BV OGD for the drilling and completion of up to two wells on the SKR 698-10-BV pad located within T6S, R98W, Section 15 (NW/NW) and Section 10 (SW/SW), Garfield County, Colorado (Figure 1). The proposed drilling unit is delineated below in red and the drill pad is located in the southwest corner of the drilling unit.

**FIGURE 1- SKR 698-10-BV Well Pad**

The drill pad location, although permitted for oil and gas development under O&G Location ID Number 336056, was never developed for well drilling and has been utilized as an equipment/material storage yard permitted by Garfield County. Due to the optimal proximity of the SKR 698-10-BV pad at the southwestern extent of the proposed drill unit, use of the existing pad would eliminate any additional pad construction disturbances outside of the pad's original Disturbed Area (DA) and allow well drilling and completion activities, with gas takeaway already in-place adjacent to the proposed pad.

The extent of the proposed activities would include well drilling and completion, freshwater sourcing from the Colorado River, gas and water flowline tie-in, emergency access road construction, and produced water flowback management and water hauling activities. Source water for drilling and completion activities will be pumped from the Kobe Water Facility and along a federal Right-of-Way (ROW) evaluated and approved by the Bureau of Land Management (BLM) in 2023 for well completion activities in Skinner Ridge, initiated in August 2023. The temporary ROW authorization (COC-80860) is good for a three-year term and will be utilized for Chevron's well drilling under this project. The temporary source water flowline will include approximately 12 miles of surface flat-lay flowline and pump stations along existing water diversion and access road disturbances, up to the water staging pad and SKR 698-10-BV well pad.

Well drilling and completion activities are all potentially within 500 feet of Deer Park Gulch (also known as Tom Creek), a Rule 1202.c.(1).S. defined Sportfish Management Waters High Priority Habitat (HPH) presented as Figure 2. Chevron personnel consulted with Colorado Parks and Wildlife (CPW's) Northwest Region Energy Liaison, Taylor Elm, in early 2023 to discuss the proposed project. CPW reviewed proposed activities and agreed that use of existing disturbances for the project was preferable and requested that Chevron provide this formal request for Waiver to these activities in HPH.

**FIGURE 2- SKR 698-10-BV Well Pad adjacent to Deer Park Gulch (aka Tom Creek)**

Anticipated activities include the following:

- Drilling and completion of up to two wells on the SKR 698-10-BV well pad; well completion activities will require the staging of flowback tanks and equipment and construction of a temporary freshwater storage facility (MLVT) on the SKR 22-1 pad to the south (the Skinner Ridge 66S98W/22NENW pad; Location ID# 324358, aka SKR 22-1).

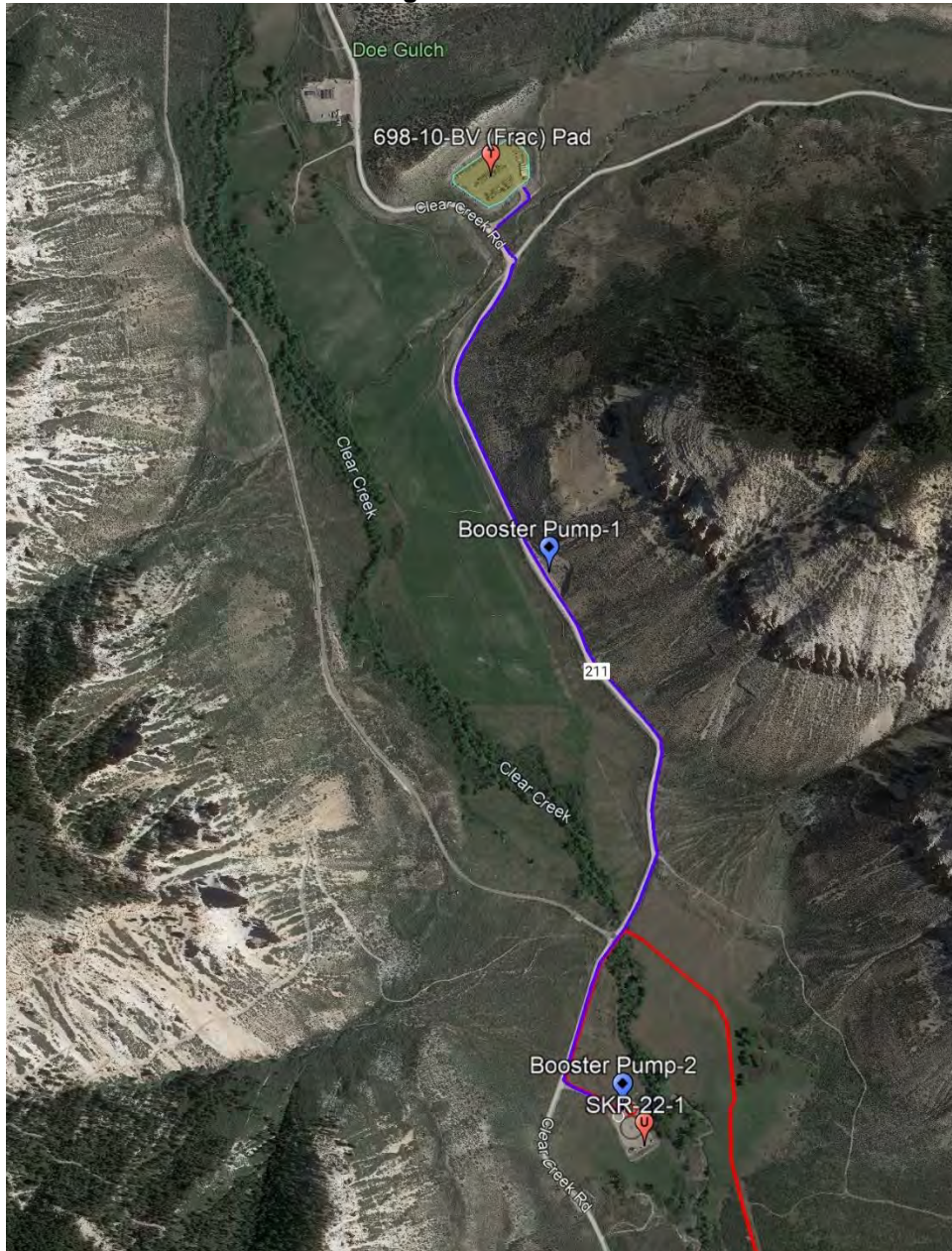


- Gas and liquids production flowline tie-in at Clear Creek Road immediately adjacent to the SKR 698-10-BV pad for gas, and then liquids flowline installed up to the SKR 698-09 AV Pad (Figure 3).

**FIGURE 3- Liquids (Red) and Gas (Yellow) Flowline Tie-in; SKR 698-10-BV Well Pad to the SKR 698-09-AV Well Pad**



- Construction of a secondary access road at the southwest corner of the SKR 698-10-BV pad.
- Temporary installation of a surface-lay freshwater feed line to MLVT staging at the SKR 22-1 pad, and then fresh water supply line routing to the SKR 598-36-BV well pad to support well completion activities (Figure 4).

**FIGURE 4- Fresh Water Sourcing from the SKR 22-1 Pad to the SKR 698-10-BV Well Pad**Waiver to Rule 1202.c(1).S.

As documented in the SKR 698-10-BV OGD Application, Chevron pre-consulted with CPW pursuant to the need for a request to the Commission for approval of a Rule 502 Variance as it relates to Rule 1202.c(1).S. (i.e., Sportfish management waters not identified by CPW as “Gold Medal” (within 500 feet of OHWM)).

Although the Commission is empowered to grant a Variance “to any of the Commission’s Rules or orders . . . after a hearing upon the application.” Rule 502.b.(1), CPW Northwest Energy liaison Taylor Elm reviewed the SKR 698-10-BV location and determined that although the location does



fall within Rule 1202.c.(1).S. HPH, the applicability of waiver provisions of Rule 309.e.(5).D.ii.bb would be appropriate to Deer Park Gulch and this OGD application.

ii. CPW may waive the application of and the Director may grant an exception to Rule 1202.c.(1).S:

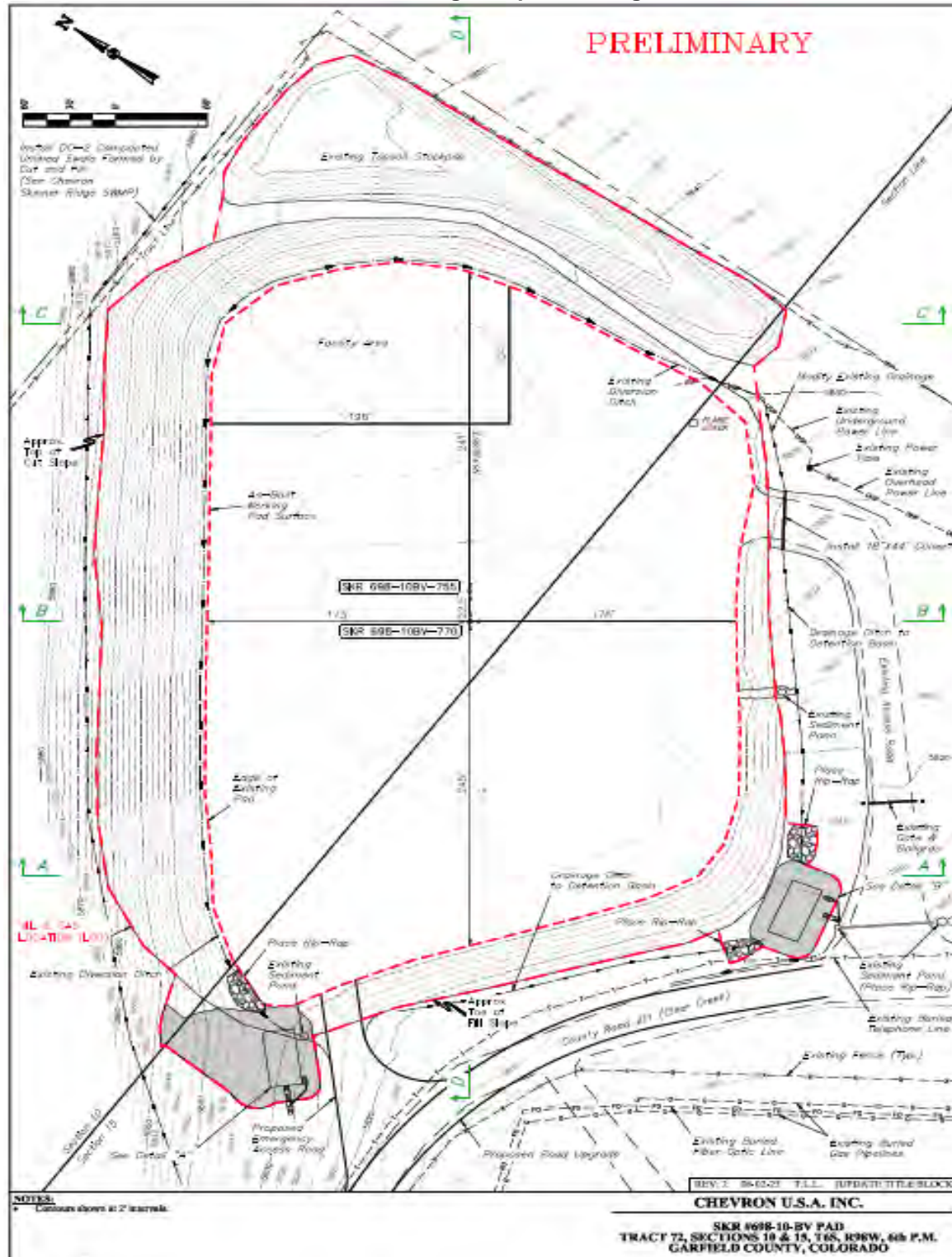
bb. For ephemeral and intermittent streams, if the Operator adheres to the following Best Management Practices:

1. *Contain Flowback and Stimulation Fluids in Tanks that are placed on a Working Pad Surface in an area with downgradient perimeter berming;*
2. *Construct lined berms or other lined containment devices pursuant to Rule 603.o around any new crude oil, condensate, and produced water storage Tanks that are installed after January 15, 2021;*
3. *Inspect the Oil and Gas Location on a daily basis, unless the approved Form 2A provides for different inspection frequency or alternative method of compliance;*
4. *Maintain adequate Spill response equipment at the Oil and Gas Location during drilling and completion operations; and*
5. *Not construct or utilize any Pits, except that Operators may continue to utilize existing Pits that were properly permitted, constructed, operated, and maintained in compliance prior to January 15, 2021.*

Therefore, this Rule provision allows for CPW to grant a waiver for an intermittent drainage anywhere within the 500-foot Aquatic HPH buffer area, instead of within 300 to 500 feet of the OHWM, as would be the case if Deer Park Gulch were a perennial drainage. Chevron respectfully requests that CPW/ECMC provide a Waiver to the rule and the 500-foot NSO and grant an application allowing these proposed activities to occur within 0-500 feet from the Sportfish Management Waters OHWM (Figure 2). Further, Chevron has made a good faith effort to comply with Commission Rules, as well as the spirit of the Commission's rule and the requested Waiver will not violate the basic intent of the Act under the following conditions and Best Management Practices (BMPs).

- Chevron proposes to utilize an existing and established disturbance under this Waiver which eliminates the impact from new pad construction, is protective of public health, safety, welfare, the environment, and wildlife resources and contains mitigation measures (as BMPs) to avoid, minimize, or mitigate any adverse impacts. The gas flowline takeaway tie-in and proposed emergency pad access construction are immediately adjacent to the SKR 698-10-BV Well Pad and Clear Creek Road and will require minimal to no expansion of disturbances (Figure 5).

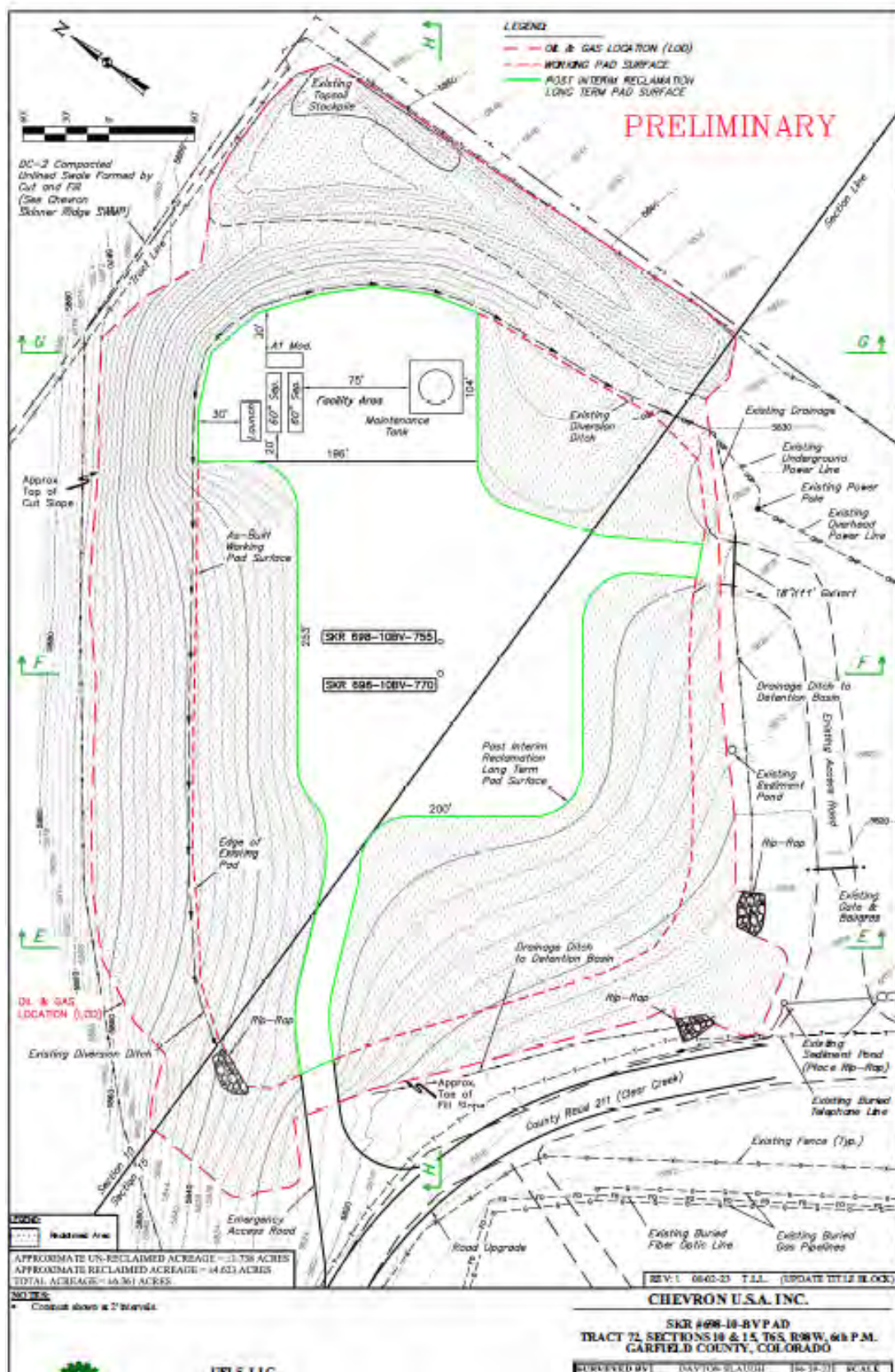
FIGURE 5- SKR 698-10-BV Well Pad, Drilling/Completion Stage





- The requested Waiver implements design mitigation measures protective of Aquatic Sportfish Management Waters associated with Deer Park Gulch, and include:
  - Stormwater management design protections that include a perimeter collection channel around the entire pad circumference while routing stormwater flow to two dedicated detention ponds on the south and west sides of the pad.
  - Post interim reclamation will maintain diversion channels on the south and west side of the reclaimed pad area to route surface flows to the permanent sediment pond(s).
  - Interim reclamation for long-term well production and facility operation will reduce the original location disturbed area (DA) from 6.4 acres to 1.7 acres, re-establishing approximately 4.6 acres of habitat to the area (Figure 6).
  - The post-interim reclamation facility pad area will include a permanent raised berm between the facility maintenance tank and Deer Park Gulch.
  - The facility maintenance tank will be constructed within an impervious, geosynthetic-lined under base, anchored into a metal-sided secondary containment system capable of containing up to 50% of the tank capacity and any spill or leak from the storage vessel.
  - Telemetric and automation technology will be utilized to monitor any variations in facility pressures and fluid gauges which could indicate a leak and provide remote shut-in capabilities of the facility in the event of any discharge or emergency.
  - A dedicated Spill-Response trailer with spill containment equipment will be staged full time at the SKR 698-10-BV well pad throughout well drilling activities and well completion operations.
  - The proposed activities will not utilize any pits. Fresh water will be temporarily stored in the Harpoon MLVT (Modular Large Volume Tank) structure on the SKR 22-1 pad, which will be covered to protect wildlife and treated for WNV larvae.
  - The location will be inspected daily during long-term production activities.

FIGURE 6- SKR 698-10-BV Well Pad, Post Interim Reclamation



This Waiver request can be further substantiated by the typical hydrologic conditions within the Clear Creek drainage system and specifically Deer Park Gulch.

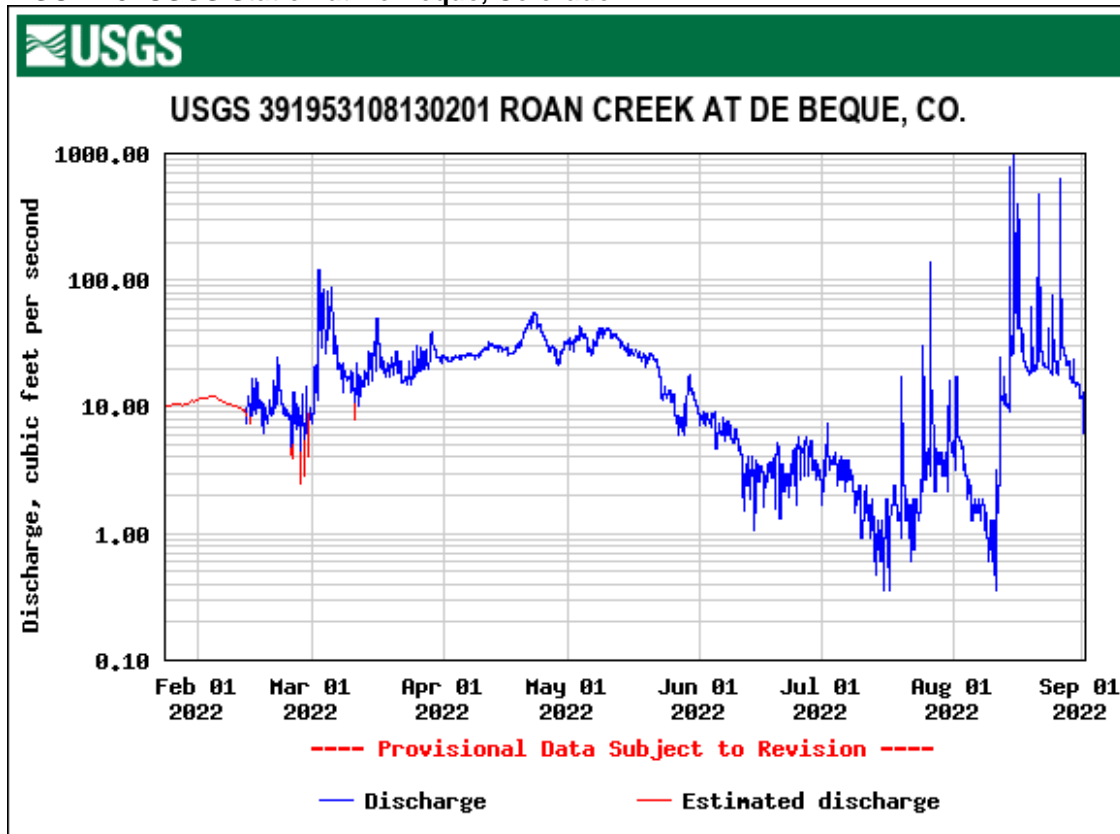
Based on the ephemeral flow conditions of the Roan Creek drainage system, SWCA Environmental Consultants (SWCA) performed field analysis of Deer Park Gulch (aka Tom Creek) on behalf of Chevron in July 2023. SWCA field determined that the Deer Park Gulch drainage's seasonal flow (Figure 7) would be incapable of supporting sportfish species, had a shallow and inconsistent OHWM, could not support any fringe wetlands within the survey area, and by definition the SKR 698-10-BV Well Pad does not fall within any mapped habitat triggering consultation under Rule 1202.c. The full SWCA field analysis is attached to this Waiver request.

**FIGURE 7- Deer Park Gulch, approximately 180 feet East of the Proposed Pad**



Further, water flow within the Roan Creek drainage (of which Deer Park Gulch, tributary to Clear Creek, is just one of many tributaries) is monitored at the De Beque flow monitoring station approximately 13 miles downstream from the SKR 698-10-BV drill pad and Chevron's proposed activities. Flow from USGS Station 391953108130201 (2022 flows shown below as Figure 8) indicate that cumulative flows from the entire Roan Creek contributory system can range between less than one cubic feet per second (cfs) and up to 40 cfs sustained flows, with transitory storm event peaks up to 100 cfs or more. However, sustained flows over the entire drainage system between one and ten cfs would not appear to support Sportfish Management Species long term. Consequently, Clear Creek and Deer Park Gulch, would contribute just a fraction of these flow volumes to the Roan Creek system and would therefore not appear to be able to sustain aquatic species.



**FIGURE 8- USGS Station at De Beque, Colorado**

Chevron is aware of CPW's designation of Deer Park Gulch/Clear Creek as Sportfish Management Waters 1202.c HPH and respectfully requests this Exception request to Rule 502.b.(1) (between 0'-300' from the OHWM) and Waiver request per Rule 309.e.(5).D consultation for well drilling, completion, flowback and water recycle activities in protection of the HPH (between 300'-500' from the OHWM).

#### Rule 1202.a.(3) Waiver Request

Chevron respectfully requests a waiver to Rule 1202.a.(3) for long term placement of tanks within 500 feet of Deer Park Gulch supported by the following hydrologic review and BMP commitment.

#### **Field Hydrologic Review**

Hydrologic field review of the SKR 698-10-BV project was performed by SWCA Environmental Services Professional Wetland Scientist (PWS) the week of July 21<sup>st</sup>, 2023. Survey activities were performed based on existing hydrologic features identified in the field including National Wetland Inventory (NWI)-mapped wetlands, National Hydrography Dataset (NHD) delineations, and the features presented on the SKR 698-10-BV Well Pad Hydrology Map to be submitted with the 2A application packet to ECMC. As depicted on Figure 9, SWCA confirmed that Deer Park Gulch (dry at the time of inspection) which can seasonally hold water and has a defined OHWM is identified as Sportfish Management Waters HPH and is located  $\pm 150'$  southeast of the pad's permitted

disturbed area (DA). Also, an agricultural ditch (holding water at the time of inspection) was identified  $\pm 343'$  southwest of the pad's DA. No other associated wetlands, water features or hydrophytic plant or soil indicators were identified within 500 feet of the pad's DA.

**FIGURE 9- SKR 698-10-BV Well Pad Hydrologic Review**



The recent hydrology field investigation suggests that per Rule 1202.a.(3), long-term well and facility operations will place the maintenance tank in the northeast portion of the pad (refer to Figure 6) within 500 feet of Deer Park Gulch to the southeast and the agricultural ditch to the southwest. Chevron is requesting CPW Waiver approval to Rule 1202.a.(3) for this location in protection of these potential aquatic resources. Chevron commits to institute the following BMPs to be protective of Deer Park Gulch and the agricultural ditch:

- The facility maintenance tank (example picture below) will be constructed within an impervious, geosynthetic-lined under base, anchored into a metal-sided secondary containment system capable of containing up to 50% of the tanks capacity and any spill or leak from the storage vessel;



- Interim reclamation of the pad will include a permanent berm placed downgradient from - the maintenance tank and between the maintenance tank and Deer Park Gulch;
- Permanent, post-interim reclamation stormwater controls will route flow from the facility area to perimeter collection channels and to stormwater sediment ponds located between the pad and downgradient aquatic features;
- All surficial activities performed by Chevron during production operation activities will be protective of the environment. All vessels, totes, valves and flow lines associated with well production activities will be inspected daily for damage or leaks while in service;
- Telemetric and automation technology will be utilized to monitor any variations in facility pressures and fluid gauges which could indicate a leak and provide remote shut-in capabilities of the facility in the event of any discharge or emergency; and

The complete Hydrologic Survey Report for the SKR 698-10-BV Pad is attached to this Waiver document. Chevron respectfully requests a timely review of the project by CPW and that a Waiver to Rule 1202.a.(3) be approved.

Review and acceptance of Rule 1202.c.(2).C.

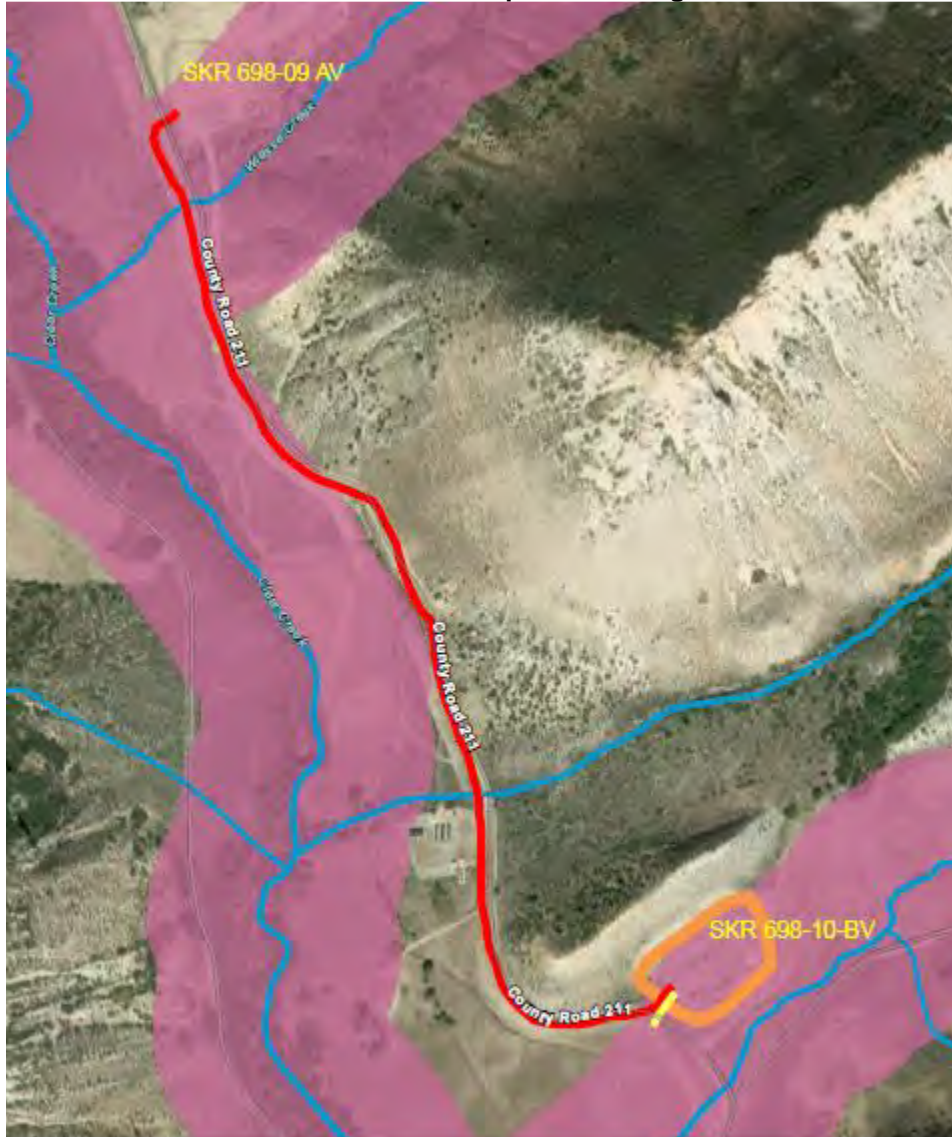
The construction of a production flowline for liquids transfer between the SKR 698-10-BV drill pad and SKR 698-09-AV drill pad (Figure 10, red trace) is proposed in anticipation of gas and liquid delivery to the Skinner Ridge gas processing facility approximately 2 ½ miles Northwest of the SKR 698-10-BV pad, along Clear Creek Road. Gas flowline tie-in (Figure 10, yellow trace) will require a short 90-foot lateral travelling west of the SKR 698-10-BV pad to an existing gas-gathering line adjacent to Clear Creek Road. Although approximately ½ of the liquid flowline (2500 feet with an overall length of 4900 feet) will require disturbances within Clear Creek's Aquatic Sportfish



Management Waters NSO, the gathering lines will be within the existing flowline right-of-way (ROW) along Clear Creek Road and Chevron respectfully utilizes Rule 1202.c.(2).C where:

*Access road construction and Flowline/utility corridor clearing and installation activities within the High Priority Habitat identified in Rules 1202.c.(1).Q–S in association with an approved Form 2A may be allowed subject to Best Management Practices or other avoidance measures agreed to in consultation with CPW*

**FIGURE 10- SKR 698-10-BV Gas and Liquid Gathering Lines**



Per Chevron's ongoing communication with CPW, Taylor Elm indicated that CPW concurs with the application of Rule 1202.c.(2).C. to allow for flowline installation within the aquatic habitat buffer. Chevron commits to institute the following BMPs to be protective of Clear Creek and its associated fringe wetlands during flowline installation.

1. The liquids flowline alignment will be constructed within the existing flowline ROW where the existing gas gathering flowline was installed. Flowline installation methods will provide a natural upgradient stormwater barrier to any siltation, fluid discharge or stormwater flow West toward Clear Creek.
2. Stormwater controls such as straw wattles and/or silt fencing will be utilized along the flowline alignment to contain any off-disturbance flow or soil movement during flowline installation.
3. Sediment settling areas (ponds) will be established within any existing access road runoff ditch.
4. The flowline will be Inspected daily during installation operations.
5. Following flowline installation, the disturbance will be covered, regraded, topsoil replaced, and reseeded as quickly as possible.
6. A dedicated Spill-Response trailer with spill containment equipment will be staged full time at the SKR 698-10-BV pad throughout flowline installation activities.

Elk Winter Concentration Area HPH Rule 1202.d.(2)

In addition to Sportfish Management Waters HPH, Chevron's proposed well drilling and completion project lies within Elk Winter Concentration Area HPH, pursuant to Rule 1202.d.(2). Chevron has consulted directly with CPW per this resource and will attempt to perform all construction, well drilling and completion activities outside of the protective timing stipulation for this habitat (i.e., allowed between May 1 thru November 30). Should proposed activities outlined in this document be delayed or the potential exists that work may extend into this protective timing window, prior to any further activity Chevron will re-consult with CPW and determine if a waiver to the timing stipulation is appropriate, along with any BMPs required to protect the species and habitat.

Chevron appreciates ECMC's and CPW's review and consideration of these waiver requests. Please don't hesitate to contact me directly if either agency requires additional information or clarification for their determination.

Michael Keller- Lead Environmental Specialist

Cc: Derek Eggert  
Mike Rodine  
Michael Jewell



**CPW Approval Documentation for Deer Park Gulch Sportfish Management Waters High Priority  
Habitat Rule Waiver Request**

**From:** [Taylor Elm - DNR](#)  
**To:** [Keller, Michael](#)  
**Subject:** **[\*\*EXTERNAL\*\*]** Re: Draft for consultation- Skinner Ridge 698-10-BV Well Pad and Sportfish Management Waters HPH Waiver Request  
**Date:** Thursday, November 16, 2023 10:57:41 AM

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Mike,

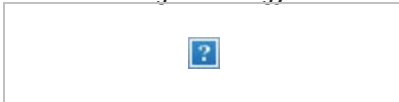
Thank you for the continued communication on this matter and for incorporating the suggested edits that I had provided on October 25th. Based on those changes and the pre-application consultation process we've been engaged in, CPW approves both of the waivers being requested (Rule 1202.c.(1).S. NSO stipulation and Rule 1202.a.(3).).

We appreciate Chevron's thorough investigation of the Deer Park Gulch waterway and we agree with the results of the SWCA Consulting report. This drainage does not contain sufficient year-round flows to support any sportfish populations. Additionally, we appreciate the incorporation of the best management practices that we have discussed to further minimize adverse impacts related to these two waiver requests. Based on these factors, CPW does not have significant concerns related to the proposed oil and gas activities. We approve both waiver requests, and consider this email correspondence as our official waiver approval.

If you have any questions, or we can provide additional information, please don't hesitate to reach out.

Thank you,

Taylor Elm  
Northwest Region Energy Liaison



P 970.947.2971 | C 970.986.9767  
711 Independent Ave. Grand Junction, CO 81505  
[taylor.elm@state.co.us](mailto:taylor.elm@state.co.us) | [cpw.state.co.us](http://cpw.state.co.us)

On Tue, Oct 24, 2023 at 3:22 PM Keller, Michael <[michael.keller@chevron.com](mailto:michael.keller@chevron.com)> wrote:

Hi Taylor and I hope you are well. Please see the attached Draft of our proposed Waiver Request for Skinner Ridge well drilling/completions and flowline installation near/within the Deer Park Gulch/Clear Creek Aquatic Sportfish Management Waters HPH. As we discussed, I cited Rule 309.e.(5).[D.ii.bb](#) to role the ECMC Variance request into CPW purview and Waiver approval. Just an FYI, Figure 5 and Figure 6 (grading plan drawings are just draft and a little difficult to see; those will be replaced with final drawings. This will be submitted with the WMP and 2A packet, and I wanted your eyes on it first.

I appreciate your guidance and review of the document as part of our consultation effort with CPW. Thanks Taylor.

Mike.

Variance to Rule 1202.c.(1).S roll this into CPWs waiver below

Waiver to Rule 1202.c.(1).S.

Waiver to Rule 1202.a.(3) staging chemical storage within 500' of an aquatic resource

Review and acceptance of Rule 1202.c.(2).C allowing flowline construction within aquatic HPH

**Michael Keller**

Lead Environmental Specialist

[Michael.Keller@Chevron.com](mailto:Michael.Keller@Chevron.com)

**Chevron Rockies Business Unit**

Chevron Corporation

2001 16<sup>th</sup> Street, Suite 900

Denver, Colorado, 80202

Mobile 970-415-2631

**From:** [Taylor Elm - DNR](#)  
**To:** [Keller, Michael](#)  
**Subject:** **[\*\*EXTERNAL\*\*]** Re: Draft for consultation- Skinner Ridge 698-10-BV Well Pad and Sportfish Management Waters HPH Waiver Request  
**Date:** Wednesday, October 25, 2023 10:40:27 AM

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Hello Mike,

Thanks for sending over this draft document. I think the bulk of the document and justification pieces (i.e., BMPs being implemented, hydrologic data that has been gathered, etc.) all look really good. I don't have any edits or additional measures that CPW would like to see included.

One recommendation on the first page would be to remove the "Variance to Rule 1202.c.(1).S." section entirely, as there is not any ECMC variance needed. Instead I would only include the Rule 309.e.(5).[D.ii.bb](#) CPW waiver request as you mentioned, and remove the "for perennial streams" language in the second section. This is not the instance that we're addressing, so I would clean all that up to be very clear on the waiver request being submitted.

Also, small potatoes, but on PDF page 13 I'd recommend the following change:

*Per Chevron's ongoing communication with CPW, Taylor Elm indicated that CPW concurs with the application of Rule 1202.c.(2).C. to allow for flowline installation within the aquatic habitat buffer could grant this waiver. Chevron commits to institute the following BMPs to be protective of Clear Creek and its associated fringe wetlands during flowline installation.*

Our concurrence on the application of Rule 1202.c.(2).C. is not typically necessary, but I'm happy to provide that. I just want to be clear that this is not a "waiver" that CPW is granting, it's allowed per that rule. We tend to catch flak for allowing so many waivers, so if we can avoid the perception of granting another one, it helps!

Thanks,

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**Michael Keller**

Lead Environmental Specialist

[Michael.Keller@Chevron.com](mailto:Michael.Keller@Chevron.com)

**Chevron Rockies Business Unit**

Chevron Corporation

2001 16<sup>th</sup> Street, Suite 900

Denver, Colorado, 80202

Mobile 970-415-2631