FINAL ENVIRONMENTAL ASSESSMENT

March 2025

Water Quality Division
Montana Department of Environmental Quality

PROJECT/SITE NAME:	**Construction Dewatering General Permit (CDGP)**	
APPLICANT/COMPANY NAME:	**NA**	
PROPOSED PERMIT/LICENSE NUMBER:	**MTG070000**	
LOCATION:	**State-wide Except within Indian Reservations**	**COUNTY:** **All**
PROPERTY OWNERSHIP:	**FEDERAL __X__ STATE __X__ CITY __X__ PRIVATE __X__** *The CDGP may authorize dewatering discharges anywhere outside of the boundaries of an Indian Reservation.*	

TABLE OF CONTENTS

1. OVERVIEW OF PROPOSED ACTION

1.1. AUTHORIZING ACTION

Under the Montana Environmental Policy Act (MEPA), Montana agencies are required to prepare an environmental review for state actions that may have an impact on the human environment. The Proposed Action is considered to be a state action that may have an impact on the human environment and, therefore, the Department of Environmental Quality (DEQ) must prepare an environmental review. This Environmental Assessment (EA) will examine the proposed action and alternatives to the proposed action and disclose potential impacts that may result from the proposed and alternative actions. DEQ will determine the need for additional environmental review based on consideration of the criteria set forth in Administrative Rules of Montana (ARM) 17.4.608.

1.2. DESCRIPTION OF DEQ REGULATORY OVERSIGHT

DEQ implements the Montana Water Quality Act of Montana, issuing discharge permits in conformance with the federal Clean Water Act under the Montana Pollutant Discharge Elimination System (MPDES) pursuant to Section 75-5-101, *et. seq*., Montana Code Annotated (MCA), and the Administrative Rules of Montana (ARM) Title 17, Chapter 30, Subchapters 2, 5, 6, 7, 12, and 13.

1.3. PROPOSED ACTION

The proposed action is to renew the *General Permit for Construction Dewatering*, known as the Construction Dewatering General Permit (CDGP), for another five-year permit cycle. There have been seven renewals since the initial CDGP in 1983. Future projects that would be subject to the proposed action can be located anywhere in Montana, other than within the boundaries of an Indian Reservation.

This general permit would provide the permitting mechanism for construction dewatering, which is the action of pumping or actively removing water from a construction site and discharging the dewatering effluent to state surface water. Construction dewatering includes discharges of water from cofferdams and other in-stream dewatering; trenches, pits, and other surface area dewatering; and dewatering from wells within disturbed areas associated with construction sites throughout Montana.

The CDGP requires the “owner or operator” of a dewatering operation to follow the Notice of Intent (NOI) process to obtain authorization under this General Permit.

The specific impact of dewatering can vary site-by-site depending on the dewatering discharge operation type and flow rate, the receiving water flow rate and turbidity at the time of the dewatering, and the successful implementation of Best Management Practices (BMPs) and corrective action.

DEQ has determined that since authorizations are for temporary activities, one EA for the master CDGP is sufficient. There is no future analysis needed and no environmental benefit from conducting multiple EAs for each authorization, as the individual activities are transient, and the discharges are limited by the CDGP.

Please refer to the permit Fact Sheet (MT DEQ, 2025) for additional information.

Table 1. Summary of Proposed Action

Proposed Action	
General Overview	The proposed action is to reissue the Construction Dewatering General Permit (CDGP) for another five-year permit term. This general permit would provide the permitting mechanism for construction dewatering, which is the action of pumping or actively removing water from a construction site and discharging the dewatering effluent to state surface water.
Duration & Hours of Operation	***Construction:*** Temporary construction activities may include the installation of infrastructure needed to dewater (wells or well points, trenches with a pump, a coffer dam, and hose or piping). There could be more labor-intensive projects such as installation of a settling pond, but installing the dewatering equipment would routinely take less than a day. ***Operation:*** Varies. The duration of discharge reported on NetDMRs for the 2020-issued CDGP ranged from zero to 17 months, with an average of one month. Dewatering may occur for a day, during all or part of a work week, or may operate 24/7 until the construction project is complete.
Estimated Disturbance	Land disturbance from dewatering is minimal, most likely less than 0.1 acre, and temporary. Dewatering activities are typically performed in conjunction with construction projects. MPDES permit coverage for construction projects is required under a separate General Permit for disturbances greater than one acre.
Construction Equipment	Typically, a diesel or gasoline pump is used for dewatering. Contractors may also use drilling equipment to install wells or well points to dewater groundwater from the area.
Personnel Onsite	***Construction:*** The excavation contractors who are doing site work are also typically responsible for installation of the dewatering equipment and controls. ***Operation:*** The permittee is required to develop a *Dewatering Control Plan* that identifies roles and responsibilities for operating the dewatering equipment, monitoring and sampling, and ensuring turbidity is adequately controlled. Typically, this would be the responsibility of contractors who are already on site for excavation. Compliance with the CDGP depends on having trained personnel on-site sufficient to carry out the above. There also needs to be responsible personnel either on-site or available by phone in case of control failure.
Location and Analysis Area	***Location****:* State-wide, except within the boundaries of an Indian Reservation. ***Analysis Area****:* Construction dewatering activities tend to be associated with construction projects. Construction dewatering activities and controls have a small footprint, with less than an 0.1-acre disturbance.
The applicant is required to comply with all applicable local, county, state, and federal requirements pertaining to the following resource areas.	
Air Quality	Dewatering activities typically rely on diesel or gasoline pumps, which emit air contaminants (including greenhouse gases) as well as noise pollution during the period of operation. No air quality permits are needed from the DEQ Air Quality Bureau for a temporary, mobile source (DEQ Air Quality, Henrikson, 2024).

Water Quality	The renewed CDGP provides the mechanism for owners/operators to permit dewatering activities and document compliance with effluent limits and other requirements.
Erosion Control and Sediment Transport	Permittees authorized under the CDGP are required to consider erosion control as part of their BMP planning. The permittee is required to install a flow dissipation device or rip rap if needed. Therefore, no significant impact is anticipated.
Solid Waste	Sediment control can result in solid waste, either as settled solids in a ponding area or material captured within a sediment bag. The proposed renewal of the CGDP would not regulate the generation or disposal of solid waste.
Cultural Resources	Dewatering activities are typically short-term and are localized activities that would not have an impact on cultural resources. As part of the NOI process, the applicant would be required to provide information from both the Montana Natural Heritage Program for Species of Concern and the Montana State Historic Preservation Office (SHPO) for a report on any historical, cultural, or archeological resources.
Hazardous Substances	Hazardous substances associated with this permit are expected to be limited to the potential use of fuel and other compounds for the operation of pumps and well installation (if applicable).
Reclamation	Once permanently abandoned, dewatering wells are required to be filled-in per Montana Department of Natural Resources and Conservation (DNRC) regulations [ARM 36.21.670].

Cumulative Impact Considerations	
Past Actions	Dischargers that were authorized under the 2020-CDGP would be required to submit a complete renewal package for coverage under the 2025-CDGP in order to continue operations after February 28, 2025.
Present Actions	Dewatering typically occurs as part of a construction project; if the area of disturbance is greater than one acre the permittee must also operate under the *General Permit for Storm Water Discharges Associated with Construction Activity*. Both general permits include BMPs as requirements to minimize the discharge of solids from the operations. However, there is the potential for both construction BMPs and dewatering BMPs to fail in a significant storm event. In addition, the majority of dewatering projects occur within the boundaries of a Municipal Separate Storm Sewer System (MS4). Typical problems associated with increased population density can impact the waterways within a MS4, which could be incrementally compounded by discharges from dewatering activities.
Related Future Actions	None.

1.4. PURPOSE, NEED, AND BENEFITS

DEQ's purpose in conducting this EA is to re-issue the existing MPDES permit for construction dewatering discharges for another five-year period. DEQ's action on the permit application is governed by § 75-5-101, *et seq*., Montana Code Annotated (MCA) and the Administrative Rules of Montana (ARM) Title 17, Chapter 30, Subchapters 2, 5, 6, 7, 12, and 13. General Permits are allowed under ARM 17.30.1341.

The purpose and need are to reissue an existing MPDES permit to allow for construction dewatering discharges in compliance with the regulations.

1.5. OTHER GOVERNMENTAL AGENCIES AND PROGRAMS WITH JURISDICTION

All applicable local, state, and federal rules must be adhered to. Other governmental agencies which may have overlapped or additional jurisdiction include but may not be limited to the US Environmental Protection Agency (EPA), Montana Department of Natural Resources & Conservation (DNRC), Montana Department of Transportation (MDT), and DEQ's Waste Management and Remediation Division.

2. EVALUATION OF AFFECTED ENVIRONMENT AND IMPACT BY RESOURCE

The impact analysis will identify and evaluate direct and secondary impacts TO THE PHYSICAL ENVIRONMENT AND HUMAN POPULATION IN THE AREA TO BE AFFECTED BY THE PROPOSED PROJECT. *Direct impacts* occur at the same time and place as the action that causes the impact. *Secondary impacts* are a further impact to the human environment that may be stimulated, induced by, or otherwise result from a direct impact of the action (ARM 17.4.603(18)). Where impacts would occur, the impacts will be described in this analysis.

Cumulative impacts are the collective impacts on the human environment within the borders of Montana of the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location and generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. The proposed action(s) identified in **Table 1** were analyzed as part of the cumulative impacts assessment for each resource.

The duration is quantified as follows:

- **Construction Impacts (short-term):** These are impacts to the environment during the construction period.
- **Operation Impacts (long-term)**: These are impacts to the environment during the operational period.

The intensity of the impacts is measured using the following:

- **No impact**: There would be no change from current conditions.
- **Negligible**: An adverse or beneficial effect would occur but would be at the lowest levels of detection.
- **Minor**: The effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.

- **Moderate**: The effect would be easily identifiable and would change the function or integrity of the resource.
- **Major**: The effect would alter the resource.

2.1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE

The general permit covers temporary construction dewatering discharges statewide and over a wide range of soil types and geologic features.

Direct Impacts

Discharge of construction dewatering effluent at a high flow rate may scour a path through the soil from the dewatering hose outlet. The CDGP would require the permittee to install controls on the discharge, including rip rap or other flow dissipation devices, if necessary.

For dewatering projects using wellpoints or other wells, the initial purge after the well installation contains solids. The permit does not allow the initial purge to discharge into receiving water untreated.

Impacts from both the construction and operation of dewatering equipment are anticipated to be minor and short-term.

Secondary Impacts

Once permanently abandoned, dewatering wells must be filled-in per Montana Department of Natural Resources and Conservation (DNRC) regulations [ARM 36.21.670]. If this is not completed there is the potential for groundwater contamination. There is low likelihood but a high risk for accidental introduction of pollutants into groundwater if well closure is not completed.

Cumulative Impacts

Dewatering often occurs in conjunction with construction projects that have significant earthwork. Both dewatering and construction activities have the potential to release sediment into surface waters. Cumulative impacts are expected to be minor because both the stormwater construction general permit and the CDGP include BMP requirements designed to prevent erosion or the introduction of soil into the receiving water.

2.2. WATER QUALITY, QUANTITY, AND DISTRIBUTION

Direct Impacts

Turbidity: The CDGP includes turbidity limits that serve to limit the amount of Total Suspended Solids (TSS) in dewatering discharge. By complying with the CDGP limits, monitoring, reporting, and special conditions, the permittee would have only a minor, temporary impact on the receiving water.

Oil & Grease: There could be fuel or other petroleum constituents that are spilled or leak from the dewatering pump or the drilling equipment which could be washed from the site. The CDGP requires daily visual monitoring and actions to be taken in the case of any visual oil release.

Potential Contaminants: If dewatering were proposed within or near an area of contamination, dewatering would be allowable if the permittee ensured the concentration of

the contaminants in the dewatering discharge would not exceed the higher of either (a) below the Required Reporting Value (RRV) or (b) 50% of the lowest water quality standard. Due to these limitations, the discharge may have a minor, temporary impact on the receiving waterbody but not cause or contribute to an exceedance of a standard.

Secondary Impacts

If there is a major dewatering activity that moves a large volume of groundwater, it is possible that dewatering could pull a contaminated plume towards the construction site. To prevent this, the CDGP requires the applicant to coordinate with the applicable remediation program within DEQ's Waste Management and Remediation Division.

Cumulative Impacts

The CDGP would limit the amount of pollutants in the discharge so that downstream uses are protected. Cumulative impacts with associated construction activities are expected to be minor, with negligible impact on the downstream water quality.

2.3. AIR QUALITY

The Clean Air Act requires EPA to set National Ambient Air Quality Standards for pollutants. Primary standards protect the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards protect against decreased visibility and damage to animals, crops, vegetation, and buildings. This project is required to abide by the federal standards.

Operation of diesel or gasoline pumps or drilling equipment is not regulated by DEQ's Air Quality Bureau since this equipment is temporary and mobile. However, the operator would be expected to maintain compliance with Montana's Air Quality Act (Title 75, chapter 2, MCA) regarding the need to take reasonable precautions to control airborne particulate matter emissions from any combustion equipment.

Direct Impacts

A water pump must be used for the Proposed Action (conveyance of groundwater or surface water from the site to be discharged off-site). Pumps may be electric or may burn gasoline or diesel and produce emissions. Combustion products emitted from gasoline or diesel pumps include particulate matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide and nitric oxide (NO_x), sulfur dioxide (SO_x), and carbon monoxide and carbon dioxide.

There may be short-term combustion odors associated with the dewatering pump. Noise pollution may also be associated with pump operations (see Section 2.9. Aesthetics).

Secondary Impacts

If dewatering were to be conducted by deep well or well points, the operation of a drill rig to install the wells would contribute minor combustion products since it is a short-term operation (less than a day) and much less intensive than earth moving and other operations that are part of the construction activity at the site.

Cumulative Impacts

Combustion products could contribute to local smog creation during atmospheric inversions.

2.4. VEGETATION COVER, QUANTITY, AND QUALITY

Construction dewatering could occur anywhere in the state outside of the boundaries of Indian Reservations. However, the dewatering footprint is very small and typically transient, and is therefore expected to have no more than minor impacts to vegetation cover, quality, and quality.

Direct Impacts

Dewatering removes groundwater or collected surface water from a construction site and may convey it to a nearby receiving waterbody. There would be negligible to minor impact on vegetation cover from this action. There would be limited vegetation to disturb within this small footprint since much of it is within an area that has been, or will be, part of a larger construction project.

Movement of the water from the site to a receiving waterbody may first be passed through a vegetated buffer to dissipate the flow and drop out solids; however, this is a temporary action and not expected to impact vegetated cover long-term.

Secondary Impacts

Dewatering equipment that remains in place for weeks or months would have increased chance of smothering the vegetation. Killing the vegetation, even though in a small footprint, may create an opportunity for noxious weed growth. Local county authorities regulate noxious weeds. There may be an impact on vegetation in a limited area where the contractor sets up wastewater control such as a sediment bag or hay bales to remove solids from the dewatering effluent. The controls would typically be present less than a month.

Cumulative Impacts

The installation and operation of construction dewatering equipment within the construction site would have negligible cumulative effects since most of the site may undergo earth moving activities that are regulated under a separate permit. The additional impact from construction dewatering equipment (dewatering hose and any wastewater control equipment) outside the construction project footprint would add a miniscule amount of impact to vegetation cover.

2.5. TERRESTRIAL, AVIAN, AND AQUATIC LIFE AND HABITATS

Construction dewatering covered under the CDGP could occur anywhere in the state outside of the boundaries of Indian Reservations. Discharges must meet water quality standards that will protect aquatic life in the receiving water. In addition, an applicant for a new project is required to consult with DNRC regarding sage grouse, and Montana's Natural Heritage Program to identify any species of special concern.

Sage Grouse: Construction dewatering could occur within Sage Grouse habitat; however, the dewatering footprint is very small and not expected to make any permanent impact on terrestrial or avian species. Furthermore, most construction activities operate within a municipality which are sage grouse exempt community boundaries.

Projects within designated sage grouse habitat are addressed through the Montana Sage Grouse Habitat Conservation Program (the Program), see: https://sagegrouse.mt.gov/. The Program has a role of consultation, recommendation, and facilitation, and has no authority to either approve or deny a project. Any recommendations and mitigations determined by the Program are provided to the project proponent in a consultation letter. Consultation with the Program must occur prior to submitting an NOI for authorization under the General Permit. The scope of the consultation letter may cover multiple state actions associated with the proposed project.

The dewatering Notice of Intent requires consultation with the Program for projects within designated sage grouse habitat and subject to Executive Order 12-2015 and 21-2105. The resulting consultation letter must be submitted as part of a complete NOI package and any recommendations and mitigation actions would be included in an authorization under the General Permit. Projects outside of designated sage grouse habitat are not subject to these additional NOI and authorization requirements.

National Heritage Program: The NOI will include a requirement for a new applicant to consult with the Montana Natural Heritage Program (MTNHP) and submit the letter to DEQ, before DEQ develops the authorization, to ensure there will not be any significant impact on wildlife. MTNHP maintains a database at http://mtnhp.org/speciesofconcern/ with information on species of concern (SOC) in the state.

Direct Impacts

Effluent limits and permit conditions such as turbidity limits and prohibition on elevated contaminants above a safe threshold would protect aquatic life & habitats from direct impacts. Furthermore, the only terrestrial or avian species impact that DEQ could identify was temporary noise impacts.

New applicants seeking coverage under the CDGP must contact the MTNHP and include the program's analysis on any impacts to unique ecological resources or species of special concern as part of the NOI package. If, during the construction or operation of a dewatering system, a permittee discovers the presence of a federally listed threatened or endangered species, the permittee is urged to contact the MNHP or the Montana Department of Fish, Wildlife and Parks.

If the project is within Sage Grouse habitat, the applicant is required to contact the DNRC Sage Grouse program to obtain a consult letter.

Secondary Impacts

Under ARM 17.30.1341(4)(e), DEQ may deny requests to discharge into an area of unique ecological or recreational significance, if the discharge may pose a threat to the habitat or threatened or endangered species. However, the CDGP protects all state waters by requiring dischargers to meet water quality standards, as well as to implement a Dewatering Plan that includes BMPs. These measures are designed to protect natural communities. Furthermore, construction dewatering operations are temporary, typically less than a month, and in a very limited area. Therefore, only a negligible, if any, impact is anticipated for any species.

Cumulative Impacts

Construction dewatering is typically associated with a construction project. If the project disturbs more than one acre, the owner/operator is required to obtain a stormwater construction permit. Construction dewatering operations are temporary, while the construction involved with site development is usually permanent.

2.6. HISTORY, CULTURE, AND ARCHAEOLOGICAL UNIQUENESS

This General Permit would regulate construction dewatering anywhere in the state outside of the boundaries of Indian Reservations. However, the dewatering footprint is very small and not expected to make any permanent impact. It is not anticipated that this project would cause a shift in any unique quality of the area.

Furthermore, new applicants seeking coverage under the CDGP must contact the Montana State Historic Preservation Office (SHPO) and include available analysis on any historical, cultural, or archeological resources as part of the NOI package. Therefore, no significant impacts are anticipated. However, should structures need to be altered or if cultural materials be inadvertently discovered during this project SHPO should be contacted.

Direct Impacts

Construction dewatering occurs primarily on project sites that are actively undergoing disturbance and construction; dewatering is not a significant part of the disturbance for most sites. Construction dewatering projects have an extremely low likelihood of impacting cultural properties as by nature they are temporary operations that primarily involve moving water away from an area of work.

Approval of the proposed action is not anticipated widely impact the cultural uniqueness of the proposed project disturbance area.

Secondary Impacts

Discharge of construction dewatering effluent has the potential to cause erosion. However, the permittee is required to install riprap or other flow dissipating devices to mitigate the dewatering discharge velocity and potential erosion.

Cumulative Impacts

Construction dewatering is typically associated with site construction activities. If the construction project will disturb more than one acre, the owner/operator is required to obtain a stormwater construction permit. Construction dewatering operations are temporary, while the construction involved with site development is usually permanent.

2.7. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR, OR ENERGY

Construction dewatering could occur anywhere in the state outside of the boundaries of Indian Reservations. However, the dewatering footprint is very small and not expected to make any permanent demands on environmental resources.

Direct Impacts

Construction dewatering authorizations permit the intentional movement of unwanted groundwater or surface water away from a construction site with discharge to an ambient waterbody. There would be minimal direct environmental demands other than fuel for the pump.

Secondary Impacts

Dewatering may be powered by a diesel or gasoline-fired pump. Construction dewatering projects are temporary, and any power requirements would be minimal. There is negligible demand on environmental resources of land, water, air, or energy.

Cumulative Impacts

Construction dewatering is nearly always associated with construction activity at a site. There would be minimal cumulative impacts between the dewatering pump and the construction equipment such as drilling rigs. There would also be minimal cumulative impacts for

suspended solids/turbidity reaching the receiving water as the dewatering activity will have a turbidity limit and both activities have permit requirements including Best Management Practices.

2.8. HUMAN HEALTH AND SAFETY

The applicant would be required to adhere to all applicable state and federal safety laws. The Occupational Safety and Health Administration (OSHA) has developed rules and guidelines to reduce the risks associated with this type of labor.

Direct Impacts

There would be negligible human health and safety risk from construction dewatering. Few, if any, members of the public would be in immediate proximity to the project during construction or operations. Only workers identified in the Dewatering Control Plan and properly trained should have any contact with the dewatering equipment. There may be a slight tripping hazard with the dewatering pipes, but no more than any other piece of equipment at a construction site.

Secondary Impacts

OSHA requires employers to implement a hearing conservation program when noise exposure is at or above 85 decibels averaged over 8 working hours, or an 8-hour time-weighted average (TWA). Construction workers that remain in the direct vicinity of a larger, noisy dewatering pump may need to wear hearing protection.

Cumulative Impacts

There is heavy equipment, much of it mobile, in constant motion at a construction site. By contrast, other than the installation of the dewatering system the only equipment will be a dewatering pump and hose and any wastewater controls – all of which are relatively stationary and provide negligible worker health and safety risk.

2.9. AESTHETICS

DEQ has identified noise from the pumps as a possible aesthetic impact from construction dewatering.

Direct Impacts

The noise impact from dewatering pumps can vary depending on fuel-type, size and age of the equipment, and the surrounding location. Proximity to the pump is a critical factor for noise; sound drops by 6 decibels (dB) for each doubling of distance (Decibelpro).

Gas-fired pumps could be over 100 dB at the source, while electric pumps would have a consistent hum at 80 – 85 dB or lower (Pumptec). A new Cummins diesel pump with a sound-attenuated enclosure would have a noise below 67 dB at 30 feet (Cummins). To place these numbers into context, a normal conversation carries between around 55 to 65 dBA (Echo Barrier).

The maximum exposure to noise is 85 dB for eight hours to protect hearing (DecibelPro). The City of Billings has noise ordinances for residential, commercial, and industrial areas that vary between 55 to 80 dBA in daytime and 45 to 70 dBA at night as measured at the complainant's property line (Billings, MT Code of Ordinances, Chapter 17). Other Montana cities have various noise ordinances.

Secondary Impacts

The role of noise as an environmental pollutant and its impact on health are being increasingly recognized. Beyond its effects on the auditory system, noise causes annoyance and disturbs sleep, and it impairs cognitive performance. Furthermore, evidence from epidemiologic studies demonstrates that environmental noise is associated with an increased incidence of arterial hypertension, myocardial infarction, and stroke. Both observational and experimental studies indicate that in particular night-time noise can cause disruptions of sleep structure, vegetative arousals (e.g. increases of blood pressure and heart rate) and increases in stress hormone levels and oxidative stress, which in turn may result in endothelial dysfunction and arterial hypertension (Cardiovascular effects of environmental noise exposure, Munzel, Gori, Babisch and Basner, European Health Journal, April 2014).

Cumulative Impacts

Since dewatering would occur at a construction site, the level of noise from the dewatering pump noticed during the day would be minimal due to noise from the other equipment. If the dewatering occurred 24/7, the pump noise without the background construction noise would be more discernible.

2.10. SOCIOECONOMICS

The project would typically occur on private land that is undergoing development. The duration of construction dewatering activities averages less than one month.

Direct Impacts

There is no discernible economic impact as a result of construction dewatering. No jobs would be created, or tax revenue generated, and no additional traffic or additional population would result from this action.

Secondary Impacts

Dewatering is often a crucial part of construction activities. Insofar as dewatering may enable contractors to develop the site, it could have a positive secondary economic impact. Depending upon the construction activity, dewatering could allow for upgraded infrastructure or construction of new homes.

Cumulative Impacts

Because dewatering projects are short-term and only require a few hours of personnel time, DEQ did not identify any cumulative socioeconomic impact.

2.11. PRIVATE PROPERTY IMPACTS

DEQ is proposing to re-issue the Construction Dewatering General Permit, which is an MPDES permit. MPDES permits regulate point sources that discharge pollutants to state surface waters. DEQ must therefore evaluate if its permitting renewal action has any regulatory impacts upon the private property of owners or operators (i.e., applicants) of such point sources. The Proposed Action would regulate the activities of applicants but does not regulate the use of real property, including any water rights. DEQ's approval of the Proposed Action would therefore have no effect on the applicant's real property. Even assuming, for the sake of argument, that the temporary erosion control measures required under the CDGP may have some limited effect upon an applicant's property, DEQ has also determined that the imposed permit conditions are within its permitting authority and are reasonably

necessary to ensure compliance with applicable requirements under the Montana Water Quality Act. Therefore, DEQ's approval of the dewatering discharge would not have private property-taking or damaging implications.

2.12. GREENHOUSE GAS ASSESSMENT

If dewatering is conducted by deep well or well points, there will be a minimal amount of construction activity to drill or jet out the wells, which would entail combustion emissions. Transportation of a dewatering pump would also entail transportation emissions. Dewatering operations are typically conducted by diesel or gasoline-powered pumps. The amount of combustion emissions depends on the type of fuel, the size of the pump, the hours of operation, and the efficiency of the pump. The combustion of fuel would release GHGs primarily being carbon dioxide (CO_2), nitrous oxide (N_2O) and much smaller concentrations of uncombusted fuel components including methane (CH_4) and other volatile organic compounds (VOCs).

Direct Impacts

DEQ has determined EPA's Scope 1 GHG impacts as defined in the Inventory Guidance for Greenhouse Gas Emissions are appropriate under MEPA for this Proposed Action. Scope 1 emissions are defined as direct GHG emissions that occur from sources that are controlled or owned by the organization (EPA Center for Corporate Climate Leadership). DEQ's review of Scope 1 emissions is consistent with the agency not evaluating downstream effects of other types of impacts.

DEQ used EPA's Simplified GHG Emissions Calculator (Mobile Sources tab) using a maximum diesel fuel combustion of 2 gallons/hour (gph) (based on fuel consumption for a Cummins Model C1350D4, maximum water pumping capacity of 1,350 gallons per minute (gpm) and DAE Model Appalachian 40, maximum water pumping capacity of 1,230 gpm). Assuming a reasonable worst-case scenario for any given permittee of 2 gph diesel consumption for 20 days at 8 hours each (160 pumping hours) provides 320 gallons of fuel consumed in a given dewatering project. The carbon dioxide (CO_2) emissions for that worst-case project are calculated to be 3,267 kilograms (3.3 metric tons). A typical passenger vehicle emits about 4.6 metric tons of CO_2 per year (EPA, 2024). On average, 8 million metric tons of CO_2 are produced annually in Montana from on-road mobile transportation sources (MDT, 2023).

This review does not include an assessment of GHG impacts in quantitative economic terms, otherwise known as evaluating the social cost of carbon. DEQ instead calculates potential GHG emissions and provides a narrative description of GHG impacts. This approach is consistent with Montana Supreme Court caselaw and the agency's discussion of other impacts in this EA. *See Belk v. Mont. DEQ*, 2022 MT 38, ¶ 29.

Secondary Impacts

GHG emissions contribute to changes in atmospheric radiative forcing, resulting in climate change impacts. GHGs act to contain solar energy loss by trapping longer wave radiation emitted from the Earth's surface and act as a positive radiative forcing component (BLM 2020).

Per EPA's website "Climate Change Indicators", the lifetime of carbon dioxide cannot be represented with a single value because the gas is not destroyed over time. The gas instead moves between air, ocean, and land mediums with atmospheric carbon dioxide remaining in the atmosphere for thousands of years, due in part to the very slow process by which carbon is transferred to ocean sediments. Methane remains in the atmosphere for approximately 12 years. Nitrous oxide has the potential to remain in the atmosphere for about 109 years (EPA, Climate Change Indictors). The

impacts of climate change throughout Montana include changes in flooding and drought, rising temperatures, and the spread of invasive species (BLM 2020).

Cumulative Impacts

GHG emissions that would be emitted as a result of the proposed activities (renewing the General Permit) would add to GHG emissions. The No Action Alternative would contribute the same amount as the Proposed Action Alternative of GHG emissions.

3. DESCRIPTION OF ALTERNATIVES

No Action Alternative: In addition to the proposed action, DEQ must also considered a "no action" alternative. The "no action" alternative would prevent this renewal of the 2020-CDGP and could result in multiple outcomes: the 2020-issued CDGP may remain in effect and permittees administratively continued for a period of time and/or the CDGP would expire, resulting in a lack of legal mechanism for this type of discharge into state waters which would result in illicit, potentially uncontrolled discharges. To remain compliant with no permitting option, the legal options for discharging would be limited to land-application, loading tanker trucks, or (if allowed) discharging into the municipal sanitary sewer system.

Other Reasonable Alternative(s): DEQ could consider renewing the 2020-issued permit without change. However, the proposed 2025-permit has clarified and stream-lined the 2020-permit in order to have equivalent or greater environmental protection.

4. CONSULTATION

DEQ engaged in internal and external efforts to identify substantive issues and/or concerns related to the proposed project, including discussion with DEQ's Air Quality Permitting staff. Internal scoping consisted of internal review of the environmental assessment document by DEQ permit writing, and MEPA staff. External scoping efforts included queries to websites/databases/personnel listed in the References section.

5. SIGNIFICANCE OF POTENTIAL IMPACTS AND NEED FOR FURTHER ANALYSIS

When determining whether the preparation of an environmental impact statement is needed, DEQ is required to consider the seven significance criteria set forth in ARM 17.4.608, which are as follows:

1. The severity, duration, geographic extent, and frequency of the occurrence of the impact;
2. The probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur;
3. Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts – identify the parameters of the proposed action;
4. The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values;
5. The importance to the state and to society of each environmental resource or value that would

be affected;

6. Any precedent that would be set as a result of an impact of the proposed action that would commit the department to future actions with significant impacts or a decision in principle about such future actions; and
7. Potential conflict with local, state, or federal laws, requirements, or formal plans.

An EIS is not required under the Montana Environmental Policy Act (MEPA) because this project lacks significant adverse effects to the human and physical environment based on above listed criteria.

6. PUBLIC INVOLVEMENT

A 30-day public comment period will be held. In addition, DEQ will hold a public hearing for the renewal of this general permit on **February 13, 2025**, in Room 111 of the Metcalf Building, in Helena, Montana.

7. CONCLUSIONS AND FINDINGS

The preferred proposed action is to issue the MPDES permit. This action is preferred because the permit program provides the regulatory mechanism for protecting water quality by enforcing the terms of the MPDES permit.

8. REFERENCES

- Billings, MT Code of Ordinances, Chapter 17, https://library.municode.com/mt/billings/codes/code_of_ordinances?nodeId=CICO_CH17NO
- BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends, 2020 https://www.blm.gov/
- Cummins. Specification sheet Portable pump, 2024. https://mart.cummins.com/imagelibrary/data/assetfiles/0075690.pdf?_gl=1*n9veny*_gcl_au*MzY0ODYzNjMyLjE3Mjg1MDM3OTA.*_ga*ODA5OTcwMjcxLjE3Mjg1MDM3Nzc.*_ga_34358ZFEWS*MTczMDIyNzE4My4yLjEuMTczMDIyNzI5Mi4yNS4wLjA.
- DAE Pumps Self-Priming Surface Pump, 2024. https://www.daepumps.com/specs/dae_pumps_appalachian_40_kohler_datasheet.pdf
- Decibelpro, How Many Decibels Is Too Loud For Ear, Accessed on 10/9/2024.
- EPA Center for Corporate Climate Leadership, https://www.epa.gov/climateleadership/scopes-1-2-and-3-emissions-inventorying-and-guidance. Accessed on 10/29/2024.
- MDT, 2023. Montana Carbon Reduction Strategy.
- MT DEQ. 2024. Fact Sheet for Montana Pollutant Discharge Elimination System Permit MTG070000, General Permit for Construction Dewatering.
- MT DEQ. 2024. Draft Montana Pollutant Discharge Elimination System Permit MTG070000, General Permit for Construction Dewatering.
- MT DEQ. 2024. Air Quality, Henrikson. Email on September 4, 2024.

- Munzel, Gori, Babisch and Basner, Cardiovascular effects of environmental noise exposure, , European Health Journal, April 2014, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3971384/. Accessed on 10/9/2024.
- OSHA https://www.osha.gov/noise/standards. Accessed on 10/9/2024.
- Pumptec at https://www.pumptec.com/blog/pump-noise-levels-and-causes#:~:text=An%20electric%20or%20battery%2Dpowered,combustion%20engines%2C%20requiring%20hearing%20protection. Accessed on 10/9/2024.

Environmental Assessment and Significance Determination Prepared By:

Christine A. Weaver
Environmental Science Specialist

Environmental Assessment Reviewed By:

Alanna Shaw, MPDES Section Supervisor

Approved By:

4/1/2025

Tatiana Davila, Chief
Water Protection Bureau
Department of Environmental Quality

DATE