DEPARTMENT OF ENVIRONMENTAL QUALITY
Environmental Assessment

Water Protection Bureau

Name of Project: Shepherd School

Type of Project: Proposed discharge of treated domestic wastewater to ground water under the Montana Ground Water Pollution Control System (MGWPCS) permit program.

Location of Project: N half of NE quarter of Section 10, T2N, R27E,
Latitude: 45.94139° Longitude: -108.34360°

City/Town: Shepherd

County: Yellowstone County

Description of Project: This Environmental Assessment (EA) is for a new MGWPCS permit (MTX000265) for the Shepherd School wastewater system. The proposed MGWPCS permit authorizes the Shepherd School to discharge treated wastewater from a subsurface discharge structure (Outfall 001) into Class I ground water. The scope of this EA addresses the installation and operation of the proposed wastewater treatment and disposal system. The Fact Sheet provides a more detailed description of the project including site maps.

Agency Action and Applicable Regulations: The proposed action is to issue the individual MGWPCS permit that contains effluent limitations, wastewater monitoring and reporting, and ground water monitoring and reporting requirements. The permit is issued under the authority of the Montana Water Quality Act.

Summary of Issues: The purpose of this action is to regulate the discharges of pollutants to state waters from the regulated facility. Issuance of an individual permit will require the permittee to implement, monitor, and manage practices to prevent pollution and degradation of ground water.

Affected Environment & Impacts of the Proposed Project:

Y = Impacts may occur (explain under Potential Impacts).
N = Not Present or No Impact will likely occur.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	**[N]** No significant impacts have been identified. All discharge structures authorized by this permit are required to undergo DEQ design review under the Sanitation in Subdivisions Act and/or the Public Water Supply Act.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	**[N]** The facility covered under this permit must show evidence of treatment capable of meeting the established effluent limitation which was derived from the most restrictive ground water quality standards and significance criteria. This effluent limitation, along with special conditions and standard conditions of the permit has been developed to maintain the beneficial uses of all state ground waters including drinking water. Facilities must be able to meet this restrictive effluent limitation prior to discharge. Ground water monitoring at the hydraulically downgradient boundary of the mixing zone is maintained within the permit renewal. Please refer to the Fact Sheet document for further details. All discharge structures must meet minimum setback requirements including surface water, flood plains, ditches and springs. The applicant is encouraged to contact and consult with the Public Water, Subdivision and State Revolving Fund programs at DEQ: http://deq.mt.gov/Water/SurfaceWater/DesignApprovals Construction activities may impact water quality by contributing discharges of sediment to surface waters. The permittee may be required to obtain permit coverage under a Montana Pollutant Discharge Elimination System (MPDES) General Permit for Storm Water Discharges Associated with Construction Activity.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
	The permittee may be required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which includes best management practices to protect nearby surface waters. Additional information can be found at the following website: http://deq.mt.gov/water/StormWater/stormsystems
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	**[N]** Best management practices are encouraged during construction or maintenance of the treatment system and drainfield to mitigate particulates produced. For additional information, the permittee is encouraged to contact the Montana DEQ Air Resources Management Bureau: http://deq.mt.gov/Air
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	**[N]** The system will be built on previously disturbed lands. According to the Natural Heritage Database there are no plant species of concern in the area (S2 or lower state ranking). http://mtnhp.org/
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	**[N]** According to the Natural Heritage Database animal species of concern in the area include: Sauger (*Sander canadensis*), Western Milksnake (*Lampropeltis gentilis*), Northern Leopard Frog (*Lithobates pipiens*), Greater Sage-Grouse (*Centrocercus urophasianus)* and Whooping Crane (*Grus americana*) (S2 or lower state ranking). http://mtnhp.org/
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	**[N]** See #4 and #5 above. All discharge disposal structures must meet the minimum setback requirements including surface water, flood plains, ditches and springs. The applicant is encouraged to contact and consult with the Public Water, Subdivision and State Revolving Fund programs at DEQ: http://deq.mt.gov/Water/SurfaceWater/DesignApprovals

IMPACTS ON THE PHYSICAL ENVIRONMENT	
	Site and habitat inventories for the applicable species were recommended in consultation with the Montana Natural Heritage Program. The applicant is encouraged to contact and consult with this program or other Natural Resource Information Programs available at the Montana State Library: http://nris.msl.mt.gov/
7. SAGE GROUSE EXECUTIVE ORDER: Is the project proposed in core, general or connectivity sage grouse habitat, as designated by the Sage Grouse Habitat Conservation Program (Program) at: https://sagegrouse.mt.gov/	**[N]** The system will be built on previously disturbed lands. The Montana Sage Grouse Habitat Conservation Program's website shows that the facility area falls just within the general habitat area for the Greater Sage Grouse (Centrocercus urophasianus). The other side of Shepherd Road (east) is outside the general habitat area. The facility is outside of the BLM Priority Habitat Management Area. https://sagegrouse.mt.gov/.
8. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	**[N]** A general recommendation by the Montana State Historic Preservation Office (MSHPO) states that in the event that cultural materials are inadvertently discovered, the permittee should contact the MSHPO office for investigation.
9. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	**[N]** The drainfield, tanks, and treatment components will be constructed sub surface. This wastewater treatment system will be built on pre-disturbed lands.
10. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR, OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded power line or other energy source be needed?	**[N]** No significant impacts have been identified.
11. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	**[N]** No significant impacts have been identified.

IMPACTS ON THE HUMAN ENVIRONMENT	
12. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	**[N]** Properly installed and operated permitted wastewater systems promote protection of health and safety.
13. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	**[N]** No significant impacts have been identified.
14. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	**[N]** The construction of this new wastewater treatment system and discharge structures will result in the creation of several temporary jobs until construction is completed. The operation and maintenance of the wastewater treatment system will also result in permanent work.
15. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	**[N]** The project has created tax revenue.
16. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	**[N]** Traffic may increase during the construction of any new wastewater treatment system and discharge structures. Once construction is complete, there may be minimal traffic for the operation and maintenance of the wastewater treatment system.
17. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	**[N]** Wastewater treatment systems may be owned and operated by local communities or sewer districts. These systems are a vital tool in protection of public and environmental health.
18. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	**[N]** No significant impacts have been identified.

IMPACTS ON THE HUMAN ENVIRONMENT	
19. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	**[N]**
20. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	**[N]**
21. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	**[N]**
22. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	**[N]**
23(a). PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	**[N]** No significant impacts have been identified.
23(b). PRIVATE PROPERTY IMPACTS: Is the agency proposing to deny the application or condition the approval in a way that restricts the use of the regulated person's private property? If not, no further analysis is required.	**[N]** No significant impacts have been identified.
23(c). PRIVATE PROPERTY IMPACTS: If the answer to 23(b) is affirmative, does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives. The agency must disclose the potential costs of identified restrictions.	**[N]** No significant impacts were identified in 23(b).

24. **Description of and Impacts of other Alternatives Considered:**

A. No Action: Under the "No Action" alternative, the Department would not issue this ground water discharge permit. "No Action" may lead to the creation of non-permitted wastewater systems. This may result in a net negative impact to ground water quality as the permit would prevent pollution and degradation of state waters.

B. Approval with Modification: The Department has not identified any necessary modifications to grant approval.

25. **Direct, Secondary, and Cumulative Effects:**

DEQ considered the direct, secondary, and cumulative environmental impacts of the construction and operation of the facility and found no significant adverse effects on water quality, the human environment, and the physical environment. The DEQ analysis included the cumulative impact from other past and present actions.

All major discharge permitting actions, including the current action and any future actions, will include any substantive information derived from public input relating to potential impacts on the human environment and on water quality. All future actions related to this current action will be addressed by DEQ through additional discharge permitting process procedures. Any actions that are outside the prevue of the discharge permit may not be addressed by DEQ until the next permitting action takes place.

To protect beneficial uses, there shall be no increase of a pollutant to a level that renders the waters harmful, detrimental, or injurious. Therefore, no wastewaters may be discharged such that the wastewater either alone or in combination with other wastes will violate or can reasonably be expected to violate any standard.

The allowable discharge is derived from a mass-balance equation that determines the assimilative capacity of the receiving aquifer. Ambient groundwater nitrogen levels were used to determine water quality limitations. A groundwater monitoring network has been established that will provide for long-term monitoring of the aquifer. The groundwater data collected will provide for DEQ to continually monitor the health of the aquifer including the impacts of any upgradient dischargers. This data is made available to the public for their viewing and will be continually used by DEQ to update permit limitations. In addition, any update to limitations, including cumulative effect analyses, will be noticed to the public and will undergo public comment.

Long-term monitoring and reporting, continual analysis and updates of permit conditions, and public notice and comment procedures is a benefit to having a system that is covered under a discharge permit.

26. **Summary of Magnitude and Significance of Potential Impacts:**
Impacts were assessed with the assumption that the facility will comply with the terms and conditions of the permit. Violations of the permit could lead to significant adverse impacts to state waters. Violations of the permit are not an effect of the agency action since the permit itself forbids such activities. However, the Department has taken steps to ensure that violations do not occur. The Department provides technical assistance to permittees for operation and maintenance, and also in understanding and implementing the requirements of the permit. The Department also conducts periodic inspections of permitted facilities and identifies potential problems with design or management practices. If violations of the permit do occur, the Department will take appropriate action under the Montanan Water Quality Act. Enforcement sanctions for violations of the permit include injunctions, civil and administrative penalties, and cleanup orders.

27. **Preferred Action Alternative and Rationale**: The preferred action is to issue the individual MGWPCS discharge permit. This action is preferred since the permit provides a regulatory mechanism for protecting ground water quality by applying effluent limits and monitoring requirements to the discharged wastewater.

Recommendation for Further Environmental Analysis:

[ ] EIS [ ] More Detailed EA [**X**] No Further Analysis

Rationale for Recommendation: An EIS is not required under the Montana Environmental Policy Act because the project lacks significant adverse effects to the human and physical environment.

28. **Public Involvement:**

Legal notice information for water quality discharge permits are listed at the following website: http://deq.mt.gov/Public/notices/wqnotices. Public comments on this proposal are invited any time prior to close of business on May 5, 2021. Comments may be directed to:

DEQWPBPublicComments@mt.gov

or to:

Montana Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620

All comments received or postmarked prior to the close of the public comment period will be considered in the formulation of the final permit. DEQ will respond to all substantive comments pertinent to this permitting action and may issue a final decision within thirty days of the close of the public comment period.

All persons, including the applicant, who believe any condition of the draft permit is inappropriate, or that DEQ's tentative decision to deny an application, terminate a permit, or prepare a draft permit is inappropriate, shall raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period (including any public hearing). All public comments received for this draft permit will be included in the administrative record and will be available for public viewing during normal business hours.

Copies of the public notice are mailed to the applicant, state and federal agencies, and interested persons who have expressed interest in being notified of permit actions. A copy of the distribution list is available in the administrative record for this draft permit. Electronic copies of the public notice, draft permit, fact sheet, and draft environmental assessment are available at the following website: http://deq.mt.gov/Public/notices/wqnotices.

Any person interested in being placed on the mailing list for information regarding this permit may contact the DEQ Water Protection Bureau at (406) 444-5546 or email DEQWPBPublicComments@mt.gov. All inquiries will need to reference the permit number (MTX000265), and include the following information: name, address, and phone number.

During the public comment period provided by the notice, DEQ will accept requests for a public hearing. A request for a public hearing must be in writing and must state the nature of the issue proposed to be raised in the hearing.

29. **References used in the Preparation of this Analysis:**

Montana State Historic Preservation Society
Montana Natural Heritage Program
Montana Bureau of Mines and Geology:

- Ground Water Information Center
- Ground Water Investigation Program
- Ground Water Assessment Program

Natural Resource Information System, Montana State Library
United States Department of Agriculture, Natural Resources Conservation Service Soil Survey
United States Geological Survey, Publication Warehouse

EA Checklist Prepared By:

Darryl Barton March 2021

Approved By:

Jon Kenning, Chief
Water Protection Bureau

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Signature Date