

DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)
Environmental Assessment

PERMITTING AND COMPLIANCE DIVISION
Water Protection Bureau

Name of Project: Domestic Sewage Treatment Lagoons General Permit (Lagoon GP), MTG580000.

Type of Project: Renew the Montana Pollutant Discharge Elimination System (MPDES) Lagoon GP, which has been administratively extended since 2004. The renewed Lagoon GP will continue to provide general permit coverage for minor existing facultative and aerated (including partial mix) domestic sewage treatment lagoons, as well as for new dischargers to ephemeral waterbodies. To be eligible for coverage, facilities must have an average daily design flow below one million gallons per day and no industrial contribution.

Location of Project: Statewide (other than Indian Reservations)

City/Town: Statewide

County: Statewide

Description of Project: DEQ proposes to reissue the Lagoon GP (MTG580000). The renewed permit will include technology-based effluent limits (TBELs) and water quality-based effluent limits (WQBELs); monitoring; recordkeeping; and reporting requirements. There are currently 25 facilities authorized under the existing Lagoon GP, and there are up to 54 additional facilities permitted under individual permits that may be eligible for coverage under the Lagoon GP.

Agency Action and Applicable Regulations: The proposed action is to reissue the Lagoon GP.

Montana Water Quality Act 75-5-101 , *et seq.*

ARM Title 17, Chapter 30:

Subchapter 5 - Mixing Zones in Surface and Ground Water.

Subchapter 6 - Surface Water Quality Standards.

Subchapter 7 - Nondegradation of Water Quality.

Subchapter 13 - MPDES Standards.

Summary of Issues: Lagoon owner/operators must apply for authorization and receive written confirmation from DEQ to be covered by the Lagoon GP. The main permit requirements are:

- *Technology-based effluent limits (TBELs)* – all facilities will be subject to national secondary standards for 5-day biochemical oxygen demand (BOD₅), or carbonaceous BOD₅ (CBOD₅) if requested. This is equivalent to the previous GP.

In addition, depending upon the facility's treatment capability, facilities will be subject to one of the following three standards for total suspended solids (TSS): national secondary standards, treatment equivalent to secondary, or alternate state requirements. The proposed TSS limits in this renewed Lagoon GP is more stringent than the previous GP, which automatically provided the most lenient 'alternate state requirements' for the TSS limits.

The Lagoon GP renewal will also provide an implementation schedule with the requirement to begin influent monitoring to demonstrate conformance with the BOD₅ and TSS % removal requirements by January 1, 2017. This is designed to allow these smaller communities time to review and select options, secure funding, design, and implement any necessary changes.

- *Water quality-based effluent limits (WQBELs)* – all facilities will be subject to *E.coli* bacteria standards. All facilities will also be subject to total residual chlorine standards if they use chlorine to disinfect. Facilities will have additional monitoring requirements (ammonia, nitrate/nitrite, total nitrogen and total phosphorus) in order to determine reasonable potential (RP) and develop necessary effluent limits during the next permit renewal cycle.

Many of the existing permittees covered under the previous General Permit consist of smaller communities with a limited ability to respond quickly to new discharge requirements. As such, DEQ has included a delayed deadline for implementation of the *E.coli* bacteria effluent limits until January 1, 2017. This is designed to allow these communities time to review and select options, secure funding, design, and implement any necessary changes.

Other new requirements include establishing an operation and maintenance program; developing procedures for land application of treated effluent (if applicable); and conducting an Inflow/Infiltration (I/I) study (if average design flow rate is > 0.1 mgd).

Since new dischargers to high quality waters are subject to nondegradation requirements, this permit will not cover new facilities unless they discharge to ephemeral waterbodies, which are not high quality waters.

Benefits and Purpose of Action: Wastewater discharged in conformance with this renewed General Permit will protect water quality and beneficial uses of state waters.

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] Only existing sources, and new facilities discharging to ephemeral drainage, are eligible for coverage under this GP. These sources are not expected to have any impact on geology and soil quality.
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] Only existing sources, and new facilities discharging to ephemeral drainage, are eligible for coverage under this GP. This GP will not allow new or increased sources to high quality water. Only minor sources with no industrial contributions are subject. Discharges authorized under this general permit must be treated sufficiently to meet technology-based effluent limits. In addition, the facilities authorized under this GP will be required to monitor during this permit cycle to provide data for DEQ to develop water quality-based effluent limits which are designed to be protective of the receiving water.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N]

<p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?</p>	<p>[N] Only existing sources, and new facilities discharging to ephemeral drainage, are eligible for coverage under this GP. For new facilities discharging to ephemeral drainage, DEQ will require the owner/operator to contact the Natural Resource Information System (NRIS) and evaluate their impacts to vegetation (see # 24).</p>
<p>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?</p>	<p>[N] Only existing sources, and new facilities discharging to ephemeral drainage, are eligible for coverage under this GP. For new facilities discharging to ephemeral drainage, DEQ will require the owner/operator to contact the Natural Resource Information System (NRIS) and evaluate their impacts to terrestrial, avian and aquatic life and habitats (see # 24).</p>
<p>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?</p>	<p>[N] Only existing sources, and new facilities discharging to ephemeral drainage, are eligible for coverage under this GP. For new facilities discharging to ephemeral drainage, DEQ will require the owner/operator to contact the Natural Resource Information System (NRIS) and evaluate their impacts to unique, endangered, fragile, or limited resources (see # 24).</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[N] Only existing sources, and new facilities discharging to ephemeral drainage, are eligible for coverage under this GP. For new facilities discharging to ephemeral drainage, DEQ will require the owner/operator to contact State Historic Preservation Office (SHPO), to evaluate impacts to historical resources (see # 24).</p>
<p>8. 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?</p>	<p>[N]</p>
<p>9. 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 powerline or other energy source be needed)</p>	<p>[N] There could be the potential need to add or upgrade power lines to provide electricity for future Ultraviolet (UV) disinfection systems that might be installed to meet new pathogen effluent limits. This is not expected to be a significant demand.</p>
<p>10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?</p>	<p>[N]</p>

IMPACTS ON THE HUMAN ENVIRONMENT

11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] The addition of <i>E.coli</i> bacteria effluent limits is designed to protect human health.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N]
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N]
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N]
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N]
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N]
17. 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]
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N]
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N]
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N]
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N]
22(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.	[NA]
22(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.	[NA]
22(c). PRIVATE PROPERTY IMPACTS: If the answer to 21(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.	[NA]

23. **Description of and Impacts of other Alternatives Considered:** Lagoon GP applicants are encouraged to evaluate whether they can land-apply the treated effluent. Land application is covered as a special condition in the Lagoon GP.

24. **Summary of Magnitude and Significance of Potential Impact:** For existing (previously permitted) facilities that have submitted a completed renewal package as required by ARM 17.30.1322 and 1341(10), no additional environmental review will be performed by DEQ.

For new discharges eligible for coverage under the Lagoon GP, DEQ will evaluate the following two Programmatic Review questions in order to assess impacts to the above considerations, as a part of the Checklist EA:

1. Does the operation have an effect on Unique, Endangered, Fragile, or Limited Environmental Resources? In answering this question, DEQ will utilize the Montana Natural Heritage Program and the Natural Resource Information System (NRIS) data supplied by the applicant, as appropriate; and
2. Does the operation have an effect on Historical, Cultural, and Archeological Resources? In answering this question, DEQ will utilize the Montana State Historic Preservation Office (SHPO) data supplied by the applicant, as appropriate.

Based upon the findings, DEQ will determine whether the facility qualifies for issuance under this Programmatic Review. If both questions are answered in the negative, the lagoon discharge is categorically excluded under ARM 17.4.607(4)(a) and no additional environmental assessment is required. If the answer to either of the questions is affirmative, then further environmental analysis, up to a potential Environmental Impact Statement, must be prepared. Further environmental analysis will be necessary only when it is determined there is a major adverse impact to the following resources: vegetation, wildlife, habitat (including fisheries and aquatic resources); unique, endangered, fragile or limited environmental resources; or historical, cultural and archeological resources.

25. **Cumulative Effects:** None

26. **Preferred Action Alternative and Rationale:** The preferred action is to issue the Lagoon GP renewal, because the Lagoon GP provides the regulatory mechanism for protecting water quality by enforcing the Montana Water Quality Act and rules.

Recommendation for Further Environmental Analysis:

EIS More Detailed EA No Further Analysis

Rationale for Recommendation: There will be no significant adverse impacts on the physical, biological or social portion of the human and natural environment.

27. **Public Involvement:** There will be a 30-day public comment period for this General Permit.

28. **Persons and agencies consulted in the preparation of this analysis:** None

EA Checklist Prepared By: Christine Weaver, July 2012

Approved By:

Jenny Chambers, Chief
Water Protection Bureau

Date