

DEPARTMENT OF ENVIRONMENTAL QUALITY
Environmental Assessment

Permitting and Compliance Division
Water Protection Bureau

Name of Project: Belgrade Wastewater Treatment Plant

Type of Project: The treatment plant discharges domestic wastewater to three rapid infiltration basins under the Montana Ground Water Pollution Control System permit program.

Location of Project: The site is situated near the intersection of Lagoon Road and E. Baseline Road, Belgrade, Montana. T01N, R04E, Section 36.

City/Town: Belgrade

County: Gallatin, Montana

Description of Project: This EA is for a permit renewal for the City of Belgrade to operate the Belgrade Wastewater Treatment Plant (BWTP) located northeast of Belgrade, Montana. The existing BWTP currently has a maximum daily design capacity of 1,915,200 gallons per day (gpd), and an average daily design capacity of 903,000 gpd. The proposed permit renewal reauthorizes discharge of effluent to ground water using three groups of rapid infiltration (RI) beds.

The permit application form lists three separate outfalls; Outfalls 001-A, Outfall 002-B and Outfall 003-C. Group A RI beds will be designated Outfall 001-A, Group B RI beds will be designated Outfall 002-B, and Group C RI beds will be designated Outfall 003-C. Each group is individually comprised of five 180 feet by 100 feet RI beds and is constructed in an east-west orientation.

Outfall 001-A is located at Latitude 45.795039°N, Longitude -111.162285°W in the E ½ of Section 36, Township 1 North, Range 4 East, and adjacent to the north side of wastewater treatment Cell #3.

Outfall 002-B is located at Latitude 45.794992°N, Longitude -111.167079°W in the E ½ of Section 36, Township 1 North, Range 4 East, and northwest of wastewater treatment Cell #3.

Outfall 003-C is located at Latitude 45.785813°N, Longitude -111.149856°W in the NE ¼ of Section 6, Township 1 South, Range 5 East. The IR beds are approximately 2,520 feet southeast of the treatment cells, south of Baseline Road between Lagoon Road and Tubb Road.

The discharge from Outfalls 001-A, 002-B, and 003-C is to the shallow unconfined aquifer which is approximately 20 to 30 feet in depth in the immediate vicinity. The receiving water for Outfalls 001-A, 002-B and 003-C is Class I ground water as defined in ARM 17.30.1006 (1).

Spray irrigation of treated wastewater is also seasonally applied at the property to the south and west of the wastewater treatment cells. This land application area extends in a strip of land that parallels the Gallatin Field Airport runway on airport property. The permittee is required to land apply treated wastewater at agronomics rates in accordance with Department review and approval letter and any subsequent updates issued by the Department. This permit does not authorize the permittee to discharge to statewaters using land application methods such as the existing spray irrigation system.

Agency Action and Applicable Regulations: The proposed action is to renew an individual MGWPCS permit that contains effluent limits and effluent monitoring requirements. The permit is issued under the authority of the Montana Water Quality Act 75-5-101 *et seq.* Montana Ground Water Pollution Control System Administrative Rules of Montana (ARM) 17.30.1001-1070, and Montana Numeric Water Quality Standards in the Department Circular DEQ-7 (August 2010).

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 applicant to implement, monitor, and manage practices to prevent pollution and degradation of groundwater.

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] Continued discharge will maintain moisture in the vadose zone. There are no observed limiting layers present in the soil profile that would impede continued mixing of effluent discharged from the drainfield.
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] A 750-foot (length) mixing zone for nitrate will be issued by the Department. Ground water in the vicinity of the project has been determined to be Class I ground water with a specific conductance of less than 1,000 µS/cm. Department conducted modeling analysis and developed numeric effluent limits, unless exceeded, water quality

IMPACTS ON THE PHYSICAL ENVIRONMENT	
	limits outside of any applicable mixing zone would be met. Compliance monitoring and reporting of the effluent parameters of concern is required from a location 'upstream' of the discharge points, as well as, ground water monitoring at the end of the mixing zone to ensure compliance with applicable standards and rules.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N] No significant impacts have been determined.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N] No significant impacts have been identified as a result of the discharge to ground water. Installation of monitoring wells or additional treatment equipment may disturb some of the existing vegetation.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	[N] No significant impacts have been identified. The closest surface water is an unnamed pond, approximately 2,000 ft northwest and down gradient of the discharge structures. This is an existing facility. No major disturbances are proposed.
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] No significant impacts have been identified. This is an existing facility. No major disturbances are proposed.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	[N] The Department believes that this project has a low likelihood of impacting cultural properties. However, should structures need to be altered or if cultural materials be inadvertently discovered during this project the State Historic Preservation Office (SHPO) should be contacted.
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?	[N] No significant impacts have been identified. The discharge structures are currently in existence and are located in a rural setting. They are not expected to be aesthetically inappropriate.
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?	[N] No significant impacts have been identified. Effluent limits require the permittee to discharge effluent that will be below water quality standards at the end of the mixing zone. Potential for ground water depletion or excessive demands on other environmental resources is minimal.
10. IMPACTS ON OTHER	[N] No significant impacts have been identified during EA

IMPACTS ON THE PHYSICAL ENVIRONMENT	
ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	preparation, however if numeric effluent limits are not met, or the groundwater quality standards are exceeded at the edge of the mixing zone, effects could be seen in the down gradient state water bodies.

IMPACTS ON THE HUMAN ENVIRONMENT	
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] No significant impacts have been identified. There is potential for health and safety risks to arise during construction of monitoring wells or additional treatment equipment.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N] No significant impacts have been identified. As this permit is for existing discharging structures, there will not be a significant increase in activity at this facility. The proposed activity will not likely increase the amount of commercial activity in the area.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N] No significant impacts have been identified. As this permit is for an existing discharging structure there will not be a significant increase in activity at this facility. The discharge from the BWTP is not likely to effect jobs to the area.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N] No significant impacts have been identified.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N] No significant impacts have been identified. The existing facility is located off of urban roads and the increased activity is likely to increase traffic on these roads.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N] No significant impacts have been identified.
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] No significant impacts have been identified.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the	[N] The permitted discharge is for the existing facility. As

IMPACTS ON THE HUMAN ENVIRONMENT	
project add to the population and require additional housing?	a result of this the population is not expected to increase or decrease.
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] No significant impacts have been identified.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] No significant impacts have been identified.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N] No significant impacts have been identified.
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.	[N] No significant impacts have been identified.
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.	[N] No significant impacts have been identified.
22(c). PRIVATE PROPERTY IMPACTS: If the answer to 22(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 22(b).

23. **Description of and Impacts of other Alternatives Considered:** None

24. **Summary of Magnitude and Significance of Potential Impacts:**

Impacts were assessed with the assumption that the permittee will comply with the terms and conditions of the permit. Violations of the permit could lead to significant adverse impacts to state waters. In preparing permit effluent limits, the Department has taken steps to ensure that beneficial uses of the receiving water are preserved and exceedance of water quality standards will not occur, which includes that the discharge will remain “nonsignificant”, as required by ARM 17.30.subchapter 7 “Nondegradation of Water

Quality”. The Department provides assistance to applicants in understanding and implementing the requirements of the permit and conducts periodic inspections of permitted facilities, where potential problems with design or management practices might be identified. If violations of the permit do occur, the Department will take appropriate action under the water quality act (Section 75-5-617, MCA). Enforcement sanctions for violations of the permit include injunctions, civil and administrative penalties, and cleanup orders.

25. **Cumulative Effects:** The issuance of this individual MGWPCS discharge permit would not have cumulative effects because the permit prohibits pollution and degradation of state waters.
26. **Preferred Action Alternative and Rationale:** The preferred action is to reissue the individual MGWPCS discharge permit. This action is preferred because 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 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.

27. **Public Involvement:** A 30-day public comment period will be held from **September 4, 2012 through October 4, 2012**. A public hearing has not been held. Public comment documents will be posted on the Department web page: <http://deq.mt.gov/notices/WQnotices.mcp.x>. For copies of the draft EA or to submit comments, write or call the Montana Department of Environmental Quality c/o Barb Sharpe, P.O. Box 200901, Helena MT 59620-0901, telephone (406) 444-2838.
28. **Persons and agencies consulted in the preparation of this analysis:**
Damon Murdo, Cultural Records Manager, Historical Preservation Society
Montana Bureau of Mines and Geology Web site
Montana Fish and Wildlife Web page, animal species information
Natural Resource Information System, Montana State Library
Natural Resources Conservation Service, National Cooperative Soil Survey

EA Checklist Prepared By:

Chris Boe

August 20, 2012

Approved By:

Jenny Chambers, Chief
Water Protection Bureau

Date