

DEPARTMENT OF ENVIRONMENTAL QUALITY
Environmental Assessment

Water Protection Bureau

Name of Project: City of Bozeman Water Treatment Plant

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

Location of Project: Section 06, Township 03 South, Range 06 East

City/Town: Bozeman

County: Gallatin County

Description of Project: This Environmental Assessment (EA) is for a MGWPCS permit renewal for the City of Bozeman Water Treatment Plant (facility). The proposed MGWPCS permit reauthorizes the Permittee (permittee) to discharge treated wastewater from a subsurface discharge structure (Outfall 002) into Class I ground water. The scope of this EA addresses the operation and discharge of the wastewater treatment and disposal system. The magnitude and significance of potential impacts are summarized below (bullet #24).

This facility is concurrently permitted under a separate Montana Pollutant Discharge Elimination System (MPDES) MT0030155 permit. The current MPDES permit, most recently issued on November 01, 2014, permits the discharge of wastewater to Bozeman Creek. The MPDES permit does not authorize discharge of wastewater to ground water. Additional EA's addressing this surface water discharge activity has been completed and available within MT0030155 permit files.

Agency Action and Applicable Regulations: The proposed action is to reissue 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 (MCA 75-5-101 *et seq.*), the Montana Ground Water Pollution Control System (ARM 17.30.1001-1045), and the Montana Numeric Water Quality Standards in the Department Circular DEQ-7.

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 the 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] The water bearing formation is unconfined. There are no known limiting layers present in the vadose zone that would impede infiltration.
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 nondegradation-nonsignificance 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.
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 identified.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N] No future construction projects have been identified. The City has operated water treatment at this Bozeman Creek location since 1957. Based on a search of the Natural Heritage Database, there are no vegetative species listed as either S1, S2, LE, or LT (http://fieldguide.mt.gov/statusCodes.aspx#msrc:rank) in the general vicinity of the facility.

IMPACTS ON THE PHYSICAL ENVIRONMENT

<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] No future construction projects have been identified. The City has operated water treatment at this Bozeman Creek location since 1957.</p> <p>Based on a search of the Natural Heritage Database, there are two animal species, listed as either S1, S2, LE, or LT (http://fieldguide.mt.gov/statusCodes.aspx#msrc:rank), in the general vicinity of the facility: <i>Oncorhynchus clarkii lewisi</i>, and <i>Ursus arctos</i>. It is to be noted the <i>Oncorhynchus clarkii lewisi</i> may be located on the nearby Hyalite Creek drainage which may be used as source water for the water treatment plant. More information is provided in Section II of the associated Fact Sheet document.</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] The City has operated water treatment at this Bozeman Creek location since 1957.</p> <p>See #4 and #5 above. All discharge disposal structures must meet the minimum set back requirements of ARM 17.36.323, which includes surface water, flood plains, and springs. 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/</p>
<p>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: http://dnrc.mt.gov/divisions/cardd/sage-grouse?</p>	<p>[N] The project has not been identified as being within sage grouse habitat.</p>
<p>8. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[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.</p>
<p>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?</p>	<p>[N] The drainfield and septic tank is constructed below the ground surface.</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT

<p>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?</p>	<p>[N] The City has operated water treatment at this Bozeman Creek location since 1957. Raw water is collected from Bozeman Creek and Hyalite Creek. The City constructed an entirely new plant which came online in March of 2014 and currently serves over 40,000 water users.</p>
<p>11. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?</p>	<p>[N] No significant impacts have been identified.</p>

IMPACTS ON THE HUMAN ENVIRONMENT

<p>12. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?</p>	<p>[Y] The water treatment plant provides a potable water supply to the City of Bozeman and the on-site Water Treatment Plant buildings.</p>
<p>13. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?</p>	<p>[N] No significant impacts have been identified.</p>
<p>14. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.</p>	<p>[Y] The City constructed an entirely new plant which came online in March of 2014. Construction may have resulted in the creation of several temporary jobs. The on-going operation and maintenance of the constructed wastewater treatment system may have resulted in the addition of permanent jobs.</p>
<p>15. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?</p>	<p>[N] No significant impacts have been identified.</p>
<p>16. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?</p>	<p>[Y] Traffic may have increased temporarily during the construction of the new water treatment plant. The on-going operation and maintenance of the constructed water treatment system may result in additional traffic.</p>
<p>17. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?</p>	<p>[Y] Establishment of a new water treatment plant is an integral part of the City of Bozeman's planning and management of their potable water utility.</p>
<p>18. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there</p>	<p>[N] No significant impacts have been identified.</p>

IMPACTS ON THE HUMAN ENVIRONMENT	
recreational potential within the tract?	
19. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N] No significant impacts have been identified.
20. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] No significant impacts have been identified.
21. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] No significant impacts have been identified.
22. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N] No significant impacts have been identified.
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. **Cumulative Effects**: Cumulative effects were analyzed as part of this EA and permitting determination. No cumulative impacts have been identified based on ambient receiving ground water conditions at the time of this analysis (see Fact Sheet). The final permit prohibits pollution and degradation of state waters.
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 assistance to applicants 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 water quality act (75-5-617, MCA). 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 reissue 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 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: <https://deq.mt.gov/Public/notices/WQnotices>. Public comments on this proposal are invited any time prior to close of business on May 10, 2016. Comments may be directed to:

DEQWPBPublicComments@mt.gov

or at:

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 were 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:
<https://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) 444-3080 or email DEQWPBPublicComments@mt.gov. All inquiries will need to reference the permit number (MTX000224), 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. **Persons and/or Agencies Consulted or Referenced in the Preparation of this Analysis:**

Montana Natural Heritage Program
Montana Bureau of Mines and Geology web site
Natural Resource Information System, Montana State Library
Historical Preservation Society
United States Department of Agriculture, Natural Resources Conservation Service Soil Survey

EA Checklist Prepared By:

Chris Boe

March 21, 2016

Approved By:

Jon Kenning, Chief
Water Protection Bureau

DRAFT

Signature

Date