

**DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER PROTECTION BUREAU
Metcalf Building, Helena, Montana 59620
(406) 444-3080**

ENVIRONMENTAL ASSESSMENT (EA)

Division/Bureau: Permitting & Compliance Division, MGWPCS Permits;

Project or Application: Red Creek Ranch Wastewater Treatment Facility; MTX000119

Description of Project: The permit renewal authorizes the discharge of treated domestic wastewater from the Red Creek Ranch (RCR) Wastewater Treatment Facility, which is located approximately 12 miles northwest of the town of West Yellowstone, along Highway 287. This system serves the Yellowstone Holiday Resort and Marina (YHRM). The YHRM currently consists of a main “facilities” building/complex that encompasses a store and a laundry, 10 cabins, and a recreational vehicle (RV) park with a total of 35 RV spaces. The permittee is Red Creek Ranch LLC. This is a conventional wastewater treatment system that collects, treats, and disposes of an effluent daily design flow of 9,400 gallons per day (gpd). Raw sewage and wastewater is collected collected via a low pressure gravity sewer main and routed to three separate septic tanks, each equipped with a septic tank effluent pump (STEP) system. Effluent from the three STEP systems gravity flows to six 1,000-gallon dose tanks with 12 Orenco dosing siphons that dose the six subsurface drainfields, with each drainfield having two zones. A Neptune totalizing flow meter has been installed following the three STEP systems and prior to the splitter valve, which routes effluent to the six dose tanks. A standard 500-foot ground water mixing zone is requested for Outfall 001. One shallow ground water monitoring well is located at the hydraulically downgradient boundary of the mixing zone. The location of Outfall 001 is 44° 48' 26" North Latitude and 111° 12' 11" West Longitude. Discharge is to ground water, which is classified "Class I" according to the Montana Ground Water Quality Standards and Beneficial Uses.

Benefits and Purpose of Proposal:

Treatment of domestic wastewater before discharging to ground water.

Description and analysis of reasonable alternatives whenever alternatives are reasonably available and prudent to consider:

None

Listing and appropriate evaluation of mitigation, stipulations and other controls enforceable by this or another government agency:

See Statement of Basis

Affected Environment and Effects from the Proposed Project:

<u>Key to Rank</u>	
NA	<i>Not applicable</i>
N	<i>No effects</i>
B	<i>Potentially beneficial effects</i>
A	<i>Potentially adverse effects</i>
M	<i>Corrective action required</i>
P	<i>Additional permits will be required</i>

Rank	Consideration	Remarks
PHYSICAL AND BIOLOGICAL ENVIRONMENT		
N	1. SOIL SUITABILITY, TOPOGRAPHIC AND/OR GEOLOGIC CONSTRAINTS (soil moisture, unstable soils or geologic conditions, steep slopes, erosion potential, subsidence potential, seismic activity)	Discharge will increase moisture in the unsaturated zone. No low permeability layers exist between the subsurface drainfields and the shallow ground water. This facility is in the Madison River Canyon Earthquake Area. There is no indication following 5 years of permitted discharge that the site of the wastewater treatment system has become unstable

		due to the construction and/or the operation of the system.
N	2. HAZARDOUS FACILITIES (power lines, hazardous waste sites, distances from explosive and flammable hazards including chemical/petroleum storage tanks, underground fuel storage tanks and related facilities such as natural gas storage facilities and propane tanks)	
N	3. AIR QUALITY (effects to or from project, dust, odors, emissions)	No significant impacts have been determined.
N	4. GROUNDWATER RESOURCES & AQUIFERS (quality/nondegradation, quantity/reliability, distribution, uses/rights, number of aquifers, mixing zones)	There will be no significant degradation outside of the mixing zone for Outfall 001 (see Statement of Basis for details and calculations). The quality of the shallow ground water shall be monitored quarterly as a condition of permit renewal.
N	5. SURFACE WATER RESOURCES (quality/nondegradation, quantity/reliability, distribution, uses/rights, storm water controls, source of community supply, community treatment, mixing zones)	The nearest downgradient surface water from Outfall 001 is Hebgen Lake, located approximately 2,500 feet from the outfall. Impacts to surface waters were determined non-significant (see previous Significance Determination Checklist, March 26, 1999).
N	6. VEGETATION AND WILDLIFE SPECIES AND HABITATS, INCLUDING FISHERIES AND AQUATIC RESOURCES (threatened, endangered, sensitive species, prime habitat, population stability, potential for human wildlife conflicts, effectiveness of post-disturbance plans)	The ground surface above the drainfield consists of a sagebrush-Idaho fescue terrain.
N	7. UNIQUE, ENDANGERED, FRAGILE, OR LIMITED ENVIRONMENTAL RESOURCES (biologic, topographic, wetlands (within one mile), floodplains (within one mile), scenic rivers, natural resource areas, etc.)	This site is less than 20 miles from the west entrance to Yellowstone National Park.
N	8. LAND USE (waste disposal, agricultural lands [grazing, cropland, forest lands, prime farmland], recreational lands [waterways, parks, playgrounds, open space, federal lands), access, commercial and industrial facilities [production & activity, growth or decline], growth, land-use change, development activity)	The drainfield area provides a sagebrush environment for wildlife.
N	9. HISTORICAL, CULTURAL, & ARCHEOLOGICAL (sites, facilities, uniqueness, diversity)	No new construction is associated with this permit renewal.
N	10. AESTHETICS (visual quality, nuisances, odors, noise)	The septic tanks, dose tanks, and drainfields are below the ground surface. Effluent from Outfall 001 is discharged to the subsurface drainfields. There are no known aesthetic issues.
N	11. DEMANDS ON OR CHANGES IN ENVIRONMENTAL RESOURCES INCLUDING LAND, WATER, AIR, OR ENERGY USE (need for new or upgraded energy sources, potential for recycling, etc.) {See (4), (5), and (8).}	Potable water is provided from two domestic wells monitored in accordance with the Public Water Supply Bureau under MT0004146.

Rank	Consideration	Remarks
IMPACTS ON THE HUMAN POPULATION		
NA	12. CHANGES IN DEMOGRAPHIC CHARACTERISTICS (population quantity, distribution and density, rate of change)	No changes in the facility are associated with this permit renewal.
N	13. GENERAL HOUSING CONDITIONS (quality, quantity and affordability)	This facility consists of a main “facilities” building/complex that encompasses a store and a laundry, 10 cabins, and a recreational vehicle (RV) park with a total of 35 RV spaces. The campground is operational four months (June, July, August, and September) of the year.
NA	14. POTENTIAL FOR DISPLACEMENT OR RELOCATION OF BUSINESS OR RESIDENTS	
N	15. PUBLIC HEALTH AND SAFETY (medical services and facilities, police, fire protection and hazards [see (2)], emergency medical services [see (8), LAND USE for waste disposal])	
N	16. LOCAL EMPLOYMENT AND INCOME PATTERNS (quantity and distribution of employment, economic impact)	
NA	17. LOCAL AND STATE TAX BASE AND REVENUES	
NA	18. EFFECTS ON SOCIAL STRUCTURES AND MORES (social conventions/standards of social conduct), DEMANDS ON SOCIAL SERVICES (law enforcement, educational facilities [libraries, schools, colleges, universities], welfare, etc.)	
N	19. TRANSPORTATION NETWORK (condition and use of roads, traffic flow conflicts, rail, airport compatibility, etc.)	
N	20. CONSISTENCY WITH LOCAL ORDINANCES, RESOLUTIONS, OR PLANS (conformance with local comprehensive plans, zoning or capital improvement plans)	
NA	21. REGULATORY RESTRICTIONS ON PRIVATE PROPERTY RIGHTS (<i>Are we regulating pursuant to a police power? Does the Agency action restrict the use of the property beyond the minimum necessary to achieve compliance with the Act? What are the costs of such additional restrictions resulting from proposed permit conditions? Are there other, less restrictive ways of achieving the same goal? See your assigned legal counsel for assistance preparing this section. [See the Private Property Assessment Act checklist accompanying this permit for details.]</i>)	

Other groups or governmental agencies contacted or which may have overlapping jurisdiction:
Public Water Supply, DEQ Subdivision Section

Public Involvement:

Thirty-day public comment period

Individuals or groups contributing to this EA:

Gaston Engineering, Hyalite Engineering

Summary of Issues:

See Statement of Basis

Summary of Potential Effects:

See Statement of Basis

Cumulative Effects:

There are no unresolved analyses for cumulative effects.

Recommendation:

Issue Ground Water Discharge permit renewal

Recommendation for Further Environmental Analysis:

Prepare an EIS

Prepare a more detailed EA

No further analysis

EA prepared by: Pat Potts

Date: May 27, 2009

Bureau Check-off

AWMB _____

CSB _____

EMB _____

IEMB _____

WPB _____

Other _____

Approved by:

Jenny Chambers, Bureau Chief
Water Protection Bureau
Permitting & Compliance Division

(Print name and title)

(Signature)

(Date)