

DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER PROTECTION BUREAU  
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(406) 444-3080

**ENVIRONMENTAL ASSESSMENT (EA)**

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

**Project or Application:** Crazy Mountain Ranch Wastewater Treatment Facility; MTX000123

**Description of Project:** The permit renewal authorizes the discharge of treated residential-strength wastewater from the Crazy Mountain Ranch, which is located north of Livingston and approximately 14 miles northeast of Clyde Park. The permittee is Philip Morris USA, Inc. The permitted discharge is for a design capacity of 20,000 gallons per day (gpd) from 5 cabins and 5 lodges/hotels for 120 guests, staff housing for 110 people, a livery/saloon/pavilion, a general store, a laundry facility, and a riding arena-barn. Wastewater from the gravity collection system enters two septic tanks operated in series, followed by a lift station and a totalizing flow meter. A total of three recirculating sand filter (RSF) treatment systems each consisting of a recirculation tank, a RSF, a dose tank, and a subsurface drainfield are maintained to be operational. The older RSF system is used as a standby system. During normal operations, one of the two newer RSF systems and the associated drainfields are operated on a rotating (quarterly) basis, with only one RSF-drainfield system treating wastewater at a time. However, during high loading periods or for other operational reasons, there may be times when more than the one RSF-drainfield system is operating simultaneously (but never more than two). Recirculating sand filters (RSFs) are considered to provide Level II wastewater treatment. Outfall 001 is located in the NE ¼ of Section 23 and NW ¼ Section 24, Township 2 North, Range 10 East in Park County at 45° 54' 41" North latitude and 110° 26' 11" West longitude. The Department has determined that the shallowest ground water beneath the site exists under confined conditions and will not be impacted by the effluent discharge. Therefore, a ground water mixing zone is not required for this discharge.

**Benefits and Purpose of Proposal:**

Adequate treatment of residential-strength wastewater before discharging to the subsurface.

**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 Fact Sheet

**Affected Environment and Effects from the Proposed Project:**

<b><u>Key to Rank</u></b>	
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
<b>PHYSICAL AND BIOLOGICAL ENVIRONMENT</b>		
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. The wastewater treatment and disposal systems are located on a topographically high and dry (no shallow ground water) bench, relative to the surrounding landscape. There is no indication that the site chosen for the wastewater system will become unstable due to construction and proper 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)	No significant degradation of ground water or surface water. The shallowest aquifer is confined by shale layering. The discharge will not impact the ground water (see Statement of Basis for details).
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 Hammond Creek, which is approximately 3,000 feet from the subsurface drainfield area. Impacts to surface water were previously determined nonsignificant degradation [see original Statement of Basis (January, 2002) for details].
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)	
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.)	
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 land was originally open ranchland and remains part of a large working ranch. A change in habitat for some native species may cause relocation into adjacent undeveloped areas.
N	9. HISTORICAL, CULTURAL, & ARCHEOLOGICAL (sites, facilities, uniqueness, diversity)	No new constructed is proposed in this permit renewal. Should cultural materials be inadvertently discovered the permittee should contact the State Historical Preservation office so the site may be investigated.
N	10. AESTHETICS (visual quality, nuisances, odors, noise)	The community septic tanks, recirculation tanks, recirculating sand filter treatment systems, and drainfields (outfall 001) are subsurface and are not visible and will not create 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 via two active onsite community supply wells.
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<b>IMPACTS ON THE HUMAN POPULATION</b>		
NA	12. CHANGES IN DEMOGRAPHIC CHARACTERISTICS (population quantity, distribution and density, rate of change)	The development is for year-around vacation/recreation use.
N	13. GENERAL HOUSING CONDITIONS (quality, quantity and affordability)	
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])	The development is fully built-out and generally fully occupied. Should there be a potential need for increased services, a permit modification would be necessary.
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> )	

