

**East Grasshopper Watershed Assessment
Executive Summary and Authorized Officer's
Determination**



Baldy Mountain, as seen from the Red Mine Pasture of the Baldy Mountain Allotment, June 2011.

**Bureau of Land Management
Dillon Field Office
1005 Selway Drive
Dillon, Montana 59725
406-683-8000**

This document summarizes the findings of the East Grasshopper Watershed Assessment (EGW) conducted during the 2011 field season. The assessment area covers approximately 120,396 total acres of land, of which 80,237 acres are public land administered by the Bureau of Land Management (BLM) in Beaverhead County, Montana. Of the total BLM-administered lands within the EGW, 79,000 acres are allotted for livestock grazing and 1,237 acres are unleased. No acres are categorized as unallotted (unavailable for livestock grazing).

The following table summarizes the determination of Rangeland Health Standards by allotment. It also briefly describes resource concerns identified by the interdisciplinary team (IDT) and preliminary recommendations to mitigate these concerns and revise management where deemed necessary.

The BLM is preparing to complete National Environmental Policy Act (NEPA) documentation, which will include all BLM-administered public lands covered in the EGW. Alternative management strategies will be analyzed wherever it is determined that allotments are not meeting the Standards, allotments are meeting the Standards but have site specific resource concerns, unhealthy forest and/or fuels conditions are outside the natural range of variability, or we have received an application to modify any of the authorized uses.

The issue of scale must be kept in mind in evaluating each standard. It is recognized that isolated sites within an allotment may be functioning-at-risk (FAR) and not meeting the standards; however, considering broader scope and scale, the allotment may be in proper functioning condition (PFC). Alternatively, isolated sites may be PFC, but overall the resource in the allotment is FAR and not meeting the standards. No single indicator provides sufficient information to determine land health. They are used in combination to provide the necessary information to make a land health determination. Alternatively, just because a standard is being met, does not mean that the conditions on the ground represent desired resource conditions or objectives.

In addition, every riparian reach or acre of upland habitat does not need to be rated as PFC for the allotment to meet standards. The scope of the resource being assessed and relative importance of riparian/wetland habitat or upland sites within the context of the allotment as a whole is considered when determining if the allotment is meeting standards or not. For example, if an allotment has 15 miles of riparian habitat and 13 miles habitat is functioning properly while 2 miles is functioning at risk, the relative importance of the two miles that is functioning at risk is considered in making an overall determination of meeting the riparian health standard or not. If the two miles of stream at risk has fisheries habitat or is contributing to water quality impairment, the allotment would not meet the riparian health standard. However, if the two miles of functioning-at-risk stream are low energy, isolated intermittent reaches or spring brooks, not hydrologically connected to larger bodies of water, the allotment as a whole may meet the riparian health standard and these isolated reaches will be addressed as site specific resource concerns.

Table 1 summarizes the determination of rangeland health standards by allotment. It also briefly describes the primary resource concerns and initial IDT recommendations to address those concerns.

Table 1. Determination of Rangeland Health Standards, including primary resource concerns and initial IDT recommendations, by allotment.

Allotment Name, Number, Category ¹ , & BLM Acres	Are Land Health Standards Being Met?					Primary Resource Concerns	Interdisciplinary Team Initial Recommendations
	Upland	Riparian Wetland	Water Quality	Air Quality	Bio-diversity		
Baldy Mountain, 30037, (I), Acres: 8,098	YES	NO	NO	YES	NO	1. Overwidening and streambank trampling (16, 1572, 1575, & 1591). 2. Soil compaction at springs. 2. Sediment from road and road crossings (18, 1572, & 1591). 3. Undersized and damaged culverts (16 & 1572). 4. Juniper encroachment along Dyce Creek (1564). 5. Conifer expansion into sagebrush/ grassland and mountain mahogany stands.	1. Reduce length of time livestock have access to stream reaches. 2. Enlarge livestock exclosures 2. Water bars, drain dips, silt fence, or re-route road. 3. Replace culvert or construct hardened crossings. 4. Remove or thin junipers. 5. Treatment via prescribed fire, mechanical, or other methods.
Bannack, 30015, (I), Acres: 6,697	YES	N/A	N/A	YES	YES	1. No resource concerns identified from currently authorized uses.	1. Continue current management.
Bannack Road, 20619, (C), Acres: 69	YES	N/A	N/A	YES	YES	1. No resource concerns identified from currently authorized uses.	1. Continue current management.

Allotment Name, Number, Category ¹ , & BLM Acres	Are Land Health Standards Being Met?					Primary Resource Concerns	Interdisciplinary Team Initial Recommendations
	Upland	Riparian Wetland	Water Quality	Air Quality	Bio-diversity		
Buffalo Creek, 30617, (C), Acres: 829	NO	NO	*	YES	NO	1. Reduced canopy cover, vigor, reproductive capability, and composition of cool-season bunchgrasses. 2. Active pedestalling, water flow patterns, and soil loss/degradation. 3. Byproducts of supplemental feeding in wetland (1570).	1 & 2. Establish an Allotment Management Plan (AMP) with deferred-use and/or rest and categorize as an "I" allotment. 3. Exclude from livestock grazing.
Cross, 30033, (I), Acres: 3,480	YES	N/A	N/A	YES	YES	1. Slight decline in production and reproductive capability of cool-season bunchgrasses.	1. Develop livestock water to improve distribution.
Ermont, 10598, (M) , Acres: 136	YES	YES	*	YES	YES	1. No resource concerns identified from currently authorized uses.	1. Continue current management.
Flying N, 20724, (I) , Acres: 102	YES	N/A	N/A	YES	YES	1. No resource concerns identified from currently authorized uses. 2. Snow fence is in disrepair.	1. Continue current management and categorize as an "M" allotment. 2. Repair or remove the snow fence.

Allotment Name, Number, Category ¹ , & BLM Acres	Are Land Health Standards Being Met?					Primary Resource Concerns	Interdisciplinary Team Initial Recommendations
	Upland	Riparian Wetland	Water Quality	Air Quality	Bio-diversity		
Frenchie, 10121, (M), Acres: 11,737	YES	NO	*	YES	YES	1. Localized trampling from livestock at Frenchie Place Springs (1597). 2. Road maintenance has diverted Cold Spring Creek (1551). 3. Localized infestations of spotted knapweed, houndstongue, black henbane, and cheatgrass.	1. Construct livestock exlosures around spring sources. 2. Install a culvert or hardened crossing. 3. Continue treating and coordinating weed treatments with private land owners, counties, and state and federal agencies.
Millpoint, 10751, (C), Acres: 734	YES	N/A	N/A	YES	YES	1. No resource concerns identified from currently authorized uses.	1. Continue current management.
Red Mine Isolated, 30609, (C), Acres: 15	YES	N/A	*	YES	YES	1. No resource concerns identified from currently authorized uses.	1. Continue current management.
Reservoir Creek AMP, 30030, (I), Acres: 13,010	YES	YES	NO	YES	YES	1. Pedestalling and water flow patterns. 2. Overwidening and streambank trampling (1594).	1. Continue recently adopted AMP. 2. Construct a livestock enclosure.
Reservoir Creek Custodial, 20723, (C), Acres: 263	NO	N/A	N/A	YES	YES	1. Water flow patterns, pedestalling. 2. Shift in community composition and distribution. 3. Reduced litter, annual production, and reproductive capability of perennial plants.	1 - 3. Reduce the frequency or duration of growing season use, including periodic rest.
Road Agent Rock, 00759, (C), Acres: 296	YES	N/A	N/A	YES	YES	1. No resource concerns identified from currently authorized uses.	1. Continue current management.

Allotment Name, Number, Category ¹ , & BLM Acres	Are Land Health Standards Being Met?					Primary Resource Concerns	Interdisciplinary Team Initial Recommendations
	Upland	Riparian Wetland	Water Quality	Air Quality	Bio-diversity		
Stonehouse, 30005, (M), Acres: 26,581	YES	NO	NO	YES	YES	<ol style="list-style-type: none"> 1. Slight decline in frequency and canopy cover of cool-season bunchgrasses in Ermont and McDowell pastures. 2. Overwidening, streambank trampling, ungulate browsing of willows, and a vehicle crossing (1566). 3. Hummocking and compaction at 1559 & 1576. 4. Spotted knapweed infestation at Badger Pass gravel pit. 	<ol style="list-style-type: none"> 1. Shorten spring grazing season or incorporate deferment and/or rest. 2. Reduce the size of the water gap or construct an off-site water development and install signs to reduce vehicle impacts. 3. Enlarge livestock enclosures and redevelop spring at 1559. 4. Continue treating and coordinating weed treatments with private land owners, counties, and state and federal agencies.
Taylor-Buffalo, 10122, (I), Acres: 5,738	NO	NO	NO	YES	NO	<ol style="list-style-type: none"> 1. Reduced frequency and canopy cover of cool-season bunchgrasses. 2. Active pedestalling, short water flow patterns, loss of soil A-horizon. 3. Reduced production and reproductive capability of perennial plants. 4. Overwidening and bank shearing (1553). 5. Overwidening and streambank trampling (1594). 	<ol style="list-style-type: none"> 1 - 4. Reduce the frequency or duration of growing season use, including deferment and/or periodic rest. 5. Construct a hardened water gap.
Taylor Creek, 10745, (I), Acres: 1,215	YES	YES	NO	YES	YES	<ol style="list-style-type: none"> 1. No resource concerns identified from currently authorized uses. 	<ol style="list-style-type: none"> 1. Continue current management and categorize as an "M" allotment.

Allotment Name, Number, Category ¹ , & BLM Acres	Are Land Health Standards Being Met?					Primary Resource Concerns	Interdisciplinary Team Initial Recommendations
	Upland	Riparian Wetland	Water Quality	Air Quality	Bio-diversity		
Unleased, Acres: 1,237	YES	N/A	N/A	YES	YES	1. No resource concerns identified from currently authorized uses.	1. Continue current management or designate as unallotted.

¹ Allotment Category: I = improve, M = maintain, C = custodial
² The Montana Department of Environmental Quality (DEQ) has the responsibility for making water quality determinations and has completed its evaluation of 303(d)-listed streams.
* Tributary streams in the EGW are not on the 303(d) list, are not priority streams, and are not scheduled to be evaluated by the DEQ.

Allotment category refers to BLM’s level of management for a given grazing allotment, based on resource values and opportunities for improvement. Allotments in the I-category are managed more intensively and are monitored more frequently. Allotments in the M-category are usually at a desired condition and are managed to maintain or improve that condition. Allotments in the C-category are usually isolated parcels with few resource concerns that are fenced in with larger parcels of deeded land, are managed in conjunction with the permittee/lessee’s normal livestock operation, and are monitored less frequently.

Standard # 1: Upland Health

The Buffalo Creek, Reservoir Creek Custodial, and Taylor-Buffalo allotments are **not** meeting this standard.

On the Buffalo Creek, Reservoir Creek Custodial, and Taylor-Buffalo allotments, IDT observations indicate a decline in frequency and canopy cover of cool-season bunchgrasses, decreased infiltration, increased runoff, water flow patterns, and pedestalling. Similar, but localized, observations were also noted on the Baldy Mountain and Stonehouse allotments, which are meeting the standard because of the small scale of these impacts, relative to the overall upland health on the allotments.

Current livestock management has been determined to be one of the contributing factors in not meeting the upland standard on the Buffalo Creek, Reservoir Creek Custodial, and Taylor-Buffalo allotments.

Standard # 2: Riparian Health

The Baldy Mountain, Buffalo Creek, Frenchie, Stonehouse, and Taylor-Buffalo allotments are **not** meeting this standard:

The riparian areas that are not meeting the standards were determined to be FAR, with either a static or downward trend, or non-functional. Riparian habitat that is FAR with an upward trend

is considered to be meeting the riparian health standard because it is making progress toward achieving PFC.

On the Baldy Mountain and Stonehouse allotments, trampling of spring sources and wetlands is affecting vegetative composition and hydrologic function. On the Baldy Mountain, Stonehouse, and Taylor-Buffalo allotments, the riparian areas that are not meeting the standard have altered vegetative composition along the riparian zone and/or reduced bank stability due to impacts from livestock trailing and/or grazing increased sediment. Additional concerns on the Baldy Mountain allotment include overwidening from road crossings, juniper encroachment, and aspen decline.

The wetland (1570) on the Buffalo Creek allotment was littered with livestock manure and old hay bales, likely from feeding during the winter months, in conjunction with adjacent private land, when the wetland is frozen. Use of the adjacent uplands was contributing to wetland degradation, the vegetative composition of the wetland was altered, and there was excessive deposition of litter and sediment.

On the Frenchie allotment, Cold Spring Creek (1551) has been diverted from its channel during road maintenance and has created a wetland. Although there were also observed impacts to springs, the small scale of these impacts, relative to the overall riparian health on the allotment did not contribute to not meeting the standard. These impacts will still be addressed on a site-specific basis.

Current livestock management has been determined to be one of the contributing factors in not meeting the riparian standard on the Baldy Mountain, Buffalo Creek, Stonehouse, and Taylor-Buffalo allotments.

Standard # 3: Water Quality

The Baldy Mountain, Reservoir Creek AMP, Stonehouse, Taylor-Buffalo, and Taylor Creek allotments are **not** meeting this standard.

The Montana Department of Environmental Quality (DEQ) has the responsibility for making water quality determinations and has completed its evaluation of 303(d)-listed streams. The East Fork, West Fork, and mainstem of Dyce Creek, Grasshopper Creek, Rattlesnake Creek, Reservoir Creek, Taylor Creek, and Horse Prairie Creek are on the 303(d) list and have been found to be impaired. Tributary streams in the EGW are not on the 303(d) list, are not priority streams, and are not scheduled to be evaluated by the DEQ.

The livestock grazing impacts described above, under the upland and riparian health standards for the Baldy Mountain, Stonehouse, and Taylor-Buffalo allotments, may also be providing non-point source pollution, and therefore be a contributing factor in not meeting the water quality standard on these allotments. On the remaining allotments and unallotted parcels, uses currently authorized by BLM are not believed to be contributing to degraded water quality.

Standard # 4: Air Quality

All of the allotments assessed within the watershed are meeting this standard.

Standard # 5: Biodiversity

The Baldy Mountain, Buffalo Creek, and Taylor-Buffalo allotments are **not** meeting this standard.

Biodiversity is closely related to upland and riparian health. The Baldy Mountain allotment does not meet the biodiversity standard because of the impacts and conditions described under the riparian standards, which are affecting westslope cutthroat trout habitat. Additional concerns that are affecting biodiversity include conifer expansion/encroachment into sagebrush/grassland and mountain mahogany stands and impacts to conifer stands resulting from mountain pine beetle, western spruce budworm, Douglas-fir bark beetle, and white pine blister rust.

The Buffalo Creek and Taylor-Buffalo allotments do not meet the biodiversity standard because of the impacts and conditions described under the upland and riparian standards, which do not support diverse plant communities and do not contribute to meeting habitat requirements for wildlife species.

Current livestock management has been determined to be one of the contributing factors in not meeting the biodiversity standard on the Buffalo Creek and Taylor-Buffalo allotments.

NEPA Documentation

Before any of the above stated recommendations can be implemented, NEPA documentation will be completed to analyze a range of reasonable alternatives to address resource concerns found during the Assessment. The Dillon Field Office will be working on the East Grasshopper Watershed Environmental Assessment (DOI-BLM-MT-B050-2011-010-EA) during the spring of 2012.

Implementation of new plans will begin upon the Authorized Officer's decision becoming final and may take several years to fully implement.

For more information, please review the East Grasshopper Watershed Assessment Report or contact the Dillon Field Office at (406) 683-8000.

Authorized Officer's Determination

Based on my review of the Assessment Team's recommendations, and other relevant data and information, I have determined that the following eight allotments and the unleased parcel within the East Grasshopper Watershed **meet** all five of the Standards for Rangeland (Land) Health and Guidelines for Grazing Management for BLM lands in Montana:

1. Bannack
2. Bannack Road
3. Cross
4. Ermont
5. Flying N
6. Millpoint
7. Red Mine Isolated
8. Road Agent Rock
9. Unleased Parcel

I have determined that the following seven allotments **do not** meet the Standards for Rangeland Health and Guidelines for Grazing Management for BLM lands in Montana:

1. Baldy Mountain
2. Buffalo Creek
3. Frenchie
4. Reservoir Creek AMP
5. Reservoir Creek Custodial
6. Stonehouse
7. Taylor-Buffalo
8. Taylor Creek

Further, I have determined that current livestock management is a significant causal factor in the land health standards **not being met** on the Baldy Mountain, Buffalo Creek, Reservoir Creek Custodial, Stonehouse, and Taylor-Buffalo allotments.

Pursuant to 43 CFR 4180.2(c), the Authorized Officer shall take appropriate action as soon as practicable but not later than the start of the next grazing year upon determining that existing grazing management practices or levels of grazing use on public lands are significant factors in failing to achieve the standards. Appropriate action means implementing actions that will result in significant progress toward fulfillment of the standards. Practices and activities subject to standards and guidelines include the development, modification, or revision of AMPs, establishment of terms and conditions of permits, leases and other grazing authorizations, and range improvement activities such as vegetation manipulation, fence construction and development of water.

BLM Manual Handbook H-4180-1, Rangeland Health Standards Handbook, provides guidance for conducting watershed-based Land Health Assessments. It states "If the Land Health Standards are not being achieved because of a causal factor other than current livestock grazing management, you must consult other program guidance for the appropriate steps to be taken to ensure that progress toward meeting Standards is made."

Dillon Field Manager

Date