

Grazing BMP Review – Targhee NF

Allotment Name: West Lake C & H **Forest:** Caribou-Targhee NF **District:** Island Park **Date:** 9/12/2006

Reviewers: Walt Grows (range), Kyle Moore (range), Kara Kleinschmidt (soils), Lee Mabey (aquatics), and Louis Wasniewski (hydrology)

Grazing System: Season Long

Unit(s) Reviewed:	<u>Duck Creek (Unit #3)</u>	On Date(s):	<u>8/20</u>	Off Date(s)	<u>9/16</u>
	<u>Schoolhouse (Unit #1) Duck Creek Exclosure</u>		<u>6/16</u>		<u>7/22</u>
Not Reviewed:	<u>Stateline/Divide (Unit #4)</u>		<u>7/23</u>		<u>8/19</u>
	<u>Rock Creek (Unit #2)</u>		<u>9/17</u>		<u>9/30</u>

6TH Level HUB:	<u>170402021201 (majority)</u>	Stream Name(s) and Type(s):	<u>Duck Creek, N & S Fork Duck Creek, Ingals</u>
	<u>170402021202</u>		<u>Creek, & Rock Creek</u>
			<u>Kelly Creek</u>
			<u>Gillian Creek (allotment divide)</u>

Geology: Predominantly Alluvium or colluvium drived from mixed sources

Soils: Predominantly Loamy-skeletal, mixed, superactive Vitrandic Cryoborolls

Ecological Unit Types:

1315-ABLA/OSCH,PAMY Edgway- ABLA/VAGL,PAMY Koffgo-PSEM/ARTRV Povey association, 15 to 50 % slopes

1149-PSME/CARU,CARU Edgway, 15 to 40 % slopes

1760-PSME/ARTRV Fourme, 0 to 4 % slopes

1128-ARTRP4/FEID Monida-ARTRP4/FEID Zeale complex, 4 to 20% slopes

1110-ABLA/VAGL, PAMY Huckridge-PSME/OSCH Paleborolls complex, 4 to 35% slopes

1594-ABLA/VAGL, VAGL Koffgo, 30 to 60% slopes

1316-ABLA/VAGL, PAMY Koffgo, ABL/THOC Koffgo-Rock Outcrop complex, 40-70% slopes

1280-Rubble Land-Low Alpine Forb Cryochrepts, loamy-skeletal-Rock Outcrop complex, 40 to 70% slopes

2020-Graminoid Chickcreek-Salix/Graminoid Tepete complex, 0 to 1% slopes

2606-Salix/Graminoid Cryaquolls and Salix/Graminoid Cryaquolls, poorly drained, 0 to 6% slopes

Community Types: Hillslopes: Mixed conifers and quaking aspen. Riparian: willow/grass and sedge

Notes:

The allotment contains 292 head of cattle rotated through four units between June 16 and September 30. The allotment is not NEPA sufficient, but it is on the Forest's schedule for AMP update/NEPA compliance in fall/winter 2006/2007. The AOI is annually updated (Kyle Moore updated this year). Three areas were visited during the review and consisted of (1) Unit #3 (Duck Creek) along the S.F. Duck Creek above the Red Rock Riparian allotment, (2) Red Rock Riparian Allotment, and (3) Unit #1 (Schoolhouse) within the Duck Creek Exclosure.

Grazing BMP Review – Targhee NF

Unit #3-Duck Creek & Red Rock Riparian Allotment: Use in unit #3 was within the standards indicated in the 2006 AOI and the aspen regeneration above the Red Rock allotment looked good. The Red Rock allotment is a small riparian pasture type of allotment and was grazed within the standards identified in the 2006 AOI. The section of NF Duck Creek above the Red Rock Riparian allotment showed signs of instability (Photos 2, 3, & 4) where by the channel is entrenched not allowing bankfull flow to access the floodplain. Several old beaver dams were observed above the Red Rock Riparian allotment and lack of beavers could be related to the channel condition. Bank alterations in this area were estimated at moderate to high and should be evaluated in the future along with stubble height to determine the appropriate indicator.

Channel conditions within the Red Rock Riparian allotment are in good condition as show in photos 5 & 6. The stream channel is not entrenched, contains a narrow and deep channel, and is stable.

To monitor trend Multiple Indicator Monitoring (MIM) plots should be established within the Red Rock Riparian allotment and upstream on the NF Duck Creek. This would also assist in the appropriate indicator as mentioned above. Beaver re-introduction is recommended to start to improve stream conditions along the NF Duck Creek.



Photo 1: Looking downstream along NF Duck Creek into the Red Rock Riparian Allotment.



Photo 2: Upstream of the Red Rock Riparian fence along NF Duck Creek and within Unit #3 (Duck Creek).

Grazing BMP Review – Targhee NF



Photo 3: Unit #3 200-400 yard upstream of the Red Rock Riparian Allotment within an old non-functional enclosure. Channel is entrenched and classified as a G or F Rosgen Channel type.



Photo 4: Staff gage within the old non-functional enclosure above Red Rock Riparian Allotment.

Grazing BMP Review – Targhee NF



Photo 5: NF Duck Creek Channel within the Red Rock Riparian Allotment. Channel is not entrenched and well connected to floodplain.



Photo 6: NF Duck Creek Channel within the Red Rock Riparian Allotment. Channel is not entrenched, maintains a small width to depth ratio which corresponds to a Rosgen “E” type channel.

Grazing BMP Review – Targhee NF

Unit #1 (Schoolhouse) within the Duck Creek Enclosure: This enclosure is functional as shown in photo 7 and should be maintained for comparison purposes. Lee Mabey, fisheries biologist, visited the Duck Creek enclosure again on 10-23-06 and identified water improvements (photos 8-11). There are two water gaps that need to be hardened and narrowed. There is also a third water gap connected to a private pasture that appears to be located on FS lands.



Photo 7: Unit #1 with the Duck Creek enclosure in foreground and unit #1 in the background.

Grazing BMP Review – Targhee NF



Photo 8: 10-23-06 Water gap, notice fence-line contrast, needs hardening and narrowing



Photo 9: 10-23-06 Water gap that appears to be on forest land, arrow lined up with forest boundary fence in back ground



Photo 10: 10-23-06 Water gap is hardened but needs narrowing

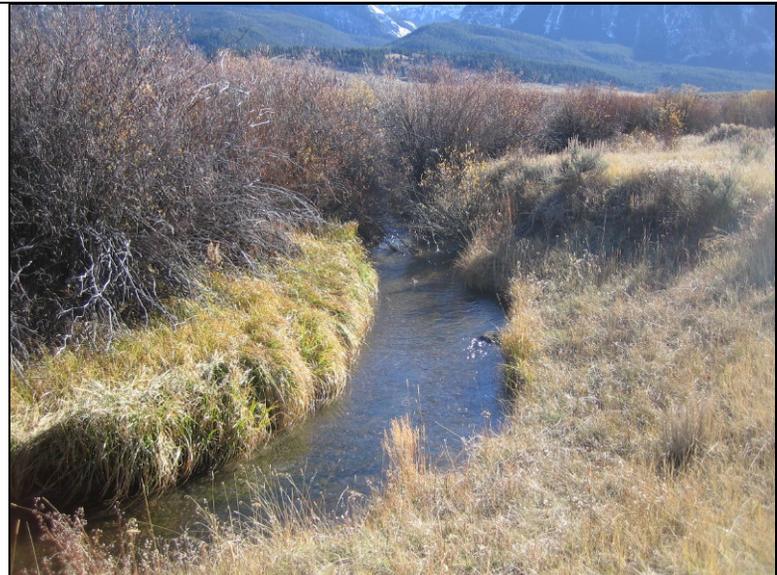


Photo 11: 10-23-06 Photo showing general condition of the lower section of Duck Creek.

Grazing BMP Review – Targhee NF

Use the Following Rating Guide and Definitions to Score Each Practice

Implemented	Score
Exceeds objective of practice	5
Meets objective of practice	4
Minor departure from practice	3
Major departure from practice	2
Gross neglect of practice	1

Effective	Score
Improved protection of soil and water over pre-project conditions	5
Adequate protection of soil and water	4
Minor and temporary impacts on soil and water	3
Major and temporary, or minor and prolonged impacts on soil and water	2
Major and prolonged impacts on soil and water	1

Term	Definition
Adequate	Small amount of material eroded; material does not reach ephemeral draws, intermittent and perennial streams, or wetlands
Minor	Erosion and delivery of material to ephemeral draws but not intermittent and perennial streams, or wetlands
Major	Erosion and subsequent delivery of sediment to ephemeral draws, intermittent and perennial streams, or wetlands
Temporary	Impacts expected to last one year or less or no more than one runoff season
Prolonged	Impacts expected to last more than one year or one runoff season

Targhee National Forest – Forest Wide Standards and Guidelines

Element	Standards and Guidelines	Implemented	Effective	Notes
Soils Quality/Forested Ecosystems ¹	Strive to maintain fine organic matter (FOM) over at least 50% of the area. The preference is for FOM to be undisturbed, but if disturbed, it should be of sufficient quantity and quality to avoid detrimental nutrient cycle deficits. If the soil and potential natural community are not capable of producing FOM over 50% of the area, adjust minimum amounts to reflect potential soil and vegetation capability. (G)	4	4	
Watershed, General	Not more than 30% of any of the principal watersheds and their subwatersheds should be in a hydrologically disturbed condition at any one time. (G)	4	4	
Fisheries & Other Aquatic Resources	1. New special use permits (SUPs) or new FS projects involving instream facilities (exclusive of facilities retrofitted to existing dams) must maintain minimum instream flows as specified by Forest or State and, on fish-bearing streams provide for fish passage and include screening devices to prevent accidental loss of fish. (S) 2. When reauthorizing existing SUPs or existing FS projects involving instream facilities (exclusive of facilities retrofitted to existing dams), where feasible, provide for minimum instream flows as specified by Forest or State and, on fish-bearing streams, where feasible, provide for fish passage and include screening devices to prevent accidental loss of fish. (S)	N/A	N/A	

¹ Timber related guideline. Determine if this guideline is appropriate for the allotment.

Grazing BMP Review – Targhee NF

Targhee National Forest – Forest Wide Standards and Guidelines

Element	Standards and Guidelines	Implemented	Effective	Notes																			
Range – Upland Forage Utilization	<p>Apply upland forage utilization levels to all allotments and/or management areas as shown below, unless determined otherwise through the IDT process. These guidelines apply to native and desirable non-native vegetation as recorded at the end of the growing season. (G)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2" style="text-align: center;">Season-Long Grazing</th> <th colspan="2" style="text-align: center;">Rotation Grazing</th> </tr> <tr> <th style="text-align: center;">Unsatisfact. Range</th> <th style="text-align: center;">Satisfact. Range</th> <th style="text-align: center;">Unsatisfact. Range</th> <th style="text-align: center;">Satisfact. Range</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Grass Herb</td> <td style="text-align: center;">35%</td> <td style="text-align: center;">45%</td> <td style="text-align: center;">45%</td> <td style="text-align: center;">55%</td> </tr> <tr> <td style="text-align: center;">Shrubs</td> <td style="text-align: center;">25%</td> <td style="text-align: center;">35%</td> <td style="text-align: center;">35%</td> <td style="text-align: center;">35%</td> </tr> </tbody> </table>		Season-Long Grazing		Rotation Grazing		Unsatisfact. Range	Satisfact. Range	Unsatisfact. Range	Satisfact. Range	Grass Herb	35%	45%	45%	55%	Shrubs	25%	35%	35%	35%	4	4	
	Season-Long Grazing		Rotation Grazing																				
	Unsatisfact. Range	Satisfact. Range	Unsatisfact. Range	Satisfact. Range																			
Grass Herb	35%	45%	45%	55%																			
Shrubs	25%	35%	35%	35%																			
Range – Upland & AIZ Forage Utilization - AOI	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Key Species</th> <th style="text-align: center;">Proper Use</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Riparian</td> <td>4 in stubble height (HGL) 3 in stubble height (AIZ)</td> </tr> <tr> <td style="text-align: center;">Riparian Shrubs</td> <td>30% current years growth</td> </tr> <tr> <td style="text-align: center;">Upland Grasses</td> <td>55% current years growth</td> </tr> <tr> <td style="text-align: center;">Upland Shrubs</td> <td>35% current years growth</td> </tr> </tbody> </table>	Key Species	Proper Use	Riparian	4 in stubble height (HGL) 3 in stubble height (AIZ)	Riparian Shrubs	30% current years growth	Upland Grasses	55% current years growth	Upland Shrubs	35% current years growth	4	4	Unit #3 Utilization of willows within the AIZ above the Red Rock Riparian Allotment were at or above 30% and something that needs to be monitored.									
Key Species	Proper Use																						
Riparian	4 in stubble height (HGL) 3 in stubble height (AIZ)																						
Riparian Shrubs	30% current years growth																						
Upland Grasses	55% current years growth																						
Upland Shrubs	35% current years growth																						
Range - Riparian Forage Utilization - Woody Plant Utilization	Not more than 30% use on riparian woody plant species (current year's growth) is allowed. 30% is the maximum allowed use as recorded at the end of the grazing period. (S)	4	4																				
Range - Riparian Forage Utilization – Riparian Vegetation Stubble Height Standard (these apply to all grazing systems)	<p>1. At the hydric green-line (HGL), there will be at least 4 inches of stubble height remaining on key species at the end of the grazing period, unless determined otherwise through the IDT process. This standard applies to key species of native and desirable non-native hydric vegetation. (S)</p> <p>2. Away from the HGL, at least 3 inches of stubble height will be left on the remainder of the key riparian species at the end of the grazing period, unless determined otherwise through the IDT process. (S)</p>	4	4																				
Range – Allotment Management Planning (AMP)	Salt should be placed greater than a ¼ mile from water, or as far from water as practicable. Salting should be designed to avoid conflicts with aspen regeneration, conifer plantations, and system trails. (G)	4	4																				
Range – (AMP)	Allow no livestock grazing before seed set of the second growing season after prescribe or natural fires and rangeland planting or seeding. (G)	NA	NA	No Fire within Allotment in the last 2 years																			
Range – (AMP)	FS administrative site livestock pastures will comply with the Forest wide standards and guidelines for forage utilization and riparian management. (S)	4	4																				

Grazing BMP Review – Targhee NF

Targhee National Forest – Forest Wide Standards and Guidelines

Element	Standards and Guidelines	Implemented	Effective	Notes
Range – (AMP)	All structural improvements directly required to implement the AMP will be installed and financed whereby the FS provides approximately 50% of the cost and the permittee provides the remaining 50%. (G)	N/A	N/A	
Range – (AMP)	Permittees are allowed motorized access to maintain facilities. AMPs and AOIs will include direction that motorized access must be less than 2 vehicles per week (This permitted access is not included in the OROMTRD). (S)	4	4	
Range – (AMP) and Fisheries & Other Aquatic Resources	<p>Within subwatersheds occupied by native cutthroat trout or designated as vital to meeting recovery goals, identify areas where livestock grazing is causing fisheries habitat conditions to fall below or retard the rate of recovery toward the values described in the “Expected values for healthy fish habitat conditions” (listed below). Include specific remedial actions in the AMP or AOI. Progress toward meeting these expected values should be monitored and grazing systems adjusted, as necessary. (G)</p> <p>Expected Values for Healthy Fish Habitat Conditions:</p> <ul style="list-style-type: none"> • Pool frequency – at least 1 pool per length of stream equal to 5-7 times the channel width. • Water Temp. – 13° C or less with a max daily average no greater than 9 in spawning habitats or 16° C with a max daily average no greater than 12 in adult holding habitats. • LWD – Greater than 20 pieces/mile. • Bank stability – Greater than 80% <p>Lower bank angle (non-forested systems) – Greater than 75% of banks with less than 90° angle. Width/depth ratio – suitable for Rosgen stream type.</p>	4	4	Yellowstone Cutthroat are present within these drainages but suppressed. The stream are spawning tributaries to the Henrys Lake fisheries
Aquatic Influence Zone (AIZ) – Range	Incorporate into AMPs, objectives for attainment of desired vegetation conditions for riparian plant community seral stage development and stream channel condition. (G)	4	4	
Aquatic Influence Zone (AIZ) – Range	<p>Proposed livestock watering facilities, corrals, and holding pastures within these lands are allowed only if appropriate mitigation measures are implemented to reduce negative effects. (S)</p> <p>Existing livestock watering facilities, corrals, and holding pastures within these lands are allowed at permit issuance only if mitigation measures are implemented to reduce negative effects. (G)</p>	N/A	N/A	No livestock facilities found within this allotment.

Grazing BMP Review – Targhee NF

R1/R4 FSH 2509.22, Chapter10 - Soil and Water Conservation Practices

Practice	Objective and Implementation	Applicable	Implemented	Effective	Notes
17.01 – Range Analysis, Allotment Management Plan, Grazing Permit System, and Permittee Operating Plan	<p>To maintain and protect soil and water resources through sustained forage production and managed multiple use of range forage.</p> <p><u>Implementation:</u></p> <ul style="list-style-type: none"> • Allotment is NEPA sufficient (if yes, give date) and AMP is sufficient (if yes, give date) • Preparation and approval of AMP • Revise AMP as needed • AOI prepared or revised (as needed) annually to adjust for current allotment conditions and trends and to incorporate special instructions • Permittee carries out the plan • Corrective action is taken if permittee does not comply with permit conditions designed to protect soil and water resources. 	Y	4	4	The allotment is not NEPA sufficient, but it is on the Forest’s schedule for AMP update/NEPA compliance in fall/winter 2006/2007. The AOI is annually updated
17.02 – Controlling Livestock Numbers and Season of Use	<p>To maintain and protect soil and water resources through management of livestock numbers and season of use.</p> <p><u>Implementation:</u></p> <ul style="list-style-type: none"> • Proper stocking rates and season of use specified in the grazing permit. • Annual field checks are made to identify needed adjustments: range readiness evaluations, livestock counts, forage & browse utilization, and periodic assessments of rangelands (soil and veg. trends) • Permit is modified, cancelled, or suspended if needed. 	Y	4	4	

Grazing BMP Review – Targhee NF

R1/R4 FSH 2509.22, Chapter10 - Soil and Water Conservation Practices

Practice	Objective and Implementation	Applicable	Implemented	Effective	Notes
17.03 – Controlling Livestock Distribution	<p>To maintain and protect soil and water resources, including riparian areas though controlling livestock distribution.</p> <p><u>Implementation:</u> Proper techniques are used to reduce the impact on sensitive or naturally overused areas. Techniques may include:</p> <ul style="list-style-type: none"> • Fence construction and use of seasonal or pasture system management • Water developments in areas that receive little use and closures of water developments when proper use is achieved. • Other Range improvements. • Riding & herding to shift livestock locations • Placing salt or supplements away from water in forage areas with light grazing use to attract livestock • Moving livestock when prescribed utilization levels are reached. • Goats and sheep – open herding, limited trailing, and use of new bed grounds nightly. <p>Direction is incorporated into the AMP and AOI. The AOI reflects current allotment conditions and vegetative trends.</p>	Y	4	4	
17.04 – Rangeland Improvements	<p>To maintain and protect soil and water resources the use of rangeland improvements.</p> <p><u>Implementation:</u> Improvements are recognized in the allotment planning process. Improvements are used to improve management and restore or improve forage quality, quantity, or availability. Improvements may include:</p> <ul style="list-style-type: none"> • Rest and/or deferment through rotation grazing, fencing, or lighter grazing use by changing the grazing season, kind, class, or permitted number of livestock. • Stream stabilization projects • Reseeding, fertilization, and/or other non-structural improvements • Water developments • ID teams provide consultation on improvements and they are constructed in manner that protects surface and ground water quality 	Y	4	4	<p>Beaver re-introduction is recommended to start to improve stream conditions along the NF Duck Creek. In addition it is also recommended to assess stream channel condition to determine if other restoration measures might be necessary to restore channel health.</p>

Grazing BMP Review – Targhee NF

R4 Soil Management Handbook, FSH 2509.18 – Chapter 2 – Soil Quality Monitoring

Practice	Objective and Implementation	Applicable	Implemented	Effective	Notes
Detrimental Soil Disturbance ²	No more than 15% of an activity area should have detrimentally disturbed soil after the completion of all management activities. In other words, at least 85% of an activity area should be in a non-detrimentally disturbed condition.	Y	4	4	
Effective Ground Cover	The minimum effective ground cover, following the cessation of disturbance in an activity area, should be sufficient to prevent detrimental erosion. Detrimental erosion includes erosion rates that cause long-term productivity losses from an activity area or soil losses that are beyond those acceptable for the activity area. Minimum amounts of ground cover necessary to protect a soil from erosion are a function of soil properties, slope gradient and length, and erosivity (precipitation factor).	Y	4	4	

² Discuss the proper scale of the activity area (e.g. allotment, pasture, riparian areas). Activity Area is define in the handbooks as “an area impacted by a land management activity, excluding specified transportation facilities, dedicated trails, and mining excavations and dumps. Activity areas include such areas as: harvest units within timber sale areas and prescribed burn areas. Riparian and other environmentally sensitive areas may be monitored and evaluated as individual activity areas within larger management areas. It is recommended to describe the Activity Area for soil resources within planning and project implementation documents.”