APPENDIX A
Guidelines for Livestock Grazing Management

Guideline #1: Salting and supplemental feeding

If salt and/or mineral are provided to livestock, they will be placed a minimum of 1/4 mile from riparian areas (including both reservoirs and creeks) and stock water tanks. Salt and/or mineral placement locations will be rotated periodically (once each grazing season at a minimum). Supplemental feeding will not be allowed except to accomplish resource objectives.

Guideline #2: Riparian stubble height

Adequate riparian vegetative cover capable of protecting banks and dissipating energy during high flows will remain at the end of the grazing season. This riparian vegetation will exhibit high vigor. Stubble height and woody species utilization will be used as indicators of the current year's grazing impacts. Other methods including but not limited to greenline successional status, greenline stability rating, and percent streambank alteration will be used to identify trend in riparian condition. Utilization of key riparian grasses will be limited to an average 4 inch stubble height at the end of the grazing season. Key riparian grasses include Spartina pectinata (prairie cordgrass), Agropyron smithii (western wheatgrass), Carex spp. (sedges) and Scirpus spp. (bulrushes). Utilization of key palatable woody species such as Salix spp. (willows) and Populus spp. (cottonwoods) will be limited to light-to-moderate browsing as described in "Browse Evaluation By Analysis of Growth Form, Volume I, Methods for Evaluating Condition and Trend" (Keigley and Frisina, 1998).

Guideline #3: Utilization of upland grasses

Utilization on key grass species in upland areas will not exceed 50% by weight or 4 inch stubble height (6 inch stubble height for bluebunch wheatgrass) at the end of the grazing season. Sage grouse nesting areas have different site-specific objectives.

Guideline #4: Grazing systems

When practical, rotational or rest rotation type grazing systems will be used to maximize the amount of rest on the allotment during the growing season and/or break up the cycle of continuous hot season use on riparian areas. At a minimum, portions of an allotment under rotational grazing should receive periodic rest during the growing season and hot season grazing should not occur each year on any given pasture. Season-long or year-round grazing will be discontinued if standards for rangeland health are not met.

Guideline #5: Surface disturbance and seeding

Permittee must notify the BLM prior to conducting any surface disturbing activities on public land. Areas that are disturbed by fire or mechanical means will be rested two growing seasons. Native plant species will be used for reclamation of all disturbed areas. The only time non-native seed should be used is when there is a lack of native seed availability following large scale fires or the use of sterile non-native annual grasses is necessary to achieve rapid site stability and/or reduce the threat of noxious weeds.

Guideline #6: Pasture moves

Pasture move dates as shown in this watershed plan are an estimate, actual move dates should be based on resource conditions and forage utilization. Any pasture moves exceeding five days past the scheduled move date will be made with concurrence of the BLM. Earlier or later move dates could be required or permitted based on resource or livestock conditions or if the guidelines for upland utilization or riparian stubble heights are exceeded or are yet to be reached.

Guideline #7: Changes in scheduled use

Any deviation from scheduled use must be applied for by the permittee and approved by the BLM manager prior to any changes taking place. The guidelines for upland utilization, riparian stubble heights and progress toward meeting site-specific objectives will be evaluated when reviewing requests for deviation from scheduled use. Requests to change use will not be granted unless it has been demonstrated to be consistent with achieving healthy, properly functioning ecosystems and site-specific objectives.

Guideline #8: Drought

During periods of drought, or at the earliest possible time when it becomes apparent that drought conditions are likely, the BLM and permittees will meet to discuss and arrange management changes needed to reduce resource impacts and continue progress toward meeting specific objectives (Refer to BLM Montana, North Dakota and South Dakota drought policy).

Guideline #9: Terms and conditions/ management prescriptions

Management prescriptions are identified on a site-specific basis and will be implemented as terms and conditions of the grazing permit/ lease. Permittees should provide periodic input to BLM on needed adjustments to grazing plans so that refinements can be made to improve resource conditions.

Guideline #10: Water developments

Locate facilities (water developments, etc) away from riparian-wetland areas. Water tanks must have an escape ramp, float valve and overflow pipe to eliminate over flow around tank.

Guideline #11: Weeds

Noxious weed control is essential and should include: cooperative agreements, public education, and integrated pest management (mechanical, biological, chemical).

Guideline #12: Water quality

Livestock management should utilize practices such as those referenced by the published Natural Resources Conservation Service (NRCS) prescribed grazing technical guide to maintain, restore or enhance water quality.

Guideline #13: Threatened, endangered and sensitive species

Grazing management should maintain or improve habitat for federally listed threatened or endangered species and any state listed sensitive species. BLM will keep permittees informed of changes in listing status of any species known to exist on their allotment.

Guideline #14: Native plants

Grazing management should maintain or promote the physical and biological conditions to sustain native populations and communities.

Guideline #15: Control of livestock

Control of livestock is the permittee's responsibility. Monitoring should be conducted by permittee to insure livestock are in proper locations. Livestock that are allowed to freely roam to public lands on adjacent allotments will be treated as trespass livestock. Additional monitoring will be conducted by the BLM to insure this guideline is met.

APPENDIX B
Standards for Rangeland Health

Standards are statements of physical and biological condition or degree of function required for health sustainable rangelands. Achieving or making significant and measurable progress towards these functions and conditions is required of all uses of public rangelands. Historical data, when available, should be used when assessing progress towards these standards.

Standard #1: Uplands Are In Proper Functioning Condition

This means that soils are stable and provide for capture, storage and safe release of water appropriate to soil type, climate and landform. The amount and distribution of ground cover (i.e., litter, live and standing dead vegetation, microbiotic crusts, and rock/gravel) for identified ecological site(s) or soil-plant associations are appropriate for soil stability.

Evidence of accelerated erosion in the form of rills and/or gullies, erosional pedestals, flow patterns, physical soil crusts/surface scaling and compaction layers below the soil surface is minimal. Ecological processes including hydrologic cycle, nutrient cycle and energy flow are maintained and support healthy biotic populations. Plants are vigorous, biomass production is near potential and there is a diversity of species characteristic of and appropriate to the site. Assessing proper functioning conditions will consider use of historical data.

As indicated by:

Physical Environment

- erosional flow patterns
- surface litter
- soil movement by water and wind
- soil crusting and surface sealing
- compaction layer
- rills
- gullies

Biotic Environment

- cover distribution
- community richness
- community structure
- exotic plants
- plant status
- seed production
- recruitment
- nutrient cycle

Standard #2: Riparian And Wetland Areas Are In Proper Functioning Condition

This means that the functioning condition of riparian-wetland areas is a result of the interaction among geology, soil, water and vegetation.

Riparian-wetland areas are functioning properly when adequate vegetation, landform or large woody debris is present to dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality; filter sediment, capture bedload, and aid floodplain development; improve flood water retention and groundwater recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for native fish production, waterfowl breeding, and other uses appropriate for the area that will support greater species richness.

The riparian-wetland vegetation is a mosaic of species richness and community structure serving to control erosion, shade water, provide thermal protection, filter sediment, aid floodplain development, dissipate energy, delay flood water, and increase recharge of groundwater where appropriate to landform.

The stream channels and flood plain dissipate energy of high water flows and transport sediment appropriate for the geomorphology

(e.g., gradient, size, shape, roughness, confinement, and sinuosity), climate, and landform.

Soils support appropriate riparian-wetland vegetation, allowing water movement, filtering sediment, and slowing ground water movement for later release. Stream channels are not entrenching beyond natural climatic variations and water levels maintain appropriate riparian-wetland species.

Riparian areas are defined as land directly influenced by permanent water. It has visible vegetation or physical characteristics reflective of permanent water influence. Lake shores and streambanks are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not exhibit the presence of vegetation dependent upon free water in the soil. Assessing proper functioning conditions will consider use of historical data.

As indicated by:

Hydrologic

- floodplain inundated in relatively frequent events (1-3 years)
- amount of altered streambanks
- sinuosity, width/depth ratio, and gradient are in balance with the landscape setting (i.e., landform, geology, and bioclimatic region); and upland watershed not contributing to riparian degradation.

Erosion/Deposition

- plain and channel characteristics; i.e., rocks, coarse and/or woody debris adequate to dissipate energy
- point bars are being created and older point bars are being vegetated
- lateral stream movement is associated with natural sinuosity
- system is vertically stable
- stream is in balance with water and sediment being supplied by the watershed (i.e., no excessive erosion or deposition)

Vegetation

- reproductive and diverse age class of vegetation
- diverse composition of vegetation
- species present indicate maintenance of riparian soil moisture characteristics
- streambank vegetation is comprised of those plants or plant communities that have deep binding root masses capable of withstanding high streamflow events
- utilization of trees and shrubs
- riparian plants exhibit high vigor
- adequate vegetative cover present to protect banks and dissipate energy during high flows
- where appropriate, plant communities in the riparian area are an adequate source of woody debris

Standard #3: Water Quality Meets Montana State Standards

This means that surface and ground water on public lands fully support designated beneficial uses described in the Montana Water Quality Standards. Assessing proper functioning conditions will consider use of historical data.

As indicated by:

- dissolved oxygen concentration
- pH
- turbidity
- temperature
- fecal coliform
- sediment
- color
- toxins
- others: ammonia, barium, boron, chlorides, chromium, cyanide, endosulfan, lindane, nitrates, phenols, phosphorus, sodium, sulfates, etc.

Standard #4: Air Quality Meets Montana State Standards

This means that air quality on public lands

helps meet the goals set out in the State of Montana Air Quality Implementation Plan. Efforts will be made to limit unnecessary emissions from existing and new point or non-point sources.

The BLM management actions or use authorizations do not contribute to air pollution that violates the quantitative or narrative Montana Air Quality Standards or contributes to deterioration of air quality in selected class area.

As indicated by:

Section 176(c) Clean Air Act which states that activities of all federal agencies must conform to the intent of the appropriate State Air Quality Implementation Plan and not:

- cause or contribute to any violations of ambient air quality standards
- increase the frequency of any existing violations
- impede the State's progress in meeting their air quality goals

Standard #5: Habitats are provided to maintain healthy, productive and diverse populations of native plant and animal species, including special status species (federally threatened, endangered, candidate or Montana species of special concern as defined in BLM Manual 6840, Special Status Species Management)

This means that native plant and animal communities will be maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant lifeforms. Where native communities exist, the conversion to exotic communities after disturbance will be minimized. Management for indigenous vegetation and animals is a priority. Ecological processes including hydrologic cycle, and energy flow, and plant succession are maintained and support healthy biotic populations. Plants are vigorous, biomass production is near potential, and there is a diversity of plant and animal species characteristic of and appropriate to the site. The environment contains components necessary to support viable populations of a sensitive/threatened and endangered species in a given area relative to site potential. Viable populations are wildlife or plant populations that contain an adequate number of reproductive individuals distributed on the landscape to ensure the long-term existence of the species. Assessing proper functioning conditions will consider use of historical data.

As indicated by:

- plants and animals are diverse, vigorous and reproducing satisfactorily noxious weeds are absent or insignificant in the overall plant community
- spatial distribution of species is suitable to ensure reproductive capability and recovery
- a variety of age classes are present
- connectivity of habitat or presence of corridors prevents habitat fragmentation
- species richness (including plants, animals, insects and microbes) are represented
- plant communities in a variety of successional stages are represented across the landscape.

APPENDIX C
Monitoring and Evaluation

Key areas would be established for upland and riparian utilization. Existing upland study sites would continue to be used and additional sites may need to be established. Additional riparian study sites would need to be established. There should be a minimum of one upland and one riparian study site per pasture unless no significant riparian habitat exists in the pasture.

Monitoring would be collected by permittees and the BLM. Permittees would be responsible to constantly monitor livestock distribution, utilization levels, and stubble heights on their allotments to ensure that livestock grazing is consistent with established guidelines. Monitoring would be conducted according to the Monitoring for Success guidebook (DNRC, August, 1999). Permittees would be responsible to send data and photos of each monitoring site yearly to BLM. The photos would be taken following grazing use. Photos would be reviewed and if there is concern about the site then the BLM would plan to monitor the site the next year.

Monitoring would be conducted utilizing the key species dominant at each study site. In most cases, key upland species would be western wheat grass, green needle and blue bunch wheat grass.

Upland study plots are marked by UTM coordinates listed in Appendix D. Permittees would take four general landscape photos taken from the UTM coordinate facing north, south, east and west. Another photo would be taken directly at the ground. Photos for riparian monitoring sites would be taken from the upstream end of the study reach looking downstream. BLM would monitor sites (riparian and upland) according to their present condition rating:

- Proper Functioning Condition sites: every 5 years
- Functioning At Risk sites: every 2-3 years
- Non-Functioning sites: yearly

Appendices D & F list the upland and riparian monitoring schedules by study plot.

BLM personnel will be available to provide monitoring training for permittees.

First order fire effects would be monitored following the prescribed burns.

Evaluation of monitoring data would occur yearly. A watershed evaluation would need to be completed within 10 years for permit renewal. The BLM may require permit/lease holders to monitor conditions on allotments in the future.

The monitoring schedule was established based on current resource conditions and the need to assess impacts of proposed changes. Random visits will also be taken to the allotments listed above to assess overall conditions. The schedule shown above does not include monitoring of restoration or prescribed fire projects.

APPENDIX D
Upland Health Assessments and Monitoring Schedule

(NOTE: In order to adhere to the Privacy Act, the names of permittees will not be used in this table. Each permittee was informed, by letter, of which number refers to his/her allotment(s)).

Allotment Name	Allot. No. & Transect No.	Identification Number	Ecol. Site Index Score/Seral Stage	Trend	Range Health Indicators (departure from expected for the site)	Transect UTM Coordinates	Monitoring Schedule and Comments
Petrolia Bench Ranch	04901 T1	001	58 - late	2 - up	slight/moderate	12T 0718749 5212548	5 years
Petrolia Bench Ranch	04901 T2	001	51 - late	2 - up	none/slight	12T 0718806 5208324	5 years
Maginnis	00823 T1	002	57 - late	1 - down	none/slight	13T 0272749 5190919	5 years
Yellowwater	15040 T1	003	32 - mid	2 - down	slight/moderate	12T 0691514 5194464	3 years
Yellowwater	15040 T2	003	42 - mid	1 - static	slight/moderate	12T 0689344 5194256	3 years
Yellowwater	15040 T4	003	51 - late	2 - down	slight/moderate	12T 0688244 5199572	3 years
Yellowwater	15040 T5	003	43 - mid	2 - down	none/slight	12T 0689186 5199209	3 years
Yellowwater	15040 T6	003	32 - mid	4 - down	none/slight	12T 0689072 5195566	3 years
Yellowwater	15040 T7	003	35 - mid	1 - static	none/slight	12T 0690661 5194493	3 years
Yellowwater	15040 T8	003	50 - late	5 - down	none/slight	12T 0688286 5194960	3 years
N. Willow Creek	04824 T-1	004	30-mid	7-down	slight/moderate	13T 0273866 5192081	2 years
N. Willow Creek	04824 T-2	004	42-mid	1-static	none/slight	13T 0275641 5192968	2 years
N. Willow Creek	04824 T-3	004	33-mid	0-static	none/slight	13T 0278889 5192416	2 years
N. Willow Creek	04824 T-4	004	59-late	0-static	slight/moderate	13T 0281060 5193724	2 years
McDonald Creek	04902 T1	005	35 - mid	0 - static	none/slight	12T 0715726 5205780	5 years
McDonald Creek	04902 T2	005	10 - early	0 - static	none/slight	12T 0714999 5205003	5 years
Warhorse Ind.	15152 T1	006	45 - mid	2 - up	none/slight	12T 0685152 5219510	3 years
South War Horse	15153 T1	007	68 - late	8 - up	none/slight	12T 0684802 5215958	5 years
Eager Home Ranch	15061 T1	008	50 - late	7 - up	none/slight	12T 0696648 5209347	5 years
Box Elder	02529 T1	009	57 - late	4 - down	none/slight	12T 0698403 5218457	5 years
Box Elder	02529 T2	009	47 - mid	0 - static	none/slight	12T 0697193 5221256	5 years
Box Elder	02529 T3	009	45 - mid	4 - down	none/slight	12T 0697231 5221517	5 years
Box Elder	02529 T4	009	53 - late	5 - up	none/slight	12T 0694373 5222991	5 years
Box Elder	02529 T5	009	56 - late	3 - down	none/slight	12T 0695462 5221682	5 years
Hubert Coulee	02539 T1	010	69 - late	8 - up	none/slight	12T 0708048 5228441	5 years
Aikens	04859 T1	011	41 - mid	0 - static	none/slight	12T 0700269 5221914	5 years
Sheep Wagon	15064 T1	012	58 - late	4 - down	none/slight	12T 0701491 5227048	5 years

*The monitoring schedule was established based on current resource conditions and the need to assess impacts of proposed changes. The schedule does not include random visits or monitoring of restoration projects.

Allotment Name	Allot. No. & Transect No.	Identification Number	Ecol. Site Index Score/Seral Stage	Trend	Range Health Indicators (departure from expected for the site)	Transect UTM Coordinates	Monitoring Schedule and Comments
Sheep Wagon	15064 T2	012	45 - mid	2 - down	none/slight	12T 0702701 5225787	5 years
Aikens	25012 T1	013	53 - late	5 - up	none/slight	12T 0702715 5219461	5 years
Yellow Water Creek	15085 T1	014	50 - late	2 - down	none/slight	12T 0698831 5195741	5 years
Yellow Water Creek	15085 T2	014	5 - early	3 - down	none/slight	12T 0696826 5194524	5 years
Chippewa	02606 T1	015	56 - late	8 - up	none/slight	12T 0660050 5214391	5 years
Chippewa	02606 T2	015	43 - mid	3 - up	none/slight	12T 0665298 5216803	5 years
Chippewa	02606 T3	015	45 - mid	2 - down	none/slight	12T 0662372 5219193	5 years
Schulz	02666 T1	016	33 - mid	1 - down	none/slight	12T 0651414 5222979	5 years
Schulz	02666 T2	016	45 - mid	7 - up	none/slight	12T 0649226 5225452	5 years
Brickyard	02611 T1	017	43 - mid	2 - down	slight/moderate	12T 0669319 5222687	3 years
Brickyard	02611 T2	017	45 - mid	2 - down	none/slight	12T 0667324 5221870	3 years
Brickyard	02611 T3	017	35 - mid	1 - down	none/slight	12T 0663738 5222709	3 years
Brickyard	02611 T4	917	40 - mid	2 - down	none/slight	12T 0670838 5220635	3 years
Degner Pasture	02613 T1	018	58 - late	9 - up	none/slight	12T 0664251 5222104	5 years
County Line	12804 T1	019	65 - late	5 - up	none/slight	12T 0681595 5198798	5 years
Spring Creek	15147 T1	020	43 - mid	4 - down	slight/moderate	12T 0682492 5202854	3 years
Spring Creek	15147 T2	020	75 - PNC	6 - up	none/slight	12T 0686371 5201675	3 years
Forty One	02664 T1	021	34 - mid	2 - down	none/slight	12T 0668641 5219596	5 years
S. Fork Bear Creek	14910 T1	022	45 - mid	1 - static	none/slight	12T 0684510 5231808	5 years
S. Fork Bear Creek	14910 T2	022	56 - late	3 - up	none/slight	12T 0683680 5235673	5 years
Grass Range East	02673 T1	023	42 - mid	1 - static	none/slight	12T 0674260 5215697	5 years
Grass Range East	02673 T2	023	50 - late	3 - up	none/slight	12T 0673739 5215385	5 years
Harris	04874 T1	024	30 - mid	2 - down	none/slight	12T 0672694 5225653	3 years
Harris	04874 T2	024	62 - late	9 - up	none/slight	12T 0671764 5226977	3 years
Harris	04874 T3	024	50 - late	6 - up	none/slight	12T 0674189 5225408	3 years
Harris	04874 T4	024	65 - late	6 - up	none/slight	12T 0674020 5225768	3 years
Harris	04874 T5	024	56 - late	3 - up	none/slight	12T 0672634 5224829	3 years
Bear Creek	14912 T1	025	31 - mid	2 - down	none/slight	12T 0680836 5236900	3 years
Bear Creek	14912 T2	025	27 - mid	8 - down	slight/moderate	12T 0677404 5237347	3 years
Bear Creek	14912 T3	025	60 - late	3 - up	none/slight	12T 0679930 5239506	3 years
Bear Creek	14912 T4	025	42 - mid	2 - up	none/slight	12T 0669569 5233395	3 years
Croft Place	12608 T1	026	48 - mid	7 - up	none/slight	12T 0648056 5218694	5 years
Croft Place	12608 T2	026	32 - mid	1 - static	none/slight	12T 0647951 5218933	5 years
Elk Creek Bench	04865 T1	027	40 - mid	3 - down	none/slight	12T 0699162 5196347	3 years
Elk Creek Bench	04865 T2	027	46 - mid	6 - up	none/slight	12T 0700586 5197378	3 years

Elk Creek Bench	04865 T4	027	40 - mid	2 - down	none/slight	12T 0700291 5195717	3 years
Elk Creek Bench	04865 T5	027	45 - mid	4 - up	none/slight	12T 0701737 5197313	3 years
Elk Creek Bench	04865 T6	027	18 - early	4 - down	none/slight	12T 0686118 5206711	3 years
Elk Creek Bench	04865 T7	027	55 - late	0 - static	slight/moderate	12T 0700992 5220710	3 years
Fanyak Exchange	02536	028	ref. 04865	ref. 04865	ref. 04865		3 years
Flatwillow Colony	09684 T1	029	42 - mid	0 - static	none/slight	12T 0695569 5182145	5 years
Duck Creek	04868 T1	030	55 - late	1 - static	none/slight	12T 0680851 5228989	3 years
Duck Creek	04868 T2	030	22 - early	4 - down	none/slight	12T 0678811 5229026	3 years
Chippewa School	02623 T1	031	43 - mid	0 - static	none/slight	12T 0661725 5217034	5 years
Wellman	02677 T1	032	30 - mid	7 - down	slight/moderate	12T 0656844 5216806	5 years
Little Dam	12601 T1	033	37 - mid	8 - down	none/slight	12T 0660694 5220552	5 years
Little Dam	12601 T2	033	41 - mid	8 - down	slight/moderate	12T 0661096 5220377	5 years
Little Dam	12601 T3	033	44 - mid	4 - up	none/slight	12T 0658752 5223332	5 years
Gilt Edge	02620 T1	034	39 - mid	3 - down	none/slight	12T 0655010 5224382	5 years
Maginnis Creek	00985	035	ref. 15119	ref. 15119	ref. 15119		2 years
Alan Ind.	15119 T1	036	35 - mid	2 - down	moderate	12T 0720393 5186346	2 years
Alan Ind.	15119 T2	036	34 - mid	1 - down	slight/moderate	12T 0723632 5191774	2 years
Railroad	15118 T1	037	25 - mid	3 - up	none/slight	12T 0712014 5185627	5 years
Petroleum Ind.	15120 T1	038	25 - mid	3 - down	slight/moderate	12T 0714239 5182768	5 years
54 Livestock	14993 T1	039	40 - mid	1 - static	none/slight	12T 0710513 5184460	5 years
North Highway	15024 T1	040	46 - mid	0 - static	none/slight	12T 0698182 5211964	5 years
FCC Ind. A	25000 T1	041	44 - mid	8 - up	none/slight	12T 0704396 5199257	5 years
Bohemian Corner	02668 T1	042	42 - mid	3 - up	none/slight	12T 0668978 5247023	5 years
Circle Bar Coulee	04827 T1	043	53 - late	4 - up	none/slight	13T 0273909 5197112	5 years
Circle Bar Coulee	04827 T2	043	47 - mid	2 - up	none/slight	12T 0274793 5197268	5 years
A Holgren Place	04872 T1	044	57 - late	1 - static	none/slight	12T 0690313 5217777	5 years
Hale Ind. D	05068 T1	045	59 - late	1 - static	none/slight	12T 0697009 5221362	5 years
C. Beckstrom Ind.	15067 T1	046	41 - mid	6 - down	slight/moderate	12T 0696014 5216878	3 years
C. Beckstrom Ind.	15067 T2	046	55 - late	3 - up	none/slight	12T 0694846 5216699	3 years
C. Beckstrom Ind.	15067 T3	046	48 - mid	2 - up	none/slight	12T 0697728 5217995	3 years
Hale Ranch	15069 T1	047	72 - late	6 - up	none/slight	12T 0694195 5220436	5 years
S. War Horse (Hale)	25004 T1	048	67 - late	1 - static	slight/moderate	12T 0692239 5216947	5 years
S. War Horse (Hale)	25004 T2	048	45 - mid	4 - up	none/slight	12T 0695756 5216505	5 years
Walker Ranch	14903 T1	049	25 - early	4 - down	slight/moderate	12T 0682939 5218635	3 years
Walker Ranch	14903 T2	049	53 - late	3 - down	none/slight	12T 0682417 5220047	3 years

*The monitoring schedule was established based on current resource conditions and the need to assess impacts of proposed changes. The schedule does not include random visits or monitoring of restoration projects.

Allotment Name	Allot. No. & Transect No.	Identification Number	Ecol. Site Index Score/Seral Stage	Trend	Range Health Indicators (departure from expected for the site)	Transect UTM Coordinates	Monitoring Schedule and Comments
Walker Ranch	14903 T3	049	44 - mid	2 - up	slight/moderate	12T 0689361 5220205	3 years
S. War Horse Ind.	15046 T1	050	39 - mid	2 - down	none/slight	12T 0683066 5222500	3 years
East Winett	15047 T1	051	29 - mid	4 - down	none/slight	12T 0709095 5212542	5 years
Yellow Water Basin	04898 T1	052	35 - mid	4 - down	none/slight	12T 0701870 5198280	3 years
Yellow Water Basin	04898 T2	052	25 - mid	3 - down	none/slight	12T 0700983 5198479	3 years
Yellow Water Basin	04898 T3	052	32 - mid	2 - down	none/slight	12T 0698865 5199085	3 years
Hedman Pasture B	15073 T1	053	36 - mid	0 - static	none/slight	12T 0678900 5224640	3 years
Hedman Pasture C	15074 T1	054	44 - mid	1 - static	none/slight	12T 0682452 5220741	5 years
Hedman Pasture D	04875 T1	055	45 - mid	5 - down	slight/moderate	12T 0683128 5226097	5 years
Hedman Pasture E	15075 T1	056	39 - mid	3 - up	none/slight	12T 0686253 5224112	5 years
Hedman Pasture F	15076 T1	057	61 - late	5 - up	none/slight	12T 0686601 5222724	5 years
Hedman Pasture F	15076 T2	057	36 - mid	1 - static	none/slight	12T 0686270 5224037	5 years
War Horse Common	15071 T1	058	50 - late	1 - static	slight/moderate	12T 0687502 5221063	5 years
Wild Horse Lake	15072 T1	059	25 - mid	5 - down	slight/moderate	12T 0681729 5226656	5 years
Wild Horse Lake	15072 T2	059	60 - late	0 - static	slight/moderate	12T 0682800 5227331	5 years
Bender Creek Winnett	04891 T1	060	53 - late	3 - down	slight/moderate	12T 0684052 5197509	5 years
Bender Creek Winnett	04891 T2	060	55 - late	4 - down	slight/moderate	12T 0686145 5194365	5 years
Bender Creek Winnett	04891 T3	060	56 - late	5 - up	none/slight	12T 0682314 5197380	5 years
Bender Creek Winnett	04891 T4	060	56 - late	6 - up	none/slight	12T 0683094 5197682	5 years
Yellowwater Ind. B	15092 T1	061	44 - mid	5 - down	moderate	12T 0686901 5199422	3 years
Kaufman	02815 T1	062	65 - late	6 - up	none/slight	12T 0675119 5186303	5 years
Kaufman	02815 T2	062	50 - late	1 - static	slight/moderate	12T 0674454 5187805	5 years
Zimmerman Place	15036 T1	063	42 - mid	3 - down	slight/moderate	12T 0683146 5186912	3 years
Zimmerman Place	15036 T2	063	42 - mid	3 - up	none/slight	12T 0683135 5185778	3 years
Iverson Yellow Water	15151 T1	064	25 - mid	2 - down	slight/moderate	12T 0691015 5193790	3 years
Iverson Yellow Water	15151 T2	064	53 - late	4 - up	none/slight	12T 0689320 5190661	3 years
Iverson Yellow Water	15151 T3	064	41 - mid	6 - down	slight/moderate	12T 0692404 5191496	3 years
Bender Creek Hughes	02813 T1	065	41 - mid	4 - up	none/slight	12T 0679037 5186211	5 years
Bender Creek Hughes	02813 T2	065	41 - mid	1 - up	none/slight	12T 0679601 5186598	5 years
Bender Creek Hughes	02813 T3	065	65 - late	8 - up	none/slight	12T 0679715 5188092	5 years
Bender Creek Hughes	02813 T4	065	85 - pnc	9 - up	none/slight	12T 0680855 5197249	5 years
Breeding Pasture	04877 T1	066	49-mid	1-static	none/slight	12T 0681979 5189368	5 years
Meadow Pasture	05141 T1	067	49 - mid	6 - up	none/slight	12T 0691750 5185836	5 years
South Pasture	05142 T1	068	40-mid	5-down	slight/moderate	12T 0693806 5182406	5 years
Bench Pasture	05143 T1	069	29-mid	1-static	none/slight	12T 0691982 5188658	3 years

Pike Creek	05161 T1	070	31-mid	3-down	none/slight	12T 0686725 5193293	3 years
Pike Creek	05161 T2	070	40-mid	2-up	none/slight	12T 0685784 5191445	3 years
Hawkins Pasture	15138 T1	071	47-mid	4-up	none/slight	12T 0696010 5193769	5 years
L. Pike Creek	15139 T1	072	26-mid	2-down	none/slight	12T 0694742 5190688	3 years
Rozie Pasture	15140 T1	073	37-mid	4-up	none/slight	12T 0694276 5188468	5 years
Snoose Creek	15144 T1	074	54-late	1-static	none/slight	12T 0685201 5193803	5 years
Lambert Bench	15145 T1	075	52-late	1-static	none/slight	12T 0683675 5190366	5 years
North Flatwillow	15146 T1	076	37-mid	0-static	none/slight	12T 0688093 5191365	3 years
Windbreak	04873 T1	077	76 - pnc	6 - up	none/slight	12T 0690158 5186428	5 years
P.D. Pasture	04878 T1	078	41 - mid	1 - static	none/slight	12T 0690398 5183461	5 years
D. Iverson	04879 T1	079	44 - mid	1 - static	none/slight	12T 0686560 5181110	5 years
Silver Sage	15070 T1	080	55 - late	1 - static	none/slight	12T 0691757 5180839	5 years
Sage Hen	04880 T1	081	54 - late	2 - up	none/slight	12T 0689719 5187135	5 years
Jackson Home Place	02010 T1	082	45 - mid	2 - up	none/slight	12T 0644827 5245201	3 years
Crowley Dam	15014 T1	083	50 - late	3 - down	slight/moderate	12T 0704246 5187835	3 years
Crowley Dam	15014 T2	083	36 - mid	4 - up	none/slight	12T 0708475 5188738	3 years
Road Junction	15001 T1	084	43 - mid	5 - up	none/slight	12T 0713692 5197979	5 years
Flatwillow	15078 T1	085	53-late	4-up	none/slight	12T 0685019 5188815	5 years
Flatwillow	15078 T2	085	50-late	2-down	none/slight	12T 0688039 5186272	5 years
Flatwillow	15078 T4	085	60-late	0-static	none/slight	12T 0688394 5188654	5 years
Flatwillow	15078 T5	085	62-late	4-up	none/slight	12T 0683452 5180727	5 years
Flatwillow	15078 T6	085	47-mid	0-static	none/slight	12T 0685894 5180953	5 years
Flatwillow	15078 T7	085	40-mid	7-up	none/slight	12T 0684234 5182054	5 years
Mosby Road	25007 T1	086	68 - late	1 - static	none/slight	13T 0282394 5185358	5 years
King	04884 T2	087	45 - mid	4 - down	slight/moderate	12T 0696290 5203968	5 years
King	04884 T3	087	60 - late	5 - up	none/slight	12T 0696008 5200301	5 years
King	04884 T4	087	59 - late	3 - up	none/slight	12T 0691862 5200424	5 years
King	04884 T5	087	50 - late	4 - up	none/slight	12T 0689860 5201806	5 years
King	04884 T6	087	71 - late	2 - down	slight/moderate	12T 0693005 5204015	5 years
King 7 Heifer Pasture	05054 T1	088	70 - late	8 - up	none/slight	12T 0689192 5205011	5 years
King Winter Pasture	15055 T1	089	48 - mid	0 - static	none/slight	12T 0692939 5201242	5 years
Nebraska Place	04890 T1	090	63 - late	4 - up	none/slight	12T 0697039 5182684	5 years
Nebraska Place	04890 T2	090	41 - mid	3 - up	none/slight	12T 0694937 5187382	5 years
Nebraska Place	04890 T3	090	46 - mid	2 - down	none/slight	12T 0702256 5181462	5 years
Nebraska Place	04890 T4	090	53 - late	4 - up	none/slight	12T 0708198 5184936	5 years

*The monitoring schedule was established based on current resource conditions and the need to assess impacts of proposed changes. The schedule does not include random visits or monitoring of restoration projects.

Allotment Name	Allot. No. & Transect No.	Identification Number	Ecol. Site Index Score/Seral Stage	Trend	Range Health Indicators (departure from expected for the site)	Transect UTM Coordinates	Monitoring Schedule and Comments
Nebraska Place	04890 T5	090	45 - mid	4 - up	none/slight	12T 0695999 5189256	5 years
West Bohemian	02636 T1	091	38 - mid	0 - static	none/slight	12T 0662564 2545081	3 years
West Bohemian	02636 T2	091	67 - late	3 - down	none/slight	12T 0664018 5246485	3 years
Kruger	04885 T1	092	68 - late	2 - down	none/slight	12T 0681094 5231949	5 years
Bassett Place	15043 T1	093	35 - mid	3 - down	slight/moderate	12T 0672609 5219244	3 years
Bassett Place	15043 T2	093	37 - mid	4 - up	none/slight	12T 0675278 5220077	3 years
Bassett Place	15043 T3	093	34 - mid	6 - down	slight/moderate	12T 0679254 5220269	3 years
Bassett Place	15043 T4	093	53 - late	3 - up	none/slight	12T 0677241 5225383	3 years
Bassett Place	15043 T5	093	51 - late	7 - up	none/slight	12T 0677215 5224898	3 years
Bassett Place	15043 T6	093	49 - mid	8 - up	none/slight	12T 0677480 5220381	3 years
Bassett Place	15043 T7	093	50 - late	4 - up	none/slight	12T 0677820 5219414	3 years
Bassett Place	15043 T8	093	48 - mid	9 - up	none/slight	12T 0676893 5222144	3 years
Maidenhead	02616 T1	094	32 - mid	5 - up	none/slight	12T 0649866 5219362	5 years
Fisher	02642 T1	095	50 - late	6 - up	none/slight	12T 0665658 5225013	5 years
Fisher	02642 T2	095	41 - mid	2 - up	slight/moderate	12T 0666670 5226317	5 years
Fisher	02642 T3	095	68 - late	4 - up	none/slight	12T 0667243 5226234	5 years
Box Elder L&L Ind.	04854 T1	096	21 - early	4 - down	slight/moderate	12T 0691900 5232415	3 years
Buckler Place	02519 T4	097	33 - mid	2 - down	none/slight	12T 0671633 5224319	3 years
William Lewis Ind.	04886 T1	098	30 - mid	9 - down	slight/moderate	12T 0675662 5221905	3 years
William Lewis Ind.	04886 T2	098	62 - late	1 - static	none/slight	12T 0675550 5222950	3 years
William Lewis Ind.	04886 T3	098	55 - late	2 - up	none/slight	12T 0675956 5225181	3 years
William Lewis Ind.	04886 T5	098	49 - mid	3 - down	none/slight	12T 0672637 5223402	3 years
# Ranch	04869 T1	099	51 - late	2 - down	none/slight	12T 0704714 5199108	5 years
# Ranch	04869 T2	099	58 - late	4 - up	none/slight	12T 0702936 5198202	5 years
Salt Sage	14992 T1	100	46 - mid	3 - down	slight/moderate	12T 0710135 5195263	5 years
Marks Ind.	04887 T1	101	73 - late	5 - up	none/slight	12T 0701421 5219548	5 years
North Box Elder	04850 T1	102	58 - late	6 - down	slight/moderate	12T 0706881 5220673	3 years
North Box Elder	04850 T2	102	58 - late	2 - down	slight/moderate	12T 0705282 5222634	3 years
North Box Elder	04850 T3	102	43 - mid	8 - down	slight/moderate	12T 0705432 5217439	3 years
North Box Elder	04850 T4	102	31 - mid	2 - down	slight/moderate	12T 0706689 5217363	3 years
North Box Elder	04850 T5	102	25 - early	0 - static	none/slight	12T 0706972 5218664	3 years
Munson	02653 T1	103	44 - mid	6 - up	none/slight	12T 0658004 5218265	5 years
Munson	02653 T2	103	50 - late	1 - static	none/slight	12T 0660040 5219537	5 years
Briggs Coulee	02647 T1	104	35 - mid	2 - down	none/slight	12T 0675972 5216641	3 years
Briggs Coulee	02647 T2	104	39 - mid	1 - static	none/slight	12T 0673008 5210198	3 years

Musselshell	15010 T1	105	56 - late	3 - up	none/slight	13T 0281014 5186995	5 years
Adams	02665 T1	106	29 - mid	4 - down	slight/moderate	12T 0652147 5243247	5 years
Pearce	14911 T1	107	34 - mid	1 - static	none/slight	12T 0668136 5232788	5 years
Pearce	14911 T2	107	10 - early	2 - up	none/slight	12T 0668098 5237432	5 years
West Winnett	15023 T1	108	35 - mid	4 - down	slight/moderate	12T 0699952 5205342	2 years
Hill South Winnett	04876 T1	109	48 - mid	1 - static	none/slight	12T 0698346 5202938	5 years
Hill South Winnett	04876 T2	109	40 - mid	4 - up	none/slight	12T 0700426 5203292	5 years
S Fork Bear Creek	02654 T1	110	46 - mid	1 - static	none/slight	12T 0667275 5228024	5 years
S Fork Bear Creek	02654 T2	110	47 - mid	2 - down	none/slight	12T 0666491 5232047	5 years
O-N	02662 T1	111	35 - mid	0 - static	none/slight	12T 0663420 5242787	5 years
Bohemian South	02656 T1	112	48 - mid	5 - up	none/slight	12T 0661272 5245486	5 years
Chimney Rock South	05098 T1	113	13 - early	5 - down	slight/moderate	12T 065775 5228978	5 years
Chimney Rock Ind.	15095 T1	114	50 - late	4 - down	none/slight	12T 0694230 5229950	5 years
Skibby Place	15059 T1	115	54 - late	2 - down	none/slight	12T 0697234 5226940	2 years
Skibby Place	15059 T2	115	60 - late	2 - up	none/slight	12T 0694999 5226894	2 years
Skibby Place	15059 T3	115	50 - late	4 - up	none/slight	12T 0700067 5228383	2 years
Skibby Place	15059 T4	115	34 - mid	0 - static	none/slight	12T 0692814 5231515	2 years
Skibby Place	15059 T5	115	39 - mid	2 - down	none/slight	12T 0691419 5227924	3 years
Skibby Place	15059 T6	115	59 - late	4 - up	none/slight	12T 0689516 5225060	3 years
Skibby Place	15059 T7	115	53 - late	4 - up	none/slight	12T 0693525 5224632	3 years
Elder	02659 T1	116	45 - mid	1 - static	none/slight	12T 0674124 5244189	5 years
Doman-Schultz	04863 T1	117	52 - late	4 - up	none/slight	12T 0685706 5203315	5 years
Doman-Schultz	04863 T2	117	51 - late	2 - up	none/slight	12T 0684821 5204003	5 years
Marsh Hawk	04894 T1	118	78 - pnc	8 - up	none/slight	12T 0687979 5206344	5 years
Marsh Hawk	04894 T2	118	62 - late	5 - up	none/slight	12T 0688864 5208054	5 years
Marsh Hawk	04894 T3	118	58 - late	4 - up	none/slight	12T 0684684 5208931	5 years
Marsh Hawk	04894 T4	118	69 - late	5 - up	none/slight	12T 0684792 5209084	5 years
Marsh Hawk	04894 T5	118	67 - late	5 - up	none/slight	12T 0686850 5209159	5 years
Marsh Hawk	04894 T6	118	55 - late	2 - up	none/slight	12T 0686768 5209009	5 years
Marsh Hawk	04894 T7	118	62 - late	6 - up	none/slight	12T 0689988 5208888	5 years
Hughes Coulee	04831 T1	119	37 - mid	3 - down	slight/moderate	13T 0282888 5205199	3 years
Hughes Coulee	04831 T2	119	44 - mid	2 - up	slight/moderate	13T 0279277 5207154	3 years
Maxwell Ranch	15009 T1	120	41 - mid	2 - down	none/slight	13T 0275150 5183768	5 years
East Roy	02670 T1	121	67 - late	7 - down	slight/moderate	12T 0659415 5244050	3 years
East Roy	02670 T2	121	45 - mid	2 - down	slight/moderate	12T 0662563 5242295	3 years

*The monitoring schedule was established based on current resource conditions and the need to assess impacts of proposed changes. The schedule does not include random visits or monitoring of restoration projects.

Allotment Name	Allot. No. & Transect No.	Identification Number	Ecol. Site Index Score/Seral Stage	Trend	Range Health Indicators (departure from expected for the site)	Transect UTM Coordinates	Monitoring Schedule and Comments
Solf Bros. A	15090 T1	122	18 - early	2 - down	slight/moderate	12T 0715897 5207249	2 years
Solf Bros. B	04897 T1	123	51 - late	2 - up	none/slight	12T 0718806 5208324	5 years
Little Bear	05018 T1	124	80 - pnc	2 - up	none/slight	12T 0691718 5221063	5 years
Gorman Coulee	04990 T1	125	42 - mid	5 - up	none/slight	12T 0722359 5207852	5 years
Gorman Coulee	04990 T2	125	38 - mid	4 - up	none/slight	12T 0721318 5208527	5 years
Gorman Coulee	04990 T3	125	58 - late	5 - up	none/slight	12T 0723962 5207858	5 years
Alfalfa Acres	14988 T1	126	61 - late	6 - up	none/slight	12T 0723271 5205507	5 years
N.T., S. Rattlesnake, Pet., & Elk	04900 T1	127	35 - mid	1 - static	none/slight	12T 0694635 5206617	5 years
N.T., S. Rattlesnake, Pet., & Elk	04900 T2	127	64 - late	8 - up	none/slight	12T 0684210 5204467	5 years
N.T., S. Rattlesnake, Pet., & Elk	04900 T3	127	75 - pnc	8 - up	none/slight	12T 0683070 5209154	5 years
N.T., S. Rattlesnake, Pet., & Elk	04900 T4	127	64 - late	2 - up	none/slight	12T 0682320 5213157	5 years
N.T., S. Rattlesnake, Pet., & Elk	04900 T5	127	46 - mid	2 - up	none/slight	12T 0679890 5214741	5 years
West Bassett	15039 T1	128	44 - mid	5 - down	none/slight	12T 0671983 5218583	5 years
Ford Creek	15045 T1	129	60 - late	9 - up	none/slight	12T 0681992 5219653	5 years
Teigen Ind. Pasture	04899 T1	130	52 - late	5 - up	none/slight	12T 0691425 5212166	5 years
Teigen Ind. Pasture	04899 T2	130	58 - late	7 - up	none/slight	12T 0690098 5211004	5 years
Schuster & White	15048 T1	131	55 - late	1 - static	none/slight	12T 0695865 5212733	5 years
Schuster & White	15048 T2	131	52 - late	5 - up	none/slight	12T 0683879 5214920	5 years
Forgy Common	12700 T1	132	43 - mid	7 - up	none/slight	12T 0664510 5219409	5 years
Forgy Common	12700 T2	132	45 - mid	1 - static	none/slight	12T 0663666 5220837	5 years
Whisonant Place	14906 T1	133	34 - mid	1 - static	none/slight	12T 0722784 5210834	5 years
Little Box Elder	02609 T1	134	68 - late	1 - up	none/slight	12T 0656234 5226947	5 years
Little Box Elder	02609 T2	134	38 - mid	1 - up	none/slight	12T 0663934 5224885	5 years

*The monitoring schedule was established based on current resource conditions and the need to assess impacts of proposed changes. The schedule does not include random visits or monitoring of restoration projects.

APPENDIX E
Riparian Health Assessments

Allotment Name	Allotment No.	Identification Number	Stream Name / Polygon No.	Health Rating	Distance (miles)	Meeting Standards?	Reason Not Meeting
Petrolia Bench Ranch	04901	001	No Riparian				
Maginnis Creek	00823	002	No Riparian				
Yellow Water	15040	003	Snoose Creek - 5	60 - FAR (upward)	0.9	NO	making progress towards meeting standards
Yellow Water	15040	003	Unnamed Tributary to Yellowwater - 1	59 - NF	0.9	NO	livestock/natural erosion
Yellow Water	15040	003	Unnamed Tributary to Yellowwater - 2	75 - FAR (upward)	0.3	NO	making progress towards meeting standards
N. Willow Creek	04824	004	Musselshell River - 14	82 - PFC	0.6	YES	
N. Willow Creek	04824	004	Musselshell River - 15	82 - PFC	0.7	YES	
N. Willow Creek	04824	004	Musselshell River - 16	67 - FAR (static)	0.8	NO	livestock/weeds
N. Willow Creek	04824	004	Musselshell River - 16a	63 - FAR (static)	included above	NO	livestock/weeds
N. Willow Creek	04824	004	North Willow Creek - 1	43 - NF	1.2	NO	livestock
N. Willow Creek	04824	004	North Willow Creek - 2	38 - NF	0.5	NO	livestock
N. Willow Creek	04824	004	North Willow Creek - 3	63 - NF	0.3	NO	livestock
McDonald Creek	04902	005	No Riparian				
War Horse Ind.	15152	006	Buffalo Creek - 1	67 - FAR (upward)	0.6	NO	making progress towards meeting standards
South War Horse	15153	007	No Riparian				
Eager Home Ranch	15061	008	No Riparian				
Box Elder	02529	009	Box Elder Creek - 1 (upper)	80 - PFC	0.4	YES	
Box Elder	02529	009	Box Elder Creek - 2 (upper)	80 - PFC	0.8	YES	
Box Elder	02529	009	Box Elder Creek - 3	82 - PFC	0.9	YES	
Box Elder	02529	009	Box Elder Creek - 4	84 - PFC	1.4	YES	
Box Elder	02529	009	Box Elder Creek - 5	91 - PFC	1.4	YES	
Box Elder	02529	009	Box Elder Creek - 6	82 - PFC	1.2	YES	
Box Elder	02529	009	Box Elder Creek - 6a	86 - PFC	included above	YES	
Box Elder	02529	009	Box Elder Creek - 7	89 - PFC	1.5	YES	
Hubert Coulee	02539	010	No Riparian				
Aikens	04859	011	No Riparian				
Sheep Wagon	15064	012	No Riparian				
Aikens	25012	013	No Riparian				
Yellow Water Creek	15085	014	No Riparian				
Chippewa	02606	015	No Riparian				
Schulz	02666	016	No Riparian				
Brickyard	02611	017	Little Box Elder (Brickyard) - 5	34 - NF	1.1	NO	livestock/weeds/historic irrigation diversion
Brickyard	02611	017	Fords Creek - 8	66 - FAR (static)	0.8	NO	livestock/weeds
Degner Pasture	02613	018	No Riparian				
County Line	12804	019	No Riparian				
Spring Creek	15147	020	No Riparian				
Forty One	02664	021	No Riparian				
S. Fork Bear Creek	14910	022	Bear Creek - 1	62 - FAR (upward)	1.4	NO	making progress towards meeting standards
S. Fork Bear Creek	14910	022	Bear Creek - 2	87 - PFC	0.9	YES	
Grass Range East	02673	023	No Riparian				
Harris	04874	024	No Riparian				

Allotment Name	Allotment No.	Identification Number	Stream Name / Polygon No.	Health Rating	Distance (miles)	Meeting Standards?	Reason Not Meeting
Bear Creek	14912	025	No Riparian				
Croft Place	12608	026	No Riparian				
Elk Creek Bench	04865	027	No Riparian				
Fanyak Exchange	02536	028	No Riparian				
Flatwillow Colony	09684	029	No Riparian				
Duck Creek	04868	030	No Riparian				
Chippewa School	02623	031	No Riparian				
Wellman	02677	032	No Riparian				
Little Dam	12601	033	Fords Creek - 1	57 - NF	1.3	NO	weeds
Little Dam	12601	033	Fords Creek - 2 (exclosure)	58 - NF	0.4	NO	weeds
Little Dam	12601	033	Fords Creek - 3	53 - NF	0.2	NO	weeds
Gilt Edge	02620	034	No Riparian				
Maginnis Creek	00985	035	No Riparian				
Alan Ind.	15119	036	Maginnis Creek - 2	55 - NF	0.8	NO	livestock
Alan Ind.	15119	036	North Maginnis Creek - 1	32 - NF	0.4	NO	livestock
Railroad	15118	037	No Riparian				
Petroleum Ind.	15120	038	No Riparian				
54 Livestock	14993	039	No Riparian				
North Highway	15024	040	No Riparian				
FCC Ind. A	25000	041	No Riparian				
Bohemian Corner	02668	042	No Riparian				
Circle Bar Coulee	04827	043	Circle Bar Coulee - 1	55 - NF	1.7	NO	pipeline/road/natural erosion
Circle Bar Coulee	04827	043	Musselshell River - 12	72 - FAR (static)	0.6	NO	weeds
Circle Bar Coulee	04827	043	Musselshell River - 13	77- FAR (static)	0.6	NO	weeds
A Holgren Place	04872	044	No Riparian				
Hale Ind. D	05068	045	No Riparian				
C. Beckstrom Ind.	15067	046	Dry Creek - 1	91 - PFC	0.7	YES	
C. Beckstrom Ind.	15067	046	Dry Creek - 2	84 - PFC	0.3	YES	
Hale Ranch	15069	047	Buffalo Creek - 3	50 - NF	0.8	NO	livestock/weeds/upstream dewatering
Hale Ranch	15069	047	Buffalo Creek - 4	35- NF	0.9	NO	livestock/weeds/natural erosion/upstream dewatering
Hale Ranch	15069	047	Buffalo Creek - 5	42- NF	0.3	NO	livestock/weeds/natural erosion/upstream dewatering
S. War Horse (Hale)	25004	048	No Riparian				
Walker Ranch	14903	049	Buffalo Creek - 2	73 - FAR (upward)	0.3	NO	making progress towards meeting standards
S. War Horse Ind.	15046	050	No Riparian				
East Winett	15047	051	No Riparian				
Yellow Water Basin	04898	052	No Riparian				
Hedman Pasture B	15073	053	No Riparian				
Hedman Pasture C	15074	054	No Riparian				
Hedman Pasture D	04875	055	Duck Creek - 1	77 - FAR (upward)	1.2	NO	making progress towards meeting standards
Hedman Pasture E	15075	056	No Riparian				
Hedman Pasture F	15076	057	No Riparian				
War Horse Common	15071	058	No Riparian				
Wild Horse Lake	15072	059	Duck Creek - 2	65 - FAR (static)	0.8	NO	weeds
Wild Horse Lake	15072	059	Duck Creek - 3	75 - FAR (upward)	0.4	NO	making progress towards meeting standards
Bender Creek Winnett	04891	060	Snoose Creek - 3	65 - FAR (static)	1.3	NO	weeds/historic irrigation diversion

Yellowwater Ind. B	15092	061	No Riparian				
Kaufman	02815	062	No Riparian				
Zimmerman Place	15036	063	No Riparian				
Iverson Yellow Water	15151	064	Pike Creek - 6	57 - NF	1.4	NO	weeds
Iverson Yellow Water	15151	064	Pike Creek - 7	70 - FAR (upward)	1	NO	making progress towards meeting standards
Iverson Yellow Water	15151	064	Pike Creek - 7a	50 - NF	0.4	NO	livestock
Bender Creek Hughes	02813	065	No Riparian				
Breeding Pasture	04877	066	No Riparian				
Meadow Pasture	05141	067	No Riparian				
South Pasture	05142	068	No Riparian				
Bench Pasture	05143	069	Pike Creek - 8	17 - NF	0.6	NO	livestock
Bench Pasture	05143	069	Pike Creek - 9	17 - NF	1.1	NO	livestock
Pike Creek	05161	070	Pike Creek - 1a	76 - FAR (upward)	0.3	NO	making progress towards meeting standards
Pike Creek	05161	070	Pike Creek - 1b	61 - FAR (static)	0.4	NO	weeds/disturbance caused undesireable species
Pike Creek	05161	070	Pike Creek - 2	52 - NF	0.6	NO	weeds/disturbance caused undesireable species
Pike Creek	05161	070	Pike Creek - 3	58 -NF	0.7	NO	livestock/weeds
Pike Creek	05161	070	Pike Creek - 4	58 - NF	1.3	NO	livestock/weeds
Pike Creek	05161	070	Pike Creek - 5	68 - FAR (static)	0.1	NO	natural erosion
Hawkins Pasture	15138	071					
L. Pike Creek	15139	072	Pike Creek - PKC-01	75 - FAR (static)	0.4	NO	weeds
L. Pike Creek	15139	072	Pike Creek - PKC-02	70 - FAR (static)	0.7	NO	weeds
L. Pike Creek	15139	072	Pike Creek - PKC-01	58 - NF	0.8	NO	natural erosion
Rozie Pasture	15140	073	No Riparian				
Snoose Creek	15144	074	Snoose Creek - 1	77 - FAR (upward)	0.3	NO	making progress towards meeting standards
Snoose Creek	15144	074	Snoose Creek - 2	59 - NF	0.9	NO	natural erosion
Lambert Bench	15145	075	No Riparian				
North Flatwillow	15146	076	Snoose Creek - 4	45 - NF	0.6	NO	livestock
Windbreak	04873	077	No Riparian				
P.D. Pasture	04878	078	No Riparian				
D. Iverson	04879	079	No Riparian				
Silver Sage	15070	080	No Riparian				
Sage Hen	04880	081	No Riparian				
Jackson Home Place	02010	082	No Riparian				
Crowley Dam	15014	083	No Riparian				
Road Junction	15001	084	No Riparian				
Flatwillow	15078	085	No Riparian				
Mosby Road	25007	086	No Riparian				
King	04884	087	No Riparian				
King 7 Heifer Pasture	05054	088	No Riparian				
King Winter Pasture	15055	089	No Riparian				
Nebraska Place	04890	090	No Riparian				
West Bohemian	02636	091	No Riparian				
Kruger	04885	092	No Riparian				
Bassett Place	15043	093	Duck Creek - 4	69 - FAR (static)	0.2	NO	livestock/weeds/small dam
Maidenhead	02616	094	No Riparian				
Fisher	02642	095	Little Box Elder (Brickyard) - 4	55 - NF	0.4	NO	natural erosion
Box Elder L&L Ind.	04854	096	No Riparian				

Allotment Name	Allotment No.	Identification Number	Stream Name / Polygon No.	Health Rating	Distance (miles)	Meeting Standards?	Reason Not Meeting
Buckler Place	02519	097	No Riparian				
William Lewis Ind.	04886	098	No Riparian				
# Ranch	04869	099	No Riparian				
Salt Sage	14992	100	No Riparian				
Marks Ind.	04887	101	Box Elder Creek - 1 (lower)	88 -PFC	1.2	YES	
Marks Ind.	04887	101	Box Elder Creek - 2 (lower)	81 - PFC	1.3	YES	
Marks Ind.	04887	101	Buffalo Creek - BFC-06	81 - PFC	1	YES	
North Box Elder	04850	102	No Riparian				
Munson	02653	103	No Riparian				
Briggs Coulee	02647	104	No Riparian				
Musselshell	15010	105	No Riparian				
Adams	02665	106	No Riparian				
Pearce	14911	107	No Riparian				
West Winnett	15023	108	No Riparian				
Hill South Winnett	04876	109	No Riparian				
S Fork Bear Creek	02654	110	No Riparian				
O-N	02662	111	No Riparian				
Bohemian South	02656	112	No Riparian				
Chimney Rock South	05098	113	No Riparian				
Chimney Rock Ind.	15095	114	No Riparian				
Skibby Place	15059	115	Fords Creek - 2 (lower)	65 - FAR (upward)	1	NO	making progress towards meeting standards
Elder	02659	116	No Riparian				
Doman-Schultz	04863	117	No Riparian				
Marsh Hawk	04894	118	No Riparian				
Hughes Coulee	04831	119	No Riparian				
Maxwell Ranch	15009	120	No Riparian				
East Roy	02670	121	No Riparian				
Solf Bros. A	15090	122	No Riparian				
Solf Bros. B	04897	123	No Riparian				
Little Bear	05018	124	No Riparian				
Gorman Coulee	04990	125	No Riparian				
Alfalfa Acres	14988	126	No Riparian				
N.T., S. Rattlesnake, Pet., & Elk	04900	127	No Riparian				
West Bassett	15039	128	No Riparian				
Ford Creek	15045	129	No Riparian				
Teigen Ind. Pasture	04899	130	No Riparian				
Schuster & White	15048	131	No Riparian				
Forgy Common	12700	132	Fords Creek - 4	61 - FAR (static)	1	NO	weeds/natural erosion
Forgy Common	12700	132	Fords Creek - 5	65 - FAR (static)	0.7	NO	weeds/natural erosion
Forgy Common	12700	132	Fords Creek - 6	63 - FAR (static)	0.8	NO	weeds/drought
Forgy Common	12700	132	Fords Creek - 7	61 - FAR (static)	0.4	NO	weeds/drought/historic irrigation diversion
Whisonant Place	14906	133	No Riparian				
Little Box Elder	02609	134	Little Box Elder (Brickyard) - 1	52 - NF	1.1	NO	weeds/natural erosion/drought
Little Box Elder	02609	134	Little Box Elder (Brickyard) - 2	64 - FAR (static)	1	NO	weeds/natural erosion/drought
Little Box Elder	02609	134	Little Box Elder (Brickyard) - 3	61 - FAR (static)	0.7	NO	weeds/natural erosion/drought

APPENDIX F
Riparian Monitoring Schedule

Allotment Name	Allotment No.	Identification Number	Polygon No.	Health Rating	BLM Monitoring Schedule
Petrolia Bench Ranch	04901	001			
Maginnis Creek	00823	002			
Yellow Water	15040	003	Snoose Creek - 5	60 - FAR (upward)	3 years
Yellow Water	15040	003	Unnamed Tributary to Yellowwater - 1	59 - NF	3 years
Yellow Water	15040	003	Unnamed Tributary to Yellowwater - 2	75 - FAR (upward)	3 years
N. Willow Creek	04824	004	Musselshell River - 14	82 - PFC	5 years
N. Willow Creek	04824	004	Musselshell River - 15	82 - PFC	5 years
N. Willow Creek	04824	004	Musselshell River - 16	67 - FAR (static)	3 years
N. Willow Creek	04824	004	Musselshell River - 16a	63 - FAR (static)	3 years
N. Willow Creek	04824	004	North Willow Creek - 1	43 - NF	yearly
N. Willow Creek	04824	004	North Willow Creek - 2	38 - NF	yearly
N. Willow Creek	04824	004	North Willow Creek - 3	63 - NF	yearly
McDonald Creek	04902	005			
War Horse Ind.	15152	006	Buffalo Creek - 1	67 - FAR (upward)	3 years
S. War Horse	15153	007			
Eager Home Ranch	15061	008			
Box Elder	02529	009	Box Elder Creek - 1 (upper)	80 - PFC	5 years
Box Elder	02529	009	Box Elder Creek - 2 (upper)	80 - PFC	5 years
Box Elder	02529	009	Box Elder Creek - 3	82 - PFC	5 years
Box Elder	02529	009	Box Elder Creek - 4	84 - PFC	5 years
Box Elder	02529	009	Box Elder Creek - 5	91 - PFC	5 years
Box Elder	02529	009	Box Elder Creek - 6	82 - PFC	5 years
Box Elder	02529	009	Box Elder Creek - 6a	86 - PFC	5 years
Box Elder	02529	009	Box Elder Creek - 7	89 - PFC	5 years
Hubert Coulee	02539	010			
Aikens	04859	011			
Sheep Wagon	15064	012			
Aikens	25012	013			
Yellow Water Creek	15085	014			
Chippewa	02606	015			
Schulz	02666	016			
Brickyard	02611	017	Little Box Elder (Brickyard) - 5	34 - NF	yearly
Brickyard	02611	017	Fords Creek - 8	66 - FAR (static)	yearly
Degner Pasture	02613	018			
County Line	12804	019			
Spring Creek	15147	020			
Forty One	02664	021			
S. Fork Bear Creek	14910	022	Bear Creek - 1	62 - FAR (upward)	5 years
S. Fork Bear Creek	14910	022	Bear Creek - 2	87 - PFC	5 years
Grass Range East	02673	023			
Harris	04874	024			
Bear Creek	14912	025			
Croft Place	12608	026			
Elk Creek Bench	04865	027			
Fanyak Exchange	02536	028			
Flatwillow Colony	09684	029			
Duck Creek	04868	030			
Chippewa School	02623	031			
Wellman	02677	032			
Little Dam	12601	033	Fords Creek - 1	57 - NF	5 years
Little Dam	12601	033	Fords Creek - 2 (exclosure)	58 - NF	5 years
Little Dam	12601	033	Fords Creek - 3	53 - NF	5 years
Gilt Edge	02620	034			

Allotment Name	Allotment No.	Identification Number	Polygon No.	Health Rating	BLM Monitoring Schedule
Maginnis Creek	00985	035			
Alan Ind.	15119	036	Maginnis Creek - 2	55 - NF	yearly
Alan Ind.	15119	036	North Maginnis Creek - 1	32 - NF	yearly
Railroad	15118	037			
Petroleum Ind.	15120	038			
54 Livestock	14993	039			
North Highway	15024	040			
FCC Ind. A	25000	041			
Bohemian Corner	02668	042			
Circle Bar Coulee	04827	043	Circle Bar Coulee - 1	55 - NF	3 years
Circle Bar Coulee	04827	043	Musselshell River - 12	72 - FAR (static)	3 years
Circle Bar Coulee	04827	043	Musselshell River - 13	77 - FAR (static)	3 years
A Holgren Place	04872	044			
Hale Ind. D	05068	045			
C. Beckstrom Ind.	15067	046	Dry Creek - 1	91 - PFC	5 years
C. Beckstrom Ind.	15067	046	Dry Creek - 2	84 - PFC	5 years
Hale Ranch	15069	047	Buffalo Creek - 3	50 - NF	3 years
Hale Ranch	15069	047	Buffalo Creek - 4	35 - NF	3 years
Hale Ranch	15069	047	Buffalo Creek - 5	42 - NF	3 years
S. War Horse (Hale)	25004	048			
Walker Ranch	14903	049	Buffalo Creek - 2	73 - FAR (upward)	5 years
S. War Horse Ind.	15046	050			
East Winett	15047	051			
Yellow Water Basin	04898	052			
Hedman Pasture B	15073	053			
Hedman Pasture C	15074	054			
Hedman Pasture D	04875	055	Duck Creek - 1	77 - FAR (upward)	5 years
Hedman Pasture E	15075	056			
Hedman Pasture F	15076	057			
War Horse Common	15071	058			
Wild Horse Lake	15072	059	Duck Creek - 2	65 - FAR (static)	5 years
Wild Horse Lake	15072	059	Duck Creek - 3	75 - FAR (upward)	5 years
Bender Creek Winnett	04891	060	Snoose Creek - 3	65 - FAR (static)	5 years
Yellowwater Ind. B	15092	061			
Kaufman	02815	062			
Zimmerman Place	15036	063			
Iverson Yellow Water	15151	064	Pike Creek - 6	57 - NF	yearly
Iverson Yellow Water	15151	064	Pike Creek - 7	70 - FAR (upward)	yearly
Iverson Yellow Water	15151	064	Pike Creek - 7a	50 - NF	yearly
Bender Creek Hughes	02813	065			
Breeding Pasture	04877	066			
Meadow Pasture	05141	067			
South Pasture	05142	068			
Bench Pasture	05143	069	Pike Creek - 8	17 - NF	yearly
Bench Pasture	05143	069	Pike Creek - 9	17 - NF	yearly
Pike Creek	05161	070	Pike Creek - 1a	76 - FAR (upward)	5 years
Pike Creek	05161	070	Pike Creek - 1b	61 - FAR (static)	3 years
Pike Creek	05161	070	Pike Creek - 2	52 - NF	yearly
Pike Creek	05161	070	Pike Creek - 3	58 - NF	yearly
Pike Creek	05161	070	Pike Creek - 4	58 - NF	yearly
Pike Creek	05161	070	Pike Creek - 5	68 - FAR (static)	3 years
Hawkins Pasture	15138	071			
L. Pike Creek	15139	072	Pike Creek - PKC-01	75 - FAR (static)	3 years
L. Pike Creek	15139	072	Pike Creek - PKC-02	70 - FAR (static)	3 years
L. Pike Creek	15139	072	Pike Creek - PKC-03	58 - NF	3 years
Rozie Pasture	15140	073			

Allotment Name	Allotment No.	Identification Number	Polygon No.	Health Rating	BLM Monitoring Schedule
Snoose Creek	15144	074	Snoose Creek - 1	77 - FAR (upward)	5 years
Snoose Creek	15144	074	Snoose Creek - 2	59 - NF	5 years
Lambert Bench	15145	075			
North Flatwillow	15146	076	Snoose Creek - 4	45 - NF	3 years
Windbreak	04873	077			
P.D. Pasture	04878	078			
D. Iverson	04879	079			
Silver Sage	15070	080			
Sage Hen	04880	081			
Jackson Home Place	02010	082			
Crowley Dam	15014	083			
Road Junction	15001	084			
Flatwillow	15078	085			
Mosby Road	25007	086			
King	04884	087			
King 7 Heifer Pasture	05054	088			
King Winter Pasture	15055	089			
Nebraska Place	04890	090			
West Bohemian	02636	091			
Kruger	04885	092			
Bassett Place	15043	093	Duck Creek - 4	69 - FAR (static)	3 years
Maidenhead	02616	094			
Fisher	02642	095	Little Box Elder (Brickyard) - 4	55 - NF	5 years
Box Elder L&L Ind.	04854	096			
Buckler Place	02519	097			
William Lewis Ind.	04886	098			
# Ranch	04869	099			
Salt Sage	14992	100			
Marks Ind.	04887	101	Box Elder Creek - 1 (lower)	88 - PFC	5 years
Marks Ind.	04887	101	Box Elder Creek - 2 (lower)	81 - PFC	5 years
Marks Ind.	04887	101	Buffalo Creek - BFC-06	81 - PFC	5 years
North Box Elder	04850	102			
Munson	02653	103			
Briggs Coulee	02647	104			
Musselshell	15010	105			
Adams	02665	106			
Pearce	14911	107			
West Winnett	15023	108			
Hill South Winnett	04876	109			
S Fork Bear Creek	02654	110			
O-N	02662	111			
Bohemian South	02656	112			
Chimney Rock South	05098	113			
Chimney Rock Ind.	15095	114			
Skibby Place	15059	115	Fords Creek - 2 (lower)	65 - FAR (upward)	5 years
Elder	02659	116			
Doman-Schultz	04863	117			
Marsh Hawk	04894	118			
Hughes Coulee	04831	119			
Maxwell Ranch	15009	120			
East Roy	02670	121			
Solf Bros. A	15090	122			
Solf Bros. B	04897	123			
Little Bear	05018	124			
Gorman Coulee	04990	125			
Alfalfa Acres	14988	126			

Allotment Name	Allotment No.	Identification Number	Polygon No.	Health Rating	BLM Monitoring Schedule
N.T., S. Rattlesnake, Pet., & Elk	04900	127			West
Bassett	15039	128			
Ford Creek	15045	129			
Teigen Ind. Pasture	04899	130			
Schuster & White	15048	131			
Forgy Common	12700	132	Fords Creek - 4	61 - FAR (static)	3 years
		132	Fords Creek - 5	65 - FAR (static)	3 years
		132	Fords Creek - 6	63 - FAR (static)	3 years
		132	Fords Creek - 7	61 - FAR (static)	3 years
Whisonant Place	14906	133			
Little Box Elder	02609	134	Little Box Elder (Brickyard) - 1	52 - NF	5 years
Little Box Elder	02609	134	Little Box Elder (Brickyard) - 2	64 - FAR (static)	5 years
Little Box Elder	02609	134	Little Box Elder (Brickyard) - 3	61 - FAR (static)	5 years

APPENDIX G
Corrective Adjustments for Resource Protection

The guidelines described in Appendix A are considered best management practices necessary to achieve objectives identified in this plan and to maintain or improve rangeland resources. Livestock use that exceeds the guideline will reduce the ability to maintain proper range conditions. The success of these guidelines is dependent on active involvement by the livestock permittees in the day-to-day management of allotments.

If the guidelines are exceeded and overuse does occur, corrective actions should be implemented during the next grazing season to insure that such use does not occur again and prevent necessary vegetative recovery from occurring. In such instances, prior to the next grazing season, the permittee(s) and BLM manager should cooperatively develop these corrective adjustments. The recommended management adjustments identified below are a tool that can be used, modified, or added to, on a case by case basis. The BLM would prefer that the grazing permittee(s) suggest corrective actions needed to maintain vegetative health and vigor while still meeting livestock management needs. If however, a cooperatively developed corrective adjustment cannot be reached, the following adjustments will be applied:

Recommended Stubble Height for Riparian Species = 4 Inches

Actual Stubble Height (inches)	Corrective Adjustment
3 to 4 inches any one year	Discuss situation with permittee
3 to 4 inches two consecutive years	5 inch stubble height the next year
3 to 4 inches more than two consecutive years	6 inch stubble height the next year
2 to 3 inches any one year	5 inch stubble height the next year
2 to 3 inches two consecutive years	6 inch stubble height the next year
2 to 3 inches more than two consecutive years	Rest the pasture the following year
Less than 2 inches in any one year	Rest the pasture the following year

Recommended Riparian Tree and Shrub Utilization = Light to Moderate Browsing

Actual Browse Level (Light, Moderate, or Intense)	Corrective Adjustment
Light to Moderate	No adjustment necessary
Intense any one year	Discuss situation with permittee
Intense two consecutive years	Eliminate hot season (July, August and September) grazing either through change in season of use or some form of fencing

Recommended Upland Species Utilization Level = 50% by Weight

Actual Utilization Level (%)	Corrective Adjustment
Exceeds prescribed level by more than 10% but less than 25%	Discuss situation with permittee
Exceeds prescribed level by more than 25%	Discuss situation with permittee. Limit utilization to 40% the following year.

APPENDIX H
Upland and Riparian Plant List

Common Upland Plants:

Trees:
Ponderosa pine (Pinus ponderosa)
Douglas fir (Pseudotsuga menziesii)

Shrubs:
Big sagebrush (Artemisia tridentata)
Silver sagebrush (Artemisia cana)
Greasewood (Sarcobatus vermiculatus)
Juniper (Juniperus sp.)
Woods' rose (Rosa woodsii)
Yucca (Yucca glauca)Saltbush (Atriplex sp.)
Winterfat (Ceratoides lanata)

Native Perennial Grasses:
Western wheatgrass (Pascopyrum smithii)
Bluebunch wheatgrass (Pseudoroegneria spicata)
Prairie junegrass (Koeleria macrantha)
Sandberg bluegrass (Poa sandbergii)
Green needlegrass (Stipa viridula)
Needle and thread (Stipa comata)
Blue grama (Bouteloua gracilis)
Prairie sandreed (Calamovilfa longifolia)

Domestic Perennial Grasses:
Crested wheatgrass (Agropyron cristatum)
Intermediate wheatgrass (Elytrigia intermedia)
Smooth brome (Bromus inermis)

Annual Grasses:
Japanese brome (Bromus japonicus)
Cheatgrass (Bromus tectorum)

Forbs:Yellow sweetclover (Melilotus officinalis)
Dandelion (Taraxacum officinale)
Phlox (Phlox hoodii)
Salisify (Trogopogon dubious)
Fringed sagewort (Artemisia frigida)
Western yarrow (Achillea millefolium)
American vetch (Vicea americana)

SucculentsPricklypear cactus (Opuntia polyacantha)
Pincushion (*Chaenactis glabriuscula*)

Pteridophyte
Dense Clubmoss (Selaginella densa)

Common Riparian Plants:

Trees:
Boxelder (Acer negundo)
Cottonwood (Populus deltoides)
Green Ash (Fraxinus pennsylvanica)
Peachleaf Willow (Salix amygdaloides)

Shrubs:
Buffaloberry (Shepherdia argentea)
Buffalo Currant (Ribes odoratum)
Chokecherry (Prunus virginiana)
Golden Currant (Ribes aureum)
Redosier Dogwood (Cornus sericea)
Sandbar Willow (Salix exigua)
Yellow Willow (Salix lutea)

Forbs:
American Licorice (Glycyrrhiza lepidota)
Cattail (Typha latifolia)
Cocklebur (Xanthium strumarium)
Curly Dock (Rumex crispus)
Horsetail (Equisetum arvense)
Mint (Mentha arvensis)
Yellow sweetclover (Melilotus officinalis)
White sweetclover (Melilotus alba)

Grasses:
Baltic Rush (Juncus balticus)
Barnyardgrass (Echinochloa muricata)
Bulrush (Scripus maritimus)
Creeping Spikesedge (Eleocharis palustris)
Foxtail Barley (Hordeum jubatum)
Hardstem Bulrush (Scripus acutus)
Inland Saltgrass (Distichlis spicata)
Kentucky Bluegrass (Poa pratensis)
Orchardgrass (Dactylis glomerata)
Prairie Cordgrass (Spartina pectinata)
Quackgrass (Agropyron repens)
Reed Canarygrass (Phalaris arundinacea)
Sloughgrass (Beckmannia syzigachne)
Smooth Brome (Bromus inermis)
Threesquare Bulrush (Scirpus pungens)
Western Wheatgrass (Pascopyrum smithii)

APPENDIX I
Proposed Range Improvement Projects

Allotment Name	Allotment Number	Identification Number	Proposed RI Projects	Project Area
Petrolia Bench Ranch	04901	001	1 stockwater pipeline within an existing 2-track trail	1.25 mi.
Maginnis Creek	00823	002		
Yellowwater	15040	003	dense clubmoss chiseling	120 ac.
		003	2 4-wire barbed wire allotment boundary fences - .75 & .50 mi.	1.25 mi.
N. Willow Creek	04824	004	1 4-wire barbed wire allotment boundary fence	1.5 mi.
		004	1 3-wire barbed wire crossfence	1.5 mi.
		004	install 1 24' cattle guard (30' x 40' area)	.03 ac.
McDonald Creek	04902	005		
Warhorse Ind.	15152	006		
South War Horse	15153	007		
Eager Home Ranch	15061	008		
Box Elder	02529	009	stockwater ppl. extension from private ppl; 2.25 mi. x 10'	2.25 mi.
		009	2 stocktanks - (20' x 20' ea).	.02 ac.
Hubert Coulee	02539	010		
Aikens	04859	011		
Sheep Wagon	15064	012	2 3-wire barbed wire crossfences -1.75 and 2.5 mi.	4.25 mi.
		012	3 stockwater pipeline extensions - 1.25, 1.0, 2.75 mi.	5.0 mi.
		012	4 stocktanks (20' x 20' ea.)	.04 ac.
		012	1 4-wire barbed wire allotment boundary fence	.75 mi.
Aikens	25012	013		
Yellow Water Creek	15085	014	stock water ppl. extension from existing tank	.5 mi.
		014	1 stocktank (20' x 20')	.01 ac.
Chippewa	02606	015		
Schulz	02666	016		
Brickyard	02611	017		
Degner Pasture	02613	018		
County Line	12804	019		
Spring Creek	15147	020		
Forty One	02664	021		
S. Fork Bear Creek	14910	022		
Grass Range East	02673	023		
Harris	04874	024	2 stockwater ppl. extensions - 5.25 mi.	5.25 mi.
		024	7 stocktanks (20' x 20' ea.)	.064 ac.
		024	2 3-wire barbed wire crossfences - 1.0 mi. ea.	2.0 mi.
Bear Creek	14912	025		
Croft Place	12608	026		
Elk Creek Bench	04865	027	Pasture A: crested wheatgrass re-seeding	38.5 ac.
		027	Pasture B: stockwater ppl. extension from private well	.75 mi.
		027	one stocktank (20' x 20' area)	.01 ac.
		027	1 3-wire barbed wire crossfence	.25 mi.
		027	NW Highway Pasture: stockwater ppl. ext. from Past. A	.25 mi.
		027	one stocktank (20' x 20')	.01 ac.
		027	Phillips Pasture: 1 3-wire barbed wire crossfence	.5 mi.
		027		
Fanyak Exchange	02536	028		
Flatwillow Colony	09684	029		
Duck Creek	04868	030		
Chippewa School	02623	031		
Wellman	02677	032		
Little Dam	12601	033		
Gilt Edge	02620	034		
Maginnis Creek	00985	035		
Alan Ind.	15119	036	1 - sheep tight fence	1.75 mi.

Allotment Name	Allotment Number	Identification Number	Proposed RI Projects	Project Area
Railroad	15118	037		
Petroleum Ind.	15120	038		
54 Livestock	14993	039		
North Highway	15024	040	1 3-wire barbed wire crossfence	2.25 mi.
		040	Install one 16' cattleguard (30' x 30' area)	.02 ac.
		040	1 stockwater ppl. extension from a private ppl	.5 mi.
		040	1 stocktank (20' x 20' area)	.01 ac.
FCC Ind. A	25000	041		
Bohemian Corner	02668	042		
Circle Bar Coulee	04827	043	1 stockwater ppl. extension from an existing stocktank	.75 mi.
A Holgren Place	04872	044		
Hale Ind. D	05068	045		
C. Beckstrom Ind.	15067	046	dense clubmoss chiseling	80 ac.
		046	1 temporary 2-wire high tensile electric fence (2 growing seasons)	1.0 mi.
Hale Ranch	15069	047	1 3-wire barbed wire crossfence	1.50 mi.
		047	1 3-wire barbed wire crossfence	.25 mi.
S. War Horse (Hale)	25004	048		
Walker Ranch	14903	049	2 stockwater ppl. extensions from a private well	1.25 mi.
		049	1 stocktank (20' x 20' area)	.01 ac.
S. War Horse Ind.	15046	050		
East Winett	15047	051		
Yellow Water Basin	04898	052	1 stockwater ppl. extension from an existing stocktank	.5 mi.
Hedman Pasture B	15073	053		
Hedman Pasture C	15074	054		
Hedman Pasture D	04875	055		
Hedman Pasture E	15075	056		
Hedman Pasture F	15076	057		
War Horse Common	15071	058		
Wild Horse Lake	15072	059	1 3-wire barbed wire crossfence	.75 mi.
		059	1 stockwater ppl. extension from an existing ppl.	1.0 mi.
Bender Creek Winnett	04891	060		
Yellowwater Ind. B	15092	061		
Kaufman	02815	062		
Zimmerman Place	15036	063	Monitor well head and solar pump on Zimmerman well. (20’x20')	.01 ac.
Iverson Yellow Water	15151	064		
Bender Creek Hughes	02813	065		
Breeding Pasture	04877	066		
Meadow Pasture	05141	067		
South Pasture	05142	068		
Bench Pasture	05143	069	1 3-wire barbed wire crossfence	1.50 mi.
Pike Creek	05161	070	1 3-wire barbed wire crossfence	1.75 mi.
Hawkins Pasture	15138	071		
L. Pike Creek	15139	072		
Rozie Pasture	15140	073		
Snoose Creek	15144	074		
Lambert Bench	15145	075		
North Flat Willow	15146	076		
Windbreak	04873	077		
P.D. Pasture	04878	078		
D. Iverson	04879	079		
Silver Sage	15070	080		
Sage Hen	04880	081		
Jackson Home Place	02010	082	1 3-wire barbed wire crossfence	1.0 mi.
Crowley Dam	15014	083	1 3-wire barbed wire crossfence	.33 mi.
Road Junction	15001	084		
Flatwillow	15078	085	1 3-wire barbed wire crossfence	1.25 mi.
		085	1 stockwater ppl. from an existing well	.75 mi.
		085	1 stocktank (20' x 20' area)	.01 ac.

Allotment Name	Allotment Number	Identification Number	Proposed RI Projects	Project Area
Mosby Road	25007	086		
King	04884	087		
King 7 Heifer Pasture	05054	088		
King Winter Pasture	15055	089		
Nebraska Place	04890	090		
West Bohemian	02636	091	1 3-wire barbed wire crossfence	.5 mi.
Kruger	04885	092		
Bassett Place	15043	093		
Maidenhead	02616	094		
Fisher	02642	095		
Box Elder L&L Ind.	04854	096	1 1-wire high tensile electric fence	.5 mi.
Buckler Place	02519	097		
William Lewis Ind.	04886	098		
# Ranch	04869	099		
Salt Sage	14992	100		
Marks Ind.	04887	101	1 3-wire barbed wire crossfence	.75 mi.
North Box Elder	04850	102	2 stockwater ppl. extensions from existing ppls.	1.25 mi.
		102	2 stocktanks, one on each ppl. extension (20' x 20' area ea.)	.02 ac.
		102	1 3-wire barbed wire crossfence	.5 mi.
		102	Install one 16' cattleguard (30' x 30' area)	.02 ac.
Munson	02653	103		
Briggs Coulee	02647	104	1 3-wire barbed wire crossfence	1.25 mi.
		104	Clean out 1 existing reservoir (app. 1 ac.)	1 ac.
Musselshell	15010	105		
Adams	02665	106		
Pearce	14911	107		
West Winnett	15023	108		
Hill South Winnett	04876	109		
S Fork Bear Creek	02654	110		
O-N	02662	111		
Bohemian South	02656	112		
Chimney Rock South	05098	113	1 3-wire barbed wire crossfence	.5 mi.
Chimney Rock Ind.	15095	114	1 3-wire barbed wire crossfence	1.5 mi.
		114	dense clubmoss chiseling	100 ac.
Skibby Place	15059	115	2 stockwater ppl. extensions from existing ppls	2.75 mi.
		115	Monitor well head on flowing well. (20'x20')	.01 ac.
		115	2 stocktanks, (20' x 20' area ea.)	.02 ac.
		115	1 4-wire barbed wire exclusionary fence (smooth bottom wire)	1.0 mi.
Elder	02659	116		
Doman-Schultz	04863	117		
Marsh Hawk	04894	118		
Hughes Coulee	04831	119		
Maxwell Ranch	15009	120		
East Roy	02670	121		
Solf Bros. A	15090	122		
Solf Bros. B	04897	123		
Little Bear	05018	124		
Gorman Coulee	04990	125		
Alfalfa Acres	14988	126		
N.T., S. Rattlesnake, Pet., & Elk	04900	127		
West Bassett	15039	128		
Ford Creek	15045	129		
Teigen Ind. Pasture	04899	130		
Schuster & White	15048	131		
Forgy Common	12700	132		
Whisonant Place	14906	133		
Little Box Elder	02609	134		

APPENDIX J
Montana Noxious Weed List

Montana noxious weeds are categorized according to the following criteria:

- *Category 1* noxious weeds are weeds that are currently established and generally widespread in many counties of the state. Management criteria include awareness and education, containment, and suppression of existing infestations and prevention of new infestations. These weeds are capable of rapid spread and render land unfit or greatly limit beneficial uses.

    - Canada Thistle (*Cirsium arvense*)
    - Field Bindweed (*Convolvulus arvensis*)
    - Whitetop or Hoary Cress (*Cardaria draba*)
    - Leafy Spurge (*Euphorbia esula*)
    - Russian Knapweed (*Centaurea repens*)
    - Spotted Knapweed (*Centaurea maculosa*)
    - Diffuse Knapweed (*Centaurea diffusa)*
    - Dalmatian Toadflax (*Linaria dalmatica)*
    - St. Johnswort (*Hypericum perforatum*)
    - Sulfur (Erect) Cinquefoil (*Potentilla recta*)
    - Common tansy (*Tanacetum vulgare*)
    - Ox-eye Daisy (*Chrysanthemum leucanthemum* L
    - Houndstongue (*Cynoglossum officinale* L.)
    - Yellow toadflax (*Linaria vulgaris)*

- *Category 2* noxious weeds have recently been introduced to the state or are rapidly spreading from their current infestation sites. These weeds are capable of rapid spread, rendering lands unfit for beneficial uses. Management criteria includes awareness and education, monitoring and containment of known infestations, and eradication where possible.

    - Dyers Woad (*Isatis tinctoria*)
    - Purple Loosestrife or Lythrum (*Lythrum salicaria*, *L. virgatum*, and any hybrid crosses thereof).
    - Tansy Ragwort (*Senecio jacobea* L)
    - Meadow Hawkweed Complex (*Hieracium pratense*,
    - *H. floribundum*, *H. piloselloides*)
    - Orange Hawkweed (*Hieracium aurantiacum* L.)
    - Tall Buttercup (*Ranunculus acris* L)
    - Tamarisk [Saltcedar] (*Tamarix* spp.)
    - Perennial pepperweed (*Lepidium latifolium*)

- *Category 3* noxious weeds have not been detected in the state or may be found only in small, scattered, localized infestations. Management criteria includes awareness and education, early detection and immediate action to eradicate infestations. These weeds are known pests in nearby states and are capable of rapid spread and render land unfit for beneficial uses.

    - Yellow Starthistle (*Centaurea solstitialis*)
    - Common Crupina (*Crupina vulgaris)*
    - Rush Skeletonweed (*Chondrilla juncea)*
    - Eurasian watermilfoil (*Myriophyllum spicatum*)
    - Yellow flag iris (*Iris pseudacoru)*

APPENDIX K
Current Allotment Information - 134 Allotments, 76 Permittees

Allotment Name	Allotment Number	Identification Number	Public Acres	AUMs	% Public Land	Livestock No.	Season of Use
Petrolia Bench Ranch	04901	001	834	175	37	90 cattle	5/1-10/7
Maginnis	00823	002	283	31	100	3 cattle	3/1-2/28
Yellowwater	15040	003	1744	354	various	4,3,2,34,37,28 cattle	3/1-2/28, 5/6-6/1, 7/23-10/31, 5/1-8/31
N. Willow Creek	04824	004	4935	941	various	77,19,17 cattle; 20,1,3,9 horses	5/1-10/31(c), 5/1-11/30(h), 3/1-2/28, 5/16-10/31(c), 3/1-2/28(h), 5/1-10/31, 3/1-4/30, 10/15-2/28
McDonald Creek	04902	005	400	98	100	8 cattle	3/1-2/28
Warhorse Ind.	15152	006	611	145	92	35 cattle	6/16-10/31
South War Horse	15153	007	923	179	85	35 cattle	5/16-11/15
Eager Home Ranch	15061	008	562	168	100	23 cattle	3/1-2/28
Box Elder	02529	009	4092	1009	69	208 cattle	5/1-11/30
Hubert Coulee	02539	010	40	8	100	1 cattle	3/1-2/28
Aikens	04859	011	30	7	100	1 cattle	3/1-2/28
Sheep Wagon	15064	012	2344	682	65	149 cattle	5/1-11/30
Aikens	25012	013	920	150	55	45 cattle	5/5-11/3
Yellow Water Creek	15085	014	800	217	35 & 100	95, 4 cattle	5/16-10/20, 3/1-2/28
Chippewa	02606	015	1597	248	100	5, 11, 7 cattle	3/1-12/31, 3/1-2/28, 3/1-12/31
Schulz	02666	016	569	135	100	11 cattle	3/1-2/28
Brickyard	02611	017	1507	324	100	27 cattle	3/1-2/28
Degner Pasture	02613	018	1531	278	100	44, 9 cattle	5/20-10/31(Degner), 8/1-12/31 (Ryan)
County Line	12804	019	80	16	100	1 cattle	3/1-2/28
Spring Creek	15147	020	2651	481	87	147 cattle	6/1-9/22
Forty One	02664	021	41	8	100	1 cattle	5/1-10/1
S. Fork Bear Creek	14910	022	1240	354	100	30 cattle	3/1-2/28
Grass Range East	02673	023	160	39	100	4 cattle	3/1-2/28
Harris	04874	024	1824	455	100	38 cattle	3/1-2/28
Bear Creek	14912	025	1000	239	100	20 cattle	3/1-2/28
Croft Place	12608	026	560	156	100	13 cattle	3/1-2/28
Elk Creek Bench	04865	027	4205	798	various	2, 22, 55, 133 cattle	3/1-2/28, 4/1-11/15, 6/7-9/22, 5/15-9/30
Fanyak Exchange	02536	028	120	27	100	2 cattle	3/1-2/28
Flatwillow Colony	09684	029	640	167	100	14 cattle	3/1-2/28
Duck Creek	04868	030	812	210	100	18 cattle	3/1-2/28
Chippewa School	02623	031	319	59	100	5 cattle	3/1-2/28
Wellman	02677	032	40	7	100	1 cattle	3/1-2/28
Little Dam	12601	033	840	195	100 & 13	14, 100, 200 cattle	3/1-2/28, 5/15-6/15, 6/16-7/31
Gilt Edge	02620	034	1520	287	100	89 cattle	6/1-9/1
Maginnis Creek	00985	035	160	41	100	3 cattle	3/1-2/28

Allotment Name	Allotment Number	Identification Number	Public Acres	AUMs	% Public Land	Livestock No.	Season of Use
Alan Ind.	15119	036	857	184	100	23 cattle	5/1-12/30
Railroad	15118	037	320	104	100	13 cattle	51-12/31
Petroleum Ind.	15120	038	680	174	100	12 cattle	3/1-2/28
54 Livestock	14993	039	1083	347	100	43 cattle	5/1-12/31
North Highway	15024	040	3201	940	85	220 cattle	5/1-9/30
FCC Ind. A	25000	041	240	63	100	5 cattle	3/1-2/28
Bohemian Corner	02668	042	159	43	100	4 cattle	3/1-2/28
Circle Bar Coulee	04827	043	1336	192	100	16 cattle	3/1-2/28
A Holgren Place	04872	044	40	10	100	1 cattle	3/1-2/28
Hale Ind. D	05068	045	184	37	100	3 cattle	3/1-2/28
C. Beckstrom Ind.	15067	046	670	165	100	14 cattle	3/1-2/28
Hale Ranch	15069	047	1729	428	61	88 cattle	5/1-12/31
S. War Horse (Hale)	25004	048	2026	469	71	94 cattle	5/16/-12/15
Walker Ranch	14903	049	984	231	100	19 cattle	3/1-2/28
S. War Horse Ind.	15046	050	713	108	38	28 cattle	3/1-5/31, 8/1-2/28
East Winett	15047	051	80	21	100	2 cattle	3/1-2/28
Yellow Water Basin	04898	052	923	262	100 & 46	12, 92 cattle	3/1-2/28, 6/1-8/31
Hedman Pasture B	15073	053	1080	242	51	68 cattle	4/15-11/15
Hedman Pasture C	15074	054	373	84	81	15 cattle	4/15-11/15
Hedman Pasture D	04875	055	478	107	100	9 cattle	3/1-2/28
Hedman Pasture E	15075	056	240	78	37	30 cattle	4/15-11/15
Hedman Pasture F	15076	057	440	79	33	33 cattle	415-11/15
War Horse Common	15071	058	56	15	100	2 cattle	3/1-2/28
Wild Horse Lake	15072	059	1991	406	54	103 cattle	4/5-11/15
Bender Creek Winnett	04891	060	1552	349	32	166 cattle	4/16-10/31
Yellowwater Ind. B	15092	061	602	118	100	10 cattle	3/1-2/28
Kaufman	02815	062	260	48	100	4 cattle	3/1-2/28
Zimmerman Place	15036	063	2178	496	various	3, 120, 70, 70 cattle	3/1-2/28, 1/1-2/28, 4/1-5/31, 8/1-11/30
Iverson Yellow Water	15151	064	3937	840	81	206 cattle	6/1-10/31
Bender Creek Hughes	02813	065	1158	225	100	22 cattle	3/1-2/28
Breeding Pasture	04877	066	375	69	100	5 cattle	3/1-2/28
Meadow Pasture	05141	067	47	19	100	1 cattle	3/1-2/28
South Pasture	05142	068	920	289	100	24 cattle	3/1-2/28
Bench Pasture	05143	069	1178	330	100	22 cattle	3/1-2/28
Pike Creek	05161	070	2161	453	65	170 cattle	4/15-7/14, 10/1-10/31
Hawkins Pasture	15138	071	530	132	100	11 cattle	3/1-2/28
L. Pike Creek	15139	072	959	299	100	25 cattle	3/1-2/28
Rozie Pasture	15140	073	137	38	100	3 cattle	3/1-2/28
Snoose Creek	15144	074	850	154	100	13 cattle	3/1-2/28
Lambert Bench	15145	075	676	113	50	112 cattle	5/1-6/30

Allotment Name	Allotment Number	Identification Number	Public Acres	AUMs	% Public Land	Livestock No.	Season of Use
North Flatwillow	15146	076	1124	233	28	210 cattle	7/1-10/30
Windbreak	04873	077	130	32	100	15 cattle	5/1-7/03
P.D. Pasture	04878	078	200	48	100	4 cattle	3/1-2/28
D. Iverson	04879	079	320	110	100	9 cattle	3/1-2/28
Silver Sage	15070	080	180	63	100	5 cattle	3/1-2/28
Sage Hen	04880	081	950	236	86	55 cattle	5/20-10/18
Jackson Home Place	02010	082	160	56	100	7 cattle	4/1-11/30
Crowley Dam	15014	083	680	154	100	6 cattle, 32 sheep	3/1-2/28
Road Junction	15001	084	40	8	100	1 cattle, 5 sheep	3/1-2/28 (c), 5/1-11/30 (s)
Flawillow	15078	085	3082	576	44	200 cattle	5/1-11/15
Mosby Road	25007	086	80	18	100	1 cattle	3/1-2/28
King	04884	087	5797	1277	36	560, 36, 463 cattle	5/2-9/22, 6/15-8/31, 9/23-12/6
King 7 Heifer Pasture	05054	088	527	119	34	70 cattle	6/11-11/9
King Winter Pasture	15055	089	279	68	100	6 cattle	3/1-7/31, 9/1-2/28
Nebraska Place	04890	090	4142	1067	100	89, 23 cattle	3/1-2/28, 9/1-2/28
West Bohemian	02636	091	720	194	100	16 cattle	3/1-2/28
Kruger	04885	092	188	32	100	3 cattle	3/1-2/28
Bassett Place	15043	093	4280	963	various	various	various
Maidenhead	02616	094	440	102	100	9 cattle	3/1-2/28
Fisher	02642	095	846	116	100	10 cattle	3/1-2/28
Box Elder L&L Ind.	04854	096	560	194	100	16 cattle	3/1-2/28
Buckler Place	02519	097	720	154	100	13 cattle	3/1-2/28
William Lewis Ind.	04886	098	3263	773	100	64 cattle	3/1-2/28
# Ranch	04869	099	1070	205	100	17 cattle	3/1-2/28
Salt Sage	14992	100	20	3	100	1 cattle	3/1-2/28
Marks Ind.	04887	101	1471	296	80	74 cattle	6/1-10/31
North Box Elder	04850	102	1318	318	41, 58	64, 90 cattle	6/1-9/30, 5/15-9/14
Munson	02653	103	372	91	100	8 cattle	3/1-2/28
Briggs Coulee	02647	104	640	113	100	9 cattle	3/1-2/28
Musselshell	15010	105	282	48	100	4 cattle	3/1-2/28
Adams	02665	106	160	61	100	6 cattle	3/1-2/28
Pearce	14911	107	160	48	100	4 cattle	3/1-2/28
West Winnett	15023	108	1284	289	100	24 cattle	3/1-2/28
Hill South Winnett	04876	109	440	105	100	9 cattle	3/1-2/28
S Fork Bear Creek	02654	110	200	18	100	3 cattle	5/1-11/15
O-N	02662	111	307	57	100	5 cattle	3/1-2/28
Bohemian South	02656	112	360	81	100	7 cattle	3/1-2/28
Chimney Rock South	05098	113	490	190	74	64 cattle	5/5-9/5
Chimney Rock Ind.	15095	114	390	116	100	10 cattle	3/1-2/28
Skibby Place	15059	115	10361	2568	various	3, 41, 10, 430 cattle	3/1-2/28, 12/5-2/28, 5/5-11/30

Allotment Name	Allotment Number	Identification Number	Public Acres	AUMs	% Public Land	Livestock No.	Season of Use
Elder	02659	116	160	36	100	3 cattle	3/1-2/28
Doman-Schultz	04863	117	700	143	28	79(S), 24(D) cattle	6/1-9/22
Marsh Hawk	04894	118	2924	743	various	199, 279, 279 cattle	5/20-9/21, 10/13-12/23, 9/23-10/12
Hughes Coulee	04831	119	1171	115	100	10 cattle	3/1-2/28
Maxwell Ranch	15009	120	60	14	100	1 cattle	3/1-2/28
East Roy	02670	121	640	124	100	11 cattle	3/1-2/28
Solf Bros. A	15090	122	390	82	63	43 cattle	4/1-5/31, 11/1-11/30
Solf Bros. B	04897	123	40	5	100	1 cattle	4/1-11/30
Little Bear	05018	124	820	176	30	97 cattle	5/1-10/31
Gorman Coulee	04990	125	3231	438	various	1, 1, 90 cattle	3/1-2/28, 5/15-11/15
Alfalfa Acres	14988	126	124	21	100	2 cattle	3/1-2/28
N.T., S. Rattlesnake, Pet., & Elk	04900	127	2447	463	100	22, 3, 7, 5 cattle	3/1-2/28
West Bassett	15039	128	326	73	100	6 cattle	3/1-2/28
Ford Creek	15045	129	1818	360	40	179 cattle	6/1-10/31
Teigen Ind. Pasture	04899	130	492	160	32	91, 93 cattle	3/1-6/15, 1/1-2/28
Schuster & White	15048	131	7925	2006	various	24, 118, 329 cattle	5/20-9/30, 5/15-9/25
Forgy Common	12700	132	1730	373	100	20, 7, 23, 26 cattle	5/16-10/15, 5/16-9/15 (Stockton)
Whisonant Place	14906	133	80	14	100	1 cattle	3/1-2/28
Little Box Elder	02609	134	954	158	100	81, 2 cattle	9/1-10/18, 3/1-2/28

APPENDIX L
Land Use Plan Guidance

- **Energy Mineral Resources:** No surface occupancy restrictions will be used to protect critical paleontology sites and archeology sites. Seasonal and distance restrictions will be included in oil and gas leases to mitigate impacts to wildlife habitat **(JVP)**.

- **Non-energy Mineral Resources:** Federal minerals are available for exploration and development unless withdrawn **(JVP)**.

- **Paleontology:** Major paleontological resources of scientific interest will be protected **(JVP)**

- **Soils:** Soil productivity will be maintained or improved by increasing vegetation cover and reducing erosion **(JVP, Standards and Guidelines)**.

- **Water Resource Management:** Surface and ground water quality will be maintained to meet or exceed state and federal water quality standards **(JVP, Standards and Guidelines)**.

- **Vegetation Management:** The ecological status will be improved or maintained to achieve a plant community of good (late seral) to excellent (potential natural community) on 80% of the public lands within 15 years of implementation of activity plans **(JVP)**.

  Public lands that are in satisfactory (good and excellent) ecological condition will be maintained. Public lands with unsatisfactory (poor and fair) ecological condition will be managed according to multiple use objectives based on ecological site potential for specific uses **(Standards and Guidelines)**.

  About 40% of the vegetation will continue to be allocated to livestock grazing and about 60% will continue to be allocated to watershed protection and wildlife forage and cover **(JVP)**.

  The quality and quantity of summer wildlife forage will be improved by improving the reproduction and availability of palatable forbs for deer and antelope. Deer and antelope winter range (especially woody species) will be maintained and/or improved. Existing sagebrush stands will be maintained at a canopy cover of 15 to 50% with an effective height over 12 inches **(JVP, Standards and Guidelines)**.

  The quality and quantity of nesting, brood rearing and winter habitat for upland game birds and waterfowl nesting habitat will be improved by providing residual upland grass and forb cover **(JVP, Standards and Guidelines)**.

  Land will be managed for succulent vegetation production, including a variety of forbs, and big and silver sagebrush will be maintained on sage grouse wintering and nesting areas with a canopy coverage of 15 to 50% and an effective height of 12 inches. Woody vegetation will be maintained or improved for sharp-tailed grouse cover **(JVP, Standards and Guidelines)**.

- **Riparian and Wetland Management:** Riparian-wetland areas will be maintained or improved based on proper functioning condition and desires plant community. Riparian-wetland objectives will be initially accomplished through livestock grazing methods at current stocking levels. If grazing methods are not successful in meeting management objectives, necessary actions will be taken to meet those objectives **(JVP, Standards and Guidelines)**.

  All manageable riparian areas will have management plans implemented to maintain, restore or improve riparian areas to

achieve a healthy and productive ecological condition for maximum long-term benefits and values **(Standards and Guidelines)**.

- **Land Treatments:** Land treatments will be used to meet watershed, grazing management and wildlife objectives but will be applied only where grazing management alone will not accomplish the desired result **(JVP)**.

- **Noxious Plants:** Noxious plants will be controlled or eradicated through integrated pest management in order to maintain native rangelands **(JVP, Standards and Guidelines)**.

- **Wildlife and Fisheries Management:** Suitable habitat for all wildlife species will be maintained or enhanced. The emphasis for habitat maintenance and development will be on present and potential habitat for sensitive, threatened and/or endangered species, nesting waterfowl, crucial wildlife winter ranges, non-game habitat and fisheries **(JVP, Standards and Guidelines)**.

- **Prairie Dog Management:** Prairie dog towns will be maintained or managed based on the values or problems encountered **(JVP)**.

- **Elk and Bighorn Sheep Management:** Habitat will be provided for elk in the Musselshell Breaks consistent with the MT Dept of FWP Elk Management Plan. **(JVP)**.

- **Recreation:** The recreational quality of public land and resources will be maintained and/or enhanced to ensure enjoyable recreational experiences. Recreation emphasis will be to develop and maintain opportunities for dispersed recreational activities such as hunting, scenic and wildlife viewing and driving for pleasure.

- **Off-Highway Vehicle Use:** BLM will restrict OHV use on BLM land year-long or seasonally to designated roads and trails or close specific areas to protect resource values, i.e., protect vegetation and soils to maintain watersheds and water quality, reduce user conflicts, and reduce harassment of wildlife and provide habitat security. **(JVP)**.

- **Visual Resource Management:** Activities will be managed to comply with VRM policies **(JVP)**.

- **Cultural:** Cultural resources will be properly managed through a systematic program of identification and evaluation. The level of conflict between cultural resources and other land and resource uses will be reduced in compliance with existing laws/regulations **(JVP)**.

- **Fire Management:** Fire will managed in the manner most cost effective and responsive to resource management objectives **(JVP)**.

  Prescribed fire will be utilized only under specific conditions and may be administered on an individual basis in grassland, sagebrush and/or conifer types to improve wildlife habitat and vegetation production **(JVP)**.

  Intensive suppression of wildfire will be applied to areas with high resource values, improvements, recreation sites, administrative sites, sagebrush and juniper, fire sensitive woody riparian species, and/or cultural values and may also be used to prevent fire from spreading to adjoining private property and structures **(JVP)**.

  Conditional suppression will be applied to areas with low resource values or to areas not warranting intensive suppression actions and costs. Conditional suppression actions will be used in grass/shrub fuel types, Missouri Breaks fuel

types and mountain timber fuel types **(JVP)**.

- **Forest Management:** Minor forest products may be harvested from the Breaks on a selected sustained yield basis with wildlife habitat objectives in mind **(JVP)**.

- **Lands:** Resource values will be protected or enhanced when considering applications or requests for Rights of Ways, leases and permits. Acquisitions will be pursued as opportunities arise through exchange or purchase with willing proponents and/or sellers. **(JVP)**

- **Access to BLM Land:** Access will be pursued to BLM land where no legal public access exists or where additional access to major blocks of BLM land is needed. **(JVP)**

- **Signing:** Appropriate signs and posters will be used to promote safety and convenience for visitors and users, define boundaries, identify management practices, provide information about geographic and historic features and protect vulnerable land areas and resources from misuse. **(JVP)**

APPENDIX M
Standards (Determinations by Allotment)

Allotment Name	Allotment Number	Identification Number	Standard 1 (uplands)	Standard 2 (riparian)	Standard 3 (h2o qual)	Standard 5 (biodiv.)	Cause (by standard)
Petrolia Bench Ranch	04901	001	meeting	n/a	n/a	meeting	
Maginnis	00823	002	not meeting	n/a	meeting	not meeting	1, 5 livestock
Yellowwater	15040	003	not meeting	not meeting	meeting	not meeting	1, 3, 5 livestock
N. Willow Creek	04824	004	not meeting	not meeting	not meeting	not meeting	1,3 livestock; 2,5 livestock & weeds
McDonald Creek	04902	005	not meeting	n/a	n/a	not meeting	1,5 crested wheatgrass
Warhorse Ind.	15152	006	not meeting	not meeting	meeting	meeting	1, 2 livestock
South War Horse	15153	006	meeting	n/a	n/a	meeting	
Eager Home Ranch	15061	008	meeting	n/a	n/a	meeting	
Box Elder	02529	009	not meeting	meeting	meeting	meeting	1 historical livestock use
Hubert Coulee	02539	010	meeting	n/a	n/a	meeting	
Aikens	04859	011	meeting	n/a	n/a	meeting	
Sheep Wagon	15064	012	meeting	n/a	n/a	meeting	
Aikens	25012	013	meeting	n/a	n/a	meeting	
Yellow Water Creek	15085	014	not meeting	n/a	n/a	not meeting	1,5 dense clubmoss
Chippewa	02606	015	meeting	n/a	n/a	meeting	
Schulz	02666	016	meeting	n/a	n/a	meeting	
Brickyard	02611	017	not meeting	not meeting	meeting	not meeting	1,2,5 weeds, livestock
Degner Pasture	02613	018	meeting	n/a	n/a	meeting	
County Line	12804	019	meeting	n/a	n/a	meeting	
Spring Creek	15147	020	not meeting	n/a	n/a	not meeting	1,5 livestock- north pasture
Forty One	02664	021	meeting	n/a	n/a	meeting	
S. Fork Bear Creek	14910	022	meeting	not meeting	meeting	meeting	2 upward trend
Grass Range East	02673	023	meeting	n/a	n/a	meeting	
Harris	04874	024	not meeting	n/a	n/a	not meeting	1,5 livestock
Bear Creek	14912	025	not meeting	n/a	n/a	not meeting	1,5 livestock
Croft Place	12608	026	meeting	n/a	n/a	meeting	
Elk Creek Bench	04865	027	not meeting	n/a	n/a	not meeting	1,5 livestock & cwg
Fanyak Exchange	02536	028	meeting	n/a	n/a	meeting	
Flatwillow Colony	09684	029	not meeting	n/a	n/a	meeting	1 large prairie dog town
Duck Creek	04868	030	not meeting	n/a	n/a	not meeting	1,5 dead sage, cwg
Chippewa School	02623	031	meeting	n/a	n/a	meeting	
Wellman	02677	032	meeting	n/a	n/a	meeting	
Little Dam	12601	033	not meeting	not meeting	meeting	not meeting	1,2,5 weeds, crested wheatgrass
Gilt Edge	02620	034	not meeting	n/a	n/a	not meeting	1,5 historical livestock use
Maginnis Creek	00985	035	not meeting	n/a	n/a	not meeting	1,5 livestock

Not meeting — livestock caused

Not meeting — not livestock caused

Allotment Name	Allotment Number	Identification Number	Standard 1 (uplands)	Standard 2 (riparian)	Standard 3 (h2o qual)	Standard 5 (biodiv.)	Cause (by standard)
Alan Ind.	15119	036	not meeting	not meeting	meeting	not meeting	1,2 5 livestock & crested wheatgrass
Railroad	15118	037	meeting	n/a	n/a	meeting	
Petroleum Ind.	15120	038	meeting	n/a	n/a	meeting	
54 Livestock	14993	039	meeting	n/a	n/a	meeting	
North Highway	15024	040	not meeting	n/a	n/a	not meeting	1,5 historical livestock use; upward trend
FCC Ind. A	25000	041	meeting	n/a	n/a	meeting	
Bohemian Corner	02668	042	meeting	n/a	n/a	meeting	
Circle Bar Coulee	04827	043	meeting	not meeting	not meeting	meeting	2,3 channel incisement, weeds
A Holgren Place	04872	044	meeting	n/a	n/a	meeting	
Hale Ind. D	05068	045	meeting	n/a	n/a	meeting	
C. Beckstrom Ind.	15067	046	not meeting	meeting	meeting	not meeting	1,5 livestock, clubmoss
Hale Ranch	15069	047	meeting	not meeting	meeting	meeting	2 livestock,weeds,dewatering,ch.inc.
S. War Horse (Hale)	25004	048	meeting	n/a	n/a	meeting	
Walker Ranch	14903	049	not meeting	not meeting	meeting	not meeting	clubmoss, livestock
S. War Horse Ind.	15046	050	not meeting	n/a	n/a	meeting	livestock
East Winnett	15047	051	not meeting	n/a	n/a	not meeting	1,5 crested wheatgrass
Yellow Water Basin	04898	052	not meeting	n/a	n/a	not meeting	1,5 livestock & cwg
Hedman Pasture B	15073	053	not meeting	n/a	n/a	not meeting	1,5 livestock, clubmoss
Hedman Pasture C	15074	054	meeting	n/a	n/a	meeting	
Hedman Pasture D	04875	055	not meeting	not meeting	meeting	meeting	1,2 historical use, upward trend
Hedman Pasture E	15075	056	meeting	n/a	n/a	meeting	
Hedman Pasture F	15076	057	meeting	n/a	n/a	meeting	
War Horse Common	15071	058	meeting	n/a	n/a	meeting	
Wild Horse Lake	15072	059	not meeting	n/a	meeting	not meeting	1,5 crested wheatgrass, weeds
Bender Creek Winnett	04891	060	meeting	not meeting	meeting	not meeting	2,5 weeds
Yellowwater Ind. B	15092	061	not meeting	n/a	n/a	not meeting	1,5 livestock, blue gramma/clubmoss
Kaufman	02815	062	meeting	n/a	n/a	meeting	
Zimmerman Place	15036	063	not meeting	n/a	n/a	not meeting	1,5 livestock, weeds
Iverson Yellow Water	15151	064	not meeting	not meeting	meeting	not meeting	1,2,5 livestock, weeds
Bender Creek Hughes	02813	065	meeting	n/a	n/a	meeting	
Breeding Pasture	04877	066	meeting	n/a	n/a	meeting	
Meadow Pasture	05141	067	meeting	n/a	n/a	meeting	
South Pasture	05142	068	not meeting	n/a	n/a	meeting	1 large prairie dog town
Bench Pasture	05143	069	not meeting	not meeting	meeting	not meeting	1,2,5 livestock, weeds
Pike Creek	05161	070	not meeting	not meeting	meeting	not meeting	1,2,5 livestock, weeds
Hawkins Pasture	15138	071	meeting	n/a	n/a	meeting	
L. Pike Creek	15139	072	not meeting	not meeting	meeting	not meeting	1 livestock, 2,5 weeds
Rozie Pasture	15140	073	meeting	n/a	n/a	meeting	
Snoose Creek	15144	074	meeting	not meeting	meeting	meeting	2 channel incisement

Not meeting — livestock caused

Not meeting — not livestock caused

Allotment Name	Allotment Number	Identification Number	Standard 1 (uplands)	Standard 2 (riparian)	Standard 3 (h2o qual)	Standard 5 (biodiv.)	Cause (by standard)
Lambert Bench	15145	075	meeting	n/a	n/a	meeting	
North Flatwillow	15146	076	not meeting	not meeting	meeting	not meeting	1,2,5 livestock
Windbreak	04873	077	meeting	n/a	n/a	meeting	
P.D. Pasture	04878	078	meeting	n/a	n/a	meeting	
D. Iverson	04879	079	meeting	n/a	n/a	meeting	
Silver Sage	15070	080	meeting	n/a	n/a	meeting	
Sage Hen	04880	081	meeting	n/a	n/a	meeting	
Jackson Home Place	02010	082	not meeting	n/a	n/a	not meeting	1,5 livestock
Crowley Dam	15014	083	not meeting	n/a	n/a	not meeting	1,5 historical livestock use
Road Junction	15001	084	meeting	n/a	n/a	meeting	
Flatwillow	15078	085	meeting	n/a	n/a	not meeting	5 weeds
Mosby Road	25007	086	meeting	n/a	n/a	meeting	
King	04884	087	meeting	n/a	n/a	meeting	
King 7 Heifer Pasture	05054	088	meeting	n/a	n/a	meeting	
King Winter Pasture	15055	089	meeting	n/a	n/a	meeting	
Nebraska Place	04890	090	meeting	n/a	n/a	meeting	
West Bohemian	02636	091	not meeting	n/a	n/a	not meeting	1,5 livestock, crested wheatgrass
Kruger	04885	092	meeting	n/a	n/a	meeting	
Bassett Place	15043	093	not meeting	not meeting	meeting	not meeting	1,2,5 livestock, clubmoss, weeds
Maidenhead	02616	094	not meeting	n/a	n/a	not meeting	1,5 crested wheatgrass
Fisher	02642	095	meeting	not meeting	meeting	meeting	2 channel incisement
Box Elder L&L Ind.	04854	096	not meeting	n/a	n/a	not meeting	1,5 crested wheatgrass
Buckler Place	02519	097	not meeting	n/a	n/a	not meeting	1,5 livestock, dense clubmoss
William Lewis Ind.	04886	098	not meeting	n/a	n/a	not meeting	1,5 livestock, dense clubmoss, weeds
# Ranch	04869	099	meeting	n/a	n/a	meeting	
Salt Sage	14992	100	meeting	n/a	n/a	meeting	
Marks Ind.	04887	101	meeting	meeting	meeting	meeting	
North Box Elder	04850	102	not meeting	n/a	n/a	not meeting	1,5 livestock, crested wheatgrass
Munson	02653	103	meeting	n/a	n/a	meeting	
Briggs Coulee	02647	104	not meeting	n/a	n/a	meeting	1 livestock, weeds
Musselshell	15010	10-5	meeting	n/a	n/a	meeting	
Adams	02665	106	meeting	n/a	n/a	meeting	
Pearce	14911	107	not meeting	n/a	n/a	not meeting	1,5 non-native grass species
West Winnett	15023	108	not meeting	n/a	n/a	not meeting	1,5 livestock, crested wg, prairie dogs
Hill South Winnett	04876	109	meeting	n/a	n/a	meeting	
S Fork Bear Creek	02654	110	meeting	n/a	n/a	meeting	
O-N	02662	111	meeting	n/a	n/a	meeting	
Bohemian South	02656	112	meeting	n/a	n/a	meeting	
Chimney Rock South	05098	113	not meeting	n/a	n/a	not meeting	1,5 crested wheatgrass

Not meeting — livestock caused

Not meeting — not livestock caused

Allotment Name	Allotment Number	Identification Number	Standard 1 (uplands)	Standard 2 (riparian)	Standard 3 (h2o qual)	Standard 5 (biodiv.)	Cause (by standard)
Chimney Rock Ind.	15095	114	meeting	n/a	n/a	meeting	clubmoss
Skibby Place	15059	115	not meeting	not meeting	meeting	not meeting	1,5 livestock; 2 historical use, upward trend
Elder	02659	116	meeting	n/a	n/a	meeting	
Doman-Schultz	04863	117	meeting	n/a	n/a	meeting	
Marsh Hawk	04894	118	meeting	n/a	n/a	meeting	
Hughes Coulee	04831	119	not meeting	n/a	n/a	meeting	1 livestock, clubmoss
Maxwell Ranch	15009	120	meeting	n/a	n/a	meeting	
East Roy	02670	121	not meeting	n/a	n/a	not meeting	1 livestock
Solf Bros. A	15090	122	not meeting	n/a	n/a	not meeting	1,5 livestock, clubmoss
Solf Bros. B	04897	123	meeting	n/a	n/a	meeting	
Little Bear	05018	124	meeting	n/a	n/a	meeting	
Gorman Coulee	04990	125	meeting	n/a	n/a	meeting	
Alfalfa Acres	14988	126	meeting	n/a	n/a	meeting	
N.T., S. Rattlesnake, Pet., & Elk	04900	127	meeting	n/a	n/a	meeting	
West Bassett	15039	128	meeting	n/a	n/a	meeting	
Ford Creek	15045	129	meeting	n/a	n/a	meeting	
Teigen Ind. Pasture	04899	130	meeting	n/a	n/a	meeting	
Schuster & White	15048	131	meeting	n/a	n/a	meeting	
Forgy Common	12700	132	not meeting	not meeting	meeting	not meeting	1,5 weeds; 2 weeds, channel incisement
Whisonant Place	14906	133	meeting	n/a	n/a	meeting	
Little Box Elder	02609	134	meeting	not meeting	meeting	meeting	2 weeds, drought, channel incisement

APPENDIX N
BLM Drought Policy

Bureau of Land Management
POLICY FOR ADMINISTERING PUBLIC LAND GRAZING
IN
MONTANA, NORTH AND SOUTH DAKOTA
DURING PERIODS OF DROUGHT

Introduction

Livestock grazing is but one of the activities that BLM manages on the public lands. Drought stresses all resources: vegetation, wildlife, soils,watershed, and timber as well as livestock. Unfortunately, only livestock and human activity can be readily controlled or restricted from access to public lands. The other resources are either immobile or not readily controlled. This policy deals with livestock use and implements provisions of existing laws and regulations. Other uses that may require special consideration during severe drought may be addressed in separate policy statements or actions.

Vegetation cover is one part of productive rangelands because it strongly affects soil moisture. When drought reduces the total forage produced and the normal residual vegetation (standing and down plant material) is used by livestock, insects, and other grazing animals; soil moisture and temperature are affected. Soil temperatures are lowered by the residual cover during warm periods and are raised by the residual cover during cold periods. Moisture intake and penetration into soils is keyed to the amount and type of residual cover found on a soil/ecological site. In fact, with little or no residual cover on rangelands, moisture events will likely produce little effective penetration into the soil. Residual cover provides protection for soils, vegetation, wildlife, watersheds, and for the many other resources dependent upon good vegetation and livestock management.

Authority

This document implements provisions of:

- Taylor Grazing Act of June 28, 1934, as amended;
- Federal Land Policy and Management Act of 1976, as amended;
- Public Rangelands Improvement Act of 1978;
- Regulations in 43 code of Federal Regulations, Group 4100(43 CFR 4100).

Policy

It is the policy and objective of the BLM to: manage the public lands and authorize livestock grazing under the principles of multiple use and sustained yield; provide for the orderly administration of grazing by domestic livestock on the public lands; and provide for the conservation and protection of soil and vegetation resources.

Accomplishment of these objectives becomes more difficult during periods of range depletion caused by drought. Normal grazing schedules and livestock management practices may have to be modified. Additional coordination, consultation, and data exchange between livestock operators and Bureau personnel will be required, over and above that level normally practiced. Appropriate state agencies and other interested parties will have to be involved at appropriate times and kept informed at all times.

The principal thrust of the policy and procedures in this document, and other regulatory and procedural requirements not repeated here, will be for the livestock operator and BLM to jointly develop strategies for livestock use on public land during and following drought. Strategies selected should be those that best protect rangeland resources while minimizing impacts on the operator to the extent possible. To that end, every degree of flexibility provided by the laws and implementing regulations will be available to authorized officers of the Bureau.
Voluntary adjustments in livestock use of public lands should be sought at the earliest date it becomes apparent that “normal” grazing schedules cannot be followed; or, if followed, would result in degradation of long-term resource productivity. The earlier an agreement can be reached or a decision is made that “normal” grazing schedules cannot be followed; the more opportunities livestock operators will have to consider alternatives to minimize impacts on his or her operation. Waiting until the last minute before scheduled turnout to make a determination or decision will reduce the options available to both the operator and the Bureau. In keeping with established Bureau policies and priorities, efforts to manage public rangeland under drought conditions will be directed first to allotments with resource concerns such as “I” category allotments. Specific allotments in the “M” and “C” categories can also be considered high priority when resource values or conditions so require. Regardless of the category assigned to an allotment, operators should be aware of the procedures and flexibilities available for dealing with drought condition.

BLM fully expects that the vast majority of livestock operators will recognize the need for and voluntarily make adjustments in livestock use of public lands if the extended drought continues. These adjustments will be recognized during the permitting process and grazing bills will be adjusted accordingly. In those situations where agreement cannot be reached, authorized officers of the Bureau have the final responsibility and accountability for ensuring that public lands are not permanently damaged by improper use.
If issuance of a decision concerning livestock use becomes necessary, the procedure specified in 43 CFR 4160 will be followed. Briefly, this procedure calls for a proposed decision, setting forth the proposed action.

Proposed decisions are issued by the Field Office Manager. The permittee then has 15 days in which to protest the proposed decision and set forth reasons why he or she believes the proposed decision is in error. The authorized officer then reviews the proposed decision in light of the protestant’s statement of reasons and any other information that may bear on the case. At the conclusion of the review, a final decision is prepared and served on appropriate parties. Any person whose interest is adversely affected by a final decision may appeal the decision for the purpose of a hearing before an Administrative Law Judge.

It should be further understood that final decisions can be modified or rescinded, if the conditions that existed when the decision was issued no longer exist. If significant amounts of precipitation occur during the growing season, producing significant changes in the amount of moisture available to plants, this may cause decisions to be reconsidered. The consultation and coordination process will be used to obtain livestock operator involvement in such cases.
If a proposed decision is not protested, during the 15-day period, it becomes the final decision of the authorized officer without further action.

In cases such as the need for temporary changes caused by conditions such as drought, final decisions may become effective upon issuance (43 CFR 4160.3(f) 4110.3-2(a)).

Procedures

The following guidelines and procedures are intended to provide the data, flexibility and direction for public land managers and livestock operators to develop strategies and

make decisions during drought conditions. Consultation and coordination with livestock operators and other interested parties will be carried out during all procedural steps.

I. Winter Assessment (Mid-November - January)

A. Analysis

1. Review past season's monitoring results. Analyze plant growth, actual use, occurrence of insect infestations, and especially the use of "rest" pastures.

2. Analyze precipitation records and distribution patterns from the National Weather Service, local cooperators, BLM, and other agencies. Tabulate moisture departures from normal levels and timing of precipitation in relation to past years' growing season.

3. In "I" allotments where there is concern because there is less residual cover, effective precipitation well below normal, rest pastures already used, etc., measure soil moisture in representative areas. Where available, use RAWS/OMNI sites, existing soil moisture stations, etc. Additional soil moisture samples are to be taken at the rooting depth of major forage species in representative areas using techniques found in agency manuals/ handbooks and professional literature and experienced personnel.

B. Action

1. Where it is apparent resource degradation might occur if drought continues, begin to notify operators through letters and news releases that the coming year's livestock grazing might be affected.

2. Set up range user meetings in affected communities to discuss available information and possible actions to prevent range resource damage.

3. Encourage operators to make needed changes in their grazing schedules, including applying for non-use. If non-use is taken then activated, BLM will waive the $10 service fee in accordance with 43 CFR 4130.8.3. Authorized officers may issue refund or credit of grazing fees under 43 CFR 4130.8-2(b).

4. Meet with individual operators when available information indicates a particular allotment is affected by severe drought condition. Attempt to reach agreement on alternative grazing strategies if conditions do not change.

II. Late Winter and Spring Assessment (February - April)

A. Analysis

1. Review precipitation and soil moisture data for winter and early spring.

2. Review the effects of winter grazing use; snow pack influence for stock water, soil temperatures, etc-

3. Continue soil moisture measurements where problems are apparent or in areas of concern. Measurements at rooting depth to measure available water for plants will be especially important during this period.

4. Assess availability of livestock water, in consultation with permittees.

B. Action

1. If drought conditions are continuing, or becoming more severe, follow up winter letters and news releases with more releases and letters that update the situation. Conduct meetings with Grazing and District Advisory Boards. Meetings are encouraged with other concerned individuals and agencies as a part of the grazing management strategy.

2. Contact remaining operators who have not voluntarily made needed changes. Where you believe you have enough information to indicate an allotment is in severe drought condition, meet with the operator to review and explain the information you have and attempt to reach agreement on a grazing strategy. If an

agreement cannot be reached and, especially if the allotment has a relatively early turnout date, issue a proposed decision. The extent of use adjustment contained in this decision (delayed turnout, reduction in numbers or duration, total exclusion, etc.) will depend on your assessment of all the factors involved. These include past grazing use, range condition, residual cover, precipitation, soil moisture and the land use objectives for the allotment.

3. If soil moisture is below the middle line on Figure 1, delay turnout until key forage plants have grown to approximately one-half their normal height (for most of our native grass species about 6 inches).

III. Continuing Assessment (throughout grazing season)

A. Analysis

1. Continue to closely monitor precipitation in "I" allotments and areas of concern. Attention is directed to determining effective (soil moisture) growing season precipitation.

2. Closely monitor utilization of key plant species and key areas. Remember to consider management objectives when selecting key species and areas.

3. Continue to measure soil moisture in "I" allotments and areas of concern.

4. Monitor factors other than livestock grazing, such as insect infestations, congregations of wildlife, availability of livestock water, etc.

B. Action

1. If soil moisture drops below the middle line on Figure 1 and utilization has reached objective levels or a maximum of 30 percent utilization has occurred, livestock are to be removed.

2. If soil moisture remains unacceptable (below the bottom line in Figure 1) during most of the spring and early summer with little or no growth in primary forage species for livestock (i.e., range readiness has not been reached), advise affected permittees that fall and winter ranges may not be available for use during the current year. Also advise that production in subsequent years may be affected if plant basal areas and density have been severely reduced.

3. For those permittees in "I", allotments with AMPs having available standing forage in rest pastures or fall or winter use pastures, advise the permittees that livestock must be removed from public lands; when consumption of standing forage has reached objective levels or a maximum of 50 percent.

4. Adjust monitoring plans to collect data concerning plant death, loss of basal area, density, and yield for analysis and use in later years.

IV. Other Considerations

1. The use of salt, mineral, and certain mineral supplements as necessary to overcome natural shortages of minerals in rangeland forage may be authorized as necessary to provide for proper range management(4130.3-2(c)).

2. Maintenance feeding on public lands is not authorized except under very unusual short-term conditions and by permit only. Maintenance feeding during drought conditions is specifically excluded.

3. Applications for a maintenance feeding permit due to poor forage conditions associated with drought should be denied and livestock removed or not allowed.

Definitions:

Available water. That portion of water in a soil that plants can extract from the soil. Generally measured per unit volume of soil.

Basal area (range). The area of ground surface covered by the stem or stems of a

range plant, usually measured 1 inch above the soil in contrast to the full spread of the foliage.

Density. (1) The number of individual plants per unit area; (2)Refers to the relative closeness of plants to one another.

Flexibility. The ability to alter the grazing management plan to meet changing conditions.

Flushing. Feeding female animals a concentrated feed shortly before and during the breeding period for the purpose of stimulating ovulation.

Growing season. In temperate climates, that portion of the year when temperature and moisture are usually most favorable for plant growth.

Key species. (1) Forage species whose use serves as our indicator to the use of associated species; (2) Those species which must, because of their importance, be considered in the management program.

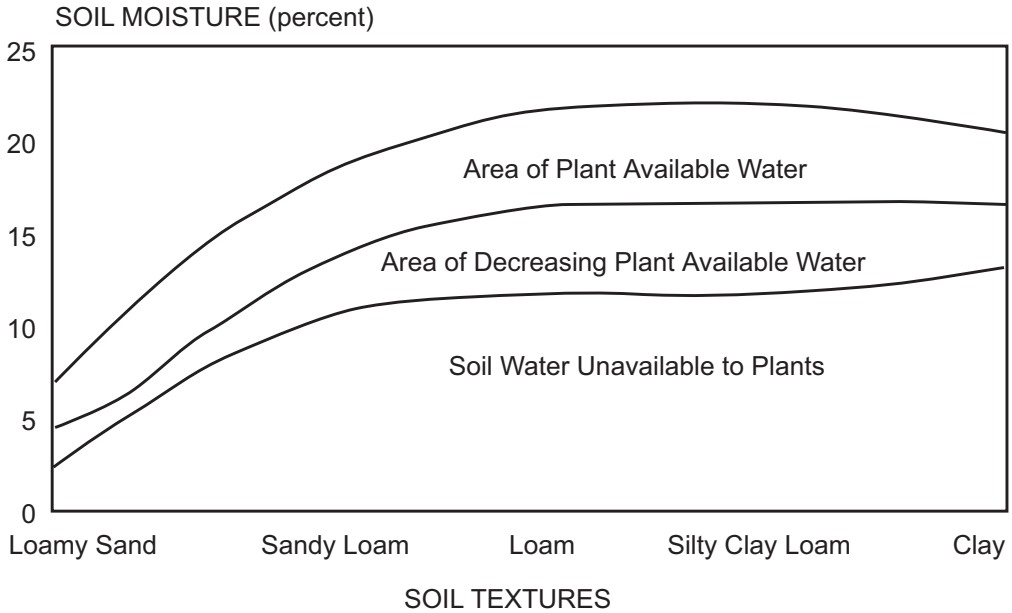
Maintenance feeding. Supplying feed to range animals when available forage is too limited to meet their minimum daily requirement (examples are cubes, pellets, baled or loose hay).

Phenology. The study of periodic biological phenomenon such as flowering, seeding, etc., especially as related to climate.

Range readiness. The defined stage of plant growth at which grazing may begin under a specific management plan without permanent damage to vegetation or soil.

Supplemental feed. A feed which supplements the forage available from the public lands and is provided to improve livestock nutrition and good animal husbandry and rangeland management practices. An example is salt or mineral block. Creep feeders to supplement feed for calves and supplemental feeding to "flush" cattle and sheep for breeding may be authorized on public lands when compatible with the resource management objectives.

FIGURE 1
Plant Available Water Capacities



When using Figure 1, the following information should be kept in mind.

a. Soil moisture is measured the depth of plant roots or to a root limiting layer. It will vary by plant(s) and soil type.

b. Soluble salts, gravel and heavy clay will decrease plant available water capacity.

c. Organic matter, good soil structure will increase plant available water capacity (The capacity increases about 1 percent for each 1 percent of organic matter).

d. Soils with water restricting layers like naturally compact subsoil, shallow bedrock or stratification can increase plant available water capacity of the overlying soil layers.

e. Soils that are deep, medium textured and uniform can have decreased plant available water but allow for deeper rooting.

Figure 1 was developed from research done in the 1980s in northern and eastern Montana. Published research was reviewed by soil scientists, range scientists and plant physiologists. These data are currently found in USDA, NRCS soil survey manuals, engineering manuals, irrigation guides, ARS and University research. It is tested and well accepted information.

The lines on the graph represent the relationship of various soil texture and soil water available to plants common to the Northern Gt. Plains and nearby Rocky Mountains.

For site specific application the lines should be adjusted to reflect the needs of key forage species on a given soil in area of interest. For example, a western wheat plant is capable of extracting more soil moisture from a silty clay soil than is a bluegrass plant.

The area above the top line is the amount of soil water in excess of what a given soil type can hold. This soil water will likely move down, through and
out of the soil root zone and possibly become ground water.

The area between the middle and top lines represents the soil moisture contents which most plants need for normal growth.

The area below the bottom line indicates soil moisture that is not available to the plant; e.g., if there is less than 4 percent moisture in a loamy sand soil within the root depth of the plant, it will not grow.

The area between the bottom and middle lines indicates a moisture level that is marginal to plant growth. The plant is becoming stressed at this point and, if further stressed by removal or damage to the top growth, it will begin to lose vigor, roots and thus its ability to grow. It is not unusual to reach this moisture level during late summer in much of Montana and other semi-arid areas.

REFERENCES

Balison, Stefani. 2002. *Fire History and Regeneration Patterns of Pinus ponderosa in the Missouri River Breaks.* Montana State University, Bozeman, MT.

Clary, Warren P., Christopher I. Thorton, and Steven R. Abt. 1996. *Riparian stubble height and recovery of degraded streambanks.* Rangelands 18(4): 137-140.

Clary, Warren P. and Wayne C. Leininger. 2000. *Stubble height as a tool for management of riparian areas.* Journal of Range Management Vol. 53:562-573.

Davis, J. W. 1982. *Livestock vs. riparian habitat management - there are solutions. In:* Wildlife - Livestock Relationships Symposium: Proceedings 10. University of Idaho Forest, Wildlife, and Range Experiment Station, Moscow, ID. pp. 175-184.

Ehrhart, Robert C., and Paul L. Hansen. 1998. *Successful strategies for grazing cattle in riparian zones.* Riparian and Wetland Research Program. Montana Forest and Conservation Experiment Station. School of Forestry, The University of Montana. Missoula, MT 47 p.

Fischer, William C. and Bruce D. Clayton. 1983. *Fire Ecology of Montana Forest Habitat Types East of the Continental Divide*. USDA Forest Service GTR INT - 141.

Heady, Harold F. 1950. *Studies of Bluebunch wheatgrass in Montana and height-weight relationships of certain range grasses*. Ecol. Monogr. 20:55-81.

Kauffman, J. Boone, and W. C. Krueger. 1984. *Livestock impacts on riparian ecosystems and streamside management implications: a review.* Journal of Range Management 37(5):430-438.

Knoph, F. L., and R. W. Cannon. 1982. *Structural resilience of a willow riparian community to changes in grazing practices. In:* Wildlife-Livestock Relationships Symposium: Proceedings 10. University of Idaho Forest, Wildlife, and Range Experiment Station, Moscow, ID. pp. 198-209.

Marcuson, P. E. 1977. *The effect of cattle grazing on brown trout in Rock Creek, Montana.* Montana Department of Fish and Game, Special Report, Project Number F-20-R-21-11a. Helena, MT. 23 p.

Montana Department of Commerce. 2001. http://ceic.commerce.state.mt.us

Montana Department of Natural Resources and Conservation. August, 1999. *Monitoring for success.* Office of the Governor. Helena, MT.

Montana Department of Environmental Quality. 1998. *List of waterbodies in need of total maximum daily load development.* http://nris.state.mt.us/wis/environet

Montana Watershed Coordination Council. 1999. *Best management practices for grazing.* USDA Department of Natural Resources and Conservation. Helena, MT. 29 p.

Mosley, Jeffrey C., Philip S. Cook, Amber J. Griffis, and Jay O'Laughlin. 1997. *Guidelines for managing cattle grazing in riparian areas to protect water quality: review of research and best management practices policy.* Idaho Forest, Wildlife and Range Policy Analysis Group. University of Idaho. Moscow, ID. 67 p.

National Wildfire Coordinating Group. 1994. *Fire Effects Guide.* National Interagency Fire Center. Boise, ID. PMS 481, NFES 2394.

Picone L.I. et. al. 2003. *Biological and chemical response of grassland soil to burning.* Journal of Range Management V. 56:291-297.

Platts, W. S. 1979. *Livestock grazing and riparian / stream ecosystems.* p. 39-45. *In:* Proceedings, Forum-Grazing and Riparian / Stream Ecosystems. Trout Unlimited, Inc., Vienna, VA. pp. 39-45.

Platts, W. S. 1981. *Effects of sheep grazing on a riparian - stream environment.* USDA Forest Service Research Note INT-307. Intermountain Forest and Range Experiment Station, Ogden, UT. 6 p.

Platts, W. S., C. Armour, G. D. Booth, M. Bryant, J. L. Bufford, P. Cuplin, S. Jensen, G. W. Lienkaemper, G. W. Minshall, S. B. Monsen, R. L. Nelson, J. R. Sedell, and J. S. Tuhy. 1987. *Methods for evaluating riparian habitats with applications to management.* USDA Forest Service General Technical Report INT-221. Intermountain Research Station, Ogden, UT. 187 p.

Reichel, Jim, and Dennis Flath. 1995. *Identification of Montanas Amphibians and Reptiles.* Montana Outdoors. May/June 1995. 17p.

Troxel, T.R., White, L.D. 1989. *Balancing forage demand with forage supply.* Texas Agricultural Extension Service Publication B-1606. Texas A&M University. College Station, Texas.

U.S. Department of Agriculture, Forest Service. 2000. *Wildland Fire in Ecosystems, Effects of Fire on Fauna*. Rocky Mountain Research Station. General Technical Report RMRS-GTR-42-volume 1.

U.S. Department of Agriculture, Forest Service. 2000. *Wildland Fire in Ecosystems, Effects of Fire on Flora*. Rocky Mountain Research Station. General Technical Report RMRS-GTR-42-volume 2.

U.S. Department of Agriculture, National Agricultural Statistics Service. 1999. *1997 Census of Agriculture*. *Montana State and County Data.* Volume 1, Geographic Area Series, Part 26. Washington, DC.

U.S. Department of Interior, Bureau of Land Management. 1997. *Grazing management for riparian-wetland areas.* Technical Reference 1737-14. National Science and Technology Center Information and Communications Group. Denver Colorado. 63 p.

U.S. Department of the Interior, Bureau of Land Management. 1981. *Prairie Potholes Vegetation Allocation Environmental Impact Statement.* Lewistown, Montana.

U.S. Department of the Interior, Bureau of Land Management. May, 1997. *Standards for Rangeland Health and Guidelines for Livestock Grazing Management Environmental Impact Statement.* Montana State Office: Billings, Montana.

U.S. Department of the Interior, Bureau of Land Management. 2000. *Interpreting Indicators of Rangeland Health.* Technical Reference 1734-6. National Science and Technology Center Information and Communications Group. Denver, Colorado. 119 p.

U.S. Department of the Interior, Bureau of Land Management. July 2000. *Instruction Memorandum No. OF&A2000-020, revision to BLM Handbook H-9214-1, Prescribed Fire Management.* Updated draft revision October 2003.

Van Pollen, H.W. and Lacey J.R. 1979. *Herbage response to grazing systems and stocking intensities.* J. Range Management 32.

Vallentine, J.F. 1990. *Grazing Management.* Academic Press, Inc. New York.

Windell, John T., Beatrice E. Willard, David J. Cooper, Susan Q. Foster, Christopher F. Knud-Hansen, Lauranne P. Rink, and George N. Kiladis. 1986. *An ecological characterization of Rocky Mountain montane and subalpine wetlands.* USDI Fish and Wildlife Service Biological Report 86(11). 298 p.

Zlatnik, Elena. 1999 Agropyron cristatum. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: http://www.fs.fed.us/database/feis/ [2004, September 17].