

## **APPENDIX D**

### **GRAZING MANAGEMENT PLAN**

**ENGINEERING APPENDIX D  
GRAZING MANAGEMENT PLAN**

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## 1.0 PURPOSE AND SCOPE

This Grazing Management Plan (hereinafter, "Plan") describes the process for managing grazing of livestock and monitoring riparian vegetation on land subject to easements for the Salmon River Ecosystem Restoration Project (hereinafter, "Project"). The process described is intended to result in vigorous, diverse riparian vegetation within the Project areas and at the same time allow a level of grazing that does not impair the riparian vegetation. Additionally, by allowing some degree of grazing, the Project Sponsor (Custer Soil Conservation District) is providing some degree of incentive to the landowner to continue irrigation, weed control, and other sound land management practices. This Plan describes the desired condition of the riparian vegetation, prescribes methods of measuring the condition of the vegetation, and outlines the process that shall be followed for determining the authorized periods, and the maximum number of livestock allowed to graze to ensure development of the desired riparian condition.

## 2.0 OVERVIEW OF PROCESS

The process described in this Plan requires production of an annual report (hereinafter, "Report") that assesses the condition of the riparian zones on each property subject to a Plan. The assessment establishes annual authorized grazing periods, proper use standards for herbaceous and shrubby vegetation, key vegetative sampling areas, forage production, and the maximum number of livestock allowed to graze on each property. The Report is produced by a board of reviewers (see "Review Board" for description of members). Initially, the Review Board will evaluate each property and develop zones with varying riparian vegetation targets. The individual site potential and goals will be based on vegetation types and key areas described in "Sampling Vegetation Attributes" (USDA and USDI. 1996b), "Utilization Studies and Residual Measurements" (USDA and USDI. 1996a), "Riparian Area Management" (USDA and USDI. 1998), and the Challis Resource Area Monitoring Procedures – 1996 (Challis BLM Field Office). The zones are developed and agreed upon by the Review Board members based upon the criteria described in "Riparian Zone Designations."

Riparian zone objectives will include:

### 2.1 Vegetation

**2.1.1.** Riparian areas will be managed to achieve proper functioning condition to ensure desired functions, improve water quality, prevent and minimize flood and sediment damage, and establish conditions which support attainment of healthy and productive aquatic habitat. Proper functioning condition is defined as "Riparian-wetland areas that contain adequate vegetation, landform or large woody debris in order 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 floodwater retention and ground-water 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 fish production, waterfowl breeding, and other uses; and support greater diversity. (USDI. 1993, Revised 1995.)"

**2.1.2** Riparian key area monitoring will include but not be limited to herbaceous stubble height, woody browse utilization (USDA and USDI, 1996) and bank shearing measurements (i.e. implementation monitoring).

The target end of season herbaceous stubble height for key areas along the Upper Salmon River at Challis (USRC) project reach of the Salmon River will be set according to guidelines and plant species in Riparian Area Management and the Challis Resource Area Monitoring Procedures – 1996.

Bank shearing by livestock in key areas along the USRC project reach will be 10% or less.

Browse utilization in key areas along the USRC project reach will be 50% or less frequency of nipping on current year leaders on woody species.

**2.1.3.** Proper Functioning Condition surveys (USDA and USDI, 1993) will be conducted along each property, in each riparian zone prior to the next grazing season to assess existing condition and trend. Vegetation transects and plots (USDA and USDI, 1996b; USDA and USDI, 1996a; USDA and USDI, 1998; Challis BLM, 1996) will be conducted prior to the next grazing to establish baseline resource conditions for the coming year.

## **2.2 Soil**

**2.2.1.** Ground cover (cover of soil by live or dead vegetative matter and rock) is maintained at or above current levels and is present within or above the expected range as described in the relevant Natural Resource Conservation Service range site guides. Plant species are grazed at levels that will maintain plant vigor and amounts of vegetative ground cover on sites throughout the allotment. Livestock impacts to riparian area soils and streambanks are within acceptable levels.

**2.2.2.** Upland utilization and riparian herbaceous stubble height and bank shearing measurements will be used to assess livestock grazing impacts to soils.

**2.2.3.** Ground cover data will be taken as part of the nested frequency procedures and along with transects and observations conducted as part of qualitative assessments on the riparian zoned within each project site as described in the previous section.

Each year, the current condition of each riparian zone will be evaluated based on field surveys conducted by the Review Board. The surveys will measure and estimate at least five parameters for each riparian zone: 1) vigor; 2) plant density; 3) species composition, 4) vegetative condition and trend, and 5) utilization. The grazing of livestock each year will be conducted according to the requirements in the Report. A "year" shall mean an annual period beginning on January 1 and ending on December 31. The initial year may be an exception to this schedule. Following execution of the easement, an initial vegetative survey and Report shall be completed within 3-months to establish baseline vegetative condition.

### **3.0 REVIEW BOARD**

The Review Board (hereinafter, "Board") shall consist of four (4) members. One member of the review board will be a member of the Custer Soil Conservation District appointed by the Chairman of the District (District). Two of the members shall be practicing conservationists experienced with grazing management and vegetative sampling, and appointed by the Chairman of the District. The fourth member will be the property owner and would vary for each property being evaluated.

## **4.0 RIPARIAN ZONE DESIGNATIONS**

There will be two riparian zone designations that are based upon proximity to water, frequency of flooding, and other selected desirable attributes. Each zone will have a desired long-term condition based on guidelines in “Riparian Area Management” and the “Challis Resource Area Monitoring Procedures”. Additionally, each riparian zone will be defined according to its stage of succession.

Forage plant production will be calculated using clipped weight plots or an equally accurate method described in “Sampling Vegetation Attributes”, “Utilization Studies and Residual Measurements”, “Riparian Area Management”, or the Challis Resource Area Monitoring Procedures, in order to determine proper use standards, duration of grazing season, and livestock stocking rates.

The plant communities in each riparian zone will be delineated based on the procedures in the “Challis RA Monitoring Procedures” and “Riparian Area Management” documents.

There will be at least one vegetation transect established in each riparian zone, on each project site (i.e. property). The vegetation and soil will be inspected each year prior to turning out livestock.

At least one utilization transect will be done midway through the proposed grazing season using methods and guidelines described in “Utilization Studies and Residual Measurements” (USDA and USDI. 1996a). The remainder of the grazing season and stocking levels will be based on this utilization check.

In addition to the transect data, photographs will be taken at the beginning and end of each grazing season. Photographs will be taken at both ends of each transect, facing the opposite end, and perpendicular to the transect at both ends.

Each transect will be read as soon as possible after livestock is removed at the end of the grazing season or before October 15, whichever is earlier.

### **4.1 Riparian Designation #1 - Frequently Flooded Riparian Zone**

This zone is characterized by frequent flooding, every 2 to 5 years that provides a means of rejuvenation for the plant communities and the soil. This zone will include the “green line” area described in the Challis RA Monitoring Procedures. It will border flowing water and may contain some low areas filled with water during the spring of each year. Groundwater is close to the surface or within approximately 2-feet of the surface even during dry portions of the year.

Target conditions for vegetative community parameters (i.e. plant vigor, species composition, density, condition and trend, and utilization) will be based on the guidelines in the “Challis RA Monitoring Procedures” and “Riparian Area Management” documents.

It is anticipated that the degree of restriction of grazing that ultimately is required to achieve the desired condition described above will preclude significant grazing in the Frequently Flooded Riparian Zone. And, potentially, no grazing will be allowed for the first several years depending upon specific site conditions.

#### **4.2 Riparian Designation #2 - Mesic Riparian Zone**

This zone is characterized by high water table and inundation, but does not have the same degree of disruption due to flood damage as the Frequently Flooded Riparian Zone. This zone is inundated at intervals of 2 to 10 years. Groundwater is close to the surface at the spring of the year and is within approximately 4-feet of the surface during the dryer portion of the year. The general plant community characteristic of this zone may also include the “green line” mentioned in the Frequently Flooded Riparian Zone.

Target conditions for vegetative community parameters (i.e. plant vigor, species composition, density, condition and trend, and utilization) will be based on the guidelines in the “Challis RA Monitoring Procedures” and “Riparian Area Management” documents.

It is anticipated that the degree of restriction of grazing that ultimately is required to achieve the desired condition described above will preclude significant grazing in the Mesic Riparian Zone. And, potentially, no grazing will be allowed for the first several years depending upon specific site conditions.

## 5.0 ANNUAL REVIEW

The annual review will consist of assessments of riparian zone condition that are based upon field surveys of established transects within each zone. The transect will be read in accordance with "Sampling Vegetation Attributes", "Utilization Studies and Residual Measurements", "Riparian Area Management", the Challis Resource Area Monitoring Procedures, and "Riparian Area Management". The transect data will be used to determine density, species composition, vigor, condition and trend and forage utilization.

The review board will select one of its members, or some other agreed upon qualified individual, to read the transects. The transect data gathered by the annual assessment will be compared with the target values for each riparian zone and used to evaluate progress towards the desired conditions for each riparian zone and project site. As the potential for each property becomes more apparent over time, the review board may adjust the desired condition targets to better reflect the site-specific conditions of each property and riparian zone. Based upon past grazing patterns, present condition and trend, current forage production, and recent weather conditions, the review board members will agree upon a tentative turnout date for livestock, the stocking rate, and season of use. A pre-season inspection will set the current year turnout date. The annual report shall state the results of the vegetation transects and utilization checks and summarize that information with the results from recent past years. Additionally, the annual report will describe the condition and trend of the riparian zone and compare it with the desired condition. Finally, the report shall state the grazing dates and number of animals allowed for each riparian zone for each property in the current season and recent past seasons.

## **6.0 APPROVED DOCUMENT**

For the life of the project, each annual report will be submitted to the Custer Soil Conservation District for approval by October 1 of each year and a copy of the report will be provided to the Upper Salmon Basin Watershed Project Technical Workgroup at that time. Each annual report shall be incorporated into the meeting minutes of the meeting for which the report is approved so that the report becomes a public record.

## 7.0 REFERENCES

USDA and USDI. 1993. Revised 1995. "Riparian Area Management, Process for Assessing Proper Functioning Condition," (Technical Report 1737-9, BLM/SC/ST-93/003+1737+REV95).

USDA and USDI. 1996a. "Utilization Studies and Residual Measurements" (technical reference BLM/RS/ST-96/004+1730).

USDA and USDI. 1996b. "Sampling Vegetation Attributes" (BLM interagency technical reference BLM/RS/ST-96/002+1730).

Challis BLM. 1996. Challis Resource Area Monitoring Procedures – 1996 (Challis BLM Field Office).

USDA and USDI. 1998. "Riparian Area Management" (Dept. of Interior Technical Reference 1737-15, 1998).