

## APPENDIX L

### RECREATION OPPORTUNITY SPECTRUM

Recreation Opportunity Spectrum (or ROS) is a conceptual framework designed for inventory, planning and management of public lands from a recreation perspective. Six ROS classes describe settings for recreation from the very developed urban setting at one end of the spectrum to the undeveloped, natural setting of a wilderness at the other.

ROS classifications are determined on the basis of physical, social and managerial setting criteria. Physical setting criteria include remoteness, size of area, and evidence of human use. Social setting criteria reflect the level and types of contacts between individuals or groups which can be expected in an area. Managerial setting criteria reflect the kind and extent of management services and facilities provided to support recreation use, and the restrictions placed on people's actions by the administering agency.

ROS can be used to describe the existing situation or a situation to develop for the future. It recognizes the diversity of needs and desired experiences of recreationists as a whole. (Please see Bureau Manual 8320, titled Planning for Recreation Resources, for a detailed description of ROS.)

APPENDIX M

ECONOMIC SAMPLE CALCULATION

<u>Crop</u>	<u>Yield/Acre</u> <sup>1/</sup>	<u>Price</u> <sup>2/</sup>	<u>Sales/Acre</u>	<u>% of Total</u>	<u>Total Sales</u>
Alfalfa Estab.	1.0 ton	\$71.15	71.15	1	\$ 0.71
Alfalfa	7.0 ton	71.15	498.05	5	24.90
Winter Wheat	105.0 Bu	3.99	418.95	17	71.22
Barley	113.0 Bu	2.94	332.22	17	56.48
Potatoes	425.0 CWT	5.12	2,176.00	22	478.72
Sugar Beets	32.0 ton	42.86	1,371.52	17	233.16
Dry Edible Beans	28.0 CWT	17.69	495.32	21	104.02
					<u>\$969.21</u>

<sup>1/</sup> As estimated for Soil Class 2, Canyon County.

<sup>2/</sup> FY-1985 Normalized Crop Price.

Sales Per Acre	= \$	969	
Total Acres	=	560	
TOTAL Sales	=	<u>\$542,600</u>	
Earnings/Gross Output Ratio <sup>2</sup>	=	<u>.383</u>	(U.S.D.C., B.E.A. 1977)
Direct Earnings	=	<u>\$207,800</u>	
Gross Output Multiplier	=	<u>2.549</u>	(U.S.D.C., B.E.A. 1977)
TOTAL Earnings	=	<u>\$529,700</u>	
Total Farm Earnings	=	\$96,317,000	
% Direct of Total Farm	=	0.2%	
Total RMP Area Earnings	=	\$2,336,753,000	
% Total of Total RMP Earnings	=	0.02%	

Employment Calculations

Direct Earnings	=	\$207,800 - \$28,000	=	7 jobs
Secondary Earnings	=	<u>321,900</u> - \$19,000	=	<u>17 jobs</u>
TOTAL Earnings	=	<u>\$529,700</u>	=	<u>24 jobs</u>

APPENDIX N

GROSS OUTPUT MULTIPLIERS  
BEA ECONOMIC AREA 159 1/

Industry	WRC Sector 2/	Multiplier
Agriculture	(03) Meat Animals, Misc. Livestock	2.662
	(08) Vegetables, Sugar, Crops	2.549
Manufacturing	(19) Meat Products	2.774
	(27) Frozen Meats and Vegetables	2.191
	(29) Prepared Feed for Animals	2.138
	(34) Other Food Products	2.060
	(38) Lumber and Wood Products	2.395
	(46) Stone, Clay, and Glass Products	2.122
Retail Trade	(54) Wholesale and Retail Trade	2.262
Wholesale Trade	(54) Wholesale and Retail Trade	2.262
Services	(56) Services	2.296
Construction	(18) General Contractors	2.022
Finance, Insurance, Real Estate	(55) Finance, Insurance, Real Estate	1.803
Transportation and Public Utility	(53) Transportation, Communication, Public Utility	1.978

Source: U.S. Water Resources Council, 1977.

1/ Bureau of Economic Analysis Area that includes the Cascade Resource Area.

2/ May include several Standard Industrial Classifications.

APPENDIX O

EARNINGS/GROSS OUTPUT RATIOS  
REGION 159

Industry	Calculation 1/	Ratio
03	$\frac{1}{2.662} (.158) + (1 - \frac{1}{2.662}) (.3008)$	0.247
08	$\frac{1}{2.549} (.511) + ( - \frac{1}{2.549}) (.3008)$	0.383
18	$\frac{1}{2.022} (.289) + ( - \frac{1}{2.022}) (.3008)$	0.295
19	$\frac{1}{2.774} (.095) + ( - \frac{1}{2.774}) (.3008)$	0.227
27	$\frac{1}{2.191} (.138) + ( - \frac{1}{2.191}) (.3008)$	0.227
29	$\frac{1}{2.183} (.040) + ( - \frac{1}{2.183}) (.3008)$	0.179
34	$\frac{1}{2.060} (.220) + ( - \frac{1}{2.060}) (.3008)$	0.261
38	$\frac{1}{2.395} (.239) + ( - \frac{1}{2.395}) (.3008)$	0.275
46	$\frac{1}{2.122} (.317) + ( - \frac{1}{2.122}) (.3008)$	0.308
53	$\frac{1}{1.978} (.311) + ( - \frac{1}{1.978}) (.3008)$	0.306
54	$\frac{1}{2.262} (.513) + ( - \frac{1}{2.262}) (.3008)$	0.395
55	$\frac{1}{1.803} (.160) + ( - \frac{1}{1.803}) (.3008)$	0.223
56	$\frac{1}{2.296} (.487) + ( - \frac{1}{2.296}) (.3008)$	0.382

<sup>1/</sup> Calculation Routine Described in U.S. Water Resources Council -  
pg. 18

## APPENDIX P

### MONITORING AND EVALUATION

The decisions outlined in the Cascade RMP will be implemented over a period of ten to twenty years or more, depending on the availability of funding and manpower. The effects of implementation will be monitored and evaluated on a periodic basis over the life of the plan. The general purposes of this monitoring and evaluation will be:

- (1) To determine if an action is fulfilling the purpose and need for which it was designed, or if there is a need for modification or termination of an action.
- (2) To discover unanticipated and/or unpredictable effects.
- (3) To determine if mitigation measures are working as prescribed.
- (4) To ensure that decisions are being implemented as scheduled.
- (5) To provide continuing evaluation of consistency with state and local plans and programs.
- (6) To provide for continuing comparison of plan benefits versus costs, including social, economic, and environmental.

A specific monitoring plan will be written for the wildlife, watershed, and range programs. This plan will provide a framework for choosing the study methods that will provide the information needed to issue and implement specific management decisions which effect watershed, wildlife, and range. Monitoring efforts will focus on allotments in the Improve category. For the range program, methodologies are available for monitoring vegetative trend, forage utilization, actual use (livestock numbers and periods of grazing), and climate. The data collected from these studies will be used to evaluate current stocking rates, to schedule pasture moves by livestock, to determine levels of forage competition, to detect changes in plant communities, and to identify patterns of forage use. If monitoring studies indicate that allotment or area objectives are not being met then management actions will be adjusted accordingly. For the grazing program, this may include adjusting livestock seasons of use, livestock stocking levels or the grazing system being used or exclusion of livestock via fencing.

Minimum monitoring standards have been adopted by the State of Idaho, Bureau of Land Management. They are included in the Minimum Monitoring Standards for BLM-Administered Rangelands in Idaho. See the attached table for minimum data elements to be monitored for various resource values as described in the Handbook. New studies will be consistent with the minimum standards recommendations. More intensive or specialized studies may be utilized if a management need exists and funding is available.

Priorities for monitoring grazing allotments will be established in the Plan Decision Document. The methodology and intensity of study that is chosen for a particular allotment will be determined by the nature and severity of the resource conflicts that are present in that allotment.

For the wildlife program, monitoring will be directed at the biotic resource components using both temporary and permanent studies. The findings from these studies can be used to monitor responses in habitat condition and trend; monitor forage availability, composition, and vigor; monitor changes in cover and habitat effectiveness; and monitor habitat management objectives.

For timber management, monitoring will be on a stand basis for determining the need and timing of silvicultural practices or adjustment in harvesting techniques. The program will be monitored to ensure compliance with both timber harvest and aquatic management objectives.

Monitoring for the watershed program will mainly involve monitoring soil erosion, although trend in stream bank stability and water quality will be monitored for mining, forestry activities, and grazing activities.

Specific monitoring plans for other programs will be developed if the need arises.

The data collected from the monitoring and evaluation process will be analyzed and fed back into the decision making process. This will provide information regarding the effects of the land use decisions, the adequacy of mitigation methods, etc. If monitoring indicates that significant unexpected adverse impacts are occurring or the mitigating measures are not working as predicted, it may be necessary to amend or revise the RMP. Conversely, if implementation and mitigating efforts are highly successful, monitoring and evaluation efforts may be reduced.

The discussion and outline below describes the approach and criteria for monitoring water quality, wetlands and riparian areas.

Monitoring will be conducted to resolve problems with management activities and evaluate management objectives as to whether or not they are being achieved, and if not, why not, and to recommend future actions. Where the management activity is ineffective, the manager will be notified so that other options can be initiated. In addition, effective management will be documented to make available a data base containing management activities and their associated effectiveness.

Monitoring will be conducted at a level commensurate with the level of site instability and sensitivity of the beneficial uses. Monitoring intensity as described by Meyers (1986) will be used as a guide. Level I (low level) monitoring will normally be conducted in areas that are producing few resource benefits that are generally not deteriorated and are not sensitive to change. Level II (high level) monitoring will normally be conducted where resource values are high and sensitive to change, or where there is a high potential for improvement from a low value condition, or where resource values are suspected of being impacted.

Monitoring plans will be formulated by providing clear descriptions of the prescribed management activity, the affected resource, the variables which the management activity will influence, the indicator variables which will test the attainment of management objectives, and the standards by which these indicator variables will be measured. Indicator variables will need to relate to the affected resource (i.e., beneficial use) in order to answer the monitoring question of whether or not there is a change and what the change is.

Monitoring plans developed for water quality/wetlands/riparian areas will generally include the elements of the following outline:

#### Water Quality/Wetlands/Riparian Area Monitoring Plan.

##### I. Planning

- A. Description of management activity to be monitored.
- B. Description of affected resource (beneficial uses and standards).
- C. Description of processes connecting the management activity and affected resource.
- D. Description of possible and anticipated impacts.
- E. List of potential variables to monitor that relate to A-D above.
- F. Evaluation of the variables with respect to:
  1. Effectiveness and usefulness to detect change.
  2. Implementation (costs, difficulty, etc.).
  3. Methodologies (temporal/spacial frequencies should be discussed).
- G. Final monitoring variable list.

##### II. Implementation

- A. Schedule
- B. Data Collection
- C. Data Analysis/Interpretation
- D. Feedback
  1. Modification to activity
  2. Update of monitoring
  3. Effectiveness of monitoring
  4. Prepare monitoring report

Meyers, L. 1986. "Riverine Riparian Inventory and Monitoring," Draft. BLM Handbook, August 1986.

Minimum Data Elements  
to be Monitored for  
Various Resource Values  
on Rangelands\*

Resource Value	Trend	Herbage Utilization	Actual Annual Use	Condition	Climate
Livestock	2,3 (intensive mgmt areas)	a	yes	<u>2/</u>	<u>3/</u>
	3 (less intensive areas)	<u>1/</u>			
Wildlife (Upland Birds & big game)	1,2,3	a,b	yes		
Watershed	2,3	N/A	N/A		
Fisheries	3	N/A	N/A		
Timber	"Specialized"	Studies Required			
Recreation	"Specialized"	Studies Required			
Paleontologic Resource	"Specialized"	Studies Required			
Cultural Resources	"Specialized"	Studies Required			
Water Quality	"Specialized"	Studies Required			

- 1/ Intensive: Conflicts and possible significant adjustment needed.  
Less Intensive: No real conflicts.
- 2/ Required by law.
- 3/ Necessary to analyze all monitoring elements.

Key to Data Elements Chart

Trend Data Information

1. Cover
2. Frequency
  
3. Photo Plot

Utilization

- a. Utilization pattern mapping.
- b. Extensive Browse Transect Method (used when browse utilization date is needed. i.e. big game winter ranges.)
- c. Only utilization portion will typically be used.

\* Source - Minimum Monitoring Standards for BLM - Administered Rangelands in Idaho (1984).



## APPENDIX Q

### WILDLIFE HABITAT ANALYSIS AND IMPACT PREDICTION METHODOLOGY

The condition and abundance of wildlife populations is highly dependent on the quality of their habitat (Dasmann 1964). Optimum food, water, and cover factors will produce healthy herds, capable of surviving periods of stress.

Major vegetation classes in the RMP area were identified using LANDSAT. Each class was analyzed as to its vegetative quality and given a range condition rating of poor, fair or good. The amount of quality forage plants and vegetative species characteristics (nutritional values, annual or perennial) were used to determine the rating of an individual vegetation class. In all cases, the good rating class provided the best wildlife habitat condition.

In Chapter 2 analysis, the term wildlife unit months was used for elk, deer and antelope. This term stands for EUMs (elk unit months), DUMs (deer unit months), AtUMs (antelope unit months).

An EUM is defined as the amount of forage needed to sustain one elk for 30 days. The same definition applies to deer and antelope respectively.

Winter use is defined as use during the months of December, January, February, and March. Yearlong use is defined as habitat use for all 12 months of the calendar year.

The effects of each alternative were analyzed for each major wildlife species. Grazing systems, stocking rates, AMPs, season-of-use, timber harvest, and lands actions were major variables included in the final estimate of the impacts on wildlife. The final impacts were then compared to the population goals set for the areas by the Idaho Department of Fish and Game.

APPENDIX R

VEGETATION CONDITION CHANGE BY ALTERNATIVE

Range Condition Class	Present Status (acres)	Vegetation Condition Change by Alternative (Approximations) 1/				
		A	B	C	D	E
Excellent	1/2% (1,922)	NC	NC	NC	NC	NC
Good	7% (33,301)	-2%	+8%	+38%	+3%	+11%
Fair	47% (210,315)	-3%	+28%	+35%	+25%	+32%
Poor	43 1/2% (198,563)	-3%	+11%	+7%	+6%	+12%
Seeded (acres) 2/	2% (9,730)	NC	6% (26,400)	3% (19,000)	7% (37,000)	5% (24,279)
Total of RMP area change		3-5%	18-23%	20-25%	14-19%	22-27%

1/ This reflects change within the specific range condition class and may or may not result in a change in condition class (i.e., fair going to good).

2/ This reflects nonnative seedings dominantly on poor condition rangeland. Percentage is that of total RMP area.