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Dr. Charles E. Poulton

The project of which this research was a part is designed to provide an improved system of ecological resource analysis. Specific objectives of this study were: (1) classification of plant communities on the fringes of the sagebrush steppes and the salt desert of southeastern Oregon, (2) development of symbolic and descriptive legends for the classification units, and (3) preparation of a dichotomous key to the legend. Major landform stratification was done on an aerial photo mosaic to aid the selection of sampling areas. Sampling was done by ocular survey of entire stands with the aid of pretyped aerial photography. Society tables were used for a phyto-sociological synthesis of the data. Fifty-six important plant communities were identified and characterized. The synthesized data

were used in preparation of a descriptive legend and the dichotomous key. This narrative legend includes a brief description of each community and a summary of its associated environmental characteristics. A symbolic legend was devised to identify each of these communities. The legend identifiers consist of a hierarchically arranged, three-digit, non-connotative symbol. A field test was made indicating that the legend and key could be accurately used in the project area. In the test, 97 percent of the keyed determinations and legend units fit the newly examined stands with negligible difference between two observers. The legend and key are designed for use with aerial photo interpretation to provide a resource analysis of increased accuracy at reasonable cost. Suggestions for expansion and adaptation of the legend to other areas are presented.

DEVELOPMENT OF A LEGEND AND KEY FOR ECOLOGICAL RESOURCE ANALYSIS IN THE 15-MILE ADMINISTRATIVE UNIT, MALHEUR COUNTY, OREGON

by

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DEVELOPMENT OF A LEGEND AND KEY FOR ECOLOGICAL RESOURCE ANALYSIS IN THE 15-MILE ADMINISTRATIVE UNIT, MALHEUR COUNTY, OREGON

INTRODUCTION

Man is completely dependent upon earth's resources for his survival. Renewable resources have limits of production which cannot be exceeded. We must make wise use of our resources to provide necessary life-giving products to meet the needs of society. Before vegetational and soil resources can be managed for the best use, they must be understood. This can be best achieved through a complete ecological inventory and analysis of the resource.

The rangelands of the United States constitute about one-half of the land area of the country (National Academy of Science, 1962). Inventories of these lands have been conducted since the idea was first conceived in 1907 by J. T. Jardine of the U. S. Forest Service (Brown, 1954). From this beginning the reconnaissance method of rangeland resource analysis was developed in 1911 (Jardine and Anderson, 1919). Other methods include the square-foot density method (Stewart and Hutchings, 1936), the range condition method (Humphrey, 1949), and the Parker three-step method (Parker, 1951). Other similar methods have been employed locally or for short periods of time. Each new method provided some improvement and made new information available. All of these methods were primarily single-use surveys oriented to forage production for range livestock.

Other surveys have been made to determine the potential for various uses. Soil surveys are currently being done by the Soil

Conservation Service for inventory and analysis of the soils of the United States (Soil Survey Staff, 1951). Surveys have also been made for watershed, timber, and recreational uses. Although these surveys have also been oriented to single or limited uses, the greatest potential of the rangelands is often realized from an optimum combination of uses. Rangelands provide livestock forage, wildlife forage and cover, timber, watershed, and recreational sites. All of these uses are important, and balancing among uses will become more essential with the increasing pressures of the growing population. An inventory philosophy and approach that comes close to meeting these needs has been the California vegetation-soil survey which has been conducted for timber, forage, and water resources (Wieslander and Storie, 1952).

Our research was initiated to provide a system of resource analysis which will provide an inventory suitable to all users of renewable rangeland resources under the multiple-use concept. Ecological resource analysis should be equally suitable for management to attain all land use objectives as well as for land use planning and zoning.

Plants segregate themselves into homogeneous groups or communities which are repeated in different stands across the landscape. This implies that everywhere a given plant community occurs the environment is effectively the same and has approximately the same natural potential. Thus, it is essential to classify and characterize these vegetational units so that others may recognize

these similar landscapes. The specific objectives of this research were to develop a classification of the plant communities and prepare a legend and key for easy reference to them. The legend and key, properly constructed, greatly facilitates ecological resource analysis in multiple-use management. Although the 15-Mile Administrative Unit in southwestern Malheur County, Oregon was selected for the site of this research, the results should have wider application.

STUDY AREA

The 15-Mile Administrative Unit was selected in cooperation with the Bureau of Land Management, U. S. Department of the Interior. It includes approximately 500 square miles of rangeland in extreme southwestern Malheur County (Figure 1) and is similar to large areas of southeastern Oregon and adjacent Nevada and Idaho.

Although little geological work has been published, preliminary studies indicate that some of the area is late Mesozoic and includes both igneous and sedimentary materials. The sedimentary deposits, which are restricted to the southern portion of the area, are diatomaceous and include leaf fossils. Ryolite deposits occur in some areas in which there is cinnabar mining (Baldwin, 1964).

This unit is on the northern edge of the Basin and Range geologic province. Only the northeast portion of the unit has an outlet to the sea. This area drains north into the Owyhee River basin and thence into the Snake and Columbia Rivers. The remainder of the unit drains to internal basins which were occupied by large lakes during the Paleozoic (Baldwin, 1964).

Elevation varies from 4400 feet to over 7900 feet. Annual precipitation varies with elevation and ranges from 8 to 18 inches (Lovell, *et. al.*, 1969).

Vegetation of the unit is primarily shrub steppe. Stands of woodland and grassland comprise a very small proportion of the total area (Figure 2).

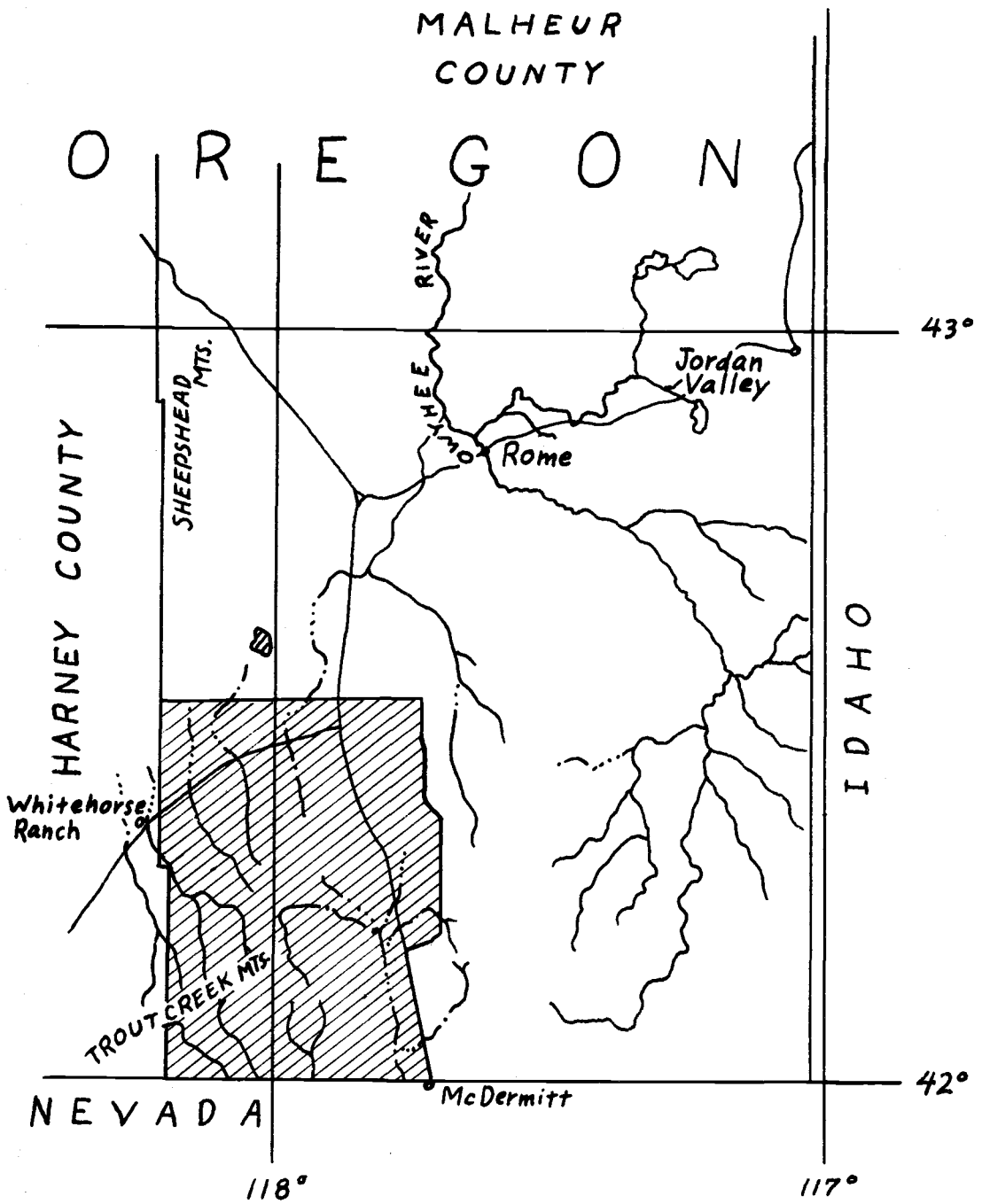

Figure 1. Location of the study area.

Figure 2. The Unit is primarily shrub steppe within which are small stands of woodland and grassland.

The area was first used for resident commercial grazing in 1869 with the establishment of the Whitehorse Ranch where Whitehorse Creek emerges from its canyon. It was settled by John Devine and was the site of Camp C. F. Smith during the Indian campaign of 1866 to 1869 (French, 1964).

> The method of running cattle in those days was as follows: The pasture on the range and in the fields was so bountiful that only the cows with young calves and the young heifers were fed hay during the winter months. In the last days of March or early April, the cattle would be driven out to the range (Brimlow, 1951, p. 208).

Basques brought the first sheep into the area in the 1880's.

The heavy grazing, early turnout, plus continuous use were a part of early land-use practices which contributed to a decrease in perennial grasses over much of the area. As a result, relict stands in good condition are rare at lower elevations, and opportunities to determine the natural ecological potential of some sites are extremely limited or lacking.

METHODS

Field Studies

When field work was initiated in June, 1968, samples of two sections per township were selected for intensive study. It was soon apparent, however, that this would not adequately represent the area. A more subjective approach was employed to insure adequate sampling in each major vegetation type. Additional areas were selected to include rare plant communities that were not in the previous sample.

Since photo mosaic flight index maps were not available, an uncontrolled mosaic was prepared from 1:63,000 scale Army Map Service (AMS) aerial photographs (Figure 3). Broad strata of similar landform were delineated on this mosaic. Samples were drawn to improve vegetational representation by studying aerial stereo models representative of these strata together with preliminary ground observation. Aerial photography of 1:12,000 scale was obtained from the Bureau of Land Management for the entire 15-Mile Unit. Strict quality control for the printing was obtained by using the BLM negatives and having the printing done by a private photogrammetry firm under rigorous standards. Examples of prints of the desired contrast were used as guidelines. This insured maximum tone quality control and uniformity from existing photography. These photographs were pre-typed by stereo examination for vegetational differences and similarities as a basis upon which representative field study locations were tentatively selected.

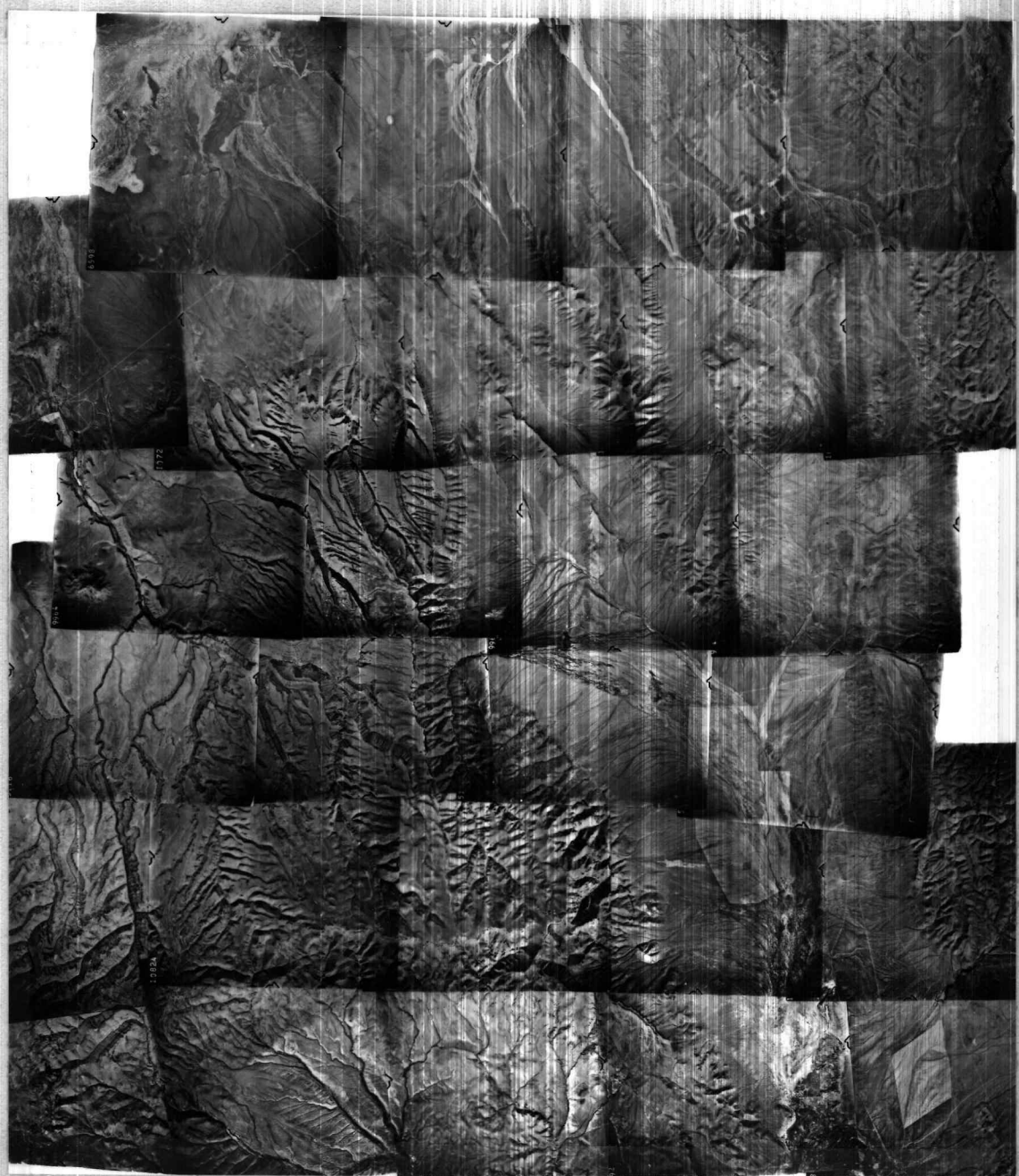

Figure 3. Aerial photo mosaic of the 15-Mile Unit.

Vegetational data, soils information, and soil surface characteristics were obtained and recorded for each sample stand. A complete plant list of each sample stand was compiled. The percent canopy cover was estimated for each species in the stand. A prominence rating on a numerical scale of 1 to 5 (1=rare; 5=most prominent species) that reflects the ease with which the species is seen was assigned for each species within each vegetative stratum to indicate relative importance.

Soils data were collected according to features which have been found to be ecologicaaly significant in similar areas (Culver, 1964). A soil pit was dug in each sample stand. Effective rooting depth to a maximum of 30 inches or to a restrictive layer was recorded. Horizon divisions and thickness of each were determined. The horizons were numbered sequentially in lieu of a genetic nomenclature. Standard Munsell soil color was determined for moist and dry samples of each horizon. Texture and structure were recorded for each horizon. Texture determination was made by the standard field method (Buckman and Brady, 1960). Percent of gravel, stone, and roots was estimated for each horizon. The pH of the soil was determined by the use of indicator dyes (Buckman and Brady, 1960).

Soil surface characteristics which may have an influence on erosion potential and upon photo image characteristics were recorded. These included percent ground cover of gravel and stones and the dominant diameter of each, percent of bare ground and, percent cover of litter, mosses and lichens, and total vegetation. Stone interspace

and diameter range were also recorded because of the possible effect upon cultural practices. Additional information included physical features, such as aspect and percentage slope, microrelief, landform, elevation, and location. The exact location of each observation was pinpricked into one of the 1:12,000 scale aerial photos.

Data Analysis and Synthesis

After the field work was completed, the data sheets were sorted into nine major categories according to the prominent vegetation. These groupings were of stands characterized by: Big sagebrush (*Artemisia tridentata*), low sagebrush (*Artemisia arbuscula*), black sagebrush (*Artemisia nova*), shadscale-budsage (*Atriplex confertifolia-Artemisia spinescens*), black greasewood (*Sarcobatus vermiculatus*), curlleaf mountainmahogany (*Cercocarpus ledifolius*), quaking aspen (*Populus tremuloides*), grasslands and rocklands. Other separations were made of prominent vegetation groups of minor importance or limited distribution. Classification was based upon the existing vegetation rather than on the observer's interpretation of climax. Knowledge of the vegatation in this area is so limited that it would have taken intensive study of plant succession on each site to determine climax. Seres tend to be unique to a given environment across a wide range of disturbance (Culver and Poulton, 1968). Therefore, while one can usually infer inherent site difference from accurately recorded data on present vegetation, it is virtually

impossible to accurately characterize the climax community where no relicts can be found. Here we must be content first with factual documentation of today's vegetation and our best inference on the direction of natural succession.

The Braun-Blanquet method of society table preparation (Küchler, 1967) provides a systematic approach to vegetation analysis and synthesis. Using this methodology the broad groups which had been identified were subdivided to identify more refined plant community units on the basis of differentiating species. This tabular procedure reorders data to facilitate identification of the natural phytosociological units. The following steps were used in the data synthesis process:

(1) Raw data for each major vegetation group was entered on a table (Table 1). Species were arranged vertically and the percent cover or prominence rating for each species was entered below the corresponding stand identifiers in their respective columns. This becomes the working summary of the raw data.

(2) The percent presence of each species was calculated and species between 60% presence and 12% presence were selected for intensive analysis (Table 2). Species occurring in more than 60% of the samples were considered too ubiquitous to be meaningful in the initial analysis. Those of less than 12% presence were too sporadic to be useful in differentiating the vegetational units (Schallig, 1967).

Table 1. Raw data from the stands in which *Artemisia nova* is the most prominent species. Species and stands are not yet arranged to show plant community relationships. Data are herbage cover percent. T indicates less than one percent cover.

Species	Stands 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Arno2	25	20	20	15	20	30	15	20	15	20	15	15	35	30	25	20	20	20	25	30	20	10	20	35	35	30	25	30	30	40	10	35	30	15	25	20	15	25	30	25
Grsp	1	5	1	8	2			2	15		15	2			T	10	2	1	2		1	1		1	T	10	1	7	1	1	3	1		3	1	5	10	2	15	10
Chna								5													T		3							T	T		2	2						
Arsp	T						2					3		T			T			T		5					1				10				2		10	5	1	4
Atco																						5		1				T	2	T	10						15		2	
Eula		T	T								2				8	3	1	2	T			T			T		3			T					2		T	5	2	1
Chvi																					1		5						+					1						
Artr											5																						3							
Ersp3																							1																	
Lepu2																							1																	
Sihy	T	2	1	3	4	4	3	6	5	2	3	15	5	2		T	T	T	1	5	5	10		2		3	2	1	4	1	10	3		5	3	3	5	3	T	10
Pose		15	1	2	4	1		8	5			3	10	T	T	1	2	1	3	2	5	5	3	10	1	3	5		1	3	T	12	12	2				2		6
Brte	1	50	2	10	3	2	60	3	5	45	3	8	3		1	2	15	3	T	3	3	15	15	2		5	5	5	3	5	2	1	3	2	1	15	20	10	T	
Orhy											1				T					T					T	T	T							2			1		T	
Spcr												1																			1						1			2
Agsp																					10		10									T	30	3						
Stth								3					2										1										7	10						
Sial	1			3	4	3	2	2	3	3	1	2	T	T	T			T	T		T			1		1	1		T	3		T			1	T	1	1	1	7
Saka				4	2	T	5				1	1			2			2							1	1	T								3	T	1	2	+	1
Spco						T				1		2		T								T				1			T		1						1	1		1
Meal2						2			1	3										1															1	1				
Phho													T								2																			
Depi													T																											
Erov		T											T									T																		
Lysp																							T											3						
Chdo								T													T																			
Oeal																										1		T												
Lare																T						T																		
Phlo																				T																				
Ersp4														T																										
Capi4																																					T	T		
Crci																																					T			

Table 2. Species presence for the 40 stands in which *Artemisia nova* is the most prominent vegetation. Check marks indicate species within the range of 12 to 60 percent presence which are entered in Table 3.

Shrubs

Species	Presence No. Stands	Percent
Arno2	40	100
Grsp	32	80
Chna	7	18 ✓
Arsp	16	40 ✓
Atco	8	20 ✓
Eula	16	40 ✓
Chvi	3	8
Artr	2	5
Ersp3	1	2
Lepu2	1	2

Grasses

Species	Presence No. Stands	Percent
Sihy	36	90
Pose	31	78
Brte	37	92
Orhy	10	25 ✓
Spcr	3	8
Agsp	5	12 ✓
Stth	5	12 ✓

Forbs

Species	Presence No. Stands	Percent
Sial	28	70
Saka	17	42 ✓
Spco	11	28 ✓
Meal2	6	15 ✓
Phho	2	5
Depi	1	2
Erov	3	8
Lysp	2	5
Chdo	2	5
Oeal	2	5
Lare	2	5
Phlo	1	2
Ersp4	1	2
Capi4	2	5
Crci	1	2

(3) The remaining species of intermediate presence percent were entered in a new table (Table 3). This provided a means of examining the species which differentiate the separate plant community classes. Species which appeared, from similar patterns of occurrence, to have some environmental affinity or exclusiveness were noted as potential differentiating species.

(4) To examine these more closely, they were in turn reorganized into an additional table in which the species and the stands were rearranged to place together both the differentiating species and the stands in which these unique groups occur (Table 4). In this manner natural vegetational units were identified from the rearranged data.

(5) Finally, a table was formed with the grouping of the previous table retained and the entire species list reentered to show all components of the community (Table 5) in completed society tabularization. By this process the same characteristic and differentiating species may be seen in the data which give each community distinctiveness upon ground examination of representative stands.

A dichotomous key to the plant communities was developed from data in these tables. The dichotomy was based primarily upon the differentiating species in each community.

Table 3. Presence table from which differentiating species were recognized. Solid and dotted underlining distinguishes two plant community groupings based on groups of species recognized as being mutually exclusive.

Stands

Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Arsp	T						2					3		T			T			T		5					1				10				2		10	5	1	
Eula		T	T								2				8	3	1	2	T			T			T		3			T					2		T	5	2	
Atco																						5		1				T	2	T	10						5		2	
Chna							5														T		3							T	T		2	2						
Orhy											1				T					T					T	T	T							2			1		T	
Stth							3						2										1										7	10						
Agsp																					10		10									T	30	3						
Saka				4	2	T	5				1	1			2			2							1	1	T								3	T	1	2	T	1
Spco						T			1			2		T								T							T		1					1	1		1
Meal2						2		1	3											1															1	1				

Table 4. Stands and differentiating species from Table 3 arranged in part table to form the basis for plant community separation.

Stands

Species	1	2	3	7	11	12	14	15	16	17	18	19	20	22	24	25	27	28	29	30	31	35	37	38	39	40	8	21	23	33	34	4	5	6	9	10	13	26	32	36
Arsp	T		2		3	T				T			T	5			1				10	2	10	5	1	4															
Eula		2	T		2			8	3	1	2	T		T		T	3			T		2	T	5	2	1															
Atco														5	1			T	2	T	10		15		2																
Chna																				T	T						5	T	3	2	2									
Stth																											3		1	7	10					2				
Agsp																												10	10	30	3							T		

Table 5. *Artemisia nova* communities identified with complete species list. Differentiating species are delineated by line blocking. These communities, from left to right, correspond to legend numbers 344, 345, and 343 listed in Table 6.

Stands

Species	1	2	3	7	11	12	14	15	16	17	18	19	20	22	24	25	27	28	29	30	31	35	37	38	39	40	8	21	23	33	34	4	5	6	9	10	13	26	32	36
Arno2	25	20	20	15	15	15	30	25	20	20	20	25	30	10	35	35	25	30	30	40	10	25	15	25	30	25	20	20	20	30	5	15	20	30	15	20	35	30	35	20
Grsp	1	5	1		15	2		T	10	2	1	2		1	1	T	1	1	1	1	3	1	10	2	15	10	2	1			3	8	2	15	15			10	1	5
Arsp	T			2		3	T			1			T	5			1				10	2	10	5	1	4													
Eula		T	T		2			8	3	1	2	T		T		T	3			T		2	1	5	2	1													
Atco														5	1			T	2	T	10		15		2														
Chna																				T	T						5	T	3	2	2								
Chvi																			T									1	5		1								
Artr					5																									3									
Ersp3																													1										
Lepu2																													1										
Brte	1	50	2	60	3	8		1	2	15	3	T	3	15	2		T	T	3	5	2	1	20	10	T		3	3	15	3	2	10	3	2	5	45	3	5	1	15
Sihy	T	2	1	3	3	15	2		T	T	T	1	5	10	2		2	1	4	1	10	3	5	3	T	10	6	5		12	5	3	4	4	5	2	5	3	3	3
Pose		15	1			3	T	T	1	2	1	3	2	5	10	1	5		1	3	T			2		6	8	5	3		2	2	4	1	5		10	3	12	
Orhy					1			T					T			T	T						1		T					2							T		
Stth																											3		1	7	10						2			
Agsp																												10	10	30	3							T		
Spcr						1															T		T			2														
Sial	1			2	1	2	T	T			T	T			1		1		T	3		1	1	1	1	7	2	T				3	4	3	3	3	T	1	T	T
Saka				5	1	1		2			2					1	T					3	1	2	T	1					4	2	T				1		T
Spco						2						1		T					T		1		1	1		1							T		1		1		
Meal2													1									1											2	1	3				1
Erov		T												T																					T				
Phho																												2								T			
Lysp																													T		3								
Chdo																											T	T											
Oeal																			T																		1		
Lare									T					T																									
Capi4																							T	T															
Depi																																				T			
Phlo												T																											
Ersp4							T																																
Crci																							T																

RESULTS AND DISCUSSION

After the analysis of vegetational data and the formation of community grouping, the utility of the groupings was considered from a management standpoint. Many of similar groups were consolidated. In the final classification, 56 important plant communities were identified and characterized (Table 6). These constitute a closed vegetational legend in contrast to the open legend format by which vegetation has been treated in most range surveys.

Symbolic Legend

The communities were each assigned a three-digit legend symbol adapted from Poulton and Hedrick (1969). This is a non-connotative symbol. It is arranged hierarchically so that different levels of intensity or refinement may be applied in inventory to meet the needs of various intensities of management. This system is also compatible with photo interpretation where some information can be derived from interpretation and more detail added with ground examination. The digits to the left in the symbol treat broad classes, most of which are identifiable from good aerial photography. The digits to the right symbolize progressively more information, the highest level of which must usually be determined by ground examination (Figure 4).

Table 6. Symbolic legend for the plant communities of the 15-Mile Administrative Unit, Malheur County, Oregon.

SYMBOL	PLANT COMMUNITY
100	Salt desert shrub communities
110	Atco-Arsp communities
111	Arsp (4-5)-Arsp (3-4)/Sihy (3-5)-Brte (0-3)
112	Atco (4-5)-Arsp (3-5)-Grsp (2-3)/Sihy (1-5)-Brte (0-5)
113	Atco (4-5)-Arsp (3-4)-Save2, Chvi, Chna (2)/Sihy (3-5)-Pose (2-3)-Brte (0-5)
140	Eula communities
141	Eula (5)/Sihy (5)
150	Save2 communities
154	Save2 (4-5)-Chvi (3-5)-Atco (0-3)/Dist (5)-Elci (0-4)
155	Shar (5)/Save2, Chvi (3-5)/Dist (5)-Elci (0-3)
156	Save2 (3-5)-Artr (0-5)-Grsp, Chvi (0-5)-Atco (0-3)/Sihy (1-5)-Elci, Brte, Meal2 (0-5)
160	Grsp communities
164	Grsp (5)-Atco, Arsp, Artr (0-3)/Sihy (3-5)-Brte (0-5)
300	Low sagebrush communities
320	Arar communities
321	Arar (5)/Pose (3-5)-Feid, Stth, Sihy (2-3)
322	Arar (5)-Artr (0-3)/Feid, Pose (3-5)-Sihy (2-3)-Agsp (0-5) Basa (0-3)-Phho (0-4)
323	Arar (5)/Pose (3-5)-Sihy, Brte, Stth, Agsp (0-5)
324	Arar (5)-Ermi (0-3)/Pose (4-5)-Orwe (2-4)-Brte (3-4)-Sihy (1-3)
325	Arar (5)/Pose (3-5)-Hast (2-5)
326	Arar (5)/Pose (3-5)-Feid, Sihy (1-4)-Hast (2-4)-Arac2 (0-5)
327	Arar (5)-Putr (3)/Agsp (3-5)-Brte, Sihy (2-3)
330	Arlo2 communities
332	Arlo2 (5)/Pose (4-5)-Feid (2-4)-Sihy (2-3)-Agsp (0-3)-Phho (2-4)

Table 6. (continued)

SYMBOL	PLANT COMMUNITY
340	Arno2 communities
343	Arno2 (4-5)-Grsp (0-4)/Sihy (3-5)-Brte (2-5)-Pose (0-5)
344	Arno2 (4-5)-Grsp, Atco, Arsp (0-4)-Eula (0-3)/Sihy, Pose, Brte (0-5)
345	Arno2 (5)-Grsp, Chvi (0-3)-Chna (2-3)/Agsp, Stth (0-5)
400	Big sagebrush communities
410	Artr-mixed shrub communities
411	Artr (4-5)-Chvi, Chna (0-4)-Teca (0-3)/Stth, Sihy, Pose (2-5) Agsp (0-5)
412	Artr (5)-Chvi, Ermi (0-3)/Stth (2-5)-Sihy (3-5)-Orwe (2-5)
413	Artr (5)/Elci (1-5)-Stth, Sihy (0-5)
414	Artr (5)-Chvi (3)/Feid (4-5)-Stth (0-5)-Agsp (2-4)
415	Artr (5)-Chvi (3)/CAREX (4-5)-Feid (3-4)-Elci, Agsp, Stth (0-3)
416	Artr (5)/Agsm, Pose (2-5)-Sihy (3-4)-Stth (0-5)-Elci (0-3)
417	Artr (5)/Agsp, Sihy Pose (0-5) other grasses
418	Artr (4-5)-Chvi (0-4)-Chna (0-3)/Agsp, Pose (3-5)-Sihy, Brte (0-5)-Basa (0-3)
430	Artr-salt desert shrub communities
431	Artr (4-5)-Arsp (0-4)-Atco, Eula (0-2)/Sihy, Pose Brte (0-5)
432	Artr (4-5)-Grsp (3-4)-Arsp, Atco (0-4)-Eula (0-3)/Sihy, Pose, Brte, Meal2 (0-5)
433	Artr (4-5)-Grsp (2-3)-Chvi (0-3)/Stth, Agsp, Sihy (0-5)
434	Artr (4-5)-Grsp (2-4)/Sihy, Brte, Pose (0-5)
440	Artr-mountain shrub communities
441	Artr (4-5)-Putr (1-4)-Chvi (3-4)/Agsp (3-5)-Elci (1-5)-Stth (0-3)
442	Artr (4-5)-Putr (1-5)-Syor (2-4)/Feid (4-5)-Elci (0-5)-Agsp(0-4)
445	Artr (4-5)-Putr (2-4)-Syor (1-3)/Elci (3-5)-Brte (0-5)-Agsp (2-5)-Pose (2-4)

Table 6 (continued)

SYMBOL	PLANT COMMUNITY
446	Artr (4-5)-Putr (4)-Chvi (3-4)-Syor (2-4)/ Pose (0-5)-Elci (3-5)
447	Artr (4-5)-Putr (3-4), Syor (2-4)-Lepu2 (2-3)- Amut (0-3)/Feid (5)-Stco, Stoc, Pocu (0-3)
448	Artr (4-5)-Syor (1-4)-Chvi (0-3)/Feid (1-5)- Stoc (0-4)-Stca (0-5) Stco (0-3)-Agsp (0-4)- CAREX (0-5)
449	Artr (4-5)-Syor (1-4)-Chvi (0-4)/Agsp, Feid (0-5)-Stth (0-4)
470	Artr2 communities
471	Artr2 (5)-Chvi, Artr (3)-SYMPH, Lepu2 (2-3)/ Feid (5)-Pose (3)-Stth (0-3)
500	Woodland and mountain shrubland communities
540	Cele communities
543	Cele (5)/Syor-Artr (3-5)-Chvi (0-3)/Feid (0-4)- Elci (3-5)-Pocu (0-4)-Basa (3-5)
545	Cele (5)/Syor (3-5), Chvi (3-4)-Artr (4), Putr (2-4)/Pose (3-5)-Elci (3)-Sihy (3-4)
560	Ceve communities
563	Ceve (5)-Prvi (3)/
570	Vegetated rocklands
572	Hodu (0-5), Artr (2-5)
590	Potr communities
591	Dwarf Potr on snowbank sites Potr (5)- Syor (2-3)/Sihy (3-5)-Poam (0-3)
592	Potr, dead stands Artr (4-5)-Rice (0-4)- Syor (2-3)/Sihy (5)-Poam (3)-Brma (2)
593	Potr (5)/Syor (1-4)-Artr (4-5)/Sihy (2-5) Mebu (0-5)-Brma (2)-Poam (0-3)
594	Potr (5)/Artr (1-5)/Sihy (2-3)-Deel (0-3)

Table 6 (continued)

SYMBOL	PLANT COMMUNITY
700	Grassland communities
710	Spcr communities
714	Spcr (5)-Brte (3)-Pose (0-3) [Arsp (2-4)-Atco (0-5)-Grsp (0-3)][1]
730	Annual grassland communities
731	Brte (3-5)-Sihy (0-3)-Saka (0-5) [Shrubs < 10% cover]
740	Agsp communities
742	Agsp (5)-Pose (3) [Artr, Lepu (3-4)-Chvi (3-5)]
743	Agsp (3-5)-Feid (4-5)-Pose (3-4) [Artr (2-3)-Chvi (0-5)-Other shrubs]
770	Seeded areas
771	Agde, plowed seeding
772	Agde, sprayed seeding
773	Agin, seeding
780	Meadow communities
781	Wet meadows SALIX (0-5)/CAREX (0-5)-JUNCU, Hobr (0-4)-Alae (0-2)
782	Dry meadows CAREX (3-5)-Pone2 (0-5)-Muri (0-3)

[1] Brackets indicate that shrubs included in the grassland communities are of generally less prominence than the grasses.

1. General Form:

(Vegetational Features)

general ——————————— specific

2. Specific Form:

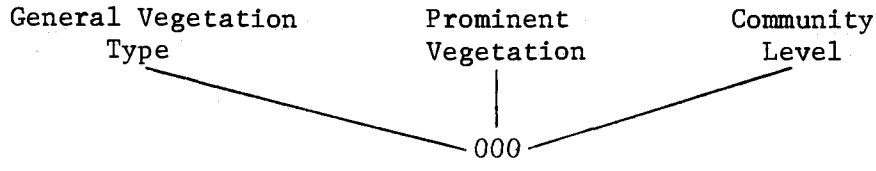

Figure 4. A Symbolic Legend Concept

The symbolic legend is designed for use as a mapping symbol and as an abbreviation when referring to the areas represented by each community. The symbol's brevity facilitates its use on maps since it will fit more easily into small delineations than will longer connotative legend symbols.

The plant community legend developed here is only a part of the total legend needed to identify the features relevant to management in a complete resource analysis. In addition to plant community symbolization, very broad vegetation classification symbols may be incorporated into the symbolic legend. An environmental symbolic legend system is also necessary (Poulton, *et al.*, 1969) to give information concerning macrorelief, landforms, and related physical features. Where appropriate, descriptors of the associated soils

characteristics can be added as a denominator in the symbol. Other information, such as range condition, may be included.

Descriptive Legend

In addition to the symbolic legend, a descriptive legend was compiled to briefly characterize each community and its environment (Appendix 1). Items included in the descriptive legend are:

(1) The Community Descriptor. This is a shorthand descrip- of some of the character and differentiating species in the plant community. It includes the plant symbol (Garrison, *et al.*, 1967) and the prominence ratings of the plants important to the identification of the community. With this descriptor the technician or manager who uses the legend can visualize the plant communities and the relative importance of the major vegetative components.

(2) The Description. This is a brief narrative description of the vegetative components of the community. It expands on the information contained in the descriptor, explains variations, and furnishes more detail as needed for effective use of the legend and accurate recognition of the legend unit.

(3) The Plant Community Index (PCI). This is an expression of the relative effectiveness of the environment in which the community is found as read from plant indicators. It gives a feel for the relative harshness of the environment and richness

of the flora on an 11-step scale. The index is productivity related (adapted from Anderson, 1968).

(4) Physiography. The relationship of the community to landform, slope, and aspect is expressed under this heading.

(5) Elevation. Elevation range in which the community has been found is expressed to the nearest hundred feet above sea level as determined from Army Map Service topographic maps.

(6) Soils. The soils characteristics associated with each community are briefly described with a narrative of some of the differentiating characteristics.

(7) Potential. An interpretation of site potential is included as a guideline. This is an approximation which is the outgrowth of observations made of relict areas representing the plant communities and of management treatments and responses in surrounding areas. In some cases, the results of actual management and improvement practices have indicated site potentials under the various practices.

(8) Vegetation Summaries. The summary tables are abstracted from the data analysis and synthesis (Appendix 1) and are included as part of the descriptive legend. These more completely characterize each of the communities. Statistics are presented in percent presence, ranges, means, and modes for cover percent; and ranges and modes for prominence.

(9) Soil Summaries. These summarize all of the soils data

recorded for each community. Where possible the data are presented as range, mean, and mode.

The descriptive legend should be a part of the narrative report for ecological resource analysis in each project area. Those contained in Appendix 1 are accurate characterizations of the communities represented in the 15-Mile Unit of the Vale District in southern Malheur County, Oregon. This legend also enables the users to make identifications of the vegetation types on the range. Study of the descriptive legend is essential to its effective use in resource analysis. It provides for the understanding of each kind of rangeland and enables stockmen and other users to make management decisions from a more thorough understanding of the resource.

Key to Legend Units

Effective use of the legend for plant community identification is aided by a dichotomous key to the plant communities (Table 7). The first order subdivision of this key is into woodlands, shrublands, and grasslands. Because of the diversity of the big sagebrush communities, a separate key was developed for them.

These keys and descriptions should be used by the resource analyst in the same manner as the field botanist uses taxonomic manuals and floras. Until community recognition is learned, the approach to the vegetation of a region or project area parallels use of a flora. First the stand must be defined and examined to learn

Table 7. Key to the plant communities, 15-Mile Unit, Malheur County, Oregon. The numbers in brackets, [ ], refer to the symbolic legend units (Table 6)

1a. Plant communities having an overstory of trees or tree-like shrubs (Key I)

1b. Plant communities with no overstory of trees or tree-like shrubs (2)

2a. Communities with shrub overstory (Key II)

2b. Communities with insignificant shrub overstory, usually having a grassland aspect (Key III)

KEY I

WOODLANDS

1a. Communities having *Shepherdia argentea* as the overstory and occurring on bottomlands usually less than 5,000 feet in elevation [155]

1b. *Shepherdia argentea* not present, located above 5,000 feet elevation on various landforms (2)

2a. *Cercocarpus ledifolius* prominent (5)

2b. *Cercocarpus ledifolius* not the most prominent species (3)

3a. *Populus tremuloides* the prominent tree species and usually occurring in pure stands (6)

3b. *Populus tremuloides* not important (4)

4a. Community basically a shrubland type of *Ceanothus velutinus* and other mountain shrubs with *Prunus virginiana* sometimes attaining size and growth habit of trees [563]

4b. Community basically a meadow with interspersed *Salix* spp., *Alnus* spp., or *Populus tremuloides* trees which may or may not be part of the community [781]

Table 7. (Continued)

5a. *Purshia tridentata* present and generally abundant in the shrub layer. *Festuca idahoensis* not present [545]

5b. No *Purshia tridentata*. *Festuca idahoensis* usually abundant. [543]

6a. *Populus tremuloides* dead and occurring as logs on the ground or dead upright snags. May be very scattered living trees remaining. Most prominent living species *Artemisia tridentata* [592]

6b. *Populus tremuloides* living. (7)

7a. *Populus tremuloides* occurring as dwarf, shrubby plants usually from 8 to 14 feet in height and growing in a very dense thicket. Site is protected slopes where snowbanks accumulate [591]

7b. Not dwarf plants on snowbank sites (8)

8a. Understory of heavy *Populus tremuloides* reproduction and *Symphoricarpos oreophilus*. Rich in forbs and grasses. [593]

8b. Few shrubs in understory. Little *Populus tremuloides* reproduction. *Symphoricarpos oreophilus* not present. [596]

KEY II

SHRUBLANDS

1a. Shrubs mostly dead, seeded, usually to introduced grasses (26)

1b. Shrubs living (2)

2a. Rocklands. Mesic shrubs present, usually including *Holodiscus dumosa*, soil only in pockets among rocks [572]

2b. Not rockland. Soil more than just pockets among rocks (3)

3a. *Eurotia lanata* in nearly a pure stand in dry lake bed [141]

3b. Not as above. Shrubs other than *Eurotia lanata* prominent (4)

Table 7. (Continued)

4a. *Atriplex confertifolia* or *Artemisia spinescens* prominent (5)

4b. Shrubs other than the above prominent (7)

5a. *Sarcobatus vermiculatus* present in the shrub layer [113]

5b. No *Sarcobatus vermiculatus* present (6)

6a. *Grayia spinosa* present in shrub layer [112]

6b. *Grayia spinosa* absent [111]

7a. *Sarcobatus vermiculatus* prominent or common in shrub layer (8)

7b. *Sarcobatus vermiculatus* not common or absent (10)

8a. Bunchgrass and annuals are prominent in the herbaceous layer [156]

8b. *Distichlis stricta* common in the herbaceous layer (9)

9a. *Shepherdia argentea* present [155]

9b. No *Shepherdia argentea* [154]

10a. *Grayia spinosa* prominent. *Atriplex confertifolia, Artemisia spinsecens* or *Artemisia tridentata* may be present [164]

10b. Prominent shrub not *Grayia spinosa* (11)

11a. *Artemisia arbuscula* prominent (12)

11b. Prominent shrub not *Artemisia arbuscula* (18)

12a. *Purshia tridentata* present [327]

12b. *Purshia tridentata* absent (13)

13a. *Oryzopsis webberi* important in herbaceous layer. No *Festuca idahoensis* present [324]

13b. *Oryzopsis webberi* not present or if present, occurring with *Festuca idahoensis* or in amounts less than 1% cover (14)

Table 7. (Continued)

14a. *Poa secunda* or *Haplopappus stenophyllus* prominent (both present) in the herbaceous layer. *Festuca idahoensis* not present. Shallow soils [325]

14b. *Poa secunda* and *Haplopappus stenophyllus* not prominent in herbaceous layer or if these are prominent, *Festuca idahoensis* present (15)

15a. *Festuca idahoensis* present with *Poa secunda, Haplopappus stenophyllus* and sometimes *Arenaria aculeata* [326]

15b. No *Haplopappus stenophyllus* in amounts greater than 1% cover. (16)

16a. *Poa secunda, Sitanion hystrix, Bromus tectorum, Stipa thurberiana* or *Agropyron spicatum* may be prominent. *Festuca idahoensis* not present [323]

16b. *Festuca idahoensis* present (17)

17a. *Stipa thurberiana* present [321]

17b. No *Stipa thurberiana* [322]

18a. Prominent shrub *Artemisia longiloba*, of limited distribution. [322]

18b. *Artemisia longiloba* not prominent (19)

19a. *Artemisia nova* prominent (20)

19b. Shrubs other than *Artemisia nova* prominent (22)

20a. *Chrysothamnus* species present. Herbaceous layer including *Agropyron spicatum* and/or *Stipa thurberiana* [345]

20b. *Chrysothamnus* species not present or otherwise not as above (21)

21a. *Atriplex confertifolia* and/or *Artemisia spinescens* present [344]

21b. The above species not present [343]

22a. *Artemisia tridentata* prominent [Key IIa]

22b. Shrubs other than *Artemisia tridentata* prominent (22)

Table 7. (Continued)

23a. *Artemisia tripartita* prominent [471]

23b. Shrubs other than *Artemisia tripartita* prominent (24)

24a. *Cercocarpus ledifolius* present and usually prominent [see Key I, WOODLANDS]

24b. *Cercocarpus ledifolius*, if present, a minor component of the community (25)

25a. *Populus tremuloides* prominent and shrublike in growth form. Snowbank sites [591]

25b. *Ceanothus velutinus* prominent. *Prunus virginiana*, *Symphoricarpos oreophilus* and other mountain shrubs may be important. Snowbank sites [563]

26a. Seeded to *Agropyron intermedium* [773]

26b. Seeded to *Agropyron desertorum* (27)

27a. Sprayed seeding; dead shrubs mostly in place [772]

27b. Plowed seeding; dead shrubs, if evident, mostly uprooted [771]

KEY IIa

ARTEMISIA TRIDENTATA COMMUNITIES

1a. Dead *Populus tremuloides* logs abundant [592]

1b. Not as above (2)

2a. Pockets of vegetation in rockland and rubbleland. *Holodiscus dumosa* usually present [572]

2b. Not occurring in rocklands (3)

3a. *Artemisia tridentata* with *Purshia tridentata* (17)

3b. *Artemisia tridentata* without *Purshia tridentata* (4)

Table 7. (Continued)

4a. *Symphoricarpos oreophilus* present (16)

4b. *Symphoricarpos oreophilus* not present (5)

5a. *Grayia spinosa, Atriplex confertifolia,* or *Artemisia spinescens* present (13)

5b. The above species not present (6)

6a. *Agropyron smithii* present [416]

6b. No *Agropyron smithii* (7)

7a. *Carex* species prominent. *Festuca idahoensis* present [415]

7b. *Carex* species not as above or occurring without *Festuca idahoensis* (8)

8a. *Festuca idahoensis* prominent [414]

8b. *Festuca idahoensis* not present or if present, not as above (9)

9a. *Elymus cinerius* present. Bottomlands, fans and terraces [413]

9b. No *Elymus cinerius* present or if present, not otherwise as above (10)

10a. *Stipa thurberiana* important in the community (11)

10b. *Agropyron spicatum, Sitanion hystrix, Bromus tectorum,* or *Poa secunda* prominent with little or no *Stipa thurberiana* present (12)

11a. *Oryzopsis webberi* present [412]

11b. No *Oryzopsis webberi* [411]

12a. *Agropyron spicatum* or *Poa secunda* prominent. *Balsamorhiza sagittata* commonly important [418]

12b. Low seral stage of depleted communities. Desirable grasses usually in small amounts [417]

Table 7. (Continued)

13a. *Grayia spinosa* present (14)

13b. No *Grayia spinosa* [431]

14a. *Atriplex confertifolia* and/or *Artemisia spinescens* present [432]

14b. The above species not present (15)

15a. *Stipa thurberiana* or *Agropyron spicatum* present [433]

15b. Neither of the above present [434]

16a. *Stipa occidentalis* and/or *Stipa columbiana* present. *Carex* species may be present [448]

16b. *Stipa* species other than *Stipa thurberiana* not present [449]

17a. *Stipa columbiana, Stipa occidentalis,* and/or *Poa cusickii* present. *Festuca idahoensis* prominent [447]

17b. Not as above (18)

18a. *Symphoricarpos oreophilus* present (19)

18b. No *Symphoricarpos oreophilus* [441]

19a. *Festuca idahoensis* present [442]

19b. No *Festuca idahoensis* (20)

20a. *Agropyron spicatum* present [445]

20b. No *Agropyron spicatum* [446]

Table 7. (Continued)

KEY III

GRASSLANDS

1a. Seeded areas. *Agropyron desertorum* the most common species. *Agropyron intermedium* often seeded in more mesic sites. Native species may be locally abundant but there is evidence of seeding and seeded species are present (7)

1b. Native grasslands, no evidence of artificial seeding (2)

2a. Plants mostly annuals. *Bromus tectorum* usually prominent although annual forbs such as *Salsola kali* may be prominent. Evidence of burning or other disturbance often present [731]

2b. Plants perennial. *Bromus tectorum* or annual forbs not prominent (3)

3a. *Sporobolus cryptandrus* prominent. Shrubs present, usually shorter than the grass, include *Atriplex confertifolia, Artemisia spinescens,* and *Grayia spinosa* [714]

3b. Prominent grass other than *Sporobolus cryptandrus,* shrubs not as above (4)

4a. *Agropyron spicatum* or *Festuca idahoensis* prominent. Occurs on steep slopes (5)

4b. Prominent plants not as above. Usually occurring as meadows in bottoms or in upland swales (6)

5a. *Festuca idahoensis* present and sometimes prominent [743]

5b. No *Festuca idahoensis* [742]

6a. Dry meadows. *Poa nevadensis* and *Muhlenbergia richardsonis* present. Usually in swales in uplands [782]

6b. Wet meadows. *Salix* species often present. No *Poa nevadensis* or *Muhlenbergia richardsonis* [781]

Table 7. (Continued)

7a. Seeded to *Agropyron intermedium* [773]

7b. Seeded to *Agropyron desertorum* (8)

8a. Sprayed seeding; dead shrubs mostly in place [772]

8b. Plowed seeding; dead shrubs, if evident, mostly uprooted [771]

its vegetational characteristics and then its identification may be keyed out by use of Table 7. Then the descriptive legend should be read to determine if the stand fits reasonably well into the concept of the legend unit. Just as with botanical keys, a perfect fit cannot always be expected. For practical purposes, the legend unit that best fits the criteria in the key and description should be selected. Field tests have indicated that the legend fits the 15-Mile Unit very well. Only in rare cases should vegetation be encountered which cannot be identified from this legend and key. When such are found, examples should be studied by the same field method, the legend temporarily opened, and the newly characterized units added.

Tests of Applicability of the Legend and Key

After the legend and key were developed for the 15-Mile Unit, a test of useability was made by examining and classifying 216 new stands. An attempt was made to test the key on two or more examples of every plant community in the unit. The sampling areas were checked for stand uniformity to lessen the possibility of interpreting a complex as a uniform stand. These stands were keyed out and comparisons made with the narrative descriptions. The agreement between the legend descriptions and the concrete stands were noted. The results of this check are summarized in Table 8.

Table 8. Summarization of applicability test for legend and key to the plant communities.

Total No. Samples	Identification		
	Accurate	Useable	Unuseable
216	210	6	0

The legend and key to the plant communities of the 15-Mile Unit were found to be very satisfactory. Some minor errors in wording were discovered and corrected in the field trial, but no extensive changes were required.

Use of Legend and Key

The legend and key developed in this study will be used in conjunction with photo interpretation to provide a comprehensive and more accurate resource analysis at a reasonable cost. Photo interpreters are dependent upon many image features when identifying vegetation. Many times image characteristics of one plant community will be similar or identical to the image of another. The interpreter is then dependent upon associated evidence or convergence of evidence as the basis of his decision on a more refined identification. Ground identification may, in fact, be required. The legend may provide the needed evidence in these problem areas by presenting information about restriction of the vegetation to certain physical locations or elevations. The existence of a legend with all of the important plant communities listed helps the interpreter by providing

a finite number of choices in the identification decision. With the help of the legend and photo interpretation aids, possible choices may be quickly narrowed so that maximum advantage may be gained from photo interpretation.

The results of minimum ground examination can be most effectively extended by photo interpretation. The communities identified on the ground are correlated with their corresponding images on the photograph. Similar images, with some checking, can be assumed to represent the same plant communities and effective environment (Figure 5). In this manner, the legend and its key can be used in ground work to refine photo interpretation aids, thus greatly increasing efficiency of resource analysis.

The legend symbols are used for mapping by placing the symbol within the delineation of a mapping unit. If plant communities are combined in a complex too intricate for separation, the symbolic legend units for each included community may be shown along with the proportionate amount each represents within the delineation (Figure 5). Thus, a more accurate picture of the resource is presented.

The legend and key developed for the 15-Mile Unit could easily be expanded to adjoining areas beyond that unit. This could be achieved by working outward from the area in which it was developed. As the work proceeds, deficiencies in the legend will arise as new communities are encountered. These can be easily provided for by opening the legend as new units are documented. These are added to

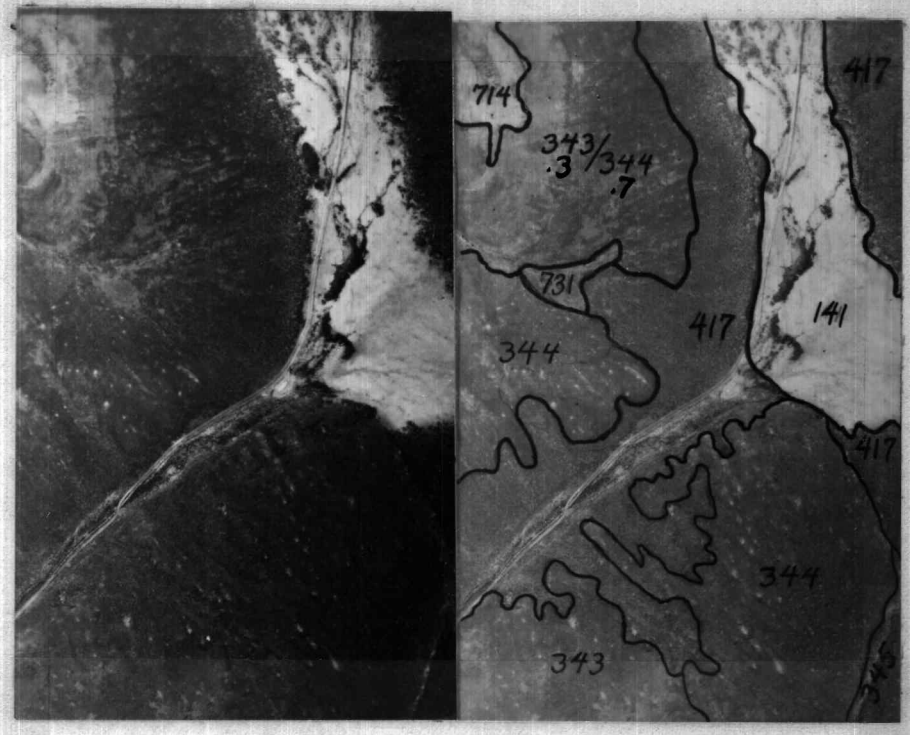

Figure 5. Stereogram of an area mapped for plant communities using the symbolic legend. The similarity of the images of the types which are repeated are indicative of possibilities for extending the use of the legend by photo interpretation.

the legend to expand it for use in the larger area. Similarly, legend units no longer appropriate for the new area are dropped from an operations legend. Where legends are needed in ecologically contrasting provinces, it may be simpler to develop a new descriptive legend and reassign the symbolic legend numbers than to continually adapt and modify.

While this legend system provides a near ultimate amount of information for resource surveys, it is important to realize that the same legend can be used for either intensive or low-intensity management. The legend has been designed so that it may be generalized by dropping the last digit of the symbol and adjusting the descriptive legend accordingly. Of course, this generalization provides less knowledge about the resource, but this may be necessary where anticipated management intensity does not justify highly detailed ecological analysis of the resource.

Resource analysis is a vital part of the intensive management of our rangelands. As multiple-use becomes more important, complete ecological resource analyses become even more essential to the decision process. This new ecologically oriented methodology provides a means of bringing this part of the science of resource management up-to-date. We can no longer afford the luxury of considering just one use when range surveys are made. Utilitarian, single-purpose surveys of naturally vegetated landscapes are no longer justifiable as the only or initial resource survey. Surveys that are ecologically

based need not be redone for every change in management intensity. One merely needs to add to the storehouse of knowledge by supplemental surveys and monitoring; by adding to the base provided in ecological resource analysis. The wisdom of land use and management decisions depends heavily on how well the resource is understood. Ecology is the basis for this understanding. A survey of the rangelands that identifies ecologically significant plant communities and characterizes the soil environment of each community will provide the advancement needed for better use of our resources, a use based on understanding.

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APPENDICES

APPENDIX 1. A DESCRIPTIVE AND SYMBOLIC LEGEND FOR ECOLOGICAL RESOURCE ANALYSIS IN SOUTHERN MALHEUR COUNTY, OREGON

The criteria for recognition of these plant communities is presented as a dichotomous key in Table 7. Each described unit represents the real plant communities that, in various combinations, comprise the landscapes of this region. Each community reflects its effective environment. Thus, these communities are the key to site recognition; to the natural management potentials of each site. They are the basis for sampling in the measurement or assessment of condition and trend, utilization or production.

This legend differs from conventional range survey vegetational notations in that this is a preclassified, closed legend , whereas most range survey vegetational legends now in use are open legends. In addition, a non-connotative, three-digit symbol has been developed to simplify the cartographic problem of identifying mapped delineations and for compatibility with computerization of resource data.

The legend presents a narrative description of each legend unit, a statistical representation of the plant community showing species presence, a summary of the soils characterstics associated with each plant community. Abbreviations used are shown on the following pages.

Abbreviations Used in Vegetation Summaries

Species names are represented by plant symbols following Garrison, *et al.* (1967) which are formed by combining the first two letters of the genus and the first two letters of the species. If genus alone is shown it is represented by the first five letters of the genus expressed in uppercase form (Appendix 2).

Prominence is rated on a numerical scale of 1 to 5 that reflects the ease with which the species can be seen.

1 ... must search carefully to find in the stand

2 ... can be seen by intent examination or by moving about in the stand

3 ... can be seen easily standing at any point in the stand and looking casually around

4 ... shares equally with one or more others as the most prominent species in the stand

5 ... the most prominent species in the stand

Abbreviations Used in Soil Summaries

Soil Color

Soil colors are moist color indicated by the appropriate Munsell notation, such as 10YR4/3 (hue 10YR; value, 4/; and chroma /3).

Soil Texture

g	gravel
s	sand
ls	loamy sand
sl	sandy loam
gsl	gravelly sandy loam
l	loam
gl	gravelly loam
si	silt
sil	silt loam
cl	clay loam
sicl	silty clay loam
scl	sandy clay loam
sic	silty clay
c	clay

Soil Structure

Grade or distinctness

1	weak
2	moderate
3	strong

Size or class

vf	very fine
f	fine
m	medium
c	coarse

Soil Structure (continued)

Form or type

pl	platy
pr	prismatic or columnar
bk	angular blocky
sbk	subangular blocky
gr	granular
sg	single grain
m	massive
ves	vesicular

Roots

0	absent
1	rare
2	few
3	common
4	abundant
5	dominant

Coarse Fragments

Gravel and stone in the profile are expressed as a percentage of the volume.

Surface Characteristics

Stone dominant diameter is expressed in inches. All other figures are percentages.

SYMBOLIC LEGEND 111

COMMUNITY DESCRIPTOR:	Atco (4-5)-Arsp (3-4)/Sihy (3-5)-Brte (0-3)
DESCRIPTION:	*Atriplex confertifolia* and *Artemisia spinescens* are the most prominent species in this community with cover values of 15% to 30% and 10% to 20%, respectively. In the herbaceous layer *Sitanion hystrix* or an annual such as *Lepidium perfoliatum* or *Mentzelia albicaulis* are the prominent species. Those may have as high as 20% cover. The number of species in this community is limited. Frequently, a bare gravelly soil surface gives the prominent aspect to these areas.
PCI:[1]	0
PHYSIOGRAPHY:	Drainages and low terraces near the basin floor.
ELEVATION:	4500 feet to 4700 feet
SOILS:	Soil depth in this community may range from 13 to 30 inches with an average depth of 21 inches. The surface soil is a silt or silt loam over a sub soil of silty clay loam or silt loam. The pH is usually 8.4 but may range from 7.5 to 8.6.
POTENTIAL:	Although production per acre is very low, this community is valuable as winter livestock range with correct management.
NUMBER OF STANDS EXAMINED:	7

[1] Plant Community Index (PCI) refers to an 11-step scale relating to the effective environment based on plant indicators. Adapted from E. William Anderson (1968).

VEGETATION SUMMARY 111

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Atco	100	5	4- 5	20	20	15-30
Arsp	100	4	3- 4	15	15	10-20
Tesp	29	0	0- 2	T	0	0- 1
Sihy	100	3	2- 5	2	3	1- 3
Brte	86	1	0- 3	1	1	0- 3
Meal2	57	5	0- 5	7	10	0-20
Lepe	29	0	0- 5	1	0	0-10
Orhy	29	0	0- 2	T	0	0- 1
Pose	14	0	0- 2	T	0	0- 1
Crci	14	0	0- 1	T	0	0- T
Erba	14	0	0- 3	1	0	0- 5
Ersp4	14	0	0- 3	T	0	0- 2
Saka	14	0	0- 3	T	0	0- 1
Sial	14	0	0- 3	T	0	0- T
Spco	14	0	0- 3	T	0	0- 2

SOIL SUMMARY 111

	Range	Mean	Mode
Soil Depth	13-30	21	30
Surface Soil Characteristics			
Horizon Thickness	1-13	7	-
Color	10YR4/3-3/3		-
Texture	si-sil		si
Structure	ves-2msbk		ves
pH	8.0-8.4	8.4	8.4
Roots	2-3	3	3
Gravel	1-10	2	0
Stones	0-60	15	0
Subsoil Characteristics			
Horizon Thickness	4-17	12	17
Color	10YR4/2-5/4		-
Texture	sicl-sil		sil
Structure	1fgr-2msbk		2msbk
pH	7.5-8.6	8.4	8.4
Roots	2-3	3	3
Gravel	0-30	8	0
Stones	0-30	8	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-20	7	-
Stone Dominant Diameter	0-12	4	0
Gravel Cover (< 3 inches)	0-40	36	-
Litter Cover	2-5	4	5
Bare Soil	15-60	33	15
Moss and Lichen Cover	T-10	5	5
Total Plant Cover	25-60	38	-

SYMBOLIC LEGEND 112

COMMUNITY DESCRIPTOR:	Atco (4-5)-Arsp (3-5)-Grsp (2-3)/Sihy (1-5)-Brte (0-5)
DESCRIPTION:	In this community either *Atriplex confertifolia* or *Artemisia spinescens* may be the most prominent. They vary from 10% to 35% and from 5% to 20% ground cover, respectively. *Grayia spinosa* is always present but cover percent is always very low, ranging from less than 1% to 5%. *Sitanion hystrix* is normally prominent in the herbaceous layer with a cover of less than 10%. *Bromus tectorum* is sometimes important.
PCI:	0
PHYSIOGRAPHY:	Terraces or rolling uplands
ELEVATION:	4400 feet to 4800 feet
SOILS:	This community usually has a soil with a 3-inch vesicular crust of loamy texture. In the surface soils the pH ranges from 7.0 to 8.4 while in the subsoils it has a range of 6.4 to 8.4. The dominant features of the soil surface is the generally high gravel cover. It varies from 0% to 65% but is usually between 35% and 50% cover.
POTENTIAL:	Since this community is so widespread, it is of great importance even though production per acre is low. It is of value as winter range for livestock.
NUMBER OF STANDS EXAMINED:	21

VEGETATION SUMMARY 112

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Atco	100	4	3- 5	20	20/15	10-35
Arsp	100	4	1- 5	14	10	T-20
Grsp	100	3	2- 4	4	5	T-20
Artr	26	0	0- 3	1	0	0- 3
Chvi	26	0	0- 3	1	0	0- 5
Tesp	9	0	0- 1	T	0	0- 1
Ermi	5	0	0- 1	T	0	0- T
Eula	5	0	0- 1	T	0	0- T
Sihy	100	5	1- 5	5	1	T-15
Brte	45	0	0- 5	5	0	0-60
Pose	23	0	0- 5	1	0	0-15
Orhy	9	0	0- 1	T	0	0- T
Oeal	41	0	0- 3	1	0	0- 5
Depi	23	0	0- 1	T	0	0- 1
Spco	18	0	0- 3	T	0	0- 1
Lepe	9	0	0- 5	T	0	0- 1
Sial	9	0	0- 2	T	0	0- 1
Meal2	5	0	0- 2	T	0	0- 2
Erba	5	0	0- 1	T	0	0- T
Lare	5	0	0- 1	T	0	0- T
Erov	5	0	0- 1	T	0	0- T
ARABI	5	0	0- 1	T	0	0- T

SOIL SUMMARY 112

	Range	Mean	Mode
Soil Depth	7-27	15	13
Surface Crust Characteristics			
Horizon Thickness	0-8	3	3
Color	10YR3/3-5/4		10YR4/3
Texture	sil-grl		1
Structure	ves		ves
pH	7.0-8.4	7.0	7.5
Roots	T-2	1	1
Gravel	0-35	9	0
Stones	-	-	-
Surface Soil Characteristics			
Horizon Thickness	0-8	3	0
Color	10YR3/3-5/4		10YR4/3
Texture	gl-cl		-
Structure	1fg-3msbk		1fpl
pH	7.2-8.4	7.8	7.5
Roots	1-3	2.5	3
Gravel	0-30	8	0
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	3-25	8	5
Color	7.5YR4/4-10YR6/4		10YR4/4
Texture	c-gls		cl
Structure	3mbk-1mgr		2f-msbk
pH	7.4-8.4	7.5	7.5
Roots	1-3	2.5	3
Gravel	0-60	15	0
Stones	0-40	5	0
Surface Characteristics			
Stone Cover (> 3 inches)	T-20	7	2
Stone Dominant Diameter	0-20	6	4
Gravel Cover (< 3 inches)	0-65	34	50
Litter Cover	0-12	3	5
Bare Soil	10-50	24	25
Moss and Lichen Cover	0-30	6	5
Total Plant Cover	20-50	36	35

SYMBOLIC LEGEND 113

COMMUNITY DESCRIPTOR:	Atco (4-5)-Arsp (3-4)-Save2, Chvi, Chna (2)/ Sihy (3-4)-Pose (2-3)-Brte (0-5)
DESCRIPTION:	The prominent species in this community are *Atriplex confertifolia* and *Artemisia spinescens* with ground cover of 15% to 25%, respectively. *Sarcobatus vermiculatus* and *Chrysothamnus* species are present in small amounts. Few forbs are present. Grasses are variable. Of limited distribution.
PCI:	θ
PHYSIOGRAPHY:	Colluvial slopes
ELEVATION:	4500 feet to 4800 feet
SOILS:	The surface soils are gravelly loams or gravelly sandy loams while the subsoil is gravelly clay loam. The entire profile is very gravelly as is the surface.
POTENTIAL:	This community is of little value for livestock as it is of limited distribution and occurs mostly on steep colluvial slopes. It has some use as chukar habitat when located near a water source.
NUMBER OF STANDS EXAMINED:	2

VEGETATION SUMMARY 113

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Atco	100	-	4- 5	18	-	15-20
Arsp	100	-	3- 4	20	-	10-25
Save2	100	2	2	T	T	T
Chvi	100	2	2	2	2	2
Grsp	100	3	3	6	-	5- 7
Chna	100	2	2	1	1	1
Teca	50	-	0- 2	T	-	0- 1
Artr	50	-	0- 3	T	-	0- T
Sihy	100	-	3- 5	4	-	2- 5
Pose	100	-	2- 3	3	-	T- 5
Elci	50	-	0- 2	1	-	0- 1
Brte	50	-	0- 5	20	-	0-40
Orhy	50	-	0- 2	T	-	0- T
Stth	50	-	0- 2	T	-	0- T

SOIL SUMMARY 113

	Range	Mean	Mode
Soil Depth	6-17	11	-
Surface Soil Characteristics			
Horizon Thickness	3-4	3.5	-
Color	10YR4/2-4/3		-
Texture	gl-gsl		-
Structure	sg-ves		-
pH			
Roots	1-2	1.5	-
Gravel	50-75	62.5	-
Stones	0	0	0
Subsoil Characteristics			
Horizon Thickness	3-7	5	-
Color	10YR5/4-5/3		-
Texture	gcl		gcl
Structure	ves-lfsbk		
pH	8.2-8.4	8.3	-
Roots	3	3	3
Gravel	25-50	37.5	-
Stones	0	0	0
Surface Characteristics			
Stone Cover (> 3 inches)	15-20	18	-
Stone Dominant Diameter	-	-	-
Gravel Cover (< 3 inches)	40	40	40
Litter Cover	0	0	0
Bare Soil	10-30	20	-
Moss and Lichen Cover	T-1	1	-
Total Plant Cover	40-60	50	-

SYMBOLIC LEGEND 141

COMMUNITY DESCRIPTOR:	Eula (5)/Sihy
DESCRIPTION:	Of very limited distribution, this community occupies only one site in the 15-mile unit. It is a pure stand of *Eurotia lanata* with 25% ground cover. *Sitanion hystrix* is the most prominent species in the herbaceous layer, but it only has 1% cover. Other grasses and forbs occur only in trace amounts.
PCI:	0
PHYSIOGRAPHY:	Dry lake playa
ELEVATION:	4700 feet
SOILS:	The soil is 12 inches deep to a hard pan. It is of silty clay texture and has a pH range between 7.2 and 8.0. There is no gravel or stones in the profile or on the surface. Bare soils is exposed on 75% of the surface.
POTENTIAL:	This community is of value as winter livestock range. It is of such limited extent that management of it would likely be tied to the surrounding area.
NUMBER OF STANDS EXAMINED:	1

VEGETATION SUMMARY 141

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Eula	100	5	5	25	25	25
Artr	100	2	2	1	1	1
Sihy	100	5	1	1	1	1
Orhy	100	1	1	T	T	T
Pose	100	1	1	T	T	T
Depi	100	2	2	T	T	T
Saka	100	1	1	T	T	T
Spco	100	2	2	T	T	T

SOIL SUMMARY 141

	Range	Mean	Mode
Soil Depth	12	12	12
Surface Soil Characteristics			
Horizon Thickness	12	One Stand Only	
Color	10YR5/4		
Texture	sc		
Structure	2fbk		
pH	7.2-8.0		
Roots	2		
Gravel	-		
Stones	-		
Subsoil Characteristics			
Horizon Thickness	-	-	-
Color	-	-	-
Texture	-	-	-
Structure	-	-	-
pH	-	-	-
Roots	-	-	-
Gravel	-	-	-
Stones	-	-	-
Surface Characteristics			
Stone Cover (> 3 inches)	0	0	0
Stone Dominant Diameter	0	0	0
Gravel Cover (< 3 inches)	0	0	0
Litter Cover	T	T	T
Bare Soil	75	75	75
Moss and Lichen Cover	T	T	T
Total Plant Cover	25	25	25

SYMBOLIC LEGEND 154

COMMUNITY DESCRIPTOR:	Save2 (4-5)-Chvi (3-5)/Dist (5)-Elci (0-4)
DESCRIPTION:	The prominent species in this community are *Sarcobatus vermiculatus* and *Chrysothamnus viscidiflorus* which have 10% to 30% cover and 2% to 25% cover, respectively. In the herbaceous layer *Distichlis stricta* is usually prominent and has 1% to 20% cover. When this community is in fair to excellent condition *Elymus cinerius* may be the most prominent, the ground cover percent being determined by the condition. In poor condition the community may contain no *Elymus cinerius*.
PCI:	4
PHYSIOGRAPHY:	Bottom lands, usually on basin floor
ELEVATION:	4400 feet to 4500 feet
SOILS:	The soils are very deep and of alluvial origin The 4- to 7-inch deep surface soil is usually silt while the subsoil is clay-loam. The pH for the entire profile is 9.2. Gravel sometimes occurs on the surface or in the profile.
POTENTIAL:	Potentially, this community is very productive. On fenced land where it has had continuous wise management, it produces an excellent stand of *Elymus cinerius* which is sometimes cut for hay or used for pasture. Where water for irrigation is available, alfalfa hay and seed has been grown on sites which were originally this community.
NUMBER OF STANDS EXAMINED:	4

VEGETATION SUMMARY 154

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Save2	100	-	4-5	4	-	10-30
Chvi	100	3	3-5	4	-	2-25
Artr	75	-	0-3	2	-	0- 5
Atco	50	-	0-3	2	0	0-15
Teca	50	-	0-2	1	0	0- 1
Grsp	25	0	0-1	T	0	0- T
Dist	100	5	5	8	-	1-20
Elci	50	0	0-4	2	0	0- 7
Sihy	25	0	0-2	T	0	0- T
Pose	25	0	0-1	T	0	0- T
Sude	50	0	0-2	T	-	0- T
Aloc	25	0	0-1	T	0	0- T
Suin	25	0	0-1	T	0	0- T

SOIL SUMMARY 154

	Range	Mean	Mode
Soil Depth	20-30	27	30
Surface Crust Characteristics			
Horizon Thickness	0-4	3.5	-
Color	10YR4/3-3/3		-
Texture	si-sic		-
Structure	ves		ves
pH	9.2		9.2
Roots	1-2	1.5	
Gravel	0	0	0
Stones	0	0	0
Surface Soil Characteristics			
Horizon Thickness	4-7	5	4
Color	10YR4/3-5/4		10YR5/3
Texture	s-si		s-si
Structure	2fpl-2mpl		-
pH	8.8-9.2	9.1	9.2
Roots	1-3	2.5	3
Gravel	0-30	7.5	0
Stones	0	0	0
Subsoil Characteristics			
Horizon Thickness	10-26	20	
Color	10YR4/3-6/3		10YR6/3
Texture	ls-cl		cl
Structure	1mfpl-3fbk		2fbk
pH	8.6-9.2	9.1	9.2
Roots	2-3	2.5	2
Gravel	0-30	7.5	0
Stones	0	0	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-1	T	0
Stone Dominant Diameter			
Gravel Cover (< 3 inches)	0-15	4	0
Litter Cover	0-10	4	-
Bare Soil	25-80	59	-
Moss and Lichen Cover	0-5	2.5	-
Total Plant Cover	35	35	35

SYMBOLIC LEGEND 155

COMMUNITY DESCRIPTOR:	Shar (5)/Save2, Chvi (3-5)/Dist (5)-Elci (0-3)
DESCRIPTION:	This community is very similar to 154, except for the presence of *Shepherdia argentea* which is generally scattered throughout the stand with a cover value of 1% to 5%. *Sarcobatus vermiculatus* is prominent in the shrub layer with 2% to 20% cover and *Chrysothamnus viscidiflorus* which has 2% to 60% cover. *Distichlis stricta* is the prominent species in the herbaceous layer with 15% to 70% cover and *Elymus cinerius* with 0% to 30% cover. *Elymus cinerius* cover decreases with lower condition and may not be present in poor condition stands.
PCI:	4
PHYSIOGRAPHY:	Bottom lands on the basin floor
ELEVATION:	4400 feet to 4500 feet
SOILS:	The soils are deep, alluvial soils which have relatively undeveloped horizons. Texture ranges from silt to clay loam. Very little gravel is found in the horizon or on the soil surface. pH is 8.0 to 8.6.
POTENTIAL:	This community is highly productive under good management. It is desirable range for both domestic livestock and wildlife. Indians harvest the berries from the *Shepherdia argentea*. When irrigation water is available, the site is sometimes used for irrigated pasture and alfalfa hay and seed crops.
NUMBER OF STANDS EXAMINED:	4

VEGETATION SUMMARY 155

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Shar	100	5	5	3	-	1- 5
Chvi	100	-	4-5	21	-	2-60
Save2	100	4	3-5	12	-	2-20
Artr	25	0	0-1	T	0	0- 1
Atco	25	0	0-3	1	0	0- 3
Shar (reprod)	25	0	0-3	T	0	0- 1
Dist	100	5	5	38	-	15-70
Elci	75	3	0-3	9	-	T-30
Spai	25	0	0-4	4	0	0-15
Sude	50	-	0-3	6	0	0-20
Aloc	25	0	0-4	4	0	0-15
Ivax	25	0	0-2	1	0	0- 3
Suin	25	0	0-T	T	0	0- T

SOIL SUMMARY 155

	Range	Mean	Mode
Soil Depth	25-30	28	30
Surface Soil Characteristics			
Horizon Thickness	25-30	28	30
Color	10YR3/3-6/3		10YR3/3
Texture	si-cl		si
Structure	sg-2msbk		1fsbk
pH	8.0-8.6	8.4	8.4
Roots	2-4	3	3
Gravel	0-3	1	0
Stones	0	0	0
Subsoil Characteristics	Horizons not well developed		
Surface Characteristics			
Stone Cover (> 3 inches)	0	0	0
Stone Dominant Diameter	0	0	0
Gravel Cover (< 3 inches)	0-1	T	0
Litter Cover	T-40	13	T
Bare Soil	10-40	22.5	-
Moss and Lichen Cover	0-25	6	0
Total Plant Cover	60-90	75	-

SYMBOLIC LEGEND 156

COMMUNITY DESCRIPTOR:	Save2 (3-5)-Artr (0-5)-Grsp, Chvi (0-5)-Atco (0-3)/ Sihy (1-5)-Elci, Brte, Meal2 (0-5)
DESCRIPTION:	The most prominent species in this community are usually *Artemisia tridentata* with 0% to 35% ground cover and *Sarcobatus vermiculatus* with 2% to 30% ground cover. *Grayia spinosa* or *Chrysothamnus viscidiflorus* may occasionally be the most prominent. *Sitanion hystrix* is the most common component of the herbaceous layer. Other grasses or forbs may be prominent. *Distichlis stricta* is not present.
PCI:	2
PHYSIOGRAPHY:	Bottom lands
ELEVATION:	4400 feet to 4700 feet
SOILS:	Deep silty soils are characteristic in this community. There is little or no development of a B horizon. The texture is usually silty loam with a weak structure. Very little gravel is found in the profile or on the surface. pH varies from 6.8 to 9.2.
POTENTIAL:	This community has limited value as range in its present condition. There is little evidence of its climax condition, but it may have supported a good grass cover. Attempts at reseeding have had little success. Where irrigation water is available it may have high potential as farm land.
NUMBER OF STANDS EXAMINED:	12

VEGETATION SUMMARY 156

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Save2	100	3	3-5	12	5	2-30
Artr	83	-	0-5	18	20	0-35
Grsp	83	3	0-5	7	15	0-20
Chvi	58	0	0-5	8	0	0-35
Arsp	33	0	0-4	2	0	0-15
Atco	33	0	0-3	2	0	0- 7
Chna	17	0	0-4	2	0	0-15
Teca	17	0	0-3	T	0	0-15
Tesp	17	0	0-2	T	0	0- T
Eula	8	0	0-1	T	0	0- T
Sihy	100	-	1-5	1	T	T- 2
Elci	58	0	0-5	2	0	0-15
Brte	42	0	0-5	2	0	0-25
Muas	8	0	0-2	T	0	0- T
Orhy	8	0	0-1	T	0	0- T
Meal2	50	0	0-5	3	0	0-20
Saka	17	0	0-3	T	0	0- 1
CAPSE	8	0	0-1	T	0	0- T
Depi	8	0	0-5	T	0	0- 5
Ivax	8	0	0-2	T	0	0- 5
Lare	8	0	0-1	T	0	0- T
Lepe	8	0	0-5	T	0	0- T
Oeal	8	0	0-2	T	0	0- T
OENOT	8	0	0-2	T	0	0- T
Sial	8	0	0-1	T	0	0- 1

SOIL SUMMARY 156

	Range	Mean	Mode
Soil Depth	15-30	28	30
Surface Soil Characteristics			
Horizon Thickness	15-30	28	30
Color	10YR2/3-5/4		10YR3/3
Texture	sl-sicl		sil
Structure	1fpl-3msbk		1fsbk
pH	6.8-9.2	8.2	
Roots	1-3	2	3
Gravel	0-15	3	0
Subsoil Characteristics	Horizons not well developed in profile		
Surface Characteristics			
Stone Cover (> 3 inches)	0-T	0	0
Stone Dominant Cover			
Gravel Cover (< 3 inches)	0-40	6.5	2
Litter Cover	5-20	10	10
Bare Soil	30-75	48	50
Moss and Lichen Cover	0-10	6	10
Total Plant Cover	25-75	56	-

SYMBOLIC LEGEND 164

COMMUNITY DESCRIPTOR:	Grsp (5)-Atco, Arsp, Artr (0-3)/Sihy (3-5)-Brte (0-5)
DESCRIPTION:	In this community *Grayia spinosa* is the most prominent with 25% to 50% cover. It usually also has *Atriplex confertifolia* and *Artemisia spinescens* in small amounts. *Sitanion hystrix* and *Bromus tectorum* are usually present in the herbaceous layer but are usually found in amounts less than 5% cover. Other grasses and forbs may also be found in minor amounts.
PCI:	0
PHYSIOGRAPHY:	This community is generally found on relatively level uplands but is sometimes found on colluvial slopes and low terraces.
ELEVATION:	4300 feet to 4800 feet
SOILS:	The surface layers are loam to clay loam with little evidence of B horizon development. Depths range from 14 inches to more than 33 inches.
POTENTIAL:	This community has value as winter livestock range, but it is of limited area.
NUMBER OF STANDS EXAMINED:	14

VEGETATION SUMMARY 164

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Grsp	100	5	5	35	25	20-50
Atco	67	3	0-3	2	0	0- 7
Artr	67	3	0-4	7	0	0-15
Arsp	58	0	0-4	4	0	0-18
Chna	25	0	0-3	T	0	0- 2
Chvi	18	0	0-3	T	0	0- 2
Eula	18	0	0-2	0	0	0- 1
Tesp	18	0	0-3	0	0	0- T
Arno2	9	0	0-3	T	0	0- 5
Save2	9	0	0-2	0	0	0- T
Teca	9	0	0-2	0	0	0- 1
Sihy	100	5	2-5	3	1	T-10
Brte	75	3	0-5	8	1	0-50
Pose	41	0	0-5	2	0	0-20
Orhy	33	0	0-3	T	0	0- 5
Agsp	9	0	0-1	0	0	0- T
Elci	9	0	0-3	T	0	0- 5
Sial	41	0	0-3	T	0	0- 3
Depi	33	0	0-4	0	0	0- 1
Spco	33	0	0-3	0	0	0- 1
Meal2	25	0	0-3	T	0	0- 3
Lare	18	0	0-1	0	0	0- T
Alre	9	0	0-2	0	0	0- T
Crac	9	0	0-1	0	0	0- T
ERIOG	9	0	0-1	0	0	0- T
Ersp4	9	0	0-3	0	0	0- 1
PENST	9	0	0-1	0	0	0- T
Saka	9	0	0-4	2	0	0-25

SOIL SUMMARY 164

	Range	Mean	Mode
Soil Depth	14-33	19	16
Surface Soil Characteristics			
Horizon Thickness	0-8	4.5	5
Color	10YR3/2-4/3		10YR4/3
Texture	si-gl		1
Structure	1vfgr-ves		ves
pH	6.7-8.4	7.5	-
Roots	1-3	2	-
Gravel	0-25	9	0
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	0-11	6	5
Color	10YR4/3-6/4		10YR4/3
Texture	c-scl		cl
Structure	2fgr-2csbk		2fsbk
pH	6.8-8.6	7.7	6.8
Roots	2-3	2.5	3
Gravel	0-50	15	0
Stones	0-30	4	0
Surface Characteristics			
Stone Cover (> 3 inches)	1-30	9	5
Stone Dominant Diameter	3-12	6	3
Gravel Cover (< 3 inches)	10-55	30	10
Litter Cover	2-10	3	2
Bare Soil	10-65	26	20
Moss and Lichen Cover	0-15	6	15
Total Plant Cover	30-70	47	40

SYMBOLIC LEGEND 321

COMMUNITY DESCRIPTOR:	Arar (5)/Pose (3-5)-Feid, Stth, Sihy (2-3)
DESCRIPTION:	*Artemisia arbuscula* is prominent in this community having a cover of 20% to 30%. *Chrysothamnus viscidiflorus* is commonly found and may have up to 15% cover. The herbaceous layer is characterized by numerous species. *Poa secunda* is usually prominent and has 2% to 20% cover. Other grasses and forbs, however, may be prominent. *Festuca idahoensis*, *Stipa thurberiana*, and *Sitanion hystrix* are also important species with cover of 1% to 10%, 2% to 3%, and 1% to 5%, respectively.
PCI:	3
PHYSIOGRAPHY:	This community is found on protected slopes and undulating to flat uplands.
ELEVATION:	5800 feet to 7000 feet
SOILS:	The surface soil and subsoil are usually gravelly loams. The profile and the soil surface commonly have high amounts of gravel. The pH ranges from 6.6 to 7.2.
POTENTIAL:	Forage production of this community can be high. With proper management it is valuable as game and livestock range. It may respond well to brush control spraying for domestic livestock range improvement.
NUMBER OF STANDS EXAMINED:	6

VEGETATION SUMMARY 321

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arar	100	5	5	28	25	20-30
Chvi	83	3	0-4	6	-	0-15
Ermi	83	3	0-3	2	-	0- 5
Ersp3	50	3	0-3	2	0	0- 5
Chna	17	0	0-2	0	0	0- T
Feid	100	3	2-4	7	-	1-22
Pose	100	5	3-5	20	-	2-55
Sihy	100	3	2-3	3	-	1- 5
Stth	100	3	2-3	2	3	1- 3
Agsp	33	0	0-5	3	0	0-15
Brte	33	0	0-3	1	0	0- 3
Orwe	33	0	0-1	0	0	0- T
Crac	100	3	1-3	2	-	T- 3
Phlo	67	0	0-3	T	0	0- 2
Basa	50	0	0-3	1	0	0- 3
Erli	33	0	0-4	4	0	0-25
Phho	33	0	0-4	2	0	0-10
Arho	17	0	0-1	0	0	0- T
Asca	17	0	0-3	0	0	0- 2
Asob	17	0	0-3	T	0	0- 2
Depi	17	0	0-2	0	0	0- T
Baho	17	0	0-3	0	0	0- 1
Eppa	17	0	0-2	0	0	0- T
Hast	17	0	0-1	0	0	0- T

SOIL SUMMARY 321

	Range	Mean	Mode
Soil Depth	12-29	19	-
Surface Soil Characteristics			
Horizon Thickness	1-16	3	1
Color	10YR4/2-3/2		10YR3/3
Texture	gl-sicl		gl
Structure	ves-lvfpl		ves
pH	7.0-7.1	7.0	7.0
Roots	2-4	3	3
Gravel	0-70	31	-
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	5-16	9	5
Color	10YR3/2-3/4		10YR3/4
Texture	gl-sc		gl
Structure	2msbk-1fgr		1fsbk
pH	6.6-7.2	7.0	7.0
Roots	1-3	3	3
Gravel	0-70	45	-
Stones	-	-	-
Surface Characteristics			
Stone Cover (> 3 inches)	3-40	16	-
Stone Dominant Diameter	4-18	10	12
Gravel Cover (< 3 inches)	10-62	30	10
Litter Cover	3-5	4	5
Bare Soil	5-40	21	10
Moss and Lichen Cover	0-1	T	0
Total Plant Cover	40-60	53	60

SYMBOLIC LEGEND 322

COMMUNITY DESCRIPTOR:	Arar (5)-Artr (0-3)/Feid, Pose (3-5)-Sihy (2-3)-Agsp (0-5)-Basa (0-3)-Phho (0-4)
DESCRIPTION:	The most prominent species in this community is *Artemisia arbuscula* which has from 25% to 45% cover. *Artemisia tridentata* is often present in small amounts as are other shrubs. *Festuca idahoensis*, *Poa secunda*, and *Agropyron spicatum* are the important grasses with 3% to 20%, 1% to 35%, and 2% to 8%, respectively. *Balsamorhiza sagittata* and *Phlox hoodii* are the most important forbs in the community.
PCI:	3
PHYSIOGRAPHY:	This community is found on protected slopes and flat to undulating uplands.
ELEVATION:	6000 to 7300 feet
SOILS:	Surface soil texture is usually gravelly loam 6 inches to a clay loam subsoil. pH is 7.0. The soil profile usually contains gravel and stones and gravel covers 15% of the soil surface.
POTENTIAL:	This community is of high value as game and livestock range. Increased forage production for domestic livestock may be obtained by brush control spraying.
NUMBER OF STANDS EXAMINED:	13

VEGETATION SUMMARY 322

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arar	100	5	5	32	30	25-45
Chvi	87	3	0-3	6	2	0-10
Artr	75	3	0-3	6	5	0-10
Ermi	13	0	0-3	0	0	0- 1
Grsp	13	0	0-1	0	0	0- T
Hodu	13	0	0-2	0	0	0- T
Lepu2	13	0	0-3	0	0	0- 3
Rice	13	0	0-1	0	0	0- T
Teca	13	0	0-2	0	0	0- 1
Tegl	13	0	0-2	0	0	0- 1
Agsp	100	3	3-4	5	-	2- 8
Pose	100	4	2-5	14	-	1-35
Feid	100	3	3-5	9	-	3-20
Sihy	87	3	0-3	2	1	0- 5
Basa	87	3	0-3	3	2	0- 5
Crac	87	3	0-3	2	1	0- 5
Erli	75	0	0-3	1	1	0- 2
Phlo	50	0	0-3	1	0	0- 3
Phho	38	0	0-3	1	0	0- 5
Aspu	25	0	0-2	0	0	0- T
Zipa	25	0	0-2	T	0	0- T
Luca	25	0	0-2	0	0	0- 1
Arho	13	0	0-1	0	0	0- 1
Ascu	13	0	0-2	0	0	0- 1
ASTRA	13	0	0-2	0	0	0- T
Chdo	13	0	0-1	0	0	0- T

SOIL SUMMARY 322

	Range	Mean	Mode
Soil Depth	14-25	19	17
Surface Soil Characteristics			
Horizon Thickness	0-15	6	6
Color	10YR6/13-3/2		3/3
Texture	gl-sicl		grl
Structure	1fgr-2msbk		-
pH	6.8-7.5	7.0	7.0
Roots	1-5	3	3/4
Gravel	0-50	15	10
Stones	0.30	5	0
Subsoil Characteristics			
Horizon Thickness	2-19	10	10
Color	10YR4/4-3/3		3/3
Texture	gl-cl		cl
Structure	1fsbk-2msbk		2msbk
pH	6.2-7.5	7.0	7.0
Roots	2-4	3	3
Gravel	0-60	20	0
Stones	0-80	9	0
Surface Characteristics			
Stone Cover (> 3 inches)	T-25	9	-
Stone Dominant Diameter	3-20	8	5
Gravel Cover (< 3 inches)	1-50	16	-
Litter Cover	2-5	4	5
Bare Soil	10-50	26	15
Moss and Lichen Cover	0-5	2	3
Total Plant Cover	50-75	66	70

SYMBOLIC LEGEND 323

COMMUNITY DESCRIPTOR:	Arar (5)/Pose (3-5)-Sihy, Brte, Stth, Agsp (0-5)
DESCRIPTION:	*Artemisia arbuscula* is prominent in this community with a cover of 15% to 40% except where it occurs on scablands where the cover may be 5% or less. *Eriogonum microthecum*, *Chrysothamnus* species and other shrubs may be present in low amounts. *Poa secunda* is always present in the herbaceous layer and is often prominent with a cover of 1% to 40%. *Sitanion hystrix*, *Bromus tectorum*, *Stipa thurberiana*, and *Agropyron spicatum* occur at times in the community and any of them may be prominent.
PCI:	2
PHYSIOGRAPHY:	This community commonly occurs on level to rolling uplands and on exposed slopes.
ELEVATION:	5400 feet to 6400 feet
SOILS:	The most commonly occurring texture in the surface soil is gravelly silt loam which is 10 inches deep to a gravelly clay loam. There is high gravel content in the profile and on the soil surface. pH is 6.6 to 7.5.
POTENTIAL:	Although useful as livestock and game rangeland, production is relatively low.
NUMBER OF STANDS EXAMINED:	25

VEGETATION SUMMARY 323

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arar	100	5	5	25	20	15-40
Chvi	67	3	0-4	2	0	0-10
Chna	39	0	0-4	1	0	0-10
Ermi	39	0	0-3	1	0	0- 3
Artr	22	0	0-4	2	0	0-10
Ersp3	6	0	0-2	0	0	0- 1
Grsp	6	0	0-4	T	0	0- 5
Lepu2	6	0	0-3	0	0	0- 1
Syor	6	0	0-2	0	0	0- T
Teca	6	0	0-2	0	0	0- 1
Pose	100	5	3-5	8	7	1-20
Sihy	83	3	0-3	1	1	0- 5
Brte	72	3	0-4	2	0	0-10
Agsp	44	0	0-5	3	0	0-10
Stth	33	0	0-5	1	0	0- 3
Agsm	6	0	0-2	0	0	0- 1
CAREX	6	0	0-2	0	0	0- 2
Elci	6	0	0-3	1	0	0- 5
Pone2	6	0	0-3	T	0	0- 3
Erbl	55	0	0-3	1	0	0- 2
Basa	44	0	0-3	1	0	0- 2
Crac	44	0	0-3	T	0	0- 2
ASTRA	39	0	0-3	T	0	0- 2
Phlo	39	0	0-3	1	0	0- 7
LOMAT	33	0	0-3	0	0	0- T
Lysp	28	0	0-3	0	0	0- 1
Depi	22	0	0-2	0	0	0- T
Phho	22	0	0-3	1	0	0- 4
Asca	17	0	0-3	0	0	0- T
Erov	17	0	0-3	0	0	0- T
Erli	17	0	0-3	T	0	0- 3
LUPIN	17	0	0-3	0	0	0- 2
Chdo	11	0	0-3	0	0	0- T
Pecu	11	0	0-2	0	0	0- 1
Zipa	11	0	0-3	0	0	0- 2
Crci	6	0	0-3	0	0	0- 1
Erum	6	0	0-2	0	0	0- 1
Ersp4	6	0	0-1	0	0	0- T
Sein	6	0	0-1	0	0	0- T

SOIL SUMMARY 323

	Range	Mean	Mode
Soil Depth	8-26	15	-
Surface Soil Characteristics			
Horizon Thickness	2-16	7.5	10
Color	10YR2/2-4/3		10YR3/3
Texture	cl-ls		gsil
Structure	1cpl-1fsg		ves
pH	6.8-7.5	7.1	7.0
Roots	1-5	3	3
Gravel	0-80	24	20
Stones	0-80	10	0
Subsoil Characteristics			
Horizon Thickness	4-11	7.5	7
Color	10YR3/3-4/4		10YR3/3
Texture	c-scl		gcl
Structure	1fgr-2msbk		2fsbk
pH	6.6-7.5	7.1	7.0
Roots	1-3	2.5	3
Gravel	0-70	21	20
Stones	0-85	22	0
Surface Characteristics			
Stone Cover (> 3 inches)	T-60	17	10
Stone Dominant Diameter	3-18	8	5
Gravel Cover (< 3 inches)	5-65	36	-
Litter Cover	T-10	3	5
Bare Soil	0-40	12	5
Moss and Lichen Cover	T-15	3	T
Total Plant Cover	25-70	44	35

SYMBOLIC LEGEND 324

COMMUNITY DESCRIPTOR:	Arar (5)-Ermi (0-3)/Pose (4-5)-Orwe (2-4)-Brte (3-4)-Sihy (1-3)
DESCRIPTION:	The most prominent species in this community is *Artemisia arbuscula* which has a cover of 15% to 25%. *Eriogonum microthecum* is usually present with cover ranging from 0% to 3%. *Poa secunda* is prominent in the herbaceous layer with a cover of 2% to 7%. *Oryzopsis webberi* is always present and has a cover of 1% to 5%.
PCI:	2
PHYSIOGRAPHY:	This community is found on xeric slopes and rolling uplands.
ELEVATION:	5100 feet to 5400 feet
SOILS:	Silt loam surface soils, which are about six inches deep over a clay subsoil, are characteristic of this community. Total soil depth is less than 13 inches. pH is 7.0. The soil profile and soil surface are gravelly.
POTENTIAL:	Present production for range livestock is low. This community is marginal for range seeding. It is found in areas which have had heavy use by livestock so production may be significantly increased with proper management.
NUMBER OF STANDS EXAMINED:	7

VEGETATION SUMMARY 324

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arar	100	5	5	21	20	15-25
Ermi	71	3	3	1	-	0- 3
Chvi	29	0	0-3	T	0	0- 3
Ersp3	29	0	0-2	T	0	0- T
Pose	100	5	4-5	4	5	2- 7
Orwe	100	3	2-4	2	1	1- 5
Sihy	100	3	1-3	1	1	T- 3
Brte	86	3	3-4	7	1	0- 2
Stth	29	-	0-3	T	0	0- 1
Phho	86	3	0-3	2	2	0- 5
Erba	71	3	0-3	1	1	0- 2
Erbl	71	3	0-3	1	1	0- 2
Phlo	71	3	0-3	T	1	0- 1
Ersp4	57	3	0-3	1	1	0- 3
LOMAT	57	0	0-3	T	T	0- 1
Hast	29	0	0-3	T	T	0- 1
Erov	29	0	0-3	T	T	0- 1
Base	20	0	0-2	T	T	0- T
Crac	29	0	0-3	T	T	0- T
Arac2	14	0	0-4	T	T	0- 2
ALLIU	14	0	0-2	T	T	0- T
Pecu	14	0	0-2	T	T	0- T
Zipa	14	0	0-2	T	T	0- T
Assc	14	0	0-1	T	T	0- T
CHENO	14	0	0-1	T	T	0- T
DESCU	14	0	0-1	T	T	0- T
Lare	14	0	0-1	T	T	0- T

SOIL SUMMARY 324

	Range	Mean	Mode
Soil Depth	7-13	9	8
Surface Soil Characteristics			
Horizon Thickness	4-8	6	-
Color	10YR3/2-4/3		3/3
Texture	gs-cl		sil
Structure	sg-2mgr		1fsbk
pH	7.0	7.0	7.0
Roots	1-3	2.5	3
Gravel	0-70	21	10
Stones	0-30	7	0
Subsoil Characteristics			
Horizon Thickness	0-5	3	4
Color	10YR3/3-4/4		3/3
Texture	c-scl		c
Structure	1fsbk-3msbk		2msbk
pH	6.8-7.2	7.0	6.8
Roots	3	3	3
Gravel	0-10	5	-
Stones	0-80	20	0
Surface Characteristics			
Stone Cover (> 3 inches)	10-25	17	15
Stone Dominant Diameter	4-10	7	6
Gravel Cover (< 3 inches)	35-45	40	40
Litter Cover	1-5	2	1
Bare Soil	10-25	18	15
Moss and Lichen Cover	T-2	T	T
Total Plant Cover	30-35	33	35

SYMBOLIC LEGEND 325

COMMUNITY DESCRIPTOR:	Arar (5)/Pose (3-5)-Hast (2-5)
DESCRIPTION:	The most prominent species in this community is *Artemisia arbuscula* which has a cover of 5% to 35%. Other shrubs, if present, are of little importance. The herbaceous layer contains *Poa secunda* and *Haplopappus stenophyllus* which have cover of 1% to 25% and trace to 25%, respectively. *Sitanion hystrix* is usually present as are many forbs of low cover.
PCI:	2
PHYSIOGRAPHY:	Level to undulating upland
ELEVATION:	4900 feet to 6100 feet
SOILS:	Loam to clay loam soils are found in the surface layers which are 3 inches to 8 inches deep over a clay to clay loam subsoil. pH is 7.0. There is a high percentage of gravel in the profile and on the soil surface.
POTENTIAL:	This community has limited value for domestic livestock and wildlife.
NUMBER OF STANDS EXAMINED:	7

VEGETATION SUMMARY 325

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arar	100	5	5	23	20	5-35
Ersp3	71	1	0-3	T	1	0- 2
Chvi	29	0	0-2	T	0	0- 1
Chna	14	0	0-3	T	0	0- 1
Pose	100	4	3-5	15	-	1-25
Sihy	86	2	0-3	3	1	0-10
Brte	29	0	0-4	3	0	0-20
Agsp	14	0	0-1	T	0	0- T
Elci	14	0	0-1	T	0	0- T
Orwe	14	0	0-1	T	0	0- T
Pocu	14	0	0-3	T	0	0- 2
Stth	14	0	0-2	T	0	0- 1
Hast	100	-	2-5	12	20	T-25
Erli	100	2	1-3	2	T	T- 7
Phlo	71	-	0-3	1	T	0- 5
LOMAT	71	1	0-3	T	1	0- 1
Asob	43	0	0-3	1	0	0- 5
Arac2	43	0	0-4	1	0	0- 3
Baho	43	0	0-3	1	0	0- 3
Phho	43	0	0-3	1	0	0- 4
AGOSE	29	0	0-2	T	0	0- T
CREPI	29	0	0-3	1	0	0- 5
Zipa	29	0	0-2	T	0	0- 1
Arho	14	0	0-2	T	0	0- T
Assc	14	0	0-2	1	0	0- 5
ASTRA	14	0	0-1	T	0	0- T
BALSA	14	0	0-1	T	0	0- T
Base	14	0	0-1	T	0	0- T
Crac	14	0	0-1	T	0	0- T
PENST	14	0	0-2	T	0	0- 1
Sial	14	0	0-3	T	0	0- 1
ARABI	14	0	0-3	T	0	0- 1

SOIL SUMMARY 325

	Range	Mean	Mode
Soil Depth	8-14	13	14
Surface Soil Characteristics			
Horizon Thickness	3-5	4	3
Color	10YR3/3-4/2		-
Texture	gl-cl		-
Structure	ves-1fgr		ves
pH	-	-	-
Roots	2-4	3	-
Gravel	0-40	20	-
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	5-8	6.5	-
Color	10YR6/3-4/2		10YR4/2
Texture	gcl-gc		cl
Structure	3msbk-2mgr		2msbk
pH	6.8-7.0	7.0	7.0
Roots	3	3	3
Gravel	0-30	15	-
Stones	0-15	3	0
Surface Characteristics			
Stone Cover (> 3 inches)	5-15	12	15
Stone Dominant Diameter	5-8	6	-
Gravel Cover (< 3 inches)	15-60	40	33
Litter Cover	2-10	2	4
Bare Soil	10-30	20	-
Moss and Lichen Cover	0-10	3	1
Total Plant Cover	40-60	50	-

SYMBOLIC LEGEND 326

COMMUNITY DESCRIPTOR:	Arar (5)/Pose (3-5)-Feid, Sihy (1-4)-Hast (2-4)-Arac2 (0-5)
DESCRIPTION:	The prominent shrub in this community is *Artemisia arbuscula*. It may have a cover of 15% to 50% and may be the only shrub present although *Chrysothamnus viscidiflorus* is sometimes present. *Poa secunda* is usually the prominent grass with 3% to 15% cover. *Happlopappus stenophyllus* or *Arenaria aculeata* may be prominent in the herbaceous layer. *Festuca idahoensis* is always present and is sometimes prominent.
PCI:	3
PHYSIOGRAPHY:	Undulating uplands or protected slopes.
ELEVATION:	5600 feet to 6200 feet
SOILS:	A silt loam surface soil 2 to 8 inches deep occurs over a clay subsoil. Total soil depth is 9 to 17 inches. pH is 6.2 to 7.2.
POTENTIAL:	This community may, under proper management, produce a significant quantity of forage. It is not suited to brush control except incidental to adjacent, suitable treatment areas.
NUMBER OF STANDS EXAMINED:	9

VEGETATION SUMMARY 326

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arar	100	5	5	27	25	15-50
Chvi	16	0	0-3	2	0	0-15
Ersp3	16	0	0-2	0	0	0- T
Pose	100	4	3-5	11	-	3-15
Feid	100	2	1-4	2	T	T-10
Sihy	100	3	1-3	3	-	T- 5
Agsp	43	0	0-5	3	0	0-20
Brte	29	0	0-3	1	0	0- 7
Hast	86	4	0-4	5	10	0-10
Arac2	43	0	0-5	2	0	0-10
Phlo	43	0	0-3	1	0	0- 5
Trgy	43	0	0-3	1	0	0- 5
Aggl	43	0	0-2	0	0	0- T
Cain	29	0	0-3	0	0	0- 1
Phho	29	0	0-3	1	0	0- 5
Baho	29	0	0-3	T	0	0- 3
Erpu	29	0	0-3	T	0	0- 2
Erba	29	0	0-3	1	0	0- 5
Asob	29	0	0-2	0	0	0- T
Assc	29	0	0-3	0	0	0- T
Lare	29	0	0-2	0	0	0- T
Leal	29	0	0-1	0	0	0- T
Erli	29	0	0-3	0	0	0- 2
Asmi	16	0	0-1	0	0	0- T
LOMAT	16	0	0-2	0	0	0- T
Crac	16	0	0-2	0	0	0- T
Lysp	16	0	0-2	0	0	0- T
Asfi	16	0	0-1	0	0	0- T
LUPIN	16	0	0-2	0	0	0- T
Copa	16	0	0-1	0	0	0- T
Erbl	16	0	0-2	0	0	0- T
Aghe	16	0	0-1	0	0	0- T
Alac	16	0	0-1	0	0	0- T
Arho	16	0	0-1	0	0	0- T
Phdi	16	0	0-3	1	0	0- 5
Meod	16	0	0-2	0	0	0- T

SOIL SUMMARY 326

	Range	Mean	Mode
Soil Depth	9-17	14	14
Surface Soil Characteristics			
Horizon Thickness	2-8	4	3
Color	10YR4/2-3/2		10YR4/2
Texture	gl-sicl		sil
Structure	ves-gr		2mpl
pH	6.8-7.2	7.0	-
Roots	2-4	3	3/4
Gravel	0-20	20	0
Stones	0-60	10	0
Subsoil Characteristics			
Horizon Thickness	6-13	10	11
Color	10YR5/4-2/2		10YR3/3
Texture	gcl-c		c
Structure	1mgr-3msbk		2msbk
pH	6.2-7.2	6.7	7.0
Roots	1-3	3	3
Gravel	0-80	40	30
Stones	0-90	30	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-15	8	
Stone Dominant Diameter	5-10	6	-
Gravel Cover (< 3 inches)	10-70	36	70
Litter Cover	2-10	5	5
Bare Soil	2-30	18	30
Moss and Lichen Cover	0-10	3	-
Total Plant Cover	50-60	55	-

SYMBOLIC LEGEND 327

COMMUNITY DESCRIPTOR:	Arar (5)-Putr (3)/Agsp (3-5)-Brte, Sihy (2-3)
DESCRIPTION:	This community, as sampled, is limited in distribution to the south portion of the unit near Cottonwood Creek. It is found on an unusual soil type and the community itself may be quite variable. *Artemisia arbuscula* is the most prominent with 15% or 30% cover. *Purshia tridentata* is always present with 3% to 10% cover. Other shrubs are present in variable amounts. The herbaceous layer is widely variable. *Agropyron spicatum* is usually present but varies from 1% to 25% cover.
PCI:	2
PHYSIOGRAPHY:	This community occurs on exposed slopes or benches on the ancient lake terraces of the area.
ELEVATION:	6000 feet to 6100 feet
SOILS:	Usually gravelly or sandy loams 4 inches to 15 inches deep to a clay loam or sandy clay subsoil. pH is 6.8 to 7.2.
POTENTIAL:	This community is of such limited distribution it is not suited to special management. It has use as a game range and limited use as livestock range.
NUMBER OF STANDS EXAMINED:	5

VEGETATION SUMMARY 327

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arar	100	5	5	25	30	15-30
Putr	100	3	3-4	5	5	3-10
Ersp3	60	0	0-3	1	0	0- 3
Chvi	60	3	0-3	2	0	0- 5
Chna	40	0	0-3	2	0	0- 5
Grsp	20	0	0-3	1	0	0- 5
Brte	100	3	2-3	3	5	T- 5
Sihy	100	3	2-3	2	-	T- 5
Agsp	100	3	2-5	10	-	1-25
Pose	100	4	3-5	9	-	3-15
Stth	60	0	0-5	8	-	0-15
Elci	60	0	0-4	3	0	0-15
Feid	40	0	0-2	T	0	0- 1
CAREX	40	0	0-5	13	0	0-60
Stel	20	0	0-1	0	0	0- T
Orwe	20	0	0-2	T	0	0- 1
Basa	80	3	0-3	2	5	0- 5
Ersp4	60	0	0-3	1	0	0- 5
Eppa	60	3	0-3	3	0	0- 7
Erli	40	0	0-3	1	0	0- 3
Crac	40	0	0-2	0	0	0- 1
Migr	40	0	0-3	1	0	0- 3
Asca	40	0	0-3	1	0	0- 4
Meal2	40	0	0-1	0	0	0- T
Arho	40	0	0-3	1	0	0- 2
ASTER	40	0	0-3	1	0	0- 2
Cabr	20	0	0-1	0	0	0- T
Ganu	20	0	0-2	0	0	0- 1
Pecu	20	0	0-3	1	0	0- 3
Erba	20	0	0-1	0	0	0- T
Erhe	20	0	0-3	0	0	0- 1
Lysp	20	0	0-2	0	0	0- T
Sial	20	0	0-1	0	0	0- T
Depi	20	0	0-2	0	0	0- 1

SOIL SUMMARY 327

	Range	Mean	Mode
Soil Depth	6-28	19	-
Surface Soil Characteristics			
Horizon Thickness	4-12	8	-
Color	10YR4/2-3/2		3/3
Texture	gs-gcl		gls
Structure	5gr-2fpl		sg
pH	6.8-7.2	6.9	6.8
Roots	1-3	2	3
Gravel	0-70	27	0
Stones	0	0	0
Subsoil Characteristics			
Horizon Thickness	11-22	15	11
Color	10YR5/4-3/2		10YR3/3
Texture	gcl-sc		-
Structure	2fsbk-3msbk		2msbk
pH	-	-	-
Roots	-	-	-
Gravel	0-50	25	-
Stones	0-35	9	0
Surface Characteristics			
Stone Cover (> 3 inches)	3-15	7	5
Stone Dominant Diameter	4-12	9	12
Gravel Cover (< 3 inches)	5-60	29	10
Litter Cover	0-10	5	5
Bare Soil	10-60	32	-
Moss and Lichen Cover	0-5	3	5
Total Plant Cover	40-85	60	40

SYMBOLIC LEGEND 332

COMMUNITY DESCRIPTOR:	Arlo2 (5)/Pose (4-5)-Feid (2-4)-Sihy (2-3)-Agsp (0-3)-Phho (2-4)
DESCRIPTION:	*Artemisia longiloba* is the most prominent shrub with 25% to 70% cover. Other shrubs are found in small amounts. *Poa secunda* is prominent in the herbaceous layer with 20% to 40% cover. *Festuca idahoensis* and *Sitanion hystrix* are also important with 2% to 5% cover, respectively.
PCI:	2
PHYSIOGRAPHY:	This community is found on undulating uplands.
ELEVATION:	6700 feet to 6800 feet
SOILS:	The surface soil is usually gravelly loam. The subsoil is usually gravelly clay loam. The soils are all 20 inches deep or deeper. pH is 6.8. Profile gravel and stones make up a majority of the soil.
POTENTIAL:	Suitable for livestock and game range. May be suited to brush control in conjunction with suitable adjacent areas.
NUMBER OF STANDS EXAMINED:	5

VEGETATION SUMMARY 332

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arlo2	100	5	5	39	35	25-70
Ermi	40	0	0-3	1	0	0- 5
Syor	40	0	0-T	T	0	0- T
Chvi	40	-	0-3	2	0	0- 5
Chna	20	0	0-3	T	0	0- 1
Pose	100	5	4-6	27	20	20-40
Feid	100	3	2-4	8	5	2-15
Sihy	100	3	2-3	3	-	2- 5
Agsp	60	0	0-3	1	0	0- 2
Pocu	40	0	0-2	T	0	0- 1
STIPA	20	0	0-3	1	0	0- 3
Elci	20	0	0-2	T	0	0- 1
Phho	100	4	2-4	10	-	1-20
Phlo	80	3	0-3	3	-	0- 7
CREPI	80	3	0-3	1	1	0- 5
Asmi	60	3	0-3	3	-	0-10
Erli	60	-	0-3	T	T	0- 1
ARABI	60	-	0-2	T	0	0- T
ASTRA	40	0	0-3	1	0	0- 3
Assc	40	0	0-2	T	0	0- 1
Zipa	20	0	0-3	1	0	0- 5
LUPIN	20	0	0-3	T	0	0- 1
Pecu	20	0	0-3	T	0	0- 1
Aspu	20	0	0-2	T	0	0- 1
Crac	20	0	0-2	T	0	0- 1
LOMAT	20	0	0-1	T	0	0- T
Lysp	80	-	0-3	1	T	0- 3
CRYPT	20	0	0-2	T	0	0- 1
Ganu	20	0	0-2	T	0	0- 1

SOIL SUMMARY 332

	Range	Mean	Mode
Soil Depth	19-28	22	20
Surface Soil Characteristics			
Horizon Thickness	0-16	6	-
Color	10YR3/3-3/2		10YR3/3
Texture	gl-cl		gl
Structure	1fgr-1vfgr		1vfgr
pH	6.6-6.8	6.8	6.8
Roots	2-5	4	4
Gravel	20-50	31	-
Stones	0-80	60	80
Subsoil Characteristics			
Horizon Thickness	4-24	14	-
Color	10YR3/3-5/3		10YR3/3
Texture	gl-sc		gcl
Structure	1vfgr-3mfsbk		1fsbk
pH	-	-	-
Roots	2-3	3	3
Gravel	20-40	33	40
Stones	70-80	75	-
Surface Characteristics			
Stone Cover (> 3 inches)	2-15	6	2
Stone Dominant Diameter	3-12	6	3
Gravel Cover (< 3 inches)	7-40	22	25
Litter Cover	3-5	4	5
Bare Soil	10-40	20	20
Moss and Lichen Cover	T-5	2	1
Total Plant Cover	60-85	71	70

SYMBOLIC LEGEND 343

COMMUNITY DESCRIPTOR:	Arno2 (4-5)-Grsp (0-4)/Sihy (3-5)-Brte (2-5)-Pose (0-5)
DESCRIPTION:	The prominent species in this community is *Artemisia nova* with cover of 15% to 35%. *Grayia spinosa* may be present with cover ranging from 0% to 15%. The herbaceous layer includes *Sitanion hystrix*, *Bromus tectorum*, or *Poa secunda* which have cover of 2% to 5%, 1% to 45%, and 0% to 12%, respectively.
PCI:	0
PHYSIOGRAPHY:	High terraces and exposed slopes are the location of this community.
ELEVATION:	4500 feet to 4900 feet
SOILS:	The surface soil is generally sandy loam but is quite variable. It is 1 to 9 inches deep over a loam to clay loam subsoil. Soil depth may range from 9 to 25 inches. The soil profile and surface are gravelly. pH is 7.0 in the surface soil and 7.0 to 8.2 in the subsoil.
POTENTIAL:	This community has use as winter livestock range and as antelope range.
NUMBER OF STANDS EXAMINED:	9

VEGETATION SUMMARY 343

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arno2	100	5	4-5	24	20	15-35
Grsp	67	-	0-4	5	0	0-15
Sihy	100	3	3-5	3	3	2- 5
Brte	100	5	2-5	10	3	2-45
Pose	78	4	0-5	4	0	0-12
Stth	11	0	0-3	T	0	0- 3
Orhy	11	0	0-2	T	0	0- T
Agsp	11	0	0-1	T	0	0- T
Sial	100	3	1-3	2	3	T- 4
Saka	56	0	0-3	1	0	0- 4
Meal2	45	0	0-3	1	0	0- 3
Spco	34	0	0-3	T	0	0- 1
Depi	11	0	0-2	T	0	0- T
Phho	11	0	0-2	T	0	0- T
Erov	11	0	0-1	T	0	0- T
CHENO	11	0	0-1	T	0	0- T
CRYPT	11	0	0-2	T	0	0- T
LOMAT	11	0	0-1	T	0	0- T
Oeal	11	0	0-2	T	0	0- 1

SOIL SUMMARY 343

	Range	Mean	Mode
Soil Depth	9-25	14	16
Surface Soil Characteristics			
Horizon Thickness	1-9	5	5
Color	2.5YR3/2-10YR5/3		10YR
Texture	gcl-sl		sl
Structure	1fgr-ves		ves
pH	7.0	7.0	7.0
Roots	1-3	2.5	3
Gravel	0-65	25	30
Stones	0-20	3	0
Subsoil Characteristics			
Horizon Thickness	3-12	8	8
Color	10YR3/3-5/4		10YR4/4
Texture	1-cl		-
Structure	1fsbk-2msbk		1fsbk
pH	7.0-8.2	7.4	7.5
Roots	1-3	2.5	3
Gravel	0-90	21	20
Stones	0-80	15	0
Surface Characteristics			
Stone Cover (> 3 inches)	7-40	18	-
Stone Dominant Diameter	4-10	6	4
Gravel Cover (< 3 inches)	20-60	38	40
Litter Cover	1-5	3	-
Bare Soil	5-40	19	15
Moss and Lichen Cover	0-1	T	0
Total Plant Cover	40-70	47	50

SYMBOLIC LEGEND 344

COMMUNITY DESCRIPTOR:	Arno2 (4-5)-Grsp, Atco, Arsp (0-4)-Eula (0-3)/ Sihy, Pose, Brte (0-5)
DESCRIPTION:	In this community *Artemisia nova* is the most prominent species with 15% to 40% cover. *Grayia spinosa*, *Atriplex confertifolia*, *Artemisia spinosa*, and *Eurotia lanata* are present either separately or in various combinations. The herbaceous layer may include *Sitanion hystrix*, *Poa secunda*, or *Bromus tectorum*.
PCI:	0
PHYSIOGRAPHY:	This community is found on ancient terraces and fans.
ELEVATION:	4500 feet to 4900 feet
SOILS:	The surface soil is generally a sandy loam which is 3 inches deep over a clay loam subsoil. pH ranges from 6.8 to 8.5 tending to be more lighter in the subsoil than in the surface soil. Gravel is abundant in the soil profile and on the surface.
POTENTIAL:	Useful as winter range for livestock and as antelope range.
NUMBER OF STANDS EXAMINED:	24

VEGETATION SUMMARY 344

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arno2	100	5	4-5	23	25	10-35
Grsp	89	3	0-4	3	1	0-15
Eula	68	3	0-3	1	0	0- 8
Arsp	57	0	0-4	2	0	0-10
Atco	29	0	0-4	2	0	0-15
Chna	7	0	0-2	0	0	0- 1
Chvi	7	0	0-2	T	0	0- 2
Artr	7	0	0-3	T	0	0- 5
Sihy	93	3	0-5	5	3	0-15
Brte	89	3	0-5	8	3	0-60
Pose	68	3	0-5	2	0	0-15
Orhy	39	0	0-3	T	0	0- 2
Spcr	11	0	0-3	T	0	0- 1
Sial	61	0	0-4	1	0	0- 3
Saka	50	0	0-5	1	0	0- 5
Spco	39	0	0-3	T	0	0- 2
Meal2	11	0	0-3	T	0	0- 1
Erov	11	0	0-2	0	0	0- T
Lare	11	0	0-1	0	0	0- T
Crci	7	0	0-1	0	0	0- T
Capi4	7	0	0-1	0	0	0- T
Erbl	7	0	0-2	0	0	0- T
Oeal	4	0	0-1	0	0	0- T
POLYG	4	0	0-2	0	0	0- T
Phlo	4	0	0-1	0	0	0- T

SOIL SUMMARY 344

	Range	Mean	Mode
Soil Depth	7-22	13	-
Surface Soil Characteristics			
Horizon Thickness	0-11	5	3
Color	10YR5/3-3/2		10YR3/3
Texture	gsl-cl		sl
Structure	sg-ves		ves
pH	6.8-8.5	7.4	7
Roots	0-4	2	3
Gravel	0-75	20	20
Stones	0-40	3	0
Subsoil Characteristics			
Horizon Thickness	0-15	6	5
Color	10YR3/3-5/5		10YR4/3
Texture	c-l		cl
Structure	sg-3fbk		lmsbk
pH	7.0-8.5	7.7	7.5
Roots	1-3	2.5	3
Gravel	0-50	18	10
Stones	0-70	5	0
Surface Characteristics			
Stone Cover (> 3 inches)	1-30	10	10
Stone Dominant Diameter	3-12	5	4
Gravel Cover (< 3 inches)	20-70	42	40
Litter Cover	T-15	3	T
Bare Soil	5-35	18	10
Moss and Lichen Cover	0-10	3	-
Total Plant Cover	25-85	42	-

SYMBOLIC LEGEND 345

COMMUNITY DESCRIPTOR:	Arno2 (5)-Grsp, Chvi (0-3)-Chna (2-3)/Agsp, Stth (0-5)
DESCRIPTION:	*Artemisia nova* is the most prominent species with 15% to 30% cover. *Chrysothamnus viscidiflorus* and *Chrysothamnus nauseosus* are indicators of this plant community. They have cover values of 0% to 5% and T to 5%, respectively. *Agropyron spicatum* and *Stipa thurberiana* have 0% to 30% and 0% to 10% cover, respectively. *Poa secunda*, *Bromus tectorum*, and *Sitanion hystrix* are also found in the herbaceous layer.
PCI:	0
PHYSIOGRAPHY:	This community is usually found on rolling uplands. It often occurs along drainage ways and in protected pockets.
ELEVATION:	4700 feet to 5000 feet
SOILS:	The surface layers are sandy loams and gravelly loams 4 to 12 inches deep over a clay loam. pH is 7.0 to 7.5.
POTENTIAL:	This community is of value for domestic livestock range. It is more productive than the other communities it is associated with but covers less area.
NUMBER OF STANDS EXAMINED:	7

VEGETATION SUMMARY 345

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arno2	100	5	5	21	20	15-30
Chna	100	3	2-3	2	2	T- 5
Chvi	60	-	0-3	1	-	0- 5
Grsp	60	-	0-3	1	0	0- 3
Artr	20	0	0-2	1	0	0- 3
Ersp3	20	0	0-2	T	0	0- 1
Lepu2	20	0	0-2	T	0	0- 1
Pose	100	3	3-4	6	-	2-12
Brte	100	3	3	5	-	2-15
Agsp	80	5	0-5	11	10	0-30
Stth	80	2	0-5	4	-	0-10
Sihy	60	0	0-4	3	-	0- 6
Orhy	20	0	0-3	T	0	0- 2
Sial	40	0	0-3	T	0	0- 2
Chdo	40	0	0-1	T	0	0- 1
Lysp	20	0	0-2	1	0	0- 3
Asle	20	0	0-1	0	0	0- T
Phho	20	0	0-3	T	0	0- 2

SOIL SUMMARY 345

	Range	Mean	Mode
Soil Depth	4-19	12	-
Surface Soil Characteristics			
Horizon Thickness	4-12	6	4
Color	10YR4/4-3/3		10YR4/3
Texture	gl-l		sl
Structure	sg-2msbk		2msbk
pH	7.0	7.0	7.0
Roots	1-3	2	3
Gravel	0-20	9	0
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	0-15	6	-
Color	10YR4/4-4/3		10YR4/4
Texture	gl-cl		cl
Structure	1fsbk-2msbk		1msbk
pH	7.1-7.5	7.2	-
Roots	2-3	3	3
Gravel	0-30	14	0
Stones	0-20	4	0
Surface Characteristics			
Stone Cover (> 3 inches)	1-35	17	-
Stone Dominant Diameter	6-15	11	15
Gravel Cover (< 3 inches)	12-25	20	25-20
Litter Cover	0-10	4	3
Bare Soil	10-30	19	20
Moss and Lichen Cover	0-5	3	-
Total Plant Cover	35-70	48	40

SYMBOLIC LEGEND 411

COMMUNITY DESCRIPTOR:	Artr (4-5)-Chvi, Chna (0-4)-Teca (0-3)/Stth, Sihy, Pose (2-5)-Agsp (0-5)
DESCRIPTION:	*Artemisia tridentata* is the most prominent species having 20% to 50% cover. *Chrysothamnus* species and *Tetradymia canescens* may be present in amounts usually less than 10% cover. *Stipa thurberiana, Sitanion hystrix,* and *Poa secunda* are usually the most important species in the herbaceous layer having 1% to 15%, T to 15%, and T to 25%, respectively. *Agropyron spicatum* is often present and may have as much as 25% cover. *Bromus tectorum* has reached as much as 40% cover in disturbed stands of the community.
PCI:	1
PHYSIOGRAPHY:	This community is found on terraces and level to undulating uplands.
ELEVATION:	4500 feet to 6400 feet
SOILS:	The surface soil is characteristically 3 inches deep and of gravelly loam texture. The subsoil is clay loam. pH is 6.9 to 8.0.
POTENTIAL:	Much of this community has been seeded. Where terrain and stone cover allows, it is well adapted to seeding with crested wheatgrass. In those stands where there is adequate grass, it responds well to spray-release brush control.
NUMBER OF STANDS EXAMINED:	24

VEGETATION SUMMARY 411

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Artr	100	5	5	33	40	20-60
Chvi	52	0	0-4	2	0	0-10
Chna	35	0	0-3	1	0	0-12
Teca	35	0	0-3	1	0	0- 5
Ermi	10	0	0-3	T	0	0- 5
Ersp3	3	0	0-2	0	0	0- T
Lepu	3	0	0-2	0	0	0- T
Stth	100	3	2-5	5	-	1-15
Sihy	97	3	0-5	4	1	0-15
Pose	97	3	0-5	7	5	0-25
Brte	80	3	0-4	9	0	0-50
Agsp	69	0	0-5	4	0	0-25
Orhy	3	0	0-2	0	0	0- T
CAREX	3	0	0-2	T	0	0- 3
POA	3	0	0-4	1	0	0-15
Phlo	45	0	0-3	1	0	0- 5
Erov	38	0	0-3	T	0	0- 3
Depi	31	0	0-3	T	0	0- 2
Phho	28	0	0-4	1	0	0-15
Crac	27	0	0-3	T	0	0- 3
Sial	17	0	0-3	1	0	0- 8
Ersp4	14	0	0-3	1	0	0- 4
Basa	14	0	0-4	0	0	0- 1
LUPIN	10	0	0-3	0	0	0- 1
LOMAT	10	0	0-2	0	0	0- T
Chdo	10	0	0-2	0	0	0- T
CRYPT	10	0	0-3	0	0	0- 1
Arho	7	0	0-2	0	0	0- 1
ERIGE	7	0	0-2	0	0	0- T
ARABI	7	0	0-2	0	0	0- T
Lysp	3	0	0-3	0	0	0- T
Asca	3	0	0-3	0	0	0- T
Erbl	3	0	0-2	0	0	0- 1
ASTRA	3	0	0-1	0	0	0- T
Erli	10	0	0-3	T	0	0- 4
Zipa	7	0	0-1	0	0	0- T
Crci	7	0	0-2	T	0	0- 1
Lare	7	0	0-2	0	0	0- T
Cabr	3	0	0-2	0	0	0- T

Vegetation Summary 411 (continued)

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Meal2	3	0	0-2	0	0	0- 2
PENST	3	0	0-2	T	0	0- 1
Asob	3	0	0-2	0	0	0- T
Luar	3	0	0-2	0	0	0- T
Pecu	3	0	0-1	0	0	0- T
Ersc	3	0	0-3	T	0	0- 3
Assc	3	0	0-2	T	0	0- 1
Asle	3	0	0-1	0	0	0- T

SOIL SUMMARY 411

	Range	Mean	Mode
Soil Depth	11-27	19	23
Surface Soil Characteristics			
Horizon Thickness	0-11	4	3
Color	10YR5/3-3/2		10YR3/3
Texture	cl-sl		gl
Structure	1vfgr-ves		ves
pH	6.8-7.2	7.0	6.8
Roots	0-3	3	3
Gravel	0-60	15.5	0
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	4-22	14	14
Color	7.5YR4/4-10YR5/4		10YR3/3
Texture	cl		cl
Structure	1fgr-3cpr		2fsbk
pH	6.8-8.0	7.2	7.0
Roots	2-3	3	3
Gravel	0-50	23	30
Stones	0-60	13	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-20	6	0
Stone Dominant Diameter	3-12	7	-
Gravel Cover (< 3 inches)	1-50	22	15
Litter Cover	2-10	6	5
Bare Soil	2-60	26	25
Moss and Lichen Cover	0-10	2	2
Total Plant Cover	25-90	57	60

SYMBOLIC LEGEND 412

COMMUNITY DESCRIPTOR:	Artr (5)-Chvi, Ermi (0-3)/Stth (2-5)-Sihy (3-5)-Orwe (2-5)-Erov (0-3)
DESCRIPTION:	*Artemisia tridentata* is the most prominent species in this community and has a cover of 20% to 40%. *Chrysothamnus viscidiflorus* and *Eriogonum microthecum* are often present. *Stipa thurberiana, Poa secunda, Sitanion hystrix,* and *Oryzopsis webberi* are the important grasses in the herbaceous layer which have cover values of 1% to 10%, 2% to 15%, 1% to 3%, and T% to 7%, respectively.
PCI:	1
PHYSIOGRAPHY:	This community is found on level to rolling uplands.
ELEVATION:	4900 feet to 6400 feet
SOILS:	The surface soils are usually loams or silt loams which are 6 inches to 13 inches deep to a clay or clay loam subsoil. pH is 6.8 to 7.0.
POTENTIAL:	Much the same as 111, this community may be successfully reseeded. It is seldom found in good conditions.
NUMBER OF STANDS EXAMINED:	17

VEGETATION SUMMARY 412

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Artr	100	5	5	33	40	20-40
Chvi	80	3	0-3	2	0	0-10
Ermi	40	0	0-3	1	0	0- 5
Ersp3	20	0	0-3	T	0	0- 1
Teca	20	0	0-2	T	0	0- T
Brte	40	0	0-4	3	0	0-10
Stth	100	4	2-5	6	7	1-10
Pose	100	3	3-5	7	3	2-15
Sihy	100	3	3-5	4	3	1- 3
Orwe	100	0	2-5	3	7	T- 7
Agsp	20	0	0-2	T	0	0- T
Elci	20	0	0-3	T	0	0- 1
Phho	60	3	0-4	3	0	0-10
Ersp4	60	0	0-3	1	0	0- 4
Erov	60	0	0-3	1	0	0- 3
Phlo	60	0	0-3	T	0	0- 2
Assc	60	0	0-3	1	0	0- 7
Depi	40	0	0-1	T	0	0- T
CREPI	40	0	0-3	1	0	0- 3
Base	40	0	0-3	T	0	0- 2
Ervi	40	0	0-3	1	0	0- 5
Erli	20	0	0-3	T	0	0- 3
Lare	20	0	0-2	T	0	0- T
Crac	20	0	0-3	T	0	0- 3
Asca	20	0	0-3	T	0	0- 2
CRYPT	20	0	0-3	T	0	0- 1
Erbl	20	0	0-3	T	0	0- T
LUPIN	20	0	0-2	T	0	0- T
Aggl	20	0	0-2	T	0	0- T
Chdo	20	0	0-2	T	0	0- T
Erum	20	0	0-2	T	0	0- T
Basa	20	0	0-2	T	0	0- T
Cabr	20	0	0-2	T	0	0- T
ARABI	20	0	0-2	T	0	0- T
CASTE	20	0	0-2	T	0	0- T
Asmi	20	0	0-1	T	0	0- T
AGOSE	20	0	0-1	T	0	0- T
Sial	20	0	0-3	T	0	0- T

SOIL SUMMARY 412

	Range	Mean	Mode
Soil Depth	7-24	16	15
Surface Soil Characteristics			
Horizon Thickness	2-16	9	12
Color	10YR4/3-3/2		10YR3/3
Texture	sl-sicl		sil
Structure	ves-1fpl		1msbk
pH	7.0-7.2	7.1	7.0
Roots	1-4	3	3
Gravel	0-40	20	15
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	4-13	8	N
Color	10YR4/3-3/3		10YR4/3
Texture	cl-c		-
Structure	2fgr-2msbk		2fsbk
pH	6.8-7.2	7.0	7.0
Roots	2-3	3	3
Gravel	0-50	18	15
Stones	0-50	17	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-30	10	-
Stone Dominant Diameter	3-15	8	-
Gravel Cover (< 3 inches)	15-45	28	20
Litter Cover	1-20	6	-
Bare Soil	25-50	37	-
Moss and Lichen Cover	T-10	4	T
Total Plant Cover	40-60	42	40

SYMBOLIC LEGEND 413

COMMUNITY DESCRIPTOR:	Artr (5)/Elci (1-5)-Stth, Sihy (0-5)
DESCRIPTION:	*Artemisia tridentata* is the prominent species in the community with 30% to 60% cover. Other shrubs such as *Chrysothamnus* species and *Tetradymia canescens* may be present. *Elymus cinerius*, *Stipa thurberiana*, and *Sitanion hystrix* are important in the herbaceous layer with T to 4%, 0% to 10%, and 0% to 20%, respectively.
PCI:	2
PHYSIOGRAPHY:	This community is usually found on fans, terraces, and bottom lands.
ELEVATION:	4800 feet and 6100 feet
SOILS:	The soils of this community are quite variable. The surface soils range from clay loams to silt loams. There is often no distinct profile development. pH is 6.8 to 8.6.
POTENTIAL:	The sites upon which this community is found are alluvial deposits and often receive more moisture than surrounding areas since they are often located near drainage ways. Readily accessible, these areas have been overgrazed and probably lack most of the forage production possible. Suitable for seeding.
NUMBER OF STANDS EXAMINED:	22

VEGETATION SUMMARY 413

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Artr	100	5	4-5	40	30	15-65
Chvi	80	3	0-4	6	-	0-30
Teca	40	0	0-3	2	0	0-15
Chna	23	0	0-3	1	0	0-10
Lepu2	15	0	0-3	T	0	0- 1
Ermi	8	0	0-3	T	0	0- 1
Elci	100	3	1-5	1	1	T- 3
Sihy	85	5	0-5	3	1	0-20
Brte	69	0	0-5	13	0	0-50
Stth	46	0	0-5	1	0	0-10
Pose	46	0	0-3	2	0	0-10
Agsp	15	0	0-4	1	0	0- 7
Stco2	15	0	0-3	T	0	0- 4
Sial	38	0	0-3	T	0	0- 1
Lysp	26	0	0-3	T	0	0- 2
LUPIN	23	0	0-3	T	0	0- 5
Ivax	15	0	0-3	T	0	0- 3
Crac	15	0	0-1	0	0	0- T
ASTRA	15	0	0-3	T	0	0- 1
Spco	15	0	0-2	0	0	0- T
ERIOG	15	0	0-2	0	0	0- T
Lare	15	0	0-1	0	0	0- T
Meal2	8	0	0-1	0	0	0- T
Zipa	8	0	0-2	T	0	0- 1
Asle	8	0	0-2	T	0	0- 1
Phho	8	0	0-3	T	0	0- 1
Erov	8	0	0-1	0	0	0- T
OENOT	8	0	0-1	0	0	0- T
Depi	8	0	0-2	T	0	0- 1
Ersp4	8	0	0-3	T	0	0- 2
ARABI	8	0	0-2	0	0	0- T
DELPH	8	0	0-1	0	0	0- T
Asfi	8	0	0-2	T	0	0- 1
Phlo	8	0	0-3	T	0	0- 1
Basa	8	0	0-3	T	0	0- 5

SOIL SUMMARY 413

	Range	Mean	Mode
Soil Depth	12-30	21	30
Surface Soil Characteristics	Horizons mostly young and undeveloped water transported soils		
Subsoil Characteristics			
Surface Characteristics			
Stone Cover (> 3 inches)	0-10	2	0
Stone Dominant Diameter	3-10	5	-
Gravel Cover (< 3 inches)	0-50	20	40
Litter Cover	3-30	13	15
Bare Soil	5-50	23	15
Moss and Lichen Cover	0-15	3	-
Total Plant Cover	40-90	62	-

SYMBOLIC LEGEND 414

COMMUNITY DESCRIPTOR:	Artr (5)-Chvi (3)/Feid (4-5)-Stth (0-5)-Agsp (2-4)-Pose (0-4)
DESCRIPTION:	The prominent shrub in this community is *Artemisia tridentata* which has a cover of 15% to 60%. *Chrysothamnus viscidiflorus* is commonly present with up to 10% cover. Other shrubs may also be present. *Festuca idahoensis* is prominent in the herbaceous layer having 7% to 30% cover. *Stipa thurberiana*, *Agropyron spicatum*, and *Poa secunda* are also important herbaceous plants in the community.
PCI:	2
PHYSIOGRAPHY:	This community occurs on protected slopes and level to undulating uplands.
ELEVATION:	5200 feet to 6300 feet
SOILS:	The surface soils are mostly gravelly loams about 9 inches deep over a gravelly clay subsoil. pH is 6.8 to 7.2.
POTENTIAL:	Except where it has been badly overgrazed, this community is very productive for domestic livestock forage. Spray-release brush control will obtain a favorable response for increase of grass production.
NUMBER OF STANDS EXAMINED:	10

VEGETATION SUMMARY 414

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Artr	100	5	5	25	15	15-40
Chvi	100	3	2-3	5	-	1-10
Teca	50	0	0-3	T	0	0- 1
Lepu2	50	0	0-3	2	0	0-10
Ermi	25	0	0-3	1	0	0-10
Chna	13	0	0-2	0	0	0- T
Rice	13	0	0-2	0	0	0- T
Arar	13	0	0-1	0	0	0- T
Feid	100	4	4-5	19	-	7-30
Agsp	100	4	2-4	8	-	1-15
Pose	100	3	3-4	14	10	5-30
Sihy	50	0	0-3	2	0	0- 5
Pocu	50	0	0-4	3	0	0-15
Elci	38	0	0-2	T	0	0- 1
Stth	25	0	0-4	3	0	0-20
Brte	25	0	0-2	1	0	0- 3
Pone2	13	0	0-2	T	0	0- 1
Stoc	13	0	0-2	0	0	0- T
Stco	13	0	0-1	0	0	0- T
Agsa	13	0	0-2	0	0	0- 1
Basa	63	0	0-3	3	0	0-15
Phlo	63	0	0-3	2	0	0- 5
Crac	50	0	0-3	1	0	0- 7
Assc	50	0	0-3	1	0	0- 3
Lysp	38	0	0-3	T	0	0- 1
LUPIN	38	0	0-4	4	0	0-25
Ersp4	38	0	0-3	1	0	0- 2
Erli	38	0	0-3	1	0	0- 7
Phho	38	0	0-4	2	0	0-15
Anco2	25	0	0-2	T	0	0- 1
ARABI	25	0	0-2	0	0	0- T
Migr	25	0	0-3	T	0	0- 3
Aggl	25	0	0-2	T	0	0- 1
Alac	25	0	0-1	0	0	0- T
Erpu	25	0	0-3	1	0	0- 5
Asfi	25	0	0-3	T	0	0- 1
CASTE	25	0	0-3	T	0	0- 1
Ganu	13	0	0-3	T	0	0- 3
Erbl	13	0	0-2	0	0	0- 1

Vegetation Summary 414 (continued)

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arac	13	0	0-1	0	0	0- T
Lica	13	0	0-1	0	0	0- T
Asle	13	0	0-1	0	0	0- T
Magr	13	0	0-2	0	0	0- 1
ASTER	13	0	0-1	0	0	0- T
SENEC	13	0	0-2	0	0	0- 1
PENST	13	0	0-3	1	0	0- 5
LOMAT	13	0	0-1	0	0	0- T

SOIL SUMMARY 414

	Range	Mean	Mode
Soil Depth	17-30	23	26
Surface Soil Characteristics			
Horizon Thickness	2-16	9	None
Color	10YR2/2-3/4		10YR3/2
Texture	sl-gsi		gl
Structure	1mpl-2msbk		5gr
pH	6.8-7.2	7.0	6.8
Roots	3-4	4	4
Gravel	0-40	16	15
Stones	0-55	15	0
Subsoil Characteristics			
Horizon Thickness	0-19	10	0
Color	2.5Y4/2-5/4		2.5Y3/3
Texture	sicl-gc		gc
Structure	5gr-3fbk		2msbk
pH	-	-	-
Roots	1-3	2	1
Gravel	0-50	27	-
Stones	0-70	32	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-40	9	-
Stone Dominant Diameter	0-24	11	6
Gravel Cover (< 3 inches)	3-30	10	3
Litter Cover	3-20	9	-
Bare Soil	15-40	27	-
Moss and Lichen Cover	0-10	3	T
Total Plant Cover	60-85	71	65

SYMBOLIC LEGEND 415

COMMUNITY DESCRIPTOR:	Artr (5)-Chvi (3)/CAREX (4-5)-Feid (3-4)-Elci, Agsp, Stth (0-3)
DESCRIPTION:	*Artemisia tridentata* is prominent in the community having a cover of 40% to 70%. *Chrysothamnus viscidiflorus* cover is 7% to 10%. *Carex* species are prominent in the herbaceous layer and have a cover of 30% to 60%. *Festuca idahoensis* is also important with 3% to 35% cover.
PCI:	3
PHYSIOGRAPHY:	This community is found on level to rolling uplands.
ELEVATION:	5600 feet to 6200 feet
SOILS:	The soils are loams or gravelly loams 10 inches deep to gravelly clay or gravelly clay loam. The soils are over 20 inches deep. pH is 6.8 to 7.0. The soil profile is very gravelly, but very little gravel is evident on the surface.
POTENTIAL:	This community is usually in small segments, but it is very productive. Spraying for brush control would probably produce a significant increase in forage production.
NUMBER OF STANDS EXAMINED:	5

VEGETATION SUMMARY 415

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Artr	100	5	5	54	-	40-70
Chvi	100	3	3	9	10	7-10
Teca	80	-	0-2	1	-	0- 1
Lepu2	20	0	0-3	1	0	0- 5
Arar	20	0	0-2	0	0	0- T
CAREX	100	5	4-5	48	60	30-60
Feid	100	4	3-4	13	5	3-35
Sihy	100	3	2-3	5	5	1-10
Pose	100	3	2-3	7	5	3-15
Elci	80	3	0-3	2	3	0- 3
Agsp	80	3	0-3	3	5	0- 5
Brte	80	3	903	3	-	0-10
Stth	40	0	0-3	3	0	0-10
Stco	20	0	0-2	T	0	0- 1
LUPIN	80	3	0-3	3	1	0-10
Basa	60	3	0-3	4	0	0-15
Migr	60	0	0-3	1	1	0- 1
Phlo	60	-	0-3	1	0	0- 5
ARABI	40	0	0-3	0	0	0- 1
Crac	40	0	0-3	0	0	0- 1
Aggl	40	0	0-3	T	0	0- 1
Assc	40	0	0-3	1	0	0- 3
ASTRA	40	0	0-2	1	0	0- 2
Coli	20	0	0-3	0	0	0- 1
Magr	20	0	0-1	0	0	0- T
CASTE	20	0	0-2	0	0	0- 1
Ersp4	20	0	0-3	0	0	0- 1
Sese	20	0	0-1	0	0	0- T
Acla	20	0	0-1	0	0	0- T
Phgr	20	0	0-2	T	0	0- 2
Arho	20	0	0-2	0	0	0- T
LOMAT	20	0	0-2	0	0	0- 1
Erpu	20	0	0-3	1	0	0- 5
Rile	20	0	0-1	0	0	0- T
Alac	20	0	0-1	0	0	0- T
Desp	20	0	0-2	0	0	0- 1
Aghe	20	0	0-1	0	0	0- T
Ganu	20	0	0-2	0	0	0- 1
Lara	20	0	0-2	0	0	0- T
Aspu	20	0	0-1	0	0	0- T

SOIL SUMMARY 415

	Range	Mean	Mode
Soil Depth	23-29	25	23
Surface Soil Characteristics			
Horizon Thickness	8-13	10	N
Color	10YR4/2-2/2		10YR3/2
Texture	gls-sil		1
Structure	gr-2mpl		1msbk
pH	7.0-6.8	6.9	-
Roots	3-4	3.5	-
Gravel	0-70	25	20
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	0-23	6	0
Color	10YR4/3-4/4		-
Texture	gcl-gc		-
Structure	2msbk-3fsbk		-
pH	-	-	-
Roots	3	3	3
Gravel	0-60	18	0
Stones	-	-	-
Surface Characteristics			
Stone Cover (> 3 inches)	0-3	1	0
Stone Dominant Diameter			
Gravel Cover (< 3 inches)	1-10	1	3
Litter Cover	5-20	13	15
Bare Soil	15-25	21	-
Moss and Lichen Cover	0-2	T	T
Total Plant Cover	90	90	90

SYMBOLIC LEGEND 416

COMMUNITY DESCRIPTOR:	Artr (5)/Agsm, Pose (2-5)-Sihy (3-4)-Stth (0-5)-Elci (0-3)
DESCRIPTION:	*Artemisia tridentata* is prominent in the community with 25% to 45% cover. *Agropyron smithii*, *Poa secunda*, and *Stipa thurberiana* are important in the herbaceous layer with T to 20% cover, T to 10% cover, and 0% to 5% cover, respectively.
PCI:	3
PHYSIOGRAPHY:	This community usually occurs on terraces, fans, and bottom lands.
ELEVATION:	4800 feet to 5200 feet
SOILS:	The surface soils are generally loams which are 6 inches deep to a clay loam subsoil. Soil pH ranges from 6.6 to 7.5.
POTENTIAL:	In the stands of this community, which have the higher cover values for *Agropyron smithii*, production is high. This community is suited to reseeding and to brush control spray-release where grass cover is sufficient.
NUMBER OF STANDS EXAMINED:	9

VEGETATION SUMMARY 416

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Artr	100	5	5	38	40	25-65
Chvi	60	3	0-4	6	0	0-25
Lepu2	20	0	0-3	T	0	0- 1
Teca	20	0	0-3	1	0	0- 5
Chna	10	0	0-3	1	0	0- 5
Agsm	100	2	1-4	5	-	0-20
Sihy	100	3	2-4	4	1	1-15
Pose	90	-	0-5	7	-	0-35
Elci	60	0	0-4	1	0	0- 3
Stth	50	0	0-5	2	0	0- 5
Brte	50	0	0-5	2	0	0-10
Agsp	30	0	0-3	1	0	0- 4
Orwe	10	0	0-2	0	0	0- T
JUNCU	10	0	0-2	0	0	0- 1
CAREX	10	0	0-5	7	0	0-70
Phho	50	0	0-3	1	0	0- 3
LUPIN	40	0	0-2	0	0	0- 1
Erov	40	0	0-2	T	0	0- 1
Phlo	30	0	0-3	T	0	0- 4
Sial	20	0	0-3	0	0	0- T
Ivax	20	0	0-3	0	0	0- 1
Lare	20	0	0-1	0	0	0- T
Depi	20	0	0-1	0	0	0- T
ARABI	20	0	0-2	0	0	0- T
Ersp4	20	0	0-3	0	0	0- 1
ASTER	10	0	0-2	0	0	0- T
Base	10	0	0-2	0	0	0- T
Meal2	10	0	0-1	0	0	0- T
Crci	10	0	0-1	0	0	0- T
Plha	10	0	0-1	0	0	0- T

SOIL SUMMARY 416

	Range	Mean	Mode
Soil Depth	13-30	22	-
Surface Soil Characteristics			
Horizon Thickness	4-10	7	6
Color	10YR6/3-3/2		10YR3/2
Texture	sl-sicl		1
Structure	2cbk-vfgr		ves
pH	6.6-7.1	6.8	6.8
Roots	1-3	2.5	3
Gravel	0-30	9	0
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	3-16	9	7
Color	10YR4/4-3/3		10YR4/4
Texture	gcl-c		cl
Structure	1fbk-2fpr		2msbk
pH	6.6-7.5	7.2	7.5
Roots	2-3	2.5	2
Gravel	0-40	13	0
Stones	0-30	6	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-5	1	0
Stone Dominant Diameter	3-7	5	4
Gravel Cover (< 3 inches)	T-35	14	-
Litter Cover	1-7	4	5
Bare Soil	10-60	36	40
Moss and Lichen Cover	0-15	4	0
Total Plant Cover	35-95	57	65

SYMBOLIC LEGEND 417

COMMUNITY DESCRIPTOR:	Artr (5)/Agsp, Sihy, Pose (0-5) other grasses
DESCRIPTION:	This community includes the low seral stages of many of the other communities described. It has been disturbed to such an extent that the vegetation is more similar within the group than to the possible habitat types to which the stands of this unit may belong. The most prominent species in this community is *Artemisia tridentata* which may have 20% to 80% cover. *Chrysothamnus* species commonly occur. *Agropyron spicatum*, *Sitanion hystrix*, and *Poa secunda* are commonly present in the herbaceous layer with 0% to 25% cover, 0% to 15% cover, and 0% to 15% cover, respectively.
PCI:	1, 2
PHYSIOGRAPHY:	This community is found on terraces, level to rolling uplands, and exposed and protected slopes.
ELEVATION:	4600 feet to 6700 feet
SOILS:	The surface soils are usually loams or silt loams which are 4 inches deep to clay or clay loam subsoil. Soil pH ranges from 6.4 to 8.4. There is generally gravel in the profile and on the soil surface.
POTENTIAL:	The low seral stage which is part of the definition, indicates a general depletion of desirable forage plants. This, however, is one of the most widely spread of the communities so it provides a large percentage of the forage production. It is generally suited to reseeding except where stone cover or terrain is limiting.
NUMBER OF STANDS EXAMINED:	54

VEGETATION SUMMARY 417

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Artr	100	5	3-5	36	40	15-80
Chvi	42	0	0-4	1	0	0-20
Teca	21	0	0-3	1	0	0-17
Chna	19	0	0-5	2	0	0-38
Lepu2	6	0	0-1	T	0	0- 3
Arno2	6	0	0-2	T	0	0- 3
Arar	6	0	0-3	T	0	0- 5
Tesp	2	0	0-1	T	0	0- 1
Rowo	2	0	0-3	T	0	0- 2
Sihy	94	3	0-5	6	1	0-18
Pose	71	3	0-5	4	0	0-15
Brte	65	3	0-5	6	0	0-50
Orhy	29	0	0-5	1	0	0- 7
Stth	15	0	0-4	0	0	0-17
Agsp	12	0	0-5	1	0	0-25
Elci	11	0	0-3	0	0	0- 7
Feid	4	0	0-3	0	0	0- 1
Orwe	2	0	0-2	0	0	0- 1
Agsa	2	0	0-2	0	0	0- T
STIPA	2	0	0-2	0	0	0- 1
POA	2	0	0-3	0	0	0- 1
Sial	29	0	0-5	1	0	0-15
Phho	19	0	0-5	T	0	0- 7
Depi	19	0	0-3	T	0	0- 5
Erov	17	0	0-3	T	0	0- 2
Phlo	14	0	0-3	T	0	0- 5
Meal2	13	0	0-5	1	0	0- 7
Spco	13	0	0-5	1	0	0-10
Ersp4	13	0	0-2	T	0	0- 1
Lare	13	0	0-2	T	0	0- 1
ASTRA	10	0	0-2	T	0	0- 1
PENST	5	0	0-2	T	0	0- 1
Asle	5	0	0-1	0	0	0- T
Saka	4	0	0-3	T	0	0- 3
Arho	4	0	0-2	T	0	0-10
ERIOG	4	0	0-3	T	0	0- 1
LOMAT	4	0	0-1	T	0	0- 1
Lysp	4	0	0-2	0	0	0- T
FRITI	4	0	0-1	T	0	0-10
CRYPT	4	0	0-3	T	0	0- 1

Vegetation Summary 417 (continued)

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Chdo	4	0	0-2	T	0	0- 1
Crac	4	0	0-1	0	0	0- T
Asca	4	0	0-3	0	0	0- T
Erli	2	0	0-3	T	0	0- 3
Arac2	2	0	0-3	T	0	0- 2
CREPI	2	0	0-2	0	0	0- T
Erbl	2	0	0-3	T	0	0- 2
Lepe	2	0	0-3	T	0	0-10
OENOT	2	0	0-3	T	0	0- 1
ASTER	2	0	0-3	T	0	0- 2
Hast	2	0	0-1	0	0	0- T
Ivax	2	0	0-1	0	0	0- T
ARABI	2	0	0-1	0	0	0- T
Eppa	2	0	0-1	0	0	0- T
PHLOX	2	0	0-3	T	0	0- 2
Lara	2	0	0-3	T	0	0- 3
Erla	2	0	0-1	0	0	0- 1
LUPIN	2	0	0-3	T	0	0- 1
Arlu	2	0	0-2	0	0	0- T
Assc	2	0	0-2	0	0	0- T
ERODI	2	0	0-1	0	0	0- T
CIRSI	2	0	0-3	0	0	0- 1

SOIL SUMMARY 417

	Range	Mean	Mode
Soil Depth	8-30	19	16
Surface Soil Characteristics			
Horizon Thickness	0-13	6	4
Color	10YR3/2-5/3		10YR3/3
Texture	ls-cl		sil
Structure	ves-sg		ves
pH	6.6-8.2	7.0	7.0
Roots	0-3	2.5	3
Gravel	0-80	33	10
Stones	0-65	8	0
Subsoil Characteristics			
Horizon Thickness	0-22	9	6
Color	7.5YR4/4-10YR5/6		10YR4/3
Texture	1-c		gcl
Structure	1fgr-2mbk		2msbk
pH	6.6-8.4	7.3	7.0
Roots	1-3	2.5	3
Gravel	0-65	17	0
Stones	0-80	19	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-30	4	0
Stone Dominant Diameter	3-12	6	4
Gravel Cover (< 3 inches)	1-60	24	-
Litter Cover	1-25	8	5
Bare Soil	5-70	27	20
Moss and Lichen Cover	0-20	6	5
Total Plant Cover	30-90	52	40

SYMBOLIC LEGEND 418

COMMUNITY DESCRIPTOR:	Artr (4-5)-Chvi (0-4)-Chna (0-3)/Agsp (3-5)-Sihy, Brte (0-5)-Basa (0-3)
DESCRIPTION:	The most prominent species in this community is *Artemisia tridentata* which has a cover of 15% to 40%. *Chrysothamnus* species and *Tetradymia canescens* may be present. In the herbaceous layer *Agropyron spicatum* is usually prominent with 1% to 50% cover. *Sitanion hystrix*, *Bromus tectorum*, and *Balsamorhiza saggitata* are also important members of the community.
PCI:	1
PHYSIOGRAPHY:	This community is usually found on level to undulating uplands or on exposed slopes.
ELEVATION:	4800 feet to 6900 feet
SOILS:	The surface soils are usually gravelly loams over a clay subsoil. pH is 6.6 to 8.4. Gravel and stones are common in the profile and on the soil surface.
POTENTIAL:	This community is very productive when in good condition. It is suitable for domestic livestock range. Brush control by spraying results in greatly increased production when perennial grasses are of sufficient abundance. With brush control, this community is suited to reseeding where terrain and stone cover permit.
NUMBER OF STANDS EXAMINED:	25

VEGETATION SUMMARY 418

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Artr	100	5	4-5	25	20	15-40
Chvi	75	3	0-4	3	2	0-20
Chna	60	3	0-4	3	0	0-15
Lepu2	25	0	0-3	1	0	0- 8
Teca	15	0	0-2	T	0	0- 1
ERIOG	5	0	0-1	0	0	0- 1
Agsp	100	5	3-5	15	10	1-50
Pose	100	3	2-5	11	10	1-30
Brte	80	3	0-5	11	-	0-50
Sihy	55	3	0-4	2	0	0-15
Stth	25	0	0-4	2	0	0-20
Feid	15	0	0-2	T	0	0- 1
Pocu	10	0	0-4	1	0	0-10
Elci	10	0	0-3	T	0	0- 2
Basa	70	3	0-3	2	2	0-10
Phlo	60	0	0-3	1	0	0- 5
Asca	45	0	0-3	1	0	0- 7
Crac	45	0	0-3	1	0	0- 5
Phho	35	0	0-4	1	0	0-10
LUPIN	20	0	0-3	T	0	0- 4
Erli	20	0	0-3	T	0	0- 3
PENST	15	0	0-2	T	0	0- 1
CASTE	10	0	0-2	0	0	0- 1
Lysp	10	0	0-2	T	0	0- 2
ERIOG	10	0	0-3	1	0	0-10
Arho	10	0	0-2	0	0	0- T
LOMAT	10	0	0-2	0	0	0- 1
CIRSI	10	0	0-1	0	0	0- T
ANTEN	5	0	0-2	T	0	0- 2
Lepe	5	0	0-1	0	0	0- T
Erca	5	0	0-3	0	0	0- 1
Luar	5	0	0-3	T	0	0- 2
ARABI	5	0	0-3	0	0	0- 1
Ersp4	5	0	0-2	0	0	0- 2
Ivax	5	0	0-3	T	0	0- 3
Aspu	5	0	0-2	0	0	0- T
Chdo	5	0	0-1	T	0	0- 1
Cere	5	0	0-1	0	0	0- T
Erhe	5	0	0-1	0	0	0- T

Vegetation Summary 418 (continued)

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Mood	5	0	0-3	T	0	0- 4
Erbl	5	0	0-3	0	0	0- 1
ASTRA	5	0	0-1	0	0	0- 1
ALLIU	5	0	0-1	0	0	0- T

SOIL SUMMARY 418

	Range	Mean	Mode
Soil Depth	12-30	19	20
Surface Soil Characteristics			
Horizon Thickness	1-14	7	12
Color	10YR6/3-3/2		10YR3/3
Texture	sl-sicl		gl
Structure	1fgr-2msbk		ves
pH	6.6-7.2	6.9	6.8
Roots	1-4	3	3
Gravel	0-85	20	20
Stones	0-30	2	0
Subsoil Characteristics			
Horizon Thickness	0-20	10	-
Color	10YR4/4-3/2		10YR3/3
Texture	gl-c		c
Structure	sg-3mpr		2fsbk
pH	6.6-8.4	7.2	7.0
Roots	1-3	2	2
Gravel	0-60	27	20
Stones	0-80	20	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-35	8	-
Stone Dominant Diameter	3-15	7	-
Gravel Cover (< 3 inches)	10-80	30	-
Litter Cover	T-15	6	5
Bare Soil	5-40	18	10
Moss and Lichen Cover	0-5	1	0
Total Plant Cover	35-85	63	70

SYMBOLIC LEGEND 431

COMMUNITY DESCRIPTOR:	Artr (4-5)-Arsp (0-4)-Atco, Eula (0-2)/Sihy, Pose, Brte (0-5)
DESCRIPTION:	The prominent species in this community is *Artemisia tridentata* which has 10% to 60% cover. There is no *Grayia spinosa* present, but *Artemisia spinescens*, *Eurotia lanata*, or *Atriplex confertifolia* is present. *Sitanion hystrix*, *Poa secunda*, or *Bromus tectorum* is prominent in the herbaceous layer.
PCI:	0
PHYSIOGRAPHY:	This community may be found on terraces, bottom lands, or level to rolling uplands.
ELEVATION:	4400 feet to 4900 feet
SOILS:	The surface soil is usually a silt loam 5 inches deep over a clay loam subsoil. pH is 6.8 to 7.4.
POTENTIAL:	Winter range for domestic livestock is the primary use of this community. Seeding potential is marginal.
NUMBER OF STANDS EXAMINED:	9

VEGETATION SUMMARY 431

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Artr	100	5	4-5	33	30	10-50
Arsp	67	1	0-4	2	T	0-10
Atco	22	0	0-2	T	0	0- T
Eula	22	0	0-2	T	0	0- 2
Chvi	11	0	0-2	0	0	0- 1
Chna	11	0	0-1	0	0	0- T
Tesp	11	0	0-2	0	0	0- 1
Sihy	89	5	0-5	3	-	0-10
Pose	55	0	0-5	2	0	0- 5
Orhy	55	0	0-2	T	0	0- 1
Brte	44	0	0-5	8	0	0-50
Agsp	22	0	0-3	1	0	0-10
Stth	11	0	0-3	T	0	0- 1
Erov	33	0	0-3	1	0	0- 5
Depi	33	0	0-2	T	0	0- T
ARABI	33	0	0-2	T	0	0- 1
Spco	33	0	0-3	T	0	0- 2
Saka	22	0	0-1	0	0	0- T
Sial	22	0	0-3	1	0	0- 5
Meal2	22	0	0-4	1	0	0- 3
Phho	22	0	0-3	1	0	0- 5
Chdo	11	0	0-1	0	0	0- T
Phlo	11	0	0-2	T	0	0- 2
PENST	11	0	0-1	0	0	0- T

SOIL SUMMARY 431

	Range	Mean	Mode
Soil Depth	10-26	15	16
Surface Soil Characteristics			
Horizon Thickness	2-5	4	5
Color	10YR3/2-5/2		10YR3/3
Texture	gsl-sic		sil
Structure	ves-1fpl		ves
pH	6.8-7.5	7.0	6.8
Roots	1-4	2	1
Gravel	0-40	19	-
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	5-12	8	9
Color	7.5YR4/4-5/4		7.5YR4/3
Texture	gcl-c		cl
Structure	2msbk-1mpl		2fsbk
pH	6.8-8.4	7.5	7.0
Roots	2-3	3	3
Gravel	0-60	16	0
Stones	-	-	-
Surface Characteristics			
Stone Cover (> 3 inches)	0-15	7	10
Stone Dominant Diameter	3-15	7	-
Gravel Cover (< 3 inches)	3-50	23	10
Litter Cover	T-20	6	5
Bare Soil	5-70	34	25
Moss and Lichen Cover	0-15	6	3
Total Plant Cover	20-80	49	-

SYMBOLIC LEGEND 432

COMMUNITY DESCRIPTOR:	Artr (4-5)-Grsp (3-4)-Arsp, Atco (0-4)-Eula (0-3)/Sihy, Pose, Brte, Meal2 (0-5)
DESCRIPTION:	The prominent species in this community is usually *Artemisia tridentata* with 10% to 50% cover although *Grayia spinosa*, which has a cover of 1% to 20%, may be equally prominent. *Artemisia spinescens*, *Atriplex confertifolia*, *or Eurotia lanata* is present in the community. *Sitanion hystrix* is usually prominent in the herbaceous layer with 0% to 12% cover. *Poa secunda* is often present as are *Bromus tectorum* or *Mentzelia albicaulis*.
PCI:	0
PHYSIOGRAPHY:	This community is usually found on terraces, bottom lands, or level to undulating uplands but may also be found on colluvial slopes.
ELEVATION:	4400 feet to 5000 feet
SOILS:	Surface soil is generally silt loam with platy structure or occurring as a vesicular crust. The subsoil is usually clay loam and occurs 6 inches below the soil surface. pH is 6.8 to 8.4.
POTENTIAL:	This community is low in forage production but is useful for winter livestock range. It has been successfully seeded in some areas but is marginal for seeding in most areas.
NUMBER OF STANDS EXAMINED:	29

VEGETATION SUMMARY 432

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Artr	100	5	4-5	26	30	10-50
Grsp	100	3	2-4	11	-	1-20
Arsp	69	2	0-4	2	2	0-15
Atco	66	2	0-4	1	0	0-10
Chvi	42	0	0-3	1	0	0-10
Eula	31	0	0-3	T	0	0- 5
Teca	24	0	0-3	T	0	0- 5
Chna	10	0	0-2	T	0	0- 2
Ermi	7	0	0-2	T	0	0- T
Tesp	3	0	0-3	T	0	0- 2
Tegl	3	0	0-2	T	0	0- 2
Sihy	96	5	0-5	3	3	0-12
Brte	52	0	0-5	3	0	0-50
Pose	45	0	0-5	4	0	0-30
Orhy	21	0	0-5	T	0	0- 1
Elci	7	0	0-5	T	0	0- 1
Pone2	7	0	0-2	T	0	0- T
POA	7	0	0-3	T	0	0- 1
Stth	3	0	0-2	T	0	0- T
Meal2	45	0	0-5	2	0	0-40
Sial	34	0	0-3	T	0	0- 3
Oeal	24	0	0-3	T	0	0- 1
Depi	17	0	0-2	T	0	0- T
Ersp4	14	0	0-3	T	0	0- 2
Erov	14	0	0-2	T	0	0- 1
Saka	10	0	0-3	T	0	0- 2
ARABI	10	0	0-2	T	0	0- T
Spco	10	0	0-1	T	0	0- T
ERIOG	7	0	0-3	T	0	0- 3
CRYPT	7	0	0-3	T	0	0- 1
Cora	7	0	0-2	T	0	0- T
OENOT	7	0	0-2	T	0	0- T
Hagl	7	0	0-3	T	0	0- 1
PHLOX	7	0	0-3	T	0	0- T
MENTZ	3	0	0-3	T	0	0- 3
Phho	3	0	0-3	T	0	0- 2
Phlo	3	0	0-2	T	0	0- 1
Chlo	3	0	0-2	T	0	0- 1
Lare	3	0	0-2	T	0	0- 1
Lepe	3	0	0-2	T	0	0- 1

Vegetation Summary 432 (continued)

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
CREPI	3	0	0-2	T	0	0- T
CASTE	3	0	0-2	T	0	0- T
Erba	3	0	0-1	T	0	0- T
LUPIN	3	0	0-1	T	0	0- T
PENST	3	0	0-1	T	0	0- T

SOIL SUMMARY 432

	Range	Mean	Mode
Soil Depth	10-30	20	30
Surface Soil Characteristics			
Horizon Thickness	1-9	4	6
Color	10YR3/2-5/4		10YR4/3
Texture	sic-gsl		sil
Structure	sg-ves		ves
pH	7.0-8.2	7.5	7.5
Roots	0-3	1.5	1
Gravel	0-40	17	0
Stones	0-50	4	0
Subsoil Characteristics			
Horizon Thickness	2-15	7	3
Color	10YR4/2-5/4		10YR4/3
Texture	c-gsicl		cl
Structure	1fgr-2msbk		-
pH	6.8-8.4	7.2	7.5
Roots	1-3	2.5	3
Gravel	0-70	18	0
Stones	0-75	17	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-25	6	5
Stone Dominant Diameter	3-10	5	4
Gravel Cover (< 3 inches)	0-50	24	30
Litter Cover	1-15	4	5
Bare Soil	5-70	31	-
Moss and Lichen Cover	0-20	5	5
Total Plant Cover	25-65	46	40

SYMBOLIC LEGEND 433

COMMUNITY DESCRIPTOR:	Artr (4-5)-Grsp (2-3)-Chvi (0-3)/Stth, Agsp, Sihy (0-5)
DESCRIPTION:	*Artemisia tridentata* is prominent in the community with 10% to 40 % cover. *Grayia spinosa* is always present and has a cover of T to 7%. *Chrysothamnus* species are often present. Any of a number of grass species may be prominent in the herbaceous layer.
PCI:	1
PHYSIOGRAPHY:	This community is usually found on level to rolling uplands. It sometimes occurs on colluvial slopes and bottom lands.
ELEVATION:	4400 feet to 5300 feet
SOILS:	The surface soils are usually loams and silt loams which are 11 inches deep to a clay subsoil. pH is 6.8 to 8.2. Surface gravel is usually about 25% cover.
POTENTIAL:	Forage production for domestic livestock is high on those stands of this community which are in good condition. Where terrain and stone cover allow, seeding can be successful.
NUMBER OF STANDS EXAMINED:	25

VEGETATION SUMMARY 433

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Artr	100	5	4-5	31	30	10-40
Grsp	100	3	2-3	2	T	T- 7
Chvi	72	3	0-3	1	0	0- 7
Ermi	36	0	0-3	T	0	0- 3
Teca	28	0	0-3	T	0	0- 5
Chna	12	0	0-4	1	0	0-10
Riav	4	0	0-3	T	0	0- 1
Lepu2	4	0	0-2	0	0	0- T
Tesp	4	0	0-2	0	0	0- T
Ersp3	4	0	0-1	0	0	0- T
Sihy	92	3	0-5	3	3	0-15
Stth	88	3	0-5	3	3	0-15
Pose	88	3	0-5	4	3	0-10
Brte	68	3	0-5	4	0	0-35
Agsp	36	0	0-5	3	0	0-30
Elci	28	0	0-3	T	0	0- 7
Orwe	20	0	0-5	1	0	0- 7
Orhy	12	0	0-3	T	0	0- 2
Agsa	4	0	0-1	0	0	0- T
Agsm	4	0	0-3	0	0	0- 1
Erov	56	0	0-3	T	0	0- 2
Phho	44	0	0-3	1	0	0- 3
Crac	36	0	0-2	T	0	0- 1
Phlo	36	0	0-3	1	0	0- 3
Depi	32	0	0-3	T	0	0- 5
Sial	32	0	0-3	T	0	0- 5
CRYPT	24	0	0-3	T	0	0- 1
LUPIN	20	0	0-2	T	0	0- T
Ersp4	20	0	0-3	T	0	0- 3
LOMAT	20	0	0-3	T	0	0- 1
Lysp	16	0	0-3	T	0	0- 1
PENST	12	0	0-3	0	0	0- T
Lare	12	0	0-3	T	0	0- 1
Zipa	8	0	0-3	T	0	0- 1
Arho	8	0	0-1	0	0	0- T
Crci	8	0	0-2	T	0	0- 1
Chdo	8	0	0-3	T	0	0- 1
Meal2	8	0	0-2	T	0	0- 2
Assc	8	0	0-1	0	0	0- T
ERIOG	4	0	0-2	0	0	0- 1

Vegetation Summary 433 (continued)

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Erla	4	0	0-2	0	0	0- 1
Copa	4	0	0-1	0	0	0- T
ARABI	4	0	0-2	0	0	0- 1
Erca	4	0	0-2	0	0	0- 1
Oeal	4	0	0-3	0	0	0- 1
CIRSI	4	0	0-1	0	0	0- T
Erba	4	0	0-2	0	0	0- T
CASTE	4	0	0-1	0	0	0- T
CALCH	4	0	0-1	0	0	0- T
Alac	4	0	0-1	0	0	0- T
Aggl	4	0	0-1	0	0	0- T
Lara	4	0	0-2	0	0	0- 1
Migr	4	0	0-3	0	0	0- 1
Pecu	4	0	0-2	0	0	0- T
Hast	4	0	0-3	0	0	0- 1
Erbl	4	0	0-3	T	0	0- 2

SOIL SUMMARY 433

	Range	Mean	Mode
Soil Depth	11-29	19	-
Surface Soil Characteristics			
Horizon Thickness	1-15	7	11
Color	10YR5/3-3/2		10YR3/3
Texture	sl-sicl		-
Structure	sg-ves		ves
pH	7.5-6.8	7.1	7.0
Roots	1-3	2.5	3
Gravel	0-40	15	10
Stones	0-15	2	0
Subsoil Characteristics			
Horizon Thickness	3-23	10	10
Color	2.5YR4/4-10YR3/3		10YR3/3
Texture	c-gcl		c
Structure	3fbk-1fgr		2mfsbk
pH	8.2-6.8	7.3	7.2
Roots	1-4	2.5	3
Gravel	0-50	19	10
Stones	0-75	14	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-40	9	10
Stone Dominant Diameter	3-20	7	3
Gravel Cover (< 3 inches)	3-50	25	25
Litter Cover	2-15	5	5
Bare Soil	T-50	26	25
Moss and Lichen Cover	0-10	2	T
Total Plant Cover	70-35	46	35

SYMBOLIC LEGEND 434

COMMUNITY DESCRIPTOR:	Artr (4-5)-Grsp (2-4)/Sihy, Brte, Pose (0-5)
DESCRIPTION:	*Artemisia tridentata* is usually prominent. It has from 20% to 50% cover. *Grayia spinosa* may be prominent and has from T to 17% cover. The herbaceous layer may include *Sitanion hystrix*, *Bromus tectorum*, or *Poa secunda*.
PCI:	0
PHYSIOGRAPHY:	This community is usually found on terrace, fan, or bottom land but may occur also on level to rolling uplands and colluvial slopes.
ELEVATION:	4300 feet to 5400 feet
SOILS:	The surface soil is usually a loam, 3 inches deep over a clay loam subsoil. pH is 6.8 to 8.4. Surface gravel is abundant.
POTENTIAL:	This community is quite extensive. It is useful as winter livestock range but has low production per acre. It is marginal for seeding but has had very successful seedings in some areas.
NUMBER OF STANDS EXAMINED:	24

VEGETATION SUMMARY 434

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Artr	100	5	4-5	34	35	20-50
Grsp	100	3	1-4	5	5	T-17
Chvi	28	0	0-3	T	0	0- 3
Teca	28	0	0-3	1	0	0- 5
Tesp	20	0	0-1	T	0	0- 1
Ermi	4	0	0-2	T	0	0- 1
HAPPL	4	0	0-2	T	0	0- 1
Sihy	96	5	0-5	4	1	0-15
Brte	72	3	0-5	5	0	0-30
Pose	68	0	0-5	3	0	0-10
Orhy	8	0	0-1	T	0	0- T
Pone2	4	0	0-2	0	0	0- T
Orwe	4	0	0-3	T	0	0- 2
STIPA	4	0	0-4	1	0	0-12
Sial	40	0	0-5	1	0	0-20
Depi	36	0	0-3	T	0	0- 3
Meal2	32	0	0-5	2	0	0-15
Ersp4	20	0	0-3	T	0	0- 3
Crci	20	0	0-3	T	0	0- 1
Erov	20	0	0-3	0	0	0- 1
Erba	16	0	0-4	1	0	0-10
Oeal	16	0	0-2	T	0	0- 1
CRYPT	16	0	0-2	T	0	0- 1
Saka	12	0	0-2	T	0	0- 1
Phho	8	0	0-3	1	0	0- 5
PENST	4	0	0-2	0	0	0- 1
Zipa	4	0	0-2	0	0	0- T
CALCO	4	0	0-1	0	0	0- T
Migr	4	0	0-3	0	0	0- 1
Asle	4	0	0-2	0	0	0- T
Erli	4	0	0-1	0	0	0- T
Lare	4	0	0-2	0	0	0- 1
LUPIN	4	0	0-2	0	0	0- T
Lysp	4	0	0-2	0	0	0- 1
Dean	4	0	0-1	0	0	0- T
DELPH	4	0	0-2	0	0	0- 1
Lepe	4	0	0-1	0	0	0- T
LOMAT	4	0	0-3	T	0	0- 2

SOIL SUMMARY 434

	Range	Mean	Mode
Soil Depth	11-30	16	18
Surface Soil Characteristics			
Horizon Thickness	2-13	5	3
Color	10YR3/3-4/4		10YR3/3
Texture	1s-cl		1
Structure	1vfpl-ves		ves
pH	6.8-8.4	7.3	7.0
Roots	0-3	1.5	1
Gravel	0-30	15	10
Stones	0-10	1	0
Subsoil Characteristics			
Horizon Thickness	4-16	8.5	6
Color	7.5YR5/4-10YR5/4		10YR4/3
Texture	1-c		cl
Structure	3msbk-1vfpl		2msbk
pH	6.8-8.0	7.4	7.5
Roots	2-3	2.5	3
Gravel	0-90	23	20
Stones	0-60	12.5	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-25	8	-
Stone Dominant Diameter	3-15	6	3
Gravel Cover (< 3 inches)	15-60	35	40
Litter Cover	3-10	6	5
Bare Soil	5-50	24	20
Moss and Lichen Cover	0-15	5	5
Total Plant Cover	30-70	48	-

SYMBOLIC LEGEND 441

COMMUNITY DESCRIPTOR:	Artr (4-5)-Putr (1-4)-Chvi (3-4)/Agsp (3-5)-Elci (1-5)-Stth (0-3)
DESCRIPTION:	*Artemisia tridentata*, which has a cover of 15% to 40%, is the most prominent species in this community. *Purshia tridentata* has a cover of T to 35%. In the herbaceous layer, *Agropyron spicatum* or *Elymus cinerius* is prominent with 35% and 5% to 25% cover, respectively.
PCI:	3
PHYSIOGRAPHY:	This community, as sampled, is found on colluvial slopes in a restricted area near Cottonwood Creek in the southern part of the unit.
ELEVATION:	6000 feet
SOILS:	The surface soils are usually gravelly silt loam and have a mean depth of 8 inches to gravelly clay. Surface pH is 7.0 and subsoil pH is 6.8 to 7.5. The soil profile usually has high gravel content.
POTENTIAL:	This community has good forage production for wildlife and domestic livestock. Its limited distribution, however, limits its overall value. Response should be good for brush control spraying.
NUMBER OF STANDS EXAMINED:	5

VEGETATION SUMMARY 441

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Artr	100	5	4-5	23	25	15-40
Putr	100	3	2-4	11	5	T-35
Chvi	100	3	3-4	11	10	3-20
Lepu2	67	3	0-3	2	-	0- 5
Amut	50	0	0-3	1	0	0- 2
Ermi	50	0	0-4	5	0	0-25
Teca	33	0	0-2	T	0	0- 2
Chna	33	0	0-2	T	0	0- 1
Arar	17	0	0-2	0	0	0- 1
Rowo	17	0	0-2	0	0	0- 1
Agsp	100	5	4-5	23	35	12-35
Elci	100	3	1-5	10	5	T-25
Pose	100	3	2-3	5	-	0-10
Stth	83	3	0-3	3	5	0- 5
Brte	67	3	0-3	4	5	0-10
Pocu	67	2	0-3	3	0	0- 7
Feid	50	0	0-4	4	0	0-20
Sihy	33	0	0-3	1	0	0- 5
Pone2	33	0	0-3	T	0	0- 2
Stoc	17	0	0-1	0	0	0- T
Basa	83	4	0-4	12	15	0-15
Crac	67	3	0-3	3	5	0- 5
Asca	67	1	0-3	1	-	0- 3
Migr	50	0	0-3	4	0	0-20
Fral	50	0	0-3	T	0	0- 2
Arho	50	0	0-3	T	0	0- T
CASTE	33	0	0-2	T	0	0- 1
ASTRA	33	0	0-2	T	0	0- 1
Erli	33	0	0-2	T	0	0- 1
PENST	33	0	0-3	T	0	0- 2
Sime	33	0	0-3	T	0	0- 2
Anco2	17	0	0-2	0	0	0- T
Asle	17	0	0-2	T	0	0- 1
Lysp	17	0	0-2	T	0	0- 1
Ganu	17	0	0-2	T	0	0- 1
Ersp4	17	0	0-3	1	0	0- 5
Chdo	17	0	0-1	T	0	0- 1
LOMAT	17	0	0-2	0	0	0- T
LUPIN	17	0	0-3	T	0	0- 1
Astr	17	0	0-1	0	0	0- T

Vegetation Summary 441 (continued)

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Pecu	17	0	0-3	T	0	0- 1
ERIGE	17	0	0-2	T	0	0- 1
Asfi	17	0	0-1	0	0	0- T
Phho	17	0	0-1	0	0	0- T
ERIOG	17	0	0-2	0	0	0- T
Erum	17	0	0-2	0	0	0- 1
Cora	17	0	0-1	0	0	0- T

SOIL SUMMARY 441

	Range	Mean	Mode
Soil Depth	12-28	21	-
Surface Soil Characteristics			
Horizon Thickness	2-14	8	-
Color	10YR2/2-3/4		10YR3/3
Texture	gsl-sil		gsil
Structure	1fgr-ves		1fgr
pH	7.0	7.0	7.0
Roots	2-4	3	3
Gravel	0-80	40	-
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	7-21	13	-
Color	7.5YR4/4-4/3		7.5YR3/3
Texture	gc-gcl		gc
Structure	1fsbk-2msbk		-
pH	6.8-7.5	7.1	-
Roots	1-3	2	3
Gravel	10-80	44	30
Stones	-	-	-
Surface Characteristics			
Stone Cover (3 inches)	3-20	12	-
Stone Dominant Diameter	5-12	9	12
Gravel Cover (3 inches)	1-20	12	15
Litter Cover	5-25	12	0
Bare Soil	10-35	21	-
Moss and Lichen Cover	0	0	0
Total Plant Cover	60-85	77	80

SYMBOLIC LEGEND 442

COMMUNITY DESCRIPTOR:	Artr (4-5)-Putr (1-5)-Syor (2-4)/Feid (4-5)/ Elci (0-5)-Agsp (0-4)
DESCRIPTION:	*Artemisia tridentata* is prominent in this community having 10% to 45% cover. *Purshia tridentata* and *Symphoricarpos oreophilus* may be prominent with cover values of 1% to 35% and 1% to 20%, respectively. *Festuca idahoensis* has cover of 3% to 40% and is usually the prominent herbaceous plant.
PCI:	2
PHYSIOGRAPHY:	This community is found on protected slopes.
ELEVATION:	6000 feet to 6100 feet
SOILS:	The surface soil is usually silt loam and has a modal depth of 4 inches to a clay loam subsoil. pH is 6.4 to 7.0.
POTENTIAL:	Forage production of this community is high for domestic livestock and wildlife. It is important summer range. Marked increase in forage is likely with brush control spraying.
NUMBER OF STANDS EXAMINED:	12

VEGETATION SUMMARY 442

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Artr	100	5	4-5	30	25	10-45
Putr	100	3	1-5	9	-	1-35
Syor	100	3	2-4	8	-	1-20
Chvi	92	3	0-4	6	-	0-20
Lepu2	42	0	0-3	1	0	0- 5
Teca	25	0	0-3	T	0	0- T
Ersp3	25	0	0-2	T	0	0- 2
Ermi	17	0	0-2	T	0	0- 2
Rowo	8	0	0-3	T	0	0- 3
Chna	8	0	0-1	0	0	0- T
Arar	8	0	0-1	0	0	0- T
Feid	100	4	2-5	22	20	3-40
Elci	92	3	0-4	5	-	0-15
Agsp	67	3	0-4	8	-	0-20
Pose	58	0	0-3	3	0	0-10
Sihy	42	0	0-3	1	0	0- 2
Brte	17	0	0-3	T	0	0- 2
Stth	17	0	0-3	T	0	0- 3
STIPA	17	0	0-3	T	0	0- 2
Agsa	8	0	0-2	T	0	0- T
Basa	100	4	1-5	14	-	T-30
Crac	83	2	0-3	1	-	0- 4
LUPIN	33	0	0-3	1	0	0- 3
Asca	25	0	0-3	1	0	0- 5
Aclo	25	0	0-3	1	0	0- 5
Phlo	25	0	0-3	T	0	0- 3
CASTE	25	0	0-2	T	0	0- T
SENEC	25	0	0-3	T	0	0- 1
ASTRA	17	0	0-3	T	0	0- 1
Arho	17	0	0-1	T	0	0- T
Anco2	17	0	0-3	T	0	0- 5
Phho	17	0	0-2	0	0	0- T
PENST	17	0	0-2	0	0	0- T
Agur	8	0	0-1	0	0	0- T
Sisc2	8	0	0-2	0	0	0- T
Migr	8	0	0-3	1	0	0- 7
AGOSE	8	0	0-1	0	0	0- T
ERIOG	8	0	0-2	0	0	0- 1
PHACE	8	0	0-1	0	0	0- T
Liru	8	0	0-3	T	0	0- 2

Vegetation Summary 442 (continued)

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Lare	8	0	0-1	0	0	0- T
Pecu	8	0	0-1	0	0	0- T
Base	8	0	0-3	T	0	0- 2
Assc	8	0	0-1	0	0	0- T
Zipa	8	0	0-1	0	0	0- T
DELPH	8	0	0-1	0	0	0- T
Asle	8	0	0-1	0	0	0- T
ANTEN	8	0	0-3	T	0	0- 3
CALCH	8	0	0-2	0	0	0- T

SOIL SUMMARY 442

	Range	Mean	Mode
Soil Depth	15-35	22	-
Surface Soil Characteristics			
Horizon Thickness	2-9	5	4
Color	10YR3/2		10YR3/2
Texture	sil-sicl		sil
Structure	sg-2msbk		sg
pH	6.6-7.0	6.8	-
Roots	3-5	4	5
Gravel	0-20	7	0
Stone	0-10	2	0
Subsoil Characteristics			
Horizon Thickness	10-22	15	
Color	7.5YR3/2-10YR4/4		10YR3/3
Texture	sicl-c		cl
Structure	1fsbk-2msbk		2fsbk
pH	6.4-7.0	6.7	7.0
Roots	1-5	3	3
Gravel	0-50	22	-
Stones	0-75	12	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-15	5	-
Stone Dominant Diameter	4-15	8	4
Gravel Cover (< 3 inches)	1-30	9	5
Litter Cover	5-20	11	10
Bare Soil	15-40	23	20
Moss and Lichen Cover	0-20	5	0
Total Plant Cover	60-85	71	-

SYMBOLIC LEGEND 445

COMMUNITY DESCRIPTOR:	Artr (4-5)-Putr (2-4)-Syor (1-3)/Elci (3-5)-Brte (0-5)-Agsp (2-5)-Pose (2-4)
DESCRIPTION:	*Artemisia tridentata* is prominent in this community with 15% to 60% cover. *Symphoricarpos oreophilus* and *Purshia tridentata* have cover values of T to 15% and 2% to 20%, respectively. The herbaceous layer is dominated by *Elymus cinerius*, *Bromus tectorum*, or *Agropyron spicatum*. These have cover values of 1% to 25%, 0% to 20%, and T to 20%, respectively.
PCI:	2
PHYSIOGRAPHY:	This community usually occurs on level to undulating uplands or colluvial slopes.
ELEVATION:	5800 feet to 6100 feet
SOILS:	The surface soils are generally gravelly loams and have a mean depth of 8 inches. The subsoil is usually gravelly clay loam. pH is 6.2 to 7.0. There is high gravel content in the profile.
POTENTIAL:	This community is productive in good condition, but often the more desirable forage species are depleted. Stands having sufficient desirable grasses would give good response to brush control spraying. Where terrain and stone cover permit, seeding should be very successful.
NUMBER OF STANDS EXAMINED:	8

VEGETATION SUMMARY 445

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Artr	100	5	4-5	36	-	15-60
Putr	100	4	2-4	12	20	2-20
Syor	100	2	1-3	3	1	T-15
Chvi	89	3	0-3	5	5	0-10
Teca	55	0	0-3	1	0	0- 5
Lepu2	11	0	0-2	T	0	0- 1
Rice	11	0	0-2	T	0	0- 1
Sace	11	0	0-2	0	0	0- T
Elci	100	3	3-5	13	5	1-25
Agsp	100	4	2-5	11	10	T-20
Pose	89	3	0-5	6	5	0-15
Brte	78	3	0-5	10	20	0-20
Stth	55	0	0-5	2	0	0-15
Sihy	44	0	0-4	2	0	0-15
Feid	22	0	0-3	T	0	0- 2
Pone2	22	0	0-3	1	0	0- 3
Mebu	11	0	0-1	T	0	0- 2
CAREX	11	0	0-4	4	0	0-40
Stel	11	0	0-3	T	0	0- 2
Crac	67	3	0-3	1	1	0- 5
Basa	55	0	0-5	3	0	0-20
Migr	55	0	0-3	2	0	0- 5
Liru	33	0	0-2	T	0	0- 1
Asca	22	0	0-3	T	0	0- 1
Erhe	22	0	0-3	T	0	0- 3
Ersp4	22	0	0-1	T	0	0- T
Phlo	22	0	0-3	T	0	0- 1
Luar	22	0	0-3	T	0	0- 3
Coli	22	0	0-3	T	0	0- 2
ASTER	22	0	0-1	T	0	0- T
Lysp	11	0	0-3	1	0	0-10
Arho	11	0	0-2	0	0	0- 1
Asle	11	0	0-1	0	0	0- T
LUPIN	11	0	0-2	0	0	0- T
Ganu	11	0	0-2	T	0	0- 1
Eppa	11	0	0-1	0	0	0- T
DELPH	11	0	0-1	0	0	0- T
PENST	11	0	0-2	0	0	0- T
CALCH	11	0	0-1	0	0	0- T

Vegetation Summary 445 (continued)

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
ERIOG	11	0	0-1	0	0	0- T
Sein	11	0	0-1	0	0	0- T

SOIL SUMMARY 445

	Range	Mean	Mode
Soil Depth	15-30	24	-
Surface Soil Characteristics			
Horizon Thickness	5-13	8	-
Color	10YR3/3-3/2		10YR3/2
Texture	sicl-gsl		gl
Structure	2mgr-1fpl		-
pH	6.2-7.0	6.8	6.8
Roots	2-4	3	3
Gravel	20-70	48	-
Stones	0-40	7	0
Subsoil Characteristics			
Horizon Thickness	7-21	15	-
Color	7.5YR4/4-3/4		7.5YR3/3
Texture	cl-gcl		gcl
Structure	1fsbk-3msbk		1fsbk
pH	6.8-7.0	6.9	-
Roots	1-4	3	3
Gravel	0-80	40	40
Stones	0-90	61	70
Surface Characteristics			
Stone Cover (> 3 inches)	0-15	6	-
Stone Dominant Diameter	4-15	9	-
Gravel Cover (< 3 inches)	2-20	10	-
Litter Cover	5-20	14	20
Bare Soil	10-40	21	-
Moss and Lichen Cover	0-5	1	0
Total Plant Cover	60-95	75	-

SYMBOLIC LEGEND 446

COMMUNITY DESCRIPTOR:	Artr (4-5)-Putr (4)-Chvi (3-4)-Syor (2-4)/ Pose (0-5)-Elci (3-5)
DESCRIPTION:	*Artemisia tridentata* is prominent in the community with 20% to 40% cover or codominant with *Purshia tridentata* which has 15% to 35% cover. *Elymus cinerius* and *Poa secunda* are important in the herbaceous layer with 1% to 15% cover and 0% to 20% cover, respectively. This community usually occurs as part of a complex with Arar types.
PCI:	2
PHYSIOGRAPHY:	This community occurs on level to undulating uplands.
ELEVATION:	6100 feet
SOILS:	The surface soil is usually silt loam and has a mean depth of 8 inches. Subsoil is mostly gravelly clay loam. There is high gravel content in the soil profile.
POTENTIAL:	Easy access to this community and its relationship to the *Artemisia arbuscula* communities with which it is complexed, has allowed apparent deterioration from a much more productive state. It still has value as domestic livestock and wildlife range. It may respond to spray treatment for brush control, but the stands are generally too small to warrant treatment unless the complex as a whole was treated.
NUMBER OF STANDS EXAMINED:	3

VEGETATION SUMMARY 446

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Artr	100	-	4-5	30	35	20-35
Putr	100	4	3-4	18	-	5-30
Syor	100	3	2-4	6	-	3-15
Chvi	100	3	3-4	13	15	5-15
Teca	25	0	0-2	T	0	0- 2
Lepu2	25	0	0-3	1	0	0- 3
Elci	100	3	2-5	6	1	1-15
Pose	75	-	0-5	10	20	0-20
Sihy	75	3	0-5	4	-	0-10
Agsp	50	-	0-3	2	0	0- 5
Feid	50	0	0-5	9	0	0-35
Pocu	25	0	0-3	1	0	0- 3
Stco	25	0	0-3	1	0	0- 3
POA	25	0	0-1	0	0	0- T
Crac	100	-	2-3	2	-	T- 5
Baho	75	2	0-3	1	1	0- 2
Sein	75	-	0-3	1	-	0- 2
Basa	50	0	0-4	4	0	0-15
ARABI	50	0	0-2	T	0	0- 1
Copa	50	0	0-3	1	0	0- 2
Migr	25	0	0-3	2	0	0-10
Luca	25	0	0-2	T	0	0- 1
LUPIN	25	0	0-4	5	0	0-20
ASTRA	25	0	0-1	0	0	0- T
LOMAT	25	0	0-1	0	0	0- T
Trgy	25	0	0-1	0	0	0- T
Gaap	25	0	0-3	1	0	0- 2
Meal2	25	0	0-1	0	0	0- T
Luar	25	0	0-1	0	0	0- T
Ganu	25	0	0-1	0	0	0- T
Sisc	25	0	0-2	T	0	0- 1
PENST	25	0	0-2	0	0	0- T
Liru	25	0	0-2	T	0	0- 1
Arho	25	0	0-2	T	0	0- 1
Fral	25	0	0-2	0	0	0- T
Asfi	25	0	0-3	1	0	0- 3
MERTE	25	0	0-3	2	0	0- T
Zipa	25	0	0-1	0	0	0- T

SOIL SUMMARY 446

	Range	Mean	Mode
Soil Depth	13-20	16	-
Surface Soil Characteristics			
Horizon Thickness	2-13	8	-
Color	10YR2/2-3/3		10YR3/2
Texture	sl-cl		sil
Structure	1fg-1msbk		1msbk
pH	-	-	-
Roots	3-4	3	3
Gravel	15-80	45	50
Stones	0-50	-	-
Subsoil Characteristics			
Horizon Thickness	6-11	8	-
Color	10YR3/2-4/4		10YR4/3
Texture	gcl-c		gcl
Structure	2fsbk-1mbk		2fsbk
pH	-	-	-
Roots	2-3	2	2
Gravel	0	0	0
Stones	0	0	0
Surface Characteristics:			
Stone Cover (> 3 inches)	1-7	3	1
Stone Dominant Diameter	5-12	9	-
Gravel Cover (< 3 inches)	1-15	6	-
Litter Cover	20-25	27	25
Bare Soil	10-30	17	10
Moss and Lichen Cover	0-T	T	0
Total Plant Cover	-	-	-

SYMBOLIC LEGEND 447

COMMUNITY DESCRIPTOR:	Artr (4-5)-Putr (3-4)-Syor (2-4)-Lepu2 (2-3)-Amut (0-3)/Feid (5)-Stco, Stoc, Pocu (0-3)
DESCRIPTION:	*Artemisia tridentata* is prominent in this community with 15% to 35% cover. *Symphoricarpos oreophilus* and *Purshia tridentata* have 1% to 15% cover and 5% to 35% cover, respectively. *Festuca idahoensis* is prominent in the herbaceous layer with 10% to 45% cover. *Stipa columbiana*, *Stipa occidentalis*, and *Poa cusickii* have cover values of 0% to 3%, 0% to 5%, and 0% to 3%.
PCI:	3
PHYSIOGRAPHY:	This community is found on protected slopes.
ELEVATION:	6000 feet
SOILS:	Soils are deep loams or gravelly loams which are more than 20 inches deep. There is little indication of profile development.
POTENTIAL:	Forage production is high for domestic livestock and wildlife. Greater production would result from brush control spraying.
NUMBER OF STANDS EXAMINED:	4

VEGETATION SUMMARY 447

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Artr	100	5	4-5	28	35	15-35
Putr	100	4	3-4	17	-	5-35
Syor	100	3	2-4	7	-	1-15
Chvi	100	3	2-3	6	5	5-10
Lepu2	100	3	2-3	3	-	2- 5
Amut	80	1	0-3	1	T	0- 5
Teca	40	0	0-2	T	0	0- 2
Ermi	20	0	0-2	T	0	0- 2
Rowo	20	0	0-2	T	0	0- 1
Sace	20	0	0-2	T	0	0- T
Feid	100	5	5	27	-	10-45
Agsp	100	3	3-4	9	7	5-15
Pose	80	3	0-3	8	-	0-20
Sihy	80	3	0-3	2	-	0- 5
Stco	60	0	0-3	1	-	0- 3
Pocu	60	0	0-3	1	3	0- 3
Elci	60	3	0-3	2	-	0- 5
Stoc	40	0	0-3	2	0	0- 5
Stca	40	0	0-2	T	0	0- 1
Brte	40	0	0-3	1	0	0- 5
Pone2	20	0	0-3	1	0	0- 3
Stth	20	0	0-3	1	0	0- 5
Stel	20	0	0-3	T	0	0- 2
Poca	20	0	0-1	0	0	0- T
Basa	100	3	3-4	9	-	3-15
Crac	100	3	3	4	3	3- 5
Fral	80	2	0-3	1	T	0- 2
Sein	60	-	0-3	1	-	0- 2
Migr	60	-	0-3	1	-	0- 2
Erum	60	2	0-2	T	-	0- 1
ARABI	40	0	0-3	T	0	0- 1
PENST	40	0	0-2	0	0	0- 1
Sisc2	40	0	0-2	T	0	0- 1
AGOSE	40	0	0-1	0	0	0- T
Pecu	20	0	0-3	T	0	0- 2
ASTRA	20	0	0-2	T	0	0- 1
Ganu	20	0	0-1	0	0	0- T
ANTEN	20	0	0-2	T	0	0- 2
Acla	20	0	0-2	0	0	0- 1
Erst	20	0	0-1	0	0	0- T

Vegetation Summary 447 (continued)

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Phhe	20	0	0-2	0	0	0- 1
Liru	20	0	0-2	0	0	0- 1
Arho	20	0	0-2	T	0	0- 1
Copa	20	0	0-3	T	0	0- 2
MERTE	20	0	0-3	1	0	0- 7
LUPIN	20	0	0-4	4	0	0-20
Chfr	20	0	0-1	0	0	0- T
Geum	20	0	0-2	0	0	0- T
Anco2	20	0	0-2	T	0	0- 2

SOIL SUMMARY 447

	Range	Mean	Mode
Soil Depth	21-28	25	-
Surface Soil Characteristics		Undeveloped	
Subsoil Characteristics		Undeveloped	
Surface Characteristics			
Stone Cover (> 3 inches)	T-20	5	1
Stone Dominant Diameter	4-18	8	4
Gravel Cover (< 3 inches)	0-5	3	-
Litter Cover	5-30	15	5
Bare Soil	10-25	18	-
Moss and Lichen Cover	0-10	4	-
Total Plant Cover	65-95	84	-

SYMBOLIC LEGEND 448

COMMUNITY DESCRIPTOR:	Artr (4-5)-Syor (1-4)-Chvi (0-3)/Feid (1-5)-Stoc (0-4) Stca (0-5)-Stco (0-3)-Agsp (0-4)-CAREX (0-5)
DESCRIPTION:	*Artemisia tridentata* is prominent in this community having 15% to 55% cover. *Symphoricarpos oreophyllus* has T to 40% cover. *Festuca idahoensis*, *Stipa californica*, or *Carex* species may be prominent in the herbaceous layer. These have cover values of 1% to 25%, 0% to 50%, and 0% to 30%, respectively.
PCI:	3
PHYSIOGRAPHY:	This community is located on level to undulating uplands or on protected slopes.
ELEVATION:	6200 feet to 7400 feet
SOILS:	Surface soil is usually silt or gravelly loam with mean depth of 9 inches. pH is 6.2 to 6.8. Gravel is abundant in the profile.
POTENTIAL:	Very high forage production is possible from this community. It is good wildlife and livestock range. Where sagebrush cover is high, grass production could be increased but damage to other shrubs may result from brush control spraying.
NUMBER OF STANDS EXAMINED:	7

VEGETATION SUMMARY 448

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Artr	100	5	4-5	41	-	15-55
Syor	100	3	1-4	7	-	T-40
Chvi	71	-	0-3	T	T	0- 1
Chna	29	0	0-3	1	0	0- 8
Teca	14	0	0-1	0	0	0- T
Arar	14	0	0-2	T	0	0- 1
Feid	100	-	1-5	13	15	1-25
Sihy	100	4	3-4	15	-	3-40
Stca	86	3	0-5	12	3	0-50
Elci	71	3	0-3	2	1	0- 5
Stoc	57	0	0-4	3	0	0-10
Agsp	57	0	0-5	3	0	0-10
CAREX	57	0	0-5	10	0	0-30
Pose	57	0	0-5	5	0	0-30
Stco	43	0	0-3	1	0	0- 2
Brte	43	0	0-3	1	0	0- 3
POA	43	0	0-4	4	0	0-20
Pocu	14	0	0-3	T	0	0- 2
Mefu	14	0	0-2	T	0	0- 1
Pone2	14	0	0-3	1	0	0-10
Crac	86	3	0-3	2	-	0- 5
LUPIN	86	3	0-4	10	25	0-25
Sein	71	3	0-3	2	-	0- 3
Aghe	57	0	0-3	1	0	0- 2
Basa	43	0	0-4	2	0	0-15
Migr	43	0	0-3	1	0	0- 2
Phlo	43	0	0-3	1	0	0- 2
ARABI	43	0	0-2	T	0	0- 1
Aclo	29	0	0-2	1	0	0- 3
Pebr	29	0	0-3	T	0	0- 3
Sisc2	29	0	0-2	T	0	0- 1
Coli	14	0	0-3	T	0	0- 3
POLYG	14	0	0-3	T	0	0- 2
Phho	14	0	0-3	T	0	0- 2
Agur	14	0	0-1	0	0	0- T
Luar	14	0	0-3	1	0	0- 4
Lare	14	0	0-1	0	0	0- T
Eppa	14	0	0-1	0	0	0- T
Erum	14	0	0-2	0	0	0- 1
PHACE	14	0	0-2	0	0	0- 1

Vegetation Summary 448 (continued)

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
CRYPT	14	0	0-2	0	0	0- T
CASTE	14	0	0-2	0	0	0- 1
Ganu	14	0	0-2	0	0	0- 1
Fral	14	0	0-2	0	0	0- T
FRITI	14	0	0-3	0	0	0- 1

SOIL SUMMARY 448

	Range	Mean	Mode
Soil Depth	21-30+	27	30
Surface Soil Characteristics			
Horizon Thickness	5-13	9	-
Color	10YR2/2-3/2		10YR3/2
Texture	gl-si		si
Structure	1vfsbk-1msbk		1fsbk
pH	6.2-6.8	6.5	-
Roots	3-5	4	4
Gravel	20-40	26	20
Stones	0-50	12	0
Subsoil Characteristics			
Horizon Thickness	5-20	13	20
Color	7.5YR4/4-3/4		7.5YR3/2
Texture	scl-c		gcl
Structure	1fsbk-2msbk		1fsbk
pH	-	-	-
Roots	2-3	3	3
Gravel	0-25	18	20
Stones	0-90	34	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-5	1	0
Stone Dominant Cover	-	-	-
Gravel Cover (< 3 inches)	3-10	6	7
Litter Cover	15-30	22	20
Bare Soil	7-15	11	10
Moss and Lichen Cover	0-20	4	0
Total Plant Cover	85-90	89	90

SYMBOLIC LEGEND 449

COMMUNITY DESCRIPTOR:	Artr (4-5)-Syor (1-4)-Chvi (0-4)/Agsp, Feid (0-5)-Stth (0-4)
DESCRIPTION:	In this community *Artemisia tridentata* with 15% to 75% cover is prominent. *Symphoricarpos oreophilus* has 1% to 35% cover. *Festuca idahoensis* or *Agropyron spicatum* is prominent in the herbaceous layer with 0% to 50% and 0% and 40%, respectively.
PCI:	2
PHYSIOGRAPHY:	This community is usually found on level to undulating uplands and protected slopes.
ELEVATION:	4900 feet to 6800 feet
SOILS:	Surface soil is usually loam with a mean depth of 8 inches to subsoil which is usually silty clay or clay loam. pH is 6.2 to 7.5.
POTENTIAL:	When it is in good condition, this community has high forage production. It is often depleted of much of the desirable forage plants, however. It should respond favorably to brush control spray and to seeding where practical.
NUMBER OF STANDS EXAMINED:	15

VEGETATION SUMMARY 449

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Artr	100	5	4-5	35	40	15-75
Syor	100	3	1-4	6	1	T-35
Chvi	85	3	0-4	6	3	0-15
Teca	35	0	0-3	T	0	0- 1
Chna	15	0	0-3	1	0	0-10
Rowo	15	0	0-3	T	0	0- 5
Lepu2	15	0	0-3	T	0	0- 5
Arar	12	0	0-3	T	0	0- 5
Ermi	8	0	0-3	T	0	0- 3
Amut	8	0	0-2	T	0	0- T
Rice	8	0	0-3	1	0	0-20
Arlo	4	0	0-3	T	0	0-10
Ersp3	4	0	0-2	0	0	0- T
Pose	85	3	0-5	14	10	0-50
Feid	74	5	0-5	10	0	0-50
Agsp	69	0	0-5	6	0	0-40
Sihy	69	0	0-5	3	0	0-15
Elci	69	3	0-4	3	0	0-15
Brte	54	0	0-5	12	0	0-75
Stth	38	0	0-4	1	0	0-15
Pocu	19	0	0-5	1	0	0-15
Pone2	12	0	0-2	T	0	0- 1
CAREX	12	0	0-3	1	0	0-15
Agsa	4	0	0-1	0	0	0- T
Stel	4	0	0-1	0	0	0- T
Mefu	4	0	0-1	0	0	0- 1
POA	4	0	0-1	0	0	0- T
Crac	74	2	0-3	1	0	0-10
Basa	60	0	0-4	3	0	0-15
LUPIN	46	0	0-3	1	0	0- 5
Phlo	46	0	0-3	1	0	0- 4
Phho	23	0	0-4	1	0	0- 7
Migr	15	0	0-3	T	0	0- 3
Asca	15	0	0-3	T	0	0- 2
ASTRA	15	0	0-3	T	0	0- 1
Arho	15	0	0-2	T	0	0- 1
Erli	15	0	0-2	T	0	0- 1
Aggl	15	0	0-3	T	0	0- 2
Alac	15	0	0-3	T	0	0- 1
Erov	12	0	0-3	T	0	0- 1

Vegetation Summary 449 (continued)

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Luar	12	0	0-4	1	0	0-15
Lysp3	12	0	0-3	T	0	0- 2
Asle	12	0	0-3	T	0	0- 5
ARABI	8	0	0-3	T	0	0- 2
Acla	8	0	0-3	T	0	0- 2
Ganu	8	0	0-3	T	0	0- 3
Assc	8	0	0-2	T	0	0- 1
SENEC	8	0	0-3	T	0	0- 5
Depi	8	0	0-3	T	0	0- 3
PENST	8	0	0-2	T	0	0- T
Agar	8	0	0-3	1	0	0- 2
CASTE	8	0	0-1	T	0	0- T
Aspu	8	0	0-2	T	0	0- T
Copa	8	0	0-2	T	0	0- 1
Zipa	8	0	0-2	T	0	0- 1
Erpu	8	0	0-3	T	0	0- 2
Coli	8	0	0-3	T	0	0- 3
Lica	8	0	0-2	T	0	0- 1
Cabr3	8	0	0-1	0	0	0- T
Hela	4	0	0-2	T	0	0- 1
Meal2	4	0	0-1	0	0	0- T
Amre2	4	0	0-2	0	0	0- T
Ivax	4	0	0-3	T	0	0- 5
CERCI	4	0	0-2	0	0	0- T
Arlu	4	0	0-2	T	0	0- 1
PHACE	4	0	0-2	T	0	0- 1
LOMAT	4	0	0-3	T	0	0- 5
Hyca	4	0	0-1	0	0	0- T
Anco2	4	0	0-4	1	0	0- 8
TRAGA	4	0	0-2	T	0	0- T
Erbl	4	0	0-1	0	0	0- T
Cain	4	0	0-2	T	0	0- 1
Asst	4	0	0-3	T	0	0- 1
Dean	4	0	0-1	0	0	0- T
Fral	4	0	0-2	T	0	0- 2
Frat	4	0	0-1	0	0	0- T
Sein	4	0	0-2	0	0	0- T
Ersp4	4	0	0-1	0	0	0- T
Aghe	4	0	0-3	T	0	0- 1
Cali	4	0	0-1	0	0	0- T
Lase	4	0	0-2	0	0	0- T
Mitr	4	0	0-1	0	0	0- T

Vegetation Summary 449 (continued)

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Gaap	4	0	0-3	T	0	0- 1
Viba	4	0	0-3	T	0	0- 2
Eppa	4	0	0-3	T	0	0- 2
MOPED	4	0	0-2	T	0	0- 1

SOIL SUMMARY 449

	Range	Mean	Mode
Soil Depth	10-32	22	22
Surface Soil Characteristics			
Horizon Thickness	3-15	8	-
Color	10YR2/1-3/3		10YR3/2
Texture	ls-si		l
Structure	ves-lfpl		lfsbk
pH	6.4-7.5	6.8	6.6
Roots	2-5	3	3
Gravel	0-60	20	0
Stones	0-70	11	0
Subsoil Characteristics			
Horizon Thickness	4-23	12	7
Color	10YR2/1-4/4		10YR3/3
Texture	scl-c		-
Structure	2bk-lfgr		2msbk
pH	6.2-7.5	6.8	6.6
Roots	1-3	2.5	3
Gravel	0-70	20	0
Stones	0-85	23	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-25	5	-
Stone Dominant Cover	3-12	7	6
Gravel Cover (< 3 inches)	0-50	9	-
Litter Cover	3-40	17	15
Bare Soil	0-30	19	25
Moss and Lichen Cover	0-15	3	0
Total Plant Cover	35-97	76	80

SYMBOLIC LEGEND 471

COMMUNITY DESCRIPTOR:	Artr2 (5) Chvi, Artr (3)-Syor, Lepu2 (2-3)/ Feid (5)-Pose (3)-Stth (0-3)
DESCRIPTION:	This community is of limited distribution. *Artemisia tripartita* is prominent with a cover of 20% to 30%. Many other shrubs are present. *Festuca idahoensis* is prominent in the herbaceous layer with 20% to 50% cover. The community is rich in forbs.
PCI:	3
PHYSIOGRAPHY:	This community occurs on steep, protected slopes of colluvial origin.
ELEVATION:	5800 feet
SOILS:	The surface soils are gravelly silt loams with a mean depth of 8 inches to a subsoil varying from gravelly sandy clay to gravelly loam. pH is 6.6 to 7.0. There is high gravel content in the profile.
POTENTIAL:	This community has value as wildlife range and limited value for domestic livestock range due to its steepness and difficult access. It is of limited distribution.
NUMBER OF STANDS EXAMINED:	2

VEGETATION SUMMARY 471

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Artr2	100	5	5	25	-	20-30
Chvi	100	3	3	9	-	7-10
Teca	100	-	1-2	T	T	T
Artr	100	3	3	5	-	3- 7
Lepu2	100	-	2-3	2	-	1- 3
Syor	100	-	2-4	9	-	1-15
Ermi	50	-	0-3	3	-	0- 5
Arar	50	-	0-1	T	-	0- T
Rice	50	-	0-2	T	-	0- 1
Feid	100	5	5	35	-	20-50
Pose	100	3	3	4	-	3- 5
Agsp	50	-	0-1	T	-	0- T
Stth	50	-	0-3	T	-	0- 1
PENST	100	3	3	4	-	3- 5
Crac	100	-	2-3	1	1	1
Basa	100	3	3	5	-	1-10
CASTE	100	-	1-3	3	-	T- 5
CREPI	100	-	2-3	3	-	1- 5
Fral	100	3	3	4	-	3- 5
Aspu	50	-	0-2	T	-	0- 1
Erli	50	-	0-2	T	-	0- 1
Erst	50	-	0-3	1	-	0- 3
Asle	50	-	0-2	T	-	0- 1
Aglo	50	-	0-3	1	-	0- 2
Asob	50	-	0-3	1	-	0- 2
Sisc2	50	-	0-1	T	-	0- T
ASTRA	50	-	0-3	1	-	0- 2
Asfi	50	-	0-3	1	-	0- 2
Mood	50	-	0-3	1	-	0- 2
Erfi	50	-	0-2	T	-	0- T
Anco2	50	-	0-3	1	-	0- 2

SOIL SUMMARY 471

	Range	Mean	Mode
Soil Depth	12-32	22	-
Surface Soil Characteristics			
Horizon Thickness	6-9	8	-
Color	10YR3/4-3/2		10YR3/2
Texture	gsicl-gsil		gsil
Structure	2msbk-2fsbk		-
pH	6.6-7.0	6.8	-
Roots	4	4	4
Gravel	40	40	40
Stones	0-50	25	-
Subsoil Characteristics			
Horizon Thickness	6-21	13	-
Color	10YR3/3		10YR3/3
Texture	gsc-gl		-
Structure	1fsbk		1fsbk
pH	6.8	6.8	-
Roots	1-3	2	3
Gravel	0-75	37	-
Stones	0-80	52	-
Surface Characteristics			
Stone Cover (> 3 inches)	15-35	20	-
Stone Dominant Cover	10-15	12	-
Gravel Cover (< 3 inches)	3-2	2.5	-
Litter Cover	5-20	13	-
Bare Soil	10-30	20	-
Moss and Lichen Cover	0-20	10	-
Total Plant Cover	80-90	85	-

SYMBOLIC LEGEND 543

COMMUNITY DESCRIPTOR:	Cele (5)/Syor, Artr (3-5)-Chvi (2-3)/ Feid (0-4)-Elci (3-5)-Pocu (0-4)-Basa (3-5)
DESCRIPTION:	*Cercocarpus ledifolius* is prominent in this community with 30% to 75% cover. The prominent species in the shrub layer is *Symphoricarpos oreophilus* which has 1% to 40% cover and *Artemisia tridentata* which has a cover of 5% to 30%. The herbaceous layer includes *Festuca idahoensis*, *Elymus cinerius*, and *Balsamorhiza saggitata* which have cover values of 0% to 25%, 1% to 60%, and 0% to 50%, respectively.
PCI:	3
PHYSIOGRAPHY:	This community is generally found on protected slopes.
ELEVATION:	6000 feet to 6100 feet
SOILS:	The surface soil is mostly gravelly loam or gravelly silty loam with a mean depth of 9 inches. The subsoil is mostly gravelly clay loam. pH is 6.6 to 7.0.
POTENTIAL:	Especially important as wildlife range, this community provides high forage production and shelter for wildlife and domestic livestock.
NUMBER OF STANDS EXAMINED:	7

VEGETATION SUMMARY 543

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Cele	100	5	5	54	60	30-75
Artr	100	4	3-5	16	-	5-30
Syor	100	4	3-5	23	20	1-40
Chvi	83	3	0-3	2	1	0- 5
Amut	17	0	0-1	T	0	0- T
Lepu2	17	0	0-2	T	0	0- 2
Elci	100	-	3-5	24	15	1-60
Sihy	100	3	1-5	5	10	T-10
Feid	83	4	0-4	10	-	0-25
Pocu	50	0	0-4	3	0	0-10
Pose	50	0	0-3	2	0	0- 7
Brte	50	0	0-3	1	0	0- 5
Stco	50	0	0-3	1	0	0- 5
Mebu	33	0	0-3	2	0	0-10
Agsp	17	0	0-3	1	0	0- 5
Pone2	17	0	0-2	1	0	0- 3
Popr	17	0	0-2	T	0	0- 1
Brma	17	0	0-2	T	0	0- 1
Agsa	17	0	0-2	T	0	0- 2
POA	17	0	0-3	1	0	0- 3
Crac	83	3	0-3	1	-	0- 2
Sein	83	3	0-3	2	-	0- 5
Basa	67	4	0-4	15	-	0-50
Migr	50	0	0-3	1	0	0- 3
PHACE	33	0	0-3	1	0	0- 2
Coli2	33	0	0-3	T	0	0- 1
PENST	17	0	0-1	0	0	0- T
Arho	17	0	0-1	0	0	0- T
Gite	17	0	0-1	0	0	0- T
Phho	17	0	0-2	T	0	0- 1
Depi	17	0	0-2	T	0	0- 1
Base	17	0	0-4	4	0	0-25
CREPI	17	0	0-3	1	0	0- 5
Ersp4	17	0	0-1	0	0	0- T
MERTE	17	0	0-3	1	0	0- 3
CHENO	17	0	0-2	T	0	0- 1
VIOLA	17	0	0-1	0	0	0- T
Luca	17	0	0-2	T	0	0- 1

Vegetation Summary 543 (continued)

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Anco2	17	0	0-1	0	0	0- T
Lare	17	0	0-1	0	0	0- T

SOIL SUMMARY 543

	Range	Mean	Mode
Soil Depth	16-30	22	-
Surface Soil Characteristics			
Horizon Thickness	2-20	9	-
Color	10YR2/1-2/2		10YR2/2
Texture	gl-si		gsil
Structure	1vfgr-1msbk		1msbk
pH	6.6-7.0	6.8	-
Roots	3-4	3.5	4
Gravel	0-75	25	20
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	0-26	13	-
Color	10YR2/2-3/3		-
Texture	gc-gsil		gcl
Structure	2fsbk-1msbk		1msbk
pH	6.6-6.8	6.7	-
Roots	3	3	3
Gravel	0-50	17	0
Stones	60-90	75	-
Surface Characteristics			
Stone Cover (> 3 inches)	2-15	6	-
Stone Dominant Cover	6-20	12	-
Gravel Cover (< 3 inches)	1-5	2	1
Litter Cover	20-80	45	-
Bare Soil	5-15	10	10
Moss and Lichen Cover	0-5	2	0
Total Plant Cover	30-97	89	95

SYMBOLIC LEGEND 545

COMMUNITY DESCRIPTOR:	Cele (5)/Syor (3-5)-Chvi (3-4)-Artr (4)-Putr (2-4)/Pose (3-5)-Elci (3)-Sihy (3-4)
DESCRIPTION:	The prominent *Cercocarpus ledifolius* gives this community a woodland aspect. It has 10% to 45% cover. *Symphoricarpos oreophilus* may be prominent in the shrub layer having 5% to 45% cover. *Purshia tridentata, Artemisia tridentata,* and *Chrysothamnus viscidiflorus* may reach high prominence in the shrub layer. They have cover ratings of 1% to 25%, 25% to 30%, and 7% to 30%, respectively. *Poa secunda, Sitanion hystrix,* and *Elymus cinerius* are usually the most abundant species in the herbaceous layer with 3% to 35% cover, 5% to 20% cover, 3% to 35% cover, 5% to 20% cover, and 3% to 10% cover, respectively.
PCI:	3
PHYSIOGRAPHY:	Level to undulating uplands or protected slopes.
ELEVATION:	6000 feet to 6100 feet
SOILS:	Surface soil usually loam or silt loam with a mean depth of 9 inches. Subsoil usually gravelly clay loam. pH is 6.6 to 7.0. Gravel and stones common in profile.
POTENTIAL:	High value wildlife habitat. Forage production for wildlife and domestic livestock can be high.
NUMBER OF STANDS EXAMINED:	4

VEGETATION SUMMARY 545

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Cele	100	5	5	28	-	10-45
Putr	100	4	2-4	13	-	1-25
Artr	100	4	4	29	30	25-30
Syor	100	4	3-5	25	-	5-45
Chvi	100	3	3-4	14	10	7-30
Amut	50	0	0-3	2	0	0- 5
Teca	50	-	0-2	T	-	0- T
Lepu2	50	0	0-2	T	0	0- 2
Pose	100	3	3-5	13	-	3-35
Elci	100	3	3	6	3	3-10
Sihy	100	3	3-4	11	5	5-20
Brte	75	2	0-3	2	2	0- 5
Feid	75	4	0-4	21	-	0-50
Stth	50	0	0-2	T	0	0- 1
STIPA	50	0	0-2	T	0	0- 1
Pocu	50	0	0-4	9	0	0-35
Agsp	50	-	0-3	1	0	0- 5
CAREX	25	0	0-4	4	0	0-15
POA	25	0	0-3	3	0	0-10
SENEC	100	3	3	4	-	T- 7
AGOSE	100	-	2-3	2	1	1- 3
Migr	75	2	0-3	2	-	0- 5
Basa	50	0	0-5	25	-	0-50
Crac	50	0	0-3	3	0	0-10
Coli2	50	-	0-2	T	-	0- 1
ARABI	50	0	0-3	T	0	0- 1
LUPIN	50	-	0-2	1	0	0- 2
Acla	50	-	0-2	1	0	0- 2
Agur	50	-	0-2	1	0	0- 3
MERTE	50	-	0-2	1	0	0- 2
Anco2	50	-	0-3	3	-	0- 5
TRAGY	25	0	0-2	T	0	0- T
Depi	25	0	0-2	T	0	0- 1
Cogr	25	0	0-3	0	0	0- 1
Fral	25	0	0-3	1	0	0- 3
HYDRO	25	0	0-2	T	0	0- 2
Asca	25	0	0-2	T	0	0- 1
Liru	25	0	0-2	T	0	0- 1
Phlo	25	0	0-2	T	0	0- 1

Vegetation Summary 545 (continued)

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
CASTE	25	0	0-3	2	0	0- 7
Aspe	25	0	0-2	T	0	0- 2
Asle	25	0	0-1	0	0	0- T

SOIL SUMMARY 545

	Range	Mean	Mode
Soil Depth	12-30	19	-
Surface Soil Characteristics			
Horizon Thickness	7-13	9	-
Color	10YR2/2		10YR2/2
Texture	gl-cl		sil
Structure	1fgr-2msbk		-
pH	6.6-7.0	6.8	-
Roots	3-4	3	3
Gravel	20-30	23	20
Stones	0-70	18	0
Subsoil Characteristics			
Horizon Thickness	9-17	12	-
Color	10YR5/4-3/3		-
Texture	gcl-c		gcl
Structure	2fsbk-2msbk		2fsbk
pH	-	-	-
Roots	3	3	3
Gravel	-	-	-
Stones	0-90	80	90
Surface Characteristics			
Stone Cover (> 3 inches)	5-15	9	5
Stone Dominant Cover	6-8	7	6
Gravel Cover (< 3 inches)	3-5	3	3
Litter Cover	20-80	52	-
Bare Soil	10-25	18	-
Moss and Lichen Cover	0-5	3	5
Total Plant Cover	85-97	92	-

SYMBOLIC LEGEND 563

COMMUNITY DESCRIPTOR:	Ceve (5)-Prvi (3)/
DESCRIPTION:	*Ceanothus velutinus* is prominent in this snowbank community with 70% to 95% cover. *Prunus virginiana* is present either emergent from the *Ceanothus* or inconspicuous among it. Other shrubs, grasses and forbs may be variable.
PCI:	4
PHYSIOGRAPHY:	Protected slopes
ELEVATION:	7000 feet to 7200 feet
SOILS:	The top 1 to 2 inches is entirely organic matter. The surface soil is loam about 10 inches to single grain loam or gravelly sandy clay loam. pH is 6.0 to 6.4.
POTENTIAL:	High value wildlife habitat. Of little value as domestic livestock range.
NUMBER OF STANDS EXAMINED:	2

VEGETATION SUMMARY 563

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Ceve	100	5	5	82	-	70-95
Prvi	100	3	3	12	-	5-20
Amut	50	-	0-3	1	-	0- 2
Syor	50	-	0-3	10	-	0-20
Potr	50	-	0-3	2	-	0- 5
Artr	50	-	0-2	T	-	0- T
Rice	50	-	0-1	T	-	0- 1
Elci	50	-	0-5	2	-	0- 5
Sihy	50	-	0-2	T	-	0- 1
Stco	50	-	0-2	T	-	0- 1
Stth	50	-	0-1	T	-	0- T
Brma	50	-	0-1	T	-	0- T
Urdi	50	-	0-3	2	-	0- 5
PHACE	50	-	0-3	T	-	0- 1
POLYG	50	-	0-3	T	-	0- 1
CHENO	50	-	0-1	T	-	0- T
Viba	50	-	0-2	T	-	0- T
SENEC	50	-	0-2	T	-	0- T
Lare	50	-	0-1	T	-	0- T
DELPH	50	-	0-3	T	-	0- 1
Agur	50	-	0-1	T	-	0- T

SOIL SUMMARY 563

	Range	Mean	Mode
Soil Depth	24-30	27	-
Surface Crust Characteristics			
Horizon Thickness	1-2	1.5	-
Color			
Texture			
Structure			
pH		Organic Matter	
Roots			
Gravel			
Stones			
Surface Soil Characteristics			
Horizon Thickness	9-12	10.5	-
Color	10YR2/2-3/2		10YR2/2
Texture	gl-1		1
Structure	2fsbk-2msbk		-
pH	6.2-6.4	6.3	6.2
Roots	3-4	3	3
Gravel	10-20	13	10
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	10-16	13	-
Color	10YR3/2-3/4		-
Texture	gscl-1		-
Structure	sg-2fsbk		-
pH	6.0-6.4	6.2	-
Roots	2	2	2
Gravel	0-15	8	-
Stones	40	40	40
Surface Characteristics			
Stone Cover (> 3 inches)	-	-	-
Stone Dominant Diameter	-	-	-
Gravel Cover (< 3 inches)	0-T	T	-
Litter Cover	5-15	10	-
Bare Soil	0-1	T	-
Moss and Lichen Cover	-	-	-
Total Plant Cover	95-99	97	-

SYMBOLIC LEGEND 572

COMMUNITY DESCRIPTOR:	Rocklands Hodu (0-5)-Artr (2-5)
DESCRIPTOR:	Variable community occurring in rocklands. *Holodiscus dumosa* usually present and often prominent with 0% to 40% cover. *Artemisia tridentata* is often prominent having 2% to 40% cover. Many other shrubs are often present.
PCI:	1, 2, 3
PHYSIOGRAPHY:	Colluvial slopes, rimrock, and other rocklands
ELEVATION:	5200 feet to 7000 feet
SOILS:	Soil occurring only in cracks or small pockets between rocks.
POTENTIAL:	Of little value for forage production. Habitat for some small wildlife.
NUMBER OF STANDS EXAMINED:	6

VEGETATION SUMMARY 572

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Artr	100	4	2-5	15	10	2-40
Hodu	80	-	0-5	19	-	0-40
Syor	80	-	0-3	2	5	0- 5
Chna	80	3	0-3	1	1	0- 1
Chvi	60	3	0-3	1	0	0- 3
Lepu2	60	-	0-3	1	-	0- 2
Prvi	40	0	0-3	2	0	0-10
Sace	40	0	0-3	1	0	0- 2
Rice	40	-	0-3	1	-	0- 2
Amut	20	0	0-2	0	0	0- T
Hana	20	0	0-4	T	0	0- 1
Putr	20	0	0-2	T	0	0- 2
Arar	20	0	0-4	T	0	0- 1
Rowo	20	0	0-1	T	0	0- 2
Ersp3	20	0	0-3	T	0	0- 1
Ermi	20	0	0-2	T	0	0- 1
Grsp	20	0	0-2	T	0	0- 1
Teca	20	0	0-1	0	0	0- T
Agsp	100	3	2-5	2	1	1- 7
Pose	80	3	0-3	1	1	0- 5
Brte	80	2	0-3	1	1	0- 3
Feid	40	0	0-2	T	0	0- 1
Elci	40	0	0-5	3	0	0-10
Stth	40	0	0-2	T	0	0- 1
Sihy	40	0	0-3	T	0	0- 1
Orhy	20	0	0-1	T	0	0- 1
Crac	40	0	0-1	T	0	0- 1
ASTER	20	0	0-5	T	0	0- 1
Mood	20	0	0-5	2	0	0-10
Erov	20	0	0-3	1	0	0- 3
Cast	20	0	0-3	1	0	0- 5
Pecu	20	0	0-3	T	0	0- 1
Asca	20	0	0-3	T	0	0- 1
PHACE	20	0	0-2	0	0	0- T
Luca	20	0	0-2	0	0	0- T
Erli	20	0	0-2	0	0	0- T
Liru	20	0	0-3	T	0	0- 1
CIRCI	20	0	0-1	0	0	0- T
Basa	20	0	0-3	1	0	0- 5
Zipa	20	0	0-1	T	0	0- 1

Vegetation Summary 572 (continued)

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Copa	20	0	0-1	T	0	0- 1
Ivba	20	0	0-1	T	0	0- 1
Erhe	20	0	0-1	T	0	0- 1

SOIL SUMMARY 572

	Range	Mean	Mode
Soil Depth	-	-	-
Surface Soil Characteristics	Rockland--No Soil Profile		
Subsoil Characteristics	Rockland--No Soil Profile		
Surface Characteristics			
Stone Cover (> 3 inches)	25-95	55	-
Stone Dominant Diameter	10-24	27	24
Gravel Cover (< 3 inches)	0-5	5	-
Litter Cover	T-5	4	-
Bare Soil	0-30	10	-
Moss and Lichen Cover	0-5	2	5
Total Plant Cover	20-85	71	-

SYMBOLIC LEGEND 591

COMMUNITY DESCRIPTOR:	Dwarf, snowbank sites Potr (5)-Syor (2-3)/ Sihy (3-5)-Poam (0-3)
DESCRIPTION:	*Populus tremuloides* occur as dwarf, shrubby plants usually from 8 to 14 feet in height and grow in a very dense thicket. Cover 50% to 90%. *Symphoricarpos oreophilus* is present with 1% to 20% cover. Other shrubs, grasses, and forbs are variable.
PCI:	4
PHYSIOGRAPHY:	Protected slopes
ELEVATION:	6700 feet to 7400 feet
SOILS:	Surface soil usually loam which has mean depth of 11 inches. Subsoil usually gravelly clay loam. pH 5.8 to 7.2.
POTENTIAL:	Very productive and good wildlife habitat. Usually too dense for good livestock use.
NUMBER OF STANDS EXAMINED:	4

VEGETATION SUMMARY 591

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Potr	100	5	5	5	-	60-90
Syor	100	3	2-3	12	-	1-20
Artr	75	2	0-2	1	2	0- 2
SALIX	25	0	0-2	T	0	0- 2
Rice	25	0	0-3	1	0	0- 3
Cele	25	0	0-3	2	0	0- 7
Rowo	25	0	0-1	T	0	0- T
Amut	25	0	0-2	T	0	0- 1
Sihy	100	4	3-5	8	15	1-15
Poam	75	3	0-3	3	5	0- 5
Mebu	50	0	0-3	T	-	0- 1
Agtr	50	0	0-3	3	0	0-10
CAREX	25	0	0-3	1	0	0- 5
Pose	25	0	0-2	T	0	0- 1
Elci	25	0	0-3	T	0	0- 2
STIPA	25	0	0-3	2	0	0-10
POA	25	0	0-3	1	0	0- 5
Brma	25	0	0-3	2	0	0-10
Mefr	25	0	0-5	6	0	0-25
Feid	25	0	0-2	T	0	0- 2
Stlo	75	3	0-3	2	-	0- 3
Urdi	50	-	0-3	2	0	0- 5
Pogl	50	0	0-4	3	0	0-10
VIOLA	50	-	0-1	T	-	0- T
Aggl	50	0	0-3	1	0	0- 3
Sese	50	0	0-2	T	0	0- 1
Sime	25	0	0-4	4	0	0-15
Smsi	25	0	0-3	2	0	0-10
Hyca	25	0	0-3	T	0	0- 2
PHACE	25	0	0-1	T	0	0- T
Stja	25	0	0-5	1	0	0- 5
DELPH	25	0	0-1	T	0	0- T
Agur	25	0	0-1	T	0	0- T
Luca	25	0	0-1	T	0	0- T
ALLIU	25	0	0-1	T	0	0- T
Frat	25	0	0-1	T	0	0- T
Arco	25	0	0-2	T	0	0- 1
Liba	25	0	0-3	2	0	0-10
Taof	25	0	0-3	1	0	0- 5

SOIL SUMMARY 591

	Range	Mean	Mode
Soil Depth	30	30	30
Surface Soil Characteristics			
Horizon Thickness	7-14	11	-
Color	10YR2/2-3/3		-
Texture	gl-sil		1
Structure	sg-2msbk		1msbk
pH	5.8-7.2	6.5	6.2
Roots	2-5	3.7	4
Gravel	0-40	11.3	-
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	12-20	17	18
Color	10YR3/2-4/4		10YR4/4
Texture	cl-sl		gcl
Structure	1vfsbk-2msbk		1fsbk
pH	6.0-7.0	6.5	6.0
Roots	2-3	3.2	3
Gravel	0-70	32	-
Stones	-	-	-
Surface Characteristics			
Stone Cover (> 3 inches)	0-5	1	0
Stone Dominant Diameter	0-18	18	0
Gravel Cover (< 3 inches)	0-2	T	0
Litter Cover	10-80	31	-
Bare Soil	0-2	1	1
Moss and Lichen Cover	-	-	-
Total Plant Cover	80-95	90	95

SYMBOLIC LEGEND 592

COMMUNITY DESCRIPTOR:	Potr, dead stands Artr (4-5)-Rice (0-4)-Syor (2-3)/Sihy (5)-Poam (3)-Brma (2)
DESCRIPTION:	These stands are covered with dead logs of *Populus tremuloides*. Occasionally a living tree may occur. *Artemisia tridentata* is prominent with 35% to 60% cover. *Symphoricarpos oreophilus* is present in small amounts. Grasses are variable but have limited cover.
PCI:	5
PHYSIOGRAPHY:	Level to undulating uplands and protected slopes.
ELEVATION:	6000 feet to 7400 feet
SOILS:	Surface soil loam with mean depth of 13 inches. Subsoil usually gravelly clay loam. Total soil depth is 16 inches to 30+ inches. pH is 6.6 to 6.8.
POTENTIAL:	This community has prominent evidence that it has declined from its climax condition. It has high potential for wildlife and domestic livestock range, but careful management must be used to bring it close to its potential. In the stands with a living tree, there is some chance for revegetation with *Populus tremuloides*. In the others high forage production is possible, but it is unlikely there will be a return to the previous climax type.
NUMBER OF STANDS EXAMINED:	5

VEGETATION SUMMARY 592

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Potr	50	0	0-2	0	0	0- 1
Artr	100	5	4-5	49	60	35-60
Syor	100	2	1-3	2	-	T- 3
Rice	75	3	0-4	10	-	0-35
Chna	75	1	0-3	1	T	0- 5
Riau	25	0	0-1	0	0	0- T
Rowo	25	0	0-3	2	0	0-10
Chvi	25	0	0-1	T	0	0- 1
Prvi	25	0	0-3	1	0	0- 3
Hodu	25	0	0-1	0	0	0- T
Sihy	100	5	4-5	13	15	10-15
Agtr	67	-	0-2	T	-	0- 1
Poam	67	3	0-3	2	3	0- 3
Pose	67	-	0-2	T	-	0- 1
CAREX	67	-	0-3	2	-	0- 5
Brma	67	2	0-2	1	-	0- 2
Stco	67	-	0-3	2	-	0- 5
Brte	33	0	0-2	T	0	0- 1
Stoc	33	0	0-4	4	0	0-12
Elci	25	0	0-5	8	0	0-30
Urdi	75	3	0-3	2	-	0- 5
Taof	75	3	0-3	2	-	0- 3
Luca	75	3	0-3	2	3	0- 3
VIOLA	75	3	0-3	3	5	0- 5
Agur	50	0	0-3	1	-	0- 2
Acmi	50	0	0-3	1	-	0- 2
Ersp4	50	0	0-3	1	0	0- 2
Sein	50	-	0-2	T	0	0- 1
PHACE	50	0	0-3	1	0	0- 3
POLYG	50	0	0-3	1	0	0- 2
Crac	50	-	0-1	T	-	0- T
CIRCI	50	-	0-2	T	0	0- 1
Phlo	50	0	0-2	T	0	0- T
Sime	50	0	0-3	2	0	0- 7
IRIS	25	0	0-2	T	0	0- 2
Thfe	25	0	0-2	T	0	0- 1
Gene	25	0	0-1	0	0	0- T
Fral	25	0	0-1	0	0	0- T
Seca	25	0	0-3	T	0	0- 2

Vegetation Summary 592 (continued)

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Hyca	25	0	0-1	0	0	0- T
CASTE	25	0	0-1	0	0	0- T
ALLIU	25	0	0-1	0	0	0- T
CRYPT	25	0	0-2	T	0	0- 1
Coli2	25	0	0-3	T	0	0- 1
Asca	25	0	0-1	0	0	0- T
Phhe	25	0	0-2	T	0	0- 1
ARABI	25	0	0-2	T	0	0- 1

SOIL SUMMARY 592

	Range	Mean	Mode
Soil Depth	16-30	27	30
Surface Soil Characteristics			
Horizon Thickness	5-18	13	-
Color	5YR2/2-10YR3/4		10YR3/2
Texture	si-1		1
Structure	1mgr-2msbk		1fsbk
pH	6.6-6.8	6.8	6.8
Roots	3-4	4	4
Gravel	0-30	6	0
Stones	0-40	11	0
Subsoil Characteristics			
Horizon Thickness	0-25	14	-
Color	2.5YR4/6-10YR4/3		-
Texture	gcl-gsl		gcl
Structure	2fsbk-2msbk		2msbk
pH	6.6	6.6	6.6
Roots	2-3	2	2
Gravel	18-30	20	20
Stones	0-20	5	0
Surface Chacteristics			
Stone Cover (> 3 inches)	0-5	2	0
Stone Dominant Diameter	5-8	6	-
Gravel Cover (< 3 inches)	2-5	3	3
Litter Cover	15-45	30	-
Bare Soil	5-20	11	5
Moss and Lichen Cover	0	0	0
Total Plant Cover	75-90	82	-

SYMBOLIC LEGEND 593

COMMUNITY DESCRIPTOR:	Potr (5)/Syor (1-4)-Artr (4-5)/Sihy (2-5) Mebu (0-5)-Brma (2)-Poam (0-3)
DESCRIPTION:	This community is a pure stand of *Populus tremuloides* trees with reproduction evident in a large number of young trees in the understory. *Symphoricarpos oreophilus* is also present in the understory with T to 4% cover. *Artemisia tridentata* has 1% to 5% cover. The herbaceous layer is rich in grasses and forbs.
PCI:	5
PHYSIOGRAPHY:	Protected slopes and rolling to undulating uplands.
ELEVATION:	6600 feet to 7000 feet
SOILS:	The surface soil is loam with a mean depth of 16 inches. Subsoil is clay loam with a mean depth of 12 inches. pH is 6.2 to 6.8.
POTENTIAL:	High value wildlife and domestic livestock range and cover.
NUMBER OF STANDS EXAMINED:	4

VEGETATION SUMMARY 593

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Potr	100	5	5	68	75	60-75
SALIX	25	0	0-3	T	0	0- 2
Syor	100	2	1-4	2	T	T- 4
Artr	100	5	4-5	3	-	1- 5
Rice	50	0	0-4	1	0	0- 3
Chna	50	0	0-3	1	0	0- 3
Rosa	25	0	0-2	T	0	0- 1
Prvi	25	0	0-1	0	0	0- T
Sihy	100	3	2-5	5	-	T-15
Agtr	75	1	0-1	T	T	0- T
Poam	75	1	0-3	1	T	0- 3
Brma	75	2	0-2	1	1	0- 1
Pose	50	-	0-1	T	-	0- T
CAREX	50	0	0-3	1	0	0- 3
Brte	50	0	0-5	4	0	0-15
POA	50	-	0-2	1	0	0- 3
Mebu	50	0	0-5	2	0	0-10
Stco	25	0	0-1	T	0	0- 1
Stoc	25	0	0-2	T	0	0- 1
Popr	25	0	0-1	0	0	0- T
Viba	75	3	0-3	1	1	0- 2
Hyca	75	-	0-4	3	1	0-10
VIOLA	75	-	0-3	3	-	0-10
Lare	75	2	0-2	1	1	0- 1
Copa	50	0	0-3	T	-	0- T
SENEC	50	0	0-2	T	-	0- T
Acmi	50	0	0-3	T	0	0- 1
Stlo2	50	-	0-3	1	0	0- 3
Moped	50	0	0-3	1	-	0- 1
Rucr	50	0	0-2	T	-	0- T
Ersp4	50	-	0-2	T	0	0- 1
Crac	50	0	0-3	1	0	0- 5
Taof	50	0	0-3	T	0	0- 1
PHACE	50	0	0-3	1	0	0- 2
DELPH	50	0	0-2	T	-	0- T
Urdi	50	0	0-3	T	0	0- 1
Libu	25	0	0-5	6	0	0-25
ALLIU	25	0	0-2	T	0	0- 1
CHENO	25	0	0-2	T	0	0- 1

Vegetation Summary 593 (continued)

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
POLYG	25	0	0-3	1	0	0- 2
Sime	25	0	0-1	0	0	0- T
Thmo	25	0	0-1	0	0	0- T
Luca	25	0	0-3	1	0	0- 2
Seca	25	0	0-3	1	0	0- 3
Phlo	25	0	0-2	0	0	0- T
CERSI	25	0	0-1	0	0	0- T
Aggl	25	0	0-1	0	0	0- T

SOIL SUMMARY 593

	Range	Mean	Mode
Soil Depth	24-30	28	30
Surface Soil Characteristics			
Horizon Thickness	6-30	16	-
Color	5YR3/2-10YR4/3		10YR3/2
Texture	sil-gl		1
Structure	1vfsg-3msbk		-
pH	6.2-6.8	6.6	6.6
Roots	2-4	3	3
Gravel	0-32	23	0
Stones	0-5	T	0
Subsoil Characteristics			
Horizon Thickness	0-24	12	-
Color	7.5YR4/4-10YR4/3		-
Texture	cl-gcl		cl
Structure	1fsbk-1msbk		-
pH	6.0-6.6	6.3	-
Roots	2-3	2	-
Gravel	0-30	18	-
Stones	10-50	28	-
Surface Characteristics			
Stone Cover (> 3 inches)	0-3	1	0
Stone Dominant Diameter	8-15	11	-
Gravel Cover (< 3 inches)	T-3	1	T
Litter Cover	10-20	15	-
Bare Soil	2-15	9	15
Moss and Lichen Cover	0	0	0
Total Plant Cover	70-95	83	-

SYMBOLIC LEGEND 594

COMMUNITY DESCRIPTOR:	Potr (5)/Artr (1-5)/Sihy (2-3)-Deel (0-3)
DESCRIPTION:	A pure stand of *Populus tremuloides* with little or no reproduction in the understory. *Artemisia tridentata* the only shrub present with 0% to 5% cover. *Sitanion hystrix* 1% to 2% cover and *Deschampsia elongata* with 0% to 1% cover in the herbaceous layer. Other grasses few.
PCI:	5
PHYSIOGRAPHY:	Rolling to undulating uplands
ELEVATION:	6800 feet to 7200 feet
SOILS:	Top soil usually 10 inches of loam to subsoil of gravelly clay loam which is 20 inches deep. pH is 5.5 to 6.8. Gravel is common in the subprofile.
POTENTIAL:	Of value as shelter for wildlife and domestic livestock. Protection needed for reproduction of trees. A good management program would probably greatly increase forage production and tree reproduction.
NUMBER OF STANDS EXAMINED:	4

VEGETATION SUMMARY 594

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Potr	100	5	5	68	80	50-80
Artr	75	5	0-5	2	-	0- 5
Sihy	100	3	2-3	1	1	1- 2
Deel	75	-	0-3	T	1	0- 1
Brte	50	0	0-3	T	0	0- 2
Mebu	25	0	0-3	T	0	0- 2
Popr	25	0	0-3	T	0	0- 1
Taof	100	1	1-3	1	T	T- 5
ALLIU	100	3	1-3	1	T	T- 3
POLYG	100	-	3-5	8	-	5-10
Stlo2	100	3	3-5	6	2	2-15
Urdi	75	3	0-5	12	-	0-40
VIOLA	75	3	0-3	1	2	0- 2
CHENO	75	1	0-2	T	T	0- T
Moped	50	-	0-3	3	0	0- 7
Sese	50	0	0-3	1	0	0- 3
Ersp4	50	0	0-3	1	0	0- 2
Lare	25	0	0-3	T	0	0- 2
PHACE	25	0	0-1	0	0	0- T
Rucr	25	0	0-1	0	0	0- T
Pogl	25	0	0-1	0	0	0- T
Agur	25	0	0-3	1	0	0- 5
Viba	25	0	0-3	T	0	0- 1
Hyca	25	0	0-3	T	0	0- 2
SENEC	25	0	0-2	0	0	0- T
Geri	25	0	0-3	T	0	0- 2

SOIL SUMMARY 594

	Range	Mean	Mode
Soil Depth	24-30	28	30
Surface Soil Characteristics			
Horizon Thickness	10-18	13	10
Color	10YR2/2-3/2		10YR3/2
Texture	1-gl		1
Structure	sg-2msbk		2msbk
pH	5.5-6.8	6.3	6.4
Roots	2-4	3	3
Gravel	5-30	16	15
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	6-20	15	20
Color	10YR3/2-4/4		-
Texture	cl-gcl		gcl
Structure	1fsbk-2mbk		1sbk
pH	5.8-6.6	6.4	6.6
Roots	2-3	3	3
Gravel	10-20	15	10
Stones	0-50	25	-
Surface Characteristics			
Stone Cover (> 3 inches)	0-1	T	0
Stone Dominant Diameter	12	12	12
Gravel Cover (< 3 inches)	0-10	3	-
Litter Cover	10-20	15	-
Bare Soil	20-30	23	20
Moss and Lichen Cover	-	-	-
Total Plant Cover	70-80	73	70

SYMBOLIC LEGEND 714

COMMUNITY DESCRIPTOR:	Spcr (5)-Brte (3)-Pose (0-3) [Arsp (2-4)-Atco (0-5)-Grsp (0-3)]
DESCRIPTION:	The most prominent species in this community is *Sporobolus cryptandrus* which has 30% to 65% cover. For the most part the shrubs here are in the understory and make up a minor part of the total cover. *Artemisia spinescens* has 1% of 7% cover, and *Atriplex confertifolia* has 0% to 10% cover.
PCI:	θ
PHYSIOGRAPHY:	This community found on exposed slopes.
ELEVATION:	4600 feet to 4900 feet
SOILS:	The surface soils are gravelly sandy loam to silt loam 2 inches deep to silty clay loam subsoil.
POTENTIAL:	Of limited value due to small size of area covered.
NUMBER OF STANDS EXAMINED:	4

VEGETATION SUMMARY 714

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arsp	100	2	2-4	2	1	1- 7
Atco	75	5	0-5	4	-	0-10
Grsp	50	-	0-3	1	0	0- 2
Eula	25	0	0-1	0	0	0- T
Spcr	100	5	5	52	-	30-65
Brte	100	3	3	4	5	1- 5
Sihy	50	0	0-2	T	-	0- T
Pose	50	-	0-3	1	-	0- 2
Saka	75	2	0-3	1	1	0- 2
Spco	75	2	0-2	1	1	0- 1
Meal2	25	0	0-2	T	0	0- 1

SOIL SUMMARY 714

	Range	Mean	Mode
Soil Depth	12-17	14	-
Surface Soil Characteristics			
Horizon Thickness	2-4	3	2
Color	10YR 3/3-4/3		10YR3/3
Texture	gsl-sil		-
Structure	m-sg		-
pH	7.5	7.5	7.5
Roots	2-3	3	3
Gravel	0-40	15	0
Stones	0-70	18	0
Subsoil Characteristics			
Horizon Thickness	4-13	10	-
Color	10YR3/3-4/3		10YR4/3
Texture	gcl-sicl		sicl
Structure	1fsbk-2msbk		1fsbk
pH	7.0-8.6	7.7	7.5
Roots	3	3	3
Gravel	0-30	16	30
Stones	-	-	-
Surface Characteristics			
Stone Cover (> 3 inches)	7-30	19	20
Stone Dominant Diameter	3-5	4	3
Gravel Cover (< 3 inches)	30-40	34	30
Litter Cover	4-7	5	5
Moss and Lichen Cover	0-1	T	-
Total Plant Cover	60-75	69	-

SYMBOLIC LEGEND 731

COMMUNITY DESCRIPTOR:	Brte (3-5)-Sihy (0-3)-Saka (0-5) [Shrubs < 10% cover]
DESCRIPTION:	This community is a very low seral successional stage of several possible climaxes. *Bromus tectorum* is usually prominent with 20% cover to 90% cover. Other annual plants may be present, but most perennial grasses and forbs have been removed. Total shrub cover is less than 10%.
PCI:	θ, 0
PHYSIOGRAPHY:	This community usually occurs on level to rolling uplands and xeric slopes.
ELEVATION:	4500 feet to 4900 feet
SOILS:	The soils are generally gravelly loams or sandy loams which are over 15 inches deep. The soils profile is generally poorly developed.
POTENTIAL:	Of limited use in very early spring. Often in stands too small to be considered in management.
NUMBER OF STANDS EXAMINED:	11

VEGETATION SUMMARY 731

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Arno2	45	0	0-5	1	0	0- 5
Grsp	45	0	0-5	1	0	0- 2
Artr	36	0	0-5	T	0	0- 3
Arsp	18	0	0-5	0	0	0- 2
Chna	9	0	0-2	0	0	0- 1
Chvi	9	0	0-3	0	0	0- T
Brte	100	5	3-5	62	-	20-90
Sihy	82	3	0-3	3	1	0-10
Pose	18	0	0-4	2	0	0-25
POA	18	0	0-3	0	0	0- 1
Agsp	9	0	0-3	1	0	0- 8
Saka	82	3	0-5	15	-	0-70
Spco	64	0	0-3	1	0	0- 3
Sial	64	0	0-3	2	0	0-10
Meal2	55	0	0-4	13	0	0-35
LUPIN	9	0	0-2	0	0	0- 1
POLYG	9	0	0-3	T	0	0- 3

SOIL SUMMARY 731

	Range	Mean	Mode
Soil Depth	13-24	18	16
Surface Soil Characteristics	Undeveloped		
Subsoil Characteristics	Soil Profile Poorly Developed		
Surface Characteristics			
Stone Cover (> 3 inches)	T-20	8	15
Stone Dominant Diameter	4-15	6	4
Gravel Cover (< 3 inches)	1-30	11	1
Litter Cover	5-50	29	-
Bare Soil	1-40	18	-
Moss and Lichen Cover	0-5	T	0
Total Plant Cover	70-97	87	95

SYMBOLIC LEGEND 742

COMMUNITY DESCIPTOR:	Agsp (5)-Pose (3) [Artr, Lepu2 (3-4)-Chvi (3-5)]
DESCRIPTION:	*Agropyron spicatum* is the most prominent species in this community with 25% to 50% cover. Other grasses and forbs are present in minor amounts. *Artemisia tridentata*, *Leptodactylon pungens*, and *Chrysothamnus viscidiflorus* are the major shrubs with 5% cover, 7% cover, and 3% to 10% cover, respectively.
PCI:	1
PHYSIOGRAPHY:	This community is found on steep exposed slopes.
ELEVATION:	6600 feet
SOILS:	The surface soils are gravelly or sandy loams with mean depth of 8 inches. There is abundant gravel in the profile. Subsoil is gravelly clay loam to gravelly loam. Soil depth exceeds 19 inches. pH is 6.8.
POTENTIAL:	Of value as domestic livestock range but of limited accessibility. Often far from water. Steepness is also a limiting factor.
NUMBER OF STANDS EXAMINED:	2

VEGETATION SUMMARY 742

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
Artr	100	-	3-4	5	5	5
Lepu2	100	-	3-4	7	7	7
Chvi	100	-	3-5	6	-	3-10
Teca	50	-	0-2	T	-	0- 1
Agsp	100	5	5	37	-	25-50
Pose	100	3	3	4	-	3- 5
Brte	100	-	2-3	8	-	1-15
Sihy	50	-	0-2	T	-	0- T
Stth	50	-	0-3	2	-	0- 3
Crac	100	3	3	2	-	1- 3
Lysp	100	3	3	4	-	1- 7
PENST	100	-	1-2	1	-	T- 1
Asca	50	-	0-3	2	-	0- 3
Ersp4	50	-	0-2	T	-	0- 1
Phlo	50	-	0-2	T	-	0- 1
ASTRA	50	-	0-1	T	-	0- T
Chdo	50	-	0-2	T	-	0- 1
Basa	50	-	0-2	1	-	0- 2
Erov	50	-	0-3	2	-	0- 3

SOIL SUMMARY 742

	Range	Mean	Mode
Soil Depth	19-22	20	-
Surface Soil Characteristics			
Horizon Thickness	5-11	8	-
Color	10YR4/2		10YR4/2
Texture	sl-gl		-
Structure	1fsbk-gr		-
pH	6.8	6.8	6.8
Roots	2-3	3	3
Gravel	40-75	57	-
Stones	-	-	-
Subsoil Characteristics			
Horizon Thickness	8-17	12	-
Color	10YR3/3-4/4		-
Texture	gcl-gl		-
Structure	1fsbk		1fsbk
pH	-	-	-
Roots	2-3	3	3
Gravel	30-50	40	-
Stones	0-25	12	-
Surface Characteristics			
Stone Cover (> 3 inches)	15-25	20	-
Stone Dominant Cover	7	7	7
Gravel Cover (< 3 inches)	20-45	32	-
Litter Cover	2-5	4	-
Bare Soil	15-25	20	-
Moss and Lichen Cover	-	-	-
Total Plant Cover	60-70	65	-

SYMBOLIC LEGEND 743

COMMUNITY DESCRIPTOR:	Agsp (3-5)-Feid (4-5)-Pose (3-4) [shrubs]
DESCRIPTION:	Either *Agropyron spicatum* or *Festuca idahoensis* is the most prominent species in this community with 7% to 22% cover and 10% to 25% cover, respectively. Low growing shrubs are present. These occur in amounts less than 10% cover except that a 6-inch high form of *Chrysothamnus viscidiflorus* may reach a cover of 25%.
PCI:	2-3
PHYSIOGRAPHY:	This community occurs on steep protected slopes.
ELEVATION:	6000 feet
SOILS:	The soils throughout the profile are loams or gravelly loams. Soil depth is 16 inches to 21 inches. pH is 6.6 to 7.0.
POTENTIAL:	High forage production but limited in value because of steepness and often because of distance to water.
NUMBER OF STANDS EXAMINED:	3

VEGETATION SUMMARY 743

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Artr	100	3	2-3	2	2	2- 3
Chvi	67	5	0-5	11	-	0-25
Ermi	67	-	0-3	T	-	0- 2
Lepu2	67	-	0-3	1	-	0- 2
Teca	67	-	0-2	T	T	0- T
Chna	33	0	0-2	T	0	0- T
Syor	33	0	0-5	2	0	0- 5
Putr	33	0	0-3	T	0	0- 2
Arar	33	0	0-3	T	0	0- 1
Feid	100	5	4-5	28	-	10-40
Agsp	100	3	3-5	11	-	5-22
Pose	100	3	3-4	12	10	10-15
Sihy	100	3	2-3	2	1	1- 5
Pocu	67	-	0-3	3	-	0- 7
Stth	33	0	0-2	T	0	0- 1
STIPA	33	0	0-2	T	0	0- 1
Lysp	67	3	0-3	3	5	0- 5
CREPI	67	3	0-3	1	-	0- 3
Erhe	67	1	0-1	T	T	0- T
Crac	67	3	0-3	T	1	0- 1
Basa	67	-	0-4	6	-	0-15
Erli	67	-	0-3	2	-	0- 5
Phlo	67	-	0-3	1	-	0- 3
ARABI	67	-	0-2	T	T	0- 1
LUPIN	33	0	0-2	T	0	0- T
Erov	33	0	0-3	T	0	0- 1
ASTRA	33	0	0-1	T	0	0- T
CASTE	33	0	0-2	T	0	0- T
Assc	33	0	0-2	T	0	0- T
Anco2	33	0	0-4	6	0	0-20
Migr	33	0	0-3	T	0	0- 2
Asob	33	0	0-3	T	0	0- 1
PENST	33	0	0-2	T	0	0- T
Asfi	33	0	0-3	T	0	0- T
Fral	33	0	0-3	2	0	0- 5
Sein	33	0	0-2	T	0	0- T
FRITI	33	0	0-2	T	0	0- T

SOIL SUMMARY 743

	Range	Mean	Mode
Soil Depth	16-30	22	-
Surface Soil Characteristics			
Horizon Thickness	7-21	14	-
Color	10YR3/2-4/3		10YR3/2
Texture	sl-gl		sl
Structure	1fgr-2msbk		-
pH	6.6-7.0	6.8	-
Roots	3-4	4	4
Gravel	0-40	23	-
Stones	0-25	8	0
Subsoil Characteristics			
Horizon Thickness	0-23	7	0
Color	10YR3/3-3/4		-
Texture	gl-gsl		-
Structure	1msbk-2msbk		-
pH	-		-
Roots	3	3	3
Gravel	30-46	38	-
Stones	-	-	-
Surface Characteristics			
Stone Cover (> 3 inches)	3-7	5	5
Stone Dominant Diameter	5-6	6	6
Gravel Cover (< 3 inches)	10-20	13	10
Litter Cover	5-25	13	-
Bare Soil	7-25	13	7
Moss and Lichen Cover	1-5	2	1
Total Plant Cover	70-85	78	-

SYMBOLIC LEGEND 771

COMMUNITY DESCRIPTOR:	Agde, plowed seeding
DESCRIPTION:	This community is the result of plowing the native vegetation to reduce competition, and the seeding of *Agropyron desertorum*. Dead shrubs, if present, are usually uprooted and scattered. Some shrub reproduction may be evident. Native grasses may be locally abundant, but there is evidence of plowing and seeding.
PCI:	0, 1, 2, 3
PHYSIOGRAPHY:	Variable
ELEVATION:	Variable
SOILS:	Variable
POTENTIAL:	If the seeding is well established and well managed, this is often the highest possible forage production for an area. It is widely variable because of the wide range of sites which can be successfully seeded in this manner.
NUMBER OF STANDS EXAMINED:	-

SYMBOLIC LEGEND 772

COMMUNITY DESCRIPTOR:	Agde, sprayed seeding
DESCRIPTION:	*Agropyron desertorum* is prominent in this community. Dead shrubs are mostly in tact. Shrubs may be only partially killed, leaving some living branches, or sometimes strips along the flight path of the aircraft which are hardly affected at all. Native grasses may be locally abundant but there is evidence of seeding.
PCI:	0, 1, 2, 3
PHYSIOGRAPHY:	Variable
ELEVATION:	Variable
SOILS:	Variable
POTENTIAL:	This is often the highest potential forage production if seeding is well established and well managed. It is quite variable because of the widely different sites treated by this range improvement method.
NUMBER OF STANDS EXAMINED:	-

SYMBOLIC LEGEND 773

COMMUNITY DESCRIPTOR:	Agin, seeding
DESCRIPTION:	The prominent species in this community is *Agropyron intermedium* which has been seeded. The usual means of brush control and seedbed preparation is plowing so there are usually few shrubs present.
PCI:	2, 3
PHYSIOGRAPHY:	Often bottom lands and terraces but may be variable.
ELEVATION:	Variable
SOILS:	Variable
POTENTIAL:	Very high forage production when seeded on a suitable site and when properly managed.
NUMBER OF STANDS EXAMINED:	-

SYMBOLIC LEGEND 781

COMMUNITY DESCRIPTOR:	Wet Meadows SALIX (0-5)/CAREX (0-5)-JUNCU, Hobr (0-4)-Alae (0-2)
DESCRIPTION:	This community is found along stream bottom lands, seeps, and springs. It often has *Salix* species scattered in it with 0% to 15% cover. *Carex* species, *Hordeum brachyantherum*, and *Poa pratensis* are usually present having 0% to 30%, 0% to 30%, and 0% to 50% cover, respectively. Other wetland grasses and forbs are abundant.
PCI:	5
PHYSIOGRAPHY:	Bottom lands
ELEVATION:	4600 feet to 5600 feet
SOILS:	Undeveloped profile, alluvial soils. pH is 6.4 to 7.0.
POTENTIAL:	This community has very high production per acre but is quite limited in area. Use is normally so concentrated that production is much less than it could be. The community is valuable for wildlife and domestic livestock and for the water which is associated with it.
NUMBER OF STANDS EXAMINED:	5

VEGETATION SUMMARY 781

Species	Presence %	Prominence		Cover %		
		Mode	Range	Mean	Mode	Range
SALIX	80	5	0-5	5	-	0-15
Potr	20	0	0-5	T	0	0- 2
Rowo	60	-	0-5	6	0	0-25
Artr	20	0	0-5	1	0	0- 5
Cost	20	0	0-3	T	0	0- 1
ALNUS	20	0	0-1	0	0	0- T
Riau	20	0	0-2	0	0	0- T
Popr	80	3	0-5	21	-	0-50
Hobr	80	4	0-4	14	30	0-30
CAREX	80	4	0-4	19	30	0-30
Alae	60	2	0-2	1	-	0- 3
JUNCU	60	-	0-4	14	0	0-30
Elsi	40	0	0-4	6	0	0-30
Agal	40	0	0-4	7	0	0-30
Phpr	40	0	0-2	T	0	0- 1
Deel	20	0	0-2	T	0	0- 1
Rucr	100	3	1-3	3	1	T-10
Taof	100	3	3-4	16	-	1-30
CIRSI	80	-	0-3	1	T	0- 3
TRIFO	60	0	0-3	1	0	0- 5
Migu	60	-	0-3	1	-	0- 3
POLYG	40	0	0-3	2	0	0-10
Racy	40	0	0-3	1	0	0- 3
Thmo	40	0	0-3	T	0	0- 2
ASTER	40	0	0-3	T	0	0- T
Acmi	40	0	0-3	1	0	0- 3
ITIS	40	0	0-2	T	0	0- 1
ERIGE	20	0	0-2	T	0	0- 1
XANTH	20	0	0-2	T	0	0- 1
PLANT	20	0	0-3	2	0	0-10
MIMUL	20	0	0-3	1	0	0- 3
Veca	20	0	0-3	T	0	0- 2
Hyfo	20	0	0-2	T	0	0- 2
GERAN	20	0	0-2	T	0	0- 1
FRAGA	20	0	0-1	0	0	0- T
ARABI	20	0	0-1	0	0	0- T
VIOLA	20	0	0-2	0	0	0- T
Urdi	20	0	0-3	1	0	0- 3
Arlu	20	0	0-1	0	0	0- T

Vegetation Summary 781 (continued)

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
POTEN	20	0	0-1	0	0	0- T
MENTH	20	0	0-2	0	0	0- T
EQUIS	20	0	0-3	3	0	0-15
PHACE	20	0	0-2	T	0	0- 1
Stja	20	0	0-1	0	0	0- T
SOLID	20	0	0-1	0	0	0- T
Epan	20	0	0-1	0	0	0- T

SOIL SUMMARY 781

	Range	Mean	Mode
Soil Depth	30	30	30
Surface Soil Characteristics		Undeveloped Profile	
Subsoil Characteristics			
Surface Characteristics			
Stone Cover (> 3 inches)	0-3	1	0
Stone Dominant Diameter	12	12	12
Gravel Cover (< 3 inches)	-	-	-
Litter Cover	0-5	2	5
Bare Soil	0-5	2	0
Moss and Lichen Cover	0-3	T	-
Total Plant Cover	90-100	96	-

SYMBOLIC LEGEND 782

COMMUNITY DESCRIPTOR:	Dry meadows CAREX (3-5)-Pone2 (0-5)-Muri (0-3)
DESCRIPTION:	This community includes *Carex* species and *Poa nevadensis* with 20% to 70% and 0% to 70% cover, respectively. *Muhlenbergia richardsonis* is usually present with 0% to 70% cover. Other grasses and forbs are abundant.
PCI:	3
PHYSIOGRAPHY:	Drainage ways or swales in rolling uplands
ELEVATION:	5600 feet to 6800 feet
SOILS:	Surface soil is a gravelly loam to a silt with a mean depth of 6 inches. The subsoil is usually gravelly clay loam. Total depth is over 24 inches. pH is 6.2 to 7.5.
POTENTIAL:	Having high forage production, this community is valuable livestock range even though acreage is comparatively small. Improvement could probably be accomplished with improvement of surrounding range so some of the grazing pressure is relieved. These are also important in watershed considerations.
NUMBER OF STANDS EXAMINED:	7

VEGETATION SUMMARY 782

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Artr	43	0	0-5	3	0	0-15
Chvi	14	0	0-3	T	0	0- 1
Arar	14	0	0-1	0	0	0- T
CAREX	100	5	3-5	51	-	20-70
Pone2	86	3	0-5	34	-	0-70
Muri	86	3	0-3	10	-	0-25
Popr	71	2	0-3	2	T	0-10
Hobr	57	0	0-4	7	0	0-30
JUNCU	43	0	0-3	10	0	0-25
Elci	29	0	0-3	T	0	0- 3
Agtr	29	0	0-3	2	0	0- 8
Poam	29	0	0-3	2	0	0-15
Sihy	29	0	0-3	1	0	0- 3
Brte	14	0	0-2	T	0	0- 1
Pocu	14	0	0-2	0	0	0- T
Agsp	14	0	0-2	T	0	0- 1
Kocr	14	0	0-2	T	0	0- 1
STIPA	14	0	0-2	T	0	0- 2
Acmi	100	3	3	6	-	2-20
Taof	100	3	3	13	3	2-35
Rucr	86	2	0-2	1	2	0- 2
CIRSI	71	0	0-3	T	T	0- 2
POTEN	43	0	0-3	T	0	0- 1
POLYG	29	0	0-3	3	0	0-15
ASTER	29	0	0-2	T	0	0- 1
PLANT	14	0	0-1	0	0	0- T
PENST	14	0	0-2	0	0	0- T
Anco	14	0	0-1	0	0	0- T
Pogl	14	0	0-1	0	0	0- T
Pogr	14	0	0-3	1	0	0- 5
Sein	14	0	0-1	0	0	0- T
Arlu	14	0	0-3	1	0	0- 5
IRIS	14	0	0-3	1	0	0-10
AGOSE	14	0	0-2	T	0	0- 1
TRIFO	14	0	0-3	1	0	0-10
Heho	14	0	0-1	0	0	0- T
VIOLA	14	0	0-1	0	0	0- T
Stlo	14	0	0-2	T	0	0- 1
DELPH	14	0	0-1	0	0	0- T
Sior	14	0	0-1	0	0	0- T

Vegetation Summary 782 (continued)

Species	Presence %	Prominence Mode	Prominence Range	Cover % Mean	Cover % Mode	Cover % Range
Ivax	14	0	0-4	1	0	0-10
Pofl	14	0	0-1	0	0	0- T
Asoc	14	0	0-3	1	0	0-10
Megr	14	0	0-2	T	0	0- 1
Monu	14	0	0-1	0	0	0- T
Hala	14	0	0-3	T	0	0- 1
Poav	14	0	0-2	T	0	0- 1
Migr	14	0	0-2	T	0	0- 1

SOIL SUMMARY 782

	Range	Mean	Mode
Soil Depth	24-40	29	30
Surface Soil Characteristics			
Horizon Thickness	1-18	6	2
Color	10YR2/1-3/3		10YR3/2
Texture	gl-si		-
Structure	sg-2csbk		1fsbk
pH	6.4-7.2	6.7	6.4
Roots	3-5	5	5
Gravel	0-20	9	10
Stones	0	0	0
Subsoil Characteristics			
Horizon Thickness	22-29	23	22
Color	10YR2/1-6/4		-
Texture	c-sicl		gcl
Structure	1fsbk-3msbk		2fsbk
pH	6.2-7.5	6.8	6.8
Roots	1-4	3	3
Gravel	0-80	18	15
Stones	0	0	0
Surface Characteristics			
Stone Cover (> 3 inches)	0-15	2	T
Stone Dominant Cover	0-48	14	-
Gravel Cover (< 3 inches)	0-2	1	-
Litter Cover	0-35	9	T
Bare Soil	0-40	11	15
Moss and Lichen Cover	0-3	1	0
Total Plant Cover	85-99	94	95

APPENDIX 2. PLANT LIST FOR 15-MILE UNIT

MALHEUR COUNTY, OREGON

GRASSES

Genus	Species	Common Name	Symbol
Agropyron	*desertorum*	standard crested wheatgrass	Agde
Agropyron	*inerme*	beardless bluebunch wheatgrass	Agin
Agropyron	*intermedium*	intermediate wheatgrass	Agin2
Agropyron	*riparium*	streambank wheatgrass	Agri
Agropyron	*saundersii*	Saunders wheatgrass	Agsa2
Agropyron	*saxicola*	foxtail wheatgrass	Agsa
Agropyron	*smithii*	bluestem wheatgrass western wheatgrass	Agsm
Agropyron	*spicatum*	bluebunch wheatgrass	Agsp
Agropyron	*subsecundum*	bearded wheatgrass	Agsu
Agropyron	*trachycaulum*	slender wheatgrass	Agtr
Agrostis	*alba*	redtop	Agal
Agrostis	*exarata*	spike bentgrass	Agex
Alopecurus	*aequalis*	shortawm foxtail	Alae
Bromus	*inermis*	smooth brome	Brin
Bromus	*marginatus*	mountain brome	Brma
Bromus	*tectorum*	cheatgrass brome	Brte
Deschampsia	*danthonioides*	annual hairgrass	Deda
Deschampsia	*elongata*	slender hairgrass	Deel
Distichlis	*stricta*	alkali saltgrass	Dist
Elymus	*cinerius*	giant wildrye	Elci
Elymus	*simplex*		Elsi
Festuca	*idahoensis*	Idaho fescue	Feid
Glyceria	*pauciflora*	weak mannagrass	Glpa
Hordeum	*brachyantherum*	northern meadow barley	Hobr
Koeleria	*cristata*	prairie junegrass	Kocr
Melica	*bulbosa*	oniongrass	Mebu
Melica	*californica*	California melic	Meca2
Melica	*fugax*	little oniongrass	Mefu
Muhlenbergia	*asperifolia*	alkali muhly	Muas
Muhlenbergia	*richardsonis*	mat muhly	Muri
Oryzopsis	*bloomeri*	Bloomers ricegrass	Orbl
Oryzopsis	*hymenoides*	Indian ricegrass	Orhy
Oryzopsis	*webberi*	Webber ricegrass	Orwe
Poa	*ampla*	big bluegrass	Poam
Poa	*canbyi*	Canby bluegrass	Poca
Poa	*cusickii*	Cusick bluegrass	Pocu
Poa	*nervosa*	Wheeler bluegrass	Pone

Genus	Species	Common Name	Symbol
Poa	*nevadensis*	Nevada bluegrass	Pone2
Poa	*pratensis*	Kentucky bluegrass	Popr
Poa	*secunda*	Sandberg bluegrass	Pose
Polypogon	*monspeliensis*	rabbitfoot polypogon	Pomo
Sitanion	*hystrix*	bottlebrush squirreltail	Sihy
Sporobolus	*airoides*	alkali sacaton	Spai
Sporobolus	*cryptandrus*	hairgrass dropseed sand dropseed	Spcr
Stipa	*californica*	California needlegrass	Stca
Stipa	*columbiana*	Columbia needlegrass	Stco
Stipa	*comata*	needle and thread	Stco2
Stipa	*elmeri*	Elmer needlegrass	Stel
Stipa	*occidentalis*	western needlegrass	Stoc
Stipa	*thurberiana*	Thurber needlegrass	Stth

GRASSLIKE PLANTS

Genus	Species	Common Name	Symbol
Carex	*spp.*	sedge	CAREX
Juncus	*spp.*	rush	JUNCU
Juncus	*effusus*	common rush	Juef
Juncus	*ensifolius*	swordleaf rush	Juen
Triglochin	*maritima*	shore podgrass arrowgrass	Trma2

FORBS

Genus	Species	Common Name	Symbol
Achillea	*millefolium* var. *lanulosa*	yarrow	Acmil
Agastache	*urticifolia*	nettleleaf gianthyssop	Agur
Agoseris	*glauca*	pale agoseris mountain dandelion	Aggl
Agoseris	*heterophylla*	annual agoseris	Aghe
Allenrolfea	*occidentalis*	pickleweed	Aloc
Allium	*acuminatum*	tapertip onion	Alac
Amsinckia	*retrorsa*	rigid fiddleneck	Amre2
Antennaria	*dimorpha*	low pussytoes	Andi
Antennaria	*rosea*	rose pussytoes	Anro
Apocynum	*androsaemifolium* var. *pumilum*	low dogbane	Apanp

Genus	Species	Common Name	Symbol
Arabis	*holboellii*	Holboell rockcress	Arho
Arabis	*puberula*	shorthair rockcress	Arpu
Arenaria	*aculeata*	needleleaf sandwort	Arac2
Arenaria	*kingii*	Kings sandwort	Arki
Arnica	*chamissonis*	chamisso arnica	Arch
Arnica	*cordifolia*	heartleaf arnica	Arco
Artemisia	*ludoviciana*	Louisiana sagebrush	Arlu
Asclepias	*cryptoceras*	pallid milkweed	Ascr
Aster	*canescens*	hoary aster	Asca
Aster	*foliaceus*	leafybract aster	Asfo
Aster	*occidentalis*	western aster	Asoc
Aster	*perelegans*	elegant aster	Aspe
Aster	*scopulorum*	crag aster	Assc
Astragalus	*lentiginosus*	specklepod loco	Asle
Astragalus	*miser*	starved milkvetch	Asmi
Astragalus	*purshii*	Pursh loco	Aspu
Astragalus	*stenophyllus*	hangingpod milkvetch	Asst
Balsamorhiza	*hookeri*	Hooker balsamroot	Baho
Balsamorhiza	*sagittata*	arrowleaf balsamroot	Basa
Balsamorhiza	*serrata*	serrated balsamroot	Base
Blepharipappus	*scaber*		Blsc
Calochortus	*bruneaunis*	sego lily, mariposa	Cabr3
Castilleja	*applegatei*	Applegate paintbrush	Caap2
Catilleja	*inverta*		Cain7
Castilleja	*linariaefolia*	Wyoming paintbrush	Cali
Caulanthus	*pilosus*		Capi4
Chaenactis	*douglasii*	falseyarrow	Chdo
Chenopodium	*fremontii*		Chfr
Chenopodium	*leptophyllum*	slimleaf goosefoot	Chle
Cirsium	spp.	thistle	CIRSI
Cleome	*lutea*	yellow spiderflower	Cllu
Collinsia	*parviflora*	littleflower collinsia	Copa
Collomia	*linearis*	narrowleaf collomia	Coli2
Cordylanthus	*ramosus*	bushy birdbeak	Cora
Crepis	*acuminata*	tapertip hawksbeard	Crac
Cryptantha	*affinis*	slender cryptantha	Craf
Cryptantha	*circumscissa*	matted cryptantha	Crci
Cryptantha	*subretusa*		Crsu
Cystopteris	*fragilis*	brittle bladderfern	Cyfr
Delphinium	*andersonii*	Anderson larkspur	Dean
Delphinium	*stachydeum*	Rockymountain larkspur	Dest
Descurainia	*pinnata*	pinnate tansymustard	Depi
Dodecatheon	*jeffreyi*	Jeffrey shootingstar	Doje
Epilobium	*glandulosum*	common willowweed	Epgl

Genus	Species	Common Name	Symbol
Epilobium	*paniculatum*	autumn willowweed	Eppa
Eriastrum	*sparsiflorum*	eriastrum	Ersp4
Erigeron	*bloomeri*	scabland fleabane	Erbl
Erigeron	*chrysopsidis*	dwarf yellow fleabane	Erch
Erigeron	*compositus*	dwarf mountain fleabane	Erco
Erigeron	*filifolius*	threadleaf fleabane	Erfi
Erigeron	*pumilis*	shaggy fleabane	Erpu
Eriogonum	*caespitosum*	mat buckwheat	Erca
Eriogonum	*ovalifolium*	cushion buckwheat	Erov
Eriogonum	*vimineum*	broom buckwheat	Ervi
Eriophyllum	*lanatum*	woolly eriophyllum	Erla
Euphorbia	*serpyllifolia*	thymeleaf euphorbia	Euse
Frasera	*albicaulis*	white stem frasera	Fral
Fritillaria	*atropurpurea*	purplespot fritillary	Frat
Fritillaria	*pudica*	yellow fritillary	Frpu
Galium	*aparine*	Cleavers bedstraw	Gaap
Galium	*triflorum*	sweetscented bedstraw	Gatr
Galium	*multiflorum*	shrubby bedstraw	Gamu
Gayophytum	*nuttallii*	Nuttall groundsmoke	Ganu
Geranium	*nervosum*		Gene
Geranium	*richardsonii*	Richardson geranium	Geri
Geum	*macrophyllum*	largeleaf avens	Gema
Gilia	*congesta*	ballhead gilia	Gico
Gilia	*leptomeria*		Gile
Gilia	*tenerrima*		Gite
Halogeton	*glomeratus*	halogeton	Hagl
Haplopappus	*lanceolatus*	laceleaf goldenweed	Hala2
Haplopappus	*nanus*	dwarf goldenweed	Hana
Haplopappus	*stenophyllus*	narrowleaf goldenweed	Hast2
Haplopappus	*uniflorus*	plantain goldenweed	Haun
Helenium	*hoopesii*	orange sneezeweed	Heho
Helianthus	*annuus*	common sunflower	Hean
Hydrophyllum	*capitatum*	ballhead waterleaf	Hyca
Hypericum	*formosum* var. *scouleri*	Scouler St. Johnswort	Hyfos
Iris	spp.	Iris	IRIS
Iva	*axillaris*	povertyweed	Ivax
Ivesia	*baileyi*	Bailey ivesia	Ivba
Kelloggia	*galioides*	kelloggia	Kega
Lactuca	*serriola*	prickly lettuce	Lase

Genus	Species	Common Name	Symbol
Lagophylla	*ramosissima*	slender rabbitleaf	Lara
Lappula	*redowskii*	western stickseed	Lare
Lepidium	*montanum*		Lemo2
Lepidium	*perfoliatum*	clasping pepperweed	Lepe
Lesquerella	*condensata*		Leco2
Lewisia	*rediviva*	bitterroot lewisia	Lere
Linanthus	*demissus*		Lide
Lithophragma	*bulbifera*	slender woodland star	Libu
Lithospermum	*californicum*	California gromwell	Lica
Lithospermum	*ruderale*	western gromwell	
		stoneseed	Liru
Lomatium	*cous*	cous biscuit root	Loco2
Lupinus	*aridus*	prairie lupine	Luar2
Lupinus	*caudatus*	tailcup lupine	Luca
Lygodesmia	*spinosa*	skeleton plant	Lysp
Madia	*glomerata*	cluster tarweed	Magl
Madia	*gracilis*	common tarweed	Magr
Marrubium	*vulgare*	common hoarhound	Mavu
Marsilea	*vestita*	hairy pepperwort	Mave
Melilotus	*alba*	white sweetclover	Meal
Mentha	*arvensis*	field mint	Mear3
Mentzelia	*albicaulis*	whitestem mentzelia	Meal2
Mentzelia	*decapetala*	tenpetal blazingstar	Mede
Mertensia	*oblongifolia*	leafy bluebells	Meob
Microseris	*alpestris*	alpine microseris	Mial2
Microseris	*troximoides*	false agoseris	Mitr
Microsteris	*gracilis*	pink microsteris	Migr
Mimulus	*guttatus*	common monkeyflower	Migu
Mimulus	*nanus*	dwarf monkeyflower	Mina
Monardella	*odoratissima*	Pacific monardella	Mood
Monolepis	*nuttalliana*	Nuttall monolepis	Monu
Montia	*perfoliata*		
	var. *depressa*	miners lettuce	Moped
Navarretia	*divaricata*		Nadi
Nemophila	*breviflora*	Great Basin	
		nemophila	Nebr
Nicotiana	*attenuata*	coyote tobacco	
		wild tobacco	Niat
Nitrophylla	*occidentalis*		Nioc
Oenothera	*alyssoides*	alyssum	
		eveningprimrose	Oeal
Oenothera	*caespitosa*		
	var. *purpurea*		Oecap
Oenothera	*claviformis*	browneyed	
		eveningprimrose	Oecl

Genus	Species	Common Name	Symbol
Oenothera	*heterantha*	longleaf evening primrose	Oehe
Paeonia	*brownii*	Browns peony	Pabr
Penstemon	*cusickii*	Cusick penstemon	Pecu
Penstemon	*deustus*	scabland penstemon	Pede
Penstemon	*humilis*	low penstemon	Pehu
Penstemon	*miser*	Malheur penstemon	Pemi2
Penstemon	*speciosus*	royal penstemon	Pesp
Perideridia	*bolanderi*	Bolander false-caraway	Pebo
Phacelia	*heterophylla*	verileaf phacelia	Phhe
Phacelia	*humilis*		Phhu
Phacelia	*scopulina*		Phsc
Phlox	*hoodii*	Hoods phlox	Phho
Phlox	*longifolia*	longleaf phlox	Phlo
Phoenicaulis	*cheiranthoides*	daggerpod	Phch
Plagiobothrys	*harknessii*		Plha
Polygonum	*aviculare*	prostrate knotweed	Poav
Polygonum	*parryi*		Popa4
Potentilla	*glandulosa*	gland cinquefoil	Pogl
Potentilla	*gracilis*	beauty cinquefoil	Pogr
Potentilla	*rivalis*	brook cinquefoil	Pori
Ranunculus	*aquatilis*	water crowfoot	Raaq
Ranunculus	*cymbalaria*	shore buttercup	Racy
Ranunculus	*glaberrimus*	sagebrush buttercup	Ragl
Ranunculus	*sceleratus*	blister buttercup	Rasc
Rigiopappus	*leptocladus*	bristle head	Rile
Rumex	*crispus*	curly dock	Rucr
Salicornia	*pacifica*	samphire	Sapa
Salsola	*kali* var. *tenuifolia*	Russian thistle	Sakat
Scrophularia	*lanceolata*	lanceleaf figwort	Scla
Senecio	*canus*	woolly groundsel	Seca
Senecio	*integerrimus*	western groundsel	Sein
Senecio	*serra*	butterweed groundsel	Sese
Sidalcea	*oregona*	Oregon checkermallow	Sior
Silene	*menziesii*	Menzies silene	Sime
Silene	*scaposa*		Sisc2
Sisymbrium	*altissimum*	tumblemustard	Sial
Smilacina	*sessilifolia*	slim solomonplume	Smse
Sphaeralcea	*coccinea*	red globemallow	Spco
Stanleya	*viridiflora*		Stvi2
Stellaria	*longifolia*		Stlo2
Stephanomeria	*exigua*	small wirelettuce	Stex
Stephanomeria	*tenuifolia*	bushy wirelettuce	Stte
Suaeda	*depressa*	Pursh seepweed	Sude

Genus	Species	Common Name	Symbol
Suadae	*intermedia*		Suin
Taraxacum	*officinale*	common dandelion	Taof
Thermopsis	*montana*	golden pea mountain thermopsis	Thmo
Tragopogon	*dubius*	yellow salsify	Trdu
Trifolium	*gymnocarpon*	hollyleaf clover	Trgy
Trifolium	*macrocephalum*	bighead clover	Trma
Urtica	*dioica*	stinging nettle	Urdi
Veratrum	*californicum*	California false-hellebore	Veca
Veronica	*americana*	American speedwell	Veam
Viola	*bakeri*		Viba
Wyethia	*amplexicaulis*	mulesear wyethia	Wyam
Xanthium	spp.	cocklebur	XANTH
Zigadenus	*paniculatus*	foothill deathcamas	Zipa

TREES AND SHRUBS

Genus	Species	Common Name	Symbol
Alnus	spp.	alder	ALNUS
Amelanchier	*utahensis*	Utah serviceberry	Amut
Artemisia	*arbuscula*	low sagebrush	Arar
Artemisia	*longiloba*	longlobe sagebrush	Arlo2
Artemisia	*nova*	black sagebrush	Arno2
Artemisia	*spinescens*	bud sagebrush	Arsp
Artemisia	*tridentata*	big sagebrush	Artr
Artemisia	*tripartita*	threetip sagebrush	Artr2
Atriplex	*canescens*	fourwing saltbush	Atca
Atriplex	*confertifolia*	shadscale	Atco
Atriplex	*nuttallii*	Nuttall saltbush	Atnu
Ceanothus	*velutinus*	snowbrush	Ceve
Cercocarpus	*ledifolius*	curlleaf mountain-mahogany	Cele
Chrysothamnus	*nauseosus*	gray rabbitbrush	Chna
Chrysothamnus	*viscidiflorus*	green rabbitbrush	Chvi
Clematis	*ligusticifolia*	virginsbower	Clli
Cornus	*stolonifera*	red-osier dogwood	Cost
Eriogonum	*heracleoides*	Wyeth buckwheat	Erhe
Eriogonum	*microthecum*	slenderbush buckwheat	Ermi
Eriogonum	*sphaerocephalum*	rock buckwheat	Ersp3
Eriogonum	*strictum*	strict buckwheat	Erst2
Eriogonum	*umbellatum*	sulphur buckwheat	Erum
Eurotia	*lanata*	winterfat whitesage	Eula

Genus	Species	Common Name	Symbol
Grayia	*spinosa*	spiny hopsage	Grsp
Holodiscus	*dumosus*	bush oceanspray	Hodu
Juniperus	*occidentalis*	western juniper	Juoc
Leptodactylon	*pungens*	granitegilia	Lepu2
Populus	*angustifolia*	narrowleaf cottonwood	Poan2
Populus	*tremuloides*	quaking aspen	Potr
Prunus	*virginiana* var. *demissa*	western chokecherry	Prvid
Purshia	*tridentata*	antelope bitterbrush	Putr
Ribes	*aureum*	golden currant	Riau
Ribes	*cereum*	wax currant	Rice
Rosa	*woodsii*	Woods rose	Rowo
Salix	spp.	willow	SALIX
Sambucus	*cerulea*	blue elderberry	Sace
Sarcobatus	*vermiculatus*	black greasewood	Save2
Shepherdia	*argentea*	silver buffaloberry	Shar
Symphoricarpos	*oreophilus*	mountain snowberry	Syor
Tetradymia	*canescens*	gray horsebrush	Teca
Tetradymia	*glabrata*	little-leaf horsebrush	Tegl
Tetradymia	*spinosa*	cottonhorn horsebrush spiny horsebrush	Tesp