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**DOCUMENTATION OF THE MODELING
OF POTENTIAL VEGETATION AT THREE SPATIAL SCALES
USING BIOPHYSICAL SETTINGS
IN THE COLUMBIA RIVER BASIN ASSESSMENT AREA**

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ABSTRACT

This report describes the application of a vegetation model to predict potential vegetation over the 822,922 **km**² of the Columbia River Basin (CRB) assessment area at 3 scales. Topographic relief in the **CRB** assessment area ranges **from** 23 m (75 ft) to 4203 m (13,785 **ft**), with vegetation types that include desert grasslands in low elevation valleys and basins and alpine communities on some of the high peaks. A regional hierarchical classification of the Western U.S. vegetation (**Bourgeron** and Engelking, 1994) was used to derive potential vegetation (**PV**) **type** classes along moisture and temperature gradients at three distinct scales (section, regional and coarse). Elevation, slope and aspect settings were assigned to the PV classes at the section level. These settings were used to assign each 1 km x 1 km DEM pixel to the most probable PV class. GIS technology was used to aggregate these section level mapping units into the regional level map and the coarse level map. **All** maps were reviewed for their general approximation of PV cover over the CRB assessment area.

INTRODUCTION

Potential vegetation (**PV**) has been characterized and mapped worldwide for a long time. A review of major international approaches, including techniques and methodologies to produce such maps, is provided in Kuchler and Zonneveld (1988). Contemporary computer 'technology (e.g., GIS, data **handling** and storage) led to production of maps of vegetation using environmental models (**Twery** et al., 1991). Such work has been conducted in Australia (**Kessel, 1990**), California (Walker et al., **1995**), and Switzerland (**Brzeziecki** et al., 1993). The generation and use of PV maps is scale dependent. Although the specific definitions may change, PV is always understood as an expression of the biophysical environment at a site regardless of the study scale (**Ellenberg, 1988**; Kuchler, 1988).

PV maps are used in conjunction with maps of **abiotic** features (e.g., landforms) to define biophysical environments at different scales (Zonneveld, 1988a). PV and biophysical environment maps have been widely used over the world in forestry, agriculture, range management, landscape design and land-use planning (Zonneveld, 1979, **1988b**, 1989). These maps are needed for setting the ecological context in the characterization of environmental and disturbance regimes in order to assess present conditions of landscape patterns and as input into models of landscape pattern changes under various scenarios (management, global change, etc.).

This documentation summarizes the approach used to model the distribution of PV over the Columbia River Basin (CRB) assessment area. Three scales were selected (section, regional and coarse levels) that correspond to the levels of ecological organization considered by the CRB assessment team (Science Integration Team, EEMP, 1994). A regional classification of the vegetation of the Western

U.S. (Bourgeron and Engelking, 1994) was adopted as the basis for the PV mapping. Vegetation relations to broad moisture and temperature settings were produced in the form of 4 x 4 matrices for the vegetation of interest at each study scale. These matrices at the **finest** scale (section) provided the basis for assigning elevation, slope and aspect settings. Hypothesized PV classes were encoded based on settings derived from information in a digital elevation model (**DEM**) of each section. Mapping units were aggregated from the lower to the next higher scale using the appropriate environmental matrices.

STUDY AREA

The area covered by the PV maps includes **all** of the CRB assessment area (822,922 km²) as defined for the **Eastside** Ecosystem Management Project (EEMP) (Figure 1). The landscape characterization boundary map produced by Menakis and Long (August 26, 1994) was used to delineate the area where PV was modeled. Topographic relief ranges from 23 m (75 ft) to 4203 m (13,785 **ft**), with vegetation types that include desert grasslands in low elevation valleys and basins and alpine communities on the high peaks. Vegetation in low to mid elevations has a complex history and has been intensively managed, including widespread conversion to agricultural and urban uses in some areas. Higher elevation zones have a somewhat more natural vegetation pattern.

The climate varies from hot and very dry in the low elevation valleys to temperate humid, with a strong maritime to continental gradient from west to east, as well as steep elevational gradients in the mountain ranges. The system used in this study to define ecological regions in the CRB assessment area is the National Hierarchical Framework of Ecological Units (**ECOMAP**, 1993). Bailey's (1980)

descriptions of the units of an initial hierarchical classification of ecoregions of the United States is being revised (Bailey, in prep). In the CRB assessment area, the section level was chosen as the basis for the PV modeling. The CRB encompasses 24 sections. Section maps (Bailey et al., 1994) and descriptions (McNab and Avers, 1994) were used. For the purpose of the PV modeling, one of the sections (342B - Northwestern Basin and Range) was split into two components because of its very large surface area and an enormous **biophysical** gradient encompassed by the section.

SCALE AND RESOLUTION

A raster map generated using a GIS is an array of square cells representing sampling points where the occurrence of vegetation types is **modelled**. Any vegetation-site model can be used to generate maps at different scales. The scale determines the grid size and/or the level of classification used and can change the characteristics of the grid cells on the map. In the CRB study, the mapping scale is **1:2,000,00** and 3 classification **scales** were used to produce grid **cells**. These three classification scales (section, regional and coarse [see **details** in the following sections of the text]) correspond to three levels of ecological organization for the assessment (Science Integration Team, EEMP, 1994).

For the generation of the maps themselves, resolution is more important than scale. Resolution is the distance between sampling points and, hence, directly determines the number of predicted points in the map area. In the present work, a resolution of 1x1 km has been chosen.

VEGETATION-SITE MODEL

Data source: The classification system used to generate PV classes

The dependent **variable** in the vegetation site model is a vegetation type. Over large areas like the CRB, there is a need **to use** a standardized and **regionalized** classification system (Bourgeron, 1988, 1989). In this modeling exercise, The Nature Conservancy's western regional vegetation classification (Bourgeron and Engelking, 1994) was adopted. The effort **to** produce a **standardized** western U.S. vegetation classification was spearheaded by The Nature Conservancy in collaboration with the State Heritage Program network and cooperators (e.g., **USFS**, **BLM**, etc.). A first comprehensive draft of the western regional vegetation classification (**WRVC**) was completed in March 1994 (Bourgeron and Engelking, 1994).

This classification includes the existing natural and the semi-natural vegetation found in the western U.S. Incorporated in the classification are vegetation **types with** modest amounts of exotic **species** that are deemed to be within the reasonable range of the original natural vegetation. Excluded from the classification are vegetation types that are entirely created by human activities (e.g., lawns, crops). Types that are dominated by exotic species are not in the main body of the classification but are documented in an appendix for various purposes (mapping and management). This appendix was available for use in the CRB assessment project.

The WRVC is a hierarchical classification system patterned at the highest levels after the UNESCO world vegetation system (UNESCO, 1973) as revised by Driscoll et al. (1984) in the U.S. ecological land classification framework. Under the UNESCO framework, subdivisions based on floristic units

have been added in the western regional classification. The hierarchical classification system is as follows:

CLASSES: There are five mutually exclusive classes based on dominant growth form and **cover:** Forest, Woodland, Shrubland, Dwarf-shrubland, and Herbaceous vegetation.

SUBCLASSES: Discrimination is based on morphologic characters as adaptations to water and temperature regimes.

GROUPS: The separations are based on **further** morphologic adaptations to generalized climatic regimes, associated life **forms**, and other physiognomic characteristics.

FORMATIONS: Criteria for communities at this level include tree crown shape, kinds of associated vegetation, amount and kind of understory vegetation, and a variety of morphologic adaptations to ecological and environmental features.

- **ALLIANCES:** The alliance level is similar to the series level used in the western U.S. (**Pfister** et al., 1977; Mueggler and Stewart, **1980**), **but** includes existing types, not just climax or **natural** vegetation types. Alliances are recognized by at least one differential or dominant differential species (sensu Pojar et al., 1987).

PLANT ASSOCIATIONS: The plant association concept (Flahault and Schroter, 1910) has been used with a few variations by most schools of vegetation classification (**Braun-Blanquet**, 1965; **Westhoff** and van der **Maarel**, 1978; see review in Whittaker, 1980). The habitat

typing methodology also uses the plant association concept but restricts its use to climax or late seral vegetation (**Daubenmire**, 1952; **Pfister**, 1977). There are approximately 2010 plant associations in the western regional classification (**Bourgeron** and Engelking, 1994).

The classification was developed by sorting stand data available over the western U.S. in journal articles, published and unpublished **reports**, **inventory** data, etc. To be included, a reference had to provide: (1) location information, (2) description of methods, and (3) species lists and measures of abundance values. A **total** of 1346 references have been used to date. The classification process was implemented through a variety of qualitative and quantitative means (stand table comparison, rearrangement, clustering, ordination, correlations of types with each others, etc.) depending upon the amount and type of information available.

The Nature Conservancy state and regional Heritage ecologists worked together to ensure: (1) the consistent regional application of the techniques and concepts; (2) the quality control of the data; and (3) the internal consistency of **the** regional classification. Existing state classifications were merged into the regional framework. A series of regional and subregional meetings have been held over the past ten years to interpret the results of the analyses and to consolidate the regional classification. Many academic and agency professionals were directly involved in the various steps of the process and in some meetings. State and regional reviews were provided by local and regional experts.

At present; the western regional classification of the vegetation covers **Arizona**, Colorado, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington and Wyoming. Work was conducted in the spring of 1994 to begin inclusion of California within the regional framework. Although the system has **some** limitations (incompleteness due to the lack of data, need for more quantitative

analysis, etc.), it is the only regional attempt of the sort that has been developed using existing information. It is used by The Nature Conservancy for conservation planning in the western region and by the National Biological Service's GAP to map existing 'vegetation at the alliance level.

Potential vegetation classifications and their temperature-moisture gradient relations

PV classifications were generated at each of the three classification scales. First, the vegetation was divided in three broad physiognomic classes: forests, **shrublands** and herbaceous types. Forests include the closed and open forests of the Driswill et al.'s (1984) classification framework. Shrublands include Driswill et al.'s shrublands and dwarf shrubiands. **Herbaceous** types are the same as in Driswill et al.'s framework. Second, potential vegetation types and their relationships to temperature-moisture gradients **were** defined for **each** physiognomic class, (1) for each section (section level) and (2) across the entire CRB assessment area (regional level). A warse level PV classification was generated by defining twenty PV types in relation to basin wide **temperature-moisture** gradients, regardless of the physiognomy.

There is a large body of information (literature and available data) that allows for the display of relationships between plant vegetation types and their environment at the landscape level. Such relationships are often presented as ecological gradient graphs which greatly facilitate the mapping of the PV. Such schemes however are generally local and cannot be easily **regionalized**. **Furthermore**, they usually do not follow an explicit and formalized process, which leads to a low degree of reproducibility.

Because (1) a regional numerical database was not available to develop statistical vegetation-site

models at the inception of the project, and (2) **constraints** due to the assessment's timetable would not have allowed for such a rigorous statistical approach, the present work followed a hybrid methodology. Expert knowledge and experience were incorporated by the participation of professionals who have broad knowledge of one or more of the vegetation classes within an array of the sections. A series of workshops were organized, and the participants asked to contribute their knowledge and experience (a list of participants is provided at the end of this document). The statement of the vegetation-environment relations was made explicit and repeatable by the use of a standardized PV classification system at the plant association level and of all environmental site data for generating environmental matrices at all the **study scales**. **Finally**, the use of a DEM to encode the **biophysical** settings for each PV class led to the verification of the hypothesized model.

The process of determining the potential vegetation **classifications** and their temperature-moisture gradient relations included the following steps.

(1) Generation of a list of PV plant associations over the CRB

A list of plant associations corresponding to potential vegetation by physiognomic class was generated from the WRVC over the CRB (Appendices 1 & 2). By definition, any PV is hypothetical (**Ellenberg**, 1988; **Kuchler**, 1988). Remnants of **natural** or semi-natural vegetation still occurring in the present day landscape are often used to assess what PV may be in a given location (e.g., **Brzeziecki** et al., 1993; **Ellenberg**, 1988; **Kuchler**, 1988).

In the CRB, the general approach was to consider as PV all plant associations that represent the end of successional sequences. The WRVC was searched for such types and a list was produced. All

existing information (e.g., literature, data, etc.) was used to make decisions. For example, generalized successional models developed for forest succession after fires were considered to assess the **seral** status of many forest types (e.g., Fisher and Clayton; 1983). The list of candidate plant associations to be used as the foundations for mapping PV in the **CRB** area was reviewed by State Heritage ecologists and agency professionals.

The master list of potential plant associations was revised as necessary (types were deleted, or added if missing) before, during, and after all **the** workshops organized to build the PV classifications, to assign the biophysical settings and to **conduct** quality control of the maps produced. To be added to the revised list, types had to be (1) in the WRVC but omitted in the initial list, or (2) fully documented (i.e., supported by hard data, and having been subjected to analysis and peer review) but not incorporated in the WRVC. **Preliminary** types that had not been published by spring 1994 were not included, but were added to an **appendix** for future update.

After the different rounds of reviews, a total number of 807 plant associations were considered for the PV mapping and **528** references were used to characterize these types and their environmental relationships (Appendix 1). Additional information on those plant associations with restricted distribution (G1-G2) is provided in Appendix 2.

(2) Arrangement of the potential associations into section level classifications

A workshop was organized in Portland, OR, to build section level potential vegetation classifications for each of the three broad physiognomic classes of vegetation (forests, shrublands and herbaceous types) from the master list of PV plant associations. A map of sections and their descriptions were

provided by the EEMP, USFS, USFWS, **BLM**, SCS, and other professionals with broad regional knowledge of the **vegetation** participated in the process.

For each physiognomic class within each section, the moisture and temperature gradients were divided into four coarse segments resulting in 4 x 4 matrices (four temperature settings x four moisture settings). Workshop participants were asked to list the PV plant associations found within each **temperature-moisture** setting (e.g., **[cold, wet]** setting). Table 1 presents an example for the Northern Rockies section. **All** available data (published and unpublished field **data**, quantitative descriptions, environmental and site factors) were used to group plant associations within the **moisture-temperature** categories.

The **temperature** and **moisture** gradients were scaled by physiognomic class **within** each section. For example, within a given section the **[cold, wet]** cell for forests is not **necessarily** equivalent to the **[cold, wet]** cell for the shrublands. Moreover, a given temperature-moisture cell (e.g., **[cold, wet]** for forests) is not **necessarily** equivalent among sections (e.g., between a high mountain section and a low desert section). The **temperature-moisture** matrices for each physiognomic class for all sections are listed in Appendix 3.

(3) Generation of the regional and coarse level classifications

Section level classifications were aggregated into a regional classification using regional **temperature-moisture** 4 x 4 matrices for each physiognomic class during a subsequent workshop. This process created three regional PV classifications, one for each physiognomic class (Tables 2 and 3). All plant associations found in each regional class are listed in Appendix 4. Descriptions of the regional

vegetation types are listed in Appendix 5.

During the same workshop, a warse level temperature-moisture matrix of twenty cells was created. The regional PV classes were aggregated into the cells of this matrix, regardless of the physiognomic class (Table 4). A list of these warse level types and names is available in Table 5 and full descriptions are in Appendix 6. Appendix 7 shows the placement of section **PV** classes into the warse temperature-moisture matrix.

Assignment of elevational, slope and aspect settings to the section level matrices

The independent variables for the model were selected on the basis of their ability to be derived from the DEM data for each 1x1 km pixel of the grid covering the entire CRB. Elevation, slope and aspect (Table 6) are indirect ecological factors that were chosen since they are closely related to direct ecological factors such as solar radiation. The **assignment** of the **biophysical** settings to section level PV classes (model calibration) was done on a subsection basis.

The subsection level is the most appropriate level when using **indirect** factors because it is at that spatial scale that indirect factors are best related to direct variables (such as site energy regimes, runoff potential, available moisture, and seasonal temperature highs and lows) that drive vegetation patterns at the level of the plant association, or functional groups of plant associations.

A total of 5 subregional workshops were organized in Boise (1), Missoula (2), Portland (1) and Reno (1). Professionals with local (section, subsection) field experience (e.g., national forest ecologists, range conservationists, etc.) were asked to assign one of four slope settings, one of three aspect

classes, and a 152.5 m (500 ft) elevation interval for the section level PV classes within each subsection.

Maps of subsections were provided by the EEMP. Work subgroups were formed based on participants' expertise and knowledge. All available information (literature, data, etc.) was provided as well. Participants in the workshop that led to the generation of the section level PV classifications attended **these subregional** meetings to provide assistance and explanation with respect to any aspect of the section level **classifications** and temperature-moisture gradients. Any necessary change to section level **classifications** was made at the time based on documented information.

USE OF THE DEM

A digital elevation model (**DEM**) provided information on elevation, slope and aspect for each 1 x 1 km pixel over the **CRB** assessment area. **The** most accurately measured variable was elevation. Aspect and slope were derived from elevation. Their accuracy depends upon the resolution of the elevation data and on the algorithm used to calculate them.

Section level PV mapping was accomplished within each subsection by reading the slope, aspect and elevation **values** for **each** pixel and using them to index the name of the section level PV vegetation type in the pixel. Inaccuracy in the DEM was corrected during a series of work sessions for quality control of the maps at the three scales.

RESULTS

Model calibration and section level simulated vegetation map

A map was produced for each section using the section level PV classifications and their assigned elevation/aspect/slope settings by subsections (Figure 2). Maps were reviewed by the state Heritage ecologists and agency professionals. Overlaps and blank areas in the maps were corrected. When more than one PV type occurred in one pixel, the dominant class was chosen. Blanks were filled in by writing PV **rules** or by using the **rockland** category whenever appropriate. Obvious errors, such as predicted forests in areas covered by shrublands, were also corrected using available information (existing maps, location specific data). Changes in the vegetation-site condition models and the classifications were made as necessary and subjected to review.

The calibration of the vegetation-site models was therefore carried out separately for each PV class by elevation belt within each subsection. Once the vegetation-site models were revised, resulting attribute matrices were generated section by section to describe the possible ecological range of each section level PV class. Table 7 provides an example of an attribute matrix for the Northern Rockies section. A final map of all sections in the **CRB** assessment area was produced at the **1:2,000,000** scale (Figure 3). Appendix 8 lists the final attribute matrices for all sections used for generating the **map**.

Regional and coarse level maps

The regional map (Figure 4) was produced from the section level maps by encoding the relation

between section level classes and regional classes (Table 3). The coarse level map (Figure 5) was produced by encoding the relation between the regional classes and the coarse level classes (Table 4). All maps were reviewed. Overlaps, blanks and obvious errors in the maps were corrected using the same rules as for the section level PV map. Changes needed in the PV classifications at any of the three scales as well as in the biophysical settings as a consequence of these corrections were made. Classification and model calibration tables and appendices reflect all changes.

Simulated vegetation patterns

The maps were analyzed to show general patterns between vegetation and elevation at different scales. Area statistics for the maps are given for:

- (1) Frequency and relative percentage of main elevational belts by individual section. Table 8 is an example for the Northern Rockies section. Appendix 9 lists **all** sections.
- (2) Frequency and relative percentage of PV classes by individual section. Table 9 is an example for the Northern **Rockies** section. Appendix 10 lists all sections.
- (3) Frequency and relative percentage of regional PV classes (Table 10).
- (4) Frequency and relative percentage of coarse PV classes (Table 11).

Model performance and map evaluation

To evaluate the **performance** of the vegetation site model and the quality of the simulated vegetation maps, quantitative comparisons were made between the simulated maps and field data that were collected on plots in an area included in the **CRB**. Field data exist that include the determination of PV for the study plot (Jensen et al., 1994). The Northern Rockies section was chosen as a test area for model performance and map evaluation because of the large number of plots that it **contains** and confidence in the PV **assignment** by field investigators.

There are several **limitations** to the quantitative comparison **of the maps** and of the plot level information:

(1) The PV name used in the plot is not the same as in the maps. This category includes four distinct cases:

(1.1.) Higher level of classification: for example the plot name is at the series level (above the plant association) that does not allow for assignment within one of the PV classes used to generate the maps. For instance, some plots indicate that the PV is Abies lasiocarna series, information that cannot be incorporated within one of the section level classes.

(1.2.) Lower **level** of classification: some plots indicate local variations of plant **associations** (e.g., phases) in a way that precludes aggregation into a PV class.

(1.3 .) Synonymy problems: classes are the same but the names are different. Some known problems were fixed but others may remain.

(1.4.) Different classifications: for example, some plots indicate that the PV is alpine rangeland, with no species specified.

- (2) The scale of the plots is much **finer** than the scale of the maps. Therefore, the plot might support a PV class that is 'either not listed in the section list (not mappable) or, if listed, might be an inclusion within the predicted mapping unit. In both cases, there is a scale dependent discrepancy between the plot level PV and the simulated map PV. This is probably the most serious problem that cannot be remedied.
- (3) The ecological coverage **is** not even for all physiognomic classes. Forests have the most plots, followed by the **shrublands** and then the herbaceous types. This unevenness leads to a bias in the quantification of the model evaluation.

The database was screened for content and confidence in the PV assignment. Plots with any of the problems listed above and/or low confidence level were omitted. A total of 2545 plots were available for the performance evaluation. Even with the limitations listed above, the comparison maps/plot database is appropriate because (1) the vegetation classification used in the plot database is basically the same as that used in the models, and (2) it is the **only** way to have any idea of the performance of the models and of the maps.

Correspondence between maps and plots was quantified. Map performance is based on percentages of plots in which predicted map class and observed class were identical. Tables **12a**, b, and c show the degree of correspondence for all vegetation types found in the Northern Rockies section for the three simulated maps (section, regional and coarse). On average correspondence is 29% at the section

classification level, 32% at the regional classification level, and 31% at the coarse classification level.

The comparisons were broadened to include adjacent classes. Adjacent classes are those within plus or minus one temperature or moisture class of the target class. For example, at the section level, the total number of locations with observed class F23 was compared with the total number of locations whose predicted class was F23 plus a weighted average of predicted classes F13, **F22**, F24, and F33. The new degree of correspondence includes the chance of making an error of one class. For forest classes at the section **level**, from 7 to 61% of observed classes are correctly predicted, with an average of 45% correct (Table 13a). The **degree of** correspondence is 46% at the regional level (Table **13b**), and 43% at the **coarse** level (Table **13c**).

Since field identification of PV on plots is **intended** to be **accurate** within plus or minus one PV category, predicted map classes were **evaluated** using both identical and adjacent observed classes. The percentage of mapped classes **falling** within plus or minus one observed class ranged from 8 to 84% at the section level. Similar ranges **occurred** at the regional and coarse levels. Tables **13a**, **b**, and **c** show **the** correspondence when an error of one class is allowed.

The numbers are encouraging because, **as** a consequence of the limitations listed earlier, the quantified degree of correspondence between the maps and the plot database are expected to be much lower than between **simulated** maps and current methods of accuracy assessment.

CONCLUSIONS

This report presents the basis for **constructing** vegetation models from vegetation-site information and for generating vegetation maps over large areas. The work emphasized the following areas:

- (1) The accuracy of the source classification of the vegetation (data driven) and the derivation of the PV plant associations.
- (2) The accuracy of the vegetation-site model, including the accuracy of the **gradient** relations of the vegetation and of the PV classifications at the three study scales.
- (4) The correction of errors associated with the DEM.

The models are correct on **average** close to half of the time when an error of one class is allowed, which is similar to results in Switzerland (**Brzeziecki et al.**, 1993) and in California (Walker et al., 1995). Such models are of strong interest because (1) they **can** be modified easily to conform to new information, and (2) they can be used to derive relationships between vegetation and driving (direct) variables through the use of simple process models.

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TABLE 1. Section **level** Potential Vegetation classification for the Columbia River Basin: Distribution of **vegetation** types (plant association level) in the **temperature-moisture** gradient matrix. Example for the **forest** biome in section **M333C**, the Northern Rockies. For all section matrices, see **Appendix 3**. Plant associations are listed as **standardized acronyms**. For the complete **association** names, refer to Appendix 1.

		MOISTURE:			
		WET (1)	MOIST (2)	D R Y (3)	VERY DRY (4)
TEMP:	COLD (1)	ABLA/CACA4	ABLA/MEFE	ABLA/LUGLH LALY/ABLA	ABLA/VASC ABLA-PIAL/VASC PIAL-ABLA
	COOL (2)	PICEA/EQAR ABLA/OPHO THPL/ATFI	ABLA/LIBO3 THPL/GYDR TSME/CLUN2 ABLA/CLUN2 PICEA/GATR3 PICEA/CLUN2	ABLA/VACE PSME/LIBO3 ABGR/XETE ABLA/XETE ABLA/VAGL	PICEA/VACE PSME/VACE
	WARM (3)	THPL/OPHO ABGR/SETR PICEA/COSE16	THPL/CLUN2 THPL/ASCA2 ABGR/LIBO3 ABGR/CLUN2	PSME/CARU PSME/PHMAS ABGR/PHMAS PSME/VAGL	PSME/SYAL
	HOT (4)	POTR5/COSE16 POTR15/COSE16 PICEA/LYAK3 PSME/COSE16	POTR5/OSOC		

TABLE 2.

Regional level Potential Vegetation classification: List of regional level classes and names.

2a. FOREST

CLASS	NAME
F1,1	COLD, WET FORESTS
F1,2	COLD, MOIST FORESTS
F1,3	COLD, DRY FORESTS
F1,4	COLD, VERY DRY FORESTS
F2,1	COOL, WET FORESTS
F2,2	COOL, MOIST FORESTS
F2,3	COOL, DRY FORESTS
F2,4	COOL, VERY DRY FORESTS
F3,1	WARM, WET FORESTS
F3,2	WARM, MOIST FORESTS
F3,3	WARM, DRY FORESTS
F3,4	WARM, VERY DRY FORESTS
F4,1	HOT, WET FORESTS
F4,2	HOT, MOIST FORESTS
F4,3	HOT, DRY FORESTS
F4,4	HOT, VERY DRY FORESTS

2b. SHRUBLAND

CLASS	NAME
S1,1	COLD, WET SHRUBLANDS
S1,2	COLD, MOIST SHRUBLANDS
S1,3	COLD, DRY SHRUBLANDS
S1,4	COLD, VERY DRY SHRUBLANDS
S2,1	COOL, WET SHRUBLANDS
S2,2	COOL, MOIST SHRUBLANDS
S2,3	COOL, DRY SHRUBLANDS
S2,4	COOL, VERY DRY SHRUBLANDS
S3,1	WARM, WET SHRUBLANDS
S3,2	WARM, MOIST SHRUBLANDS
S3,3	WARM, DRY SHRUBLANDS
S3,4	WARM, VERY DRY SHRUBLANDS
S4,1	HOT, WET SHRUBLANDS
S4,2	HOT, MOIST SHRUBLANDS
S4,3	HOT, DRY SHRUBLANDS
S4,4	HOT, VERY DRY SHRUBLANDS

**2 c. HERBACEOUS
CLASS**

CLASS	NAME
H1,1	COLD, WET HERBLANDS
H1,2	COLD, MOIST HERBLANDS
H1,3	COLD, DRY HERBLANDS
H1,4	COLD, VERY DRY HERBLANDS
H2,1	COOL, WET HERBLANDS
H2,2	COOL, MOIST HERBLANDS
H2,3	COOL, DRY HERBLANDS
H2,4	COOL, VERY DRY HERBLANDS
H3,1	WARM, WET HERBLANDS
H3,2	WARM, MOIST HERBLANDS
H3,3	WARM, DRY HERBLANDS
H3,4	WARM, VERY DRY HERBLANDS
H4,1	HOT, WET HERBLANDS
H4,2	HOT, MOIST HERBLANDS
H4,3	HOT, DRY HERBLANDS
H4,4	HOT, VERY DRY HERBLANDS

TABLE 3. Regional level Potential Vegetation classification: Distribution of vegetation types (i.e. groups of plant associations defined at the section level) in the temperature moisture gradient matrices, for each of the biomes.

TABLE 3a. Regional Forest Classes

TEMP:	MOISTURE: WET (1)		MOIST (2)		DRY (3)		VERY DRY (4)	
	Sections	Groups	Sections	Groups	Sections	Groups	Sections	Groups
COLD (1)	M242C	1,1	M242C	1 2	342C	1,3	M242C	1,4
	M331A	1,1	M331A	1,2	M242C	1,3	M261D	1,4
	M331D	1,1	M331D	1,2	M261D	1,2	M261G	1,4
	M331J	1,1	M331J	1,2 2,2	M331A	1,3	M331A	1,4 2,4
	M332A	1,1 1,2	M332B	1,3	M331D	1,3	M331D	1,4
	M332B	1,1 1,2	M332C	1,2	M331J	1,3	M331J	1,4
	M332C	1,1	M332D	1,2	M332A	1,4	M332B	1,4
	M332D	1,1	M332E	1,2	M332C	1,3	M332C	1,4
	M332E	1,1	M332G	2,2	M332D	1,3	M332D	1,4
	M332F	1,1	M333A	1,3	M332E	1,3	M332E	1,4
	M332G	1,3	M333D	1,2	M332F	1,2 1,3	M332F	1,4
	M333A	1,1 1,2			M332G	1,4	M333A	1,4
	M333B	1,1 1,2			M333B	1,3	M333B	1,4
	M333C	1,1 1,2			M333C	1,3	M333C	1,4
	M333D	1,1			M333D	1,3	M333D	1,4
	COOL (2)	342B-E	1,1	341E	1,2	341E	1,3	
342C		1,1	342C	1,2 2,1 2,2	342B-E	1,2	M242C	2,4
M242C		2,1 3,1	M242C	2,2 3,2	342B-W	1,2	M331D	2,4
M331A		2,1	M261G	2,1	M242C	2,3	M331J	2,4
M331D		2,1	M331A	2,2	M261D	1,3 2,1 2,2	M332D	2,4
M331J		2,1 3,1	M331D	2,2	M261G	1,1 1,2 1,3 & 2,2 2,3	M332E	2,3
M332A		2,1 3,1	M331J	3,2			M333A	2 4
M332B		2,1 3,1	M332A	2,2 2,3	M331A	2,3 3,2	M333B	2,4
M332C		2,1 3,1	M332B	2 2 3 2	M331D	2,3		
M332D		2,1	M332C	2,2	M331J	2,3		
M332E		2,1	M332D	2,2	M332A	1,3 2,4		
M332F		2,1	M332E	2,2	M332B	2,3		
M332G		2,1	M332F	2,2	M332C	2,3		
M333A		2,1	M332G	2,3	M332D	2,3		
M333B		2,1 3,1	M333A	2,2 3,1	M332F	2,3		
M333C		2,1 3,1	M333B	2,2 3,2	M332G	2,4		
M333D	2,1 3,1	M333C	2,2	M333A	2,3			
		M333D	2,2	M333B	2,3			
				M333C	2,3			
				M333D	2,3			

TABLE 3a. Regional Forest Classes (page 2)

MOISTURE:	WET (1)		MOIST (2)		DRY (3)		VERY DRY (4)	
	Sections	Groups	Sections	Groups	Sections	Groups	Sections	Groups
TEMP: WARM (3)	331A	2,1	342B - E	2,2 2,3 3,2	331A	1,2 1,3	342D	3,4
	342B - E	2,1	342B - W	1,1 2,2 2,3 3,2	342B - E	1,3	M242C	3,4
	342B - W	2,1	342C	3,1	342B - W	1,3	M261D	3,3
	342D	2,1	342D	3,2	342C	2,3	M261G	3,3
	342H	1,1	M261D	3,1	342D	2,3	M331D	3,4
	342I	1,1	M261G	3,1	342H	1,2	M331J	3,4
	M331A	3,1	M331D	3,2 4,2	342I	1,2	M332C	4,3
	M331D	3,1	M332A	3,2 3,3	M242C	3,3	M332D	4,3
	M332B	4,1	M332B	2,4 4,2	M261D	2,3 3,2 3,4	M332E	3,4 4,3
	M332C	4,1	M332C	3,2	M261G	3,2	M332F	2,4 4,4
	M332D	3,1	M332D	3,2	M331A	3,3 3,4 4,2 4,3	M333A	3,4
	M332E	3,1	M332E	3,2	M331D	3,3 4,3	M333B	4,4
	M332F	3,1	M332F	3,2	M331J	3,3	M333D	4,4
	M333B	4,1	M333A	3,2	M332A	3,4		
	M333C	4,1	M333B	4,2	M332B	3,3 3,4 4,3		
	M333D	4,1	M333C	3,2 4,2	M332C	2,4 3,3		
			M333D	3,2 4,2	M332D	3,3 3,4		
					M332E	2,4 3,3 4,1 4,2		
					M332F	3,3 3,4		
					M332G	3,2 3,3 3,4		
				M333A	3,3			
				M333B	3,3 3,4 4,3			
				M333C	2,4 3,3 3,4			
				M333D	2,4 3,3 3,4			
HOT (4)	331A	1,1 1,2 3,1 4,1	331A	2,2	331A	3,2	341E	3,3 4,4
	341E	4,1	342C	3,3 3,4	342B - E	3,3	342B-E	3,4 4,4
	342B - E	3,1 4,1	342H	1,3	342B - W	3,3 4,3	342B-W	3,4 4,4
	342B - W	3,1 4,1	M242C	4,2 4,3	342H	2,3	342C	4,3 4,4
	342C	4,1	M261D	4,2	342I	2,3 4,4	342H	3,3 3,4 4,3 4,4
	342H	2,1 3,1 4,1	M261G	4,3	M242C	4,4	M261D	4,4
	342I	3,1 4,1	M333A	4,3 4,4	M261D	4,3	M261G	4,4
	M261D	4,1			M331A	4,4	M331D	4,4
	M332A	4,2			M331J	4,4	M332E	4,4
	M332D	4,1			M332A	4,4		
	M332G	3,1			M332B	4,4		
	M333A	4,1			M332C	3,4 4,4		
					M332D	4,4		
					M332G	4,3 4,4		

TABLE 3b. Regional Shrubland Classes

TEMP:	MOISTURE:		MOIST		DRY		VERY DRY	
	Sections	WBT (1) Groups	Sections	(2) Groups	Sections	(3) Groups	Sections	(4) Group
COLD (1)	M242C	1,1	342B - E	1,1	M242C	2,4	M261G	1,4
	M261G	1,1	M242C	1,2	M261D	2,3		
	M331A	1,1	M333A	1,2	M261G	1,2		
	M331J	1,1			M332A	2,3		
	M332A	1,1			M332C	1,3 3 3		
	M332B	1,1						
	M332C	1,1 1,2			M332E	1,2		
	M332D	1,1 1,2			M332F	1,2		
	M332E	1,1						
	M332F	1,1						
	M333A	2,1						
	M333B	1,1 1,2						
	M333C	1,1 1,2						
	M333D	1,1 1,2						
COOL (2)	342B - E	2,1	341E	1,2	341E	1,3	M2B-E	2,4
	342B - W	1,1 2,1	342B - E	1,2 2,2	342B-E	1,3 1,4	M2D	2,4
	342C	2,1	342B - W	1,3 2,2	342B - w	1,2 1,4	M331A	1,4
	342D	2,1	342C	1,2 2,2	342C	1,1 1,3	M332E	1,4
	M242C	2,1	342D	1,2	342D	2,2	M332F	1,4
	M261D	3,1	342H	1,1 2,2	342I	2,3 2,4		
	M261G	2,1	342I	2,2	M242C	1,3 1,4 3,3 3,4		
	M331A	2,1	M242C	2,3	M261D	1,3 3,2		
	M331D	1,1 2,1	M261D	2,2	M261G	3,4		
	M331J	2,1	M261G	2,2 2,3 3,3	M331A	2,4		
	M332A	2,1	M331A	2,2 2,3	M331D	2,4		
	M332B	2,1 2,2	M331D	1,3 2,2 2,3	M332B	3,4		
	M332C	2,1 2,2	M331J	2,2 2,3 3,2 3,3	M332C	2,4		
	M332D	2,1 2,2	M332A	4,4	M332D	2,4 3,4		
	M332E	2,1	M332B	3,3	M332E	2,3		
	M332F	2,1	M332C	2,3 3,2	M332F	2,3		
	M333A	1 1	M332D	2,3 3,2	M333A	2 4 4 3		
	M333B	2,1 2,2	M332E	2,2				
	M333C	2,1	M332F	1,3 2,2				
	M333D	2,1	M332G	3,3 4,3				
			M333A	3,3				
			M333B	3,3				
			M333C	2,2 3,3				
			M333D	3 3				

TABLE 3b. Regional Shrubland Classes (page 2)

MOISTURE:	WET		MOIST		DRY		VERY DRY	
	Sections	Groups	Sections	Groups	Sections	Groups	Sections	Groups
TEMP: WARM (3)	341E	3,1	342B - E	2,2	331A	4,3	331A	3,4 4,4
	342B - E	3,1	342B - W	3,2	341E	2,2 2,3	341E	3,3 3,4
	342B - W	3,1	342D	3,2	342B - E	2,3 3,3 3,4 4,2	342B - W	2,4 3,3 3,4
	342C	3,1	342H	4,2	342B - W	2,3	342C	2,4 3,3
	342D	1,1 3,1	342I	3,2	342C	2,3 3,2	342D	3,4
	M242C	4,2	M242C	4,3	342D	2,3 3,3	342H	3,4 4,3 4,4
	M261D	1,1	M331A	3,2 3,3	342H	3,2 3,3	342I	4,4
	M261G	3,1 3,2	M331D	3,4	342I	3,3 3,4	M261G	2,4
	M331A	3,1	M332C	4,2	M242C	4,4	M331D	4,4
	M331D	3,1 3,2	M333D	4,4	M261D	3,3 3,4 4,3	M332E	4,4
	M331J	3,1			M261G	4,3	M332F	4,3 4,4
	M332A	3,1			M331A	4,4		
	M332B	3,1 3,2			M331D	3,3 4,3		
	M332C	3,1			M331J	4,4		
	M332D	3,1			M332B	4,4		
	M332E	3,1			M332C	4,4		
	M332F	3,1			M332D	4,4		
	M332G	2,1 3,2			M332E	3,3 3,4		
	M333A	3,1			M332F	3,3		
	M333B	3,1			M332G	4,4		
M333C	3,1			M333A	4,4			
M333D	2,2 3,1			M333B	4,4			
HOT (4)	331A	3,3	341E	3,2	341E	4,2	341E	4,3 4,4
	341E	4,1	342B - W	4,2	342B - E	4,3	342B - E	4,4
	342B - E	4,1	342C	4,1 4,3	342C	3,4 4,4	342B - W	4,3 4,4
	342B - W	4,1	342H	4,1	342D	4,4	M261G	4,4
	342D	4,1	342I	4,3	M332D	4,3		
	342I	2,1 3,1	M261G	4,2	M332E	4,3		
	M261G	4,1	M332D	4,2				
	M331D	4,1	M333A	4,2				
	M332A	4,1						
	M332C	4,1						
	M332D	4,1						
	M332E	4,1						
	M332F	4,1						
	M333B	3,2 4,2						
	M333C	3,2						
	M333D	3,2 4,2						

TABLE 3c. Regional Herbland Classes

MOISTURE:	WET		MOIST		DRY		VERY DRY		
	Sections	Groups (1)	Sections	Groups (2)	Sections	Groups (3)	Sections	Groups (4)	
TEMP: COLD (1)	342B - E	1,1	342B-E	1,2	342B - W	1,2	M332C	1,4	
	342B - W	1,1	M242C	1,2	M242C	1,3 1,4	M332D	1,4	
	M242C	1,1	M331A	1,2	M331A	1,3	M332E	1,4	
	M261G	1,1	M331J	1,2	M331J	1,3	M332F	1,4	
	M331A	1,1	M332C	1,3	M332A	1,3			
	M332B	1,1	M332D	1,3	M332E	1,3			
	M332C	1,1	M332E	1,2	M332F	1,3			
	M332D	1,1	M332F	1,2					
	M332E	1,1	M333B	1,2					
	M332F	1,1	M333C	1,2					
	M332G	1,1	M333D	1,2					
	M333A	1,1							
	M333B	1,1							
	M333C	1,1							
	M333D	1,1							
	COOL (2)	341E	2,1	342B - E	2,2	331A	2,2 2,3	M332D	2,4
		342B-E	2,1	342B - W	2,2	342C	3,3	M332E	2,4
		342B-W	2,3	M242C	2,3	342I	1,1 2,2	M332F	2,4
		342C	2,1	M261G	2,2 3,3	M242C	3,3		
342D		2,1	M331A	2,2	M331A	2,3 3,2 3,3			
M242C		2,1 2,2	M331D	1,3 1,4 2,4	M331D	2,3			
M261D		2,1	M331J	2,2	M331J	3,3			
M261G		2,1	M332B	2,2 2,3	M332B	3,3			
M331A		2,1	M332D	2,2 3,2	M332C	3,3			
M331D		1,1 1,2	M332E	2,2	M332D	2,3 3,3			
M332A		2,1	M332F	2,2	M332E	2,3 3,3			
M332B		1,1 2,1 3,1	M332G	1,3 2,2 2,3 2,4	M332F	2,3			
M332C		1,2	M333A	1,2 1,3	M332G	3,3			
M332D		1,2 2,1	M333B	2,2 3,3	M333A	2,3 3,3			
M332E		2,1	M333C	2,2 3,3	M333B	2,3 3,4 4,3			
M332F		2,1	M333D	2,3	M333C	2,3 3,4 4,4			
M333A		2,1 3,1 3,2			M333D	3,3 3,4 4,3			
M333B		2,1							
M333C		2,1							
M333D		2,1 2,2 3,1							

TABLE 3c. Regional Herbiand Classes

(page 2)

TEMP:	MOISTURE: WET (1)		MOIST (2)		DRY (3)		VERY DRY (4)	
	Sections	Groups	Sections	Groups	Sections	Groups	Sections	Groups
WARM (3)	331A	1,2 3,1	341E	3,2 3,3	331A	3,3	331A	3,4 4,4
	341E	3,1	342B - E	3,2	342B - E	3,4	342C	4,3
	342B - E	3,1	342B - W	3,2	342B - W	3,3 3,4	342H	3,3 3,4 4,3
	342B - W	2,1 3,1	342C	2,2	342C	2,3	342I	3,3 4,4
	342C	3,1	342D	3,2	342D	2,3	M242C	4,4
	342D	3,1			342H	2,2	M261G	4,3 4,4
	342H	1,1			342I	3,2	M331A	4,4
	M242C	3,1			M242C	4,3	M331J	4,4
	M331A	3,1			M261G	3,4	M332C	4,4
	M331D	3,1			M331A	3,4 4,3	M332D	4,4
	M332A	3,1			M332B	4,4	M332E	3,4
	M332B	3,2			M332C	4,3	M332F	3,4
	M332D	3,1			M332D	4,3	M332G	3,4 4,4
	M332E	3,1					M333B	4,4
	M332F	3,1					M333D	4,4
	M333B	3,1 3,2						
	M333C	3,1 3,2						
M333D	3,2							
HOT (4)	341E	4,1	341E	4,2	331A	3,2 4,3	341E	4,4
	342B - E	4,1	342B - E	4,3	341E	4,3	342B - W	4,4
	342B - W	4,1	342B - W	4,2	342B - W	4,3	M332E	4,4
	M242C	4,1	342C	4,2	342C	3,2	M332F	4,4
	M261D	4,1	M261G	3,2	342H	4,1		
	M261G	4,1	M332C	4,2	342I	4,2 4,3		
	M331A	4,1	M332D	4,2	M261D	4,4		
	M332B	4,1	M332G	4,2	M261G	4,2		
	M332D	4,1			M331D	4,4		
	M332F	4,1			M332G	4,3		
	M333B	4,1						
	M333C	4,1						
	M333D	4,1						

TABLE 4. Coarse level Potential Vegetation classification: Distribution of vegetation types (i.e., the groups defined at the regional level) in the temperature-moisture gradient matrix.

MOISTURE:

TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)	ARID (5)
COLD (1)	COLD WET FORESTS COLD WET SHRUBLANDS COLD MOIST SHRUBLANDS COLD WET HERBLANDS COLD MOIST HERBLANDS COOL MOIST HERBLANDS	COLD MOIST FORESTS	COLD DRY FORESTS COLD DRY SHRUBLANDS COLD DRY HERBLANDS	COLD VERY DRY FORESTS COLD VERY DRY SHRUBLANDS COOL VERY DRY SHRUBLANDS COLD VERY DRY HERBLANDS COOL VERY DRY HERBLANDS	
COOL (2)	COOL WET FORESTS COOL WET SHRUBLANDS COOL WET HERBLANDS	COOL MOIST FORESTS	COOL DRY FORESTS	COOL VERY DRY FORESTS	
WARM (3)	WARM MT FORESTS WARM WET SHRUBLANDS WARM MT HERBLANDS	WARM MOIST FORESTS	WARM DRY FORESTS	WARM VERY DRY FORESTS	
HOT (4)	HOT WET FORESTS HOT WET SHRUBLANDS HOT WET HERBLANDS HOT MOIST HERBLANDS	HOT MOIST FORESTS COOL MOIST SHRUBLANDS COOL DRY HERBLANDS WARM MOIST HERBLANDS	HOT DRY FORESTS WARM MOIST SHRUBLANDS WARM DRY HERBLANDS	HOT VERY DRY FORESTS COOL DRY SHRUBLANDS WARM DRY SHRUBLANDS WARM VERY DRY HERBLANDS	WARM VERY DRY SHRUBLANDS
VERY HOT (5)			HOT MOIST SHRUBLANDS HOT DRY HERBLANDS	HOT DRY SHRUBLANDS HOT VERY DRY HERBLANDS	HOT VERY DRY SHRUBLANDS

TABLE 5. Coarse level Potential Vegetation classification: List of **coarse** level classes and names.

COARSE LEVEL CLASS	NAME
1,1	ALPINE & COLD SUBALPINE WETLAND/RIPARIAN TYPES
1,2	COLD, MOIST SUBALPINE FORESTS
1,3	DRY ALPINE & COLD DRY SUBALPINE PARKLANDS
1,4	VERY DRY ALPINE & TIMBERLINE/COLD SUBALPINE GROVELANDS
2,1	COOL SUBALPINE WETLAND/RIPARIAN TYPES
2,2	COOL, MOIST FORESTS
2,3	COOL, DRY FORESTS
2,4	COOL, VERY DRY FORESTS
3,1	WARM MONTANE WETLAND/RIPARIAN TYPES
3,2	WARM, MOIST FORESTS
3,3	WARM, DRY FORESTS
3,4	WARM, VERY DRY FORESTS
4,1	HOT VALLEY & PLAIN WETLAND/RIPARIAN TYPES
4,2	HOT, MOIST LOWER TREELINE/FOOTHILLS FORESTS, SHRUBLANDS & HERBLANDS
4,3	HOT, DRY SHRUB & GRASS STEPPE TO OPEN LOWER TREELINE FORESTS
4,4	HOT, VERY DRY CANYON SHRUB-STEPPE TO OPEN LOWER TREELINE FORESTS
4,5	HOT, ARID SHRUB-STEPPE
5,3	VERY HOT, SEASONALLY-FLOODED SALT-DESERT BASINS
5,4	VERY HOT, VERY DRY SALT-DESERT SHRUB
5,5	VERY HOT, ARID SALT-DESERT SHRUB

TABLE 6. List of site parameter/GIS rules used in the "vegetation-site" model.

ELEVATION	ASPECT	SLOPE
0 -304 m	NE	FLAT
305 -609 m	SW	5 - 29%
610 -914 m	FLAT	30 - 59%
915-1219 m		60 +
1220-1523 m		
1524-1828 m		
1829-2133 m		
2134-2438 m		
2439-2743 m		
2744-3047 m		
3048-3352 m		
3353-3657 m		
3658-3962 m		
3963-4267 m		

TABLE 7. Calibration of the "vegetation-site" rules for the GIS model. Example shown for section M333C, the Northern Rockies. See text for further explanation and Appendix 1 for the full names of the plant associations and their references.

GRADIENTS		PLANT ASSOCIATIONS	VEGETATION-SITE RULES		
TEMP	MOIS		ELEVATION (m)	ASPECT	SLOPE
COLD-1	WET-1				
FORESTS					
1	1	ABLA/CACA4		NOT MAPPED	
1	2	ABLA/MEFE	1220-2590	ALL	ALL
1	3	LALY-ABLA	1829-2285	FLAT,NE	ALL
1	3	ABLA/LUGLH			
1	4	ABLA/VASC	1982-2285	ALL	ALL
1	4	ABLA-PIAL/VASC			
1	4	PIAL-ABLA			
2	1	PICEA/EQAR		NOT MAPPED	
2	1	ABLA/OPHO			
2	1	THPL/ATFI			
2	2	ABLA/LIBO3	610-1828	ALL	ALL
2	2	THPL/GYDR			
2	2	TSME/CLUN2			
2	2	ABLA/CLUN2			
2	2	PICEA/CLUN2			
2	3	ABLA/VACE	1220-2133	SW	GT5
2	3	PSME/LIBO3			
2	3	ABGR/XETE			
2	3	ABLA/XETE			
2	3	ABLA/VAGL			
2	4	PSME/VACE	762-1219	ALL	LT30
2	4	PICEA/VACE			
3	1	THPL/OPHO		NOT MAPPED	
3	1	ABGR/SETR			
3	1	PICEA/COSE16			
3	2	THPL/CLUN2	1067-1523	ALL	LT60
3	2	THPL/ASCA2			
3	2	ABGR/LIBO3			
3	2	ABGR/CLUN2			
3	3	PSME/CARU	1067-1676	SW	5-59
3	3	PSME/PHMA5			
3	3	ABGR/PHMA5			
3	3	PSME/VAGL			
3	4	PSME/SYAL		NOT MAPPED	
4	1	POTRS/COSE16		NOT MAPPED	
4	1	POTR15/COSE16			
4	1	PICEA/LYAM3			
4	1	PSME/COSE16			
4	2	POTRS/OSOC		NOT MAPPED	

TABLE 7 (cont)

GRADIENTS
 TEMP MOIS VEGETATION-SITE RULES
 COLD-1 WET-1 PLANT ASSOCIATIONS ELEVATION (m) ASPECT SLOPE

SHRUBLANDS

1	1	SAPL2/CASC12	NOT MAPPED		
1	1	SACA4/CAR06			
1	1	KAMI/CASC12			
1	2	PHEM/ANLA3	NOT MAPPED		
2	1	SAGE2/CAAQ	NOT MAPPED		
2	1	SAGE2/CACA4			
2	1	B EGL/CAR06			
2	2	SAWO/DECE	NOT MAPPED		
2	2	ALIN2			
2	2	ALVIS			
2	2	SABE2			
3	1	SALU2/CAR06	NOT MAPPED		
3	1	SALU2/CACA4			
3	1	SADR			
3	2	SALUL	NOT MAPPED		
3	2	COSE16			
3	2	SAEX			
3	3	PEFL15/FESC	NOT MAPPED		
3	3	PEFL15/DECE			

HERBACEOUS

1	1	CACA4	NOT MAPPED		
1	1	SETR			
1	1	CAS12			
1	1	CASC12			
1	2	ALPINE RANGELAND	2286-2743	ALL	LT60
2	1	ELQU2	NOT MAPPED		
2	1	ELPA3			
2	1	CAR06			
2	1	CABU6			
2	1	CAAQ			
2	1	CALA11			
2	2	DECE-CAREX	NOT MAPPED		
2	2	DECE			
2	3	FEID-ELTR7	NOT MAPPED		
3	1	PHAU7	NOT MAPPED		
3	1	EQFL			
3	1	GLBO			
3	1	CAAP3			
3	2	POPA2	NOT MAPPED		
3	2	JUBA			
3	2	CANE2			
3	3	FEID-DECE	NOT MAPPED		
3	3	FEID-STR12			
3	4	FESC-FEID	NOT MAPPED		
4	1	TYLA	NOT MAPPED		
4	1	SCAC			
4	4	FESC-PSSP6	NOT MAPPED		
4	4	FEID-PSSP6			
		ROCKS	2286-2590	NE,SW	GT60

TABLE 8. Frequency and relative percentage of main elevational belts: codes of section Potential Vegetation (**PV**) classes (listed below the elevation belt), number of section PV classes, **number** of plant associations by elevation belt, number of pixels intercepted by **elevation** belt, **%** representation of elevation belt of the section. An example is given for section **M333c**, the Northern Rockies. For all sections, see Appendix 9.

ELEVATION BELT (m)	SECTION PV CLASSES	# OF CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
610-914	F22 F24	2	7	16	0.12
915-1219	F22 F32 F33 F24	4	15	1733	13.39
1220-1523	F12 F22 F32 F23 F33	5	19	3073	23.74
1524-1828	F12 F22 F23 F33	4	15	3717	28.72
1829-2133	F12 F13 F23 F14	4	11	3345	25.84
2134-2438	F12 F13 F14 H12 ROCKS	5	7	984	7.60
2439-2743	F12 H12 ROCKS		2	75	0.58
TOTAL				12944	100.00

TABLE 9. Frequency and relative percentage of section Potential Vegetation classes: number of plant associations per class, number of pixels intercepted by each class, 96 representation of the section. Example provided for section M333C, the Northern Rockies. For all sections, see Appendix 10.

PNV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F12	1	2718	21.00
F22	3	1429	11.04
F32	4	626	4.84
F13	2	1609	12.43
F23	5	3611	27.90
F 3 3	4	612	4.73
F14	3	928	7.17
F24	2	1084	8.37
H12	1	323	2.50
ROCKS	N/A	4.	0.03
TOTAL	25	12944	100.00

TABLE 10. Frequency and relative percentage of regional PVvegetation classes: number of sections, number of section PV classes, number of plant associations, number of pixels (1 km X1 km) intercepted by each regional PV class,% representation of the region.

Table 10a. Forest classes.

REGIONAL PV CLASS	# OF SECTIONS	# OF SECTION CLASSES	# OF PLANT ASSO- CIATIONS	# OF PIXELS	% OF THE CRB
F1,1	15	20	18	9,956	1.21
F1,2	11	12	20	9,821	1.19
F1,3	15	16	34	36,000	4.37
F1,4	15	16	31	11,775	1.43
F2,1	17	25	28	3,819	0.46
F2,2	18	25	80	43,936	5.34
F2,3	19	27	79	52,987	6.44
F2,4	7	7	30	12,302	1.49
F3,1	16	16	25	2,331	0.28
F3,2	17	27	55	21,072	2.56
F3,3	24	47	83	98,666	11.99
F3,4	13	15	44	17,100	2.08
F4,1	12	20	36	2,643	0.32
F4,2	7	10	36	10,997	1.34
F4,3	14	18	40	16,771	2.04
F4,4	9	16	40	22,367	2.72
Subtotal				372,543	45.26

Table 10b.

Shrubland classes.

REGIONAL PV CLASS	# OF SECTIONS	# OF SECTION CLASSES	# OF PLANT ASSO- CIATIONS	# OF PIXELS	% OF THE CRB
S1,1	14	19	18	45	0.01
S1,2	3	3	6	69	0.01
S1,3	8	10	9	5,091	0.62
S1,4	1	1	2	75	0.01
S2,1	20	26	48	756	0.09
S2,2	24	41	52	67,037	8.15
S2,3	17	27	29	29,200	3.55
S3,1	22	28	43	4,132	0.50
S3,2	10	11	18	26,593	3.23
S3,3	22	34	44	158,715	19.29
S3,4	11	19	42	26,247	3.19
S4,1	16	19	15	3,158	0.38
S4,2	8	9	15	14,744	1.79
S4,3	6	7	13	27,911	3.39
S4,4	4	6	28	11,874	1.44
Subtotal				375,647	45.65

Table 10c.

Herbland classes.

REGIONAL PV CLASS	# OF SECTIONS	# OF SECTION CLASSES	# OF PLANT ASSO- CIATIONS	# OF PIXELS	% OF THE CRB
H1,1	15	15	12	37	0.00
H1,2	11	11	14	1,604	0.19
H1,3	7	8	15	4,230	0.51
H1,4	4	4	4	103	0.01
H2,1	20	29	33	545	0.07
H2,2	16	27	20	1,650	0.20
H2,3	17	30	17	28,284	3.44
H2,4	3	3	4	16	0.00
H3,1	18	22	19	336	0.04
H3,3	13	15	11	16,184	1.97
H3,4	15	21	20	14,307	1.74
H4,1	13	13	12	2,359	0.29
H4,2	8	8	9	209	0.03
H4,3	10	12	14	2,540	0.31
Subtotal				72,404	8.80
ROCKS	10	N/A	N/A	2,328	0.28
TOTAL				822,922	100.00

* Three regional PV classes were not mapped, S2,4, H3,2 & H4,4. This is because the section level PV classes included in these regional classes were not mapped at the section level.

TABLE 11.

Frequency and relative percentage of coarse PV vegetation classes: number of sections, number of regional and sectional PV classes, number of plant associations, number of pixels intercepted by each coarse PV class, % representation of the region.

COARSE PV CLASS	# OF SECTIONS	# OF REGIONAL PV CLASSES	# OF SECTION PV CLASSES	# OF PLANT ASSOC.	# OF PIXELS	% OF THE CRB	
1,1	18	6	9	5	77	13,361	1.62
1,2	11	1	12		20	9,821	1.19
1,3	17	3	34		58	45,321	5.51
1,4	17	5	29		43	11,969	1.45
2,1	22	3	80		109	5,120	0.62
2,2	18	1	25		80	43,936	5.34
2,3	19	1	27		79	52,987	6.44
2,4	7	1	7		30	12,302	1.49
3,1	25	3	66		87	6,799	0.83
3,2	17	1	27		55	21,072	2.56
3,3	24	1	47		83	98,666	11.99
3,4	13	1	15		44	17,100	2.08
4,1	24	4	60		72	8,369	1.02
4,2	25	4	87		111	78,034	9.48
4,3	18	3	44		69	71,648	8.71
4,4	23	4	98		123	226,466	27.52
4,5	11	1	19		42	40,554	4.93
5,3	12	2	21		29	17,284	2.10
5,4	8	2	11		15	27,911	3.39
5,5	4	1	6		28	11,874	1.44
ROCKS	10	N/A	N/A		N/A	2,328	0.28
TOTAL						822,922	100.00

TABLE 12a. Comparison between observed section level potential vegetation (PV) classes and predicted (mapped) section level PV classes for plot locations in the Northern Rockies section of the Columbia River Basin. Observed classes derived from field identification of potential vegetation on plots. Omitted classes lacked occurrences on both plots and map in the section. Bold-faced numbers indicate locations with identical observed and predicted classes.

OBSERVED CLASS	PREDICTED (MAPPED) CLASS																							Σ	X		
	F11	F12	F13	F14	F21*	F22	F23	F24	F31*	F32	F33	F34*	S21*	S22*	S31*	S32*	S33*	H11*	H12	H21*	H31*	H32*	H41*				
F11	0	26	9	6	0	1	21	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	0	
F12	0	96	18	3	0	5	59	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	183	52	
F13	0	117	256	90	0	0	152	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	627	41	
F14	0	5	9	10	0	0	14	0	0	1	0	0	0	0	0	0	0	0	12	0	0	0	0	0	45	22	
F21	0	11	1	0	0	17	3	1	0	1	2	0	0	0	0	0	0	0	6	0	0	0	0	0	36	0	
F22	0	297	9	4	0	154	180	70	0	47	38	0	0	0	0	0	0	0	0	0	0	0	0	0	799	19	
F23	0	79	19	21	0	20	119	19	0	20	16	0	0	0	0	0	0	0	0	0	0	0	0	0	314	38	
F24	0	2	0	0	0	17	1	2	0	4	8	0	0	0	0	0	0	0	1	0	0	0	0	0	34	6	
F31	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	
F32	0	4	0	0	0	81	2	9	0	84	22	0	0	0	0	0	0	0	0	0	0	0	0	0	202	42	
F33	0	25	0	3	0	10	55	2	0	3	17	0	0	0	0	0	0	0	0	0	0	0	0	0	115	15	
F34	0	11	0	0	0	9	4	3	0	2	17	0	0	0	0	0	0	0	0	0	0	0	0	0	46	0	
S21	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	
S22	0	2	1	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	
S31	0	0	0	0	0	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	
S32	0	0	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	
S33	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	
H11	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	
H12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H21	0	2	3	0	0	10	2	1	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H31	0	0	1	0	0	5	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0	
H34	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	
H41	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	
Σ	0	678	327	137	0	343	623	114	0	172	132	0	0	0	0	0	0	0	19	0	0	0	0	0	(738)	29	
X		14	78	7		45	19	2		49	13							0							2545	29	
																										29	

*Class not mapped in Northern Rockies section.

b.f

TABLE 12b. Comparison between observed regional level potential vegetation (PV) classes and predicted (mapped) regional level PV classes for plot locations in the Northern Rockies section of the Columbia River Basin. Observed classes derived from field identification of potential vegetation on plots. Omitted classes lacked occurrences on both plots and map in the section. Bold-faced numbers indicate locations with identical observed and predicted classes.

OBSERVED CLASS	PREDICTED (MAPPED) CLASS																Σ	X		
	F11	F13	F14	F21'	F22	F23	F32	F33	S21'	S22'	S31'	S41'	H11'	H12	H21'	H23'			H31'	H41'
F11	122	27	9	0	6	80	2	4	0	0	0	0	0	0	0	0	0	0	250	49
F13	117	256	90	0	0	152	0	0	0	0	0	0	0	12	0	0	0	0	627	41
F14	5	9	10	0	0	14	1	0	0	0	0	0	0	6	0	0	0	0	45	44
F21	11	1	0	0	18	3	2	3	0	0	0	0	0	0	0	0	0	0	38	0
F22	297	9	4	0	154	180	47	108	0	0	0	0	0	0	0	0	0	0	799	19
F23	79	19	21	0	20	119	20	35	0	0	0	0	0	1	0	0	0	0	314	38
F32	4	0	0	0	81	2	84	31	0	0	0	0	0	0	0	0	0	0	202	42
F33	38	0	3	0	36	60	9	49	0	0	0	0	0	0	0	0	0	0	195	25
S21	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3	0
S22	2	1	0	0	4	1	1	1	0	0	0	0	0	0	0	0	0	0	10	0
S31	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	4	0
S41	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	4	0
H11	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0
H12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H21	2	3	0	0	10	2	2	7	0	0	0	0	0	0	0	0	0	0	26	0
H23	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	12	0
H31	0	1	0	0	5	2	0	3	0	0	0	0	0	0	0	0	0	0	11	0
H41	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0
Σ	678	327	137	0	343	623	172	246	0	0	0	0	0	19	0	0	0	0	(804) 2545	32
X	18	78	15		45	19	49	20					0						32	

*Class not mapped in Northern Rockies section.

TABLE 12c. Comparison between observed coarse level potential vegetation (PV) classes and predicted (mapped) coarse level PV classes for plot locations in the Northern Rockies section of the Columbia River Basin. Observed classes derived from field identification of potential vegetation on plots. Omitted classes lacked occurrences on both plots and map in the section. Bold-faced numbers indicate locations with identical observed and predicted classes.

OBSERVED CLASS	PREDICTED (MAPPED) CLASS											Σ	‡
	1,1	1,3	1,4	2,1*	2,2	2,3	3,1*	3,2	3,3	4,1*	4,2*		
1,1	123	27	9	0	6	81	0	2	4	0	0	252	49
1,3	129	256	90	0	0	152	0	0	0	0	0	627	41
1,4	11	9	10	0	0	14	0	1	0	0	0	45	22
2,1	13	4	0	0	28	5	0	6	11	0	0	67	0
2,2	297	9	4	0	154	180	0	47	108	0	0	799	19
2,3	80	19	21	0	20	119	0	20	35	0	0	314	38
3,1	0	1	0	0	5	3	0	0	6	0	0	15	0
3,2	4	0	0	0	81	2	0	84	31	0	0	202	42
3,3	38	0	3	0	36	60	0	9	49	0	0	195	25
4,1	0	1	0	0	3	0	0	2	1	0	0	7	0
4,2	2	1	0	0	10	7	0	1	1	0	0	22	0
Σ	697	327	137	0	343	623	0	172	246	0	0	(795) 2545	31
‡	18	78	7		45	19		49	20			31	

*Class not mapped in Northern Rockies section.

TABLE 13a. Evaluation of section level potential vegetation (PV) map performance using both identical and weighted average of adjacent PV classes (e.g., existing adjacent classes for F23 are F13, F22, F24, and F33; total number of adjacent locations is divided by 4) for plot locations in the Northern Rockies section of the Columbia River Basin. Only forest classes included in evaluation.

OBSERVED CLASS	NUMBER OF LOCATIONS IN IDENTICAL PREDICTED (MAPPED) CLASS	WEIGHTED AVERAGE OF ADJACENT PREDICTED (MAPPED) CLASSES	TOTAL IDENTICAL AND ADJACENT	TOTAL OBSERVED	PERCENT CORRECT
F11	0	13	13	67	19
F12	96	8	104	183	57
F13	256	120	376	615	61
F14	10	5	15	39	38
F21	0*	6	6	36	17
F22	154	131	285	799	36
F23	119	19	138	313	44
F24	2	0.3	2.3	34	7
F31	0*	0.5	0.5	2	25
F32	84	34	118	202	58
F33	17	19	36	115	31
F34	0*	10	10	46	22
TOTAL			1104	2451	45

PREDICTED CLASS	NUMBER OF LOCATIONS IN IDENTICAL OBSERVED CLASS	WEIGHTED AVERAGE OF ADJACENT OBSERVED CLASSES	TOTAL IDENTICAL AND ADJACENT	TOTAL PREDICTED	PERCENT CORRECT
F11	0	0	0	0	
F12	96	147	243	673	36
F13	256	15	271	321	84
F14	10	45	55	137	40
F21	0*	0	0	0	
F22	154	31	185	315	59
F23	119	97	216	610	35
F24	2	7	9	110	8
F31	0*	0	0	0	
F32	84	17	101	165	61
F33	17	18	35	120	29
F34	0*	0	0	0	
TOTAL			1115	2451	45

*Class not mapped in Northern Rockies section.

TABLE 13b. Evaluation of regional level potential vegetation (PV) map performance using both identical and weighted average of adjacent PV classes (e.g., existing adjacent classes for F23 are F13, F22, and F33; total number of adjacent locations is divided by 3) for plot locations in the Northern Rockies section of the Columbia River Basin. Only forest classes included in evaluation.

OBSERVED CLASS	NUMBER OF LOCATIONS IN IDENTICAL PREDICTED (MAPPED) CLASS	WEIGHTED AVERAGE OF ADJACENT PREDICTED (MAPPED) CLASSES	TOTAL IDENTICAL AND ADJACENT	TOTAL OBSERVED	PERCENT CORRECT
F11	122	0	122	250	49
F13	256	121	377	615	61
F14	10	9	19	39	49
F21	0	15	15	38	39
F22	154	76	230	799	29
F2.3	119	25	144	313	46
F32	84	56	140	202	69
F33	49	35	84	195	43
TOTAL			1131	2451	46

PREDICTED CLASS	NUMBER OF LOCATIONS IN IDENTICAL OBSERVED CLASS	WEIGHTED AVERAGE OF ADJACENT OBSERVED CLASSES	TOTAL IDENTICAL AND ADJACENT	TOTAL PREDICTED	PERCENT CORRECT
F11	122	11	133	673	20
F13	256	-14	270	321	84
F14	10	90	100	137	73
F21	0	0	0	0	
F22	154	40	194	315	62
F23	119	131	250	610	41
F32	84	28	112	165	68
F33	49	33	82	230	36
TOTAL			1141	2451	47

'Class not mapped in Northern Rockies section.

TABLE 13c. Evaluation of coarse level potential vegetation (PV) map performance using both identical and weighted average of adjacent PV classes (e.g., existing adjacent classes for 2,3 are 1,3, 2,2, and 3,3; total number of adjacent locations is divided by 3) for plot locations in the Northern Rockies section of the Columbia River Basin.

OBSERVED CLASS	NUMBER OF LOCATIONS IN IDENTICAL PREDICTED (MAPPED) CLASS	WEIGHTED AVERAGE OF ADJACENT PREDICTED (MAPPED) CLASSES	TOTAL IDENTICAL AND ADJACENT	TOTAL OBSERVED	PERCENT CORRECT
1,1	123	0	123	252	49
1,3	256	121	377	627	60
1,4	10	9	19	45	42
2,1	0*	14	14	67	21
2,2	154	76	230	799	29
2,3	119	25	144	314	46
3,1	0*	0	0	15	0
3,2	84	28	112	202	55
3,3	49	35	84	195	43
4,1	0*	0	0	7	0
4,2	0*	0.5	0.5	22	2
TOTAL			1104	2545	43

PREDICTED CLASS	NUMBER OF LOCATIONS IN IDENTICAL OBSERVED CLASS	WEIGHTED AVERAGE OF ADJACENT OBSERVED CLASSES	TOTAL IDENTICAL AND ADJACENT	TOTAL PREDICTED	PERCENT CORRECT
1,1	123	13	136	697	20
1,3	256	14	270	327	83
1,4	10	90	100	137	66
2,1	0*	0	0	0	
2,2	154	43	197	343	57
2,3	119	131	250	623	40
3,1	0*	0	0	0	
3,2	84	14	98	172	57
3,3	49	33	82	246	33
4,1	0*	0	0	0	
4,2	0*	0	0	0	
TOTAL			1133	2545	45

*Class not mapped in Northern Rockies section.

**LIST OF WORKSHOP PARTICIPANTS,
THEIR AGENCY AFFILIATIONS & WORKSHOPS ATTENDED**

<u>NAME</u>	<u>AGENCY</u>	<u>MISSOULA MONTANA 5/10-13/94</u>	<u>PORTLAND OREGON 5/24/94</u>	<u>BOISE IDAHO 6/7-9/94</u>	<u>PORTLAND OREGON 6/13/94</u>	<u>MISSOULA MONTANA 9/21/94</u>	<u>PORTLAND OREGON 9/94</u>	<u>RENO NEVADA 9/94</u>
Terry Aho	NRCS		X					
Vic Applegate	USFS		X					
John Arnold	PC			X			X	
Dave Atkins	USFS		X					
Joe Bailey	USFS			X			X	
Steve Bateman	USFS	X						
Rita Beard	USFS				X			
Doug Berglund	USFS	X						
Mike Boltz	BLM			X				
Jo Booser	USFS				X			
Susan Boudreau	USFS		X	X				
Patrick Bourgeron	WHTF	X	X	X	X		X	X
Ken Brewer	USFS			X				
Lew Brown	BLM			X				
James Chamberlain	USFS		X					
Larry Chitwood	USFS		X					
Lee Clark	USFS					X		
Steve Cooper	MTNHP	X	X	X		X	X	
Jim Cornwell	NRCS			X				
Rex Crawford	WANHP		X		X			
Lynn Danly	BLM			X				
Randy Davis	USFS			X		X		
Carl Davis	USFS		X					
Ted Demetriades	USFS			X				
Bruce Easton	BLM			X				
Lisa Engelking	WHTF		X	X				
Clif Fanning	BLM		X					
Jean Findley	BLM				X			
Steve Fletcher	USFS				X			
Gary Ford	USFS	X	X	X	X			
Dennis Froeming	NRCS			X				
Tom Frost	USGS		X					
Steve Gibson	USFS				X			
Caroline Gordon	USFS		X					
Pat Green	USFS					X		
Dave Hayes	USFS	X						
Stephen Hiebert	USFS				X			
Brian Hockett	BLM					X		
Steve Holzman	USFWS				X			
Bill Hopkins	USFS		X		X			
Ed Horn	BLM				X			
Kent Houston	USFS				X			
Gary Jackson	USFS			X		X		
Harry Jageman	USFS	X						
Mark Jensen	USFS	X						
Darwin Jeppesen	BLM			X				

**LIST OF WORKSHOP PARTICIPANTS (cont),
THEIR AGENCY AFFILIATIONS & WORKSHOPS ATTENDED**

<u>NAME</u>	<u>AGENCY</u>	<u>MISSOULA MONTANA 5/10-13/94</u>	<u>PORTLAND OREGON 5/24/94</u>	<u>BOISE IDAHO 6/7-9/94</u>	<u>PORTLAND OREGON 6/13/94</u>	<u>MISSOULA MONTANA 9/21/94</u>	<u>PORTLAND OREGON 9/94</u>	<u>RENO NEVADA 9/94</u>
Steven Jirik	BLM		X	X				
Charlie Johnson	USFS		X		X			
Rod Jorgenson	USFS			X				
Jimmy Kagan	ORNHP		X		X		X	X
Todd Keeler-Wolf	CANDDB							X
Nancy Ketrans	BLM		X					
Lou Kuennan	USFS	X				X		
Larry Laing	USFS	X				X		
Scott Lambert	NRCS				X			
Duane Lammers	USFS		X					
Jean Lavell	USFS	X						
Dan Leavell	USFS	X				X		
Terry Lillybridge	USFS				X			
John Lott	USFS			X				
Maria Mantas	USFS					X		
Dave Marben	USFS			X				
Harold Maxwell	USDA			X				
Ken McBride	USFS	X				X		
Cheryl McCaffrey	BLM		X		X			
Jim Menakis	USFS							X
Bob Meurisse	USFS		X					
Duane Monte	USFS			X				
Jim Morefield	NVNHP							X
Bob Moseley	IDCDC		X	X			X	X
Jan Nachlinger	NVFO							X
Jon Nakoe	USFS				X			
Norman Nass	USFS			X				
John Nesser	USFS		X					
Jerry Niehoff	USFS		X					
Vince Novotny	USFS				X			
Lois Olsen	USFS					X		
Dave Pacroretty	BLM				X			
Wayne Phillips	USFS					X		
Steve Popovich	BLM			X				
Sue Puddy	USFS				X			
Teal Purrington	BLM				X			
Marion Reid	WHTF						X	X
Jim Rineholt	USFS			X				
Gary Rollins	USFS				X			
Phil Rumpel	BLM				X			
Dave Rupert	USFS	X				X		
Bill Rush	USFS		X	X				
Michelle Satterfield	USFS				X			
Mike Schoter	USFS				X			
John Shelly	BLM			X				
Henry Shovic	USFS					X		

LIST OF WORKSHOP **PARTICIPANTS** (cont),
THEIR AGENCY AFFILIATIONS & WORKSHOPS ATTENDED

<u>NAME</u>	<u>AGENCY</u>	<u>MISSOULA</u>	<u>PORTLAND.</u>	<u>BOISE</u>	<u>PORTLAND</u>	<u>MISSOULA</u>	<u>PORTLAND</u>	<u>RENO</u>
		<u>MONTANA</u> <u>5/10-13/94</u>	<u>OREGON</u> <u>5/24/94</u>	<u>IDAHO</u> <u>6/7-9/94</u>	<u>OREGON</u> <u>6/13/94</u>	<u>MONTANA</u> <u>9/21/94</u>	<u>OREGON</u> <u>9/94</u>	<u>NEVADA</u> <u>9/94</u>
Dean Sirucek	USFS	X				X		
Brad Smith	USFS		X		X			
Bob Spokas	USFS	X				X		
Barry Stem	USFS			X				
Joyce Stock	USFS	X						
Dan Svoboda	USFS					X		
Rick Tholen	BLM			X				
Thor Thorson	NRCS		X					
Craig Toss	USFWS				X			
John Townsley	USFS				X			
Larry Walker	BLM		X		X			
Dave Ward	BLM				X			
Larry warren	USFS			X				
Dave Wentzel	USFS		X					
Louis Whitealer	BLM				X			
Dale Win	USFS			X				
Richard Wright	BLM			X				
Bill Wulf	USFS	X						
Julie Yocom	BLM				X			
Art Zack	USFS					X		
Dave Zalunardo	USFS				X			
Steve Ziemth	USFS				X			

AGENCY AFFILIATIONS:

BLM	US Dept. of Interior Bureau of Land Management
CANDDB	California Natural Diversity Database
IDCDC	Idaho Conservation Data Center
MTNHP	Montana Natural Heritage Program
NRCS	US Dept. of Agriculture Natural Resources Conservation Service
NVFO	Nevada Field Office, The Nature Conservancy
NVNHP	Nevada Natural Heritage Program
ORNHP	Oregon Natural Heritage Program
PC	Private Consultant
WANHP	Washington Natural Heritage Program
WHTF	Western Heritage Task Force, The Nature Conservancy
USFS	US Dept. of Agriculture Forest Service
USFWS	US Dept. of Interior Fish & Wildlife Service
USGS	US Dept. of Interior Geological Survey

APPENDIX 1.

List of plant associations representing Potential Vegetation found within the Columbia River Basin, with references. Nomenclature of the plant species follows Kartesz (1994). Global ranks, as assigned by The Nature Conservancy, are listed, and provide a numerical assessment of the association's relative rarity across its entire range of distribution. G1 indicates critically imperiled, and G5 indicates the most common. The CCA column denotes whether a Community Characterization Abstract has been written for that association. Standardized acronyms are also listed for each association. Full citations for the references are provided in Part 2 of the appendix.

GLOBAL RANK	CCA	PLANT ASSOCIATION NAME AND CLASS	ACRONYM	REFERENCES
G3		ABIES AMABILIS-ABIES CONCOLOR/MAHONIA NERVOSA VAR. NERVOSA FOREST	ABAM-ABCO/MANEN	13
G4		ABIES AMABILIS/ACER CIRCINATUM FOREST	ABAM/ACCI	13, 207, 208, 514
G4		ABIES AMABILIS/ACHLYS TRIPHYLLA FOREST	ABAM/ACTR	215, 217, 514
G4		ABIES AMABILIS/CLINTONIA UNIFLORA FOREST	ABAM/CLUN2	13, 508
G5		ABIES AMABILIS/GAULTHERIA SHALLON FOREST	ABAM/GASH	56, 170, 171, 174, 210, 213, 214, 217, 220
G4		ABIES AMABILIS/MENZIESIA FERRUGINEA FOREST	ABAM/MEFE	56, 170, 171, 207, 208, 210, 514
G5		ABIES AMABILIS/OPLOPANAX HORRIDUS FOREST	ABAM/OPHO	56, 170, 171, 174, 207, 208, 211, 212, 213, 214, 216, 217, 220, 514
G5		ABIES AMABILIS/RHODODENDRON ALBIFLORUM FOREST	ABAM/RHAL2	56, 170, 171, 174, 207, 208, 215, 508, 509, 514
G5		ABIES AMABILIS/VACCINIUM ALASKENSE FOREST	ABAM/VAAL	56, 170, 171, 174, 210, 211, 212, 213, 214, 215, 217, 514
G4		ABIES AMABILIS/VACCINIUM MEMBRANACEUM FOREST	ABAM/VAME	56, 174, 207, 208, 210, 211, 212, 213, 215, 216, 217, 220, 514
G4		ABIES AMABILIS/XEROPHYLLUM TENAX FOREST	ABAM/XETE	56, 170, 171, 174, 207, 208, 210, 214, 215, 217
G3		ABIES CONCOLOR-ABIES X SHASTENSIS/CHIMAPHILA UMBELLATA FOREST	ABCO-ABSH/CHUM	13, 234
G2		ABIES CONCOLOR-CALOCEDRUS DECURRENS-PINUS PONDEROSA/AMELANCHIER ALNIFOLIA FOREST	ABCO-CADE27-PIPO/AMAL2	235
G3		ABIES CONCOLOR-PINUS CONTORTA/CAREX PENNSYLVANICA-STIPA OCCIDENTALIS FOREST	ABCO-PICO/CAPE6-STOC2	235
G2		ABIES CONCOLOR-PINUS LAMBERTIANA-PINUS PONDEROSA/ARCTOSTAPHYLOS PATULA FOREST	ABCO-PILA-PIPO/ARPA6	235
G3		ABIES CONCOLOR-PINUS PONDEROSA/ARCTOSTAPHYLOS PATULA-BERBERIS SPP. FOREST	ABCO-PIPO/ARPA6-BERBE	235
G3		ABIES CONCOLOR-PINUS PONDEROSA/CAREX PENNSYLVANICA FOREST	ABCO-PIPO/CAPE6	235
G3		ABIES CONCOLOR-PINUS PONDEROSA/CEANOTHUS VELUTINUS FOREST	ABCO-PIPO/CEVE	235
G3		ABIES CONCOLOR-PINUS PONDEROSA/PURSHIA TRIDENTATA FOREST	ABCO-PIPO/PUTR2	130
G3		ABIES CONCOLOR-PINUS PONDEROSA/RIBES VISCOSISSIMUM FOREST	ABCO-PIPO/RIV13	235
G3		ABIES CONCOLOR-PINUS PONDEROSA/SYMPHORICARPOS SPP. FOREST	ABCO-PIPO/SYMPH	12, 235
G4		ABIES CONCOLOR-PSEUDOTSUGA MENZIESII/MAHONIA PIPERIANA FOREST	ABCO-PSME/MAP13	13
G5	Y	ABIES CONCOLOR/ACER GLABRUM FOREST	ABCO/ACGL	3, 5, 13, 126, 128, 129, 164, 295, 341, 449, 523
G3		ABIES CONCOLOR/AMELANCHIER ALNIFOLIA-CORYLUS CORNUTA FOREST	ABCO/AMAL2-COCO6	13
G3		ABIES CONCOLOR/AMELANCHIER ALNIFOLIA/ANEMONE DELTOIDEA FOREST	ABCO/AMAL2/ANDE3	13
G5	Y	ABIES CONCOLOR/ARCTOSTAPHYLOS PATULA FOREST	ABCO/ARPA6	411, 523
G3		ABIES CONCOLOR/CASTANOPSIS CHRYSOPHYLLA FOREST	ABCO/CACH6	234
G3		ABIES CONCOLOR/CEANOTHUS VELUTINUS FOREST	ABCO/CEVE	234, 487
G3		ABIES CONCOLOR/CHIMAPHILA UMBELLATA FOREST	ABCO/CHUM	13
G3		ABIES CONCOLOR/MAHONIA NERVOSA VAR. NERVOSA FOREST	ABCO/MANEN	12, 13
G5		ABIES CONCOLOR/MAHONIA REPENS FOREST	ABCO/MARE11	5, 129, 164, 205, 261, 295, 328, 341, 383, 411, 523
G3		ABIES CONCOLOR/RUBUS NIVALIS FOREST	ABCO/RUN12	13
G3		ABIES CONCOLOR/SYMPHORICARPOS ALBUS FOREST	ABCO/SYAL	234
G3		ABIES CONCOLOR/SYMPHORICARPOS MOLLIS FOREST	ABCO/SYMO	12, 235
G3		ABIES CONCOLOR/VACCINIUM MEMBRANACEUM FOREST	ABCO/VAME	13
G3		ABIES GRANDIS-PICEA ENGELMANNII/MAIANTHEMUM STELLATUM FOREST	ABGR-PIEN/HAST4	468
G4		ABIES GRANDIS/ACER CIRCINATUM FOREST	ABGR/ACCI	468, 514
G3	Y	ABIES GRANDIS/ACER GLABRUM FOREST	ABGR/ACGL	98, 250, 443
G3		ABIES GRANDIS/ACHLYS TRIPHYLLA FOREST	ABGR/ACTR	466, 468, 514
G2	Y	ABIES GRANDIS/ARCTOSTAPHYLOS NEVADENSIS WOODLAND	ABGR/ARNE	248, 514
G4	Y	ABIES GRANDIS/ASARUM CAUDATUM FOREST	ABGR/ASCA2	98
G4	Y	ABIES GRANDIS/CALAMAGROSTIS RUBESCENS WOODLAND	ABGR/CARU	98, 172, 185, 186, 248, 250, 443, 466, 514
G3		ABIES GRANDIS/CAREX GEYERI WOODLAND	ABGR/CAGE2	466, 468, 514
G2	Y	ABIES GRANDIS/CASTANOPSIS CHRYSOPHYLLA FOREST	ABGR/CACH6	468
G5	Y	ABIES GRANDIS/CLINTONIA UNIFLORA FOREST	ABGR/CLUN2	90, 98, 100, 250, 385, 443, 462, 509, 513
G2	Y	ABIES GRANDIS/COPTIS OCCIDENTALIS FOREST	ABGR/COOC	250, 443

G3		ABIES GRANDIS/HOLODISCUS DISCOLOR FOREST	ABGR/HOD1	100,250,443,466,468,509
G5	Y	ABIES GRANDIS/LINNAEA BOREALIS FOREST	ABGR/LIB03	98,100,185,248,250,443,468,509,528
G3		ABIES GRANDIS/MAHONIA NERVOSA VAR. NERVOSA FOREST	ABGR/MANEN	514
G4		ABIES GRANDIS/PAXISTIMA MYRSINITES FOREST	ABGR/PAMY	119,122,186,204
G3	Y	ABIES GRANDIS/PHYSOCARPUS MALVACEUS FOREST	ABGR/PHMA5	98,250,513
G3		ABIES GRANDIS/POLEMONIUM PULCHERRIMUM FOREST	ABGR/POPU3	468,516
G3	Y	ABIES GRANDIS/SENECIO TRIANGULARIS FOREST	ABGR/SETR	98
G3Q	Y	ABIES GRANDIS/SPIRAEA BETULIFOLIA FOREST	ABGR/SPBE2	98,250
G4		ABIES GRANDIS/SYMPHORICARPOS ALBUS FOREST	ABGR/SYAL	250,468,514
G2	Y	ABIES GRANDIS/TAXUS BREVIFOLIA FOREST	ABGR/TABR2	250
G3		ABIES GRANDIS/TRAUTVETTERIA CAROLINIENSIS FOREST	ABGR/TRCA	253
G3		ABIES GRANDIS/TRIENTALIS LATIFOLIA FOREST	ABGR/TRLA6	250
G2	Y	ABIES GRANDIS/VACCINIUM CESPITOSUM FOREST	ABGR/VACE	443,509,513
G3		ABIES GRANDIS/VACCINIUM GLOBULARE FOREST	ABGR/VAGL	98,443
G4		ABIES GRANDIS/VACCINIUM MEMBRANACEUM FOREST	ABGR/VAME	98,119,122,185,186,204,250
G3		ABIES GRANDIS/VACCINIUM MEMBRANACEUM-CLINTONIA UNIFLORA FOREST	ABGR/VAME-CLUN2	466
G4		ABIES GRANDIS/VACCINIUM SCOPARIUM FOREST	ABGR/VASC	185,250
G4		ABIES GRANDIS/XEROPHYLLUM TENAX FOREST	ABGR/XETE	98,443
G3		ABIES LASIOCARPA-PINUS ALBICAULIS/ARCTOSTAPHYLOS UVA-URSI WOODLAND	ABLA-PIAL/ARUV	90
G5		ABIES LASIOCARPA-PINUS ALBICAULIS/VACCINIUM SCOPARIUM WOODLAND	ABLA-PIAL/VASC	93,385
G5		ABIES LASIOCARPA/ACER GLABRUM FOREST	ABLA/ACGL	3,295,328,443,444,523
G4	Y	ABIES LASIOCARPA/ACTAEA RUBRA FOREST	ABLA/ACRU2	195,262,328,376,444,523
G4		ABIES LASIOCARPA/ALNUS VIRIDIS SSP. SIMUATA FOREST	ABLA/ALVIS	385
G5		ABIES LASIOCARPA/ARNICA CORDIFOLIA FOREST	ABLA/ARCO9	230,304,385,403,443,444,444,524
G4		ABIES LASIOCARPA/ARNICA LATIFOLIA FOREST	ABLA/ARLA8	99,262,444
G5	Y	ABIES LASIOCARPA/CALAMAGROSTIS CANADENSIS FOREST	ABLA/CACA4	97,98,223,286,328,385,443,444,453
G5		ABIES LASIOCARPA/CALAMAGROSTIS RUBESCENS FOREST	ABLA/CARU	58,98,250,284,286,328,385,443,444,509,513,514,523
G3		ABIES LASIOCARPA/CALTHA LEPTOSEPALA SSP. HOWELLII FOREST	ABLA/CALEH2	443
G5		ABIES LASIOCARPA/CAREX GEYERI FOREST	ABLA/CAGE2	6,223,262,284,286,385,443,444,453,493,523
G5		ABIES LASIOCARPA/CAREX ROSSII FOREST	ABLA/CAR05	444,523
G3		ABIES LASIOCARPA/CLEMATIS COLUMBIANA VAR. COLUMBIANA FOREST	ABLA/CLCOC2	385
G5		ABIES LASIOCARPA/CLINTONIA UNIFLORA FOREST	ABLA/CLUN2	98,122,250,385,513
G4		ABIES LASIOCARPA/COPTIS OCCIDENTALIS FOREST	ABLA/COOC	443
G3		ABIES LASIOCARPA/CORNUS CANADENSIS FOREST	ABLA/COCA13	512,513
G4		ABIES LASIOCARPA/GALIUM TRIFLORUM FOREST	ABLA/GATR3	385
G5		ABIES LASIOCARPA/JUNIPERUS COMMUNIS WOODLAND	ABLA/JUCO6	214,217,261,262,295,328,341,385
G4		ABIES LASIOCARPA/LEDUM GLANDULOSUM FOREST	ABLA/LEGL	410,443,444,523
G5		ABIES LASIOCARPA/LINNAEA BOREALIS FOREST	ABLA/LIB03	195
G5		ABIES LASIOCARPA/LUZULA GLABRATA VAR. HITCHCOCKII FOREST	ABLA/LUGLH	101,216,250,262,385,443,444,508,509,514
G5		ABIES LASIOCARPA/MAHONIA REPENS FOREST	ABLA/MARE11	98,385,444,514
G5		ABIES LASIOCARPA/MENZIESIA FERRUGINEA FOREST	ABLA/MEFE	262,274,328,383,444,523
G3		ABIES LASIOCARPA/OPLOPANAX HORRIDUS FOREST	ABLA/OPHO	98,122,250,385,443,444
G4G5		ABIES LASIOCARPA/OSMORHIZA CHILENSIS FOREST	ABLA/OSCH	385
G4		ABIES LASIOCARPA/PAXISTIMA MYRSINITES FOREST	ABLA/PAMY	218,328,443,444
G5		ABIES LASIOCARPA/PEDICULARIS RACEMOSA FOREST	ABLA/PERA	122,331,508
G4		ABIES LASIOCARPA/PHYLLODOCE EMPETRIFORMIS WOODLAND	ABLA/PHEM	218,328,444
G4G5		ABIES LASIOCARPA/PHYSOCARPUS MALVACEUS FOREST	ABLA/PHMA5	508
G4		ABIES LASIOCARPA/RHOODENDRON ALBIFLORUM FOREST	ABLA/RHAL2	328,443,444,523
G5	Y	ABIES LASIOCARPA/RIBES MONTIGENUM FOREST	ABLA/RIMO2	56,210,214,217,462,508,509,513,514
G4		ABIES LASIOCARPA/SPIRAEA BETULIFOLIA FOREST	ABLA/SPBE2	219,293,328,381,383,385,434,443,444,523
G4		ABIES LASIOCARPA/STREPTOPUS AMPLEXIFOLIUS FOREST	ABLA/STAM2	444
G4		ABIES LASIOCARPA/SYMPHORICARPOS ALBUS FOREST	ABLA/SYAL	98,195,250,328,376,443,444,523
				99,444

G4		ABIES LASIOCARPA/THALICTRUM OCCIDENTALE FOREST	ABLA/THOC	93,101,262,444
G3		ABIES LASIOCARPA/TRAUTVETTERIA CAROLINIENSIS FOREST	ABLA/TRCA	512,513,514
G5		ABIES LASIOCARPA/VACCINIUM CESPITOSUM FOREST	ABLA/VACE	274,328,385,443,513,523
G5		ABIES LASIOCARPA/VACCINIUM GLOBULARE FOREST	ABLA/VAGL	101,262,274,328,385,443,444,453
G4		ABIES LASIOCARPA/VACCINIUM MEMBRANACEUM FOREST	ABLA/VAME	93,167,185,214,217,250,513
G5	Y	ABIES LASIOCARPA/VACCINIUM MYRTILLUS FOREST	ABLA/VAMY2	3,7,49,129,164,222,227,228,249,259, 261,272,284,286,293,295,313,314, 315,318,319,322,341,381,477,523
G5	Y	ABIES LASIOCARPA/VACCINIUM SCOPARIUM FOREST	ABLA/VASC	6,7,49,93,101,122,126,139,176,179,185, 202,221,223,227,230,250,262,280,286,293, 319,328,331,335,381,383,385,401,404,443, 444,453,502,508,513,514
G5		ABIES LASIOCARPA/XEROPHYLLUM TENAX FOREST	ABLA/XETE	98,101,122,236,385,444,509,513
G3		ABIES X SHASTENSIS-TSUGA MERTENSIANA/ARCTOSTAPHYLOS NEVADENSIS FOREST	ABSH-TSME/ARNE	235
G3		ABIES X SHASTENSIS/CAREX PENNSYLVANICA FOREST	ABSH/CAPE6	235
G3		ABIES X SHASTENSIS/VACCINIUM MEMBRANACEUM FOREST	ABSH/VAME	13
G4		ACER GLABRUM (DRAINAGE BOTTOM) SHRUBLAND	ACGL (DRAINAGE BOTTOM)	427
G2		ACER GRANDIDENTATUM/CALAMAGROSTIS RUBESCENS FOREST	ACGR3/CARU	70
G3		ACER NEGUNDO/CORNUS SERICEA FOREST	ACNE2/COSE16	376,380,525
G27		ACER NEGUNDO/EQUISETUM ARVENSE FOREST	ACNE2/EQAR	380
G2		AGROSTIS EXARATA-AGROSTIS SCABRA HERBACEOUS VEGETATION	AGEX-AGSC5	473,474
G5		AGROSTIS STOLONIFERA HERBACEOUS VEGETATION	AGST2	195
G2		ALLENROLFEA OCCIDENTALIS SHRUBLAND	ALOC2	183,371
G3		ALNUS INCANA SHRUBLAND	ALIN2	155,195
G1		ALNUS INCANA-BETULA OCCIDENTALIS/(SALIX SPP.) SHRUBLAND	ALIN2-BEOC2/(SALIX)	193,311
G1		ALNUS INCANA-POPULUS TREMULOIDES/BETULA GLANDULOSA-RIBES SPP./CAREX SPP. SHRUBLAND	ALIN2-POTR5/BEGL-RIBES/CAREX	266
G1		ALNUS INCANA-POPULUS TREMULOIDES/CORNUS SERICEA SHRUBLAND	ALIN2-POTR5/COSE16	156
G1	Y	ALNUS INCANA-POPULUS TRICHOCARPA/(SALIX SPP.)/CAREX SPP. FOREST	ALIN2-POTR15/(SALIX)/CAREX	291
G3		ALNUS INCANA/CAREX SPP. SHRUBLAND	ALIN2/CAREX	156
G4		ALNUS INCANA/CORNUS SERICEA SHRUBLAND	ALIN2/COSE16	376,380,474
G2G3		ALNUS INCANA/MESIC FORB SHRUBLAND	ALIN2/MESIC FORB	376,380
G2G3		ALNUS INCANA/MESIC GRAMINOID SHRUBLAND	ALIN2/MESIC GRAMINOID	380
G3		ALNUS INCANA/RIBES HUDSONIANUM SHRUBLAND	ALIN2/RIHU	522
G2		ALNUS INCANA/SYMPHORICARPOS ALBUS SHRUBLAND	ALIN2/SYAL	269,270,291,379
G3		ALNUS RHOMBIFOLIA FOREST	ALRH2	334
G2		ALNUS RHOMBIFOLIA-ABIES GRANDIS FOREST	ALRH2-ABGR	334
G3		ALNUS RHOMBIFOLIA/AMELANCHIER ALNIFOLIA FOREST	ALRH2/AMAL2	334
G1	Y	ALNUS RHOMBIFOLIA/BETULA OCCIDENTALIS FOREST	ALRH2/BEOC2	334
G2		ALNUS RHOMBIFOLIA/CELTIS LAEVIGATA VAR. RETICULATA FOREST	ALRH2/CELAR	334
G1	Y	ALNUS RHOMBIFOLIA/PHILADELPHUS LEWISII FOREST	ALRH2/PHLE4	334
G2		ALNUS RHOMBIFOLIA/SAMBUCUS CERULEA FOREST	ALRH2/SACE3	334
G27		ALNUS VIRIDIS SSP. SINUATA SHRUBLAND	ALVIS	195
G4Q		AMELANCHIER ALNIFOLIA/ARTEMISIA TRIDENTATA/FESTUCA IDAHOENSIS SHRUBLAND	AMAL2/ARTR2/FEID	36
G3		ARCTOSTAPHYLOS PATULA/CEANOTHUS VELUTINUS-CEANOTHUS PROSTRATUS SHRUBLAND	ARPA6/CEVE-CEPR	469
G2	Y	ARCTOSTAPHYLOS VISCIDA-CEANOTHUS CUNEATUS/FESTUCA IDAHOENSIS-STIPA LEMMONII SHRUBLAND	ARVI4-CECU/FEID-STLE2	12,371
G3		ARISTIDA LONGISETA-POA SECUNDA HERBACEOUS VEGETATION	ARLO3-POSE	121,462
G2	Y	ARISTIDA LONGISETA-SPOROBOLUS CRYPTANDRUS SPARSE SHRUBLAND	ARLO3-SPCR	250
G4G5		ARTEMISIA ARBUSCULA SSP. LONGILOBA SPARSE DWARF-SHRUBLAND	ARARL	300
G3		ARTEMISIA ARBUSCULA SSP. LONGILOBA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARARL/FEID	78,225,244,354,421,464,527
G3Q		ARTEMISIA ARBUSCULA SSP. LONGILOBA/POA SECUNDA SPARSE DWARF-SHRUBLAND	ARARL/POSE	37
G2	Y	ARTEMISIA ARBUSCULA SSP. THERMOPOLA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARART/FEID	225,421
G4		ARTEMISIA ARBUSCULA-CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA-POA SECUNDA	ARAR8-CELE3/PSSP6-POSE	131

SPARSE WOODLAND				
G3Q		ARTEMISIA ARBUSCULA-PURSHIA TRIDENTATA/PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARAR8-PUTR2/PSSP6-FEID	130
G5		ARTEMISIA ARBUSCULA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARAR8/FEID	37,39,40,185,222,300,354,476,527
G1G2	Y	ARTEMISIA ARBUSCULA/LEYMUS AMBIGUUS SPARSE DWARF-SHRUBLAND	ARAR8/LEAM	74
G5		ARTEMISIA ARBUSCULA/POA SECUNDA SPARSE DWARF-SHRUBLAND	ARAR8/POSE	36,37,39,41,42,205,420
G5		ARTEMISIA ARBUSCULA/PSEUDOROEGNERIA SPICATA SPARSE DWARF-SHRUBLAND	ARAR8/PSSP6	43,185,244,300,354,423,457,527
G4G5		ARTEMISIA ARBUSCULA/STIPA THURBERIANA SPARSE DWARF-SHRUBLAND	ARAR8/STTH2	527
G2G3		ARTEMISIA CANA SSP. VISCIDULA/DESCHAMPSIA CESPITOSA SHRUBLAND	ARCAV2/DECE	363,376,380
G4		ARTEMISIA CANA SSP. VISCIDULA/FESTUCA IDAHOENSIS SHRUBLAND	ARCAV2/FEID	51,354,363,522
G2		ARTEMISIA CANA-ARTEMISIA TRIDENTATA SSP. VASEYANA/POA CUSICKII SPARSE SHRUBLAND	ARCA13-ARTRV/POCU3	371
G1	Y	ARTEMISIA CANA/(ELYMUS CANINUS)-POA NEVADENSIS SPARSE SHRUBLAND	ARCA13/(ELCA11)-POME3	312,371
G2		ARTEMISIA CANA/CAREX NEBRASCENSIS-POA CUSICKII SPARSE SHRUBLAND	ARCA13/CANE2-POCU3	291,379,519
G4		ARTEMISIA CANA/FESTUCA IDAHOENSIS SPARSE SHRUBLAND	ARCA13/FEID	354
G1	Y	ARTEMISIA CANA/LEYMUS CINEREUS SPARSE SHRUBLAND	ARCA13/LECI4	371
G3		ARTEMISIA CANA/MUHLENBERGIA RICHARDSONIS SPARSE SHRUBLAND	ARCA13/MURI	172,225
G4		ARTEMISIA CANA/PASCOPYRUM SMITHII SHRUBLAND	ARCA13/PASM	195
G3G5		ARTEMISIA NOVA SPARSE DWARF-SHRUBLAND	ARNO4	28,38,59,205,296,336,382
G4G5		ARTEMISIA NOVA/ELYMUS ELYMOIDES SPARSE DWARF-SHRUBLAND	ARNO4/ELEL5	244,300,406
G4		ARTEMISIA NOVA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARNO4/FEID	354
G3G5		ARTEMISIA NOVA/HILARIA JAMESII SPARSE DWARF-SHRUBLAND	ARNO4/HIJA	158
G1G2	Y	ARTEMISIA NOVA/LEYMUS AMBIGUUS SPARSE DWARF-SHRUBLAND	ARNO4/LEAM	77
G4G5		ARTEMISIA NOVA/ORYZOPSIS HYMENOIDES SPARSE DWARF-SHRUBLAND	ARNO4/ORHY	40,244
G3		ARTEMISIA NOVA/POA SECUNDA SPARSE DWARF-SHRUBLAND	ARNO4/POSE	76,371
G5		ARTEMISIA NOVA/PSEUDOROEGNERIA SPICATA SPARSE DWARF-SHRUBLAND	ARNO4/PSSP6	22,24,38,43,161,162,237,305,476,479,527
G3G5		ARTEMISIA NOVA/STIPA COMATA SPARSE DWARF-SHRUBLAND	ARNO4/STCO4	22,24,38,411,527
G2	Y	ARTEMISIA PEDATIFIDA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARPE6/FEID	354
G4		ARTEMISIA RIGIDA/POA SECUNDA SPARSE DWARF-SHRUBLAND	ARR12/POSE	121,185,250,251,462
G3		ARTEMISIA RIGIDA/PSEUDOROEGNERIA SPICATA SPARSE DWARF-SHRUBLAND	ARR12/PSSP6	371
G3G4		ARTEMISIA TRIDENTATA SSP. TRIDENTATA/FESTUCA IDAHOENSIS SHRUBLAND	ARTRT/FEID	244
G2G3		ARTEMISIA TRIDENTATA SSP. TRIDENTATA/LEYMUS CINEREUS SHRUBLAND	ARTRT/LECI4	18,23,23
G2G3		ARTEMISIA TRIDENTATA SSP. TRIDENTATA/PASCOPYRUM SMITHII SHRUBLAND	ARTRT/PASM	168,271,448,458
G4		ARTEMISIA TRIDENTATA SSP. TRIDENTATA/PSEUDOROEGNERIA SPICATA SHRUBLAND	ARTRT/PSSP6	81,244,345,354,476
G1	Y	ARTEMISIA TRIDENTATA SSP. VASEYANA-CERCOCARPUS LEDIFOLIUS/ELYMUS CANINUS-POA SECUNDA SHRUBLAND	ARTRV-CELE3/ELCA11-POSE	131
G4Q		ARTEMISIA TRIDENTATA SSP. VASEYANA-SYMPHORICARPOS OREOPHILUS/BROMUS CARINATUS SHRUBLAND	ARTRV-SYOR2/BRCA5	244
G4		ARTEMISIA TRIDENTATA SSP. VASEYANA-SYMPHORICARPOS OREOPHILUS/FESTUCA IDAHOENSIS SHRUBLAND	ARTRV-SYOR2/FEID	72
G5		ARTEMISIA TRIDENTATA SSP. VASEYANA-SYMPHORICARPOS OREOPHILUS/PSEUDOROEGNERIA SPICATA SHRUBLAND	ARTRV-SYOR2/PSSP6	244,470
G4		ARTEMISIA TRIDENTATA SSP. VASEYANA/BROMUS CARINATUS SHRUBLAND	ARTRV/BRCA5	299
G3		ARTEMISIA TRIDENTATA SSP. VASEYANA/CAREX GEYERI SPARSE SHRUBLAND	ARTRV/CAGE2	253
G5		ARTEMISIA TRIDENTATA SSP. VASEYANA/FESTUCA IDAHOENSIS SPARSE SHRUBLAND	ARTRV/FEID	51,134,168,221,222,238,244,262,285,299,300,345,354,418,439,448,452,458,476
G4		ARTEMISIA TRIDENTATA SSP. VASEYANA/LEYMUS CINEREUS SHRUBLAND	ARTRV/LECI4	244,345
G4		ARTEMISIA TRIDENTATA SSP. VASEYANA/PSEUDOROEGNERIA SPICATA SHRUBLAND	ARTRV/PSSP6	22,24,51,115,244,300,345,439,452
G2	Y	ARTEMISIA TRIDENTATA SSP. VASEYANA/STIPA OCCIDENTALIS SHRUBLAND	ARTRV/STOC2	253,371
G3G5		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS-ATRIPLEX CONFERTIFOLIA SHRUBLAND	ARTRW8-ATCO	499
G2		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS-PERAPHYLLUM RAMOSISSIMUM/FESTUCA IDAHOENSIS SHRUBLAND	ARTRW8-PERA4/FEID	371
G3Q		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS-PURSHIA TRIDENTATA/PSEUDOROEGNERIA SPICATA SHRUBLAND	ARTRW8-PUTR2/PSSP6	222,285
G3		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS/LEYMUS AMBIGUUS SHRUBLAND	ARTRW8/LEAM	221,222,262

G5Q		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS/POA SECUNDA SHRUBLAND	ARTRW8/POSE	82,244
G5		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS/PSEUDOROEGNERIA SPICATA SPARSE SHRUBLAND	ARTRW8/PSSP6	22,24,64,160,162,198,221,281,305, 366,430,440,448,458,476
G2	Y	ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS/STIPA COMATA SHRUBLAND	ARTRW8/STCO4	81,225,518
G3		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS/STIPA THURBERIANA SHRUBLAND	ARTRW8/STTH2	37,39,40,42,43,79,80
G2		ARTEMISIA TRIDENTATA-ATRIPLEX CANESCENS-SARCOBATUS VERMICULATUS/(ORYZOPSIS HYMENOIDES) SHRUBLAND	ARTR2-ATCA2-SAVE4/(ORHY)	392
G5		ARTEMISIA TRIDENTATA-EPHEDRA VIRIDIS SHRUBLAND	ARTR2-EPVI	292,382,491
G1	Y	ARTEMISIA TRIDENTATA-PURSHIA TRIDENTATA/ORYZOPSIS HYMENOIDES-STIPA COMATA SPARSE SHRUBLAND	ARTR2-PUTR2/ORHY-STCO4	105,390
G4		ARTEMISIA TRIDENTATA/FESTUCA IDAHOENSIS SPARSE SHRUBLAND	ARTR2/FE1D	36,121,185,225,331,354,390,461
G3		ARTEMISIA TRIDENTATA/FESTUCA SCABRELLA SPARSE SHRUBLAND	ARTR2/FESC	354
G2G4		ARTEMISIA TRIDENTATA/LEYMUS CINEREUS SPARSE SHRUBLAND	ARTR2/LECI4	37,40,41,43,472,489,521
G3G5		ARTEMISIA TRIDENTATA/POA SECUNDA SHRUBLAND	ARTR2/POSE	121,346,347,412
G5		ARTEMISIA TRIDENTATA/PSEUDOROEGNERIA SPICATA SHRUBLAND	ARTR2/PSSP6	35,36,37,39,41,43,61,121,185,205, 225,300,331,346,347,354,390,461
G5		ARTEMISIA TRIDENTATA/STIPA COMATA SHRUBLAND	ARTR2/STCO4	35,38,76,81,121,225,297,331,390,471,472
G3		ARTEMISIA TRIPARTITA/FESTUCA IDAHOENSIS SPARSE SHRUBLAND	ARTR4/FE1D	78,121,221,225,262,354
G2		ARTEMISIA TRIPARTITA/FESTUCA SCABRELLA SPARSE SHRUBLAND	ARTR4/FESC	492
G3		ARTEMISIA TRIPARTITA/PSEUDOROEGNERIA SPICATA SPARSE SHRUBLAND	ARTR4/PSSP6	79,80,121,225,331
G1	Y	ARTEMISIA TRIPARTITA/STIPA COMATA SPARSE SHRUBLAND	ARTR4/STCO4	121,225,331,492
G5		ATRIPLEX CANESCENS SHRUBLAND	ATCA2	28
G3G5		ATRIPLEX CANESCENS-ARTEMISIA TRIDENTATA SHRUBLAND	ATCA2-ARTR2	411,491
G5		ATRIPLEX CANESCENS-KRASCHENINNIKOVIA LANATA SHRUBLAND	ATCA2-KRLA2	382
G5		ATRIPLEX CANESCENS/HILARIA JAMESII SHRUBLAND	ATCA2/HIJA	52,53,138,241,306,332,437,479, 480,482,498,500,501
G3G5		ATRIPLEX CANESCENS/ORYZOPSIS HYMENOIDES SHRUBLAND	ATCA2/ORHY	484
G5Q		ATRIPLEX CANESCENS/SPOROBOLUS AIROIDES SHRUBLAND	ATCA2/SPAI	19,136,141,169,484
G5		ATRIPLEX CONFERTIFOLIA (COMMUNITY II) SHRUBLAND	ATCO (COMMUNITY II)	10,28,36,40,50,296,382,406
G5Q		ATRIPLEX CONFERTIFOLIA-ARTEMISIA SPINESCENS-SARCOBATUS VERMICULATUS SHRUBLAND	ATCO-ARSP5-SAVE4	42
G5		ATRIPLEX CONFERTIFOLIA-EPHEDRA NEVADENSIS SHRUBLAND	ATCO-EPNE	422,491
G3G5		ATRIPLEX CONFERTIFOLIA-KRASCHENINNIKOVIA LANATA SHRUBLAND	ATCO-KRLA2	28,33,36,158
G4		ATRIPLEX CONFERTIFOLIA-LYCIUM SHOCKLEYI SHRUBLAND	ATCO-LYSH	28
G5		ATRIPLEX CONFERTIFOLIA-SARCOBATUS VERMICULATUS SHRUBLAND	ATCO-SAVE4	159,332
G5		ATRIPLEX CONFERTIFOLIA/ARTEMISIA SPINESCENS SHRUBLAND	ATCO/ARSP5	33,40
G5Q		ATRIPLEX CONFERTIFOLIA/ARTEMISIA SPINESCENS/KRASCHENINNIKOVIA LANATA SHRUBLAND	ATCO/ARSP5/KRLA2	42
G5Q		ATRIPLEX CONFERTIFOLIA/ARTEMISIA SPINESCENS/ORYZOPSIS HYMENOIDES SHRUBLAND	ATCO/ARSP5/ORHY	42
G3G5		ATRIPLEX CONFERTIFOLIA/ELYMUS ELYMOIDES SHRUBLAND	ATCO/ELEL5	485
G3G5		ATRIPLEX CONFERTIFOLIA/HILARIA JAMESII SHRUBLAND	ATCO/HIJA	10,52,53,83,118,181,201,241,306, 389,438,475,479,481,482,500
G3G5		ATRIPLEX CONFERTIFOLIA/KOCHIA AMERICANA SHRUBLAND	ATCO/KOAM	201,485
G2	Y	ATRIPLEX CONFERTIFOLIA/LEYMUS AMBIGUUS SHRUBLAND	ATCO/LEAM	74
G2		ATRIPLEX CONFERTIFOLIA/ORYZOPSIS HYMENOIDES SHRUBLAND	ATCO/ORHY	23,36,42,77,271,273,406,490,521
G3		ATRIPLEX CONFERTIFOLIA/PSEUDOROEGNERIA SPICATA SHRUBLAND	ATCO/PSSP6	18,22,24
G3G5		ATRIPLEX CONFERTIFOLIA/TETRADYMIA GLABRATA SHRUBLAND	ATCO/TEGL	158
G4		(BALSAMORHIZA SERRATA)-POA SECUNDA HERBACEOUS VEGETATION	(BASE2)-POSE	390
G4		BETULA GLANDULOSA/CAREX ROSTRATA SHRUBLAND	B EGL/CARO6	195
G3		BETULA OCCIDENTALIS SHRUBLAND	BEOC2	195,276
G3		BETULA OCCIDENTALIS/CORNUS SERICEA SHRUBLAND	BEOC2/COSE16	155,194,376,380,525
G2		BETULA OCCIDENTALIS/CRATAEGUS DOUGLASII SHRUBLAND	BEOC2/CRDO2	371
G2G3		BETULA OCCIDENTALIS/MESIC FORB SHRUBLAND	BEOC2/MESIC FORB	380
G2		BETULA OCCIDENTALIS/POPULUS TRICHOCARPA/SALIX SPP. SHRUBLAND	BEOC2/POTR15/SALIX	155,312
G4Q		CALAMAGROSTIS CANADENSIS HERBACEOUS VEGETATION	CACA4	96,97,184,194,195,283,326,327, 359,360,362,380,515

G2	CALAMAGROSTIS PURPURASCENS HERBACEOUS VEGETATION	CAPU	143
G4	CALTHA LEPTOSEPALA HERBACEOUS VEGETATION	CALE4	154,376,380
G2	CAREX APERTA HERBACEOUS VEGETATION	CAAP3	195
G5	CAREX AQUATILIS HERBACEOUS VEGETATION	CAAQ	19,22,24,31,55,66,112,179,189,195,199,222,255,256,257,258,276,283,298,326,367,376,377,380,396,398,409,453,473,474,522,525
G4	CAREX BREWERI HERBACEOUS VEGETATION	CABR12	143
G3	CAREX BUXBAUMII HERBACEOUS VEGETATION	CABU6	194,326,380,387,388
G4	CAREX DOUGLASII HERBACEOUS VEGETATION	CADO2	310
G4	CAREX ELYNOIDES HERBACEOUS VEGETATION	CAEL3	16,17,102,340
G3	CAREX ELYNOIDES-LUPINUS ARGENTEUS HERBACEOUS VEGETATION	CAEL3-LUAR3	71
G3	CAREX HOODII-FESTUCA IDAHOENSIS HERBACEOUS VEGETATION	CAH05-FE1D	462
G3	CAREX HOODII-FESTUCA VIRIDULA HERBACEOUS VEGETATION	CAH05-FEVI	250
G4	CAREX LANUGINOSA HERBACEOUS VEGETATION	CALA30	199,291,376,380
G4	CAREX LASIOCARPA HERBACEOUS VEGETATION	CALA11	194,195,291,380
G3	CAREX LIMOSA HERBACEOUS VEGETATION	CAL17	194,195,380
G4	CAREX MICROPTERA HERBACEOUS VEGETATION	CAM17	199,376,380,522,525
G4	CAREX NEBRASCENSIS HERBACEOUS VEGETATION	CANE2	185,195,199,291,362,376,380,522,525
G4	CAREX NIGRICANS HERBACEOUS VEGETATION	CAN12	1,102,143,191,209,211
G2G3	CAREX PRAEGRACILIS-CAREX AQUATILIS HERBACEOUS VEGETATION	CAPR5-CAAQ	60
G3	CAREX PSEUDOSCIRPOIDEA HERBACEOUS VEGETATION	CAPS2	143
G5	CAREX ROSTRATA HERBACEOUS VEGETATION	CARO6	9,17,30,172,195,199,222,274,276,291,303,326,359,360,361,362,363,365,367,376,379,380,396,400,421,432,473,474,522,525
G4	CAREX RUPESTRIS VAR. DRUMMONDIANA HERBACEOUS VEGETATION	CARU0	16,17
G3	CAREX SCIRPOIDEA-GEUM ROSSII HERBACEOUS VEGETATION	CASC10-GERO2	102
G2	CAREX SCIRPOIDEA-POTENTILLA DIVERSIFOLIA HERBACEOUS VEGETATION	CASC10-POD12	102
G4	CAREX SCOPULORUM HERBACEOUS VEGETATION	CASC12	195,312
G4	CAREX SCOPULORUM-CALTHA LEPTOSEPALA HERBACEOUS VEGETATION	CASC12-CALE4	91,102,221,222,262,285,329,374,425,505,506
G3	CAREX SIMULATA HERBACEOUS VEGETATION	CAS12	195,199,291,365,376,380,474,522
G4	CAREX SPECTABILIS HERBACEOUS VEGETATION	CASP5	143
G2	CAREX STENOPHYLLA-POA SECUNDA SPARSE SHRUBLAND	CAST40-POSE	82
G5	CASSIOPE MERTENSIANA-PHYLLODOCE EMPETRIFORMIS DWARF-SHRUBLAND	CAME7-PHEM	133,191
G3	CELTIS LAEVIGATA VAR. RETICULATA/PSEUDOROEGNERIA SPICATA SHRUBLAND	CELAR/PSSP6	462
G4	CERCOCARPUS LEDIFOLIUS/ARTEMISIA TRIDENTATA SHRUBLAND	CELE3/ARTR2	28,40,205
G2	Y CERCOCARPUS LEDIFOLIUS/CALAMAGROSTIS RUBESCENS SHRUBLAND	CELE3/CARU	131
G2	CERCOCARPUS LEDIFOLIUS/FESTUCA IDAHOENSIS SHRUBLAND	CELE3/FE1D	127,131,185
G1	Y CERCOCARPUS LEDIFOLIUS/HOLODISCUS DUMOSUS SHRUBLAND	CELE3/HODU	349
G2	Y CERCOCARPUS LEDIFOLIUS/LEYMUS AMBIGUUS SHRUBLAND	CELE3/LEAM	349
G4	CERCOCARPUS LEDIFOLIUS/PRUNUS VIRGINIANA SHRUBLAND	CELE3/PRVI	300
G5	CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA SHRUBLAND	CELE3/PSSP6	22,24,281,300,333,354,354,462
G2	CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS SHRUBLAND	CELE3/PSSP6-FE1D	131
G2	CERCOCARPUS LEDIFOLIUS/SYMPHORICARPOS OREOPHILUS SHRUBLAND	CELE3/SYOR2	131
G1	Y CHRYSOTHAMNUS NAUSEOSUS/LEYMUS FLAVESCENS/PSORALIDIUM LANCEOLATUM SHRUBLAND	CHNA2/LEFL4/PSLA3	84
G4	CORNUS SERICEA SHRUBLAND	COSE16	195
G3	CORNUS SERICEA/GALIUM TRIFLORUM SHRUBLAND	COSE16/GATR3	363,367,522
G3	CORNUS SERICEA/HERACLEUM LANATUM SHRUBLAND	COSE16/HELA4	376,380,474,522
G2	CRATAEGUS DOUGLASII SHRUBLAND	CRDO2	146
G2	Y CRATAEGUS DOUGLASII/HERACLEUM LANATUM SHRUBLAND	CRDO2/HELA4	121
G2	Y CRATAEGUS DOUGLASII/ROSA WOODSII SHRUBLAND	CRDO2/ROWO	291,371
G3	CRATAEGUS DOUGLASII/SYMPHORICARPOS ALBUS SHRUBLAND	CRDO2/SYAL	121
G1	Y DANTHONIA CALIFORNICA (VALLEY GRASSLAND) HERBACEOUS VEGETATION	DACA3 (VALLEY GRASSLAND)	95,247,265,339
G2G3	DANTHONIA INTERMEDIA HERBACEOUS VEGETATION	DAIN	143,189,222,283,287,380
G3	DANTHONIA UNISPICATA-POA SECUNDA HERBACEOUS VEGETATION	DAUN-POSE	178,250

G4	DESCHAMPSIA CESPITOSA HERBACEOUS VEGETATION	DECE	46,55,122,172,185,189,191,195,199,222 199,222,250,251,291,362,376,456,474,522,525
G4	DESCHAMPSIA CESPITOSA-CALTHA LEPTOSEPALA HERBACEOUS VEGETATION	DECE-CALE4	45,46,102,221,222,254,262,285,329,373,515
G4	DESCHAMPSIA CESPITOSA-CAREX SPP. HERBACEOUS VEGETATION	DECE-CAREX	354
G3G5	DISTICHLIS SPICATA HERBACEOUS VEGETATION	DISP	28,58,67,109,113,117,121,172,181, 195,240,279,372,394,399,413, 414,433,442,474,479,486,494
G4	DISTICHLIS SPICATA-(SCIRPUS NEVADENSIS) HERBACEOUS VEGETATION	DISP-(SCNE)	106,121,183,419
G37	DRYAS OCTOPETALA HERBACEOUS VEGETATION	DROC	143
G4	DRYAS OCTOPETALA-CAREX RUPESTRIS HERBACEOUS VEGETATION	DROC-CARU3	102,112,151,176,221,222,231,232, 233,262,275,283,496,506,507
G5	Y ELEOCHARIS PALUSTRIS HERBACEOUS VEGETATION	ELPA3	22,24,60,67,153,165,195,199,276,291, 360,361,376,380,396,399,442,446,522
G2G4	ELEOCHARIS PALUSTRIS-DISTICHLIS SPICATA HERBACEOUS VEGETATION	ELPA3-DISP	58
G2G4	ELEOCHARIS PALUSTRIS-JUNCUS BALTICUS HERBACEOUS VEGETATION	ELPA3-JUBA	436
G4	ELEOCHARIS QUINQUEFLORA HERBACEOUS VEGETATION	ELQU2	55,194,245,283,291,326,380,515
G2	ELYMUS GLAUCUS HERBACEOUS VEGETATION	ELGL	407
G4	EQUISETUM FLUVIATILE HERBACEOUS VEGETATION	EQFL	195
G3	ERIOGONUM COMPOSITUM-POA SECUNDA HERBACEOUS VEGETATION	ERCO12-POSE	121
G3	ERIOGONUM DOUGLASII-POA SECUNDA HERBACEOUS VEGETATION	ERDO-POSE	121,250,251
G3	ERIOGONUM MICROTHECUM-PHYSARIA OREGONA SPARSE SHRUBLAND	ERM14-PHOR2	121,250,251
G3	ERIOGONUM NIVELUM-POA SECUNDA HERBACEOUS VEGETATION	ERN12-POSE	121
G1	Y ERIOGONUM OVALIFOLIUM VAR. DEPRESSUM DWARF-SHRUBLAND	EROVD	124,125
G3	ERIOGONUM SPHAEROCEPHALUM-POA SECUNDA DWARF-SHRUBLAND	ERSP7-POSE	121
G3	ERIOGONUM SPHAEROCEPHALUM-POA SECUNDA HERBACEOUS VEGETATION	ERSP7-POSE	121
G4	ERIOGONUM STRICTUM-POA SECUNDA HERBACEOUS VEGETATION	ERST4-POSE	121,251,390
G3	ERIOGONUM THYMOIDES-POA SECUNDA DWARF-SHRUBLAND	ERTH4-POSE	121
G3	ERIOGONUM THYMOIDES-POA SECUNDA HERBACEOUS VEGETATION	ERTH4-POSE	121
G3	FESTUCA IDAHOENSIS HERBACEOUS VEGETATION	FEID	19,254
G3	FESTUCA IDAHOENSIS-CAREX FILIFOLIA HERBACEOUS VEGETATION	FEID-CAFI	354
G3G47	FESTUCA IDAHOENSIS-CAREX HOODII HERBACEOUS VEGETATION	FEID-CAHO5	299
G2	Y FESTUCA IDAHOENSIS-CAREX SCIRPOIDEA HERBACEOUS VEGETATION	FEID-CASC10	354
G4	FESTUCA IDAHOENSIS-DESCHAMPSIA CESPITOSA HERBACEOUS VEGETATION	FEID-DECE	354
G4	FESTUCA IDAHOENSIS-ELYMUS TRACHYCAULUS HERBACEOUS VEGETATION	FEID-ELTR7	222,262,354
G2	FESTUCA IDAHOENSIS-ERIOGONUM CAESPITOSUM HERBACEOUS VEGETATION	FEID-ERCA8	71
G2	Y FESTUCA IDAHOENSIS-ERIOGONUM HERACLEOIDES HERBACEOUS VEGETATION	FEID-ERHE2	121,331,460,461
G27	FESTUCA IDAHOENSIS-FESTUCA KINGII HERBACEOUS VEGETATION	FEID-FEK12	344
G2	Y FESTUCA IDAHOENSIS-HIERACIUM CYNOGLOSSOIDES HERBACEOUS VEGETATION	FEID-HICY	121
G3	FESTUCA IDAHOENSIS-KOELERIA MACRANTHA HERBACEOUS VEGETATION	FEID-KOMA	250,251,390,462
G3	FESTUCA IDAHOENSIS-POTENTILLA DIVERSIFOLIA HERBACEOUS VEGETATION	FEID-POD12	102
G4	FESTUCA IDAHOENSIS-PSEUDOROEGNERIA SPICATA HERBACEOUS VEGETATION	FEID-PSSP6	354,462
G3	FESTUCA IDAHOENSIS-STIPA RICHARDSONII HERBACEOUS VEGETATION	FEID-STR12	354
G2	Y FESTUCA IDAHOENSIS-SYMPHORICARPOS ALBUS SPARSE SHRUBLAND	FEID-SYAL	121,251,462
G3	FESTUCA KINGII HERBACEOUS VEGETATION	FEK12	344
G3	FESTUCA KINGII-CAREX ELYNOIDES HERBACEOUS VEGETATION	FEK12-CAEL3	348
G3	FESTUCA KINGII-PHLOX PULVINATA HERBACEOUS VEGETATION	FEK12-PHPU5	348
G3	FESTUCA KINGII-POA CUSICKII HERBACEOUS VEGETATION	FEK12-POCU3	348
G4	FESTUCA OVINA HERBACEOUS VEGETATION	FEOV	189
G4	FESTUCA SCABRELLA-FESTUCA IDAHOENSIS HERBACEOUS VEGETATION	FESC-FEID	121,226,331,354,460,461,463
G4	FESTUCA SCABRELLA-PSEUDOROEGNERIA SPICATA HERBACEOUS VEGETATION	FESC-PSSP6	354
G2	Y FESTUCA VIRIDULA-FESTUCA IDAHOENSIS HERBACEOUS VEGETATION	FEVI-FEID	250
G3	FESTUCA VIRIDULA-LUPINUS ARGENTEUS SSP. ARGENTEUS VAR. LAXIFLORUS HERBACEOUS VEGETATION	FEVI-LUARL5	250
G4G5	GEUM ROSSII HERBACEOUS VEGETATION	GERO2	298,304

G5	GLOSSOPETALON NEVADENSE/PSEUDOROEGNERIA SPICATA SHRUBLAND	GLNE3/PSSP6	250
G3	GLYCERIA BOREALIS HERBACEOUS VEGETATION	GLBO	195
G5	GRAYIA SPINOSA-EPHEDRA VIRIDIS SHRUBLAND	GRSP-EPVI	292
G4	GRAYIA SPINOSA-PRUNUS ANDERSONII SHRUBLAND	GRSP-PRAN2	394
G4	GRAYIA SPINOSA/ARTEMISIA NOVA/STIPA SPECIOSA SHRUBLAND	GRSP/ARNO4/STSP3	40
G5	GRAYIA SPINOSA/ARTEMISIA SPINESCENS SHRUBLAND	GRSP/ARSP5	38,40
G5	GRAYIA SPINOSA/LYCIUM ANDERSONII SHRUBLAND	GRSP/LYAN	28,382,406,435,495
G4	GRAYIA SPINOSA/ORYZOPSIS HYMENOIDES SHRUBLAND	GRSP/ORHY	36
G7	GRAYIA SPINOSA/POA SECUNDA SHRUBLAND	GRSP/POSE	121
G2	IVESIA GORDONII-ERIOGONUM CAESPITOSUM HERBACEOUS VEGETATION	IVGO-ERCAB	71
G2	IVESIA GORDONII-MIMUJARTIA OBTUSILOBA HERBACEOUS VEGETATION	IVGO-MIOB2	71
G5	JUNCUS BALTICUS HERBACEOUS VEGETATION	JUBA	60,67,165,194,195,221,285,310,361,363,370,379,380,402,436,446,474,493,522
G2G4	JUNCUS BALTICUS-CAREX ROSSII HERBACEOUS VEGETATION	JUBA-CAR05	411
G4	JUNCUS DRUMMONDII-CAREX SPP. HERBACEOUS VEGETATION	JUDR-CAREX	29,262,283,288,316,369,374,425,441,506,507
G3	JUNIPERUS OCCIDENTALIS-PINUS PONDEROSA/ARTEMISIA TRIDENTATA/PSEUDOROEGNERIA SPICATA-(FESTUCA IDAHOENSIS-STIPA SPP.) SPARSE WOODLAND	JUOC-PIPO/ARTR2/PSSP6-(FEID-STIPA)	188
G3	JUNIPERUS OCCIDENTALIS-PINUS PONDEROSA/PURSHIA TRIDENTATA/(PSEUDOROEGNERIA SPICATA)-FESTUCA IDAHOENSIS SPARSE WOODLAND	JUOC-PIPO/PUTR2/(PSSP6)-FEID	15
G2	JUNIPERUS OCCIDENTALIS/ARTEMISIA ARBUSCULA/DANTHONIA UNISPICATA-POA SECUNDA SPARSE WOODLAND	JUOC/ARAR8/DAUN-POSE	188
G3	JUNIPERUS OCCIDENTALIS/ARTEMISIA ARBUSCULA/FESTUCA IDAHOENSIS SPARSE WOODLAND	JUOC/ARAR8/FEID	150,185,188,235
G4	JUNIPERUS OCCIDENTALIS/ARTEMISIA ARBUSCULA/PSEUDOROEGNERIA SPICATA SPARSE WOODLAND	JUOC/ARAR8/PSSP6	150,185,188,235
G2	JUNIPERUS OCCIDENTALIS/ARTEMISIA RIGIDA/POA SECUNDA SPARSE WOODLAND	JUOC/ARR12/POSE	185,188
G4	JUNIPERUS OCCIDENTALIS/ARTEMISIA TRIDENTATA SSP. VASEYANA WOODLAND	JUOC/ARTRV	68,69,253
G3	JUNIPERUS OCCIDENTALIS/ARTEMISIA TRIDENTATA-PURSHIA TRIDENTATA/PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS SPARSE WOODLAND	JUOC/ARTR2-PUTR2/PSSP6-FEID	144,145,429,487
G1	Y JUNIPERUS OCCIDENTALIS/ARTEMISIA TRIDENTATA/CAREX FILIFOLIA SPARSE WOODLAND	JUOC/ARTR2/CAFI	173
G3	JUNIPERUS OCCIDENTALIS/ARTEMISIA TRIDENTATA/FESTUCA IDAHOENSIS SPARSE WOODLAND	JUOC/ARTR2/FEID	144,150,185,188,235
G3	JUNIPERUS OCCIDENTALIS/ARTEMISIA TRIDENTATA/PSEUDOROEGNERIA SPICATA SPARSE WOODLAND	JUOC/ARTR2/PSSP6	132,144,150,185,235
G2	JUNIPERUS OCCIDENTALIS/CERCOCARPUS LEDIFOLIUS-SYMPHORICARPOS OREOPHILUS WOODLAND	JUOC/CELE3-SYOR2	131
G2	Y JUNIPERUS OCCIDENTALIS/CERCOCARPUS LEDIFOLIUS/CAREX GEYERI WOODLAND	JUOC/CELE3/CAGE2	253
G4	JUNIPERUS OCCIDENTALIS/CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA WOODLAND	JUOC/CELE3/PSSP6	253
G27	JUNIPERUS OCCIDENTALIS/FESTUCA IDAHOENSIS SPARSE WOODLAND	JUOC/FEID	144,185,343
GU	JUNIPERUS OCCIDENTALIS/POA SECUNDA-STIPA OCCIDENTALIS SPARSE WOODLAND	JUOC/POSE-STOC2	107,268
G3	JUNIPERUS OCCIDENTALIS/PSEUDOROEGNERIA SPICATA SPARSE WOODLAND	JUOC/PSSP6	144,185,250,517
G5	JUNIPERUS OSTEOSPERMA WOODLAND	JUOS	38,43,44
G5	JUNIPERUS OSTEOSPERMA/ARTEMISIA NOVA WOODLAND	JUOS/ARNO4	38,43,44,74
G5	JUNIPERUS OSTEOSPERMA/ARTEMISIA NOVA/ROCK WOODLAND	JUOS/ARNO4/ROCK	38
G5Q	JUNIPERUS OSTEOSPERMA/ARTEMISIA TRIDENTATA WOODLAND	JUOS/ARTR2	36,38,41,43,44,50,63,118,140,242,295,297,336,342,478
G4G5	JUNIPERUS OSTEOSPERMA/ARTEMISIA TRIDENTATA/ORYZOPSIS HYMENOIDES WOODLAND	JUOS/ARTR2/ORHY	41
G7Q	JUNIPERUS OSTEOSPERMA/BARREN WOODLAND	JUOS/BARREN	336
G1	Y JUNIPERUS OSTEOSPERMA/LEYMUS AMBIGUUS SPARSE WOODLAND	JUOS/LEAM	74
G4	JUNIPERUS OSTEOSPERMA/PSEUDOROEGNERIA SPICATA WOODLAND	JUOS/PSSP6	19,22,134,262,264,281,297,323,503,504
G1	Y JUNIPERUS OSTEOSPERMA/PURSHIA TRIDENTATA-SYMPHORICARPOS OREOPHILUS/PSEUDOROEGNERIA SPICATA WOODLAND	JUOS/PUTR2-SYOR2/PSSP6	260,278
G1	Y JUNIPERUS OSTEOSPERMA/STIPA COMATA SPARSE WOODLAND	JUOS/STCO4	74
G4	JUNIPERUS SCOPULORUM/CORNUS SERICEA WOODLAND	JUSC2/COSE16	195
G4	JUNIPERUS SCOPULORUM/PSEUDOROEGNERIA SPICATA WOODLAND	JUSC2/PSSP6	32,64,168,197,198,262,448,453,458
G3	KALMIA MICROPHYLLA/CAREX SCOPULORUM DWARF-SHRUBLAND	KAMI/CASC12	195
G5	KRASCHEINNIKOVIA LANATA SHRUBLAND	KRLA2	157,337

G3	KRASCHENINNIKOVIA LANATA/POA SECUNDA SHRUBLAND	KRLA2/POSE	121
G4	LARIX LYALLII-ABIES LASIOCARPA FOREST	LALY-ABLA	385
G3	LARIX LYALLII/LUZULA GLABRATA VAR. HITCHCOCKII WOODLAND	LALY/LUGLH	514
G3	LARIX LYALLII/VACCINIUM DELICIOSUM WOODLAND	LALY/VADE	514
G2	Y LEYMUS AMBIGUUS-ENCELTIOPSIS NUDICAULIS HERBACEOUS VEGETATION	LEAM-ENNU	349
G2	Y LEYMUS AMBIGUUS-LUPINUS ARGENTEUS HERBACEOUS VEGETATION	LEAM-LUAR3	349
G1	LEYMUS CINEREUS (BOTTOMLANDS) HERBACEOUS VEGETATION	LEC14 (BOTTOMLANDS)	106,121,251,390,431
G3	LEYMUS CINEREUS HERBACEOUS VEGETATION	LEC14	127,250
G2	Y LEYMUS FLAVESCENS SPARSE VEGETATION	LEFL4	84
G47	LEYMUS TRITICOIDES-CAREX SPP. HERBACEOUS VEGETATION	LETR5-CAREX	40
G2	LEYMUS TRITICOIDES-POA SECUNDA HERBACEOUS VEGETATION	LETR5-POSE	149
G4	LOMATIUM COUS-POA SECUNDA HERBACEOUS VEGETATION	LOCO4-POSE	517
G4	MERTENSIA CILIATA HERBACEOUS VEGETATION	MEC13	283,380
G4	MUPHAR LUTEA SSP. POLYSEPALA HERBACEOUS VEGETATION	NULLP	321,400
G3G5	PASCOPYRUM SMITHII HERBACEOUS VEGETATION	PASH	22,24,67,86,195,317,395,397,399,433,479
G4	PENTAPHYLLOIDES FLORIBUNDA/DESCHAMPSIA CESPITOSA SHRUBLAND	PEFL15/DECE	195,363,376,380,522,525
G4	PENTAPHYLLOIDES FLORIBUNDA/FESTUCA IDAHOENSIS SPARSE SHRUBLAND	PEFL15/FE10	327,354,476,522
G4	PENTAPHYLLOIDES FLORIBUNDA/FESTUCA SCABRELLA SPARSE SHRUBLAND	PEFL15/FESC	354
G4	PHALARIS ARUNDINACEA HERBACEOUS VEGETATION	PHAR3	195
G3	Y PHRAGMITES AUSTRALIS HERBACEOUS VEGETATION	PHAU7	195
G3	PHYLLODOCE EMPETRIFORMIS/ANTENNARIA LANATA DWARF-SHRUBLAND	PHEN/ANLA3	102
G3	PHYSOCARPUS MALVACEUS-SYMPHORICARPOS ALBUS SHRUBLAND	PHMA5-SYAL	250
G2	PHYSOCARPUS MALVACEUS-SYMPHORICARPOS ALBUS SHRUBLAND	PHMA5-SYAL	250
G5	PICEA ENGELMANNII/ARNICA CORDIFOLIA FOREST	PIEN/ARCO9	444
G3	PICEA ENGELMANNII/CALAMAGROSTIS CANADENSIS FOREST	PIEN/CACA4	529
G4	Y PICEA ENGELMANNII/CALTHA LEPTOSEPALA FOREST	PIEN/CALE4	262,328,444
G2	PICEA ENGELMANNII/CAREX DISPERMA FOREST	PIEN/CAD16	262,443,444
G3	PICEA ENGELMANNII/CLINTONIA UNIFLORA FOREST	PIEN/CLUN2	291
G3	PICEA ENGELMANNII/CORNUS SERICEA WOODLAND	PIEN/COSE16	529
G4G5	PICEA ENGELMANNII/EQUISETUM ARVENSE FOREST	PIEN/EQAR	96,97,101,262,291,328,380,381,385,443,444,508,509,513,514,524
G4	PICEA ENGELMANNII/GALIUM TRIFLORUM FOREST	PIEN/GATR3	101,443,444,522
G2	PICEA ENGELMANNII/HYPNUM REVOLUTUM FOREST	PIEN/HYRE70	262,443,444
G4	PICEA ENGELMANNII/JUNIPERUS COMMUNIS FOREST	PIEN/JUCO6	262,444
G3	PICEA ENGELMANNII/LINNAEA BOREALIS FOREST	PIEN/LIBO3	101,262,444
G2	PICEA ENGELMANNII/PHYSOCARPUS MALVACEUS FOREST	PIEN/PHMA5	262,444
G5	PICEA ENGELMANNII/RIBES MONTIGENUM FOREST	PIEN/RIMO2	34,295,383,444,493,523
G3	PICEA ENGELMANNII/SENECIO TRIANGULARIS FOREST	PIEN/SETR	93
G4G5	PICEA ENGELMANNII/VACCINIUM CESPITOSUM FOREST	PIEN/VACE	328,385
G4G5	PICEA ENGELMANNII/VACCINIUM SCOPARIUM FOREST	PIEN/VASC	230,262,328,404,444,453
G1	PICEA SPP./CAREX DISPERMA FOREST	PICEA/CAD16	444
G4	PICEA SPP./CLINTONIA UNIFLORA FOREST	PICEA/CLUN2	385
G3	PICEA SPP./CORNUS SERICEA FOREST	PICEA/COSE16	195
G4	PICEA SPP./EQUISETUM ARVENSE FOREST	PICEA/EQAR	385
G4	PICEA SPP./GALIUM TRIFLORUM FOREST	PICEA/GATR3	385
G4	PICEA SPP./LINNAEA BOREALIS FOREST	PICEA/LIBO3	385
G2	Y PICEA SPP./LYSICHTON AMERICANUS FOREST	PICEA/LYAM3	195
G4	PICEA SPP./MATANTHEMUM STELLATUM FOREST	PICEA/MAST4	385
G3	PICEA SPP./PHYSOCARPUS MALVACEUS FOREST	PICEA/PHMA5	385
G4	PICEA SPP./SENECIO STREPTANTHIFOLIUS FOREST	PICEA/SEST3	385
G4	PICEA SPP./VACCINIUM CESPITOSUM FOREST	PICEA/VACE	385
G5	PINUS ALBICAULIS FOREST	PIAL	385
G5	PINUS ALBICAULIS-ABIES LASIOCARPA FOREST	PIAL-ABLA	385
G3	PINUS ALBICAULIS-PINUS CONTORTA/PENSTEMON LAETUS FOREST	PIAL-PICO/PELA7	235

G3	PINUS ALBICAULIS/CALAMAGROSTIS RUBESCENS WOODLAND	PIAL/CARU	508,509,513,514
G4	PINUS ALBICAULIS/CAREX GEYERI WOODLAND	PIAL/CAGE2	101,185,262,444
G4	PINUS ALBICAULIS/CAREX ROSSII FOREST	PIAL/CAR05	262,403,444
G4	PINUS ALBICAULIS/FESTUCA IDAHOENSIS WOODLAND	PIAL/FEID	262,344,444
G4	PINUS ALBICAULIS/JUNIPERUS COMMUNIS WOODLAND	PIAL/JUC06	262,403,444
G4	PINUS ALBICAULIS/LUZULA GLABRATA VAR. HITCHCOCKII WOODLAND	PIAL/LUGLH	514
G4	PINUS ALBICAULIS/VACCINIUM SCOPARIUM FOREST	PIAL/VASC	101,262,403,444,453
G2	PINUS CONTORTA-(POPULUS TREMULOIDES)/SPIRAEA DOUGLASII/CAREX SPP. FOREST	PICO-(POTR5)/SPDO/CAREX	291
G3	PINUS CONTORTA-(POPULUS TREMULOIDES)/VACCINIUM ULIGINOSUM FOREST	PICO-(POTR5)/VAUL	291
G3	PINUS CONTORTA/ARCTOSTAPHYLOS NEVADENSIS FOREST	PICO/ARNE	13,324
G5	PINUS CONTORTA/ARCTOSTAPHYLOS UVA-URSI FOREST	PICO/ARUV	135,142,171,230,262,328,383,453,487
G4	PINUS CONTORTA/ARNICA CORDIFOLIA FOREST	PICO/ARCO9	262,444
G3	PINUS CONTORTA/ARTEMISIA TRIDENTATA/FESTUCA IDAHOENSIS FOREST	PICO/ARTR2/FEID	487
G3	PINUS CONTORTA/ARTEMISIA TRIDENTATA/STIPA OCCIDENTALIS FOREST	PICO/ARTR2/STOC2	487
G5	PINUS CONTORTA/CALAMAGROSTIS RUBESCENS FOREST	PICO/CARU	236,375,385,444,463
G5	PINUS CONTORTA/CAREX GEYERI FOREST	PICO/CAGE2	2,6,221,222,223,262,286,338,443,444,445,493
G4	PINUS CONTORTA/CAREX PENNSYLVANICA FOREST	PICO/CAPE6	487
G5	PINUS CONTORTA/CAREX ROSSII FOREST	PICO/CAR05	6,328,444
G4	PINUS CONTORTA/CAREX SPP. FOREST	PICO/CAREX	291
G4	PINUS CONTORTA/CEANOETHUS VELUTINUS FOREST	PICO/CEVE	426,487
G2	PINUS CONTORTA/ELYMUS GLAUCUS FOREST	PICO/ELGL	185
G3	PINUS CONTORTA/FESTUCA IDAHOENSIS FOREST	PICO/FEID	130,443
G5	PINUS CONTORTA/JUNIPERUS COMMUNIS WOODLAND	PICO/JUC06	2,6,221,222,223,262,286,320,328,338,381,410,443,444,493
G3	PINUS CONTORTA/PURSHIA TRIDENTATA WOODLAND	PICO/PUTR2	385
G4	PINUS CONTORTA/PURSHIA TRIDENTATA-RIBES CERULUM FOREST	PICO/PUTR2-RICE	487
G4	PINUS CONTORTA/PURSHIA TRIDENTATA/CAREX PENNSYLVANICA FOREST	PICO/PUTR2/CAPE6	487
G3	PINUS CONTORTA/PURSHIA TRIDENTATA/FESTUCA IDAHOENSIS FOREST	PICO/PUTR2/FEID	487
G3	PINUS CONTORTA/PURSHIA TRIDENTATA/STIPA OCCIDENTALIS FOREST	PICO/PUTR2/STOC2	487
G3G4	PINUS CONTORTA/SPIRAEA BETULIFOLIA FOREST	PICO/SPBE2	444
G3	PINUS CONTORTA/STIPA OCCIDENTALIS FOREST	PICO/STOC2	487
G5	PINUS CONTORTA/VACCINIUM CESPITOSUM FOREST	PICO/VACE	98,328,385,443
G3G5	PINUS CONTORTA/VACCINIUM GLOBULARE FOREST	PICO/VAGL	444
G5	PINUS CONTORTA/VACCINIUM SCOPARIUM FOREST	PICO/VASC	6,98,185,202,221,223,230,236,252,262,286,320,328,375,385,415,443,444,444,445,453,483,487,493
G3	PINUS CONTORTA/VACCINIUM SCOPARIUM/CAREX PENNSYLVANICA FOREST	PICO/VASC/CAPE6	185,487
G5	PINUS CONTORTA/XEROPHYLLUM TENAX FOREST	PICO/XETE	11,98,487
G3G4	PINUS FLEXILIS/CERCOCARPUS LEDIFOLIUS WOODLAND	PIFL2/CELE3	127,328,443,444
G5	PINUS FLEXILIS/FESTUCA IDAHOENSIS WOODLAND	PIFL2/FEID	262,385,443,444
G4	PINUS FLEXILIS/FESTUCA KINGII WOODLAND	PIFL2/FEK12	6,101,262,264,443,444,453
G5	PINUS FLEXILIS/JUNIPERUS COMMUNIS WOODLAND	PIFL2/JUC06	6,93,221,223,227,262,263,385,443,444,493
G3?	PINUS FLEXILIS/MAHONIA REPENS WOODLAND	PIFL2/MARE11	328
G1Q	PINUS FLEXILIS/PENTAPHYLLOIDES FLORIBUNDA/DISTICHLIS STRICTA WOODLAND	PIFL2/PEFL15/DIST3	242
G4	PINUS FLEXILIS/PSEUDOROEGNERIA SPICATA WOODLAND	PIFL2/PSSP6	385
G1	Y PINUS FLEXILIS/PURSHIA TRIDENTATA WOODLAND	PIFL2/PUTR2	124,125,152
G5	PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/ARTEMISIA ARBUSCULA WOODLAND	PIMO-JUOS/ARAR8	39,40
G1	Y PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/ARTEMISIA TRIDENTATA SSP. VASEYANA/PSEUDOROEGNERIA SPICATA WOODLAND	PIMO-JUOS/ARTRV/PSSP6	72,73
G5	PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/ARTEMISIA TRIDENTATA WOODLAND	PIMO-JUOS/ARTR2	39,40,44,290
G1	Y PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA WOODLAND	PIMO-JUOS/CELE3/PSSP6	72
G1	Y PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/LEYMUS CINEREUS WOODLAND	PIMO-JUOS/LEC14	72
G1	Y PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/PRUNUS VIRGINIANA WOODLAND	PIMO-JUOS/PRVI	72

G5		PINUS MONOPHYLLA/ARTEMISIA TRIDENTATA WOODLAND	PIMO/ARTR2	28,36,41,292
G5		PINUS MONOPHYLLA/CERCOCARPUS LEDIFOLIUS WOODLAND	PIMO/CELE3	205
GU		PINUS PONDEROSA-POPULUS TREMULOIDES/CAREX SPP.-(POA SPP.) FOREST	PIPO-POTR5/CAREX-(POA)	291
G1	Y	PINUS PONDEROSA-PSEUDOTSUGA MENZIESII WOODLAND	PIPO-PSME	308
G2	Y	PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/ARCTOSTAPHYLOS NEVADENSIS FOREST	PIPO-PSME/ARNE	12,468
G3		PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/ARCTOSTAPHYLOS PATULA FOREST	PIPO-PSME/ARPA6	12
G3		PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/PENSTEMON FRUTICOSUS FOREST	PIPO-PSME/PEFR3	514
G3G4		PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/PHYSOCARPUS MALVACEUS FOREST	PIPO-PSME/PHMA5	185
G3		PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/PSEUDOROEGNERIA SPICATA SSP. INERMIS FOREST	PIPO-PSME/PSSP1	462,508,509,513
G4		PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/PURSHIA TRIDENTATA FOREST	PIPO-PSME/PUTR2	324,508,509,514
G1		PINUS PONDEROSA-QUERCUS GARRYANA/ARCTOSTAPHYLOS VISCIDA/FESTUCA CALIFORNICA WOODLAND	PIPO-QUGA4/ARVI4/FECA	371
G2	Y	PINUS PONDEROSA-QUERCUS GARRYANA/BALSAMORHIZA SAGITTATA WOODLAND	PIPO-QUGA4/BASA3	468
G3		PINUS PONDEROSA-QUERCUS GARRYANA/CAREX GEYERI WOODLAND	PIPO-QUGA4/CAGE2	248
G3		PINUS PONDEROSA-QUERCUS GARRYANA/PURSHIA TRIDENTATA WOODLAND	PIPO-QUGA4/PUTR2	468
G3		PINUS PONDEROSA-QUERCUS GARRYANA/SYMPHORICARPOS ALBUS WOODLAND	PIPO-QUGA4/SYAL	248
G5		PINUS PONDEROSA/ARCTOSTAPHYLOS PATULA WOODLAND	PIPO/ARPA6	182,262,411,523
G3		PINUS PONDEROSA/ARCTOSTAPHYLOS PATULA-PURSHIA TRIDENTATA FOREST	PIPO/ARPA6-PUTR2	147,487
G2		PINUS PONDEROSA/ARTEMISIA TRIDENTATA SSP. VASEYANA/POA NERVOSA FOREST	PIPO/ARTRV/PONE2	235
G3		PINUS PONDEROSA/ARTEMISIA TRIDENTATA-PURSHIA TRIDENTATA FOREST	PIPO/ARTR2-PUTR2	487
G1		PINUS PONDEROSA/ARTEMISIA TRIDENTATA/STIPA SPP. FOREST	PIPO/ARTR2/STIPA	235
G1	Y	PINUS PONDEROSA/ASPIDOTIS Densa WOODLAND	PIPO/ASDE6	514
G2	Y	PINUS PONDEROSA/CALAMAGROSTIS RUBESCENS FOREST	PIPO/CARU	122,172,185,417,423,547
G4		PINUS PONDEROSA/CAREX GEYERI FOREST	PIPO/CAGE2	6,49,262,328,453,520
G4		PINUS PONDEROSA/CEANOTHUS VELUTINUS-PURSHIA TRIDENTATA FOREST	PIPO/CEVE-PUTR2	147,487
G4		PINUS PONDEROSA/CERCOCARPUS LEDIFOLIUS WOODLAND	PIPO/CELE3	523
G3		PINUS PONDEROSA/CORNUS SERICEA WOODLAND	PIPO/COSE16	195
G1	Y	PINUS PONDEROSA/CRATAEGUS DOUGLASII WOODLAND	PIPO/CRDO2	270,371
G2		PINUS PONDEROSA/ELYMUS GLAUCUS FOREST	PIPO/ELGL	185,203
G5		PINUS PONDEROSA/FESTUCA IDAHOENSIS WOODLAND	PIPO/FEID	90,98,100,110,110,116,119,122,178,185,187,230,250,262,286,328,331,384,385,443,453,463,528
G3G4		PINUS PONDEROSA/FESTUCA SCABRELLA FOREST	PIPO/FESC	331,344,492
G2		PINUS PONDEROSA/PHYSOCARPUS MALVACEUS FOREST	PIPO/PHMA5	98,103,119,122,172,185,331,443,492,509
G4		PINUS PONDEROSA/PRUNUS VIRGINIANA FOREST	PIPO/PRV1	198,229,385
G4		PINUS PONDEROSA/PSEUDOROEGNERIA SPICATA WOODLAND	PIPO/PSSP6	90,98,119,121,122,185,198,230,250,251,331,385,443,453,462,508,509,528
G5		PINUS PONDEROSA/PURSHIA TRIDENTATA WOODLAND	PIPO/PUTR2	26,54,90,119,122,172,185,221,222,223,250,262,294,381,385,385,411,416,443,493,509,523
G3		PINUS PONDEROSA/PURSHIA TRIDENTATA/CAREX PENNSYLVANICA FOREST	PIPO/PUTR2/CAPE6	487
G3		PINUS PONDEROSA/PURSHIA TRIDENTATA/CAREX ROSSII FOREST	PIPO/PUTR2/CAROS	185
G3		PINUS PONDEROSA/PURSHIA TRIDENTATA/FESTUCA IDAHOENSIS FOREST	PIPO/PUTR2/FEID	130,147,234,235,246,487
G1	Y	PINUS PONDEROSA/PURSHIA TRIDENTATA/ORYZOPSIS HYMENOIDES SPARSE VEGETATION	PIPO/PUTR2/ORHY	90,343
G3		PINUS PONDEROSA/PURSHIA TRIDENTATA/PSEUDOROEGNERIA SPICATA FOREST	PIPO/PUTR2/PSSP6	90,250,487,514
G2		PINUS PONDEROSA/PURSHIA TRIDENTATA/STIPA OCCIDENTALIS FOREST	PIPO/PUTR2/STOC2	234,487
G1		PINUS PONDEROSA/STIPA COMATA WOODLAND	PIPO/STCO4	119,122,172,443,528
G5		PINUS PONDEROSA/SYMPHORICARPOS ALBUS FOREST	PIPO/SYAL	90,98,119,122,229,250,262,307,331,385,443,453,454,463,528
G4		PINUS PONDEROSA/SYMPHORICARPOS OREOPHILUS FOREST	PIPO/SYOR2	309,443,523
G2		PINUS PONDEROSA/WYETHIA MOLLIS FOREST	PIPO/WYMO	235
G2		POA CUSICKII HERBACEOUS VEGETATION	POCU3	291
G47		POA NEVADENSIS HERBACEOUS VEGETATION	PONE3	42,310
G1	Y	POA NEVADENSIS-PUCCINELLIA LEMMONII-ELYMUS ELYMOIDES HERBACEOUS VEGETATION	PONE3-PULE-ELEL5	47,267

G4	POA PALUSTRIS HERBACEOUS VEGETATION	POPA2	195
G2G3	POPULUS ANGUSTIFOLIA/ACER GRANDIDENTATUM FOREST	POAN3/ACGR3	380
G3	POPULUS ANGUSTIFOLIA/BETULA OCCIDENTALIS FOREST	POAN3/BEOC2	285,370,376,380
G4	POPULUS ANGUSTIFOLIA/CORNUS SERICEA FOREST	POAN3/COSE16	195,262,356,376,380,522,525
G3?	POPULUS FREMONTII/SALIX GEYERIANA WOODLAND	POTR2/SAGE2	40
G4G5	POPULUS TREMULOIDES/AMELANCHIER ALNIFOLIA-SYMPHORICARPOS OREOPHILUS/BROMUS CARINATUS FOREST	POTR5/AMAL2-SYOR2/BRCAS	351
G4	POPULUS TREMULOIDES/AMELANCHIER ALNIFOLIA-SYMPHORICARPOS OREOPHILUS/CALAMAGROSTIS RUBESCENS FOREST	POTR5/AMAL2-SYOR2/CARU	228,351,352,353,524
G5	POPULUS TREMULOIDES/AMELANCHIER ALNIFOLIA-SYMPHORICARPOS OREOPHILUS/TALL FORB FOREST	POTR5/AMAL2-SYOR2/TALL FORB	351,353
G4G5	POPULUS TREMULOIDES/AMELANCHIER ALNIFOLIA-SYMPHORICARPOS OREOPHILUS/THALICTRUM FENDLERI FOREST	POTR5/AMAL2-SYOR2/THFE	22,263,289,351,524
G4G5	POPULUS TREMULOIDES/AMELANCHIER ALNIFOLIA/TALL FORB FOREST	POTR5/AMAL2/TALL FORB	351,352,353
G47	POPULUS TREMULOIDES/AMELANCHIER ALNIFOLIA/THALICTRUM FENDLERI FOREST	POTR5/AMAL2/THFE	351,352,353,524
G47	POPULUS TREMULOIDES/ARTEMISIA TRIDENTATA FOREST	POTR5/ARTR2	40,262,351,524
G5	POPULUS TREMULOIDES/BROMUS CARINATUS FOREST	POTR5/BRCAS	351,353
G3	POPULUS TREMULOIDES/CALAMAGROSTIS CANADENSIS FOREST	POTR5/CACA4	195,361,391
G5	POPULUS TREMULOIDES/CALAMAGROSTIS RUBESCENS FOREST	POTR5/CARU	6,14,99,351,352,353,508,524
G2	POPULUS TREMULOIDES/CAREX SPP. FOREST	POTR5/CAREX	291,378
G3	POPULUS TREMULOIDES/CORNUS SERICEA FOREST	POTR5/COSE16	155,195,492
G4G5	POPULUS TREMULOIDES/JUNIPERUS COMMUNIS/CAREX GEYERI FOREST	POTR5/JUCO6/CAGE2	351,353
G3G4	POPULUS TREMULOIDES/JUNIPERUS COMMUNIS/LUPINUS ARGENTEUS FOREST	POTR5/JUCO6/LUAR3	351
G3	POPULUS TREMULOIDES/OSMORHIZA OCCIDENTALIS FOREST	POTR5/OSOC	195
G3	POPULUS TREMULOIDES/PRUNUS VIRGINIANA FOREST	POTR5/PRVI	92,524
G27	POPULUS TREMULOIDES/RUBUS PARVIFLORUS FOREST	POTR5/RUPA	351
G4	POPULUS TREMULOIDES/SALIX SCOULERIANA FOREST	POTR5/SASC	351
G4	POPULUS TREMULOIDES/SHEPHERDIA CANADENSIS FOREST	POTR5/SHCA	351,391,524
G3G4	POPULUS TREMULOIDES/STIPA COMATA FOREST	POTR5/STCO4	351,353
G3	POPULUS TREMULOIDES/SYMPHORICARPOS ALBUS FOREST	POTR5/SYAL	99,508
G2	POPULUS TREMULOIDES/SYMPHORICARPOS ALBUS/ELYMUS GLAUCUS WOODLAND	POTR5/SYAL/ELGL	291,378
G5	POPULUS TREMULOIDES/SYMPHORICARPOS OREOPHILUS/BROMUS CARINATUS FOREST	POTR5/SYOR2/BRCAS	351,353
G5	POPULUS TREMULOIDES/SYMPHORICARPOS OREOPHILUS/CALAMAGROSTIS RUBESCENS FOREST	POTR5/SYOR2/CARU	351,353
G3G4	POPULUS TREMULOIDES/SYMPHORICARPOS OREOPHILUS/CAREX ROSSII FOREST	POTR5/SYOR2/CAROS	351,353
G5	POPULUS TREMULOIDES/SYMPHORICARPOS OREOPHILUS/TALL FORB FOREST	POTR5/SYOR2/TALL FORB	351,353
G5	POPULUS TREMULOIDES/SYMPHORICARPOS OREOPHILUS/THALICTRUM FENDLERI FOREST	POTR5/SYOR2/THFE	351,353,524
G5	Y POPULUS TREMULOIDES/TALL FORB FOREST	POTR5/TALL FORB	49,65,66,222,227,228,263,272,300,319,344,351,353,391
G5	POPULUS TREMULOIDES/THALICTRUM FENDLERI FOREST	POTR5/THFE	49,65,66,114,221,223,227,228,262,263,272,289,293,351,391
G3	POPULUS TREMULOIDES/WYETHIA AMPLEXICAULIS FOREST	POTR5/WYAM	351,352,524
G7	POPULUS TRICHOCARPA-ALNUS RHOMBIFOLIA FOREST	POTR15-ALRH2	121
G1	Y POPULUS TRICHOCARPA/CICUTA DOUGLASII FOREST	POTR15/CIDO	121
G4	POPULUS TRICHOCARPA/CORNUS SERICEA FOREST	POTR15/COSE16	195
G1	Y POPULUS TRICHOCARPA/CRATAEGUS DOUGLASII FOREST	POTR15/CRDO2	269,270
G1	POPULUS TRICHOCARPA/SALIX EXIGUA FOREST	POTR15/SAEX	312,390
G4	PRUNUS VIRGINIANA SHRUBLAND	PRVI	195
G27	PSEUDOROEGNERIA SPICATA HERBACEOUS VEGETATION	PSSP6	22,23
G2	Y PSEUDOROEGNERIA SPICATA-ARISTIDA LONGISETA-SPOROBOLUS CRYPTANDRUS HERBACEOUS VEGETATION	PSSP6-ARLQ3-SPCR	251
G3	PSEUDOROEGNERIA SPICATA-BALSAMORHIZA SAGITTATA-POA SECUNDA HERBACEOUS VEGETATION	PSSP6-BASA3-POSE	121,178,251,390
G4	PSEUDOROEGNERIA SPICATA-BOUTELOUJA GRACILIS HERBACEOUS VEGETATION	PSSP6-BOGR2	27,48,168,354,450,458
G17	PSEUDOROEGNERIA SPICATA-ERIOGONUM HERACLEOIDES HERBACEOUS VEGETATION	PSSP6-ERHE2	178,251
G3	PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS (CANYON) HERBACEOUS VEGETATION	PSSP6-FEID (CANYON)	121,178,251,390,459,462

G17	Y	PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS (PALOUSE) HERBACEOUS VEGETATION	PSSP6-FEID (PALOUSE)	8,121,185,250,253,390,462
G3		PSEUDOROEGNERIA SPICATA-OPUNTIA POLYACANTHA-(POA SECUNDA) HERBACEOUS VEGETATION	PSSP6-OPPO-(POSE)	251,459,462
G4		PSEUDOROEGNERIA SPICATA-PASCOPYRUM SMITHII HERBACEOUS VEGETATION	PSSP6-PASH	198,354
G3		PSEUDOROEGNERIA SPICATA-POA SECUNDA (LITHOSOL) HERBACEOUS VEGETATION	PSSP6-POSE (LITHOSOL)	121,185,250,251,390,462
G4		PSEUDOROEGNERIA SPICATA-POA SECUNDA HERBACEOUS VEGETATION	PSSP6-POSE	8,85,86,121,163,185,250,251,277, 354,390,393,453,462,510
G4		PSEUDOROEGNERIA SPICATA-STIPA COMATA HERBACEOUS VEGETATION	PSSP6-STCO4	8,32,121,239,344,354,390,476,510
G3		PSEUDOTSUGA MENZIESII-PINUS PONDEROSA/PENSTEMON FRUTICOSUS WOODLAND	PSME-PIPO/PEFR3	514
G4		PSEUDOTSUGA MENZIESII/ACER GLABRUM FOREST	PSME/ACGL	250,262,328,443,444
G4		PSEUDOTSUGA MENZIESII/ARCTOSTAPHYLOS PATULA FOREST	PSME/ARPA6	182,411,523
G4Q		PSEUDOTSUGA MENZIESII/ARCTOSTAPHYLOS UVA-URSI (CASCADIAN) FOREST	PSME/ARUV (CASCADIAN)	170,174,214,217,508,514
G3		PSEUDOTSUGA MENZIESII/ARCTOSTAPHYLOS UVA-URSI-PURSHIA TRIDENTATA FOREST	PSME/ARUV-PUTR2	54,443,463,508,514
G4		PSEUDOTSUGA MENZIESII/ARNICA CORDIFOLIA FOREST	PSME/ARCO9	262,385,443,444
G5		PSEUDOTSUGA MENZIESII/CALAMAGROSTIS RUBESCENS FOREST	PSME/CARU	90,93,94,98,119,122,185,236,250,262,328,331, 368,385,443,444,453,462,508,509,513,528
G5		PSEUDOTSUGA MENZIESII/CAREX GEYERI FOREST	PSME/CAGE2	49,98,179,221,223,262,289,385,443,468
G4		PSEUDOTSUGA MENZIESII/CERCOCARPUS LEDIFOLIUS WOODLAND	PSME/CELE3	127,328,443,444,523
G3		PSEUDOTSUGA MENZIESII/CORNUS SERICEA WOODLAND	PSME/COSE16	195
G5		PSEUDOTSUGA MENZIESII/FESTUCA IDAHOENSIS WOODLAND	PSME/FEID	262,385,444
G4		PSEUDOTSUGA MENZIESII/FESTUCA KINGII WOODLAND	PSME/FEK12	444
G3		PSEUDOTSUGA MENZIESII/FESTUCA OCCIDENTALIS FOREST	PSME/FEOC	468
G4		PSEUDOTSUGA MENZIESII/FESTUCA SCABRELLA WOODLAND	PSME/FESC	385
G3		PSEUDOTSUGA MENZIESII/HOLODISCUS DISCOLOR FOREST	PSME/HOD1	1,90,142,172,467,468
G5Q		PSEUDOTSUGA MENZIESII/JUNIPERUS COMMUNIS FOREST	PSME/JUCO6	179,262,358,385,443,444,488
G4		PSEUDOTSUGA MENZIESII/LINNAEA BOREALIS FOREST	PSME/LIBO3	385,443
G5		PSEUDOTSUGA MENZIESII/MAHONIA REPENS FOREST	PSME/MARE11	4,5,12,230,261,262,295,328,410, 411,443,444,523
G4G5		PSEUDOTSUGA MENZIESII/OSMORHIZA CHILENSIS FOREST	PSME/OSCH	328,443,444
G2G3		PSEUDOTSUGA MENZIESII/PAXISTIMA MYRSINITES FOREST	PSME/PAMY	66,119,222,227,289,463,508
G5		PSEUDOTSUGA MENZIESII/PHYSOCARPUS MALVACEUS FOREST	PSME/PHMA5	98,101,119,122,185,250,262,328,385, 443,444,462,508,509,513,523,528
G4		PSEUDOTSUGA MENZIESII/PHYSOCARPUS MALVACEUS-LINNAEA BOREALIS FOREST	PSME/PHMA5-LIBO3	513
G5		PSEUDOTSUGA MENZIESII/PSEUDOROEGNERIA SPICATA WOODLAND	PSME/PSSP6	93,385
G5		PSEUDOTSUGA MENZIESII/SPIRAEA BETULIFOLIA FOREST	PSME/SPBE2	98,236,250,262,375,385,444,524
G5		PSEUDOTSUGA MENZIESII/SYMPHORICARPOS ALBUS FOREST	PSME/SYAL	98,101,122,166,250,262,385,443, 444,462,468,508,509,513,528
G5		PSEUDOTSUGA MENZIESII/SYMPHORICARPOS OREOPHILUS FOREST	PSME/SYOR2	222,250,262,286,328,355,385,404, 443,444,508,509,513,523
G5		PSEUDOTSUGA MENZIESII/VACCINIUM CESPITOSUM FOREST	PSME/VACE	98,385,443
G5Q		PSEUDOTSUGA MENZIESII/VACCINIUM GLOBULARE FOREST	PSME/VAGL	98,101,177,262,385,444
G4		PSEUDOTSUGA MENZIESII/VACCINIUM SPP. FOREST	PSME/VACCI	98,122,385,508,509
G3G4		PSOROTHAMNUS POLYDENIUS VAR. POLYDENIUS/ORYZOPSIS HYMENOIDES SHRUBLAND	PSPOP/ORHY	40
G1	Y	PURSHIA TRIDENTATA-CHRYSOTHAMNUS MAUSEOSUS SHRUBLAND	PUTR2-CHNA2	84
G1		PURSHIA TRIDENTATA/(PSEUDOROEGNERIA SPICATA)-FESTUCA IDAHOENSIS SPARSE SHRUBLAND	PUTR2/(PSSP6)-FEID	253
G1		PURSHIA TRIDENTATA/CAREX PENNSYLVANICA-STIPA OCCIDENTALIS SPARSE SHRUBLAND	PUTR2/CAPE6-STOC2	487
G5		PURSHIA TRIDENTATA/FESTUCA IDAHOENSIS SPARSE SHRUBLAND	PUTR2/FEID	121,185,250,300,354,476
G3		PURSHIA TRIDENTATA/FESTUCA SCABRELLA SPARSE SHRUBLAND	PUTR2/FESC	354
G1		PURSHIA TRIDENTATA/ORYZOPSIS HYMENOIDES SHRUBLAND	PUTR2/ORHY	120,121,492
G17		PURSHIA TRIDENTATA/PRUNUS VIRGINIANA SHRUBLAND	PUTR2/PRVI	75
G3		PURSHIA TRIDENTATA/PSEUDOROEGNERIA SPICATA SPARSE SHRUBLAND	PUTR2/PSSP6	121,185,225,250,354
G2	Y	PURSHIA TRIDENTATA/STIPA COMATA SPARSE SHRUBLAND	PUTR2/STCO4	121,390,461
G2	Y	QUERCUS GARRYANA/CAREX GEYERI FOREST	QUGA4/CAGE2	514
G2		QUERCUS GARRYANA/CEANOTHUS CUNEATUS/FESTUCA IDAHOENSIS WOODLAND	QUGA4/CECU/FEID	25
G2		QUERCUS GARRYANA/ELYMUS GLAUCUS FOREST	QUGA4/ELGL	248

G1	QUERCUS GARRYANA/FESTUCA IDAHOENSIS FOREST	QUGA4/FE1D	248
G7	QUERCUS GARRYANA/PSEUDOROEGERIA SPICATA FOREST	QUGA4/PSSP6	514
G3	QUERCUS GARRYANA/SYMPHORICARPOS ALBUS FOREST	QUGA4/SYAL	248
G2	QUERCUS GARRYANA/TOXICODENDRON DIVERSILOBUM-SYMPHORICARPOS ALBUS/ELYMUS GLAUCUS WOODLAND	QUGA4/T001-SYAL/ELGL	371,455
G3	RHUS GLABRA/PSEUDOROEGERIA SPICATA SHRUBLAND	RHGL/PSSP6	121,250,462
G2G3	Y ROSA MUTKANA/FESTUCA IDAHOENSIS HERBACEOUS VEGETATION	RONU/FE1D	121,251
G4	ROSA WOODSII SHRUBLAND	ROWO	195
G1	SALIX AMYGDALOIDES-SALIX EXIGUA-SALIX LUCIDA SSP. LASIANDRA WOODLAND	SAAM2-SAEX-SALUL	224
G1	SALIX AMYGDALOIDES-SALIX FLUVIATILIS-SALIX LUCIDA SSP. LASIANDRA/CAREX SPP. WOODLAND	SAAM2-SAFL14-SALUL/CAREX	224
G2G3	SALIX ARCTICA/CALTHA LEPTOSEPALA DWARF-SHRUBLAND	SAAR16/CALE4	304
G2	SALIX ARCTICA/POLYGONUM BISTORTOIDES DWARF-SHRUBLAND	SAAR16/POB16	102
G3	Y SALIX BEBBIANA SHRUBLAND	SABE2	23,137,195,449
G2	SALIX BOOTHII-SALIX GEYERIANA SHRUBLAND	SABO2-SAGE2	291
G2	SALIX BOOTHII-SALIX GEYERIANA/CAREX ANGUSTATA SHRUBLAND	SABO2-SAGE2/CAAM15	291
G2	SALIX BOOTHII-SALIX LEMMONII SHRUBLAND	SABO2-SALE	291,312
G4	SALIX BOOTHII/CALAMAGROSTIS CANADENSIS SHRUBLAND	SABO2/CACA4	362,363,367,376,474,522
G2G3	SALIX BOOTHII/CAREX AQUATILIS SHRUBLAND	SABO2/CAAQ	376,522,525
G3	SALIX BOOTHII/CAREX NEBRASCENSIS SHRUBLAND	SABO2/CANE2	376,380,522,525
G5	SALIX BOOTHII/CAREX ROSTRATA SHRUBLAND	SABO2/CARO6	291,362,363,367,376,380,474,522,525
G3	SALIX BOOTHII/EQUISETUM ARVENSE SHRUBLAND	SABO2/EQAR	376,522
G3	SALIX BOOTHII/MAIANTHEMUM STELLATUM SHRUBLAND	SABO2/MAST4	522
G3	SALIX BOOTHII/MESIC FORB SHRUBLAND	SABO2/MESIC FORB	367,376,380,522,525
G3	SALIX BOOTHII/MESIC GRAMINOID SHRUBLAND	SABO2/MESIC GRAMINOID	376,380,405
G1	SALIX BOOTHII/POA PALUSTRIS SHRUBLAND	SABO2/POPA2	380,522
G3	SALIX CANDIDA/CAREX ROSTRATA SHRUBLAND	SACA4/CARO6	195
G3	SALIX COMMUTATA/CAREX SCOPULORUM SHRUBLAND	SACO2/CASC12	474
G3	SALIX DRUMMONDIANA SHRUBLAND	SADR	21,195,196,276,386
G1	SALIX EASTWOODIAE SHRUBLAND	SAEA	522
G2	SALIX EASTWOODIAE/CAREX AQUATILIS SHRUBLAND	SAEA/CAAQ	362
G2	SALIX EASTWOODIAE/CAREX ROSTRATA SHRUBLAND	SAEA/CARO6	362
G5	SALIX EXIGUA SHRUBLAND	SAEX	156,195,196,276,291,386
G1	SALIX EXIGUA-SALIX LUCIDA SSP. LASIANDRA SHRUBLAND	SAEX-SALUL	364
G3Q	SALIX EXIGUA/BARREN SHRUBLAND	SAEX/BARREN	376,380,474
G3	SALIX EXIGUA/EQUISETUM ARVENSE SHRUBLAND	SAEX/EQAR	522
G2Q	SALIX EXIGUA/MESIC FORB SHRUBLAND	SAEX/MESIC FORB	376,380
G3Q	SALIX EXIGUA/MESIC GRAMINOID SHRUBLAND	SAEX/MESIC GRAMINOID	376,380
G2	SALIX GEYERIANA-SALIX LEMMONII SHRUBLAND	SAGE2-SALE	291
QU	SALIX GEYERIANA-SALIX RIGIDA SHRUBLAND	SAGE2-SAR12	371
G5	SALIX GEYERIANA/CALAMAGROSTIS CANADENSIS SHRUBLAND	SAGE2/CACA4	97,195,380,474,522
G37	SALIX GEYERIANA/CAREX AQUATILIS SHRUBLAND	SAGE2/CAAQ	245,376,380,522,525
G5	SALIX GEYERIANA/CAREX ROSTRATA SHRUBLAND	SAGE2/CARO6	195,362,380,474,522
G4	SALIX GEYERIANA/DESCHAMPSIA CESPITOSA SHRUBLAND	SAGE2/DECE	245,344,376,380
G3	SALIX GEYERIANA/MESIC FORB SHRUBLAND	SAGE2/MESIC FORB	245,376,380,522,525
G2G3	SALIX GEYERIANA/MESIC GRAMINOID SHRUBLAND	SAGE2/MESIC GRAMINOID	376,380,522
G2	SALIX GEYERIANA/POA PALUSTRIS SHRUBLAND	SAGE2/POPA2	362,380,522
G2Q	SALIX LASIOLEPIS/BARREN SHRUBLAND	SALA6/BARREN	380
G3Q	SALIX LASIOLEPIS/ROSA WOODSII/GRASS-FORB SHRUBLAND	SALA6/ROWO/GRASS-FORB	36
G3	SALIX LUCIDA SSP. LASIANDRA SHRUBLAND	SALUL	195
G3	SALIX LUTEA/CALAMAGROSTIS CANADENSIS SHRUBLAND	SALU2/CACA4	195
G4	SALIX LUTEA/CAREX ROSTRATA SHRUBLAND	SALU2/CARO6	195
G2	SALIX PLANIFOLIA SHRUBLAND	SAPL2	522
G3	SALIX PLANIFOLIA/CAREX AQUATILIS SHRUBLAND	SAPL2/CAAQ	195,222,245,298,326,376,380,451

G3		SALIX PLANIFOLIA/CAREX AQUATILIS-CAREX ROSTRATA SHRUBLAND	SAPL2/CAAQ-CAR06	362
G4		SALIX PLANIFOLIA/CAREX SCOPULORUM SHRUBLAND	SAPL2/CASC12	221,222,283,285
G2		SALIX RETICULATA/CALTHA LEPTOSEPALA DWARF-SHRUBLAND	SARE2/CALE4	102
GU		SALIX RIGIDA/RIBES AUREUM SHRUBLAND	SAR12/RIAU	156,312
G4		SALIX WOLFII/CAREX AQUATILIS SHRUBLAND	SAWO/CAAQ	20,21,195,326,327,367,376,380,474,522,525
G2		SALIX WOLFII/CAREX NEBRASCENSIS SHRUBLAND	SAWO/CANE2	522
G4		SALIX WOLFII/CAREX ROSTRATA SHRUBLAND	SAWO/CAR06	245,363,367,376,380,474,522
G3		SALIX WOLFII/DESCHAMPSIA CESPITOSA SHRUBLAND	SAWO/DECE	195,376,380,522,525
G3		SALIX WOLFII/MESIC FORB SHRUBLAND	SAWO/MESIC FORB	245,362,376,380
G2		SALIX WOLFII/POA PALUSTRIS SHRUBLAND	SAWO/POPA2	522
G2	Y	SALIX WOLFII/SWERTIA PERENNIS-PEDICULARIS GROENLANDICA SHRUBLAND	SAWO/SWPE-PEGR2	473,474
G4		SALVIA DORRII/PSEUDOROEGNERIA SPICATA DWARF-SHRUBLAND	SADO4/PSSP6	371
G5Q		SARCOBATUS VERMICULATUS (DUNE) SPARSE VEGETATION	SAVE4 (DUNE)	521
G5		SARCOBATUS VERMICULATUS SHRUBLAND	SAVE4	62,118,181,521
G5Q		SARCOBATUS VERMICULATUS/TRIPLEX CONFERTIFOLIA/ARTEMISIA SPINESCENS SHRUBLAND	SAVE4/ATCO/ARSP5	42
G5		SARCOBATUS VERMICULATUS/CHRYSOTHAMNUS NAUSEOSUS SHRUBLAND	SAVE4/CHNA2	159
G4		SARCOBATUS VERMICULATUS/DISTICHLIS SPICATA SHRUBLAND	SAVE4/DISP	121,172,354
G4		SARCOBATUS VERMICULATUS/ELYMUS ELYMOIDES SHRUBLAND	SAVE4/ELEL5	42
G3		SARCOBATUS VERMICULATUS/LEYMUS CINEREUS SHRUBLAND	SAVE4/LECI4	354
G4		SARCOBATUS VERMICULATUS/ORYZOPSIS HYMENOIDES SHRUBLAND	SAVE4/ORHY	40
G4		SARCOBATUS VERMICULATUS/PASCOPIRUM SMITHII SPARSE SHRUBLAND	SAVE4/PASM	148,163,192,198,354,370
G5		SARCOBATUS VERMICULATUS/SUAEDA NIGRA SHRUBLAND	SAVE4/SUNI	106,108
G5		SCIRPUS ACUTUS HERBACEOUS VEGETATION	SCAC	195
G1Q		SCIRPUS AMERICANUS HERBACEOUS VEGETATION	SCAM2	473
G1	Y	SCIRPUS CESPITOSUS-CAREX LIVIDA HERBACEOUS VEGETATION	SCCE2-CALI	473
G4		SCIRPUS MARITIMUS HERBACEOUS VEGETATION	SCMA	195
G2G4		SCIRPUS PUNGENS HERBACEOUS VEGETATION	SCPU3	60,195
G27		SENECIO TRIANGULARIS HERBACEOUS VEGETATION	SETR	195,283
G4		SENECIO TRIANGULARIS-VERATRUM CALIFORNICUM HERBACEOUS VEGETATION	SETR-VECA2	207,291,312
G3		SPARTINA PECTINATA HERBACEOUS VEGETATION	SPPE	155,195,196,198
G2	Y	SPHAEROMERIA ARGENTEA-ARTEMISIA FRIGIDA-POA SECUNDA HERBACEOUS VEGETATION	SPAR2-ARFR4-POSE	82
G2	Y	SPHAEROMERIA ARGENTEA-ORYZOPSIS SWALLENII HERBACEOUS VEGETATION	SPAR2-ORSW	82
G4		SPIRAEA DOUGLASII SHRUBLAND	SPDO	195
G3G5		SPOROBOLUS AIROIDES-DISTICHLIS STRICTA HERBACEOUS VEGETATION	SPAI-DIST3	357,521
G5		STIPA COMATA-BOUTELOUA GRACILIS HERBACEOUS VEGETATION	STCO4-BOGR2	27,111,123,200,221,262,354,395,447,479
G3	Y	STIPA COMATA-POA SECUNDA HERBACEOUS VEGETATION	STCO4-POSE	104,121,390,526
G5		SUAEDA MOQUINII HERBACEOUS VEGETATION	SUMO	157
G4		SYMPHORICARPOS ALBUS-ROSA MUTKANA SHRUBLAND	SYAL-RONU	121,462
G4		SYMPHORICARPOS OCCIDENTALIS SHRUBLAND	SYOC	88,89,195
G2	Y	THUJA PLICATA/ACHLYS TRIPHYLLA FOREST	THPL/ACTR	466
G2	Y	THUJA PLICATA/ADIANTUM PEDATUM FOREST	THPL/ADPE	98
G2		THUJA PLICATA/ARALIA NUDICAULIS FOREST	THPL/ARNU2	509,513
G4		THUJA PLICATA/ASARUM CAUDATUM FOREST	THPL/ASCA2	98,428
G4		THUJA PLICATA/ATHYRIUM FILIX-FEMINA FOREST	THPL/ATFI	98,122,195,513
G5		THUJA PLICATA/CLINTONIA UNIFLORA FOREST	THPL/CLUN2	98,385,509,528
G3		THUJA PLICATA/GYMNOCARPUM DRYOPTERIS FOREST	THPL/GYDR	98,195
G2		THUJA PLICATA/LINNAEA BOREALIS FOREST	THPL/LIBO3	13,511
G4		THUJA PLICATA/LYSICHTON AMERICANUS FOREST	THPL/LYAM3	171,180,217,282,467,492
G3		THUJA PLICATA/OPLOPANAX HORRIDUS FOREST	THPL/OPHO	98,119,122,142,171,385,509,513
G3		THUJA PLICATA/TAXUS BREVIFOLIA/ASARUM CAUDATUM FOREST	THPL/TABR2/ASCA2	98
G3		THUJA PLICATA/VACCINIUM MEMBRANACEUM FOREST	THPL/VAME	513
G4		TSUGA HETEROPHYLLA/ACHLYS TRIPHYLLA FOREST	TSHE/ACTR	167,170,172,174,190,207,214,217,467,514
G3		TSUGA HETEROPHYLLA/ARALIA NUDICAULIS FOREST	TSHE/ARNU2	98,513
G3		TSUGA HETEROPHYLLA/ARCTOSTAPHYLOS NEVADENSIS WOODLAND	TSHE/ARNE	514

G3		TSUGA HETEROPHYLLA/ASARUM CAUDATUM FOREST	TSHE/ASCA2	98,428,514
G2	Y	TSUGA HETEROPHYLLA/ATHYRIUM FILIX-FEMINA FOREST	TSHE/ATFI	98,350,497
G5		TSUGA HETEROPHYLLA/CLINTONIA UNIFLORA FOREST	TSHE/CLUN2	98,385,513,528
G4		TSUGA HETEROPHYLLA/GYMNOCARPUM DRYOPTERIS FOREST	TSHE/GYDR	98,195,509,513
G3		TSUGA HETEROPHYLLA/LINNAEA BOREALIS FOREST	TSHE/LIBO3	207
G5		TSUGA HETEROPHYLLA/MAHONIA NERVOSA VAR. NERVOSA FOREST	TSHE/MANEN	190,206,207,210,211,212,213,214, 215,217,220,467,514
G2	Y	TSUGA HETEROPHYLLA/MENZIESIA FERRUGINEA FOREST	TSHE/MEFE	98,513
G4		TSUGA HETEROPHYLLA/OPLOPANAX HORRIDUS FOREST	TSHE/OPHO	98,172,190,211,212,213,214,216, 217,220,467,514
G1		TSUGA HETEROPHYLLA/RHODODENDRON ALBIFLORUM FOREST	TSHE/RHAL2	509
G4		TSUGA HETEROPHYLLA/RHODODENDRON MACROPHYLLUM FOREST	TSHE/RHMA3	13,190,206,207,214,217
G7		TSUGA HETEROPHYLLA/RUBUS PEDATUS FOREST	TSHE/RUPE	509,513
G4		TSUGA HETEROPHYLLA/VACCINIUM MEMBRANACEUM/LINNAEA BOREALIS FOREST	TSHE/VAME/LIBO3	13
G2	Y	TSUGA HETEROPHYLLA/XEROPHYLLUM TENAX FOREST	TSHE/XETE	98,172,214,217,509,513
G3		TSUGA MERTENSIANA/CLINTONIA UNIFLORA FOREST	TSME/CLUN2	98,344
G4		TSUGA MERTENSIANA/LUZULA GLABRATA VAR. HITCHCOCKII FOREST	TSME/LUGLH	98,207,385,424,514
G4		TSUGA MERTENSIANA/MENZIESIA FERRUGINEA FOREST	TSME/MEFE	98,385
G4		TSUGA MERTENSIANA/PHYLLODOCE EMPETRIFORMIS-VACCINIUM DELICIOSUM WOODLAND	TSME/PHEM-VADE	142,214,215,216,217,220
G3		TSUGA MERTENSIANA/RUBUS LASIOCOCCLUS FOREST	TSME/RULA2	514
G2	Y	TSUGA MERTENSIANA/STREPTOPUS AMPLEXIFOLIUS FOREST	TSME/STAM2	98
G4		TSUGA MERTENSIANA/VACCINIUM MEMBRANACEUM FOREST	TSME/VAME	13,56,57,207,208,210,211,212,213, 214,215,217,220,250
G4		TSUGA MERTENSIANA/VACCINIUM SCOPARIUM FOREST	TSME/VASC	13,207,208,250,424,487
G4		TSUGA MERTENSIANA/XEROPHYLLUM TENAX FOREST	TSME/XETE	98,122,212,385,514
GU	Y	TYPHA DOMINGENSIS HERBACEOUS VEGETATION	TYDO	23
G5		TYPHA LATIFOLIA HERBACEOUS VEGETATION	TYLA	67,87,195,301,302,325,330,356,380,465
G5		VACCINIUM ULIGINOSUM/CAREX AQUATILIS VAR. DIVES SHRUBLAND	VAUL/CAAQO	175,291,408

APPENDIX 1, (Part 2.)

Full citations for references provided with the plant associations listed above.

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APPENDIX 1, (part 3).

List of plant associations and alliances found in the California portion of the Columbia River Basin. These vegetation types have not been placed into the WRVC, therefore literature sources are not provided. Further information on these associations can be obtained from the California Natural Diversity Database (data on file). These types are included in the section level matrices.

PLANT ASSOCIATION NAME

ABIES X SHASTENSIS/CASTANOPSIS CHRYSOPHYLLA
ABIES X SHASTENSIS/PENSTEMON
 ARCTOSTAPHYLOS PATULA SERIES
ARCTOSTAPHYLOS VISCIDA-CEANOTHUS CUNEATUS
/FESTUCA IDAHOENSIS-STIPA LEMMONII
BETULA CLANDULOSA-SALIX SPP.
CALOCEDRUS DECURRENS-PSEUDOTSUGA MENZIESII/CASTANOPSIS CHRYSOPHYLLA
 CEANOTHUS NJNEATUS SERIES
 CEANOTHUS **CUNEATUS-CERCOCARPUS HONTANUS VAR. GLABER-PRUNUS SUBCORDATA**
 CEANOTHUS **CUNEATUS/PSEUDOROEGNERIA SPICATA**
 CEANOTHUS **VELUTINUS**
 CERCOCARPUS **LEDIFOLIUS** SERIES
 CUPRESSUS BAKERI SERIES
FESTUCA IDAHOENSIS
ERICAMERIA DISCOIDEA
HOLODISCUS DISCOLOR SERIES
 JUNIPERUS **OCCIDENTALIS-PINUS PONDEROSA-WERCUS GARRYANA**
/CEANOTHUS CUNEATUS/FESTUCA IDAHOENSIS
 JUNIPERUS **OCCIDENTALIS-QUERCUS GARRYANA**
 JUNIPERUS **OCCIDENTALIS/ARTEMISIA NOVA**
LEPTODACTYLON PUNGENS
MASSELLA PULCHRA
PINUS ALBICAULIS/ARENARIA ACULEATA
PINUS ALBICAULIS/PENSTEMON GRACILENTUS
PINUS ALBICAULIS/STIPA CALIFORNICA
 PINUS ATTENUATA SERIES
 PINUS JEFFREYI-WERCUS **KELLOGGII/POA SECUNDA**
PINUS JEFFREYI-QUERCUS KELLOGGII/RHUS TRILOBATA
PINUS JEFFREYI/ARTEMISIA TRIDENTATA SSP. VASEYANA
PINUS JEFFREYI/PURSHIA TRIDENTATA
PINUS LAMBERTIANA-PSEUDOTSUGA MENZIESII/CASTANOPSIS CHRYSOPHYLLA
 PINUS PONDEROSA-PINUS JEFFREYI-CALOCEDRUS DECURRENS SERIES
 PINUS PONDEROSA-PINUS JEFFREYI/FRANGULA RUBRA
 PINUS PONDEROSA-PINUS JEFFREYI/MAHONIA REPENS
 PINUS PONDEROSA-PINUS JEFFREYI/PURSHIA TRIDENTATA
 PINUS PONDEROSA-PINUS JEFFREYI/STIPA COLUMBIANA
 PINUS PONDEROSA-QUERCUS GARRYANA
 PINUS PONDEROSA-QUERCUS **KELLOGGII** SERIES
 PINUS PONDEROSA-QUERCUS **WISLIZENI** SERIES
 PINUS PONDEROSA/AMELANCHIER ALNIFOLIA-MAHONIA REPENS
 PINUS PONDEROSA/CERCOCARPUS **LEDIFOLIUS-PURSHIA TRIDENTATA**
 PINUS WASHOENSIS/ARCTOSTAPHYLOS NEVADENSIS
 PINUS WASHOENSIS/SYMPHORICARPOS LONGIFLORUS/PSEUDOSTELLARIA JAMESIANA
 POPULUS **FREMONTII/SALIX LAEVIGATA**
 POA SECUNDA SERIES
 PRUNUS SUBCORDATA
QUERCUS DOUGLASII
QUERCUS BREWERI
QUERCUS KELLOGGII
QUERCUS VACCINIFOLIA
SALIX LEMMONII
SALIX LEMMONII/LEYMUS CINEREUS
SALIX LIGULIFOLIA SERIES
STIPA LEMMONII
STIPA THURBERIANA
TSUGA MERTENSIANA/JUNCUS PARRYI

ACRONYM

ABSH/CACH6
ABSH/PENSTEMON
 ARPA6
ARV111-CECU/FEID-STLE2

B EGL-SALIX
CADE27-PSME/CACH6
 CECU
CECU-CEMOG-PRSU
CECU/PSSP6
 CEVE
CELE3-ARTRV
 CUBA
FEID
ERDI
HOMI
JUOC-PIPO-QUGA4/CECU/FEID

JUOC-QUGA4
JUOC/ARNO4
 LEPU
 N A P U
PIAL/ARAC
PIAL/PEGR
PIAL/STCA
PIAT
 PIJE-DUKE/POSE
PIJE-QUKE/RHTR
PIJE/ARTRV
PIJE/PUTR2
PILA-PIPO-PSME
PIPO-PIJE-CADE27
PIPO-PIJE/FRRU
PIPO-PIJE/MARE11
PIPO-PIJE/PUTR2
PIPO-PIJE/STCOL
PIPO-QUGA4
 PIPO-PUKE
PIPO-QUWI
PIPO/AMAL2-MARE11
PIPO/CELE3-PUTR2
PIWA/ARNE
PIWA/SYLO/PSJA
POFR2/SALA
 POSE
 PRSU
QUDO
QUBR
QUKE
QUVA
 SALE
SALE/LEC14
SALI
STLE2
STTH2
TSME/JUPA

APPENDIX 2.

List of plant associations representing Potential Vegetation found in the Columbia River Basin, with global ranks of G1 through G2G4. Global ranks provide a numerical assessment of the association's relative rarity across its entire range of distribution, with G1 indicating critically imperiled, and G5 indicating the most common. For further explanation of The Nature Conservancy's ranking system, see Bourgeron and Engelking (1994). Nomenclature of species names follows Kartesz (1994). Standardized acronyms are also listed for each association.

GLOBAL RANK G1

ALNUS INCANA-BETULA OCCIDENTALIS/(SALIX SPP.) SHRUBLAND
 ALNUS INCANA-POPULUS TREMULOIDES/BETULA GLANDULOSA-RIBES SPP./CAREX SPP. SHRUBLAND
 ALNUS INCANA-POPULUS TREMULOIDES/CORNUS SERICEA SHRUBLAND
 ALNUS INCANA-POPULUS TRICHOCARPA/(SALIX SPP.)/CAREX SPP. FOREST
 ALNUS RHOMBIFOLIA/BETULA OCCIDENTALIS FOREST
 ALNUS RHOMBIFOLIA/PHILADELPHUS LEWISII FOREST
 ARTEMISIA CANA/(ELYMUS CANINUS)-POA NEVADENSIS SPARSE SHRUBLAND
 ARTEMISIA CANA/LEYMUS CINEREUS SPARSE SHRUBLAND
 ARTEMISIA TRIDENTATA SSP. VASEYANA-CERCOCARPUS LEDIFOLIUS/ELYMUS CANINUS-POA SECUNDA SHRUBLAND
 ARTEMISIA TRIDENTATA-PURSHIA TRIDENTATA/ORYZOPSIS HYMENOIDES-STIPA COMATA SPARSE SHRUBLAND
 ARTEMISIA TRIPARTITA/STIPA COMATA SPARSE SHRUBLAND
 CERCOCARPUS LEDIFOLIUS/HOLODISCUS DUMOSUS SHRUBLAND
 CHRYSOTHAMNUS NAUSEOSUS/LEYMUS FLAVESCENS/PSORALIDIUM LANCEOLATUM SHRUBLAND
 DANTHONIA CALIFORNICA (VALLEY GRASSLAND) HERBACEOUS VEGETATION
 ERIOGONUM OVALIFOLIUM VAR. DEPRESSUM DWARF-SHRUBLAND
 JUNIPERUS OCCIDENTALIS/ARTEMISIA TRIDENTATA/CAREX FILIFOLIA SPARSE WOODLAND
 JUNIPERUS OSTEOSPERMA/LEYMUS AMBIGUUS SPARSE WOODLAND
 JUNIPERUS OSTEOSPERMA/PURSHIA TRIDENTATA-SYMPHORICARPOS OREOPHILUS/PSEUDOROEGNERIA SPICATA WOODLAND
 JUNIPERUS OSTEOSPERMA/STIPA COMATA SPARSE WOODLAND
 LEYMUS CINEREUS (BOTTOMLANDS) HERBACEOUS VEGETATION
 PICEA SPP./CAREX DISPERMA FOREST
 PINUS FLEXILIS/PURSHIA TRIDENTATA WOODLAND
 PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/ARTEMISIA TRIDENTATA SSP. VASEYANA/PSEUDOROEGNERIA SPICATA WOODLAND
 PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA WOODLAND
 PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/LEYMUS CINEREUS WOODLAND
 PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/PRUNUS VIRGINIANA WOODLAND
 PINUS PONDEROSA-PSEUDOTSUGA MENZIESII WOODLAND
 PINUS PONDEROSA-QUERCUS GARRYANA/ARCTOSTAPHYLOS VISCIDA/FESTUCA CALIFORNICA WOODLAND
 PINUS PONDEROSA/ARTEMISIA TRIDENTATA/STIPA SPP. FOREST
 PINUS PONDEROSA/ASPIDOTIS Densa WOODLAND
 PINUS PONDEROSA/CRATAEGUS DOUGLASII WOODLAND
 PINUS PONDEROSA/PURSHIA TRIDENTATA/ORYZOPSIS HYMENOIDES SPARSE VEGETATION
 PINUS PONDEROSA/STIPA COMATA WOODLAND
 POA NEVADENSIS-PUCCINELLIA LEMMONII-ELYMUS ELYMOIDES HERBACEOUS VEGETATION
 POPULUS TRICHOCARPA/CICUTA DOUGLASII FOREST
 POPULUS TRICHOCARPA/CRATAEGUS DOUGLASII FOREST
 POPULUS TRICHOCARPA/SALIX EXIGUA FOREST
 PURSHIA TRIDENTATA-CHRYSOTHAMNUS NAUSEOSUS SHRUBLAND
 PURSHIA TRIDENTATA/(PSEUDOROEGNERIA SPICATA)-FESTUCA IDAHOENSIS SPARSE SHRUBLAND
 PURSHIA TRIDENTATA/CAREX PENNSYLVANICA-STIPA OCCIDENTALIS SPARSE SHRUBLAND
 PURSHIA TRIDENTATA/ORYZOPSIS HYMENOIDES SHRUBLAND
 QUERCUS GARRYANA/FESTUCA IDAHOENSIS FOREST
 SALIX AMYGDALOIDES-SALIX EXIGUA-SALIX LUCIDA SSP. LASIANDRA WOODLAND
 SALIX AMYGDALOIDES-SALIX FLUVIATILIS-SALIX LUCIDA SSP. LASIANDRA/CAREX SPP. WOODLAND
 SALIX BOOTHII/POA PALUSTRIS SHRUBLAND
 SALIX EASTWOODIAE SHRUBLAND
 SALIX EXIGUA-SALIX LUCIDA SSP. LASIANDRA SHRUBLAND
 SCIRPUS CESPITOSUS-CAREX LIVIDA HERBACEOUS VEGETATION
 TSUGA HETEROPHYLLA/RHODODENDRON ALBIFLORUM FOREST

ALIN2-BEOC2/(SALIX)
 ALIN2-POTR5/BEGL-RIBES/CAREX
 ALIN2-POTR5/COSE16
 ALIN2-POTR15/(SALIX)/CAREX
 ALRH2/BEOC2
 ALRH2/PHLE4
 ARCA13/(ELCA11)-PONE3
 ARCA13/LEC14
 ARTRV-CELE3/ELCA11-POSE
 ARTR2-PUTR2/ORHY-STCO4
 ARTR4/STCO4
 CELE3/HODU
 CHNA2/LEFL4/PSLA3
 DACA3 (VALLEY GRASSLAND)
 EROVD
 JUOC/ARTR2/CAF1
 JUOS/LEAM
 JUOS/PUTR2-SYOR2/PSSP6
 JUOS/STCO4
 LEC14 (BOTTOMLANDS)
 PICEA/CAD16
 PIFL2/PUTR2
 PIMO-JUOS/ARTRV/PSSP6
 PIMO-JUOS/CELE3/PSSP6
 PIMO-JUOS/LEC14
 PIMO-JUOS/PRVI
 PIPO-PSME
 PIPO-QUGA4/ARVI4/FECA
 PIPO/ARTR2/STIPA
 PIPO/ASDE6
 PIPO/CRDO2
 PIPO/PUTR2/ORHY
 PIPO/STCO4
 PONE3-PULE-ELEL5
 POTR15/CIDO
 POTR15/CRDO2
 POTR15/SAEX
 PUTR2-CHNA2
 PUTR2/(PSSP6)-FEID
 PUTR2/CAPE6-STOC2
 PUTR2/ORHY
 QUGA4/FEID
 SAAM2-FAEX-SALUL
 SAAM2-SAF14-SALUL/CAREX
 SABO2/POPA2
 SAEA
 SAEX-SALUL
 SCCE2-CAL1
 TSHE/RHAL2

GLOBAL RANK G17

PSEUDOROEGNERIA SPICATA-ERIOGONUM HERACLEOIDES HERBACEOUS VEGETATION
PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS (PALOUSE) HERBACEOUS VEGETATION
PURSHIA TRIDENTATA/PRUNUS VIRGINIANA SHRUBLAND

PSSP6-ERHE2
PSSP6-FEID (PALOUSE)
PUTR2/PRV1

GLOBAL RANK G1G2

ARTEMISIA ARBUSCULA/LEYMUS AMBIGUUS SPARSE DWARF-SHRUBLAND
ARTEMISIA NOVA/LEYMUS AMBIGUUS SPARSE DWARF-SHRUBLAND

ARARB/LEAM
ARNO4/LEAM

GLOBAL RANK G1Q

PINUS FLEXILIS/PENTAPHYLLOIDES FLORIBUNDA/DISTICHLIS STRICTA WOODLAND
SCIRPUS AMERICANUS HERBACEOUS VEGETATION

PIFL2/PEFL15/DIST3
SCAM2

GLOBAL RANK G2

ABIES CONCOLOR-CALOCEDRUS DECURRENS-PINUS PONDEROSA/AMELANCHIER ALNIFOLIA FOREST
ABIES CONCOLOR-PINUS LAMBERTIANA-PINUS PONDEROSA/ARCTOSTAPHYLOS PATULA FOREST
ABIES GRANDIS/ARCTOSTAPHYLOS NEVADENSIS WOODLAND
ABIES GRANDIS/CASTANOPSIS CHRYSOPHYLLA FOREST
ABIES GRANDIS/COPTIS OCCIDENTALIS FOREST
ABIES GRANDIS/TAXUS BREVIFOLIA FOREST
ABIES GRANDIS/VACCINIUM CESPITOSUM FOREST
ACER GRANDIDENTATUM/CALAMAGROSTIS RUBESCENS FOREST
AGROSTIS EXARATA-AGROSTIS SCABRA HERBACEOUS VEGETATION
ALLENROLFEA OCCIDENTALIS SHRUBLAND
ALNUS INCANA/SYMPHORICARPOS ALBUS SHRUBLAND
ALNUS RHOMBIFOLIA-ABIES GRANDIS FOREST
ALNUS RHOMBIFOLIA/CELTIS LAEVIGATA VAR. RETICULATA FOREST
ALNUS RHOMBIFOLIA/SAMBUCUS CERULEA FOREST
ARCTOSTAPHYLOS VISCIDA-CEANOTHUS CUNEATUS/FESTUCA IDAHOENSIS-STIPA LEMMONII SHRUBLAND
ARISTIDA LONGISETA-SPOROBOLUS CRYPTANDRUS SPARSE SHRUBLAND
ARTEMISIA ARBUSCULA SSP. THERMOPOLA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND
ARTEMISIA CANA-ARTEMISIA TRIDENTATA SSP. VASEYANA/POA CUSICKII SPARSE SHRUBLAND
ARTEMISIA CANA/CAREX NEBRASCENSIS-POA CUSICKII SPARSE SHRUBLAND
ARTEMISIA PEDATIFIDA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND
ARTEMISIA TRIDENTATA SSP. VASEYANA/STIPA OCCIDENTALIS SHRUBLAND
ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS-PERAPHYLLUM RAMOSISSIMUM/FESTUCA IDAHOENSIS SHRUBLAND
ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS/STIPA COMATA SHRUBLAND
ARTEMISIA TRIDENTATA-ATRIplex CANESCENS-SARCOBATUS VERMICULATUS/(ORYZOPSIS HYMENOIDES) SHRUBLAND
ARTEMISIA TRIPARTITA/FESTUCA SCABRELLA SPARSE SHRUBLAND
ATRIplex CONFERTIFOLIA/LEYMUS AMBIGUUS SHRUBLAND
ATRIplex CONFERTIFOLIA/ORYZOPSIS HYMENOIDES SHRUBLAND
BETULA OCCIDENTALIS/CRATAEGUS DOUGLASII SHRUBLAND
BETULA OCCIDENTALIS/POPULUS TRICHOCARPA/SALIX SPP. SHRUBLAND
CALAMAGROSTIS PURPURASCENS HERBACEOUS VEGETATION
CAREX APERTA HERBACEOUS VEGETATION
CAREX SCIRPOIDEA-POTENTILLA DIVERSIFOLIA HERBACEOUS VEGETATION
CAREX STENOPHYLLA-POA SECUNDA SPARSE SHRUBLAND
CERCOCARPUS LEDIFOLIUS/CALAMAGROSTIS RUBESCENS SHRUBLAND
CERCOCARPUS LEDIFOLIUS/FESTUCA IDAHOENSIS SHRUBLAND

ABCO-CADE27-PIPO/AMAL2
ABCO-PILA-PIPO/ARPA6
ABGR/ARNE
ABGR/CACH6
ABGR/COOC
ABGR/TABR2
ABGR/VACE
ACGR3/CARU
AGEX-AGSC5
ALOC2
ALIN2/SYAL
ALRH2-ABGR
ALRH2/CELAR
ALRH2/SACE3
ARV14-CECU/FEID-STLE2
ARLO3-SPCR
ARART/FEID
ARCA13-ARTRV/POCU3
ARCA13/CANE2-POCU3
ARPE6/FEID
ARTRV/STOC2
ARTRW8-PERA4/FEID
ARTRW8/STCO4
ARTR2-ATCA2-SAVE4/(ORHY)
ARTR4/FESC
ATCO/LEAM
ATCO/ORHY
BEOC2/CRD02
BEOC2/POTR15/SALIX
CAPU
CAAP3
CASC10-POD12
CAST40-POSE
CELE3/CARU
CELE3/FEID

CERCOCARPUS LEDIFOLIUS/LEYMUS AMBIGUUS SHRUBLAND
 CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS SHRUBLAND
 CERCOCARPUS LEDIFOLIUS/SYMPHORICARPOS OREOPHILUS SHRUBLAND
 CRATAEGUS DOUGLASII SHRUBLAND
 CRATAEGUS DOUGLASII/HERACLEUM LANATUM SHRUBLAND
 CRATAEGUS DOUGLASII/ROSA WOODSII SHRUBLAND
 ELYMUS GLAUCUS HERBACEOUS VEGETATION
 FESTUCA IDAHOENSIS-CAREX SCIRPOIDEA HERBACEOUS VEGETATION
 FESTUCA IDAHOENSIS-ERIOGONUM CAESPITOSUM HERBACEOUS VEGETATION
 FESTUCA IDAHOENSIS-ERIOGONUM HERACLEOIDES HERBACEOUS VEGETATION
 FESTUCA IDAHOENSIS-HIERACIUM CYNOGLOSSOIDES HERBACEOUS VEGETATION
 FESTUCA IDAHOENSIS-SYMPHORICARPOS ALBUS SPARSE SHRUBLAND
 FESTUCA VIRIDULA-FESTUCA IDAHOENSIS HERBACEOUS VEGETATION
 IVESIA GORDONII-ERIOGONUM CAESPITOSUM HERBACEOUS VEGETATION
 IVESIA GORDONII-MINUARTIA OBTUSILOBA HERBACEOUS VEGETATION
 JUNIPERUS OCCIDENTALIS/ARTEMISIA ARBUSCULA/DANTHONIA UNISPICATA-POA SECUNDA SPARSE WOODLAND
 JUNIPERUS OCCIDENTALIS/ARTEMISIA RIGIDA/POA SECUNDA SPARSE WOODLAND
 JUNIPERUS OCCIDENTALIS/CERCOCARPUS LEDIFOLIUS-SYMPHORICARPOS OREOPHILUS WOODLAND
 JUNIPERUS OCCIDENTALIS/CERCOCARPUS LEDIFOLIUS/CAREX GEYERI WOODLAND
 LEYMUS AMBIGUUS-ENCELIOPSIS NUDICAULIS HERBACEOUS VEGETATION
 LEYMUS AMBIGUUS-LUPINUS ARGENTUS HERBACEOUS VEGETATION
 LEYMUS FLAVESCENS SPARSE VEGETATION
 LEYMUS TRITICOIDES-POA SECUNDA HERBACEOUS VEGETATION
 PHYSOCARPUS MALVACEUS-SYMPHORICARPOS ALBUS SHRUBLAND
 PICEA ENGELMANNII/CAREX DISPERMA FOREST
 PICEA ENGELMANNII/HYPNUM REVOLUTUM FOREST
 PICEA ENGELMANNII/PHYSOCARPUS MALVACEUS FOREST
 PICEA SPP./LYSICHTON AMERICANUS FOREST
 PINUS CONTORTA-(POPULUS TREMULOIDES)/SPIRAEA DOUGLASII/CAREX SPP. FOREST
 PINUS CONTORTA/ELYMUS GLAUCUS FOREST
 PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/ARCTOSTAPHYLOS NEVADENSIS FOREST
 PINUS PONDEROSA-QUERCUS GARRYANA/BALSAMORHIZA SAGITTATA WOODLAND
 PINUS PONDEROSA/ARTEMISIA TRIDENTATA SSP. VASEYANA/POA NERVOSA FOREST
 PINUS PONDEROSA/CALAMAGROSTIS RUBESCENS FOREST
 PINUS PONDEROSA/ELYMUS GLAUCUS FOREST
 PINUS PONDEROSA/PHYSOCARPUS MALVACEUS FOREST
 PINUS PONDEROSA/PURSHIA TRIDENTATA/STIPA OCCIDENTALIS FOREST
 PINUS PONDEROSA/WYETHIA MOLLIS FOREST
 POA CUSICKII HERBACEOUS VEGETATION
 POPULUS TREMULOIDES/CAREX SPP. FOREST
 POPULUS TREMULOIDES/SYMPHORICARPOS ALBUS/ELYMUS GLAUCUS WOODLAND
 PSEUDOROEGNERIA SPICATA-ARISTIDA LONGISETA-SPOROBOLUS CRYPTANDRUS HERBACEOUS VEGETATION
 PURSHIA TRIDENTATA/STIPA COMATA SPARSE SHRUBLAND
 QUERCUS GARRYANA/CAREX GEYERI FOREST
 QUERCUS GARRYANA/CEANOTHUS CUNEATUS/FESTUCA IDAHOENSIS WOODLAND
 QUERCUS GARRYANA/ELYMUS GLAUCUS FOREST
 QUERCUS GARRYANA/TOXICODENDRON DIVERSILOBUM-SYMPHORICARPOS ALBUS/ELYMUS GLAUCUS WOODLAND
 SALIX ARCTICA/POLYGONUM BISTORTOIDES DWARF-SHRUBLAND
 SALIX BOOTHII-SALIX GEYERIANA SHRUBLAND
 SALIX BOOTHII-SALIX GEYERIANA/CAREX ANGUSTATA SHRUBLAND
 SALIX BOOTHII-SALIX LEMMONII SHRUBLAND
 SALIX EASTWOODIAE/CAREX AQUATILIS SHRUBLAND
 SALIX EASTWOODIAE/CAREX ROSTRATA SHRUBLAND
 SALIX GEYERIANA-SALIX LEMMONII SHRUBLAND
 SALIX GEYERIANA/POA PALUSTRIS SHRUBLAND
 SALIX PLANIFOLIA SHRUBLAND
 CELE3/LEAM
 CELE3/PSSP6-FEID
 CELE3/SYOR2
 CRDO2
 CRDO2/HELA4
 CRDO2/ROWO
 ELGL
 FEID-CASC10
 FEID-ERCA8
 FEID-ERHE2
 FEID-HICY
 FEID-SYAL
 FEVI-FEID
 IVGO-ERCA8
 IVGO-MIOB2
 JUOC/ARAR8/DAUN-POSE
 JUOC/ARR12/POSE
 JUOC/CELE3-SYOR2
 JUOC/CELE3/CAGE2
 LEAM-ENMU
 LEAM-LUAR3
 LEFL4
 LETR5-POSE
 PHMA5-SYAL
 PIEN/CAD16
 PIEN/HYRE70
 PIEN/PHMA5
 PICEA/LYAM3
 PICO-(POTR5)/SPDO/CAREX
 PICO/ELGL
 PIPO-PSME/ARNE
 PIPO-QUGA4/BASA3
 PIPO/ARTRV/PONE2
 PIPO/CARU
 PIPO/ELGL
 PIPO/PHMA5
 PIPO/PUTR2/STOC2
 PIPO/WYMO
 POCU3
 POTR5/CAREX
 POTR5/SYAL/ELGL
 PSSP6-ARLO3-SPCR
 PUTR2/STCO4
 QUGA4/CAGE2
 QUGA4/CECU/FEID
 QUGA4/ELGL
 QUGA4/TOD1-SYAL/ELGL
 SAAR16/POB16
 SABO2-SAGE2
 SABO2-SAGE2/CAAN15
 SABO2-SALE
 SAEA/CAAQ
 SAEA/CARO6
 SAGE2-SALE
 SAGE2/POPA2
 SAPL2

SALIX RETICULATA/CALTHA LEPTOSEPALA DWARF-SHRUBLAND
 SALIX WOLFII/CAREX NEBRASCENSIS SHRUBLAND
 SALIX WOLFII/POA PALUSTRIS SHRUBLAND
 SALIX WOLFII/SWERTIA PERENNIS-PEDICULARIS GROENLANDICA SHRUBLAND
 SPHAEROMERIA ARGENTEA-ARTEMISIA FRIGIDA-POA SECUNDA HERBACEOUS VEGETATION
 SPHAEROMERIA ARGENTEA-ORYZOPSIS SWALLENII HERBACEOUS VEGETATION
 THUJA PLICATA/ACHLYS TRIPHYLLA FOREST
 THUJA PLICATA/ADIANTUM PEDATUM FOREST
 THUJA PLICATA/ARALIA NUDICAULIS FOREST
 THUJA PLICATA/LINNAEA BOREALIS FOREST
 TSUGA HETEROPHYLLA/ATHYRIUM FILIX-FEMINA FOREST
 TSUGA HETEROPHYLLA/MENZIESIA FERRUGINEA FOREST
 TSUGA HETEROPHYLLA/XEROPHYLLUM TENAX FOREST
 TSUGA MERTENSIANA/STREPTOPUS AMPLEXIFOLIUS FOREST

SARE2/CALE4
 SAWO/CANE2
 SAWO/POPA2
 SAWO/SWPE-PEGR2
 SPAR2-ARFR4-POSE
 SPAR2-ORSW
 THPL/ACTR
 THPL/ADPE
 THPL/ARNU2
 THPL/L1B03
 TSHE/ATF1
 TSHE/MEFE
 TSHE/XETE
 TSME/STAM2

GLOBAL RANK G27

ACER NEGUNDO/EQUISETUM ARVENSE FOREST
 ALNUS VIRIDIS SSP. SINUATA SHRUBLAND
 FESTUCA IDAHOENSIS-FESTUCA KINGII HERBACEOUS VEGETATION
 JUNIPERUS OCCIDENTALIS/FESTUCA IDAHOENSIS SPARSE WOODLAND
 POPULUS TREMULOIDES/RUBUS PARVIFLORUS FOREST
 PSEUDOROEGNERIA SPICATA HERBACEOUS VEGETATION
 SENECIO TRIANGULARIS HERBACEOUS VEGETATION

ACNE2/EQAR
 ALVIS
 FEID-FEK12
 JUOC/FEID
 POTR5/RUPA
 PSSP6
 SETR

GLOBAL RANK G2G3

ALNUS INCANA/MESIC FORB SHRUBLAND
 ALNUS INCANA/MESIC GRAMINOID SHRUBLAND
 ARTEMISIA CANA SSP. VISCIDULA/DESCHAMPSIA CESPITOSA SHRUBLAND
 ARTEMISIA TRIDENTATA SSP. TRIDENTATA/LEYMUS CINEREUS SHRUBLAND
 ARTEMISIA TRIDENTATA, SSP. TRIDENTATA/PASCOPYRUM SMITHII SHRUBLAND
 BETULA OCCIDENTALIS/MESIC FORB SHRUBLAND
 CAREX PRAEGRACILIS-CAREX AQUATILIS HERBACEOUS VEGETATION
 DANTHONIA INTERMEDIA HERBACEOUS VEGETATION
 POPULUS ANGUSTIFOLIA/ACER GRANDIDENTATUM FOREST
 PSEUDOTSUGA MENZIESII/PAXISTIMA MYRSINITES FOREST
 ROSA NUTKANA/FESTUCA IDAHOENSIS HERBACEOUS VEGETATION
 SALIX ARCTICA/CALTHA LEPTOSEPALA DWARF-SHRUBLAND
 SALIX BOOTHII/CAREX AQUATILIS SHRUBLAND
 SALIX GEYERIANA/MESIC GRAMINOID SHRUBLAND

ALIN2/MESIC FORB
 ALIN2/MESIC GRAMINOID
 ARCAV2/DECE
 ARTR/LECI4
 ARTR/PASM
 BEOC2/MESIC FORB
 CAPR5-CAAQ
 DAIN
 POAN3/ACGR3
 PSME/PAMY
 RONU/FEID
 SAAR16/CALE4
 SABO2/CAAQ
 SAGE2/MESIC GRAMINOID

GLOBAL RANK G2G4

ARTEMISIA TRIDENTATA/LEYMUS CINEREUS SPARSE SHRUBLAND
 ELEOCHARIS PALUSTRIS-DISTICHLIS SPICATA HERBACEOUS VEGETATION
 ELEOCHARIS PALUSTRIS-JUNCUS BALTICUS HERBACEOUS VEGETATION
 JUNCUS BALTICUS-CAREX ROSSII HERBACEOUS VEGETATION
 SCIRPUS PUNGENS HERBACEOUS VEGETATION

ARTR2/LECI4
 ELPA3-DISP
 ELPA3-JUBA
 JUBA-CAR05
 SCPU3

GLOBAL RANK G20

SALIX EXIGUA/MESIC FORB SHRUBLAND
SALIX LASTOLEPIS/BARREN SHRUBLAND

SAEX/MESIC FORB
SALA6/BARREN

GLOBAL RANK G7

GRAYIA SPINOSA/POA SECUNDA SHRUBLAND
POPULUS TRICHOCARPA-ALMUS RHOMBIFOLIA FOREST
QUERCUS GARRYANA/PSEUDOROEGNERIA SPICATA FOREST
TSUGA HETEROPHYLLA/RUBUS PEDATUS FOREST

GRSP/POSE
POTR15-ALRH2
OUGA4/PSSP6
TSHE/RUPE

GLOBAL RANK GU

JUNIPERUS OCCIDENTALIS/POA SECUNDA-STIPA OCCIDENTALIS SPARSE WOODLAND
PINUS PONDEROSA-POPULUS TREMULOIDES/CAREX SPP.-(POA SPP.) FOREST
SALIX GEYERIANA-SALIX RIGIDA SHRUBLAND
SALIX RIGIDA/RIBES AUREUM SHRUBLAND
TYPHA DOMINGENSIS HERBACEOUS VEGETATION

JUOC/POSE-STOC2
PIPO-POTR5/CAREX-(POA)
SAGE2-SAR12
SAR12/RIAU
TYDO

APPENDIX 3.

Section level PV classification: Distribution of the vegetation types (plant association level) in the ' **temperature-moisture** gradients **matrices**. For all biomes section by section.

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	PIPO/CRDO2	ABGR/CLUN2 ABLA/CLUN2 THPL/CLUN2	PSME/PHMA5	
COOL (2)	ALRH2-ABGR	PIPO/FESC PIPO/PHMA5 PIPO/SYAL		
WARM (3)	ALRH2/AMAL2 ALRH2/BE0C2 POTR15-ALRH2 POTR15/CIDO SALUL	PIPO/FEID PIPO/PSSP6		
HOT (4)	ALRH2/CELAR			

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)				
COOL (2)				
WARM (3)			CRDO2/HELA4 CRDO2/SYAL	ARR12/POSE ERN12/POSE
HOT (4)			CELAR/PSSP6 GLNE3/PSSP6 RHGL/PSSP6	ERMI4-PHOR2 ERSP7-POSE

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)		DECE		
COOL (2)		PSSP6-ERHE2 FESC-FEID	FEID/SYAL RONU/FEID FEID-KOMA CAHOS-FEID	
WARM (3)	CANE2	LECI4	PSSP6-FEID (CANYON) PSSP6-FEID (PALOUSE) PSSP6-BASA3-POSE	STCO4-POSE
HOT (4)			SPCR-POSE ARLO3-POSE	PSSP6-POSE PSSP6-OPPO-(POSE)

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)		POTR5/SYOR2/TALL FORB	POTR5/ARTR2	
COOL (2)				
WARM (3)			JUOS/PSSP6 JUOS/ARTR2 JUOS/ARTR2/ORHY	
HOT (4)	POFR2/SAGE2			JUOS JUOS/BARREN JUOS/ARNO4/ROCK JUOS/ARNO4

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)		ARTRV/LECI4	CELE3/ARTR2 CELE3/PSSP6	
COOL (2)		ARTRT/FEID ARTRV/PSSP6	ARTRT/PSSP6	
WARM (3)	SALA6/BARREN SALA6/ROWO/GRASS-FORB	ARTRT/LECI4	GRSP-EPV1 GRSP-PRAN2 ARNO4/HLIA ARNO4/PSSP6 ATCA2-KRLA2 ATCA2-ARTR2 ARTRW8/PSSP6	ATCO/HLIA GRSP-ARSP5 GRSP-LYAN ARNO4/ORHY ARNO4/STCO4 ATCA2/ORHY ARTRW8-ATCO
HOT (4)	SAEX	SAVE4-CHNA2	ALOC2 ATCO-ARSP5-SAVE4 ATCO-KRLA2 SAVE4 SAVE4 (DUNE) KRLA2 ATCA2/SPA1	ATCO ATCO/ARSP5 ATCO/ARSP5/KRLA2 ATCO/ARSP5/ORHY ATCO-EPNE ATCO/KOAM ATCO-LYSH ATCO/ORHY SAVE4/ATCO/ARSP5 SAVE4/ORHY PSP0P/ORHY

HERBLANDS

	MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP:					
COLD (1)					
COOL (2)		CAR06			
WARM (3)		CANE2	PONE3	LETR5-CAREX JUBA CADO2	
HOT (4)		SCAM2 SCPU3 ELPA3 ELPA3-JUBA TYDO TYLA	ELPA3-DISP	DISP SPAI-DIST3 SUMO	ORHY SERIES

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/STAM2 PICEA/COSE16 PICEA/EQAR	ABLA/RIMO2 ABLA/CARU ABLA/ACGL ABLA/MARE11 ABLA/CAR05 ABLA/ACRU2 ABLA/VAGL ABLA/OSCH ABLA/PERA4 ABLA/PHMA5	PSME/MARE11 PSME/CARU POTRS/SHCA	
COOL (2)	ALIN2/COSE16 ALIN2/MESIC FORB ALIN2/MESIC GRAMINOID	PSME/ACGL PSME/OSCH POTRS/AMAL2- SYOR2/TALL FORB	PSME/SYOR2 PSME/PHMA5 POTRS/TALL FORB POTRS/SYOR2/TALL FORB POTRS/SYOR2/THFE POTRS/AMAL2/TALL FORB POTRS/SYOR2/CARU POTRS/AMAL2-SYOR2/CARU	
WARM (3)	BEOC2/COSE16 BEOC2/MESIC FORB	POTRS/WYAM POTRS/THFE POTRS/AMAL2-SYOR2/THFE POTRS/AMAL2/THFE	ACGR3/CARU PSME/CELE3 PIFL2/CELE3 PIFL2/MARE11	PIMO-JUOS/CELE3/PSSP6 JUOS/PUTR2-SYOR2/PSSP6 PIMO-JUOS/ARTRV/PSSP6 PIMO-JUOS/LECI4 PIMO-JUOS/PRV1
HOT (4)	ACNE2/COSE16 ACNE2/EQAR POAN3/BEOC2 POAN3/COSE16 POAN3/ACGR3			JUOS/ARTR2 JUOS/STCO4

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	PEFL15/DECE SAWO/CAAQ SAWO/DECE SAWO/MESIC FORB	CELE3/SYOR2	CELE3/PSSP6 ARTRV-SYOR2/FEID ARTRV-SYOR2/BRCA5	ARTRV-SYOR2/PSSP6
COOL (2)	ARCAV2/DECE COSE16/HELA4 SAGE2/CARO6 SAGE2/CAAQ SAGE2/MESIC GRAMINOID SAGE2/MESIC FORB SABO2/MESIC GRAMINOID SABO2/MESIC FORB SABO2/EQAR SABO2/CANE2 SABO2/CACA4 SABO2/CARO6 SABO2/CAAQ	ARTRV/FEID ARTR4/FEID ARTR4/PSSP6	ARTRV/PSSP6 ARTRV/LECI4	ARARL/FEID
WARM (3)	SAEX/MESIC GRAMINOID ROWO	ARTR2/FEID	ARTRW8/PSSP6	ARAR8/FEID
HOT (4)	SAEX/BARREN SAEX/MESIC FORB SAEX/MESIC GRAMINOID	ARTRT/PSSP6 ARTRT/FEID	ATCO/ELEL5 ARNO4/ORHY ARNO4/PSSP6 SAVE4	ARAR8/STTH2 ARAR8/PSSP6 ATCO

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ELQU2 MECI3 CASC12	FEID ELGL FEOV		
COOL (2)	DECE CAAQ CARO6 AGST2 POCU3	FEID-SYAL		
WARM (3)	CANE2 CAMI7 CALA30 JUBA CASI2	PONE3-PULE-ELEL5		PSSP6-STCO4 PSSP6-BASA3-POSE
HOT (4)	TYLA ELPA3		DISP-(SCNE) LECI4 LETR5-POSE	

**NORTHWESTERN BASIN AND RANGE SECTION:
WESTERN PORTION**

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	POTR5/CAREX	POTR5/SYAL/ELGL	ABCO/MARE11	
COOL (2)	POTR15/COSE16 ALIN2/CAREX ALIN2-POTR5/COSE16 ALIN2/SYAL ALIN2-POTR15/SALIX/ CAREX ALIN2-BEOC2/(SALIX)	PIPO/ARPA6	JUOC/ARTR2/FEID JUOC/ARAR8/FEID PIMO/ARTR2 PIMO/CELE3	
WARM (3)	POTR15/COSE16 BEOC2/POTR15/SALIX	PIPO-QUKE SERIES QUKE	JUOC/CELE3/PSSP6 JUOC/FEID JUOC/ARTR2-PUTR2/PSSP6- FEID PIMO-JUOS/ARTR2	PIMO-JUOS/ARAR8 JUOC/PSSP6 JUOC/ARAR8/PSSP6 JUOC/ARTR2/PSSP6
HOT (4)	POFR2/SAGE2 POAN3/COSE16		PIPO/PUTR2/ORHY	JUOC/ARR12/POSE JUOC/ARAR8/DAUN-POSE JUOS/BARREN JUOS/ARNO4 JUOS/ARNO4/ROCK

SHRUBLANDS (see next page)

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CAN2 CASP5	FEID ELGL FEOV		
COOL (2)	DECE POCU3 CAFR5-CAAQ	FEID-SYAL FEID	JUBA-CAR05	
WARM (3)	CAN2 DECE-CAREX CAMI7	PONE3-PULE-ELEL5 PONE3	PSSP6-POSE CADO2	PSSP6-STCO4 PSSP6-BASA3-POSE
HOT (4)	TYLA ELPA3 ELPA3-JUBA	ELPA3-DISP	DISP-(SCNE) DISP JUBA LECI4 LETR5-POSE SUMO	ORHY SERIES

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	SADR	CELE3/SYOR2 ARTRV-CELE3/ELCA- POSE ARTRV/CAGE2	ARAR8/FEID ARTRV/FEID ARTRV/BRCAS CELE3/PSSP6-FEID ARAR8-CELE3/PSSP6-POSE PUTR2/FEID	CELE3/ARTR2 ARTR2/FEID
COOL (2)	SABO2-SAGE2 SABO2/CARO6 SABO2-SALE SAGE2-SARL2 SAGE2-SALE SARL2/RIAU SALISERIES	ARTR4/PSSP6 ARTR4/FEID ARTRW8-PUTR2/PSSP6 ARTRW8-PERA4/FEID ARTRV/STOC2 ARTRV/PSSP6 CELE3/PRVI AMAL2/ARTR2/FEID ARPA6/CEVE-CEPR	CELE3/PSSP6 ARAR8/PSSP6 ARAR8/FEID ARTRW8/PSSP6 ARTRW8/STCO4 ARTRW8/STTH2 ARTRT/PSSP6 ARRI2/PSSP6 ARAR8/POSE	SADO4/PSSP6 ARTRW8-ATCO ARTR2-EPVI
WARM (3)	SALA6/BARREN SALA6/ROWO/GRASS-FORB ARCA13(ELCA11)-PONE3 ARCA13/LECI4	PUTR2/ORHY ARTR2-PUTR2/ORHY- STCO4 ARTRT/FEID ARTRT/LECI4	ARRI2/POSE GRSP-EPVI GRSP-PRANZ ATCA2 ATCA2-ARTR2 ATCA2-KRLA2 ATCA2/HIJA ARNO4/HIJA ARNO4/PSSP6 ARNO4/ELEL5	GRSP/ARSP5 GRSP/LYAN GRSP/ORHY GRSP/ARNO4/STSP3 ATCA2/ORHY ATCO/HIJA ARNO4 ARNO4/ORHY ARNO4/STCO4
HOT (4)	SAEX SAEX-SALUL	SAVE4/LECI4 SAVE4/DISP SAVE4/CHNA2	ATCA2/SPAI ALOC2 ATCO-SAVE4 ATCO/ELEL5 ATCO/ARSP5/SAVE4 ATCO-KRLA2 KRLA2/POSE SAVE4 (DUNE) SAVE' SAVE4/SUNI	ATCO (COMM I) ATCO/ARSP5 ATCO/ARSP5/KRLA2 ATCO/ARSP5/ORHY ATCO-EPNE ATCO/KOAM ATCO-LYSH ATCO/ORHY ATCO/TEGL SAVE4/ATCO/ARSP5 SAVE4/ORHY SAVE4/ELEL5 PSPOP/ORHY

FORESTS

	MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP:	COLD (1)	ABLA/STAM2	ABLA/CLUN2 ABLA/VAGL	ABLA/CAGE2 ABLA/VASC	
	COOL (2)	POTRS/SYAL/ELGL POTRS/CAREX	ABGR/CLUN2 PSME/OSCH PSME/SYAL ABGR/VAGL	ABGR/CARU ABGR/ACGL ABGR/SPBE2 ABGR/VACE PSME/CARU PSME/CAGE2 PSME/PHMAS PSME/SPBE2	
	WARM (3)	POTRS/SASC		PIPO/SYAL	PIPO/SYOR2 PIPO/FEID PIPO/PSSP6 PIPO/PUTR2 PSME/FEID PSME/PSSP6 JUOC/ARTRV JUOC/CELE3/PSSP6
	HOT (4)	ALRH2/AMAL2 ALRH2/BEOC2 ALRH2/CELAR ALRH2/PHLE4 ALRH2/SACE3 ALRH2-POTR15 POTRS SERIES		JUOC/CELE3-SYOR2 JUOC/CELE3/CAGE2 JUOC-PIPO/PUTR2	JUOC/PSSP6 JUOC/FEID JUOC/ARAR8/PSSP6 JUOC/ARTR2/PSSP6

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CELE3/SYOR2 CELE3/CARU ARTRV-CELE3/ELCA-POSE ARTRV/CAGE2 ARTRV-SYOR2/FEID	PHMA5-SYAL ARTRV/BRCAS ARTRV/FEID PUTR2/FEID ARPA6/CEVE-CEPR ARTRV/LECI4	PUTR2/ORHY PUTR2/STCO4 PUTR2/PSSP6 ARTR2/FEID ARAR8/FEID	
COOL (2)	ARCA13/CANE2-POCU3	ARTRV/PSSP6 ARTRT/FEID CELE3/PSSP6 ARTRW8-PERA4/FEID	ARTRW8/PSSP6 ARTRW8/STCO4 ARTRW8/STTH2 ARTRT/PSSP6 ARTR2/STCO4 ARAR8/PSSP6	ARNO4/POSE ARNO4/PSSP6
WARM (3)	ARCA13(ELCA11)-PONE3	GLNE3/PSSP6 ARTRT/FEID ARTRT/LECI4 CELAR/PSSP6	ARARWPOSE ARRI2/POSE ERSP7-POSE ERTH4-POSE	ATCO-ARSP5-SAVE4
HOT (4)	ARCA13/LECI4 ARCA13/MURI		ATCO-SAVE4 SAVE4/DISP SAVE4/LECI4 SAVE4/SUNI	ATCO/ORHY ATCO/PSSP6 KRLA2/POSE ATCO/ELEL5

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)				
COOL (2)	CAAQ CARO6	FEID-KOMA	PSSP6-FEID (CANYON)	
WARM (3)	CANE2	LECI4 (BOTTOMLANDS)	PSSP6-BASA3-POSE	
HOT (4)		DISP-(SCNE) JUBA	PSSP6-OPPO-(POSE)	

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)		PIFL2/PUTR2 JUOS/PUTR2-SYOR2/PSSP6		
COOL (2)	POAN3/COSE16		JUOS/ARTR2	
WARM (3)		JUOS/PSSP6		
HOT (4)				

SHRUBLANDS

MOISTURE-	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ALIN2/RIHU	ARTRV/FEID ARTRV/PSSP6 ACGR3/CARU		
COOL (2)	PEFL15/DECE ALIN2/COSE16 SAGE2/CAR06 SAGE2/MESIC FORB SAGE2/DECE SAGE2/MESIC GRAMINOID	PUTR2/(PSSP6)-FEID	PUTR2/CHNA2 CHNA2/LEFLA-PSLA3	ARARL/FEID
WARM (3)	SABO2/CAR06 SABO2/MAST4 SABO2/CAAQ	ARTR2/FEID ARTR2/PSSP6 ARTR2/STCO4 ARCA13/MURI PUTR2/PRVI	ARTR2/STCO4 ARTRT/PSSP6 ARTRW8/STTH2 ARTRW8/PSSP6 ARTRW8/STCO4	ARAR8/POSE ARAR8/PSSP6
HOT (4)	SAEX			ATCO/ORHY ATCO/PSSP6 KRLA2/POSE EROV ARNO4/POSE

HERBLANDS

	MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP:					
COLD (1)					
COOL (2)		CAR06 CAAQ CASZ		LEFL4	
WARM (3)		CANE2 ELPA3 JUBA SCAC	PASM		
HOT (4)					

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	POTR5/SYAL/ELGL ALIN2-POTR5/COSE16 SAGE2-SAR12 SAGE2-SALE ALIN2/COSE16 SABO2/CARO6 ALIN2-BEOC2/(SALIX) SABO2-SAGE2	PIPO/CARU PIPO/CAGE2 ABGR/CARU PSME/SYAL PIPO-PSME/PUTR2 PSME/VAGL	JUOC-PIPO/PUTR2/ (PSSP6)-FEID	
COOL (2)	SAR12/RIAU POTR15/CIDO BEOC2/CRDO2 BEOC2-POTR15/SALIX		JUOC/ARTR2-PUTR2/ PSSP6-FEID	
WARM (3)	PRV1-SALIX/ROWO SAAM2-SAF14- SALUL/CAREX SAAM2-SAEX-SALUL CRDO2/SYAL CRDO2/ROWO POTR15/COSE16		JUOC/POSE-STOC2	JUOC/ARAR8/FEID JUOC/ARTR2/FEID JUOC/FEID
HOT (4)	POTR15/SAEX		JUOC/ARTR2/CAFI	JUOC/ARR12/POSE JUOC/ARTR2/PSSP6 JUOC/ARAR8/PSSP6 JUOC/PSSP6

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CELE3/PSSP6-FEID PUTR2/(PSSP6)-FEID			
COOL (2)		ARTR2/FEID ARAR8/FEID		
WARM (3)		CELE3/PSSP6 ARTRV/STOC2 CELAR/PSSP6 ARTRW8-PUTR2/PSSP6 ARR12/PSSP6	ARTRW8/STH2 ARTRW8/PSSP6 ARAR8/PSSP6	ERDO-POSE ERSP7-POSE
HOT (4)	SAVE4/DISP ARCA13/LECI4 SAEX SAEX-SALUL	ARTR2/LECI4	ARAR8/POSE ARR12/POSE ARTRW8/STCO4	SADO4/PSSP6

HERBLANDS

	MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP:					
COLD (1)		CANE2			
COOL (2)			PSSP6-FEID(CANYON)		
WARM (3)				PSSP6-BASA3-POSE PSSP6-POSE(LITHOSOL) PSSP6-ERHE2	LOCO4-POSE (BASE2)-POSE
HOT (4)		LECI4(BOTTOMLANDS) DISP-(SCNE)		PSSP6-OPPO-(POSE)	

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	POTR3/SYAL PIPO-PSME ALIN2			
COOL (2)		PSME/SYAL PSME/PHMA5 PSME/CARU	PIPO-PSME/PSSP6	
WARM (3)	ALRH2			
HOT (4)	POTR15/COSE16			PIPO/FEID PIPO/PSSP6 PIPO/PUTR2 JUOC SERIES QUGA4 SERIES

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)				
COOL (2)	CRDO2/ROWO	PUTR2/FEID ARTR4/FEID SYAL-RONU	PUTR2/PSSP6 ARTR4/PSSP6	PUTR2/STCO4 ARTR4/STCO4
WARM (3)	SAEX	ARTR2/FEID	ARTR2/PSSP6 ARR12/PSSP6 RHGL/PSSP6	ARTR2/STCO4 PUTR2/ORHY
HOT (4)			SAVE4/DISP ARTRT/FEID ARTRT/PSSP6	KRLA2/POSE GRSP/POSE ARTR2/POSE ARR12/POSE ERSP7-POSE

COLUMBIA BASIN SECTION

HERBLANDS

	MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP:					
COLD (1)		FEID-KOMA FEID-SYAL RONU/FEID			
COOL (2)			PSSP6-FEID (PALOUSE)		
WARM (3)			PSSP6-FEID (CANYON)	PSSP6-POSE (LITHOSOL)	
HOT (4)			LECI4 (BOTTOMLANDS)	DISP-(SCNE)	LOCO4-POSE STCO4-POSE DAUN-POSE ARLO3-POSE

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/LEGL ABLA/RHAL2	ABLA/PHEM LALY/VADE TSME/PHEM-VADE	TSME/XETE TSME/VASC TSHE/ARNE TSME/LUHI ABLA/LUHI ABLA/VAMY2 ABLA/VASC PICO/VASC PICO/XETE	PIAL/CARU PIAL/LUGLH LALY/LUGLH PIAL-PICO/PELA7 PICO/CAPE6
COOL (2)	ABLA/MEFE ABLA/TRCA3 PIEN/EQAR ABAM/OPHO ABGR/POPU3 TSHE/OPHO THPL/OPHO	ABAM/CLUN2 PIEN/CLUN2 ABLA/LIBO3 ABAM/ACCI ABAM/ACTR ABAM/VAAL ABAM/GASH ABGR-PIEN/MAST4 ABGR/VAME/CLUN2 ABGR/VAME THPL/ACTR TSHE/ACTR TSHE/RHMA3 ABCO-PIPO/CAPE6	ABAM/XETE TSME/RULA2 ABAM/VAME ABCO-ABSH/CHUM ABSH/CAPE6 ABSH-TSME/ARNE TSHE/ARNE TSHE/XETE ABCO/CEVE ABCO-PIPO/RIV3 ABCO-PILA-PIPO/ARPA6 ABCO-PICO/CAPE6-STOC2 PICO/CAPE6 PSME/ARUV	ABLA/CARU ABLA/CAGE2 ABGR/CAGE2 PIPO-PSME/ARNE ABGR/ARNE PSME/HODI PSME/SPBE2 PICO/STOC2 PICO/CAGE2 PICO/CEVE PSME/ARUV-PUTR2 PICO/ARTR2 PICO/ARTR2/FEID PICO/ARTR2/STOC2 PICO/PUTR2/CAPE6 PICO/PUTR2-RICE
WARM (3)	PICO/CAREX WETLAND PICO-POTRS/VAUL TSHE/LIBO3	ABGR/CACH6 ABGR/ACTR ABGR/CLUN2 ABGR/ACCI ABGR/LIBO3 ABGR/PAMY TSHE/MANEN ABGR/MANEN PICO/PUTR2 PICWARUV ABCO/CACH6	ABGR/TRLA6 ABGR/SYAL ABGR/CARU ABGR/SPBE2 PSME/SYAL PShWCAGE2 PSME/CARU ABCO-PIPO/ARPA6-MANEN PICO/FEID ABCO/CEVE ABCO/SYAL	ABGR/HODI PSME/FEOC PIPO-PSME/PUTR2 PIPO-PSME/ARPA6-CEVE PIPO-PSME/PEFR3 PIPO/ARPA6 PIPO/ASDE6 ABCO-CADE27- PIPO/AMAL2 ABCO/ARPA6
HOT (4)		PIPO/PUTR2-FEID PIPO/ARPA6-PUTR2 PIPO-QUGA4/SYAL QUGA4/ELGL PIPO/CEVE-PUTR2 PIPO/PUTR2/CAPE6 PIPO/ARTRV/PONE2	PIPO-QUGA4/PUTR2 PIPO-QUGA4/BASA3 PIPO-QUGA4/CAGE2 QUGA4/CAGE2 QUGA4/SYAL QUGA4/FEID PIPO/PUTR2/STOC2 PIPO/WYMO	JUOC/ARTR2-PUTR2/ PSSP6-FEID

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)		ALVIS CAME7-PHEM	PUTR2/CAPE6-STOC2	ARTRV/CAGE2 ARTRV/STOC2
COOL (2)	SABO2-SAGE2/CAAN15 SABO2/CARO6 SABO2-SAGE2 SABO2-SALE SAGE2-SALE VAOC/CAAQD		PUTR2/FEID ARTR4/FEID	ARTRV/FEID
WARM (3)			CELE3/PSSP6-FEID ARTR2/FEID ARAR8/FEID	ARTRV/PSSP6
HOT (4)		ARCA13(ELCA11)-PONE3 ARCA13-ARTRV/POCU3	ARTRW8-PUTR2/PSSP6 ARAR8-PUTR2/PSSP6-FEID	ARTRW8/PSSP6 ARTRW8/STTH2 ARAR8/PSSP6 ARAR8/POSE

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CAN2 CASC10-GERO2	CASP5	CABR12 FEVI FEOV	CAPU DAIN
COOL (2)	CAS2 CALE4 CALA11 CARO6	DECE	POCU3 PONE3	
WARM (3)	CANE2		FEID-HICY	
HOT (4)	SCAC TYLA		PSSP6-FEID (PALOUSE)	PSSP6-POSE PSSP6-BASA3-POSE

FORESTS

MOISTURE:	WET (1)	MOIST (2)	D R Y (3)	VERY DRY (4)
TEMP: COLD (1)		TSME/PHEM-VADE TSME/JUPA TSME/VASC ABSH/VAME ABSH/CAPE6 ABSH/PENST	ABCO-ABSH/CHUM ABSH-TSME/ARNE	PIAL SERIES PICO/ARNE
COOL (2)	TSHE/VAME/LIBO3 ABAM-ABCO/MANEN	ABCO/RUN2 ABCO/VAME ABCO/ACGL ABCO/AMAL2-COCO6 ABCO/AMAL2/ANDE3	ABCO/CHUM ABCO/CACH6 ABCO/CEVE ABCO-PSME/MAPI3 ABCO-PIPO/CEVE	
WARM (3)	PIPO/AMAL2-MARE11 ABCO/MANEN	PIPO-PIJE/MARE11 PIPO-PSME/PUTR2 ABCO-PILA-PIPO/ARPA6 ABCO-CADE27- PIPO/AMAL2 CADE27-PSME/CACH6 PILA-PSME/CACH6 PIJE-QUKE/POSE PIJE-QUKE/RHTR	PIPO-PIJE/STCOL PIPO/ARPA6-PUTR2 PIPO/ARPA6	CUPBAK
HOT (4)	TSHE/MANEN	PIPO-QUKE PIPO-QLJWI JUOC-PIPO- QUGA4/CECU/FEID QUGA4/CECU/FEID QUGA4/TOD1-SYAL/ELGL	PIPO/STCO4 PIPO/PUTR2 PIPO-QUGA4/PUTR2 PIAT SERIES	JUOC/ARTRV JUOC/ARAR8/PSSP6 JUOC-QUGA4 QUDO

SHRUBLANDS & HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ALIN2		HODI	
COOL (2)	DECE CANE2 CAR06	CEVE	CELE3/FEID	
WARM (3)	SALE	QUVA ARPA6 SERIES	QUBR	ARTR2 SERIES PSSP6
HOT (4)	VERNAL POOLS		ARV116-CECU/FEID-STLE2 CECU SERIES DACA3 STLE2	NAPU

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	PICO/VACE PICO/ARTR2/FEID PICO/ARTR2/STOC2	ABSH/CAPE6 PICO SERIES ABCO/CACH6 ABCO/CEVE	ABSH-TSME/ARNE ABSH/CACH6 ABSH/PENST PIWA/SYLO/PSJA PIWA/ARNE	PIAL/STCA PIAL/PEGR PIAL/ARAC
COOL (2)	POTR15 SERIES	ABCO/SYAL ABCO/SYMO ABCO/MARE11 ABCO-PIPO/SYMPH	PIJE/PUTR2 PIJE/ARTRV	
WARM (3)	ABCO-CADE27- PIPO/AMAL2	PIPO-PIJE/FRRU PIPO-PIJE/MARE11 ABCO-PIPO/CEVE ABCO-PIPO/PUTR2	PIPO-PIJE/PUTR2 PIPO-PIJE-CADE27 PIPO-PIJE/STCOL PIPO/CEVE-PUTR2 PIPO/ARPA6-PUTR2 PIPO/PUTR2/ORHY PIPO/CELE3-PUTR2	
HOT (4)			PIPO/ARTR2/STIPA PIPO-QUGA4 PIPO/PUTR2 PIPO/CELE3/PSSP6 PIPO/ARTR2-PUTR2 JUOC-PIPO/PUTR2/ (PSSP6)-FEID	JUOC-PIPO- QUGA4/CECU/FEID JUOC/ARNO4 JUOC/ARAR8/PSSP6 JUOC/ARTRV

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	B EGL-SALIX	CELE3/FEID ARTRV/FEID		ERDI LEPU
COOL (2)	SABO2-SALE SAGE2-SARL2	CELE3/PSSP6 ARPA6/CEVE-CEPR CEVE	ARAR8/FEID ARTR2/FEID	ARNO4/POSE ARAR8/POSE
WARM (3)	SALE/LECI4	ARCA13/CANE2-POCU3 ARCA13/MURI ARCA13/FEID	PUTR2/FEID PRSU	CECU-CEMOG-PRSU ARAR8/PSSP6 ARTRWWPSSP6 ARTRW8/STTH2
HOT (4)	SAEX	SAVE4/DISP SAVE4/LECI4 ARTR2/LECI4	CECU/PSSP6	ATCO-SAVE4

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CASP5 CANI2			
COOL (2)	CABR12 CALA30 CALA11 CAS12 CAAQ DECE CANE2	PONE3		
WARM (3)		POaJ3 LETR5-POSE	FEID - CA	PSSP6
HOT (4)	SCAC SCVA TYLA	LECI4 DISP	STTH2	POSE

FORESTS

MOISTURE:		WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP:	COLD (1)	PIEN/CAD16 ABLA/CACA4 PIEN/CALE4	ABLA/LUGLH PIEN/GATR3	ABLA-PIAL/VASC PIEN/VASC ABLA/VASC	PIEN/ARCO9 PIEN/HYRE70 PIAL/VASC PIAL/CAR05 PIAL/JUCO6 PIAL/CAGE2
	COOL (2)	PIEN/COSE16 PIEN/EQAR POTRS/CACA4	ABLA/THOC PIEN/LIBO3 PICEA/LIBO3 ABLA/ACRU2 ABLA/LIBO3	ABLA/VAGL ABLA/SYAL ABLA/CARU PSME/VAGL	ABLA/ARCO9 ABLA/JUCO6 ABLA/CAR05 PICO/PUTR2
	WARM (3)	POTRS/COSE16 POTR15/COSE16	PSME/OSCH ABLA/SPBE2 ABLA/ACGL	PSME/SYAL PSME/CARU	PSME/JUCO6 PSME/ARCO9 PSME/FEK12 PIEN/JUCO6
	HOT (4)		PSME/SPBE2 PSME/ACGL	PSME/PHMAS PIEN/PHMAS PICEA/PHMAS ACGR3/CARU	PIFL2/JUCO6 PIFL2/FEID PICEA/PHMAS PSME/PSSP6 PSME/FEID

SHRUBLANDS

MOISTURE:		WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP:	COLD (1)	SAWO/CAAQ SAWO/DECE SAPL2/CAAQ-CAR06 SARE2/CALE4 BEG1/CAR06 KAMI/CASC12			ARART/FEID
	COOL (2)	SAGE2/CACA4 SAGE2/CAR06 SACA4/CAR06	ARTRV-SYOR2/FEID ARCA13/PASM ARCA13/FEID PEFLWDECE	ARTRV/FEID ARTRV/BRCA5 ARTR4/FEID	ARTRV/PSSP6 ARTR4/PSSP6
	WARM (3)	SADR SABE2 COSE16	ARTRT/PASM	ARTRT/PSSP6 ARTRT/FEID ARPE6/FEID CELE3/PSSP6	
	HOT (4)				ARNO4/PSSP6

HERBLANDS

MOISTURE:		WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP:	COLD (1)	CASC12 CACA4	MOIST ALPINE TURF	DRY ALPINE TURF	
	COOL (2)	CAR06 CAAQ CALI7 CALA11 ELQU2 GLBO	DECE SETR FEm-DECE	FEID-ELTR7 FEID-CAFI	
	WARM (3)	CAS12 CANE2 ELPA3 SCAC	FEID-STR12	FEID-PSSP6	PSSP6
	HOT (4)	TYLA		PSSP6-PASM	STCO4-BOGR2 PSSP6-BOGR2 PSSP6-POSE

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	PIEN/CALE4 PIEN/CADI6 PIEN/CACA4 ABLA/CACA4	PIEN/GATR3 ABLA/VASC PIEN/LIBO3 ABLA/ARLA8	PIEN/VASC PIAL/VASC PIAL/CAGE2 PIAL/JUCO6 PIAL/CAR05	PICO/ARCO9 PIEN/RIMO2 PIEN/JUCO6
COOL (2)	PIEN/COSE16 PIEN/EQAR POTR15/COSE16	ABLA/ACRU2 ABLA/LIBO3 ABLA/THOC ABLA/OSCH POTR5/SYOR2/CARU POTR5/SYOR2/TALL FORB POTR5/SYOR2/THFE POTR5/SYOR2/CAR05 POTR5/SYOR2/BRCAS POTR5/AMAL2- SYOR2/BRCAS POTR5/AMAL2- SYOR2/THFE POTR5/AMAL2- SYOR2/CARU POTR5/AMAL2- SYOR2/TALL FORB POTR5/RUPA ABLA/RIMO2	ABLA/PHMAS ABLA/VAGL ABLA/SYAL ABLA/CARU ABLA/PERA4 PICO/VASC PICO/SPBE2 PICO/VAGL PICO/CARU	ABLA/ARCO9 ABLA/CAR05 POTR5/SASC
WARM (3)	POAN3/COSE16	PSME/ARCO9 PSME/SYOR2 PSME/OSCH ABLA/ACGL ABLA/SPBE2 POAN3/ACGR3 POTR5/THFE POTR5/SHCA	PSME/CARU PSME/SYAL PSME/VAGL POTR5/AMAL2/TALL FORB POTR5/AMAL2/THFE POTR5/CARU POTR5/BRCAS	PSME/JUCO6 ABLA/MARE11 ABLA/JUCO6 POTR5/WYAM POTR5/TALL FORB PSME/FEK12 PIFL2/FEK12 PIFL2/FEID PIFL2/CELE3
HOT (4)		PSME/SPBE2 PSME/ACGL	PSME/PHMAS POTR5/JUCO6/CAGE2 POTR5/JUCO6/LUAR3	PSME/CELE3 PSME/MARE11 POTR5/ARTR POTR5/STCO4 JUOS/PSSP6 PSME/FEID

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	SAWO/CAAQ SAWO/CAR06 SAWO/CANE2 SAWO/DECE SAWO/MESIC FORB SAPL2		ARTRV-SYOR2/PSSP6 ARTRV-SYOR2/FEID	
COOL (2)	SAEA SAGE2/POPA2 SAGE2/CAR06 SAGE2/CACA4 SAGE2/MESIC FORB SAGE2/DECE SAGE2/MESIC GRAMINOID ARCAV2/DECE	PEFL15/DECE PEFL15/FEID ARCAV2/FEID	ARTRV/FEID ARTRV/BRCAS ACGL	PUTR2/PSSP6 ARTRV/PSSP6
WARM (3)	SABO2/CAR06 SABO2/CANE2 SABO2/CACA4 SABO2/EQAR SABO2/POPA2 SABO2/MAST4 SABO2/CAAQ SABO2/MESIC FORB SABO2/MESIC GRAMINOID COSE16/GATR3 ALIN2/RIHU ALIN2/MESIC FORB ALIN2/MESIC GRAMINOID	BEOC2/COSE16 BEOC2/MESIC FORB	ARTR4/PSSP6 ARTR4/FEID ARTRW8/POSE ARTRW8/PSSP6 ARTRW8/STCO4 ARTRT/PSSP6 ARTRT/FEID ARTR2/STCO4	PUTR2/STCO4 CELE3/PSSP6
HOT (4)	SAEX/EQAR SAEX/MESIC FORB SAEX/MESIC GRAMINOID SALU2/CAR06 SALU2/CACA4 COSE16/HELA4		ARAR8/FEID ARNO4/FEID	ARNO4/PSSP6 ARARWPOSE ARAR8/PSSP6

HERBLANDS

	MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP:					
COLD (1)		CAAQ CASE2	CAM17 CARO6 CANE2 JUBA	DECE	
COOL (2)			MEC13	MESICFORB	POPA2
WARM (3)		ELPA3			
HUT (4)					LEC14 PSSP6 ORHY SERIES

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/CALEH2 ABLA/CACA4	ABLA-PIAL/VASC PIAL/VASC	ABLA/ARCO9 PICO/ARCO9 ABLA/JUCO6	PIAL/JUCO6 PIAL/CARO5 PIAL/FEID
COOL (2)	PICEA/EQAR PICEA/CADI6 ABLA/CACA4	PIENVASC ABLA/VASC ABLA/ARL48 PICO/VASC	PICO/CARU PICO/JUCO6	PICO/CARO5 PShWSPBE2 PICO/FEID
WARM (3)	ABLA/STAM2 POPTRE/COSE16	ABLA/ACRU2	PICEA/PHMA5 PSME/SYAL PSME/MARE11 PSME/CARU	PSME/JUCO6 PSME/SYOR2 PSME/ARCO9
HUT (4)				PIFL2/FEID PIFL2/FEK12 PSME/FEK12 PSME/FEID PIFL2/JUCO6

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	KRUMMHOLZ SAPL2/CAAQ SAPL2/CASC12 SARE2/CALE4 PHEM/ANLA3 KAMI/CASC12			
COOL (2)	SABO2/CACA4 SABO2/EQAR SABO2/CAAQ SABO2/CANE2 SADR	ARTRV-SYOR2/FEID	ARTRV/FEID	
WARM (3)	SABE2 SALU2/CACA4 SALU2/CARO6	PUTR2/FEID	ARAR8/FEID ARTR4/FEID	
HOT (4)				ARTRT/PSSP6 ARTRW8/PSSP6 ARTRV/PSSP6

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)		FEID-CASC10 MOIST ALPINE	DRY ALPINE	
COOL (2)		FEID-ELTR7		
WARM (3)			FEID-PSSP6	
HOT (4)				PSSP6-POSE

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/CACA4 ABLA/CABI ABLA/LEGL	ABLA/MEFE LALY-ABLA ABLA/LUGLH	ABLA/CARU ABLA/CLUN2 ABLA/COOC ABLA/LIBO3 ABLA/VACE ABGR/XETE ABLA/VAGL ABLA/XETE	ABLA/CAGE2 ABLA/SPBE2 ABLA/ARCO9 PIAL-ABLA PICO/FEID ABLA/VASC PICO/VASC
COOL (2)	ABLA/STAM2	THPL/ASCA2 THPL/CLUN2 THPL/GYDR THPL/TABR2/ASCA2	ABGR/CLUN2 ABGR/COOC ABGR/ASCA2 ABGR/VACE ABGR/LIBO3 ABGR/TABR2 PSME/VACE	ABLA/ACGL ABGR/ACGL ABGR/VAGL
WARM (3)	THPL/ATFI	THPL/ADPE	PSME/SYAL ABGR/SPBE2 PSME/ACGL PSME/LIBO3 PSME/VAGL ABGR/CARU	PSME/SPBE2 PSME/CAGE2 PSME/PHMA5 PSME/MARE11 PSME/CARU PSME/SYOR2 PIPO/PHMA5 PIPO/SYAL PIPO/SYOR2
HOT (4)		PIPO/CRDO2 POTR15/COSE16		PSME/PSSP6 PSME/FEID PIPO/FEID PIPO/PSSP6 PIPO/PUTR2 PIPO/STCO4

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	SAWO/CAAQ SAWO/CAR06 SAWO/SWPE-PEGR2 SAPL2/CASC12 SAPL2/CAAQ-CAR06 SACO2/CASC12 BEG1/CAR06			
COOL (2)	SAEA/CAAQ SAEA/CAR06 SAB02/CACA4 SAGE2/CACA4		ARTRV-SYOR2/FEID ARTRV-SYOR2/PSSP6	
WARM (3)	SAB02/CAAQ SAB02/CAR06 SAGE2/CAR06 COSE16/HELA4 ALIN2/COSE16 ALIN2/RIHU COSE16			
HOT (4)	BEOC2			PUTR2/FEID PUTR2/PSSP6 CELE3/FEID CELE3/PSSP6 ARTRV/PSSP6 ARTRV/FEID

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)			GERO2 JUDR-CAREX SPP. ALPINE GRASSLAND	
COOL (2)	CACA4 CAAQ CABU6			
WARM (3)	CANE2 JUBA ELPA3			
HOT (4)				

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/CACA4	ABLA/MEFE	LALY-ABLA ABLA/LUGLH ABLA/VASC ABLA-PIAL/VASC	PIAL SERIES PIAL-ABLA
COOL (2)	PICEA/EQAR THPL/ATFI	ABLA/LIBO3 ABLA/CLUN2 PICEA/GATR3 ABLA/GATR3 PICEA/CLUN2	ABLA/VACE PSME/VAGL ABGR/XETE ABLA/XETE ABLA/VAGL	PSME/VACE PICEA/VACE
WARM (3)	ABGR/SETR PICEA/COSE16	ABGR/CLUN2 THPL/CLUN2 ABGR/LIBO3	PSME/CARU PSME/PHMA5 PSME/LIBO3	PSME/SPBE2 PSME/SYAL
HOT (4)	POTR15/COSE16 PSME/COSE16 PIPO/COSE16	POTR15/SAEX	PIPO/SYAL	PIPO/PSSP6 PIPO/PUTR2 PIPO/FEID PSME/FESC PSME/FEID

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	SAPL2/CASC12 SACA4/CARO6 KAM1/CASC12			
COOL (2)	SAGE2/CAAQ SAGE2/CARO6 SAWO/CAAQ SAGE2/CACA4 BEG1/CARO6	ALIN2 ALVIS SABE2		
WARM (3)	SALU2/CARO6 SALU2/CACA4 SADR	SALUL COSE16	PEFL15/DECE PEFL15/FEID ARTR2FESC	CELE3/PSSP6
HOT (4)				ARTR2/PSSP6 PUTR2/FEID ARTR2/FEID

HERBLANDS

	MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP:	COLD (1)	CAS2 CASC12			
	COOL (2)	ELQU2 ELPA3 SETR CALI7 CACA4 CAAQ CABU6 CALA11	DECE-CAREXSP. DECE	FEID-DECE	
	WARM (3)	EQFL GLBO CAR06	POPA2 JUBA CANE2	FEID-STR2 FESC-FEID	
	HOT (4)	TYLA PHAR3 PHAU7 SCAC			FESC-PSSP6 FEm-PSSP6 PSSP6-POSE

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/CACA4 PIEN/CACA4 ABLA/LEGL	ABLA/LUGLH ABLA/MEFE LALY-ABLA	ABLA/VASC ABLA-PIAL/VASC ABLA/RIMO2	ABLA/ARCO9 PIAL SERIES PIAL-ABLA ABLA-PIAL/ARUV
COOL (2)	PIEN/GATR3 ABLA/GATR3 ABLA/STAM2 POTRS/CACA4	PICEA/MAST4 ABLA/ACRU2 ABLA/LIBO3 ABLA/CLUN2 ABLA/ALVIS PIEN/LIBO3	ABLA/CARU PSME/VACE PIEN/VACE ABLA/VACE ABLA/VAGL ABLA/XETE	PSME/ARCO9 PICEA/SEST3 PSME/SPBE2 ABLA/CLCOC2
WARM (3)	PIEN/EQAR PIEN/COSE16 POTRS/COSE16	PSME/PHMA5 PSME/LIBO3 POTRS/OSOC	PSME/CARU PSME/SYAL	PIFL2/JUCO6 PSME/JUCO6 PSME/ARUV
HOT (4)	POTRS/COSE16 PSME/COSE16 JUSC/COSE16		PSME/FESC PSME/FEID	PIFL2/PSSP6 PIFL2/FEID

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	SAPL2/CAAQ SAPL2/CASC12 SARE2/CALE4 KAMI/CASC12	SAAR16/POB16 PHEM/ANLA3	DROC/CARU3	
COOL (2)	SACA4/CAR06 SAWO/CAAQ ALIN2	ALVIS PEFL15/DECE ARCA13/FEID SAWO/DECE	PEFL15/FEID	ARTRV/PSSP6
WARM (3)	SAGE2/CAR06 SAGE2/CACA4 SALU2/CACA4 BEOC2 SADR SABE2	PEFL15/FESC ARCA13/PASM ROWO	ARTR2/FESC ARTRV/FEID	
HOT (4)	SAEX SALU2/CAR06 COSE16	PRVI SYOC		ARTRW8/PSSP6

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CASC12 CASC12-CALE4	DECE-CAREX CAN12 FEID-CASC10 DECE-CALE4	CASC10-POD12	CARUD GER02
COOL (2)				
WARM (3)			FESC-PSSP6 FESC-FEID FEID-PSSP6	
HOT (4)		SPPE PASM	PSSP6-PASM	PSSP6-BOGR2 PSSP6-POSE STCO4-BOGR2

FORESTS

MOISTURE:	WET (1)	M O I S T (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/CACA4 ABLA/LEGL	ABLA/ALVIS ABLA/LUGLH ABLA/MEFE LALY-ABLA	ABLA/VASC ABLA-PIAL/VASC ABLA/RIMO2	ABLA/ARCO9 PIAL SERIES PIAL-ABLA
COOL (2)	PIEN/GATR3 ABLA/GATR3 PIEN/EQAR ABLA/STAM2 POTRS/CACA4	PICEA/MAST4 ABLA/ACRU2 ABLA/LIBO3 PIEN/LIBO3	PSME/VACE PSME/VAGL PICEA/VACE ABLA/VACE ABLA/VAGL ABLA/XETE ABLA/CARU	PSME/ARCO9 PSME/SPBE2 PICEA/SEST3 ABLA//CLCOC2 ABLA/CAGE2
WARM (3)	PSME/COSE16 PIEN/COSE16 POTR15/COSE16 POAN3/COSE16	PIEN/PHMA5 PSME/LIBO3 PSME/PHMA5	PSME/CARU PSME/SYAL PSME/SYOR2	PSME/ARUV PSME/JUCO6 PIFL2/JUCO6
HUT (4)	PIPO/COSE16 JUSC/COSE16	PIPO/PRVI	PSME/FESC PSME/FEID	PIFL2/FEID PIFL2/PSSP6 PIPO/PSSP6 PIPO/FEID PIPO/PUTR2 PIFL2/CELE3 JUSC/PSSP6

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	SAPWCAAQ SAPL2/CASC12 SARE2/CALE4 KAMI/CASC12	SAAR16/CALE4 SAAR16/POB16	DROC/CARU3	
COOL (2)	ALIN2 SAWQ/CAAQ SACA4/CARO6	PEFL15/DECE ARCA13/FEID SAWWDECE ALVIS	PEFL15/FEID PUTR2/FEID	ARTRV/PSSP6
WARM (3)	SAGE2/CARO6 SAGE2/CACA4 SALU2/CACA4 BEOC2 SADR SABE2	PEFL15/FESC ARCA13/PASM ROWO	ARAR8/FEID ARTRV/FEID ARTR2/FESC ARTR4/FEID	PUTR2/PSSP6 CELE3/PSSP6
HOT (4)	SAEX SALU2/CARO6 COSE16	SAVE4/LECI4 PRVI SYOC	SAVE4/PASM	ARNO4/PSSP6 ARAR8/PSSP6 ARTRW8/PSSP6 ARTRW8/STCO4

HERBLANDS

MOISTURE:	WET (1)	MOIST 6	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CASC12 CASC12-CALE4	DECE-CAREX CAN2 DECE-CALE4	CASC10/POD12 CASC10-GERO2	CAEL3
COOL (2)	SETR ELQU2 CACA4 CALI7 CAAP3 CAAQ CAS12	FEID-DECE FEID-ELTR7	FEID-CAFI	FEK12
WARM (3)	SCAC ELPA3 GLBO EQFL PHAR3 CANE2 CAR06	FEID-STR12 POPA2	FESC-PSSP6 FESC-FEID FEm-PSSP6	
HOT (4)	TYLA SCIUA SCPU3	LECI4 SPPE PASM	PSSP6-PASM	STCO4-BOGR2 PSSP6-BOGR2 PSSP6-POSE

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	PIEN/EQAR PIEN/CAD16 ABLA/CACA4	LALY-ABLA ABLA-PIAL/VASC ABLA/VASC	PIAL/VASC ABLA/RIMO2 ABLA/ARCO9 ABLA/VACE	PIEN/HYRE70 PIAL-ABLA PIAL/FEID ABLA/CLCOC2 PICO/FEID
COOL (2)	ABLA/STAM2 ABLA/MEFE	PIEN/LIBO3 PIEN/GATR3 ABLA/ACGL ABLA/LIBO3 ABLA/THOC	PSME/CAGE2 PSME/SPBE2 ABLA/CARU ABLA/CAGE2 PICEA/SEST3 ABLA/SYAL	PIFL2/JUCO6 PSME/JUCO6 PSME/ARCO9
WARM (3)	POTRS/COSE16	PSME/ACGL POTRS/SHCA POTRS/AMAL2- SYOR2/THFE POTRS/AMAL2- SYOR2/CARU POTRS/THFE	PSME/CARU PSME/MARE11 PSME/PHMA5 PSME/SYAL POTRS/CARU POTRS/SYOR2/CARU POTRS/SYOR2/THFE	PIFL2/CELE3 PSME/CELE3 PSME/SYOR2 PIFL2/FEID PIFL2/FEK12 PIFL2/PSPP6 PSME/PSPP6 PSME/FEID
HOT (4)	PIFL2/PEFL15/DIST3	POTRS/WYAM	POTRS/STCO4	JUOS/ARNO4 JUOS/ARTR2 JUOS/STCO4 JUOS/LEAM

SHRUBLANDS

MOISTURE: WET MOIST DRY VERY DRY
 (1) (2) (3) (4)

TEMP:
 COLD
 (1)

 COOL
 (2)

 WARM
 (3)

 HOT
 (4)

<p>SACO2/CASC12 PHEM/ANLA3 SARE2/CALE4 SAAR16/CALE4 SAPL2/CAAQ-CARO6 SAPL2/CASC12</p>	<p>DROC SAAR16/POBI6</p>		<p>ARART/FEID</p>
<p>SABO2/CACA4 SAEA/CAAQ SAEA/CARO6 SAGE2/CARO6 SAGE2/POPA2 SAWO/CAAQ SAWO/CARO6 SAWO/POPA2</p>	<p>ARTR4/FEID ARTRV/FEID ARTRV-SYOR2/FEID</p>	<p>ARTRV-SYOR2/PSSP6 ARTR4/PSSP6 ARTRV/PSSP6</p>	
<p>ALIN2/COSE16 COSE16/HELA4 SABO2/CAAQ SABO2/CANE2 SABO2/CARO6 SABO2/EQAR SABO2/MESIC FORB</p>		<p>CELE3/PSSP6 ARTRW8/LEAM ARPE6/FEID ARTR2/FEID</p>	<p>ARNO4/FEID ARAR8/PSSP6 ARAR8/LEAM</p>
<p>BEOC2</p>		<p>ATCO/LEAM</p>	<p>SPAR2-ARFR4-POSE SPAR2-ORSW ARNO4/POSE ARNO4/ORHY ARNO4/LEAM ARTRW8/PSSP6 ATCO/ORHY ATCO/PSSP6</p>

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CACA4 CASC12	FEID-POD2 FEID-CASC10 JUDR-CAREX SPP.	FEID-ERCA8 CAPU GERO2	CARUD CAEL3-LUAR3
COOL (2)	DECE CAAQ CAS12 DECE-CALE4	FEID-DECE	FEID-FEK12	FEK12 FEK12-CAEL3 FEK12-PHPUS FEK12-POCU3
WARM (3)	CANE2 ELPA3 ELQU2 JUBA		FEID-PSSP6 FESC-FEID	CAST40-POSE
HOT (4)				LEAM-ENNU

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/CACA4	ABLA/RIMO2	ABLA/VASC PIAL-ABLA	PICO/FEID ABLA/ARCO9
COOL (2)	ABLA/STAM2 PIEN/EQAR	ABLA/LIBO3 ABLA/VACE	ABLA/CAGE2 ABLA/CARU ABLA/SPBE2	PSME/JUCO6 PSME/ARCO9
WARM (3)	POTR15/COSE16	PSME/ACGL	PSME/SYAL PSME/CAGE2 PSME/CARU	PSME/SYOR2 PSME/MARE11
HOT (4)				PIFL2/CELE3 PSME/CELE3 PSME/FEID PSME/PSSP6

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	SACO2/CASC12 SAPL2/CAAQ-CARO6 SAPL2/CASC12 SAWO/SWPE-PEGR2	DROC	ARCA13/FEID	ARART/FEID
COOL (2)	BEG1/CARO6 PEFL15/DECE SABO2/CACA4 SAEA/CAAQ SAEA/CARO6 SAGE2/CACA4 SAGE2/CARO6 SAWO/CAAQ SAWO/CARO6 PEFL15/FEID	ARTRV/FEID ARTR4/FEID ARAR8/FEID ARTR4/PSSP6	CELE3/HODU ARTRV/PSSP6 ARTRV-SYOR2/PSSP6	
WARM (3)	ALIN2/COSE16 ALIN2/RIHU COSE16/HELA4 SABO2/CAAQ SABO2/CARO6		CELE3/PSSP6	
HOT (4)	BEOC2		ARTRW8/POSE	SPAR2-ARFR4-POSE SPAR2-ORSW ARNO4/ORHY ARTRW8/PSSP6 ARAR8/PSSP6 ATCO/PSSP6 ATCO/LEAM

HERBLANDS

MOISTURE	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CACA4 CASC12	FEID-POD12 CAPS2 JUDR-CAREXSPP.	FEID-ERCA8 IVGO-ERCA8 IVGO-MIOE2 CARUD GERO2	CAEL3-LUAR3
COOL (2)	DECE CAAQ CAS12 CABU6 SCCE2-CALI DECE-CALE4 AGEX-AGSC5	FEID-DECE	FEID-FEK12	FEK12 FEK12-CAEL3 FEK12-PHPU5 FEK12-POCU3
WARM (3)	CANE2 ELPA3 ELQU2 JUBA			LEAM-LUAR3 CAST40-POSE
HOT (4)	SCAM2			LEAM-ENNU

FORESTS

MOISTURE:	WET (1)	MOIST (2)	D R Y (3)	VERY DRY (4)
TEMP: COLD (1)			ABLA/MEFE	ABLA/CAGE2 ABLA/VASC ABLA/PHEM PICO/VASC/CAPE6 TSME/VASC TSME/VAME ABGRJVASC
COOL (2)	ABLA/STAM2 PIEN/CLUN2 ABGR/TABR2 PIEN'EQAR ABGR/SETR	PICO--(POTR5)SPDO/CAREX	ABLA/TRCA ABLA/CLUN2 ABLA/LIBO3 ABLA/THOC ABGR/ASCA2 ABGR/TRCA ABGR/CLUN2 ABGR/SYAL PICO/ELGL ABLA/RHAL2	ABLA/CARU ABLA/VAME ABLA/ARCO9 ABGR/VAME ABGR/LIBO3 ABGR/COOC2
WARM (3)	PIPO-POTR5/CAREX--(POA)	ABGR/ACGL	PSME/PHMA5 PSME/HOD1 PSME/SYOR2 PSME/CELE3 PIPO-PSME/PHMA5	ABGR/SPBE2 ABGR/CARU ABGR/CAGE2 PICO/CARU PICO/FEID PICO/PUTR2/FEID PSME/CARU PSME/CAGE2 PSME/VAGL PSME/SYAL PSME/SPBE2 PShWPSSP6 PIPO-PSME/PUTR2 PIPO/CARU PIPO/CAGE2 PIPO/ELGL PIFL2/JUCO6
HOT (4)			PIPO/ARTRV/PONE2 PIPO/PUTR2/FEID PIPO/CELE3 PIPO/FEID JUOC-PIPO/ARTR2/PSSP6- (FEID-STIPA) JUOC/PSSP6 JUOC/ARAR8/FEID JUOC/ARTR2-PUTR2/ PSSP6-FEID JUOC/ARTRV	PIPO/PUTR2/PSSP6 PIPO/PSSP6 JUOC/ARAR8/PSSP6 JUOC/ARRI2/POSE JUOC/ARAR8/DAUN-POSE

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)				
COOL (2)	ALIN2-BEOC2/(SALIX)			
WARM (3)		BEOC2/CRDO2 BEOC2/POTR15/SALIX ARCA13/(ELCA11)-PONE3 ARCA13/LECI4	CRDO2/SYAL CRDO2/ROWO ARTRV/FEID PHMA5-SYAL SYAL-RONU	
HOT (4)			CELE3/PSSP6-FEID CELE3/CARU PUTR2/PSSP6-FEID ARTRV/LECI4 ARTRV/CAGE2 ARTRW8/LECI4 ARTR2/FEID ARTRW8-PERA4/FEID ARAR8-PUTR2/PSSP6-FEID ARAR8/FEID ARTR4/FEID SAVE4/DISP SAVE4/LECI4	CELE3/PSSP6 PUTR2/PSSP6 ARTR2/STCO4 ARTRV/PSSP6 ARTRW8/PSSP6 ARTRW8/POSE ARTRW8-PUTR2/PSSP6 ARTR4/PSSP6 ARAR8/PSSP6 ARAR8/POSE CELE3/PSSP6 ARR2/PSSP6 ARR2/POSE ARTRW8-ATCO GLNE3/PSSP6 RHGL/PSSP6

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CALA11 CAN12 CASC12 CASP5		FEID FEOV	
COOL (2)		DECE	CAH05-FEVI FEVI-LUARL5 PSSP6-FEID (PALOUSE)	ELGL PONE3
WARM (3)			FEID-CAH05 PSSP6-ERHE2 FEID-KOMA FEID-SYAL RONU/FEID	PSSP6-ARLO3-SPCR
HOT (4)		DECE-CAREX	DISP-(SCNE) LECI4 (BOTTOMLANDS) PONE3-PULE-ELEL55	PSSP6-POSE PSSPC-OPPO-(POSE) DAUN-POSE PSSP6-POSE (LITHOSOL) ARLO3-POSE ERST4-POSE ERM14-PHOR2 ERCO12-POSE

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/CACA4	ABLA/MEFE ABLA/RHAL2 TSME/MEFE TSHE/MEFE TSHE/RHAL2	ABLA-PIAL/VASC ABLA/VASC ABLA/XETE ABLA/LUGLH TSME/XETE TSME/LUGLH	PIAL/CARU ABLA/CARU ABLA-PIAL/ARUV
COOL (2)	ABLA/TRCA ABLA/STAM2 ABLA/OPHO THPL/OPHO PIEN/EQAR	TSME/CLUN2 TSHE/CLUN2 ABLA/CLUN2 ABLA/LIBO3 ABLA/COCA13 TSHE/ARNU2 TSHE/XETE TSHE/RUPE THPL/VAME THPL/LIBO3	PSME/VACCI PSME/VACE ABGR/VACE ABLA/VACE ABGR/XETE	PSME/CARU PSME/SPBE2 PSME/ARUV
WARM (3)	TSHE/GYDR THPL/ARNU2 THPL/GYDR THPL/ATFI	ABGR/PHMA5 ABGR/LIBO3 ABGR/CLUN2 ABGR/TABR2 ABGR/PAMY THPL/CLUN2 THPL/ASCA2 PSME/LIBO3	PSME/PHMA5 PSME/PHMA5-LIBO3 PSME/HODI PSME/SYAL	PSME/CARU PIPO-PSME/PSSP6
HOT (4)	POTRS/COSE16 POTR1S/COSE16 ALIN2-POTRS/BEGL- RIBES/CAREX		PIPO/FEID PIPO/SYAL PIPO/PHMA5 PSME/SYOR2 PSME/FEID PIPO/FESC	PIPO/PSSP6 PIPO/PUTR2 PIPO/PUTR2/FEID PIPO/PUTR2/ORHY PIPO/PUTR2/PSSP6

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	BEG1/CAR06	CAME7-PHEM		
COOL (2)	ALVIS			ARTRV/PSSP6
WARM (3)	ALIN2 COSE16 SPDO		PUTR2/FEID ARTR4/FESC ARTR4/FEID	
HOT (4)		SAVE4	PUTR2/PSSP6 PUTR2/STCO4 ARTR4/STCO4 ARTR4/PSSP6	ARTR2/STCO4 ARTR1/PSSP6

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CAN12 CAPS2	FEVI	FEVI-FEID	
COOL (2)	CAR06 CAAQ CALA30 CALA11 CACA4		FEID-FESC	
WARM (3)	SCAC NULUP	JUBA	FEID-ERHE2	
HOT (4)				

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/CACA4 TSME/STAM2 PIAL SERIES	ABLA/LUGLH TSME/MEFE ABLA/MEFE TSME/LUGLH TSHE/MEFE	ABLA/VASC LALY-ABLA ABLA-PIAL/VASC	PIAL-ABLA
COOL (2)	PICEA/EQAR ABLA/OPHO TSME/STAM2 ABLA/STAM2 THPL/ATFI	ABLA/LIBO3 THPL/GYDR TSME/CLUN2 ABLA/CLUN2 TSHE/GYDR PICEA/GATR3 PICEA/CLUN2	TSME/XETE ABLA/VACE ABGR/XETE ABLA/XETE TSHE/XETE ABLA/VAGL	PSME/VACE PICEA/VACE
WARM (3)	THPL/OPHO ABGR/SETR PICEA/COSE16	THPL/CLUN2 THPL/ASCA2 TSHE/CLUN2 ABGR/LIBO3 ABGR/CLUN2	PSME/CARU PSME/PHMA5 PSME/LIBO3 PSME/SYAL ABGR/PHMA5 PSME/VAGL	PSME/ARUV
HOT (4)	POTRS/COSE16 POTR15/COSE16 PICEA/YAM3 PSME/COSE16 PIPO/COSE16	POTRS/OSOC	PIPO/SYAL	PIPO/PSSP6 PIPO/FEID PSME/FESC PSME/PSSP6 PSME/FEID

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	SAPL2/CASC12 SACA4/CARO6 KAMI/CASC12	PHEM/ANLA3		
COOL (2)	SAGE2/CAAQ SAGE2/CACA4 B EGL/CARO6	SAWO/DECE ALIN2 ALVIS SABE2		
WARM (3)	SALU2/CARO6 SALU2/CACA4 SADR	SALUL COSE16 SAEX	PEFL15/FESC PEFL15/DECE ARTR2/FESC	
HOT (4)		CRDO2		ARTR2/PSSP6 ARTR2/FEID

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CACA4 SETR CASE2 CASC12	ALPINE RGNLND		
COOL (2)	ELQU2 ELPA3 CARO6 CABU6 CAAQ CALA11	DECE-CAREX DECE	FEID-ELTR7	
WARM (3)	PHAU7 EQFL GLBO CAAP3	POPA2 JUBA CANE2	FEID-DECE FEID-SIR12	FESC-FEID
HOT (4)	TYLA SCAC		FESC-PSSP6 FEID-PSSP6	PSSP6-POSE

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/CACA	ABLA/MEFE	ABLA/LUGLH LALY-ABLA	ABLA-PIAL/VASC PIAL-ABLA ABLA/VASC
COOL (2)	PICEA/EQAR ABLA/OPHO THPL/ATFI	ABLA/LIBO THPL/GYDR TSME/CLUN ABLA/CLUN PICEA/GATR PICEA/CLUN	ABLA/VACE PSME/LIBO ABGR/XETE ABLA/XETE ABLA/VAGL	PICEA/VACE PSME/VACE
WARM (3)	THPL/OPHO ABGR/SETR PICEA/COSE	THPL/CLUN THPL/ASCA ABGR/LIBO ABGR/CLUN	PSME/CARU PSME/PHMA ABGR/PHMA PSME/VAGL	PSME/SYAL
HOT (4)	POTRE/COSE POTRI/COSE PICEA/LYAM PSME/COSE	POTRE/OSOC		

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	SAPL2/CASC12 SACA4/CAR06 KAMI/CASC12	PHEM/ANLA3		
COOL (2)	SAGE2/CAAQ SAGE2/CACA4 BEG1/CAR06	SAWO/DECE ALIN2 ALVIS SABE2		
WARM (3)	SALU2/CAR06 SALU2/CACA4 SADR	SALUL COSE16 SAEX	PEFL15/FESC PEFL15/DECE	
HOT (4)				

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CACA4 SETR CAS12 CASC12	ALPINE RNLND		
COOL (2)	ELQU2 ELPA3 CARO6 CABU6 CAAQ CALA11	DECE-CAREX DECE	FEID-ELTR7	
WARM (3)	PHAU7 EQFL GLBO CAAP3	POPA2 JUBA CANE2	FEID-DECE FEID-STR12	FESC-FEID
HOT (4)	TYLA SCAC			FESC-PSSP6 FEID-PSSP6

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/CACA4 TSME/STAM2	ABLA/LUGLH TSME/LUGLH TSME/MEFE ABLA/MEFE LALY-ABLA	ABLA/VASC ABLA-PIAL/VASC	PIAL PIAL-ABLA
COOL (2)	ABLA/GATR3 PICEA/GATR3 THPL/OPHO ABLA/OPHO THPL/ATFI	ABLA/LIBO3 THPL/GYDR ABLA/CLUN2 TSHE/GYDR ABGR/TABR2 TSME/CLUN2 ABGR/CLUN2 PICEA/CLUN2	TSME/XETE ABLA/VACE PSME/LIBO3 ABGR/XETE ABLA/XETE TSHE/XETE ABLA/VAGL	PSME/VACE PICEA/VACE
WARM (3)	ABGR/SETR PICEA/COSE16	THPL/ADPE TSHE/ASCA2 TSHE/CLUN2 ABGR/LIBO3 ABGR/ASCA2	PSME/CARU PSME/PHMA5 ABGR/PHMA5 ABGR/SPBE2 PSME/SPBE2 PSME/VAGL	PSME/SYAL
HOT (4)	POTR15/COSE16 PICEA/YAM3 PSME/COSE16 PIPO/COSE16	POTR15/CRDO		PIPO/PSSP6 PIPO/FEID PIPWSYAL PSME/PSSP6 PSME/FEID

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	SAPL2/CASC12 SACA4/CAR06 KAMI/CASC12	PHEM/ANLA3		
COOL (2)	SAGE2/CAAQ SAGE2/CAR06 SAWO/CAAQ SAGE2/CACA4 B EGL/CAR06	ALIN2 ALVIS SABE2		
WARM (3)	SALU2/CAR06 SALU2/CACA4 SADR	SALUL COSE16 SAEX	PUTR2/FESC ARTR4/FESC PEFL15/DECE ARTR2/FESC	
HOT (4)		CRDO2		ARTR2/PSSP6 ARTR2/FEID

HERBLANDS

	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CASC12-CALE4 SETR CAS12 CASC12	DECE-CALE4		
COOL (2)	ELQU2 ELPA3 CACA4 CABU6 CAAQ CALA11	DECE-CAREX DECE	FESC-DECE	
WARM (3)	EQFL GLBO CARO6	POPA2 JUBA CANE2	FEID-STR12	FESC-FEID
HOT (4)	TYLA PHAU7 SCAC		FESC-PSSP6 FEID-PSSP6	PSSP6-POSE