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Using Estimates of Natural Variation to Detect Ecologically Important Change in Forest Spatial Patterns: A Case Study, Cascade Range, Eastern Washington

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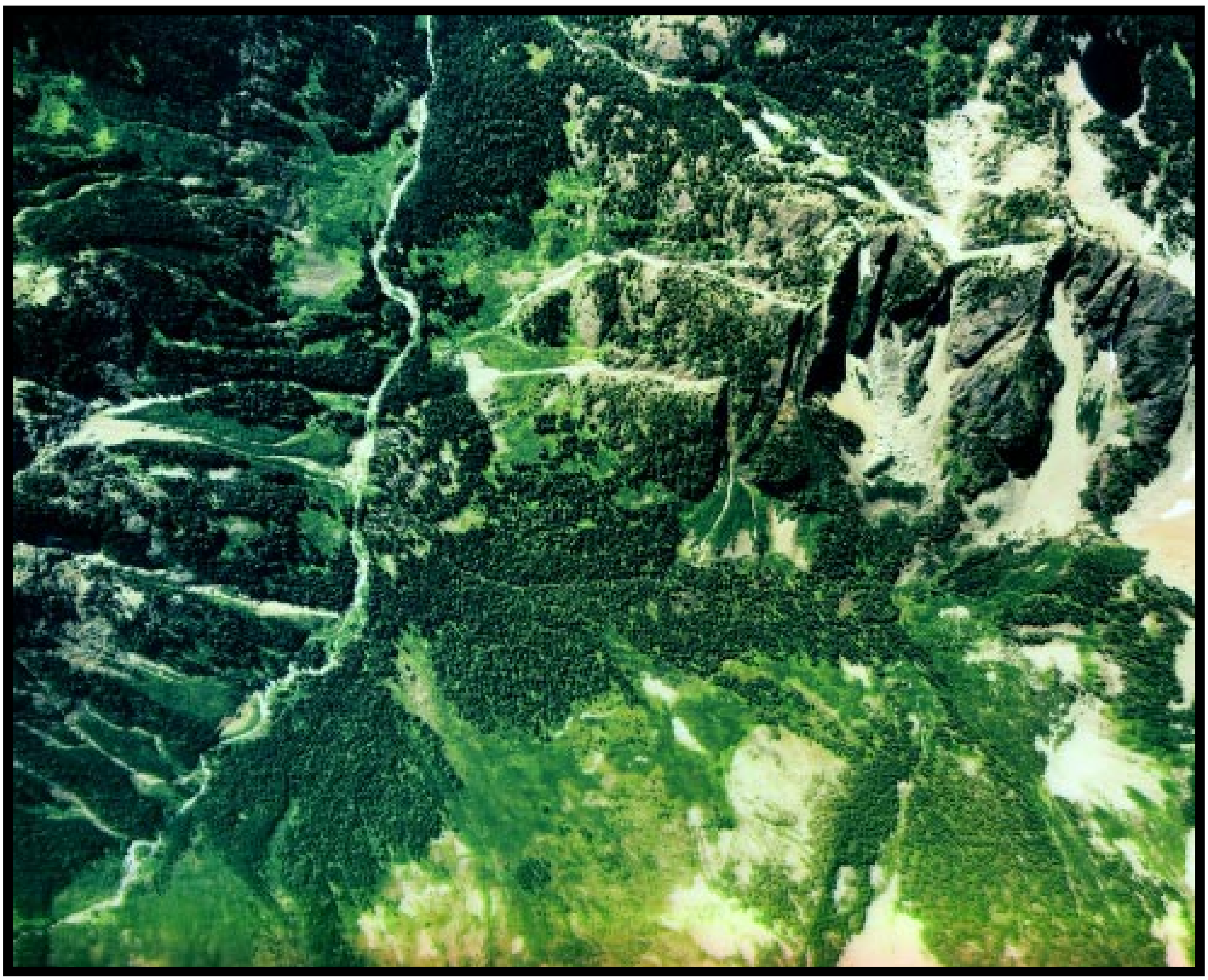

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Abstract

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Using hierarchical clustering techniques, we grouped subwatersheds on the eastern slope of the Cascade Range in Washington State into ecological subregions by similarity of area in potential vegetation and climate attributes. We then built spatially continous historical and current vegetation maps for 48 randomly selected subwatersheds from interpretations of 1938-49 and 1985-93 aerial photos, respectively, and attributed cover types, structural classes, and potential vegetation types to individual patches by modeling procedures. We estimated a natural range of variation (NRV) in spatial patterns of patch types by subwatersheds and five forested ecological subregions. We illustrate how NRV information can be used to characterize the direction and magnitude of vegetation change occurring as a consequence of management.

Keywords: Natural range of variation, forest health, space-for-time substitution, ecosystem restoration, ecological monitoring, landscape patterns, spatial pattern analysis.

Summary

Twentieth-century forest management activities, such as timber harvesting, fire suppression, road construction, and domestic livestock grazing, have modified spatial patterns of interior Northwest forests. As a consequence, parameters of current disturbance regimes differ from those of historical regimes, present-day wildlife habitat spatial distributions differ from historical distributions, and future viability of some native terrestrial species is uncertain. Public land managers are under increasing social pressure to mold existing forest spatial patterns to reflect patterns resulting from natural disturbance regimes and patterns of biophysical environments, but knowledge of the characteristics of natural patterns is unavailable.

Using hierarchical clustering techniques, we grouped subwatersheds (4 to 15 000 ha) on the eastern slope of the Cascade Range in Washington State into ecological subregions by similarity of area in potential vegetation and climate attributes. We then built spatially continuous historical and current vegetation maps for 48 randomly selected subwatersheds from interpretations of 1938-49 and 1985-93 aerial photos, respectively, and attributed cover types, structural classes, and potential vegetation types to individual patches by modeling procedures. We estimated a natural range of variation (NRV) in spatial patterns of patch types (cover type-structural class) by subwatersheds and five forested ecological subregions from the sample of historical vegetation maps of each subregion by using a suite of class and landscape metrics and a space-for-time substitution sampling logic. Finally, we compared the current pattern of an example subwatershed with NRV estimates of its corresponding subregion to illustrate how NRV information can be used to characterize the direction and magnitude of vegetation change occurring as a consequence of management.

We detected ecologically important change in patch type area, patch density, and mean patch size, as well as change in landscape patterns of patch types. For example, we observed reduction in the percentage of area and mean patch size of ponderosa pine old-forest multistory and stand initiation structures, and old-forest multistory transition to stem exclusion, young-forest multistory, and understory reinitiation structures in both Douglas-fir and ponderosa pine cover types through the selective harvest of large, overstory ponderosa pine. By coupling NRV estimates (nominally, the sample median 80-percent range) with the full range of class and landscape metrics, we were able to identify conditions that would normally fall outside the NRV and that probably should be managed as outliner conditions relative to subregion NRV estimates. Comparison of current conditions with NRV estimates of landscape pattern metrics revealed significantly increased patch richness, increased patch type diversity, and reduced contagion. This method gives land managers an ability to compare characteristics of present-day managed landscapes with more natural ranges of conditions to reveal pattern departures that may be remedied through specific conservation or restoration strategies.

Introduction

Landscape ecology is founded on the notion that landscape patterns at many scales influence ecosystem processes and functioning (Forman and Godron 1986; Turner 1989, 1990; Urban and others 1987); for example, genetic and life history diversity among populations of native salmonids differ with the area, connectivity, and patterns of their habitats (Lee and others 1997). Thus, multiscale assessment of landscape pattern change is a prerequisite to the study of change in ecosystem functioning.

To detect change in landscape patterns, it is necessary to first understand their natural variability. In this study, recent historical vegetation patterns (1938-49) of selected subwatersheds (average area 4 to 15 000 ha, 6th code hydrologic units; Seaber and others 1987) were mapped and analyzed by using a space-for-time substitution sampling logic to estimate natural ranges of variation (NRV) in spatial patterns of vegetation patches. Patch types in spatial pattern analysis were cover type-structural class couplets. Current vegetation (1985-93) of the same subwatersheds also was mapped for comparison with NRV estimates and detection of the direction and magnitude of change in structural and compositional patterns. Vegetation mapping and spatial analysis relied on high-quality, comparable aerial photography of recent historical and current vegetation conditions.

A key tenet of ecosystem management (Overbay 1992, Society of American Foresters 1993), borrowed from recent developments in conservation biology and related fields, is that native terrestrial and aquatic species have evolved within the context of natural disturbance regimes and the landscape patterns of habitats that were a consequence of those regimes (Frankel and Soule 1981, Franklin 1980). Hence, the potential for survival of many species may be diminished if temporal and spatial patterns of their habitats shift outside the NRV, especially if shifts occur too quickly to allow adaptation or migration.

Swanson and others (1994) assert that managing ecosystems within the NRV is a scientifically defensible and robust approach to conserving native species diversity and ecosystem processes. This approach provides an initial empirical basis for meeting societal objectives of producing sustainable flows of commodities from terrestrial and aquatic habitats in patterns that will maintain viable populations of native species, as articulated in the National Forest Management Act and Endangered Species Act. Concrete examples of characteristic patterns and the natural variability of forest landscapes are lacking in most cases. Knowledge of the variability of recent historical forest patterns would provide a window through which managers could view more features of sustainable ecosystems, and would enhance understanding of the pattern-process interactions of contemporary ecosystems.

Objectives of this study were to (1) classify subwatersheds along the east side of the Cascade Range in Washington into ecological subregions based on their similar composition of climate and potential vegetation attributes; (2) estimate NRV in vegetation spatial patterns of forested subregions; and (3) illustrate the use of NRV estimates to detect ecologically important landscape pattern change. Hereafter we use the terms “historical” or “recent historical” to describe a time depth (the last 100 years) relevant to current climatic conditions and contemporary forest ecosystem behavior.

Relation to the Interior Columbia Basin Assessment

In a recent ecological assessment, we sampled biophysical environments and vegetation conditions representative of each of the major forest and rangeland provinces of the interior Columbia River basin (Hessburg and others, in press). Based on a two-stage, stratified random sample of 337 subwatersheds distributed throughout the study area, we characterized recent historical and current vegetation composition and structure, and we quantified change in vegetation spatial patterns and landscape vulnerability to fires and 21 insect and pathogen disturbances over the most recent 50- to 60-year period, (Hessburg and others, in press; Ottmar and others, ms. in prep.). We used a variety of class (patch type) and landscape metrics from the spatial pattern analysis program FRAGSTATS (McGarigal and Marks 1995) to characterize change in spatial patterns of cover type-structural class patch types. Results of change analysis were pooled to province-scale strata called ecological reporting units (ERUs). We estimated change from historical to current conditions as the mean difference between conditions. Significant ($P \leq 0.2$) change was determined by examining for any given metric, the 80-percent confidence interval around the mean difference for the ERU. We also approximated the NRV by calculating the historical sample median 75-percent range for each class and landscape metric and compared the current sample median value with this estimate. The NRV characterizations were useful in revealing both causes and consequences of change in ecosystem characteristics, but high environmental variability pooled at the ERU scale masked much of the change that had occurred (Hessburg and others, in press). We hypothesize that grouping of subwatersheds into subregions based on similarity of ecological attributes will organize environmental variation and make change detection more transparent, which would enable refinement of our estimates of natural pattern variation.

In this paper, we will critically examine a subset of the interior Columbia River basin study area, the east side of the Cascade Range in Washington, and provide initial estimates of natural variability in forest spatial patterns for the contemporary climate period. We based our work on four assumptions. First, that vegetation and disturbance patterns are closely linked with climate and environment (Agee 1993, DeBano and others 1998). Second, that environmental composition of subwatersheds can be approximated by using potential vegetation and climate attributes (Daubenmire and Daubenmire 1968). Third, historical aerial photographic coverages portray vegetation conditions relevant to contemporary forest ecosystems. Fourth, the earliest historical aerial photographs reflect conditions that show the least alteration by resource management activities.

Alternative Methods for Estimating NRV

Two general approaches have been used to estimate natural variability of landscape patterns (Swanson and others 1994). Both approaches assume that landscapes are comprised of unique states or “patches” (Brooks and Grant 1992a, 1992b) and that patches change state as a result of disturbance, succession, or stand dynamics processes (Oliver and Larson 1996). The first approach emphasizes delphic or empirical estimation of the area of patches belonging to a particular class (for examples, see Caraher and others 1992; Hann and others 1994; Hessburg and others, in press; Lehmkuhl and others 1994; O’Hara and others 1994; Shlisky 1994; USDA 1993). The second approach uses disturbance regimes—their spatial distribution, frequency, and severity—and unique patch dynamics associated with regime areas (Cissel and others 1998, Swanson and others 1994).

Delphic approach—Expert panels have been convened to characterize NRV in area of forest cover types, seral stages, or structural classes by using limited data and expert opinion (Caraher and others 1992, USDA 1993). Advantages of this approach are economy and efficiency, but the validity and variability of estimates are unknown. Lehmkuhl and others (1994), for example, compared their empirically derived estimates of the NRV in area of seral stages with estimates derived by an expert panel for the Grande Ronde River basin in the Blue Mountains of eastern Oregon (Caraher and others 1992). They agreed on estimates of area in early seral stages (20 to 30 percent vs. 20 to 40 percent, respectively) but disagreed on estimates of area in late-seral parklike conditions (10 to 25 percent vs. 20 to 40 percent).

Disturbance chronologies and stand reconstructions—Disturbance chronologies document historical disturbance frequency and severity via fire scar interpretation and cross dating, but inferences about associated vegetation spatial patterns are relatively crude (Arno 1980, Arno and Sneck 1977, Fritts and Swetnam 1989, Glock 1933, McBride 1983). Spatial accuracy depends on an irregular distribution of often widely spaced observations. Similarly, via stem mapping, tree ring and cohort analysis, stand reconstructions provide spatially precise information about composition and structure that emerged locally through time (Oliver and Larson 1996), but because reconstructions are intensive and highly detailed, reconstructed areas are relatively small, often consisting of one to several patches, and inferences about broader landscape spatial patterns are tenuous.

Space-for-time substitution in sampling—A third method, and the one we use in this paper, is to substitute a sampling of space for a sampling of time. Theory posits that if one samples spatial patterns of vegetation of similar biophysical environments with similar disturbance and climatic regimes, a cross section of temporal variation will be observed. In effect, differences in space are equivalent to differences in time, and inferences may be made regarding variation in spatial pattern that might occur at a single location over time. Particularly where process explanation is sought, care must be taken in application to select study locations having comparable underlying biophysical and climatic conditions (Pickett 1989). We addressed this concern by grouping our sample of historical landscapes (subwatersheds) by similar composition of potential vegetation and climate attributes. Potential pitfalls are inadequate time depth, incompatible disturbance and climate histories, convergent environmental histories, and nonhomo-geneous environments.

Consider this thought experiment: if we were to observe the percentage of area in ponderosa pine cover in a hypothetical 10 000-ha subwatershed plotted for the last 100 years, the trace might resemble that shown in figure 1, A. If we were able to rewind and rerun the time interval three more times and assume similar climate, environmental conditions, and disturbance regimes, we would likely observe four unique traces (fig. 1, A-D). Differences in cover type area among iterations would occur as a consequence of climate, environmental, and disturbance regime stochasticity. In a related experiment, consider now that we are observing the area of ponderosa pine cover in 10 different 10 000-ha subwatersheds similar in their climate, potential vegetation, and disturbance regimes, and observations are occurring at two or three different historical time depths over a period of comparable climate regime. This latter approach to space-for-time substitution is the one we have taken in this study.

Mapping Ecological Subregions

We constrained the analysis area to include portions of Bailey's Eastern Cascades, Okanogan Highlands, and Columbia Basin sections (Bailey 1994a, 1994b) to explore affinities on either side of the Eastern Cascades section boundary. We included all 6th code subwatersheds (Seaber and others 1987) of the subbasins (170 000 to 760 000 ha) shown in figure 2. Subwatersheds were used as basic landscape sampling units for two reasons: (1) landscapes must be large enough to avoid the problem of landscape-pattern attribute correlation with size of landscape analysis area (Lehmkuhl and Raphael 1993, Turner 1989); and (2) delimiting landscapes by hydrologic boundaries

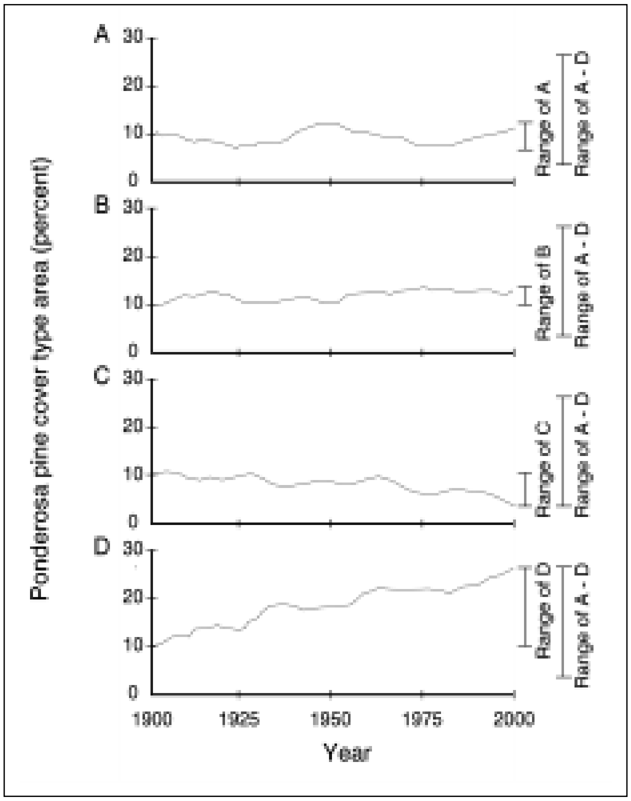

Figure 1—Change in area of the ponderosa pine cover type in a hypothetical 10 000-ha subwatershed through four temporal iterations.

Figure 2—Bailey's Eastern Cascades section and vicinity in Washington.

enabled future use of data and results in integrated terrestrial and aquatic ecosystem analysis. We used subwatersheds no smaller than 4000 ha to avoid bias associated with small sampling units. Those smaller than 4000 ha were joined with an adjacent subwatershed to form larger logical units.

Potential Vegetation and Climate Attributes

Classes of four variables were attributed to a spatially continuous digital coverage of subwatersheds in a geographical information system (GIS): potential vegetation group, mean annual temperature, total annual precipitation, and average annual shortwave solar radiative flux for a normal weather year (fig. 3). These data were available in continuous 1- or 2-km raster coverages for the entire analysis area, and we used them to “fingerprint” each subwatershed by calculating class area of each variable.

In the broadscale interior Columbia River basin landscape assessment (Hann and others 1997), 88 series-level potential vegetation types (PVTs) were mapped to indicate site potential differences across the interior Columbia basin. Potential vegetation groups (PVGs) were developed by grouping similar PVTs into 10 PVGs (fig. 3, A). The PVG map was available in a continuous 1-km raster coverage. We obtained mean annual temperature (°C), total annual precipitation (mm), and mean annual shortwave solar radiative flux (W/m^2) raster data for a “normal” weather year (1989) from the Numerical Terradynamics Simulation Group at the University of Montana (Thornton and others 1997). Continuous maps were modeled and interpolated by using daily meteorological observations from about 500 weather stations in the interior Northwest and the MT-CLIM model (Glassy and Running 1994, Hungerford and others 1989, Running and others 1987). Predicted and observed daily and annual average values were compared by cross-validation analysis, and overall prediction success rate for daily precipitation exceeded 83 percent. Temperatures ranging from -10 to 14 °C across the analysis area were reclassified into 10 classes of equal interval (fig. 3, B). Precipitation, also in continuous integer data ranging from 0 to 10 000 mm, was reclassified into six natural logarithm classes (fig. 3, C). Shortwave radiative flux values ranging from 0 to 450 W/m^2 were reclassified into nine classes of equal interval (fig. 3, D). Subwatershed area in each PVG, temperature, precipitation, and solar radiation class was computed and attributed to each subwatershed in a GIS.

Clustering Subwatersheds and Validation

Subwatersheds were clustered into six groups according to their similar composition of potential vegetation and climate attributes by hierarchical cluster analysis (VARCLUS procedure; SAS 1989). We mapped subwatershed clusters and subjectively evaluated each grouping (fig. 4). Cluster composition was then compared with that of clusters generated by two-way indicator species analysis. Using subwatersheds as objects and the classes of each variable as attributes, we submitted the data to an iterative TWINSPAN analysis (Hill 1979). The first four subwatershed groupings were identified after two divisions, and data from each group were independently submitted to TWINSPAN for additional division. This process was continued until all subwatersheds were allocated to groups. Analysis resulted in eight subwatershed groupings that could be collapsed by retracing the sequence of divisions. Subregion membership was assigned to each subwatershed in a GIS, and a map was generated. We compared this map with the map generated by hierarchical cluster analysis and found better than 80 percent agreement in group assignment between the two procedures.

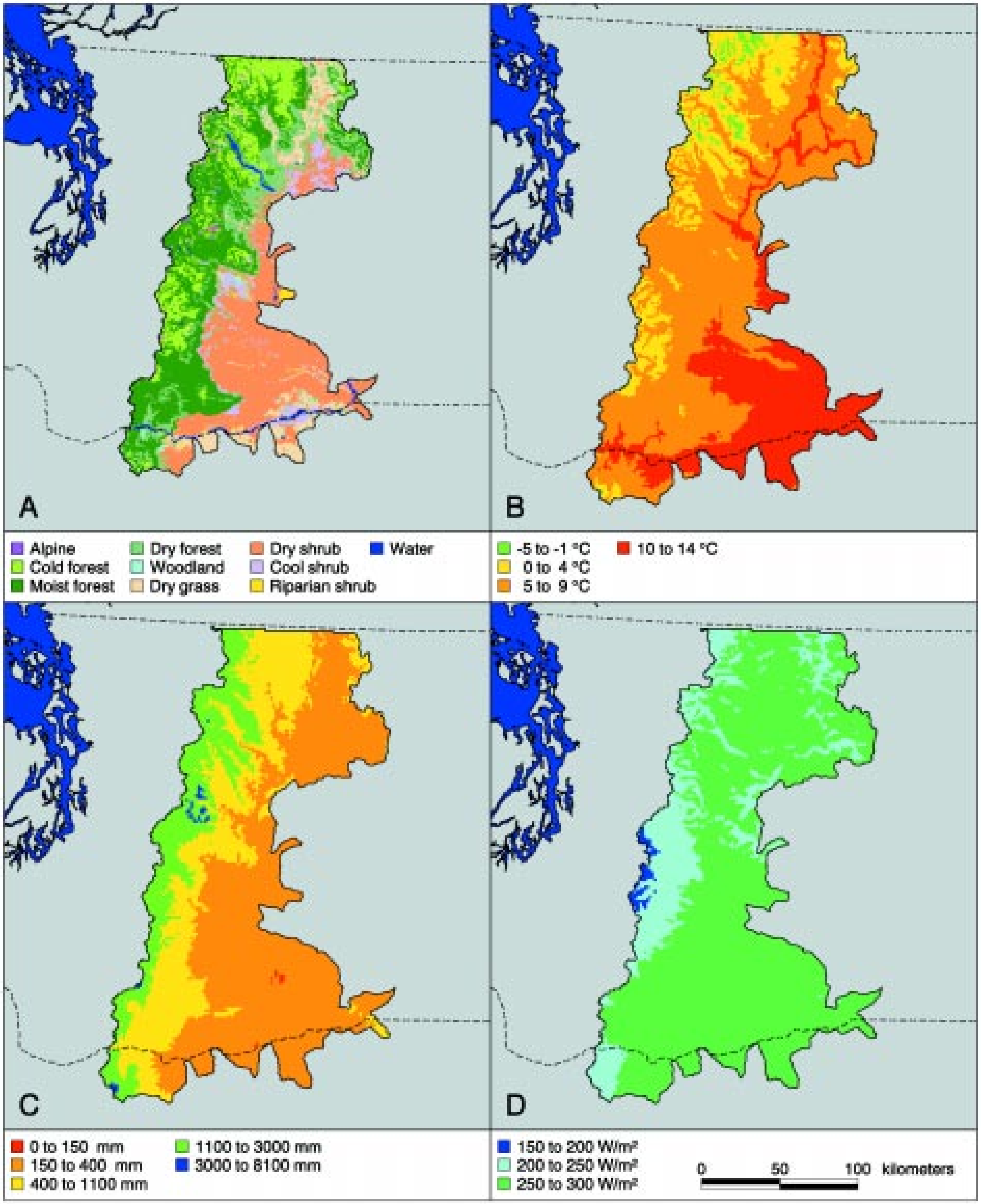

Figure 3—Broadscale maps of potential vegetation groups: (A) mean annual temperature, (B) total annual precipitation, (C) total solar radiation, and (D) "normal" weather year along the east side of the Cascade Range and vicinity, Washington. W/m^2 = solar radiative flux expressed in watts per square meter.

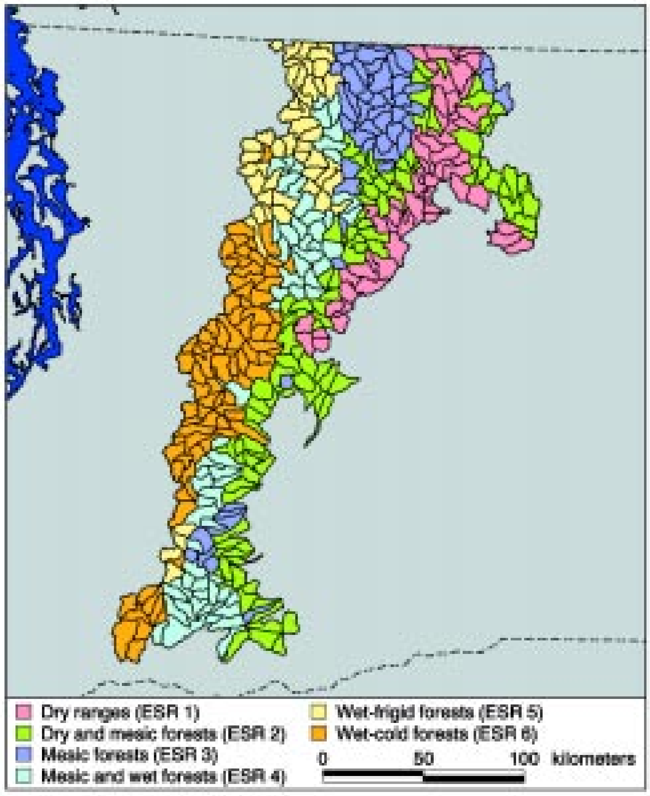

Figure 4—Map of ecological subregions of the east side of the Cascade Range, Washington. Subwatersheds are grouped by similar composition of potential vegetation and climate attributes.

Modeling Forest Structure, Composition, and Potential Vegetation

We took 48 randomly selected subwatersheds from the interior Columbia River basin midscale assessment (Hessburg and others, in press) for the five forested subregions and used them to estimate the NRV in vegetation spatial patterns. For each selected subwatershed, we constructed historical and current vegetation maps from interpretations of 1938-49 and 1985-93 aerial photographs, respectively. During our aerial photo research, we learned that the earliest flights predated the era of major timber harvest. In fact, we observed that early flights were made as a reconnaissance of large timber. We then attributed cover types, structural classes, and series-level PVTs to individual patches by modeling procedures. We characterized NRV in vegetation spatial patterns within the historical subwatersheds of the five forested subregions by using an array of class and landscape pattern metrics and the FRAGSTATS spatial pattern analysis program.

Vegetation patches were delineated to a minimum size of 4 ha by using stereo color (current) or black and white (historical) aerial photography. Photo scale ranged from 1:12,000, for recent color resource photography, to 1:20,000, for black and white historical photography. Higher stereoscopic magnification was used with decreasing photo scale to provide comparable resolution of attributes. Following are photointerpreted patch attributes: (1, 2) total and overstory tree crown cover; (3) understory tree crown cover, computed by subtracting overstory from total crown cover; (4, 5, 6) clumpiness, clump density, and average clump size of tree cover; (7) degree of crown differentiation among overstory tree crowns; (8) canopy layers; (9) riparian or wetland status; (10) nonforest type; (11) type of visible logging entry; (12, 13) overstory and understory size class; (14, 15) overstory and understory species or species mix; (16) dead tree and snag abundance; (17) elevation belt; and (18) overstory canopy cover of nonforest types. Items 1 through 9 and 11 through 16 were interpreted for forest patches; items 9, 10, 11, 17, and 18 applied to nonforest patches. Items 1 through 3 were estimated to the nearest 10 percent. Refer to Hessburg and others (in press) for photointerpretation methods and attribute classes.

Patches were delineated by within-patch uniformity of attributes; a single class change of any attribute prompted delineation of a new patch, provided that the 4-ha minimum patch size limitation was satisfied. Patches were delineated on stereo aerial photo pairs with the aid of variable magnification, mirrored scanning stereoscopes, and were transferred to Mylar® overlays on georeferenced 1:24,000 orthophotographs.[1] Riparian vegetation areas were delineated first within the effective area of each photo-pair. Overlay maps were digitally scanned, edited, and edge-matched by using LTplus raster-to-vector conversion software and imported into the ARC/INFO GIS where they were merged with patch attribute files. The final product was a vector ARC/INFO map linked to a relational database of raw patch attributes.

Patch attributes were interpreted from photos for all forest and rangeland vegetation in the sampled subwatersheds. Photointerpreted attributes and derivations using the raw attributes provided the basis for analysis. Three primary vegetation attributes were derived from remotely sensed data and mapped to all polygons: cover type (CT), structural class (SC), and PVT.

Forest Cover Types

Vegetation cover attributes were classified into CTs. Cover types were assigned from overstory and understory species composition and crown cover attributes. Both pure and mixed cover conditions were photointerpreted for forest patches. Cover types were based on the overstory species attribute when overstory crown cover was ≥25 percent and on the understory species attribute when overstory crown cover was ≤20 percent and understory crown cover exceeded overstory crown cover.

Forest CTs were classified according to Society of American Foresters (SAF) forest cover type definitions (Eyre 1980). To be identified as forest cover, total crown cover was ≥25 percent; to be identified as a component of a mixed type, a species had to comprise at least 20 percent of the total basal area, which was estimated by using size class and crown cover attributes where trees were pole sized or larger, or be at least 20 percent of the total trees per hectare, where trees were seedlings or saplings. Forest CTs were ponderosa pine (*PIPO—Pinus ponderosa*); western larch (*LAOC—Larix occidentalis*); lodgepole pine (*PICO—Pinus contorta*); Douglas-fir (*PSME—Pseudotsuga menziesii*); grand fir (*ABGR—Abies grandis*); subalpine fir/Engelmann spruce (*ABLA2/PIEN—Abies lasiocarpa/Picea engelmannii*); Pacific silver fir (*ABAM—Abies amabilis*); western hemlock/western redcedar (*TSHE/THPL—Tsuga heterophylla/Thuja plicata*); mountain hemlock (*TSME—Tsuga mertensiana*); western white pine (*PIMO—Pinus monticola*); whitebark pine/subalpine larch (*PIAL/LALY—Pinus albicaulis/Larix lyallii*); and hardwood species (*HDWD*). In this analysis, we collapsed all CTs modeled in rangeland settings into their respective physiognomic condition (woodland, shrubland, herbland). The “other” CT represented remaining nonforest-nonrange and anthropogenic types.[2]

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[1] The use of trade or firm names in this publication is for reader information and does imply endorsement by the U.S. Department of Agriculture of any product or service.

[2] Anthropogenic: caused or produced through the agency of human beings.

Forest Structural Classes

Oliver and Larson (1996) identify four process-based structural stages to describe single-cohort stand development following stand-replacement disturbance. These stages are defined primarily by availability of and competition for site resources. Oliver and Larson's (1996) stages are stand initiation (si), closed canopy-stem exclusion (secc), understory reinitiation (ur), and old growth. Stand initiation begins with a stand-replacing disturbance and ends when growing space is fully occupied. Closed canopy stem exclusion is the period when intense competition from existing trees precludes new regeneration. During understory reinitiation, the single-cohort nature of a patch begins to break down, and a new cohort of seedlings and saplings becomes established. The final stage, old growth, is defined by a uniformity of processes and an absence of trees established from allogenic disturbances (Oliver 1981, Oliver and Larson 1996). We expanded their classification to seven classes to include conditions characteristic of stand development in interior Northwest forests with their frequent disturbance (fig. 5; see also O'Hara and others 1996). The additional classes were open canopy-stem exclusion (seoc) where crown cover is constrained by belowground competition for site resources; young-forest multistory (yfms) created by a series of minor disturbances (including timber harvest) to the overstory that maintain a multilayer, multi-cohort structure and preclude dominance of large trees; and old-forest single story (ofss) that consists of multiaged trees in a single layer maintained by frequent low-intensity surface fire or other disturbance, and large trees are a dominant feature. Our old-forest multistory (ofms) class was equivalent to Oliver's old-growth stage. Rules for classifying forest structures from continuous crown cover and size class data are provided in table 1.

Agee (1990, 1993) defined high-severity, stand-replacing fires in the Pacific Northwest as those that caused mortality to 70 percent or more of the overstory basal area. For modeling forest structural classes, we defined old forests as those structures displaying at least 25 percent crown cover of large trees; other SCs could display up to 24 percent large tree crown cover. We did so to allow remnant trees surviving stand-replacement fires to be a factor in structural definitions. Indeed, many non-old-forest structures that have experienced stand replacement fires exhibit late successional characteristics, including large snags, down coarse wood accumulation, and complex understories, and large trees may not dominate forest cover.

The CT and SC attributes were assigned to each patch, and the assigned "type" was that CT×SC couplet (for example, Douglas-fir/stand initiation (*PSME_si*), western larch/stem exclusion-closed canopy (*LAOC_secc*), and ponderosa pine/old-forest single story (*PIPO_ofss*)). In subsequent analysis, patch types are the unique elements of the landscape mosaic and the focus of NRV estimates and pattern analysis.

Forest PVTs

Environments highly similar in their climate, landforms, and geomorphic processes display a similar distribution of vegetation in the absence of disturbance. This unique vegetation class is termed the PVT. We modeled and mapped forest PVTs to frame our estimates of NRV by ecological environment, to compare changes occurring in similar environmental settings in differing geographic locations, and to contrast differences in magnitude and direction of change as a function of site potential.

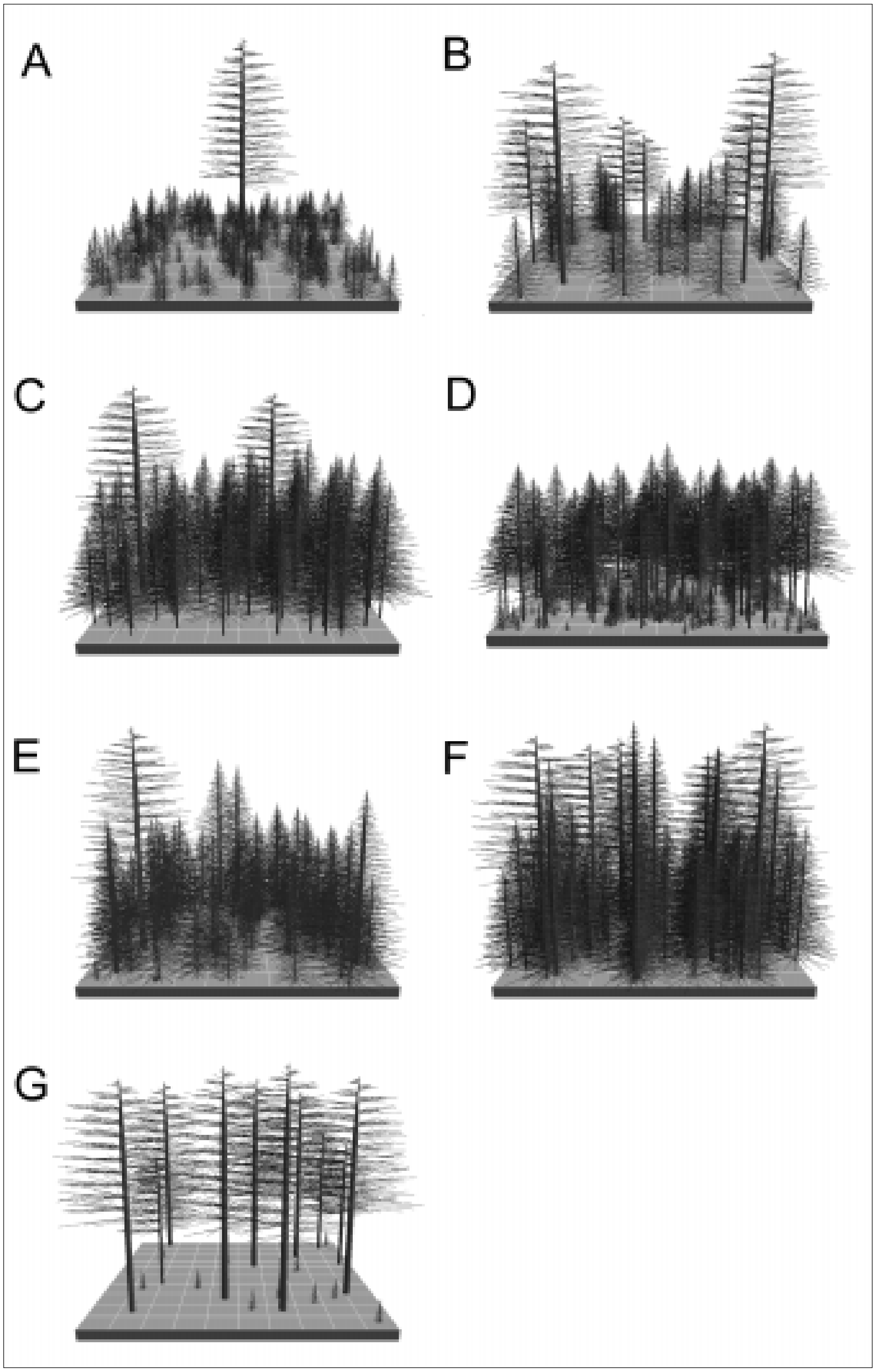

Figure 5—Graphic representation of forest structural classes modeled in forested subregions of the east side of the Cascade Range, Washington: (A) stand initiation, (B) open stem exclusion, (C) closed stem exclusion, (D) understory reinitiation, (E) young multistory forest, (F) old multistory forest, (G) old single-story forest.

Table 1—Classification rules for forest structural classes of subwatersheds sampled along the east side of the Cascade Range, Washington

Structural class	Code	Rule
Stand initiation	si	LgT_cc[a] < 30% (i.e., = 0, 10, or 20%) and SS[b]_cc ≥ 10% and {[PT_cc + SmT_cc + MedT_cc < 20%] or [PT_cc + SmT_cc + MedT_cc ≤ 60% and PT_cc + SmT_cc + MedT_cc ≥ 20% and SmT_cc + MedT_cc < 10%]}
Stem exclusion-open canopy	seoc	LgT_cc < 30% (i.e., = 0, 10, or 20%) and SS_cc < 10% and PT_cc + SmT_cc + MedT_cc ≤ 70%
Stem exclusion-closed canopy	secc	LgT_cc < 30% (i.e., = 0, 10, or 20%) and SS_cc < 10% and PT_cc + SmT_cc + MedT_cc > 70%
Understory reinitiation	ur	LgT_cc < 30% (i.e., = 0, 10, or 20%) and SS_cc ≥ 10% and PT_cc + SmT_cc + MedT_cc > 60%
Young-forest multistory	yfms	LgT_cc < 30% (i.e., = 0, 10, or 20%) and SS_cc ≥ 10% and PT_cc + SmT_cc + MedT_cc ≤ 60% and SmT_cc ≥ 10% or MedT_cc ≥ 10%
Old-forest multistory	ofms	LgT_cc ≥ 30% and SS_cc + PT_cc + SmT_cc + MedT_cc > 20%
Old-forest single story	ofss	LgT_cc ≥ 30% and SS_cc + PT_cc + SmT_cc + MedT_cc ≤ 20%

[a] cc = crown cover; crown cover was interpreted in 10-percent increments and class percentages were expressed as midpoints; e.g., 10 percent crown cover class = 5-14 percent crown cover.

[b] Tree size classes were SS = seedlings and saplings < 12.7 cm d.b.h.; PT = poles 12.7 to 22.6 cm d.b.h.; SmT = small trees 22.7 to 40.4 cm d.b.h.; MedT = medium trees 40.5 to 63.5 cm d.b.h.; LgT = large trees > 63.5 cm d.b.h.

Forest PVTs were modeled at about the series level (for example, see Lillybridge and others 1995) by using the methods of Hessburg and others (in press). As used here, a series is a conceptual grouping of related plant associations having the same predicted dominant “climatic climax” conifer species. The dominant climax conifer of each forest patch was identified from both remotely sensed historical and current overstory and understory species composition, and elevation, slope, and aspect coverages generated from 90-m digital elevation models. In a GIS, we created a complex vector coverage for each sampled subwatershed based on the intersection of a topographic theme, the remotely sensed current vegetation coverage, and the historical vegetation coverage. The topographic theme included elevation and aspect coverages constructed from 90-m digital elevation models (DEMs). Elevation ranging from 0 to 3962.4 m was classified into 13 classes of 304.8-m intervals. Aspect was classified into five classes: north, east, south, west, and flat, corresponding with aspect values of 351 to 80°, 81 to 170°, 171 to 260°, and 261 to 350° true, and slope <1 percent, respectively. Each photointerpreted patch was assigned a modal elevation class and a modal aspect class, and each polygon in the complex coverage was attributed to elevation class, aspect class, modal slope, and each of the current and historical photointerpreted attributes. Data were exported to Paradox® for analysis.

Step 1—Potential vegetation analysis was done separately for each subbasin containing sampled subwatersheds; it involved three modeling steps and a final map review step. First, attribute combinations were used to provisionally assign a likely PVT. Assignments generally were based on overstory and understory species identities (historical and current), but other attributes such as elevation, slope, aspect, presence and type of visible logging, and riparian or wetland status, were used occasionally. These rules were effective for determining the forest PVT of patches located in dry, moist, or cold forest environmental settings. They were not immediately useful for classifying PVTs of forest polygons with vegetation dominated by early seral species. For example, the presence of mountain hemlock in either the overstory or understory (current or historical) was sufficient to assign a polygon to the mountain hemlock PVT. But polygons with Douglas-fir as the principal cover species were not assigned a PVT at this step because Douglas-fir can be early seral to climax depending on the biophysical setting. These patches were addressed in subsequent steps.

Step 2—In a second step, probability rules were developed from PVT assignments made in step 1 for all possible elevation and aspect class combinations. We tallied the area of all assigned polygons by PVT within combined elevation and aspect classes, and calculated the proportion of the total assigned area within a subbasin comprised of each PVT-elevation-aspect class combination. Unassigned polygons were then assigned a probable PVT based on elevation, aspect, occasionally the early seral species identity, and the result of a uniform random number generator. The PVT labels for this step differed from those assigned in step 1 such that assignments in either step could be revisited. For example, in a particular subbasin, the combination of elevation class = 609.7 to 914.4 m and aspect class = N, the western hemlock/western redcedar PVT occupied 50 percent of the assignable subbasin area in step 1, the Pacific silver fir PVT occupied 30 percent of the assignable area, and the Douglas-fir/grand fir PVT occupied 20 percent of the assignable area. These PVTs were assigned ranges of 1 to 50, 51 to 80, and 81 to 100, respectively. A random draw of 33 assigned an unassigned polygon of the same elevation-aspect class identity to the western hemlock/western redcedar PVT in step 2.

Step 3—The Douglas-fir/grand fir, western hemlock/western redcedar, and subalpine fir/Engelmann spruce PVTs were defined at a series-group level, because of the limited resolution of remotely sensed data. In a third step, these series-groups were further split into cool-moist and warm-dry subgroups by using elevation and aspect rules based on published species distributions and local plant association and habitat type manuals. A cold-dry-harsh subgroup also was erected for the subalpine fir/Engelmann spruce PVT in the most harsh elevation and aspect conditions.

Map step—Once these three steps were completed, an initial PVT map of the subbasin was rendered in a GIS, and the map was checked against a terrain model for reasonable pattern, location, and setting of PVTs. Step 2, above, would occasionally result in odd polygon assignments that became obvious when displayed on a terrain map. These were manually converted to the type of the surrounding matrix. Some polygons were initially small slivers resulting from initial creation of the complex topographic theme. A smoothing algorithm was applied in ARC/INFO to merge these slivers into larger adjacent units. Polygon boundaries were dissolved to homogeneous PVT areas, and this became the final PVT map for the subwatershed. Forest PVTs for the east side of the Cascade Range subbasins were ponderosa pine, warm-dry and cool-moist Douglas-fir/grand fir, warm-dry and cool-moist western hemlock/western redcedar, Pacific silver fir, mountain hemlock, warm-dry, cool-moist, and cold-dry-harsh subalpine fir/Engelmann spruce, whitebark pine/subalpine larch, quaking aspen, Oregon white oak, and edaphic lodgepole pine.

The PVTs of small inclusions of herbland, shrubland, and woodland were modeled as broad habitat-type groups. Rangeland PVTs along the east side of the Cascades were antelope bitterbrush steppe, Wyoming big sagebrush, mountain big sagebrush steppe, fescue grassland, fescue grassland with conifers, three-tip sagebrush steppe, mountain shrub, riparian sedge, bluebunch wheatgrass steppe with conifers, and alpine herbland with low shrubs (Hessburg and others, in press). Nonforest-nonrange types were collapsed into the PVT "other."

Estimating Natural Variation in Forest Spatial Patterns

From a continuous map of subwatersheds assigned to an ecological subregion (fig. 4), we estimated natural variation in landscape patterns of sampled subwatersheds of a subregion. The subregion map provided a basis to poststratify historical subwatersheds sampled in the interior Columbia River basin midscale assessment for NRV analysis and extrapolate results to subwatersheds of a subregion.

Most CT×SC patch types are associated with more than one PVT setting. For example, *PSME_si* is associated with at least six PVTs along the east side of the Cascades; but disturbance regimes and their resultant patterns differ significantly by PVT. To accurately reflect natural variability in spatial patterns, we must understand variation in patterns of patch types for each environmental setting where a type occurs. To that end, we modeled PVTs and estimated NRV of patch types occurring within a PVT.

Estimating NRV in Patch Type Area and Connectivity

We used the FRAGSTATS spatial pattern analysis program to summarize spatial relations of CT×SC patch types of historical subwatersheds of each subregion. We chose three class metrics to display area and connectivity conditions: percentage of landscape area—%LAND; patch density per 10 000 ha—PD; and mean patch size—MPS. Mean, median, range, and median 80-percent range (NRV) statistics were computed for sampled subwatersheds of a subregion in S-PLUS (Statistical Sciences 1993). Appendix 1 summarizes NRV estimates for CT×SC patch types of all forested subregions along the east side of the Cascades (fig. 4). Similarly, appendix 2 summarizes NRV estimates for CT×SC patch types of PVTs of all forested subregions. Appendices 1 and 2 are provided as a reference resource for managers interested in empirical estimates of NRV. As we illustrate later in this paper, resource managers can use NRV estimates such as these to diagnose departure of existing vegetation conditions from those that would be more typical in the environments they manage and to develop specific pattern restoration goals for watersheds exhibiting significant departure.

We chose the median 80-percent range, instead of the full range, as our estimate of the NRV of class and landscape metrics to portray typical variation exclusive of extreme observations. Historical data distributions were skewed, and the sample median value was a more accurate reflection of central tendency than either the mean or mode. Most observations clustered within the median 75- to 80-percent range, and few observations accounted for differences between the range of the clustered observations and the full range. We reasoned that more extreme variation usually results from either unique environmental contexts or rare events. By imposing the contrast between current values and a typical range of conditions in departure analysis, managers using NRV estimates retain the ability to detect conditions resulting from management activities, random chance, rare events, or perhaps extreme weather conditions.

In eastern Washington, our use of the earliest historical aerial photography minimized much of the effect of fire suppression and all but the earliest selective timber harvests on spatial patterns of forests. But we could not eliminate the effects of early mining activities, sheep and cattle grazing in the late 19th and early 20th centuries, and agricultural development of the interior valleys (McIntosh and others 1994; Oliver and others

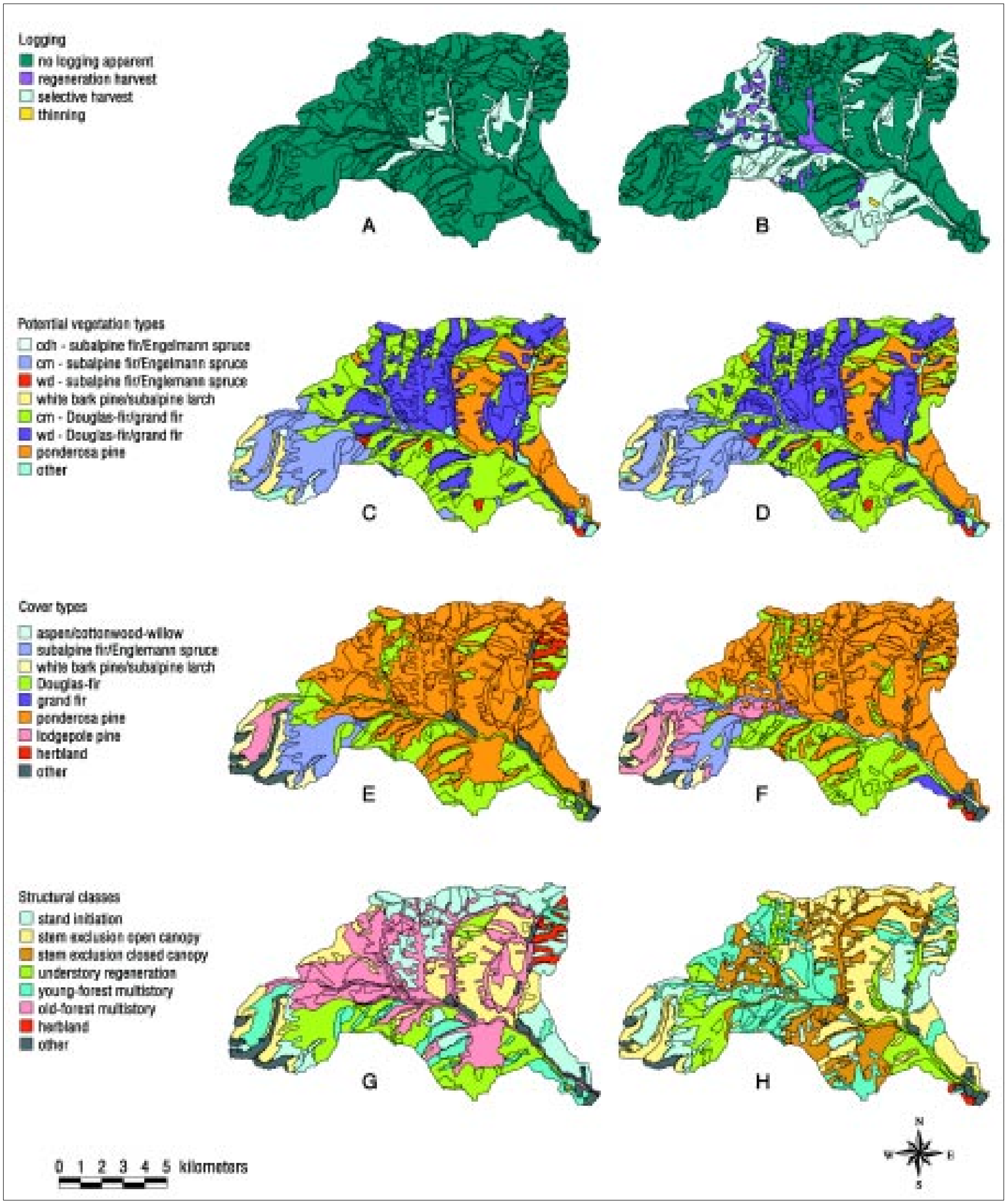

Figure 6—The Libby Creek subwatershed MET_11 of the mesic forests subregion displaying (A) historical and (B) current visible logging extent and historical and current distributions of PVTs (C and D), cover types (E and F), and structural classes (G and H).

1994; Wissmar and others 1994a, 1994b). We observed and attributed the occurrence of early logging in our historical vegetation coverages. From local stand reconstructions and detailed disturbance chronologies, it is possible to characterize the period, species, and magnitude of conifer understory development in response to livestock grazing or fire exclusion. Similarly, we could conservatively predict preharvest conditions of harvested portions of sampled historical subwatersheds by analysis and field sampling, and that work is in progress.

Interpreting NRV in Landscape Patterns

We characterized patterns of patch types within and among subregions by using an array of landscape indices. Metrics we chose for spatial pattern characterizations enabled us to identify primary characteristics of patterns within subregions and factors responsible for those characteristics. Ten metrics were chosen to display pattern conditions: relative patch richness (RPR), patch richness (PR), Shannon diversity index (SHDI), Hill's transformation of SHDI (N1; Hill 1973), Hill's transformation of Simpson's λ (N2; Hill 1973, Simpson 1949), a modified Simpson's evenness index (MSIEI), Alatalo's evenness index (R21; Alatalo 1981), a contagion index (CONTAG), an interspersion and juxtaposition index (IJI), and an area-weighted mean edge contrast index (AWMECI). We added computational algorithms for metrics N1, N2, and R21 to the FRAGSTATS source code. Mean, median, range, and median 80-percent range statistics (NRV) were computed for landscape metrics of subwatersheds of a subregion in S-PLUS, and NRV estimates were computed and tabulated for CT×SC patch types, and CT×SC patch types of PVTs of each subregion. Appendix 3 displays NRV estimates for landscape patterns of CT×SC patch types of each forested subregion. Appendix 4 displays NRV estimates of landscape patterns of CT×SC patch types of PVTs of each subregion. Appendix 5 provides edge contrast weights for computation of AWMECI.

Vegetation patterns result from patterns of environments and patterns of disturbances. To understand complex landscape patterns, it is essential that we study whole patterns as well as patterns of component patch types. In the example that follows, we use NRV estimates for class and landscape metrics of a subregion to quantify pattern departure of a current subwatershed.

Diagnosing Pattern Departure

Figure 6 reflects historical and current conditions of the Libby Creek drainage, MET_11, a 10 386-ha subwatershed in the Methow subbasin (fig. 2), mesic forests subregion (fig. 4). In the historical vegetation coverage, MET_11 displayed evidence of prior timber harvest entry across 6.7 percent of the subwatershed area. All harvest was selection cutting (fig. 6, A), and most cutting was of low to moderate impact; that is, structural class did not change. About 34.4 percent of the subwatershed area has been influenced by cutting in the current condition (that is, historical plus current harvested area; fig. 6, B). Early selective harvesting targeted large (> 63.5 cm diameter at breast height [d.b.h.]), old ponderosa pine growing in warm-dry and cool-moist Douglas-fir/grand fir PVTs, and rarely dry ponderosa pine PVTs (fig. 6, C). Most timber harvesting in the current condition has been in these same environmental settings (fig. 6, D).

Forest cover in MET_11 was historically dominated by *PIPO* (59 percent) followed in order of declining abundance by *PSME* (21.8 percent) in both riparian and upland settings, *ABLA2/PIEN* (7 percent), *PIAL/LALY* (3.7 percent), *PICO* (2.2 percent), and *HDWD* (0.1 percent; fig. 6, E). In the current condition, *PIPO* is again the dominant forest cover (53.2 percent), followed by *PSME* (23.5 percent), *PICO* (8.1 percent), *ABLA2/PIEN* (6.9 percent), *PIAL/LALY* (3.6 percent), and *HDWD* (1.2 percent); *HDWD* and *ABLA2/PIEN* replaced *PSME* as the primary cover species in the highest order streamside riparian environments (fig. 6, F). The *PSME* cover type increased south of the Libby Creek main stem and in the area beneath the headlands to the west; *PICO* cover increased in the Libby Creek headlands in the Lake Chelan-Sawtooth Wilderness and in an area to the east between the North and South Fork tributaries.

Forest structural conditions of MET_11 were contagiously clumped in the historical condition, which reflected disturbance history and biophysical environmental conditions (fig. 6, G). Stand initiation (*si*) structures historically occupied 19.4 percent of the subwatershed area, and patches were large and clumped. In the current condition, area in *si* structures declined to 14.2 percent of the area, and patches were smaller and dispersed. Old forest multistory structures (*ofms*) occupied 32.1 percent of the subwatershed area in the historical condition, and patch areas were large and contiguous with others of similar type, reflecting historical burn patterns. Nearly all valley bottom settings of the Libby Creek main stem and those of each major tributary were occupied by *ofms* with either *PSME* or *PIPO* as the major cover species. The *ofms* structures are not present in the current condition (fig. 6, H). Closed stem exclusion structures (*secc*) occupied 0.1 percent of the area in the historical condition, but that area rose to 19.3 percent in the current condition. The spatial position of *secc* patches in the current condition, shows that *ofms* patches were converted to *secc* patches by selective harvest of large tree overstories. This was confirmed by transition analysis (table 2). Selection cutting also converted *ofms* to *yfms* and understory reinitiation (*ur*) structures. Old-forest single-story structures (*ofss*) were not present in either the historical or current condition.

Table 2—Historical to current condition patch type transitions of MET_11, a subwatershed, mesic forests subregion, east side of the Cascade Range, Washington

Historical patch type	Current patch type of the subwatershed area																									
	ABGR_ur	*ABLA2_secc*	*ABLA2_si*	*ABLA2_ur*	ABLA2_yfms	*HDWD_ur*	Herbland	Other	*PIAL_seoc*	*PIAL_si*	*PIAL_ur*	*PICO_seoc*	*PICO_si*	*PICO_ur*	*PICO_yfms*	*PIPO_secc*	*PIPO_seoc*	*PIPO_si*	*PIPO_ur*	*PIPO_yfms*	*PSME_secc*	*PSME_seoc*	*PSME_si*	*PSME_ur*	*PSME_yfms*	Total
	Percent																									
ABLA2_seoc													0.1													0.2
ABLA2_si			0.8	0.1						0.1	0.1		0.5	0.1												1.7
ABLA2_ur		0.1	0.1	2.8									0.5	0.5								0.1	0.1	0.2	0.4	5.1
HDWD_secc								0.1																		0.1
Herbland																	1.7		0.1	0.1						1.9
Other						0.1			0.3			1.1	0.1				0.5		0.1	0.1						4.5
PIAL_seoc									2.5			0.1	0.4													3.1
PIAL_si			0.1						0.2		0.3															0.6
PICO_yfms					0.1				0.1				1.9													2.2
PIPO_ofms		0.4			0.1	0.3									1.3	5.7	0.6	2.4	1.4	5.2	5.5	0.6	0.6	1.2	1.0	26.3
PIPO_seoc																0.8	6.9	3.4	0.2	3.4			0.1	0.1		14.9
PIPO_si								0.1								0.5	11.4			1.5	0.1		0.1			13.8
PIPO_yfms																	2.2			1.0	0.3				0.4	4.0
PSME_ofms		0.5	0.2		0.6	0.6							0.4	0.8	0.1	0.2	0.1			0.6	0.1		0.1	1.4	0.1	5.7
PSME_seoc																					0.1					0.1
PSME_si								0.1									0.1	0.5	0.3	0.2	0.5		1.1	0.5		3.3
PSME_ur	0.1					0.1										1.0	0.1	0.3		0.3	3.1	0.1	0.1	2.1	2.8	10.1
PSME_yfms	0.7	0.3		0.1	0.3		0.3	0.2									0.1							0.2	0.3	2.5
Totals	0.8	1.4	1.2	3.1	1.2	1.1	0.3	2.7	3.1	0.1	0.4	1.2	4.0	1.5	1.4	8.2	23.8	6.8	2.0	12.4	9.7	0.8	2.1	5.7	5.0	100.0

Open stem exclusion structures (*seoc*) occupied 18.2 percent of the area in the historical condition and were located primarily in dry ponderosa pine PVTs. In the current condition, *seoc* structures occupied 29.0 percent of the area. Young-forest multistory structures occupied 8.7 percent of the subwatershed area in the historical condition and 19.9 percent of the area in the current condition. Landscape area in *ur* structures remained relatively stable during the sample period, declining slightly from 15.2 to 14.6 percent, but average patch size declined and patch density increased. In the absence of fire, herbland declined from 1.9 to 0.3 percent of the subwatershed area.

Diagnosing Area and Connectivity Departures

In table 3, we compare current values of three class metrics %LAND, PD, and MPS of each CT×SC patch type in MET_11 with corresponding NRV estimates for the mesic forests subregion. For example, the NRV estimate for %LAND of the *PIPO_secc* patch type was 0 to 2.4 percent of the subwatershed area. In the current condition, the *PIPO_secc* patch type occupies 8.2 percent of the subwatershed area, and patch type area is outside the NRV. We also display historical class metric values of MET_11 and the full range of historical values for each patch type and metric.

Class metrics of many current MET_11 patch types were outside the estimated NRV, and MET_11 was unique among subwatersheds of the subregion. This was indicated by historical class metric values that were outside the estimated NRV, but within the full range of the historical data (table 3). Structural classes of the *PIPO* CT exhibited the greatest departure. For example, current %LAND of the *PIPO_si* patch type was well above the NRV; the historical value was nearly double the current value but within the full range, indicating that stand-replacing disturbances once were more common in MET_11 than in other subwatersheds of the subregion. Likewise, current area of the *PIPO_seoc* and *PIPO_secc* patch types was well above the NRV. Area of other structural classes of the *PIPO* CT were within the NRV. In the historical condition, there was no area of *secc* or *ur* in the *PIPO* CT, and area in the *yfms* SC was small. The NRV for *PIPO_ofms* patch type area was 0.0 to 16.7 percent, but the historical area of *PIPO_ofms* was 26.3 percent—a value well above the NRV but within the full range.

Among subwatersheds of the mesic forests subregion, MET_11 historically displayed abnormally high area in *si* and *ofms* structures, and that area was clumped in a few large patches reflecting the contagious nature of past disturbance (fig. 6, G). This also was seen when we examined historical and current values of the PD and MPS metrics for those types. It may be more appropriate to consider the values of the full range for the %LAND, PD, and MPS metrics when evaluating opportunities to restore area and connectivity of the *PIPO_si* and *PIPO_ofms* patch types in MET_11. Similarly, in the *PSME* CT, historical area of *PSME_si* and *PSME_ofms* patch types was outside the NRV (table 3). Current %LAND values for either patch type are within the NRV, but historical values were outside the estimated NRV. Likewise, historical MPS values were above the NRV, but within the full range.

Table 2 displays all patch type transitions occurring from the historical to the current condition. Patch type transitions were computed from 30-m raster versions of the historical and current maps. It is apparent that after selective harvest, *PIPO_ofms* and *PSME_ofms* patch types were converted to *si* and intermediate forest structures, such as *seoc*, *secc*, *ur*, and *yfms*. For example, *PIPO_si* patches developed into *PIPO_seoc, PIPO_secc*, and *PIPO_yfms* patches and were regenerated in the current condition, not by fire over large areas, but by regeneration harvest of *PIPO_ofms* and *PIPO_seoc* patch types in small dispersed patches (tables 2 and 3 and fig. 6, B).

Table 3—Comparison of current area and connectivity conditions in subwatershed MET_11 with NRV estimates of sampled subwatersheds, east side of the Cascade Range, Washington, mesic forests subregion where patch types were cover-structure type couplets

Mesic forests subregion ESR3 (n=8)[a]	%LAND						PD—patch density						MPS—mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
	C[b]	H[b]	Min	Max	Min	Max	C	H	Min	Max	Min	Max	C	H	Min	Max	Min	Max
	- - - - - Percentage area (%) - - - - -						- - - - - - - N/10 000 ha - - - - - - -						- - - - - - - - - - Ha - - - - - - - - - -					
PIPO:[c]																		
si	6.8*[d]	13.8*	0.0	5.6	0.0	13.8	22.0*	5.0	0.0	5.0	0.0	5.0	30.7	286.1*	0.0	111.8	0.0	286.1
seoc	23.8*	14.9	0.0	19.0	0.0	28.3	23.0*	10.0	0.0	11.0	0.0	14.0	102.9	155.1	0.0	219.9	0.0	264.1
secc	8.2*	0.0	0.0	2.4	0.0	8.0	2.0*	0.0	0.0	1.0	0.0	4.0	425.0*	0.0	0.0	60.1	0.0	200.3
ur	2.0	0.0	0.0	4.7	0.0	6.4	2.0	0.0	0.0	10.0	0.0	12.0	102.9*	0.0	0.0	85.6	0.0	189.9
yfms	12.4	4.0	0.0	23.5	0.0	31.0	9.0	7.0	0.0	18.0	0.0	24.0	142.8	59.7	0.0	169.0	0.0	259.8
ofms	0.0	26.3*	0.0	16.7	0.0	26.3	0.0	5.0	0.0	5.0	0.0	6.0	0.0	546.8*	0.0	316.7	0.0	546.8
PSME:																		
si	2.2	3.3*	0.0	2.3	0.0	3.3	8.0*	6.0*	0.0	4.0	0.0	6.0	27.9	56.6*	0.0	55.0	0.0	56.6
seoc	0.8	0.1	0.0	4.1	0.0	4.1	4.0	1.0	0.0	9.0	0.0	10.0	21.4	8.3	0.0	54.0	0.0	72.0
secc	9.7*	0.0	0.0	5.2	0.0	13.4	5.0*	0.0	0.0	5.0	0.0	9.0	202.1*	0.0	0.0	79.5	0.0	143.6
ur	5.8	10.1	0.0	16.8	0.0	32.2	8.0	4.0	0.0	12.0	0.0	18.0	74.6	263.2*	0.0	202.1	0.0	263.2
yfms	5.0	2.5	0.0	24.3	0.0	29.9	6.0	4.0	0.0	16.0	0.0	17.0	87.1	64.2	0.0	146.6	0.0	178.1
ofms	0.0	5.8*	0.0	4.7	0.0	5.8	0.0	2.0	0.0	3.0	0.0	4.0	0.0	298.4*	0.0	245.0	0.0	298.4
PICO:																		
si	4.0	0.0	0.0	28.2	0.0	51.1	2.0	0.0	0.0	12.0	0.0	23.0	208.1	0.0	0.0	333.9	0.0	922.1
seoc	1.2	0.0	0.0	5.8	0.0	8.1	1.0	0.0	0.0	7.0	0.0	14.0	122.0*	0.0	0.0	94.1	0.0	119.6
ur	1.5	0.0	0.0	10.7	0.0	13.1	2.0	0.0	0.0	15.0	0.0	21.0	76.7*	0.0	0.0	65.3	0.0	74.6
yfms	1.4	2.2	0.0	7.5	0.0	13.2	2.0	1.0	0.0	11.0	0.0	17.0	71.6	227.2*	0.0	121.8	0.0	227.2
ABGR, ur	0.8*	0.0	0.0	0.1	0.0	0.4	1.0*	0.0	0.0	1.0	0.0	2.0	83.3*	0.0	0.0	6.7	0.0	22.3
ABLA2-PIEN:																		
si	1.2	1.7	0.0	3.3	0.0	7.0	2.0	2.0	0.0	8.0	0.0	16.0	60.2	88.6*	0.0	87.4	0.0	88.6
seoc	0.0	0.2	0.0	4.3	0.0	6.3	0.0	1.0	0.0	12.0	0.0	19.0	0.0	17.8	0.0	36.4	0.0	43.4
secc	1.4	0.0	0.0	12.6	0.0	27.6	1.0	0.0	0.0	13.0	0.0	24.0	141.1*	0.0	0.0	88.6	0.0	115.2
ur	3.1	5.1	0.0	7.9	0.0	11.8	1.0	1.0	0.0	14.0	0.0	20.0	317.0*	527.3*	0.0	199.7	0.0	527.3
yfms	1.2	0.0	0.0	9.6	0.0	20.2	2.0	0.0	0.0	14.0	0.0	21.0	60.3	0.0	0.0	89.8	0.0	94.9
PIAL-LALY:																		
si	0.1	0.6	0.0	2.8	0.0	7.5	1.0	2.0	0.0	7.0	0.0	12.0	12.2	32.4	0.0	50.7	0.0	61.4
seoc	3.1	3.1	0.0	6.4	0.0	11.6	6.0	4.0	0.0	8.0	0.0	9.0	54.2	79.4	0.0	107.9	0.0	174.4
ur	0.4	0.0	0.0	0.6	0.0	0.9	1.0	0.0	0.0	4.0	0.0	5.0	40.7*	0.0	0.0	14.2	0.0	16.9
HDWD:																		
secc	0.0	0.1*	0.0	0.0	0.0	0.1	0.0	1.0	0.0	0.0	0.0	1.0	0.0	7.6*	0.0	2.3	0.0	7.6
ur	1.2*	0.0	0.0	0.0	0.0	0.0	2.0*	0.0	0.0	0.0	0.0	0.0	59.7*	0.0	0.0	0.0	0.0	0.0
Herbland	0.3*	1.9	0.6	13.8	0.5	18.1	3.0*	8.0	3.4	10.0	2.0	11.0	11.9	24.6	9.5	355.5	6.8	896.5
Other, nonforest-nonrange	2.7	4.5	0.1	9.5	0.1	16.8	11.0	10.0	1.0	23.0	1.0	24.0	25.4	46.3	5.6	95.8	5.2	158.9

[a] Structural classes are si = stand initiation; seoc = stem exclusion, open canopy; secc = stem exclusion-closed canopy; ur = understory reinitiation; yfms = young-forest multistory; ofms = old-forest multistory; ofss = old-forest single story.

[b] C=current; H=historical.

[c] *PIPO* = ponderosa pine; *PSME* = Douglas-fir; *PICO* = lodgepole pine; *ABGR* = grand fir; *ABLA2-PIEN* = subalpine fir/Engelmann spruce; *PIAL-LALY* = whitebark pine/subalpine larch; *HDWD* = hardwood.

[d] * = the current or historical value for the metric is outside the estimated natural range of variation (NRV), which is nominally the sample median 80-percent range.

Diagnosing Landscape Pattern Departures

In addition to understanding area and connectivity departures of patch types, it is useful to managers to be able to examine the distribution and arrangement of all patch types in patterns. For example, at a variety of spatial and temporal scales, terrestrial species interpret landscape patterns as more or less suitable to their specific habitat needs. Hence, change in overall vegetation pattern may have a bearing on species persistence in the landscape. As patterns change, different suites of species are favored. But as we can see in tables 3 and 4, variability of landscape spatial patterns is the rule and not the exception. In the interior West, it is likely that such natural variability in landscape patterns is part of a long-term survival recipe for terrestrial and associated aquatic species (Swanson and others 1994, and references therein). Variable area, connectivity, and pattern of patch types afford periods of plenty and need, boom and bust, which are advantageous to the adaptation and survival of native species in the long term so long as habitats do not become overly fragmented or isolated.

We compared the pattern of MET_11 in its current condition with patterns of sampled historical subwatersheds by using the 10 landscape pattern metrics described earlier. Results of that comparison are provided in table 4. Current values of 4 of 10 metrics were outside the NRV; only the historical value of relative patch richness (RPR) was outside the NRV. The NRV for the RPR metric was 32.73 percent, a value below the NRV and thus indicating that less than one-third of the possible patch types observable within the subregion were observed in the historical condition. The current value of absolute patch richness (PR) exceeded the NRV, thereby indicating that additional CT×SC patch types were generated in MET_11 as a consequence of management; 18 historical patch types became 25 types in the current condition. Consequently, the current value of the Shannon diversity index (SHDI), which measures proportional abundance of patch types and the equitability of patch type area distribution, was above the NRV. Of all diversity metrics we used, SHDI is most sensitive to increases in PR and increased equitability of area. The current value of Hill's (1973) index N1 also was outside the NRV. This diversity metric is less sensitive than SHDI to changes in PR because rare patch types receive less weight in the calculation. The current value indicates increased equitability of patch type area, especially among the more dominant patch types. The current value of CONTAG also was outside the NRV. Landscape contagion was reduced from fragmentation of historical areas of *si* and *ofms* structures in the *PIPO* and *PSME* cover types, presumably through selection cutting and exclusion of fire.

Gauging Pattern Restoration Opportunities

By examining current area, connectivity, and pattern relations of MET_11 patch types and comparing current conditions to NRV estimates, we characterized features that could be modified if the object of management was restoration to a more natural range of conditions. But to identify specific site conditions for revising pattern relations of any CT×SC patch type, one additional landscape analysis step was needed. It was necessary to create the PVT×CT×SC patch type by intersecting the current CT×SC patch type map with the PVT map. We then recomputed NRV estimates for class and landscape metrics of each new patch type and compared current conditions of MET_11 with NRV estimates for these new patch types (table 5).

Table 4—Comparison of current landscape pattern conditions in subwatershed MET_11 with NRV estimates of sampled subwatersheds of the east side of the Cascade Range, Washington, mesic forests subregion where patch types were cover type-structural class couplets

	Mesic forests subregion		MET_11	
Landscape metrics[a]	Min	Max	Current conditions	Historical conditions
Richness and diversity:				
RPR_100% range	23.91	56.52		
RPR_80% range	33.05	50.44	45.45	32.73**
PR_100% range	11.00	26.00		
PR_80% range	15.20	23.20	25.00**	18.00
SHDI_100% range	1.61	2.77		
SHDI_80% range	1.63	2.55	2.64**	2.32
N1_100% range	4.98	15.98		
N1_80% range	5.11	12.89	14.07**	10.13
N2_100% range	3.25	12.98		
N2_80% range	3.75	9.68	9.53	7.46
Evenness:				
MSIEI_100% range	0.49	0.79		
MSIEI_80% range	0.49	0.73	0.70	0.70
R21_100% range	0.57	0.80		
R21_80% range	0.59	0.75	0.65	0.71
Contagion and interspersion:				
CONTAG_100% range	52.28	65.07		
CONTAG_80% range	53.96	62.63	53.29**	54.68
IJI_100% range	49.04	77.54		
IJI_80% range	58.88	74.28	67.15	63.10
Edge contrast:				
AWMECI_100% range	28.85	47.70		
AWMECI_80% range	29.98	41.07	30.22	38.23

** = the current value for the metric is outside the NRV (nominally the median 80-percent range of that metric in the historical sample).

[a] RPR = relative patch richness; PR = patch richness; SHDI = Shannon diversity index; N1 = Hill's index N1 = e^{SHDI}; N2 = Hill's index N2 = 1/(1/SIDI); MSIEI = modified Simpson's evenness index; R21 = Alatalo's evenness index = (N2-1)/(N1-1); CONTAG = contagion index; IJI = interspersion and juxtaposition index; AWMECI = area-weighted mean edge contrast index (see also McGarigal and Marks 1995).

Table 5—Comparison of current area and connectivity conditions in subwatershed MET_11 with NRV estimates of sampled subwatersheds of the east side of the Cascade Range, Washington, mesic forests subregion where patch types were potential vegetation type-cover type-structural class triplets

Mesic forests subregion ESR3 (n=8)[a]	%LAND						PD—patch density						MPS—mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
	C[b]	H[b]	Min	Max	Min	Max	C	H	Min	Max	Min	Max	C	H	Min	Max	Min	Max
	Percentage area (%)						*N/10 000ha*						*Ha*					
Ponderosa pine PVT:																		
PIPO_si	0.0	3.4*	0.0	1.1	0.0	3.4	2.0	2.0	0.0	2.6	0.0	4.0	0.3	178.2*	0.0	55.0	0.0	178.2
PIPO_seoc	12.0*	7.0	0.0	9.9	0.0	16.8	13.0*	7.0	0.0	9.1	0.0	14.0	96.1	103.5	0.0	108.2	0.0	119.2
PIPO_secc	0.1*	0.0	0.0	0.0	0.0	0.0	5.0*	0.0	0.0	0.0	0.0	0.0	1.3*	0.0	0.0	0.0	0.0	0.0
PIPO_ur	0.4*	0.0	0.0	0.3	0.0	0.9	10.0*	0.0	0.0	2.4	0.0	8.0	4.4*	0.0	0.0	3.4	0.0	11.4
PIPO_yfms	0.8	0.3	0.0	2.4	0.0	3.1	3.0	1.0	0.0	15.2	0.0	18.0	29.0*	34.5*	0.0	25.9	0.0	34.5
PIPO_ofms	0.0	0.5	0.0	0.6	0.0	0.7	0.0	9.0*	0.0	6.9	0.0	9.0	0.0	5.9	0.0	7.5	0.0	11.0
PSME_si	0.0	0.0*	0.0	0.0	0.0	0.0	2.0*	3.0*	0.0	0.9	0.0	3.0	0.2	0.8*	0.0	0.2	0.0	0.8
PSME_ur	0.2*	0.0*	0.0	0.0	0.0	0.0	3.0*	1.0	0.0	2.2	0.0	5.0	5.2*	2.6*	0.0	0.9	0.0	2.6
Herbland	0.0	1.7*	0.0	0.9	0.0	1.7	0.0	6.0	0.0	7.2	0.0	10.0	0.0	29.2	0.0	35.6	0.0	50.5
Other	0.1	0.7*	0.0	0.2	0.0	0.7	3.0	13.0*	0.0	6.7	0.0	13.0	4.5*	5.4*	0.0	1.8	0.0	5.4
Warm-dry-Douglas-fir/grand fir PVT:																		
PIPO_si	3.7*	7.4*	0.0	3.2	0.0	7.4	18.0*	17.0*	0.0	10.0	0.0	17.0	20.1	42.5*	0.0	26.0	0.0	42.5
PIPO_seoc	8.1*	4.7	0.0	4.7	0.0	4.8	66.0*	44.0*	0.0	28.6	0.0	44.0	12.2	10.5	0.0	40.7	0.0	73.4
PIPO_secc	4.2*	0.0	0.0	0.6	0.0	2.0	23.0*	0.0	0.0	4.5	0.0	15.0	18.2*	0.0	0.0	4.0	0.0	13.4
PIPO_ur	1.2	0.0	0.0	2.7	0.0	4.4	5.0	0.0	0.0	5.9	0.0	8.0	24.4	0.0	0.0	66.9	0.0	131.6
PIPO_yfms	6.4	1.9	0.0	10.8	0.0	14.6	17.0	7.0	0.0	28.7	0.0	49.0	37.0*	28.1	0.0	35.2	0.0	48.3
PIPO_ofms	0.0	12.2*	0.0	4.3	0.0	12.2	0.0	45.0*	0.0	26.1	0.0	45.0	0.0	27.0	0.0	29.8	0.0	36.5
PICO_yfms	0.6*	0.0	0.0	0.3	0.0	0.9	3.0*	0.0	0.0	2.1	0.0	7.0	20.8*	0.0	0.0	4.0	0.0	13.2
PSME_si	0.4*	0.3*	0.0	0.2	0.0	0.3	9.0*	10.0*	0.0	5.1	0.0	10.0	4.7*	2.9	0.0	4.0	0.0	6.5
PSME_seoc	0.4*	0.0	0.0	0.4	0.0	0.5	2.0	0.0	0.0	5.8	0.0	10.0	21.1*	0.0	0.0	6.1	0.0	9.2
PSME_secc	1.0*	0.0	0.0	0.0	0.0	0.2	25.0*	0.0	0.0	0.3	0.0	1.0	4.1*	0.0	0.0	3.2	0.0	10.8
PSME_ur	1.2	0.6	0.0	2.7	0.0	6.4	13.0	13.0	0.0	37.6	0.0	95.0	9.3*	5.0	0.0	8.7	0.0	13.2
PSME_yfms	0.4	0.4	0.0	6.9	0.0	12.5	7.0	2.0	0.0	31.7	0.0	66.0	6.1	20.3	0.0	36.5	0.0	74.4
PSME_ofms	0.0	0.5	0.0	1.0	0.0	1.6	0.0	7.0	0.0	7.3	0.0	8.0	0.0	7.6	0.0	23.8	0.0	57.2
ABGR_ur	0.1*	0.0	0.0	0.0	0.0	0.0	1.0*	0.0	0.0	0.0	0.0	0.0	6.3*	0.0	0.0	0.0	0.0	0.0
HDWD_secc	0.0	0.1*	0.0	0.0	0.0	0.1	0.0	1.0*	0.0	0.3	0.0	1.0	0.0	7.5*	0.0	2.2	0.0	7.5
HDWD_ur	0.2*	0.0	0.0	0.0	0.0	0.0	1.0*	0.0	0.0	0.0	0.0	0.0	17.8*	0.0	0.0	0.0	0.0	0.0
Other	0.3	0.1	0.0	0.4	0.0	0.4	13.0	13.0	0.0	20.2	0.0	37.0	2.1	0.7	0.0	9.7	0.0	29.9
Cool-moist-Douglas-fir/grand fir PVT*:*																		
PIPO_si	3.1*	3.0*	0.0	1.3	0.0	3.0	23.0*	33.0*	0.0	12.7	0.0	33.0	13.4*	9.1	0.0	11.0	0.0	15.5
PIPO_seoc	3.6	3.3	0.0	7.1	0.0	8.1	96.0*	43.0*	0.0	40.9	0.0	43.0	3.8	7.5	0.0	80.8	0.0	186.8
PIPO_secc	3.9*	0.0	0.0	1.7	0.0	5.6	15.0*	0.0	0.0	2.4	0.0	8.0	25.4*	0.0	0.0	20.9	0.0	69.8
PIPO_ur	0.4	0.0	0.0	1.9	0.0	2.0	10.0	0.0	0.0	13.1	0.0	18.0	4.0	0.0	0.0	15.0	0.0	18.5
PIPO_yfms	5.1	1.8	0.0	12.1	0.0	14.3	26.0	19.0	0.0	58.0	0.0	121.0	19.6	9.3	0.0	22.0	0.0	35.6
PIPO_ofms	0.0	13.0*	0.0	11.4	0.0	13.0	0.0	42.0*	0.0	16.8	0.0	42.0	0.0	30.6	0.0	105.9	0.0	187.0
PICO_ur	0.4	0.0	0.0	1.8	0.0	3.4	1.0	0.0	0.0	3.3	0.0	4.0	42.2	0.0	0.0	51.6	0.0	85.4
PICO_yfms	0.7	0.0	0.0	1.4	0.0	4.8	4.0	0.0	0.0	7.2	0.0	24.0	17.1*	0.0	0.0	6.1	0.0	20.2
PSME_si	1.7	3.0*	0.0	2.0	0.0	3.0	10.0*	8.0*	0.0	5.2	0.0	8.0	17.1	38.6*	0.0	37.3	0.0	38.6
PSME_seoc	0.4	0.1	0.0	3.3	0.0	3.7	3.0	1.0	0.0	10.6	0.0	12.0	12.0	8.3	0.0	39.2	0.0	44.6
PSME_secc	8.1*	0.0	0.0	1.8	0.0	3.4	9.0*	0.0	0.0	8.5	0.0	12.0	93.8*	0.0	0.0	26.8	0.0	28.7
PSME_ur	3.8	8.4	0.0	12.8	0.0	23.1	9.0	13.0	0.0	24.4	0.0	51.0	44.2	66.7	0.0	98.8	0.0	173.5
PSME_yfms	3.4	1.0	0.0	13.6	0.0	14.3	9.0	4.0	0.0	43.2	0.0	46.0	39.2*	25.0	0.0	31.2	0.0	31.3
PSME_ofms	0.0	2.7	0.0	2.7	0.0	2.7	0.0	26.0*	0.0	14.1	0.0	26.0	0.0	10.4	0.0	67.6	0.0	111.7
ABGR_ur	0.7*	0.0	0.0	0.1	0.0	0.4	2.0*	0.0	0.0	0.6	0.0	2.0	38.5*	0.0	0.0	6.8	0.0	22.5
HDWD_ur	0.9*	0.0	0.0	0.0	0.0	0.0	3.0*	0.0	0.0	0.0	0.0	0.0	30.1*	0.0	0.0	0.0	0.0	0.0
Herbland	0.1	0.2	0.0	1.7	0.0	4.2	1.0-	30.0*	1.4	23.0	0.0	30.0	9.5	0.5	0.4	30.3	0.0	72.4
Other	0.1	0.1	0.0	0.6	0.0	1.2	8.0	13.0	0.7	20.4	0.0	26.0	1.0	0.7	0.1	18.8	0.0	43.5
Warm-dry-subalpine fir/Engelmann spruce PVT:																		
PSME_secc	0.3*	0.0	0.0	0.3	0.0	1.0	2.0	0.0	0.0	7.5	0.0	11.0	16.3*	0.0	0.0	2.9	0.0	9.4
PSME_ur	0.0	0.3	0.0	0.5	0.0	0.8	0.0	2.0	0.0	4.9	0.0	7.0	0.0	16.3*	0.0	12.6	0.0	16.3
PSME_yfms	0.2	0.3	0.0	0.3	0.0	0.4	1.0	2.0	0.0	4.0	0.0	4.0	18.2*	13.2*	0.0	10.9	0.0	13.2
ABLA2_ur	0.0	0.1	0.0	1.1	0.0	3.4	0.0	1.0	0.0	4.8	0.0	9.0	0.0	10.4	0.0	18.2	0.0	36.4
Herbland	0.2*	0.0	0.0	0.0	0.0	0.0	1.0*	0.0	0.0	0.0	0.0	0.0	18.4*	0.0	0.0	0.0	0.0	0.0

Mesic forests subregion ESR3 (n=8)[a]	%LAND						PD—patch density						MPS—mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
	C[b]	H[b]	Min	Max	Min	Max	C	H	Min	Max	Min	Max	C	H	Min	Max	Min	Max
	- - - - - *Percentage area (%)* - - - - -						- - - - - - - *N/10 000ha* - - - - - - - -						- - - - - - - - - - - *Ha* - - - - - - - - -					
Cool-moist - subalpine fir/ Englemann spruce PVT:																		
PIPO_yfms	0.0*	0.0	0.0	0.0	0.0	0.0	1.0	3.0*	0.0	2.3	0.0	3.0	3.2*	0.7	0.0	0.8	0.0	0.9
PIPO_ofms	0.0	0.7	0.0	1.0	0.0	1.7	0.0	19.0*	0.0	7.8	0.0	19.0	0.0	3.5	0.0	20.3	0.0	59.4
PICO_si	3.6	0.0	0.0	14.4	0.0	25.3	2.0	0.0	0.0	28.0	0.0	49.0	188.7*	0.0	0.0	56.3	0.0	134.4
PICO_seoc	1.1	0.0	0.0	3.1	0.0	6.4	1.0	0.0	0.0	12.5	0.0	16.0	114.9*	0.0	0.0	26.5	0.0	40.7
PICO_ur	1.1	0.0	0.0	8.9	0.0	11.2	3.0	0.0	0.0	24.5	0.0	35.0	36.2*	0.0	0.0	34.5	0.0	39.4
PICO_yfms	0.1	2.2	0.0	5.2	0.0	6.4	3.0	1.0	0.0	17.1	0.0	36.0	4.1	226.3*	0.0	106.4	0.0	226.3
PSME_si	0.1*	0.0	0.0	0.0	0.0	0.1	1.0*	0.0	0.0	0.3	0.0	1.0	10.0*	0.0	0.0	1.2	0.0	4.1
PSME_seoc	0.1	0.0	0.0	0.4	0.0	0.6	1.0	0.0	0.0	3.3	0.0	4.0	7.4	0.0	0.0	10.0	0.0	14.1
PSME_secc	0.3	0.0	0.0	3.1	0.0	8.8	5.0	0.0	0.0	11.4	0.0	17.0	5.6	0.0	0.0	20.1	0.0	50.6
PSME_ur	0.6	0.8	0.0	1.2	0.0	1.7	3.0	5.0	0.0	12.3	0.0	13.0	20.9*	17.0*	0.0	16.2	0.0	17.0
PSME_yfms	1.1	0.9	0.0	3.0	0.0	4.0	4.0	2.0	0.0	8.8	0.0	13.0	27.3	44.8*	0.0	38.1	0.0	44.8
PSME_ofms	0.0	2.6*	0.0	1.3	0.0	2.6	0.0	7.0*	0.0	4.9	0.0	7.0	0.0	37.8*	0.0	27.6	0.0	37.8
ABLA2_si	1.1	1.5	0.0	1.6	0.0	1.6	2.0	4.0	0.0	11.7	0.0	18.0	55.5*	40.1	0.0	40.1	0.0	40.1
ABLA2_seoc	0.0	0.2	0.0	2.1	0.0	2.8	0.0	1.0	0.0	19.6	0.0	21.0	0.0	17.5*	0.0	15.4	0.0	17.5
ABLA2_secc	1.4	0.0	0.0	11.2	0.0	25.8	1.0	0.0	0.0	21.0	0.0	35.0	141.2*	0.0	0.0	46.0	0.0	74.5
ABLA2_ur	3.0	5.0	0.0	5.8	0.0	7.6	1.0	2.0	0.0	22.4	0.0	28.0	315.1*	257.5*	0.0	96.3	0.0	257.5
ABLA2_yfms	1.2	0.0	0.0	5.5	0.0	7.8	2.0	0.0	0.0	25.3	0.0	54.0	60.3*	0.0	0.0	51.4	0.0	52.4
PIAL_seoc	0.2	0.1	0.0	0.4	0.0	1.0	16.0*	5.0	0.0	5.6	0.0	7.0	0.9	1.4	0.0	5.7	0.0	15.7
HDWD_ur	0.1*	0.0	0.0	0.0	0.0	0.0	1.0*	0.0	0.0	0.0	0.0	0.0	11.4*	0.0	0.0	0.0	0.0	0.0
Other	0.1	1.2	0.0	1.4	0.0	1.9	5.0	4.0	0.0	14.5	0.0	18.0	0.9	30.1*	0.0	23.8	0.0	30.1
Harsh-cold - subalpine fir/ Engelmann spruce PVT:																		
PICO_si	0.3	0.0	0.0	3.2	0.0	9.7	2.0	0.0	0.0	16.8	0.0	49.0	15.8	0.0	0.0	15.8	0.0	19.9
ABLA2_si	0.1	0.2	0.0	1.3	0.0	3.9	1.0	2.0	0.0	5.0	0.0	12.0	7.7	8.4	0.0	15.5	0.0	32.0
PIAL_si	0.1	0.4	0.0	1.3	0.0	2.3	1.0	1.0	0.0	9.2	0.0	19.0	12.2	45.5*	0.0	24.3	0.0	45.5
PIAL_seoc	0.0	0.3	0.0	1.4	0.0	3.8	0.0	5.0	0.0	6.2	0.0	9.0	0.0	6.8	0.0	24.5	0.0	41.0
PIAL_ur	0.4	0.0	0.0	0.6	0.0	0.9	1.0	0.0	0.0	4.3	0.0	5.0	40.7*	0.0	0.0	14.3	0.0	16.9
Whitebark pine/ subalpine larch PVT:																		
PICO_si	0.1*	0.0	0.0	0.0	0.0	0.0	12.0*	0.0	0.0	0.3	0.0	1.0	0.6*	0.0	0.0	0.3	0.0	0.9
PICO_seoc	0.0*	0.0	0.0	0.0	0.0	0.0	5.0*	0.0	0.0	0.6	0.0	2.0	0.5*	0.0	0.0	0.2	0.0	0.7
PICO_yfms	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	2.0*	0.0	0.6	0.0	2.0	0.0	0.5*	0.0	0.2	0.0	0.5
ABLA2_si	0.0*	0.0	0.0	0.0	0.0	0.1	4.0*	1.0	0.0	1.0	0.0	1.0	0.4	0.1	0.0	1.5	0.0	4.9
PIAL_si	0.0	0.2	0.0	1.2	0.0	3.6	0.0	1.0	0.0	4.0	0.0	11.0	0.0	19.4	0.0	23.2	0.0	32.3
PIAL_seoc	3.0	2.7	0.0	3.0	0.0	3.9	6.0	5.0	0.0	6.8	0.0	11.0	51.7*	55.4*	0.0	41.5	0.0	55.4
Other	0.0	0.3	0.0	0.6	0.0	1.5	5.0	21.0*	0.0	14.7	0.0	21.0	0.6	1.3	0.0	4.6	0.0	12.4
Other PVT, nonforest/nonrange	2.1	2.2	0.0	7.1	0.0	12.0	11.0	11.0	0.0	11.6	0.0	13.0	20.2	20.3	0.0	67.2	0.0	108.1

* = indicates that the current or historical value for the metric is outside the estimated natural range of variation (NRV) which is nominally the sample median 80-percent range.

[a] Structural classes are si = stand initiation; seoc = stem exclusion, open canopy; secc = stem exclusion-closed canopy; ur = understory reinitiation; yfms = young-forest multistory; ofms = old-forest multistory; ofss = old-forest single story. Cover types are *PIPO* = ponderosa pine; *PSME* = Douglas-fir; *ABGR* = grand fir; *HDWD* = hardwood; *PICO* = lodgepole pine; *ABLA2 (=ABLA2/PIEN)* = subalpine fir/Engelmann spruce; *PIAL (=PIAL/LALY)* = whitebark pine/subalpine larch; herbland = all herbland cover types and structural classes combined; other = all nonforest/nonrangeland and anthropogenic types combined.

[b] C=Current; H=Historical.

In table 5, we observe that *PIPO_si* patch types occurred in the *PIPO,* warm-dry *PSME/ABGR* and cool-moist *PSME/ABGR* PVTs, and area was unevenly distributed. Current *PIPO_si* area in the cool-moist *PSME/ABGR* PVT is equivalent to what occurred historically, current PD is lower than occurred historically, and current MPS is greater than existed historically, but values for all three metrics are above the estimated NRV. Area of *PIPO_si* was more contagiously distributed historically in MET_11 than otherwise would be indicated by NRV estimates, and restoration activities would focus on increasing PD and decreasing MPS values while maintaining %LAND at a value above the maximum value of the NRV, but within the full range. Reductions to area of *PIPO_si* patches occurred principally in *PIPO* and warm-dry *PSME/ABGR* settings.

In the historical condition, 26.3 percent of the subwatershed area was occupied by *PIPO_ofms* patches (table 3). Nearly all area of this patch type was evenly distributed in warm-dry, and cool-moist *PSME/ABGR* settings (table 5). The focus of activity to restore area and connectivity of *PIPO_ofms* patches should be in these settings, with somewhat higher target PD in warm-dry *PSME/ABGR* settings, and larger target MPS in cool-moist *PSME/ABGR* settings. Figure 7 contrasts the distribution of CT×SC patch types between historical and current conditions of MET_11 in the warm-dry *PSME/ABGR* PVT. The pattern of patch types shown for the historical condition is one of many spatial arrangements that could be interpreted from NRV estimates.

In the historical condition, 0.0 percent of the subwatershed area was comprised of *PIPO_secc* and *PSME_secc* patches (table 3). In the current condition, 4.2 and 1.0 percent of the subwatershed area is comprised of the *PIPO_secc* and *PSME_secc* patch types in the warm-dry *PSME/ABGR* PVT, and 3.9 percent and 8.1 percent of the subwatershed area in the cool-moist *PSME/ABGR* PVT, respectively (table 5). In table 2, we observe that the primary transitions away from *PIPO_ofms* were to these structural conditions. The focus of activities to restore area and connectivity of *PIPO_ofms* patches should be in these areas of current *secc* structure.

Most native herbland inclusions in forest historically resided in dry *PIPO* PVTs. Herblands were invaded by ponderosa pine (table 2) and are currently comprised of *PIPO_seoc* patches. Efforts to reestablish native herbland area should be mostly constrained to these drier settings.

Management Implications

We have introduced a method that managers can use to estimate the NRV of forest spatial patterns through a sampling of historical vegetation maps created from remotely sensed data, an ecological regionalization to stratify the sample, and a space-for-time substitution sampling logic. We conservatively estimate the NRV as the historical median 80-percent range of class and landscape metrics. By comparing current and historical values of metrics with NRV estimates and the full range of historical values, ecologically important change can be detected as well as unique attributes of landscapes that do not neatly fit within the NRV but are "outlier" conditions under normal circumstances. Estimates of NRV in vegetation spatial patterns using space-for-time substitution in historical landscape sampling can and should be augmented to include more variation resulting from stochastic features of ecosystems, by broadening samples across both space and time, and by merging empirical and process modeling approaches such as that used by Keane and others (1996).

We used comparisons of current landscape conditions with NRV and full historical range estimates where patch types are CT×SC couplets to diagnose the most important compositional and structural departures. Managers can use these tools to do

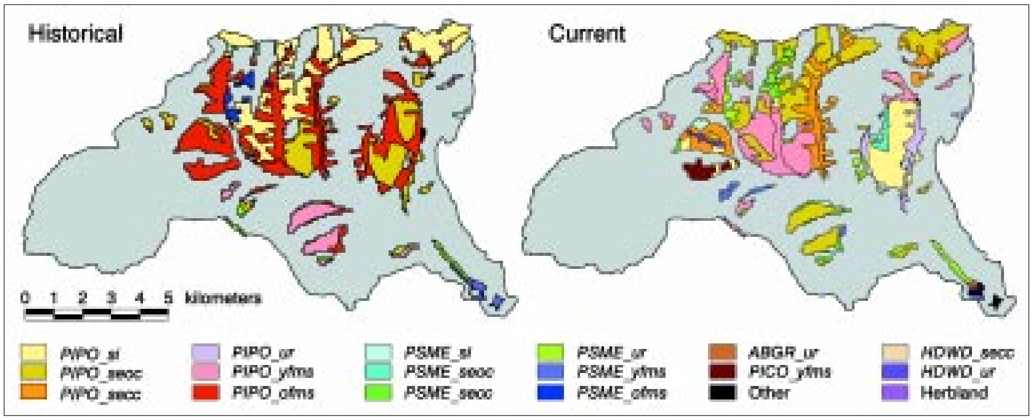

Figure 7—The Libby Creek subwatershed MET_11 of the mesic forests subregion displaying historical and current distributions of cover type-structural class patch types of the warm-dry Douglas-fir/grand fir potential vegetation type.

similar landscape or watershed diagnoses. To identify specific environments for revising patterns, we associated NRV estimates with specific environmental settings. To that end, we created the PVT×CT×SC patch type and estimated the NRV of all class and landscape metrics, because we knew that natural distributions of CT×SC patch types differ significantly by PVT setting. We developed transition matrices to show the primary transitions occurring as a consequence of management; primary patch type transitions show which types in the current condition can be most easily modified for pattern restoration.

The fields of conservation biology and landscape ecology provide a strong biological and ecological rationale for managing ecosystems within their NRV, both to sustain native species and processes and to maintain productivity of ecosystems. Knowledge of the NRV is an essential ingredient for designing, managing, and maintaining sustainable and healthy ecosystems (Morgan and others 1994). In fact, this is the greatest value of knowing the NRV of any ecosystem. The better we understand native ecosystem patterns and the processes that have shaped and continue to shape ecosystem patterns, the better we are able to design management systems and activities that cooperate with, rather than run contrary to, these patterns and processes.

We submit that using estimates of NRV in the management of ecosystems will not return landscapes to any preexisting wild or pristine condition. Rather, resource managers can use NRV estimates to evaluate current conditions and estimate consequences to native species and processes. They can assess risks to and opportunities for native species, processes, and ecosystem productivity associated with alternative patch and landscape-scale treatments by gauging departure from the NRV. And they can develop specific landscape pattern restoration goals and set conservation and restoration priorities among watersheds. The magnitude of risk associated with ecosystem change is likely to be related to the magnitude and direction of departures from the NRV. Risks and opportunities have ecological and social consequences, and the degree of risk management is a resource management decision with ecological and social dimensions. Use of the NRV to gauge pattern departure will inform decision-makers and citizens of the ecological and social costs and benefits of decisions and will aid in prioritizing investments of money, energy, and human effort in the management of ecosystems.

One of the daunting challenges facing forest managers today is conserving native biological diversity and native ecosystem patterns, processes, and interactions. Conservation concurrent with an ever expanding human population would be challenge enough had present-day managers inherited ecosystems unaffected by humans. But forest ecosystem patterns and processes are highly modified as a consequence of past management, and the task of conserving natural patterns and associated process interactions is virtually impossible without some knowledge of natural pattern variability and the disturbance regimes influencing such variability. To provide some measure of commodity resources while conserving habitat patterns that ensure persistence of native species, present-day managers must engage in simultaneous problem solving: managers must understand native ecosystem patterns and functioning, and they must conserve landscape patterns of living and dead vegetation that are consistent with desired habitat patterns and parameters of inherent and related fire, insect, and pathogen disturbance regimes. The difficulty of this task is compounded by effects of past management activities that often constrain current options and place demands for timber and forage resources in conflict with terrestrial habitat conservation or disturbance regime management.

As human management activities continue to modify patterns of forests, those concerned with managing commodity forest resources must develop better predictions of terrestrial species and habitat pattern outcomes associated with management. Estimates of the NRV in spatial patterns can provide valuable insight into vegetation patterns resulting from more natural patterns of biophysical environments and disturbance regimes, and can assist managers to predict conditions better suited to some native species than the existing condition. Reference to natural ranges of conditions does not imply specific direction for ecosystem management, but it does broaden the range of management decisions. Use of NRV estimates in watershed analysis and ecosystem management planning defines a range within which compromises between ecological and social values will have to be forged.

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English Equivalents

When you know:	Multiply by:	To obtain
Millimeter (mm)	0.03937	Inches
Centimeter (cm)	0.3937	Inches
Meter (m)	3.281	Feet
Square meter (m^2)	10.764	Square feet
Kilometer (km)	0.6214	Miles
Hectare (ha)	2.471	Acres
Celsius (°C)	1.8 + 32	Fahrenheit

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Appendix 1

Table 6—Estimated NRV in area and connectivity of cover-structure patch types of ecological subregions of the east side of the Cascade Range, Washington[a]

	%LAND						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percentage area(%)						N/10 000 ha						Ha					
Mesic forests subregion (ESR 2) (n=10):																		
PIPO--																		
si	2.7	1.6	0.0	7.2	0.0	7.7	5.0	4.0	0.0	12.0	0.0	16.0	33.2	37.0	0.0	65.0	0.0	86.1
seoc	7.1	3.4	0.0	15.4	0.0	33.1	11.0	8.0	0.0	27.0	0.0	27.0	50.6	20.9	0.0	129.5	0.0	155.3
secc	0.3	0.0	0.0	0.3	0.0	2.7	1.0	0.0	0.0	1.0	0.0	6.0	4.2	0.0	0.0	4.2	0.0	41.7
ur	4.2	0.6	0.0	13.4	0.0	18.7	5.0	2.0	0.0	13.0	0.0	18.0	37.7	18.0	0.0	103.0	0.0	105.2
yfms	17.0	13.6	2.9	29.1	2.0	59.1	18.0	12.0	4.0	35.0	2.0	55.0	202.4	80.3	40.0	368.1	28.6	1230.7
ofms	6.6	0.9	0.0	14.2	0.0	39.5	4.0	2.0	0.0	10.0	0.0	16.0	129.2	35.4	0.0	224.6	0.0	939.4
ofss	1.2	0.0	0.0	3.4	0.0	5.9	3.0	0.0	0.0	9.0	0.0	14.0	13.8	0.0	0.0	42.8	0.0	49.1
LAOC--																		
si	0.1	0.0	0.0	0.3	0.0	0.4	0.0	0.0	0.0	1.0	0.0	2.0	7.7	0.0	0.0	18.8	0.0	63.0
seoc	0.1	0.0	0.0	0.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	2.0	5.3	0.0	0.0	5.3	0.0	52.6
secc	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	0.0	0.0	0.0	0.0	0.0
ur	0.1	0.0	0.0	0.3	0.0	1.3	1.0	0.0	0.0	3.0	0.0	4.0	3.8	0.0	0.0	7.2	0.0	33.6
yfms	0.4	0.0	0.0	0.7	0.0	3.3	1.0	0.0	0.0	3.0	0.0	3.0	11.7	0.0	0.0	20.9	0.0	105.5
ofms	0.1	0.0	0.0	0.2	0.0	0.9	0.0	0.0	0.0	1.0	0.0	2.0	5.4	0.0	0.0	15.0	0.0	42.2
ofss	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	1.0	3.8	0.0	0.0	3.8	0.0	37.9
PICO--																		
si	0.4	0.0	0.0	0.4	0.0	3.6	0.0	0.0	0.0	0.0	0.0	4.0	10.0	0.0	0.0	10.0	0.0	100.0
seoc	0.1	0.0	0.0	0.3	0.0	0.8	0.0	0.0	0.0	1.0	0.0	4.0	10.2	0.0	0.0	14.5	0.0	96.6
secc	1.5	0.0	0.0	2.4	0.0	14.0	3.0	0.0	0.0	9.0	0.0	16.0	14.7	0.0	0.0	47.1	0.0	89.5
ur	0.5	0.0	0.0	1.6	0.0	3.4	2.0	0.0	0.0	7.0	0.0	13.0	8.5	0.0	0.0	27.7	0.0	35.5
yfms	0.7	0.0	0.0	2.5	0.0	3.9	2.0	0.0	0.0	3.0	0.0	15.0	20.8	0.0	0.0	58.1	0.0	131.1
PSME--																		
si	1.7	0.0	0.0	3.8	0.0	13.3	2.0	0.0	0.0	8.0	0.0	10.0	20.6	0.0	0.0	45.8	0.0	127.2
seoc	3.8	0.4	0.0	7.4	0.0	20.6	6.0	3.0	0.0	12.0	0.0	22.0	37.2	13.6	0.0	98.3	0.0	180.2
secc	1.1	0.5	0.0	3.4	0.0	4.0	2.0	2.0	0.0	3.0	0.0	5.0	45.0	23.5	0.0	120.6	0.0	176.4
ur	6.5	4.4	0.3	13.6	0.0	18.6	11.0	4.0	2.0	19.0	0.0	54.0	61.6	78.2	10.2	101.2	0.0	110.1
yfms	10.9	6.1	2.4	27.3	0.0	34.5	14.0	12.0	4.0	21.0	0.0	45.0	76.9	59.2	22.9	194.8	0.0	213.4
ofms	0.8	0.0	0.0	1.6	0.0	6.3	1.0	0.0	0.0	4.0	0.0	9.0	22.3	0.0	0.0	80.1	0.0	135.5
ofss	0.4	0.0	0.0	0.4	0.0	4.1	0.0	0.0	0.0	0.0	0.0	2.0	23.0	0.0	0.0	23.0	0.0	230.1
ABGR--																		
seoc	0.2	0.0	0.0	0.6	0.0	1.2	1.0	0.0	0.0	1.0	0.0	5.0	7.5	0.0	0.0	26.4	0.0	51.6
ur	0.4	0.0	0.0	0.8	0.0	3.9	1.0	0.0	0.0	1.0	0.0	5.0	12.6	0.0	0.0	50.0	0.0	79.1
yfms	0.9	0.0	0.0	2.1	0.0	5.7	1.0	0.0	0.0	3.0	0.0	8.0	32.3	0.0	0.0	96.8	0.0	156.7
ofms	0.2	0.0	0.0	0.5	0.0	2.1	0.0	0.0	0.0	1.0	0.0	2.0	13.9	0.0	0.0	47.1	0.0	97.6
ofss	0.3	0.0	0.0	0.3	0.0	2.9	0.0	0.0	0.0	0.0	0.0	4.0	7.0	0.0	0.0	7.0	0.0	70.1
ABLA2/PIEN--																		
si	0.2	0.0	0.0	0.3	0.0	1.6	0.0	0.0	0.0	1.0	0.0	3.0	6.3	0.0	0.0	16.8	0.0	49.3
seoc	0.5	0.0	0.0	1.7	0.0	1.7	2.0	0.0	0.0	4.0	0.0	6.0	11.0	0.0	0.0	41.0	0.0	44.5
secc	0.3	0.0	0.0	0.9	0.0	1.9	1.0	0.0	0.0	4.0	0.0	6.0	17.5	0.0	0.0	53.2	0.0	121.3
ur	0.7	0.4	0.0	1.9	0.0	2.1	2.0	0.0	0.0	5.0	0.0	9.0	28.6	6.1	0.0	83.6	0.0	96.8
yfms	1.1	0.2	0.0	3.7	0.0	4.3	2.0	1.0	0.0	6.0	0.0	8.0	20.5	9.9	0.0	56.2	0.0	85.9
PIAL/LALY--																		
si	0.2	0.0	0.0	0.2	0.0	1.5	0.0	0.0	0.0	0.0	0.0	5.0	2.8	0.0	0.0	2.8	0.0	28.4
yfms	0.1	0.0	0.0	0.1	0.0	0.7	0.0	0.0	0.0	0.0	0.0	2.0	3.9	0.0	0.0	3.9	0.0	39.4
HDWD--																		
si	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	4.4	0.0	0.0	4.4	0.0	44.3
seoc	0.1	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	1.0	0.0	1.0	4.4	0.0	0.0	13.5	0.0	24.3
ur	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	1.0	0.0	2.0	3.6	0.0	0.0	8.9	0.0	29.7
yfms	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.0	1.8	0.0	0.0	1.8	0.0	17.9
woodland	1.2	0.1	0.0	2.8	0.0	6.2	5.0	1.0	0.0	17.0	0.0	22.0	10.5	6.3	0.0	28.3	0.0	35.8
Herbland	13.7	10.4	1.1	25.6	0.4	42.6	16.0	16.0	5.0	25.0	2.0	33.0	118.4	60.7	7.8	215.9	7.4	588.8
Shrubland	8.8	1.1	0.0	28.4	0.0	37.8	14.0	4.0	0.0	38.0	0.0	44.0	30.4	13.4	0.0	82.5	0.0	103.2
Other	2.9	2.0	0.3	5.9	0.0	7.8	7.0	5.0	2.0	14.0	2.0	19.0	43.1	38.7	6.2	66.2	1.9	126.4

Subregion	%LAND						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percentage area(%)						*N/10 000 ha*						*Ha*					
Mesic forests subregion (ESR 3) (n=8):																		
PIPO--																		
si	2.0	0.0	0.0	5.6	0.0	13.8	1.0	0.0	0.0	5.0	0.0	5.0	43.4	0.0	0.0	111.8	0.0	286.1
seoc	7.7	3.7	0.0	19.0	0.0	28.3	5.0	4.0	0.0	11.0	0.0	14.0	95.7	72.7	0.0	219.9	0.0	264.1
secc	1.0	0.0	0.0	2.4	0.0	8.0	0.0	0.0	0.0	1.0	0.0	4.0	25.0	0.0	0.0	60.1	0.0	200.3
ur	1.9	0.4	0.0	4.7	0.0	6.4	3.0	1.0	0.0	10.0	0.0	12.0	37.9	16.5	0.0	85.6	0.0	189.9
yfms	8.2	2.5	0.0	23.5	0.0	31.0	8.0	6.0	0.0	18.0	0.0	24.0	68.9	39.8	0.0	169.0	0.0	259.8
ofms	5.6	0.6	0.0	16.7	0.0	26.3	2.0	1.0	0.0	5.0	0.0	6.0	121.8	49.2	0.0	316.7	0.0	546.8
ofss	0.6	0.1	0.0	1.8	0.0	3.6	1.0	1.0	0.0	3.0	0.0	4.0	22.1	8.4	0.0	63.8	0.0	88.7
PSME--																		
si	0.7	0.0	0.0	2.3	0.0	3.3	1.0	0.0	0.0	4.0	0.0	6.0	18.4	0.0	0.0	55.0	0.0	56.6
seoc	1.2	0.4	0.0	4.1	0.0	4.1	3.0	1.0	0.0	9.0	0.0	10.0	26.5	24.5	0.0	54.0	0.0	72.0
secc	2.0	0.1	0.0	5.2	0.0	13.4	2.0	1.0	0.0	5.0	0.0	9.0	29.0	5.4	0.0	79.5	0.0	143.6
ur	7.2	2.2	0.0	16.8	0.0	32.2	6.0	5.0	0.0	12.0	0.0	18.0	86.1	59.9	0.0	202.1	0.0	263.2
yfms	7.3	1.9	0.0	24.3	0.0	29.9	7.0	4.0	0.0	16.0	0.0	17.0	56.6	29.9	0.0	146.6	0.0	178.1
ofms	2.0	1.2	0.0	4.7	0.0	5.8	1.0	1.0	0.0	3.0	0.0	4.0	89.8	35.6	0.0	245.0	0.0	298.4
ofss	1.9	0.3	0.0	6.0	0.0	6.5	3.0	1.0	0.0	9.0	0.0	10.0	28.8	18.2	0.0	67.0	0.0	72.5
ABGR--																		
seoc	0.1	0.0	0.0	0.2	0.0	0.7	0.0	0.0	0.0	0.0	0.0	1.0	6.1	0.0	0.0	14.7	0.0	49.1
ur	0.1	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	1.0	0.0	2.0	2.8	0.0	0.0	6.7	0.0	22.3
yfms	0.3	0.0	0.0	0.6	0.0	2.1	1.0	0.0	0.0	3.0	0.0	9.0	3.1	0.0	0.0	7.4	0.0	24.5
ofms	0.4	0.0	0.0	1.0	0.0	3.5	0.0	0.0	0.0	1.0	0.0	3.0	15.2	0.0	0.0	36.4	0.0	121.4
ofss	0.7	0.0	0.0	1.8	0.0	6.0	0.0	0.0	0.0	1.0	0.0	3.0	26.1	0.0	0.0	62.6	0.0	208.8
LAOC--																		
ur	0.3	0.0	0.0	0.8	0.0	2.5	1.0	0.0	0.0	2.0	0.0	6.0	5.3	0.0	0.0	12.6	0.0	42.1
yfms	0.2	0.0	0.0	0.4	0.0	1.4	1.0	0.0	0.0	1.0	0.0	4.0	4.4	0.0	0.0	10.6	0.0	35.4
ofms	0.4	0.0	0.0	0.9	0.0	3.1	1.0	0.0	0.0	1.0	0.0	4.0	9.6	0.0	0.0	23.2	0.0	77.2
ofss	0.3	0.0	0.0	0.7	0.0	2.3	1.0	0.0	0.0	1.0	0.0	4.0	7.0	0.0	0.0	16.9	0.0	56.3
PICO--																		
si	9.0	0.2	0.0	28.2	0.0	51.1	5.0	2.0	0.0	12.0	0.0	23.0	131.9	8.1	0.0	333.9	0.0	922.1
seoc	2.1	0.7	0.0	5.8	0.0	8.1	3.0	1.0	0.0	7.0	0.0	14.0	40.3	28.2	0.0	94.1	0.0	119.6
secc	1.7	0.8	0.0	3.9	0.0	5.5	3.0	2.0	0.0	8.0	0.0	11.0	37.8	34.3	0.0	77.5	0.0	138.6
ur	3.3	0.2	0.0	10.7	0.0	13.1	5.0	1.0	0.0	15.0	0.0	21.0	28.0	14.5	0.0	65.3	0.0	74.6
yfms	2.6	0.0	0.0	7.5	0.0	13.2	3.0	0.0	0.0	11.0	0.0	17.0	45.3	0.0	0.0	121.8	0.0	227.2
ABLA2/PIEN--																		
si	1.5	0.9	0.0	3.3	0.0	7.0	3.0	2.0	0.0	8.0	0.0	16.0	40.7	38.5	0.0	87.4	0.0	88.6
seoc	1.6	0.2	0.0	4.3	0.0	6.3	5.0	1.0	0.0	12.0	0.0	19.0	18.6	16.2	0.0	36.4	0.0	43.4
secc	4.2	0.0	0.0	12.6	0.0	27.6	4.0	0.0	0.0	13.0	0.0	24.0	24.1	0.0	0.0	88.6	0.0	115.2
ur	3.1	0.6	0.0	7.9	0.0	11.8	6.0	3.0	0.0	14.0	0.0	20.0	82.7	8.3	0.0	199.7	0.0	527.3
yfms	3.5	0.5	0.0	9.6	0.0	20.2	5.0	2.0	0.0	14.0	0.0	21.0	34.5	21.4	0.0	89.8	0.0	94.9
ofss	0.2	0.0	0.0	0.6	0.0	1.1	0.0	0.0	0.0	1.0	0.0	1.0	13.5	0.0	0.0	44.8	0.0	76.6
PIAL/LALY--																		
si	1.2	0.3	0.0	2.8	0.0	7.5	3.0	1.0	0.0	7.0	0.0	12.0	19.4	7.6	0.0	50.7	0.0	61.4
seoc	2.3	0.0	0.0	6.4	0.0	11.6	3.0	0.0	0.0	8.0	0.0	9.0	37.6	0.0	0.0	107.9	0.0	174.4
secc	0.5	0.0	0.0	1.2	0.0	4.0	1.0	0.0	0.0	2.0	0.0	8.0	6.3	0.0	0.0	15.2	0.0	50.6
ur	0.2	0.0	0.0	0.6	0.0	0.9	1.0	0.0	0.0	4.0	0.0	5.0	3.7	0.0	0.0	14.2	0.0	16.9
yfms	0.4	0.1	0.0	1.1	0.0	1.2	2.0	1.0	0.0	4.0	0.0	7.0	15.7	4.1	0.0	44.3	0.0	62.8
HDWD--																		
seoc	0.1	0.0	0.0	0.3	0.0	1.1	0.0	0.0	0.0	1.0	0.0	2.0	6.9	0.0	0.0	16.7	0.0	55.5
yfms	0.1	0.0	0.0	0.2	0.0	0.7	0.0	0.0	0.0	0.0	0.0	1.0	8.3	0.0	0.0	19.9	0.0	66.4
Herbland	5.4	2.9	0.6	13.8	0.5	18.1	7.0	7.0	3.0	10.0	2.0	11.0	155.0	29.5	9.5	355.5	6.8	896.5
Shrubland	0.8	0.0	0.0	1.9	0.0	6.1	3.0	0.0	0.0	8.0	0.0	24.0	4.6	0.0	0.0	11.9	0.0	24.8
Other	4.1	1.8	0.1	9.5	0.1	16.8	9.0	5.0	1.0	23.0	1.0	24.0	45.7	30.7	5.6	95.8	5.2	158.9

	%LAND						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - Percentage area(%) - - - - -						*- - - - - - - N/10 000 ha - - - - - - -*						*- - - - - - - - - - Ha - - - - - - - - -*					
Mesic and wet forests subregion (ESR 4) (n=7):																		
PIPO--																		
si	1.3	0.4	0.0	3.5	0.0	5.6	3.0	1.0	0.0	8.0	0.0	11.0	31.3	17.7	0.0	73.8	0.0	88.2
seoc	6.8	1.1	0.2	19.8	0.0	31.2	6.0	5.0	1.0	13.0	0.0	18.0	69.5	38.3	6.5	175.4	0.0	182.8
secc	0.1	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0	1.0	0.0	2.0	8.6	0.0	0.0	28.3	0.0	40.0
ur	3.4	1.0	0.0	9.3	0.0	11.9	6.0	2.0	0.0	18.0	0.0	29.0	49.6	42.7	0.0	95.9	0.0	136.3
yfms	8.8	11.6	1.8	13.0	0.3	13.4	11.0	8.0	3.0	22.0	2.0	36.0	90.9	89.8	27.8	154.9	17.9	158.9
ofms	1.4	0.5	0.0	3.5	0.0	5.1	2.0	1.0	0.0	5.0	0.0	9.0	41.7	26.1	0.0	100.3	0.0	161.3
ofss	1.0	0.0	0.0	2.7	0.0	3.0	2.0	0.0	0.0	5.0	0.0	6.0	19.6	0.0	0.0	53.6	0.0	61.2
LAOC--																		
si	0.6	0.0	0.0	1.7	0.0	3.7	1.0	0.0	0.0	3.0	0.0	6.0	14.5	0.0	0.0	48.3	0.0	63.1
seoc	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.0	0.0	1.0	2.4	0.0	0.0	8.2	0.0	9.5
yfms	0.8	0.0	0.0	2.4	0.0	4.8	2.0	0.0	0.0	5.0	0.0	9.0	15.0	0.0	0.0	36.8	0.0	51.1
PICO--																		
si	1.7	0.0	0.0	5.5	0.0	7.5	1.0	0.0	0.0	3.0	0.0	4.0	51.5	0.0	0.0	156.5	0.0	246.6
seoc	0.1	0.0	0.0	0.4	0.0	0.5	1.0	0.0	0.0	4.0	0.0	6.0	5.1	0.0	0.0	15.4	0.0	28.9
secc	3.0	0.0	0.0	8.5	0.0	19.6	2.0	0.0	0.0	5.0	0.0	9.0	48.1	0.0	0.0	153.6	0.0	214.2
ur	1.2	0.6	0.0	3.0	0.0	4.1	4.0	1.0	0.0	9.0	0.0	14.0	25.3	15.8	0.0	62.7	0.0	67.0
yfms	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	1.7	0.0	0.0	4.9	0.0	12.2
PSME--																		
si	2.3	2.1	0.4	3.9	0.0	4.3	6.0	6.0	1.0	11.0	0.0	15.0	45.8	49.4	12.5	76.6	0.0	99.0
seoc	3.1	1.9	0.0	7.1	0.0	12.7	7.0	6.0	0.0	15.0	0.0	16.0	27.7	24.7	0.0	54.3	0.0	77.6
secc	1.2	0.9	0.0	2.7	0.0	3.5	3.0	2.0	0.0	8.0	0.0	9.0	35.3	30.2	0.0	71.8	0.0	99.5
ur	13.7	12.8	1.0	25.4	0.0	33.1	16.0	9.0	2.0	34.0	0.0	60.0	124.8	84.1	16.6	310.0	0.0	356.9
yfms	11.9	14.4	3.9	18.0	0.8	20.4	15.0	16.0	4.0	26.0	3.0	36.0	101.4	92.2	38.3	169.3	27.5	265.4
ofms	0.4	0.0	0.0	1.3	0.0	1.4	1.0	0.0	0.0	2.0	0.0	3.0	18.2	0.0	0.0	47.3	0.0	54.0
ofss	0.2	0.0	0.0	0.7	0.0	1.0	1.0	0.0	0.0	2.0	0.0	3.0	19.4	0.0	0.0	56.8	0.0	123.1
ABGR--																		
si	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	1.8	0.0	0.0	5.8	0.0	8.7
seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.6	0.0	0.0	4.4	0.0	10.9
ur	0.9	0.0	0.0	2.6	0.0	5.4	1.0	0.0	0.0	4.0	0.0	7.0	34.5	0.0	0.0	98.8	0.0	229.9
yfms	0.6	0.0	0.0	1.6	0.0	3.9	1.0	0.0	0.0	4.0	0.0	8.0	7.8	0.0	0.0	23.1	0.0	47.8
ofms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.7	0.0	0.0	4.8	0.0	12.0
ABAM--																		
si	0.1	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	1.0	0.0	2.0	3.0	0.0	0.0	8.5	0.0	21.2
ur	1.1	0.0	0.0	3.5	0.0	5.1	1.0	0.0	0.0	3.0	0.0	4.0	39.3	0.0	0.0	121.4	0.0	219.1
yfms	0.6	0.0	0.0	2.1	0.0	2.1	1.0	0.0	0.0	2.0	0.0	3.0	21.7	0.0	0.0	73.0	0.0	89.9
ABLA2/PIEN--																		
si	2.2	2.2	0.5	4.1	0.0	5.5	5.0	5.0	2.0	9.0	0.0	13.0	47.5	23.0	9.3	99.8	0.0	100.6
seoc	4.4	0.4	0.0	11.9	0.0	22.9	4.0	3.0	0.0	10.0	0.0	11.0	55.8	10.8	0.0	154.7	0.0	240.2
secc	0.5	0.3	0.0	1.1	0.0	1.6	1.0	1.0	0.0	3.0	0.0	4.0	20.0	16.8	0.0	46.4	0.0	59.8
ur	4.8	3.0	0.4	10.5	0.4	12.0	3.0	2.0	1.0	5.0	1.0	6.0	265.6	53.0	42.2	735.8	38.2	896.2
yfms	7.1	5.3	0.3	15.6	0.0	25.6	7.0	6.0	1.0	14.0	0.0	21.0	92.6	60.5	8.7	214.2	0.0	335.1
TSHE/THPL--																		
seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	2.5	0.0	6.1
ur	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	2.0	0.0	0.0	5.7	0.0	14.3
TSME--																		
si	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	1.0	0.0	2.0	3.3	0.0	0.0	9.2	0.0	23.0
seoc	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.9	0.0	0.0	5.2	0.0	13.1
ur	1.3	0.0	0.0	4.2	0.0	7.0	1.0	0.0	0.0	2.0	0.0	4.0	68.9	0.0	0.0	232.7	0.0	283.1
yfms	0.6	0.0	0.0	1.7	0.0	4.2	1.0	0.0	0.0	2.0	0.0	6.0	10.1	0.0	0.0	28.4	0.0	70.9

	%LAND						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percentage area(%)						*N/10 000 ha*						*Ha*					
Mesic and wet forests subregion (ESR 4) (n=7):																		
PIAL/LALY--																		
si	1.1	0.0	0.0	3.6	0.0	3.7	3.0	0.0	0.0	8.0	0.0	12.0	16.6	0.0	0.0	44.7	0.0	69.2
seoc	1.3	0.0	0.0	4.2	0.0	5.3	2.0	0.0	0.0	5.0	0.0	6.0	24.4	0.0	0.0	73.5	0.0	98.0
ur	0.2	0.0	0.0	0.6	0.0	1.4	1.0	0.0	0.0	3.0	0.0	6.0	4.8	0.0	0.0	15.5	0.0	22.8
PIMO--																		
si	0.5	0.0	0.0	1.4	0.0	3.5	1.0	0.0	0.0	3.0	0.0	8.0	6.1	0.0	0.0	17.1	0.0	42.7
yfms	0.1	0.0	0.0	0.4	0.0	1.0	1.0	0.0	0.0	2.0	0.0	5.0	3.1	0.0	0.0	8.6	0.0	21.5
HDWD--																		
si	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	1.2	0.0	0.0	3.3	0.0	8.3
seoc	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	1.0	0.0	2.0	1.5	0.0	0.0	4.1	0.0	10.3
ur	0.2	0.0	0.0	0.6	0.0	1.4	1.0	0.0	0.0	3.0	0.0	8.0	2.5	0.0	0.0	7.0	0.0	17.4
yfms	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	1.0	0.0	3.0	1.8	0.0	0.0	5.2	0.0	12.9
Herbland	2.1	0.6	0.1	5.4	0.0	9.6	4.0	3.0	1.0	7.0	0.0	8.0	37.3	14.9	6.3	87.3	0.0	113.3
Shrubland	0.8	0.3	0.0	2.1	0.0	3.4	2.0	1.0	0.0	6.0	0.0	9.0	19.9	9.8	0.0	43.7	0.0	52.9
Other	6.3	7.1	4.1	7.9	3.3	8.0	13.0	11.0	9.0	18.0	8.0	21.0	53.5	50.0	36.4	74.7	33.9	81.5

	%LAND						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - *Percentage area(%)* - - - - -						- - - - - - - *N/10 000 ha* - - - - - - -						- - - - - - - - - - *Ha* - - - - - - - - -					
Wet-frigid forests subregion (ESR 5) (n=7):																		
PIPO--																		
si	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	3.9	0.0	0.0	10.9	0.0	27.4
seoc	1.0	0.0	0.0	3.2	0.0	5.1	2.0	0.0	0.0	7.0	0.0	8.0	13.7	0.0	0.0	44.7	0.0	64.4
secc	1.2	0.0	0.0	4.1	0.0	5.0	1.0	0.0	0.0	2.0	0.0	4.0	60.9	0.0	0.0	192.9	0.0	314.3
ur	1.4	0.0	0.0	4.3	0.0	6.8	1.0	0.0	0.0	4.0	0.0	7.0	30.5	0.0	0.0	104.0	0.0	120.3
yfms	1.3	0.0	0.0	3.4	0.0	5.4	2.0	0.0	0.0	6.0	0.0	11.0	39.3	0.0	0.0	100.9	0.0	181.1
ofms	1.3	0.0	0.0	4.2	0.0	5.7	1.0	0.0	0.0	4.0	0.0	7.0	41.2	0.0	0.0	132.3	0.0	203.1
ofss	2.7	0.0	0.0	7.7	0.0	19.2	1.0	0.0	0.0	4.0	0.0	9.0	30.6	0.0	0.0	85.6	0.0	214.1
LAOC--																		
si	0.1	0.0	0.0	0.3	0.0	0.7	0.0	0.0	0.0	0.0	0.0	1.0	8.9	0.0	0.0	25.0	0.0	62.4
seoc	1.1	0.0	0.0	3.2	0.0	7.9	1.0	0.0	0.0	2.0	0.0	5.0	21.7	0.0	0.0	60.8	0.0	152.1
ur	0.1	0.0	0.0	0.2	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.0	6.2	0.0	0.0	17.5	0.0	43.7
yfms	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.9	0.0	0.0	5.2	0.0	13.0
PICO--																		
si	3.8	0.5	0.0	11.0	0.0	20.9	2.0	1.0	0.0	6.0	0.0	12.0	63.9	31.7	0.0	183.4	0.0	206.9
seoc	1.2	0.0	0.0	3.6	0.0	6.0	1.0	0.0	0.0	4.0	0.0	8.0	86.9	0.0	0.0	240.5	0.0	550.7
secc	3.6	0.0	0.0	10.4	0.0	22.2	1.0	0.0	0.0	2.0	0.0	2.0	161.8	0.0	0.0	463.6	0.0	987.4
ur	0.5	0.0	0.0	1.4	0.0	2.0	1.0	0.0	0.0	2.0	0.0	2.0	27.6	0.0	0.0	88.8	0.0	89.9
yfms	0.8	0.0	0.0	2.0	0.0	2.2	1.0	0.0	0.0	4.0	0.0	6.0	39.4	0.0	0.0	111.1	0.0	169.1
PSME--																		
si	0.7	0.0	0.0	2.3	0.0	2.6	1.0	0.0	0.0	2.0	0.0	3.0	34.3	0.0	0.0	109.7	0.0	172.7
seoc	4.9	3.8	0.6	9.7	0.0	16.5	5.0	5.0	1.0	10.0	0.0	17.0	79.2	78.5	26.3	138.9	0.0	176.4
secc	0.3	0.0	0.0	0.8	0.0	1.2	1.0	0.0	0.0	4.0	0.0	6.0	7.2	0.0	0.0	18.4	0.0	20.4
ur	1.6	0.6	0.0	4.3	0.0	4.9	2.0	1.0	0.0	4.0	0.0	6.0	69.8	27.6	0.0	195.3	0.0	252.5
yfms	1.6	0.6	0.5	3.6	0.4	6.2	3.0	2.0	2.0	6.0	1.0	11.0	43.5	54.2	19.6	64.0	12.7	70.5
ofms	3.0	0.0	0.0	8.8	0.0	20.0	1.0	0.0	0.0	3.0	0.0	3.0	100.3	0.0	0.0	289.9	0.0	657.0
ofss	1.1	0.0	0.0	3.1	0.0	6.6	1.0	0.0	0.0	2.0	0.0	2.0	72.7	0.0	0.0	199.3	0.0	434.1
ABAM--																		
seoc	0.1	0.0	0.0	0.4	0.0	0.9	0.0	0.0	0.0	1.0	0.0	3.0	4.5	0.0	0.0	12.6	0.0	31.5
secc	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.9	0.0	0.0	2.6	0.0	6.5
ur	0.3	0.0	0.0	0.8	0.0	2.0	1.0	0.0	0.0	2.0	0.0	6.0	5.3	0.0	0.0	14.7	0.0	36.8
yfms	0.2	0.0	0.0	0.6	0.0	1.5	0.0	0.0	0.0	1.0	0.0	3.0	7.7	0.0	0.0	21.5	0.0	53.6
ofms	0.3	0.0	0.0	0.8	0.0	2.1	0.0	0.0	0.0	1.0	0.0	2.0	16.3	0.0	0.0	45.6	0.0	114.0
ABLA2/PIEN--																		
si	2.0	1.3	0.2	4.5	0.0	6.1	3.0	2.0	1.0	7.0	0.0	8.0	47.5	32.2	14.3	95.5	0.0	113.2
seoc	9.7	6.6	3.1	17.8	2.1	18.5	13.0	8.0	4.0	29.0	3.0	34.0	93.3	60.9	44.0	186.5	42.7	228.1
secc	2.7	3.3	0.1	4.8	0.1	5.1	3.0	3.0	2.0	6.0	1.0	8.0	71.6	57.8	5.5	132.8	5.2	157.3
ur	6.6	5.6	4.0	9.8	2.8	14.2	7.0	6.0	3.0	11.0	2.0	14.0	129.3	100.2	50.9	224.9	20.6	283.4
yfms	5.8	5.7	1.7	10.9	0.5	13.8	9.0	6.0	3.0	18.0	1.0	22.0	63.1	55.4	42.7	90.0	40.6	95.3
ofms	1.9	0.9	0.0	4.7	0.0	9.3	2.0	1.0	0.0	4.0	0.0	6.0	62.1	57.3	0.0	158.3	0.0	165.0
ofss	4.6	1.5	0.0	11.4	0.0	21.5	3.0	3.0	0.0	5.0	0.0	7.0	107.7	36.1	0.0	261.6	0.0	318.9
TSME--																		
seoc	0.1	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	2.0	0.0	4.0	1.5	0.0	0.0	4.3	0.0	10.7
ur	0.2	0.0	0.0	0.4	0.0	1.1	1.0	0.0	0.0	2.0	0.0	4.0	4.1	0.0	0.0	11.6	0.0	28.9
yfms	0.2	0.0	0.0	0.6	0.0	1.5	1.0	0.0	0.0	2.0	0.0	4.0	5.9	0.0	0.0	16.4	0.0	41.0
ofms	0.2	0.0	0.0	0.6	0.0	1.5	1.0	0.0	0.0	2.0	0.0	4.0	5.6	0.0	0.0	15.8	0.0	39.5
ofss	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	1.0	0.0	3.0	1.9	0.0	0.0	5.4	0.0	13.5
PIAL/LALY--																		
si	1.5	1.2	0.0	3.3	0.0	5.9	3.0	1.0	0.0	9.0	0.0	11.0	35.4	16.0	0.0	81.7	0.0	122.5
seoc	7.6	6.8	3.1	12.8	2.5	13.3	9.0	10.0	6.0	11.0	5.0	12.0	83.7	95.6	46.6	116.1	24.6	123.0
ur	0.3	0.0	0.0	0.8	0.0	1.8	0.0	0.0	0.0	1.0	0.0	2.0	12.5	0.0	0.0	36.2	0.0	80.9
yfms	1.1	0.3	0.0	3.0	0.0	5.4	2.0	1.0	0.0	4.0	0.0	6.0	32.6	23.3	0.0	80.3	0.0	95.1
ofms	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	4.6	0.0	0.0	12.9	0.0	32.1
ofss	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	2.6	0.0	0.0	7.3	0.0	18.4
PIMO seoc	0.1	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	5.0	0.0	0.0	14.0	0.0	34.9

	%LAND						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - Percentage area(%) - - - - -						*- - - - - - - N/10 000 ha - - - - - - -*						*- - - - - - - - - - Ha - - - - - - - - - -*					
HDWD--																		
si	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	3.9	0.0	0.0	10.8	0.0	27.0
secc	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	1.0	0.0	3.0	2.1	0.0	0.0	5.8	0.0	14.6
yfms	0.1	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	1.0	0.0	2.0	4.8	0.0	0.0	15.2	0.0	24.5
ofss	0.1	0.0	0.0	0.2	0.0	0.6	0.0	0.0	0.0	1.0	0.0	2.0	3.7	0.0	0.0	10.2	0.0	25.6
Herbland	1.2	0.7	0.0	2.9	0.0	3.2	4.0	1.0	0.0	10.0	0.0	11.0	39.8	23.2	0.0	87.6	0.0	169.3
Shrubland	5.6	2.6	0.1	14.9	0.0	19.7	7.0	4.0	1.0	14.0	0.0	24.0	66.0	48.7	5.5	149.0	0.0	247.0
Woodland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.7	0.0	0.0	1.9	0.0	4.9
Other	14.4	11.1	7.2	26.7	5.2	28.2	16.0	15.0	9.0	23.0	8.0	31.0	117.6	62.3	46.6	244.0	33.1	339.8

	%LAND						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - *Percentage area(%)* - - - - -						- - - - - - - *N/10 000 ha* - - - - - - -						- - - - - - - - - - *Ha* - - - - - - - - -					
Wet-cold forests (ESR 6) (n=16):																		
PIPO--																		
si	0.7	0.0	0.0	1.8	0.0	7.9	2.0	0.0	0.0	4.0	0.0	18.0	11.0	0.0	0.0	43.0	0.0	70.2
seoc	0.6	0.0	0.0	2.5	0.0	4.1	2.0	0.0	0.0	6.0	0.0	25.0	14.0	0.0	0.0	43.1	0.0	129.2
secc	0.1	0.0	0.0	0.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	5.0	3.2	0.0	0.0	11.0	0.0	29.6
ur	0.6	0.0	0.0	1.4	0.0	6.2	1.0	0.0	0.0	2.0	0.0	8.0	26.8	0.0	0.0	50.6	0.0	327.7
yfms	0.8	0.0	0.0	2.6	0.0	5.8	2.0	0.0	0.0	4.0	0.0	20.0	18.3	0.0	0.0	71.5	0.0	110.8
ofms	0.9	0.0	0.0	2.9	0.0	8.5	1.0	0.0	0.0	2.0	0.0	12.0	29.5	0.0	0.0	32.6	0.0	406.0
ofss	0.3	0.0	0.0	1.1	0.0	1.5	1.0	0.0	0.0	2.0	0.0	6.0	15.6	0.0	0.0	54.8	0.0	121.0
LAOC--																		
si	0.2	0.0	0.0	0.4	0.0	1.7	0.0	0.0	0.0	1.0	0.0	5.0	9.1	0.0	0.0	27.7	0.0	74.3
seoc	0.1	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	2.0	3.0	0.0	0.0	0.0	0.0	48.0
secc	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	3.3	0.0	0.0	12.6	0.0	27.7
ur	0.3	0.0	0.0	1.1	0.0	1.5	0.0	0.0	0.0	1.0	0.0	2.0	26.3	0.0	0.0	115.5	0.0	177.0
yfms	0.2	0.0	0.0	0.2	0.0	2.4	0.0	0.0	0.0	0.0	0.0	2.0	9.2	0.0	0.0	25.1	0.0	96.2
ofms	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.3	0.0	0.0	0.0	0.0	20.5
PICO--																		
si	0.4	0.0	0.0	1.3	0.0	2.9	1.0	0.0	0.0	2.0	0.0	3.0	16.2	0.0	0.0	68.1	0.0	87.0
seoc	0.1	0.0	0.0	0.1	0.0	1.7	0.0	0.0	0.0	1.0	0.0	2.0	7.7	0.0	0.0	9.4	0.0	104.9
secc	0.4	0.0	0.0	1.0	0.0	2.7	1.0	0.0	0.0	2.0	0.0	3.0	28.5	0.0	0.0	41.7	0.0	311.9
ur	0.3	0.0	0.0	0.8	0.0	2.3	1.0	0.0	0.0	2.0	0.0	7.0	16.8	0.0	0.0	60.6	0.0	71.6
yfms	0.4	0.0	0.0	1.3	0.0	3.2	1.0	0.0	0.0	2.0	0.0	2.0	29.8	0.0	0.0	99.6	0.0	164.5
PSME--																		
si	3.0	0.7	0.0	8.8	0.0	10.0	7.0	3.0	0.0	16.0	0.0	21.0	31.2	27.9	0.0	58.0	0.0	92.1
seoc	3.8	2.9	0.0	8.3	0.0	12.7	6.0	4.0	0.0	15.0	0.0	27.0	59.4	50.4	0.0	122.6	0.0	181.9
secc	4.9	3.0	0.2	14.0	0.0	20.1	6.0	2.0	1.0	15.0	0.0	20.0	106.0	81.8	11.7	199.8	0.0	425.3
ur	7.2	4.5	0.3	16.9	0.1	25.8	10.0	8.0	1.0	20.0	1.0	32.0	70.9	45.5	15.7	147.4	5.8	273.3
yfms	4.7	3.6	0.4	8.7	0.0	22.3	12.0	11.0	3.0	23.0	0.0	28.0	35.8	29.9	9.3	69.9	0.0	93.9
ofms	3.1	0.4	0.0	9.5	0.0	15.9	3.0	1.0	0.0	9.0	0.0	16.0	122.2	31.0	0.0	377.5	0.0	839.1
ofss	1.6	1.2	0.0	4.4	0.0	6.7	3.0	2.0	0.0	6.0	0.0	11.0	45.3	26.1	0.0	135.6	0.0	142.6
ABGR--																		
si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.6	0.0	0.0	4.6	0.0	15.6
seoc	0.1	0.0	0.0	0.2	0.0	0.6	0.0	0.0	0.0	2.0	0.0	4.0	1.9	0.0	0.0	7.6	0.0	15.8
secc	0.1	0.0	0.0	0.1	0.0	0.6	0.0	0.0	0.0	0.0	0.0	1.0	6.5	0.0	0.0	14.8	0.0	75.1
ur	0.2	0.0	0.0	0.3	0.0	2.2	0.0	0.0	0.0	1.0	0.0	2.0	12.6	0.0	0.0	31.3	0.0	127.9
yfms	0.2	0.0	0.0	0.5	0.0	1.3	0.0	0.0	0.0	1.0	0.0	2.0	12.8	0.0	0.0	50.9	0.0	86.9
ofss	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	0.0	0.0	14.2
ABAM--																		
si	1.1	0.3	0.0	2.7	0.0	6.2	3.0	2.0	0.0	8.0	0.0	10.0	18.3	14.0	0.0	47.4	0.0	62.1
seoc	2.1	2.2	0.0	4.5	0.0	6.4	6.0	3.0	0.0	15.0	0.0	25.0	32.9	21.9	0.0	78.5	0.0	104.2
secc	3.7	0.7	0.0	13.3	0.0	14.6	5.0	2.0	0.0	13.0	0.0	17.0	42.2	17.1	0.0	98.0	0.0	188.4
ur	3.9	2.6	0.0	9.9	0.0	11.5	7.0	5.0	0.0	16.0	0.0	22.0	48.0	41.4	0.0	98.6	0.0	173.8
yfms	2.7	1.5	0.0	6.9	0.0	12.5	7.0	4.0	0.0	16.0	0.0	30.0	35.8	34.3	0.0	71.4	0.0	100.4
ofms	1.1	0.0	0.0	2.0	0.0	10.6	1.0	0.0	0.0	4.0	0.0	4.0	32.1	0.0	0.0	73.0	0.0	278.9
ofss	2.0	0.0	0.0	2.1	0.0	21.8	1.0	0.0	0.0	4.0	0.0	5.0	51.1	0.0	0.0	104.3	0.0	461.5
ABLA2/PIEN--																		
si	3.7	1.4	0.1	12.1	0.0	16.0	6.0	6.0	0.0	13.0	0.0	19.0	38.6	26.5	6.3	86.3	0.0	111.9
seoc	1.6	1.3	0.5	2.7	0.3	4.0	6.0	6.0	2.0	14.0	1.0	17.0	31.0	20.6	16.6	58.3	15.2	72.1
secc	0.8	0.3	0.0	2.4	0.0	3.1	2.0	1.0	0.0	4.0	0.0	5.0	46.1	25.7	0.0	105.0	0.0	248.9
ur	4.8	2.3	0.3	12.1	0.0	25.3	6.0	6.0	0.0	14.0	0.0	17.0	70.2	35.3	7.2	175.2	0.0	267.6
yfms	6.8	5.7	0.2	13.9	0.0	19.7	14.0	12.0	1.0	24.0	0.0	32.0	44.4	45.9	16.3	71.9	0.0	85.4
ofms	0.4	0.0	0.0	0.8	0.0	4.4	1.0	0.0	0.0	2.0	0.0	4.0	14.3	0.0	0.0	34.0	0.0	124.2
ofss	0.5	0.0	0.0	1.5	0.0	5.3	0.0	0.0	0.0	2.0	0.0	2.0	37.1	0.0	0.0	71.0	0.0	426.9

Subregion	%LAND						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - *Percentage area(%)* - - - - -						- - - - - - - *N/10 000 ha* - - - - - - -						- - - - - - - - - - *Ha* - - - - - - - - -					
TSHE/THPL--																		
si	0.4	0.0	0.0	1.4	0.0	2.4	1.0	0.0	0.0	2.0	0.0	4.0	14.1	0.0	0.0	39.3	0.0	85.0
seoc	0.5	0.0	0.0	0.9	0.0	4.8	1.0	0.0	0.0	2.0	0.0	6.0	14.4	0.0	0.0	50.9	0.0	76.0
secc	1.3	0.2	0.0	5.3	0.0	7.6	1.0	1.0	0.0	4.0	0.0	6.0	46.0	18.5	0.0	111.6	0.0	279.3
ur	3.7	0.5	0.0	7.5	0.0	31.4	2.0	1.0	0.0	6.0	0.0	11.0	101.0	16.0	0.0	317.9	0.0	660.3
yfms	0.5	0.0	0.0	1.4	0.0	3.5	1.0	0.0	0.0	4.0	0.0	6.0	17.6	1.1	0.0	48.6	0.0	118.6
ofms	1.0	0.0	0.0	1.7	0.0	11.4	1.0	0.0	0.0	4.0	0.0	7.0	21.4	0.0	0.0	56.2	0.0	155.6
ofss	1.4	0.0	0.0	5.2	0.0	6.8	1.0	0.0	0.0	2.0	0.0	8.0	59.3	0.0	0.0	198.1	0.0	360.1
TSHE--																		
si	0.0	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	1.0	0.0	2.0	2.9	0.0	0.0	10.5	0.0	25.3
seoc	0.1	0.0	0.0	0.3	0.0	0.7	1.0	0.0	0.0	1.0	0.0	6.0	5.1	0.0	0.0	15.4	0.0	39.4
secc	0.4	0.0	0.0	1.0	0.0	3.8	0.0	0.0	0.0	2.0	0.0	3.0	24.5	0.0	0.0	56.1	0.0	225.1
ur	0.7	0.0	0.0	2.4	0.0	3.2	1.0	0.0	0.0	3.0	0.0	5.0	33.2	0.0	0.0	104.1	0.0	238.7
yfms	1.0	0.0	0.0	3.9	0.0	7.6	2.0	0.0	0.0	6.0	0.0	15.0	12.2	0.0	0.0	37.1	0.0	74.4
ofms	0.2	0.0	0.0	0.6	0.0	2.1	0.0	0.0	0.0	1.0	0.0	3.0	9.7	0.0	0.0	21.6	0.0	111.9
ofss	0.2	0.0	0.0	0.6	0.0	1.8	0.0	0.0	0.0	0.0	0.0	2.0	14.1	0.0	0.0	47.3	0.0	130.5
PIAL/LALY--																		
si	0.5	0.0	0.0	1.4	0.0	3.2	1.0	0.0	0.0	4.0	0.0	7.0	14.1	0.0	0.0	45.3	0.0	67.8
seoc	0.4	0.0	0.0	1.4	0.0	3.6	1.0	0.0	0.0	4.0	0.0	11.0	6.1	0.0	0.0	17.7	0.0	55.3
secc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.0	0.0	4.1
ur	0.1	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	4.0	3.0	0.0	0.0	0.0	0.0	47.5
yfms	0.9	0.0	0.0	1.0	0.0	11.9	1.0	0.0	0.0	4.0	0.0	12.0	9.5	0.0	0.0	21.5	0.0	96.6
PIMO--																		
ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	0.0	0.0	17.4
yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	0.0	0.0	17.1
ofss	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.0	3.8	0.0	0.0	0.0	0.0	60.8
HDWD--																		
si	0.1	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	6.0	1.3	0.0	0.0	0.0	0.0	21.4
seoc	0.1	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	5.0	2.2	0.0	0.0	0.0	0.0	35.3
secc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.0	0.0	4.3
ur	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.0	0.0	4.1
yfms	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.0	0.7	0.0	0.0	0.0	0.0	10.4
ofms	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	4.0	1.0	0.0	0.0	0.0	0.0	15.3
ofss	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.0	0.8	0.0	0.0	0.0	0.0	12.4
Woodland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.7	0.0	0.0	0.0	0.0	11.7
Herbland	1.7	1.6	0.1	4.0	0.0	5.2	7.0	6.0	1.0	13.0	0.0	26.0	26.1	20.6	8.3	48.3	0.0	88.5
Shrubland	2.9	1.4	0.1	7.1	0.0	14.7	8.0	5.0	0.0	22.0	0.0	28.0	28.8	24.3	4.7	63.6	0.0	87.3
Other	12.0	11.4	3.1	23.3	0.2	25.4	20.0	19.0	8.0	32.0	1.0	50.0	76.2	47.6	22.0	153.2	19.8	326.0

[a] Structural classes are si = stand initiation; seoc = stem exclusion, open canopy; secc = stem exclusion-closed canopy; ur = understory reinitiation; yfms = young-forest multistory; ofms = old-forest multistory; ofss = old-forest single story. Cover types are *PIPO* = ponderosa pine; *PSME* = Douglas-fir; *ABGR* = grand fir; *HDWD* = hardwood; *PICO* = lodgepole pine; *ABLA2 (=ABLA2/PIEN*) = subalpine fir/Engelmann spruce; *PIAL (=PIAL/LALY*) = whitebark pine/subalpine larch; herbland = all herbland cover types and structural classes combined; other = all nonforest/nonrangeland and anthropogenic types combined.

Appendix 2

Table 7—Estimated NRV in area and connectivity of cover-structure patch types of potential vegetation types of ecological subregions of the east side of the Cascade Range, Washington[a]

	%Land						PD--patch density						MPS-mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - - Percent land (%) - - - - -						*- - - - - - - - N/10 000 ha - - - - - -*						*- - - - - - - - - Ha - - - - - - - - - -*					
Dry and mesic forests subregion (ESR 2) (n=10):																		
Oregon white oak PVT--																		
*HDWD*_woodland	0.1	0.0	0.0	0.1	0.0	0.7	0.0	0.0	0.0	0.0	0.0	5.0	1.5	0.0	0.0	1.5	0.0	14.9
Herbland	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	4.0	0.6	0.0	0.0	0.6	0.0	6.0
Shrubland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	4.0	0.1	0.0	0.0	0.1	0.0	1.4
Ponderosa pine PVT--																		
PIPO_si	0.6	0.1	0.0	1.5	0.0	3.4	3.0	2.0	0.0	10.0	0.0	13.0	18.7	3.7	0.0	36.4	0.0	122.8
PIPO_seoc	2.1	0.0	0.0	8.6	0.0	11.3	3.0	0.0	0.0	10.0	0.0	16.0	21.6	0.0	0.0	60.8	0.0	131.0
PIPO_secc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.6	0.0	0.0	0.6	0.0	5.9
PIPO_ur	0.3	0.0	0.0	1.0	0.0	2.0	1.0	0.0	0.0	4.0	0.0	9.0	9.8	0.0	0.0	17.0	0.0	80.5
PIPO_yfms	1.3	0.0	0.0	4.2	0.0	7.0	5.0	0.0	0.0	14.0	0.0	23.0	8.0	0.1	0.0	30.1	0.0	30.9
PIPO_ofms	0.1	0.0	0.0	0.1	0.0	0.6	1.0	0.0	0.0	3.0	0.0	10.0	0.7	0.0	0.0	1.7	0.0	6.2
PIPO_ofss	0.1	0.0	0.0	0.1	0.0	0.5	0.0	0.0	0.0	1.0	0.0	1.0	4.3	0.0	0.0	5.4	0.0	41.3
Herbland	0.1	0.0	0.0	0.3	0.0	0.5	2.0	0.0	0.0	6.0	0.0	13.0	1.6	0.0	0.0	4.4	0.0	4.7
Shrubland	0.1	0.0	0.0	0.2	0.0	0.4	2.0	0.0	0.0	8.0	0.0	16.0	0.5	0.0	0.0	2.4	0.0	2.8
Other	0.1	0.0	0.0	0.2	0.0	0.7	1.0	0.0	0.0	4.0	0.0	5.0	2.8	0.0	0.0	7.2	0.0	18.1
Warm/dry Douglas-fir/ grand fir PVT--																		
PIPO_si	1.0	0.4	0.0	3.2	0.0	3.3	5.0	4.0	0.0	13.0	0.0	15.0	10.4	8.4	0.0	22.4	0.0	37.4
PIPO_seoc	2.1	0.6	0.0	3.8	0.0	13.6	14.0	4.0	0.0	33.0	0.0	44.0	9.1	7.5	0.0	17.7	0.0	30.7
PIPO_secc	0.1	0.0	0.0	0.1	0.0	1.3	0.0	0.0	0.0	0.0	0.0	4.0	3.3	0.0	0.0	3.3	0.0	32.8
PIPO_ur	0.8	0.1	0.0	1.4	0.0	7.0	6.0	0.0	0.0	20.0	0.0	34.0	5.7	1.1	0.0	17.1	0.0	20.5
PIPO_yfms	6.5	3.6	1.7	13.5	0.9	23.3	25.0	16.0	6.0	51.0	1.0	62.0	34.5	25.0	13.2	77.6	10.2	95.2
PIPO_ofms	0.6	0.0	0.0	1.8	0.0	2.8	6.0	0.0	0.0	17.0	0.0	26.0	3.0	0.0	0.0	10.8	0.0	11.2
PIPO_ofss	0.3	0.0	0.0	0.3	0.0	2.8	2.0	0.0	0.0	2.0	0.0	17.0	1.6	0.0	0.0	1.6	0.0	16.1
LAOC_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0	0.5	0.0	4.6
PICO_secc	0.2	0.0	0.0	0.2	0.0	2.1	1.0	0.0	0.0	1.0	0.0	13.0	1.6	0.0	0.0	1.6	0.0	16.0
PICO_ur	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	4.0	0.5	0.0	0.0	0.5	0.0	5.1
PICO_yfms	0.0	0.0	0.0	0.0	0.0	0.4	1.0	0.0	0.0	1.0	0.0	7.0	0.5	0.0	0.0	0.5	0.0	5.1
PSME_si	0.5	0.0	0.0	1.3	0.0	3.8	2.0	0.0	0.0	5.0	0.0	13.0	7.2	0.0	0.0	27.4	0.0	29.1
PSME_seoc	1.6	0.1	0.0	3.8	0.0	9.7	4.0	0.0	0.0	13.0	0.0	14.0	21.1	1.4	0.0	72.6	0.0	93.6
PSME_secc	0.6	0.0	0.0	1.6	0.0	3.5	2.0	1.0	0.0	3.0	0.0	8.0	27.4	0.3	0.0	76.5	0.0	153.9
PSME_ur	1.2	1.1	0.2	2.3	0.0	2.6	13.0	4.0	2.0	42.0	0.0	66.0	28.1	10.9	2.9	99.6	0.0	100.8
PSME_yfms	3.3	1.8	0.2	6.9	0.0	16.7	14.0	7.0	2.0	32.0	0.0	59.0	20.5	22.4	6.5	35.8	0.0	37.3
PSME_ofms	0.2	0.0	0.0	0.6	0.0	1.1	2.0	0.0	0.0	4.0	0.0	22.0	14.1	0.0	0.0	16.3	0.0	136.1
PSME_ofss	0.2	0.0	0.0	0.2	0.0	1.6	1.0	0.0	0.0	1.0	0.0	7.0	2.3	0.0	0.0	2.3	0.0	22.5
HDWD_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	2.0	0.0	3.0	0.7	0.0	0.0	1.0	0.0	6.1
HDWD_yfms	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.0	1.8	0.0	0.0	1.8	0.0	17.9
*HDWD*_woodland	0.5	0.0	0.0	1.5	0.0	1.9	5.0	0.0	0.0	15.0	0.0	24.0	5.0	0.0	0.0	15.1	0.0	16.5
Herbland	1.1	0.3	0.0	2.5	0.0	6.0	55.0	14.0	1.0	123.0	0.0	250.0	4.9	0.9	0.1	8.2	0.0	35.4
Shrubland	0.9	0.0	0.0	3.0	0.0	3.6	36.0	4.0	0.0	95.0	0.0	186.0	1.5	0.8	0.0	2.7	0.0	9.1
Other	0.5	0.1	0.0	1.6	0.0	2.9	14.0	8.0	0.0	31.0	0.0	54.0	1.8	0.5	0.0	3.6	0.0	10.3
Cool/moist Douglas-fir/ grand fir PVT--																		
PIPO_si	1.2	0.2	0.0	3.4	0.0	3.8	10.0	7.0	0.0	17.0	0.0	47.0	7.9	3.6	0.0	26.1	0.0	33.4
PIPO_seoc	2.4	1.0	0.0	5.5	0.0	10.5	24.0	14.0	0.0	57.0	0.0	71.0	8.4	6.8	0.0	19.5	0.0	22.1
PIPO_secc	0.1	0.0	0.0	0.1	0.0	1.3	1.0	0.0	0.0	1.0	0.0	8.0	1.7	0.0	0.0	1.7	0.0	16.8
PIPO_ur	3.0	0.4	0.0	10.9	0.0	11.9	7.0	2.0	0.0	15.0	0.0	34.0	22.0	9.3	0.0	52.3	0.0	103.5
PIPO_yfms	8.8	4.3	1.8	17.9	0.2	35.8	39.0	24.0	7.0	79.0	4.0	138.0	37.5	19.4	7.4	66.1	3.4	186.3
PIPO_ofms	4.5	0.9	0.0	10.2	0.0	25.0	6.0	2.0	0.0	14.0	0.0	22.0	43.3	19.6	0.0	93.5	0.0	197.7
PIPO_ofss	0.6	0.0	0.0	1.7	0.0	3.1	6.0	0.0	0.0	20.0	0.0	30.0	5.9	0.0	0.0	20.4	0.0	20.9
LAOC_si	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	1.0	6.0	0.0	0.0	6.0	0.0	59.7
LAOC_seoc	0.1	0.0	0.0	0.1	0.0	0.5	1.0	0.0	0.0	1.0	0.0	7.0	0.7	0.0	0.0	0.7	0.0	6.8
LAOC_ur	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	1.0	0.0	4.0	1.3	0.0	0.0	5.9	0.0	6.7
LAOC_yfms	0.2	0.0	0.0	0.2	0.0	2.2	0.0	0.0	0.0	0.0	0.0	3.0	8.6	0.0	0.0	8.6	0.0	86.4
LAOC_ofms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	3.0	1.0	0.0	0.0	2.1	0.0	9.2
PICO_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.7	0.0	0.0	0.7	0.0	7.4
PICO_secc	1.1	0.0	0.0	1.5	0.0	10.4	4.0	0.0	0.0	10.0	0.0	31.0	4.2	0.0	0.0	9.0	0.0	33.1
PICO_ur	0.2	0.0	0.0	0.7	0.0	1.6	2.0	0.0	0.0	5.0	0.0	13.0	2.8	0.0	0.0	13.3	0.0	14.9

	%Land						PD--patch density						MPS-mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percent land (%)						*N/10 000 ha*						*Ha*					
PICO_yfms	0.2	0.0	0.0	0.5	0.0	0.8	2.0	0.0	0.0	5.0	0.0	16.0	6.1	0.0	0.0	15.4	0.0	43.9
PSME_si	1.2	0.0	0.0	2.8	0.0	9.5	3.0	0.0	0.0	9.0	0.0	10.0	12.6	0.0	0.0	33.8	0.0	90.9
PSME_seoc	2.1	0.1	0.0	4.3	0.0	11.1	9.0	4.0	0.0	30.0	0.0	32.0	13.6	4.7	0.0	38.0	0.0	44.9
PSME_secc	0.5	0.3	0.0	1.0	0.0	2.0	2.0	2.0	0.0	4.0	0.0	5.0	30.9	7.9	0.0	70.7	0.0	207.8
PSME_ur	4.8	3.0	0.0	11.0	0.0	13.3	16.0	4.0	0.0	28.0	0.0	87.0	37.3	27.5	0.0	62.7	0.0	151.9
PSME_yfms	6.9	3.8	1.9	14.8	0.0	20.7	18.0	15.0	4.0	33.0	0.0	60.0	39.0	33.4	12.1	69.6	0.0	99.7
PSME_ofms	0.6	0.0	0.0	0.9	0.0	5.0	2.0	0.0	0.0	3.0	0.0	16.0	5.2	0.0	0.0	21.6	0.0	31.3
PSME_ofss	0.3	0.0	0.0	0.3	0.0	2.5	0.0	0.0	0.0	0.0	0.0	4.0	7.0	0.0	0.0	7.0	0.0	70.1
ABGR_seoc	0.1	0.0	0.0	0.5	0.0	0.8	1.0	0.0	0.0	1.0	0.0	6.0	6.6	0.0	0.0	18.1	0.0	51.6
ABGR_ur	0.4	0.0	0.0	0.7	0.0	3.1	1.0	0.0	0.0	1.0	0.0	5.0	10.8	0.0	0.0	48.3	0.0	61.3
ABGR_yfms	0.7	0.0	0.0	1.9	0.0	5.3	1.0	0.0	0.0	3.0	0.0	8.0	22.7	0.0	0.0	72.5	0.0	154.7
ABGR_ofms	0.2	0.0	0.0	0.5	0.0	2.1	0.0	0.0	0.0	1.0	0.0	2.0	13.9	0.0	0.0	47.1	0.0	97.6
ABGR_ofss	0.3	0.0	0.0	0.3	0.0	2.9	0.0	0.0	0.0	0.0	0.0	4.0	7.0	0.0	0.0	7.0	0.0	70.2
ABLA2/PIEN_secc	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	1.5	0.0	0.0	6.8	0.0	8.8
HDWD_si	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.8	0.0	0.0	1.8	0.0	18.3
HDWD_seoc	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	1.0	0.0	1.0	3.1	0.0	0.0	8.6	0.0	24.1
HDWD_ur	0.0	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	1.0	0.0	2.0	2.9	0.0	0.0	3.3	0.0	29.0
Herbland	1.5	0.3	0.1	2.0	0.0	12.5	28.0	14.0	6.0	71.0	5.0	104.0	3.0	1.4	0.7	7.8	0.3	12.0
Shrubland	1.4	0.3	0.0	4.4	0.0	5.1	41.0	8.0	0.0	104.0	0.0	218.0	2.6	1.5	0.0	5.7	0.0	12.7
Other	0.3	0.0	0.0	0.6	0.0	2.1	8.0	2.0	0.0	24.0	0.0	29.0	1.5	0.3	0.0	2.9	0.0	9.3
Pacific silver fir PVT--																		
ABLA2/PIEN_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.5	0.0	0.0	0.5	0.0	4.8
Mountain hemlock PVT--																		
PIPO_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.4	0.0	0.0	0.4	0.0	4.1
PIPO_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	3.0	0.2	0.0	0.0	0.2	0.0	1.7
PIPO_yfms	0.2	0.0	0.0	0.2	0.0	1.7	1.0	0.0	0.0	1.0	0.0	11.0	1.5	0.0	0.0	1.5	0.0	15.4
PIPO_ofms	0.2	0.0	0.0	0.3	0.0	1.9	1.0	0.0	0.0	3.0	0.0	9.0	9.0	0.0	0.0	9.8	0.0	88.8
PSME_ur	0.1	0.0	0.0	0.1	0.0	0.5	2.0	0.0	0.0	2.0	0.0	17.0	0.3	0.0	0.0	0.3	0.0	2.9
PSME_yfms	0.0	0.0	0.0	0.0	0.0	0.4	1.0	0.0	0.0	1.0	0.0	11.0	0.4	0.0	0.0	0.4	0.0	3.8
Warm/dry subalpine fir/ Engelmann spruce PVT--																		
PIPO_seoc	0.1	0.0	0.0	0.1	0.0	0.9	1.0	0.0	0.0	1.0	0.0	8.0	1.1	0.0	0.0	1.1	0.0	11.1
PIPO_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.8	0.0	0.0	0.8	0.0	8.3
PIPO_yfms	0.1	0.0	0.0	0.3	0.0	0.7	1.0	0.0	0.0	3.0	0.0	5.0	4.6	0.0	0.0	8.6	0.0	34.6
PIPO_ofms	0.0	0.0	0.0	0.0	0.0	0.3	1.0	0.0	0.0	1.0	0.0	8.0	0.3	0.0	0.0	0.3	0.0	3.1
LAOC_ur	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	3.0	0.8	0.0	0.0	0.8	0.0	8.4
PICO_si	0.2	0.0	0.0	0.2	0.0	2.2	1.0	0.0	0.0	1.0	0.0	7.0	3.1	0.0	0.0	3.1	0.0	31.1
PICO_seoc	0.0	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	2.0	0.0	2.0	2.7	0.0	0.0	3.6	0.0	26.1
PICO_ur	0.0	0.0	0.0	0.0	0.0	0.3	1.0	0.0	0.0	1.0	0.0	7.0	0.4	0.0	0.0	0.4	0.0	4.2
PICO_yfms	0.1	0.0	0.0	0.3	0.0	1.1	0.0	0.0	0.0	2.0	0.0	2.0	7.4	0.0	0.0	16.0	0.0	63.0
PSME_si	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	4.0	0.5	0.0	0.0	0.5	0.0	5.3
PSME_ur	0.1	0.0	0.0	0.3	0.0	0.4	1.0	0.0	0.0	4.0	0.0	5.0	2.9	0.0	0.0	8.9	0.0	18.5
PSME_yfms	0.3	0.0	0.0	1.1	0.0	2.3	2.0	0.0	0.0	5.0	0.0	11.0	4.7	0.0	0.0	21.4	0.0	21.7
PSME_ofms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	1.1	0.0	10.7
ABLA2/PIEN_si	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	1.0	0.0	2.0	3.5	0.0	0.0	14.0	0.0	21.6
ABLA2/PIEN_seoc	0.1	0.0	0.0	0.2	0.0	0.7	1.0	0.0	0.0	2.0	0.0	4.0	6.5	0.0	0.0	8.5	0.0	56.9
ABLA2/PIEN_ur	0.2	0.0	0.0	0.4	0.0	1.4	2.0	1.0	0.0	4.0	0.0	7.0	5.0	1.1	0.0	14.6	0.0	19.8
ABLA2/PIEN_yfms	0.1	0.0	0.0	0.2	0.0	0.7	1.0	0.0	0.0	4.0	0.0	5.0	3.7	0.1	0.0	14.1	0.0	18.0
Herbland	0.0	0.0	0.0	0.1	0.0	0.3	1.0	0.0	0.0	3.0	0.0	5.0	1.9	0.0	0.0	7.3	0.0	8.1
Other	0.1	0.0	0.0	0.1	0.0	0.8	1.0	0.0	0.0	6.0	0.0	7.0	1.3	0.0	0.0	1.9	0.0	12.1
Cool/moist subalpine fir/Engelmann spruce PVT--																		
PIPO_si	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	5.0	0.2	0.0	0.0	0.3	0.0	1.8
PIPO_seoc	0.5	0.0	0.0	0.9	0.0	3.9	3.0	0.0	0.0	9.0	0.0	19.0	2.8	0.0	0.0	8.9	0.0	20.5
PIPO_yfms	0.1	0.0	0.0	0.2	0.0	0.8	2.0	0.0	0.0	6.0	0.0	8.0	1.5	0.0	0.0	3.6	0.0	9.8
PIPO_ofms	1.2	0.0	0.0	1.2	0.0	12.5	3.0	0.0	0.0	3.0	0.0	34.0	3.7	0.0	0.0	3.7	0.0	37.0
PIPO_ofss	0.2	0.0	0.0	0.2	0.0	2.2	0.0	0.0	0.0	0.0	0.0	4.0	5.2	0.0	0.0	5.2	0.0	51.8
LAOC_si	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.0	1.4	0.0	0.0	1.4	0.0	13.9
LAOC_seoc	0.1	0.0	0.0	0.1	0.0	0.6	0.0	0.0	0.0	0.0	0.0	3.0	1.9	0.0	0.0	1.9	0.0	19.3

	%Land						PD--patch density						MPS-mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percent land (%)						*N/10 000 ha*						*Ha*					
LAOC_ur	0.1	0.0	0.0	0.1	0.0	0.7	0.0	0.0	0.0	2.0	0.0	3.0	2.4	0.0	0.0	5.1	0.0	20.6
LAOC_yfms	0.1	0.0	0.0	0.3	0.0	1.1	0.0	0.0	0.0	2.0	0.0	3.0	5.3	0.0	0.0	11.9	0.0	44.8
LAOC_ofms	0.1	0.0	0.0	0.1	0.0	0.9	0.0	0.0	0.0	1.0	0.0	3.0	2.8	0.0	0.0	4.0	0.0	27.0
LAOC_ofss	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	1.0	3.8	0.0	0.0	3.8	0.0	37.9
PICO_si	0.1	0.0	0.0	0.1	0.0	1.1	1.0	0.0	0.0	1.0	0.0	11.0	1.0	0.0	0.0	1.0	0.0	10.4
PICO_seoc	0.1	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	1.0	0.0	4.0	4.4	0.0	0.0	8.2	0.0	39.7
PICO_secc	0.2	0.0	0.0	0.6	0.0	1.6	1.0	0.0	0.0	4.0	0.0	8.0	7.5	0.0	0.0	22.3	0.0	42.4
PICO_ur	0.2	0.0	0.0	0.8	0.0	1.1	3.0	0.0	0.0	12.0	0.0	16.0	4.9	0.0	0.0	10.2	0.0	34.7
PICO_yfms	0.3	0.0	0.0	0.4	0.0	3.2	2.0	0.0	0.0	3.0	0.0	23.0	1.7	0.0	0.0	4.1	0.0	13.7
PSME_si	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	4.4	0.0	0.0	4.4	0.0	43.7
PSME_seoc	0.2	0.0	0.0	0.3	0.0	1.3	1.0	0.0	0.0	3.0	0.0	6.0	5.2	0.0	0.0	18.1	0.0	19.6
PSME_secc	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	11.0	0.3	0.0	0.0	0.7	0.0	2.7
PSME_ur	0.4	0.0	0.0	1.1	0.0	2.2	3.0	0.0	0.0	8.0	0.0	13.0	5.2	0.0	0.0	17.4	0.0	19.0
PSME_yfms	0.3	0.1	0.0	1.1	0.0	1.3	3.0	2.0	0.0	9.0	0.0	13.0	6.6	0.8	0.0	22.1	0.0	23.5
PSME_ofms	0.1	0.0	0.0	0.1	0.0	0.7	1.0	0.0	0.0	2.0	0.0	6.0	1.4	0.0	0.0	4.0	0.0	10.2
ABGR_seoc	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.0	2.1	0.0	0.0	2.1	0.0	20.5
ABGR_ur	0.1	0.0	0.0	0.1	0.0	0.9	1.0	0.0	0.0	1.0	0.0	6.0	1.5	0.0	0.0	1.5	0.0	15.2
ABGR_yfms	0.2	0.0	0.0	0.5	0.0	1.4	2.0	0.0	0.0	6.0	0.0	7.0	12.9	0.0	0.0	18.4	0.0	112.7
ABLA2/PIEN_si	0.1	0.0	0.0	0.1	0.0	1.2	0.0	0.0	0.0	0.0	0.0	5.0	2.3	0.0	0.0	2.3	0.0	22.8
ABLA2/PIEN_seoc	0.3	0.0	0.0	0.7	0.0	1.6	2.0	0.0	0.0	4.0	0.0	7.0	7.0	0.0	0.0	16.9	0.0	38.1
ABLA2/PIEN_secc	0.3	0.0	0.0	0.9	0.0	1.7	1.0	0.0	0.0	5.0	0.0	6.0	15.7	0.0	0.0	36.8	0.0	121.3
ABLA2/PIEN_ur	0.5	0.2	0.0	1.1	0.0	2.0	2.0	0.0	0.0	6.0	0.0	7.0	17.9	4.0	0.0	64.0	0.0	81.6
ABLA2/PIEN_yfms	0.9	0.1	0.0	3.6	0.0	3.6	3.0	1.0	0.0	9.0	0.0	10.0	24.4	2.3	0.0	49.5	0.0	170.5
Herbland	0.2	0.0	0.0	0.5	0.0	0.9	3.0	1.0	0.0	11.0	0.0	12.0	4.7	0.0	0.0	7.9	0.0	37.4
Shrubland	0.1	0.0	0.0	0.3	0.0	0.9	4.0	0.0	0.0	15.0	0.0	29.0	2.8	0.0	0.0	8.8	0.0	15.0
Other	0.1	0.0	0.0	0.1	0.0	0.9	3.0	0.0	0.0	4.0	0.0	27.0	0.5	0.0	0.0	2.1	0.0	3.5
Harsh/cold subalpine fir/Engelmann spruce PVT--																		
PICO_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.6	0.0	0.0	0.6	0.0	5.9
PICO_ur	0.0	0.0	0.0	0.0	0.0	0.2	1.0	0.0	0.0	1.0	0.0	11.0	0.1	0.0	0.0	0.1	0.0	1.4
PSME_ur	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	1.0	0.0	7.0	0.1	0.0	0.0	0.1	0.0	0.9
ABLA2/PIEN_ur	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	1.0	0.0	9.0	0.1	0.0	0.0	0.1	0.0	0.5
PIAL/LALY_si	0.2	0.0	0.0	0.2	0.0	1.5	0.0	0.0	0.0	0.0	0.0	5.0	2.9	0.0	0.0	2.9	0.0	28.5
PIAL/LALY_yfms	0.1	0.0	0.0	0.1	0.0	0.7	0.0	0.0	0.0	0.0	0.0	2.0	3.9	0.0	0.0	3.9	0.0	39.3
Warm/dry aspen PVT--																		
*HDWD*_woodland	0.5	0.0	0.0	1.2	0.0	4.1	3.0	0.0	0.0	5.0	0.0	19.0	6.6	0.0	0.0	22.7	0.0	26.7
Herbland	0.1	0.0	0.0	0.4	0.0	0.9	10.0	0.0	0.0	25.0	0.0	57.0	0.6	0.0	0.0	1.1	0.0	4.2
Shrubland	0.4	0.0	0.0	1.2	0.0	2.1	5.0	0.0	0.0	15.0	0.0	26.0	2.9	0.0	0.0	11.9	0.0	15.0
Bitterbrush PVT--																		
*HDWD*_woodland	0.0	0.0	0.0	0.0	0.0	0.2	2.0	0.0	0.0	7.0	0.0	11.0	0.2	0.0	0.0	0.3	0.0	1.6
Herbland	2.0	0.0	0.0	6.6	0.0	7.9	5.0	0.0	0.0	16.0	0.0	18.0	13.8	0.0	0.0	38.5	0.0	68.4
Shrubland	0.2	0.0	0.0	0.2	0.0	1.8	2.0	0.0	0.0	7.0	0.0	11.0	2.8	0.0	0.0	3.2	0.0	26.6
Other	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	3.8	0.0	0.0	3.8	0.0	38.0
Wyoming big sagebrush PVT--																		
*HDWD*_woodland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	2.0	0.0	2.0	0.7	0.0	0.0	0.8	0.0	6.4
Herbland	3.4	0.0	0.0	7.4	0.0	23.4	8.0	0.0	0.0	21.0	0.0	51.0	15.6	0.0	0.0	48.2	0.0	67.5
Shrubland	1.6	0.0	0.0	1.8	0.0	15.8	2.0	0.0	0.0	4.0	0.0	18.0	10.3	0.0	0.0	19.4	0.0	89.8
Other	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	5.0	0.1	0.0	0.0	0.1	0.0	1.0
Fescue grassland PVT--																		
PIPO_yfms	0.0	0.0	0.0	0.1	0.0	0.2	2.0	0.0	0.0	8.0	0.0	11.0	0.3	0.0	0.0	0.9	0.0	1.8
PIPO_ofms	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	1.0	0.0	6.0	0.1	0.0	0.0	0.1	0.0	0.8
Herbland	3.2	1.1	0.0	9.3	0.0	10.9	6.0	2.0	0.0	19.0	0.0	23.0	135.7	22.7	0.0	171.5	0.0	1135.5
Other	0.4	0.0	0.0	0.8	0.0	2.9	2.0	0.0	0.0	4.0	0.0	5.0	19.6	0.2	0.0	30.4	0.0	159.2
Three-tip sagebrush PVT--																		
Herbland	1.4	0.0	0.0	5.3	0.0	7.6	4.0	0.0	0.0	12.0	0.0	21.0	10.4	0.0	0.0	36.4	0.0	46.5
Shrubland	0.4	0.0	0.0	0.7	0.0	2.9	3.0	0.0	0.0	6.0	0.0	20.0	4.0	0.0	0.0	15.0	0.0	18.8

	%Land						PD--patch density						MPS-mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - - *Percent land (%)* - - - - -						- - - - - - - - *N/10 000 ha* - - - - - -						- - - - - - - - - - *Ha* - - - - - - - - - -					
Mountain shrub PVT--																		
Shrubland	0.1	0.0	0.0	0.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	3.0	3.4	0.0	0.0	3.4	0.0	33.6
Riparian sedge (without *Salix* spp.) PVT--																		
Herbland	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.0	0.8	0.0	0.0	0.8	0.0	8.3
Alpine herbland-low shrub PVT--																		
Herbland	0.1	0.0	0.0	0.3	0.0	1.1	1.0	0.0	0.0	1.0	0.0	5.0	3.7	0.0	0.0	16.2	0.0	21.3
Other	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	2.6	0.0	0.0	2.6	0.0	26.4
Fescue grassland (with conifer encroachment) PVT--																		
PSME_yfms	0.0	0.0	0.0	0.1	0.0	0.2	1.0	0.0	0.0	2.0	0.0	7.0	0.6	0.0	0.0	2.3	0.0	3.4
ABLA2/PIEN_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.4	0.0	0.0	0.4	0.0	3.9
Herbland	0.2	0.0	0.0	0.6	0.0	1.0	2.0	0.0	0.0	6.0	0.0	7.0	3.1	0.0	0.0	9.4	0.0	13.3
Shrubland	2.7	0.0	0.0	6.8	0.0	18.5	10.0	0.0	0.0	20.0	0.0	64.0	9.5	0.0	0.0	29.6	0.0	36.9
Other	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	1.0	0.0	1.0	3.7	0.0	0.0	4.4	0.0	36.2
Agropyron steppe (with conifer encroachment) PVT--																		
PIPO_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	5.0	0.3	0.0	0.0	0.3	0.0	2.8
Herbland	0.1	0.0	0.0	0.2	0.0	0.6	2.0	0.0	0.0	2.0	0.0	15.0	2.4	0.0	0.0	5.6	0.0	20.1
Shrubland	1.0	0.0	0.0	2.0	0.0	8.0	4.0	0.0	0.0	12.0	0.0	21.0	7.1	0.0	0.0	24.1	0.0	38.9
Other--																		
PIPO_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	1.0	1.1	0.0	0.0	1.3	0.0	11.0
PIPO_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	3.0	0.6	0.0	0.0	0.9	0.0	5.4
LAOC_yfms	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.8	0.0	0.0	1.8	0.0	17.8
PSME_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	5.0	0.1	0.0	0.0	0.1	0.0	0.9
ABLA2/PIEN_seoc	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	2.0	0.0	2.0	1.9	0.0	0.0	4.8	0.0	14.9
ABLA2/PIEN_yfms	0.0	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	1.0	0.0	4.0	3.9	0.0	0.0	4.2	0.0	38.8
Herbland	0.1	0.0	0.0	0.5	0.0	0.7	2.0	0.0	0.0	4.0	0.0	11.0	5.9	0.0	0.0	23.1	0.0	24.6
Other	1.3	0.8	0.0	3.5	0.0	4.6	5.0	4.0	0.0	16.0	0.0	16.0	22.4	21.9	0.0	47.0	0.0	52.0

	%Land						PD--patch density						MPS-Mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - - Percent land (%) - - - - - -						*- - - - - - - N/10 000 ha - - - - - - -*						*- - - - - - - - - - Ha - - - - - - - - - -*					
Mesic forests subregion (ESR 3), (n=8):																		
Ponderosa pine PVT--																		
PIPO_si	0.4	0.0	0.0	1.1	0.0	3.4	1.0	0.0	0.0	3.0	0.0	4.0	22.6	0.0	0.0	55.0	0.0	178.2
PIPO_seoc	3.0	0.0	0.0	9.9	0.0	16.8	3.0	0.0	0.0	9.0	0.0	14.0	27.8	0.0	0.0	108.2	0.0	119.2
PIPO_ur	0.1	0.0	0.0	0.3	0.0	0.9	1.0	0.0	0.0	2.0	0.0	8.0	1.4	0.0	0.0	3.4	0.0	11.4
PIPO_yfms	0.7	0.0	0.0	2.4	0.0	3.1	4.0	0.0	0.0	15.0	0.0	18.0	8.5	0.0	0.0	25.9	0.0	34.5
PIPO_ofms	0.2	0.0	0.0	0.6	0.0	0.7	2.0	0.0	0.0	7.0	0.0	9.0	2.1	0.0	0.0	7.5	0.0	11.0
PIPO_ofss	0.0	0.0	0.0	0.1	0.0	0.3	2.0	0.0	0.0	4.0	0.0	12.0	0.3	0.0	0.0	0.6	0.0	2.0
Herbland	0.3	0.0	0.0	0.9	0.0	1.7	2.0	0.0	0.0	7.0	0.0	10.0	10.2	0.0	0.0	35.6	0.0	50.5
Other	0.1	0.0	0.0	0.2	0.0	0.7	2.0	0.0	0.0	7.0	0.0	13.0	0.7	0.0	0.0	1.8	0.0	5.4
Warm-dry Douglas-fir/grand fir PVT--																		
PIPO_si	1.1	0.0	0.0	3.2	0.0	7.4	3.0	0.0	0.0	10.0	0.0	17.0	7.7	0.0	0.0	26.0	0.0	42.5
PIPO_seoc	1.8	0.9	0.0	4.7	0.0	4.8	10.0	4.0	0.0	29.0	0.0	44.0	18.4	12.6	0.0	40.7	0.0	73.4
PIPO_secc	0.2	0.0	0.0	0.6	0.0	2.0	2.0	0.0	0.0	4.0	0.0	15.0	1.7	0.0	0.0	4.0	0.0	13.4
PIPO_ur	1.1	0.4	0.0	2.7	0.0	4.4	2.0	1.0	0.0	6.0	0.0	8.0	28.0	7.5	0.0	66.9	0.0	131.6
PIPO_yfms	3.8	1.1	0.0	10.8	0.0	14.6	12.0	5.0	0.0	29.0	0.0	49.0	19.9	21.3	0.0	35.2	0.0	48.3
PIPO_ofms	1.7	0.0	0.0	4.3	0.0	12.2	8.0	0.0	0.0	26.0	0.0	45.0	8.6	0.0	0.0	29.8	0.0	36.5
PIPO_ofss	0.1	0.0	0.0	0.2	0.0	0.7	0.0	0.0	0.0	2.0	0.0	2.0	5.0	0.0	0.0	12.1	0.0	39.0
LAOC_ur	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	1.5	0.0	0.0	3.6	0.0	12.0
LAOC_yfms	0.1	0.0	0.0	0.2	0.0	0.5	0.0	0.0	0.0	1.0	0.0	2.0	3.3	0.0	0.0	7.9	0.0	26.5
LAOC_ofms	0.0	0.0	0.0	0.1	0.0	0.2	1.0	0.0	0.0	2.0	0.0	6.0	0.4	0.0	0.0	1.1	0.0	3.5
LAOC_ofss	0.1	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	1.0	0.0	2.0	2.7	0.0	0.0	6.6	0.0	22.0
PICO_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	2.1	0.0	6.9
PICO_secc	0.1	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0	1.0	4.1	0.0	0.0	9.8	0.0	32.6
PICO_ur	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	6.0	0.3	0.0	0.0	0.6	0.0	2.0
PICO_yfms	0.1	0.0	0.0	0.3	0.0	0.9	1.0	0.0	0.0	2.0	0.0	7.0	1.7	0.0	0.0	4.0	0.0	13.2
PSME_si	0.1	0.0	0.0	0.2	0.0	0.3	2.0	0.0	0.0	5.0	0.0	10.0	1.2	0.0	0.0	4.0	0.0	6.5
PSME_seoc	0.1	0.0	0.0	0.4	0.0	0.5	2.0	0.0	0.0	6.0	0.0	10.0	1.8	0.0	0.0	6.1	0.0	9.2
PSME_secc	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.4	0.0	0.0	3.2	0.0	10.8
PSME_ur	1.0	0.1	0.0	2.8	0.0	6.4	15.0	2.0	0.0	38.0	0.0	95.0	4.0	3.5	0.0	8.7	0.0	13.2
PSME_yfms	2.3	0.5	0.0	6.9	0.0	12.5	12.0	3.0	0.0	32.0	0.0	66.0	15.7	8.0	0.0	36.5	0.0	74.4
PSME_ofms	0.4	0.0	0.0	1.0	0.0	1.6	3.0	2.0	0.0	7.0	0.0	8.0	9.3	0.1	0.0	23.8	0.0	57.2
PSME_ofss	0.2	0.0	0.0	0.5	0.0	1.4	2.0	0.0	0.0	5.0	0.0	6.0	5.0	0.1	0.0	17.8	0.0	23.1
HDWD_secc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	2.2	0.0	7.5
Herbland	0.5	0.0	0.0	1.3	0.0	4.1	3.0	1.0	0.0	9.0	0.0	10.0	5.6	0.2	0.0	13.8	0.0	40.6
Shrubland	0.1	0.0	0.0	0.2	0.0	0.7	1.0	0.0	0.0	3.0	0.0	10.0	0.9	0.0	0.0	2.0	0.0	6.8
Other	0.1	0.0	0.0	0.4	0.0	0.4	7.0	0.0	0.0	20.0	0.0	37.0	4.0	0.0	0.0	9.7	0.0	29.9
Cool-moist Douglas-fir/grand fir PVT--																		
PIPO_si	0.4	0.0	0.0	1.3	0.0	3.0	5.0	0.0	0.0	13.0	0.0	33.0	3.1	0.0	0.0	11.0	0.0	15.5
PIPO_seoc	3.0	2.1	0.0	7.1	0.0	8.1	13.0	6.0	0.0	41.0	0.0	43.0	32.4	10.0	0.0	80.8	0.0	186.8
PIPO_secc	0.7	0.0	0.0	1.7	0.0	5.6	1.0	0.0	0.0	2.0	0.0	8.0	8.7	0.0	0.0	20.9	0.0	69.8
PIPO_ur	0.7	0.0	0.0	1.9	0.0	2.0	5.0	0.0	0.0	13.0	0.0	18.0	5.4	0.0	0.0	15.1	0.0	18.5
PIPO_yfms	3.8	1.2	0.0	12.1	0.0	14.3	25.0	11.0	0.0	58.0	0.0	121.0	11.4	10.0	0.0	22.0	0.0	35.6
PIPO_ofms	3.4	0.1	0.0	11.4	0.0	13.0	7.0	0.0	0.0	17.0	0.0	42.0	39.3	13.0	0.0	105.9	0.0	187.0
PIPO_ofss	0.5	0.1	0.0	1.2	0.0	3.3	1.0	0.0	0.0	4.0	0.0	4.0	15.4	3.6	0.0	37.5	0.0	82.4
LAOC_ur	0.2	0.0	0.0	0.5	0.0	1.8	1.0	0.0	0.0	3.0	0.0	10.0	2.2	0.0	0.0	5.4	0.0	18.0
LAOC_yfms	0.1	0.0	0.0	0.3	0.0	0.9	1.0	0.0	0.0	2.0	0.0	6.0	1.8	0.0	0.0	4.4	0.0	14.8
LAOC_ofms	0.3	0.0	0.0	0.7	0.0	2.2	1.0	0.0	0.0	3.0	0.0	10.0	2.8	0.0	0.0	6.6	0.0	22.1
LAOC_ofss	0.2	0.0	0.0	0.4	0.0	1.2	1.0	0.0	0.0	2.0	0.0	6.0	2.5	0.0	0.0	6.0	0.0	20.1
PICO_si	2.9	0.0	0.0	9.6	0.0	15.8	11.0	0.0	0.0	37.0	0.0	62.0	10.6	0.0	0.0	27.9	0.0	59.5
PICO_seoc	0.5	0.0	0.0	1.7	0.0	3.2	2.0	0.0	0.0	8.0	0.0	9.0	7.4	0.0	0.0	20.8	0.0	40.5
PICO_secc	0.5	0.1	0.0	1.4	0.0	3.0	3.0	0.0	0.0	8.0	0.0	13.0	10.3	2.8	0.0	26.7	0.0	51.8
PICO_ur	0.6	0.1	0.0	1.8	0.0	3.4	1.0	0.0	0.0	3.0	0.0	4.0	17.7	4.6	0.0	51.6	0.0	85.4

	%Land						PD--patch density						MPS-Mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - - *Percent land (%)* - - - - - -						- - - - - - - *N/10 000 ha* - - - - - - -						- - - - - - - - - - *Ha* - - - - - - - - -					
PICO_yfms	0.6	0.0	0.0	1.5	0.0	4.8	3.0	0.0	0.0	7.0	0.0	24.0	2.5	0.0	0.0	6.1	0.0	20.2
PSME_si	0.7	0.0	0.0	2.0	0.0	3.0	2.0	0.0	0.0	5.0	0.0	8.0	13.8	0.0	0.0	37.3	0.0	38.6
PSME_seoc	1.0	0.2	0.0	3.3	0.0	3.7	3.0	1.0	0.0	11.0	0.0	12.0	16.2	11.5	0.0	39.2	0.0	44.6
PSME_secc	0.6	0.0	0.0	1.8	0.0	3.4	3.0	0.0	0.0	8.0	0.0	12.0	8.9	0.0	0.0	26.8	0.0	28.7
PSME_ur	5.4	2.2	0.0	12.8	0.0	23.1	11.0	3.0	0.0	24.0	0.0	51.0	46.8	38.6	0.0	98.8	0.0	173.5
PSME_yfms	3.9	1.0	0.0	13.6	0.0	14.3	13.0	4.0	0.0	43.0	0.0	46.0	16.4	21.2	0.0	31.2	0.0	31.3
PSME_ofms	1.2	0.8	0.0	2.7	0.0	2.7	5.0	1.0	0.0	14.0	0.0	26.0	23.6	5.2	0.0	67.6	0.0	111.7
PSME_ofss	1.2	0.3	0.0	3.7	0.0	4.2	5.0	1.0	0.0	12.0	0.0	14.0	13.5	5.2	0.0	35.9	0.0	37.2
ABGR_ur	0.1	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	1.0	0.0	2.0	2.8	0.0	0.0	6.8	0.0	22.5
ABGR_yfms	0.2	0.0	0.0	0.4	0.0	1.4	1.0	0.0	0.0	2.0	0.0	7.0	2.5	0.0	0.0	5.9	0.0	19.6
ABGR_ofms	0.4	0.0	0.0	0.8	0.0	2.8	0.0	0.0	0.0	0.0	0.0	1.0	24.2	0.0	0.0	58.0	0.0	193.4
ABGR_ofss	0.6	0.0	0.0	1.4	0.0	4.7	0.0	0.0	0.0	0.0	0.0	1.0	40.7	0.0	0.0	97.6	0.0	325.3
ABLA2/PIEN_si	0.2	0.0	0.0	0.8	0.0	1.5	3.0	0.0	0.0	10.0	0.0	12.0	2.1	0.0	0.0	7.2	0.0	11.9
ABLA2/PIEN_seoc	0.3	0.0	0.0	1.2	0.0	1.4	4.0	0.0	0.0	13.0	0.0	19.0	2.3	0.0	0.0	8.6	0.0	10.8
ABLA2/PIEN_secc	0.1	0.0	0.0	0.3	0.0	1.1	2.0	0.0	0.0	5.0	0.0	17.0	0.8	0.0	0.0	1.9	0.0	6.5
ABLA2/PIEN_ur	0.3	0.0	0.0	0.8	0.0	2.6	3.0	0.0	0.0	8.0	0.0	25.0	1.5	0.0	0.0	4.4	0.0	10.3
ABLA2/PIEN_yfms	1.3	0.0	0.0	3.2	0.0	10.7	6.0	0.0	0.0	15.0	0.0	50.0	2.7	0.0	0.0	6.4	0.0	21.2
ABLA2/PIEN_ofms	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	2.5	0.0	0.0	6.1	0.0	20.3
ABLA2/PIEN_ofss	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	3.1	0.0	0.0	7.5	0.0	24.8
PIAL/LALY_si	0.2	0.0	0.0	0.7	0.0	1.4	1.0	0.0	0.0	4.0	0.0	8.0	4.4	0.0	0.0	17.5	0.0	17.8
PIAL/LALY_seoc	0.8	0.0	0.0	2.0	0.0	6.6	3.0	0.0	0.0	7.0	0.0	20.0	4.4	0.0	0.0	11.4	0.0	33.1
PIAL/LALY_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.6	0.0	0.0	1.4	0.0	4.5
HDWD_yfms	0.1	0.0	0.0	0.2	0.0	0.8	0.0	0.0	0.0	0.0	0.0	1.0	8.4	0.0	0.0	20.0	0.0	66.8
Herbland	0.7	0.2	0.0	1.7	0.0	4.2	9.0	6.0	1.0	23.0	0.0	30.0	13.1	3.8	0.4	30.3	0.0	72.4
Shrubland	0.3	0.0	0.0	0.8	0.0	2.5	4.0	0.0	0.0	10.0	0.0	32.0	1.0	0.0	0.0	2.4	0.0	7.9
Other	0.2	0.1	0.0	0.6	0.0	1.2	10.0	9.0	1.0	20.0	0.0	26.0	7.4	0.6	0.1	18.8	0.0	43.5
Mountain hemlock PVT--																		
PICO_seoc	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.7	0.0	0.0	4.2	0.0	13.9
PICO_ur	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	3.0	1.1	0.0	0.0	2.5	0.0	8.4
PICO_yfms	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	1.0	0.0	3.0	1.2	0.0	0.0	2.8	0.0	9.4
Shrubland	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	3.0	1.1	0.0	0.0	2.5	0.0	8.4
Warm-dry subalpine fir/ Engelmann spruce PVT--																		
PICO_si	0.2	0.0	0.0	0.6	0.0	1.4	2.0	0.0	0.0	4.0	0.0	8.0	4.8	0.0	0.0	14.7	0.0	17.8
PICO_seoc	0.1	0.0	0.0	0.2	0.0	0.2	1.0	0.0	0.0	4.0	0.0	4.0	2.2	0.0	0.0	6.2	0.0	10.2
PICO_secc	0.1	0.0	0.0	0.3	0.0	1.0	1.0	0.0	0.0	2.0	0.0	7.0	1.8	0.0	0.0	4.3	0.0	14.2
PICO_ur	0.2	0.0	0.0	0.7	0.0	1.3	2.0	0.0	0.0	6.0	0.0	12.0	4.4	0.0	0.0	11.9	0.0	14.1
PICO_yfms	0.1	0.0	0.0	0.3	0.0	0.8	0.0	0.0	0.0	1.0	0.0	4.0	2.6	0.0	0.0	6.3	0.0	20.8
PSME_seoc	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	3.4	0.0	0.0	8.2	0.0	27.5
PSME_secc	0.1	0.0	0.0	0.3	0.0	1.0	2.0	0.0	0.0	7.0	0.0	11.0	1.2	0.0	0.0	2.9	0.0	9.4
PSME_ur	0.2	0.0	0.0	0.5	0.0	0.8	2.0	0.0	0.0	5.0	0.0	7.0	4.7	1.5	0.0	12.6	0.0	16.3
PSME_yfms	0.1	0.0	0.0	0.3	0.0	0.4	1.0	0.0	0.0	4.0	0.0	4.0	3.4	0.0	0.0	10.9	0.0	13.2
PSME_ofss	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	1.4	0.0	0.0	3.9	0.0	10.1
ABLA2/PIEN_si	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	2.4	0.0	0.0	9.3	0.0	10.7
ABLA2/PIEN_seoc	0.1	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	3.0	0.0	3.0	2.0	0.0	0.0	5.8	0.0	13.3
ABLA2/PIEN_secc	0.1	0.0	0.0	0.4	0.0	1.0	2.0	0.0	0.0	5.0	0.0	16.0	1.6	0.0	0.0	6.1	0.0	6.5
ABLA2/PIEN_ur	0.5	0.0	0.0	1.1	0.0	3.4	2.0	2.0	0.0	5.0	0.0	9.0	6.4	0.3	0.0	18.2	0.0	36.4
ABLA2/PIEN_yfms	0.2	0.1	0.0	0.5	0.0	0.6	1.0	0.0	0.0	3.0	0.0	5.0	9.1	3.8	0.0	22.1	0.0	43.8
Cool-moist subalpine fir/ Engelmann spruce PVT--																		
LAOC_ur	0.1	0.0	0.0	0.2	0.0	0.5	0.0	0.0	0.0	1.0	0.0	2.0	3.1	0.0	0.0	7.4	0.0	24.7
LAOC_ofms	0.1	0.0	0.0	0.2	0.0	0.7	0.0	0.0	0.0	1.0	0.0	2.0	4.2	0.0	0.0	10.0	0.0	33.2
LAOC_ofss	0.1	0.0	0.0	0.2	0.0	0.6	0.0	0.0	0.0	1.0	0.0	4.0	1.9	0.0	0.0	4.5	0.0	15.1
PICO_si	4.7	0.0	0.0	14.4	0.0	25.3	10.0	1.0	0.0	28.0	0.0	49.0	22.3	0.9	0.0	56.3	0.0	134.4
PICO_seoc	1.2	0.2	0.0	3.1	0.0	6.4	5.0	1.0	0.0	12.0	0.0	16.0	11.1	5.0	0.0	26.5	0.0	40.7
PICO_secc	0.9	0.2	0.0	2.8	0.0	4.4	5.0	1.0	0.0	13.0	0.0	24.0	16.9	7.1	0.0	46.8	0.0	54.6
PICO_ur	2.4	0.0	0.0	8.9	0.0	11.2	7.0	0.0	0.0	24.0	0.0	35.0	9.0	0.0	0.0	34.5	0.0	39.4
PICO_yfms	1.7	0.0	0.0	5.2	0.0	6.4	6.0	0.0	0.0	17.0	0.0	36.0	37.4	0.0	0.0	106.4	0.0	226.3

	%Land						PD--patch density						MPS-Mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - - Percent land (%) - - - - - -						*- - - - - - - N/10 000 ha - - - - - - -*						*- - - - - - - - - - Ha - - - - - - - - - -*					
PSME_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0	1.2	0.0	4.1
PSME_seoc	0.1	0.0	0.0	0.4	0.0	0.6	1.0	0.0	0.0	3.0	0.0	4.0	2.8	0.0	0.0	10.1	0.0	14.1
PSME_secc	1.2	0.0	0.0	3.1	0.0	8.8	3.0	0.0	0.0	11.0	0.0	17.0	7.2	0.0	0.0	20.1	0.0	50.6
PSME_ur	0.6	0.4	0.0	1.3	0.0	1.7	5.0	2.0	0.0	12.0	0.0	13.0	6.8	4.1	0.0	16.2	0.0	17.0
PSME_yfms	1.0	0.1	0.0	3.0	0.0	4.0	3.0	2.0	0.0	9.0	0.0	13.0	16.2	10.1	0.0	38.1	0.0	44.8
PSME_ofms	0.4	0.0	0.0	1.3	0.0	2.6	2.0	0.0	0.0	5.0	0.0	7.0	7.8	0.0	0.0	27.6	0.0	37.8
PSME_ofss	0.5	0.0	0.0	1.5	0.0	2.2	2.0	0.0	0.0	5.0	0.0	7.0	12.9	0.0	0.0	40.8	0.0	48.5
ABGR_seoc	0.1	0.0	0.0	0.2	0.0	0.7	0.0	0.0	0.0	0.0	0.0	1.0	6.1	0.0	0.0	14.5	0.0	48.4
ABGR_yfms	0.1	0.0	0.0	0.2	0.0	0.7	1.0	0.0	0.0	3.0	0.0	10.0	0.9	0.0	0.0	2.1	0.0	6.9
ABGR_ofms	0.1	0.0	0.0	0.2	0.0	0.7	0.0	0.0	0.0	1.0	0.0	4.0	2.0	0.0	0.0	4.8	0.0	15.8
ABGR_ofss	0.2	0.0	0.0	0.4	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.0	11.5	0.0	0.0	27.7	0.0	92.2
ABLA2/PIEN_si	0.7	0.7	0.0	1.6	0.0	1.6	5.0	3.0	0.0	12.0	0.0	18.0	18.0	12.3	0.0	40.1	0.0	40.1
ABLA2/PIEN_seoc	0.8	0.2	0.0	2.1	0.0	2.8	7.0	1.0	0.0	20.0	0.0	21.0	9.2	9.4	0.0	15.4	0.0	17.5
ABLA2/PIEN_secc	3.8	0.0	0.0	11.2	0.0	25.8	6.0	0.0	0.0	21.0	0.0	35.0	13.6	0.0	0.0	46.0	0.0	74.5
ABLA2/PIEN_ur	2.1	0.5	0.0	5.8	0.0	7.6	8.0	2.0	0.0	22.0	0.0	28.0	39.4	6.5	0.0	96.3	0.0	257.5
ABLA2/PIEN_yfms	1.8	0.4	0.0	5.5	0.0	7.8	10.0	2.0	0.0	25.0	0.0	54.0	17.4	10.8	0.0	51.4	0.0	52.4
ABLA2/PIEN_ofss	0.2	0.0	0.0	0.4	0.0	1.1	0.0	0.0	0.0	2.0	0.0	3.0	10.0	0.0	0.0	25.2	0.0	76.6
PIAL/LALY_si	0.0	0.0	0.0	0.1	0.0	0.3	1.0	0.0	0.0	2.0	0.0	4.0	1.2	0.0	0.0	4.1	0.0	6.1
PIAL/LALY_seoc	0.1	0.0	0.0	0.4	0.0	1.0	2.0	0.0	0.0	6.0	0.0	7.0	2.1	0.0	0.0	5.7	0.0	15.7
PIAL/LALY_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	4.0	0.3	0.0	0.0	0.6	0.0	2.1
Herbland	0.2	0.2	0.0	0.5	0.0	0.8	4.0	2.0	0.0	8.0	0.0	11.0	4.3	2.8	0.0	11.5	0.0	13.6
Shrubland	0.1	0.0	0.0	0.2	0.0	0.7	2.0	0.0	0.0	5.0	0.0	14.0	0.7	0.0	0.0	2.3	0.0	4.6
Other	0.5	0.1	0.0	1.4	0.0	1.9	6.0	4.0	0.0	14.0	0.0	18.0	8.5	2.9	0.0	23.8	0.0	30.1
Harsh-cold																		
Subalpine fir/																		
Engelmann spruce PVT--																		
PICO_si	1.3	0.0	0.0	3.2	0.0	9.7	6.0	0.0	0.0	17.0	0.0	49.0	4.3	0.0	0.0	15.8	0.0	19.9
PICO_seoc	0.2	0.0	0.0	0.6	0.0	0.9	3.0	0.0	0.0	9.0	0.0	12.0	5.7	0.0	0.0	14.2	0.0	38.5
PICO_secc	0.1	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	3.0	0.0	5.0	2.2	0.0	0.0	5.7	0.0	16.0
PICO_ur	0.1	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	1.0	0.0	4.0	1.3	0.0	0.0	3.2	0.0	10.5
PICO_yfms	0.0	0.0	0.0	0.1	0.0	0.3	2.0	0.0	0.0	4.0	0.0	12.0	0.3	0.0	0.0	0.7	0.0	2.4
PSME_secc	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.7	0.0	0.0	4.2	0.0	13.9
PSME_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	4.0	0.3	0.0	0.0	0.7	0.0	2.4
PSME_ofms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.4	0.0	0.0	3.3	0.0	10.9
ABLA2/PIEN_si	0.5	0.0	0.0	1.3	0.0	3.9	2.0	0.0	0.0	5.0	0.0	12.0	5.1	0.0	0.0	15.5	0.0	32.0
ABLA2/PIEN_seoc	0.3	0.0	0.0	0.7	0.0	2.0	2.0	0.0	0.0	6.0	0.0	12.0	2.4	0.0	0.0	6.7	0.0	16.2
ABLA2/PIEN_secc	0.1	0.0	0.0	0.3	0.0	0.9	5.0	0.0	0.0	12.0	0.0	39.0	0.3	0.0	0.0	0.8	0.0	2.3
ABLA2/PIEN_ur	0.1	0.0	0.0	0.4	0.0	0.8	2.0	1.0	0.0	5.0	0.0	11.0	2.7	0.5	0.0	8.9	0.0	11.4
ABLA2/PIEN_yfms	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	2.0	0.0	3.0	1.3	0.0	0.0	3.1	0.0	9.8
PIAL/LALY_si	0.5	0.1	0.0	1.3	0.0	2.3	4.0	0.0	0.0	9.0	0.0	19.0	9.4	1.0	0.0	24.3	0.0	45.5
PIAL/LALY_seoc	0.5	0.0	0.0	1.4	0.0	3.8	2.0	0.0	0.0	6.0	0.0	9.0	8.2	0.0	0.0	24.5	0.0	41.0
PIAL/LALY_secc	0.5	0.0	0.0	1.2	0.0	4.0	1.0	0.0	0.0	2.0	0.0	8.0	6.3	0.0	0.0	15.2	0.0	50.6
PIAL/LALY_ur	0.2	0.0	0.0	0.6	0.0	0.9	1.0	0.0	0.0	4.0	0.0	5.0	3.8	0.0	0.0	14.3	0.0	16.9
PIAL/LALY_yfms	0.3	0.1	0.0	0.8	0.0	0.9	2.0	0.0	0.0	4.0	0.0	8.0	13.9	3.1	0.0	42.8	0.0	62.8
Herbland	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	4.0	0.0	7.0	0.3	0.0	0.0	1.0	0.0	2.1
Shrubland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0	1.3	0.0	4.3
Other	0.1	0.0	0.0	0.4	0.0	0.9	6.0	0.0	0.0	22.0	0.0	27.0	0.8	0.0	0.0	2.6	0.0	3.4

	%Land						PD--patch density						MPS-Mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - - Percent land (%) - - - - - -						*- - - - - - - N/10 000 ha - - - - - - -*						*- - - - - - - - - - Ha - - - - - - - - - -*					
Whitebark pine/ subalpine larch PVT--																		
ABLA2/PIEN_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	1.0	0.6	0.0	0.0	1.5	0.0	4.9
ABLA2/PIEN_seoc	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	2.0	0.0	3.0	0.9	0.0	0.0	2.3	0.0	6.9
PIAL/LALY_si	0.5	0.0	0.0	1.2	0.0	3.6	2.0	0.0	0.0	4.0	0.0	11.0	6.5	0.0	0.0	23.2	0.0	32.3
PIAL/LALY_seoc	0.8	0.0	0.0	3.1	0.0	3.9	2.0	0.0	0.0	7.0	0.0	11.0	12.8	0.0	0.0	41.5	0.0	55.4
PIAL/LALY_yfms	0.1	0.0	0.0	0.2	0.0	0.7	0.0	0.0	0.0	1.0	0.0	3.0	3.1	0.0	0.0	7.5	0.0	25.0
Herbland	0.1	0.0	0.0	0.3	0.0	0.7	2.0	0.0	0.0	7.0	0.0	7.0	1.4	0.0	0.0	3.8	0.0	10.6
Shrubland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.8	0.0	0.0	1.8	0.0	6.1
Other	0.2	0.0	0.0	0.6	0.0	1.5	4.0	0.0	0.0	15.0	0.0	21.0	1.7	0.0	0.0	4.6	0.0	12.4
Cottonwood PVT--																		
HDWD_seoc	0.1	0.0	0.0	0.3	0.0	1.1	0.0	0.0	0.0	1.0	0.0	2.0	6.8	0.0	0.0	16.4	0.0	54.7
Warm/dry - aspen PVT--																		
Herbland	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	3.0	0.0	9.0	0.2	0.0	0.0	0.4	0.0	1.2
Shrubland	0.1	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	1.0	0.0	3.0	1.8	0.0	0.0	4.2	0.0	14.0
Wyoming big sagebrush (warm to hot sites) PVT--																		
Herbland	0.2	0.0	0.0	0.4	0.0	1.3	0.0	0.0	0.0	1.0	0.0	4.0	3.8	0.0	0.0	9.2	0.0	30.5
Shrubland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.8	0.0	0.0	1.9	0.0	6.5
Fescue grassland PVT--																		
PIPO_yfms	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	2.0	0.0	0.0	0.0	0.1	0.0	0.3
Herbland	2.7	0.0	0.0	8.2	0.0	16.4	1.0	0.0	0.0	4.0	0.0	4.0	69.8	0.0	0.0	220.8	0.0	406.7
Other	0.2	0.0	0.0	0.7	0.0	0.8	2.0	0.0	0.0	6.0	0.0	9.0	2.8	0.0	0.0	9.9	0.0	12.1
Three-tip sagebrush steppe PVT--																		
Herbland	0.2	0.0	0.0	0.4	0.0	1.4	0.0	0.0	0.0	1.0	0.0	4.0	4.0	0.0	0.0	9.5	0.0	31.8
Shrubland	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	4.0	0.6	0.0	0.0	1.5	0.0	5.1
Riparian sedge (without *Salix* spp.) PVT--																		
Herbland	0.1	0.0	0.0	0.2	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.0	5.6	0.0	0.0	13.3	0.0	44.4
Other	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	3.0	0.6	0.0	0.0	1.4	0.0	4.8
Fescue grassland with conifers PVT--																		
Shrubland	0.1	0.0	0.0	0.2	0.0	0.5	0.0	0.0	0.0	1.0	0.0	3.0	2.1	0.0	0.0	5.1	0.0	17.2
Bluebunch wheatgrass steppe with conifers PVT--																		
Shrubland	0.1	0.0	0.0	0.2	0.0	0.8	0.0	0.0	0.0	0.0	0.0	1.0	6.7	0.0	0.0	16.2	0.0	53.9
Other--																		
Herbland	0.5	0.0	0.0	1.6	0.0	2.1	2.0	0.0	0.0	8.0	0.0	10.0	6.8	0.0	0.0	19.1	0.0	31.9
Other	2.6	0.8	0.0	7.1	0.0	12.0	5.0	3.0	0.0	12.0	0.0	13.0	29.4	19.1	0.0	67.2	0.0	108.1

	%Land						PD--patch density						MPS--mean patch size					
			80% Range		100% Range				80% Range		100% Range				80% Range		100% Range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percent land (%)						*N/10 000 ha*						*Ha*					
Mesic and wet forests subregion (ESR 4) (n=7):																		
Ponderosa pine PVT--																		
PIPO_si	0.1	0.0	0.0	0.3	0.0	0.7	0.0	0.0	0.0	0.0	0.0	1.0	9.3	0.0	0.0	26.1	0.0	65.3
PIPO_seoc	1.1	0.0	0.0	3.5	0.0	4.5	5.0	0.0	0.0	14.0	0.0	27.0	11.6	0.0	0.0	29.6	0.0	49.3
PIPO_yfms	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	3.0	0.0	6.0	0.7	0.0	0.0	2.5	0.0	2.9
Herbland	0.2	0.0	0.0	0.5	0.0	1.1	1.0	0.0	0.0	3.0	0.0	4.0	8.4	0.0	0.0	24.1	0.0	56.4
Warm/dry Douglas-fir/ grand fir PVT--																		
PIPO_si	0.8	0.1	0.0	2.2	0.0	4.6	4.0	1.0	0.0	11.0	0.0	16.0	10.1	2.3	0.0	27.7	0.0	54.4
PIPO_seoc	1.2	0.4	0.1	3.2	0.0	5.0	8.0	2.0	1.0	20.0	0.0	24.0	12.2	13.9	1.9	22.4	0.0	25.2
PIPO_secc	0.1	0.0	0.0	0.1	0.0	0.3	1.0	0.0	0.0	2.0	0.0	3.0	2.5	0.0	0.0	7.3	0.0	15.6
PIPO_ur	1.0	0.3	0.0	2.6	0.0	4.2	10.0	2.0	0.0	28.0	0.0	52.0	9.6	8.0	0.0	21.7	0.0	22.8
PIPO_yfms	4.1	2.8	0.9	8.0	0.2	10.0	17.0	17.0	2.0	33.0	1.0	54.0	31.9	16.1	13.1	66.1	12.2	76.2
PIPO_ofms	0.1	0.0	0.0	0.4	0.0	0.5	2.0	0.0	0.0	7.0	0.0	14.0	2.9	0.0	0.0	7.6	0.0	12.8
PIPO_ofss	0.4	0.0	0.0	1.2	0.0	2.2	2.0	0.0	0.0	5.0	0.0	7.0	8.3	0.0	0.0	24.7	0.0	51.3
LAOC_yfms	0.1	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	2.0	0.0	4.0	1.7	0.0	0.0	4.7	0.0	11.9
PICO_seoc	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	3.0	0.8	0.0	0.0	2.1	0.0	5.2
PICO_secc	0.1	0.0	0.0	0.3	0.0	0.7	3.0	0.0	0.0	7.0	0.0	18.0	0.6	0.0	0.0	1.6	0.0	4.0
PICO_ur	0.1	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	4.0	0.0	5.0	1.2	0.0	0.0	3.3	0.0	7.8
PSME_si	0.4	0.2	0.0	1.1	0.0	2.2	4.0	2.0	0.0	10.0	0.0	18.0	7.6	4.6	0.0	19.5	0.0	30.7
PSME_seoc	0.5	0.0	0.0	1.7	0.0	2.1	6.0	1.0	0.0	18.0	0.0	23.0	4.6	3.6	0.0	9.8	0.0	9.8
PSME_secc	0.2	0.0	0.0	0.6	0.0	0.6	3.0	0.0	0.0	9.0	0.0	11.0	3.7	0.0	0.0	9.6	0.0	12.4
PSME_ur	1.8	0.6	0.0	4.9	0.0	7.4	19.0	6.0	0.0	49.0	0.0	95.0	8.8	7.8	0.0	16.3	0.0	18.8
PSME_yfms	2.7	2.0	0.2	6.4	0.0	9.6	18.0	14.0	4.0	33.0	0.0	52.0	11.1	11.2	3.2	19.3	0.0	20.7
PSME_ofms	0.1	0.0	0.0	0.3	0.0	0.6	1.0	0.0	0.0	3.0	0.0	7.0	1.4	0.0	0.0	3.9	0.0	9.8
PSME_ofss	0.1	0.0	0.0	0.2	0.0	0.2	1.0	0.0	0.0	2.0	0.0	2.0	2.5	0.0	0.0	8.5	0.0	8.7
HDWD_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.7	0.0	0.0	4.7	0.0	11.7
Herbland	0.1	0.0	0.0	0.3	0.0	0.5	10.0	0.0	0.0	31.0	0.0	54.0	0.3	0.0	0.0	1.0	0.0	1.1
Shrubland	0.1	0.0	0.0	0.1	0.0	0.3	1.0	0.0	0.0	2.0	0.0	4.0	3.7	0.0	0.0	10.6	0.0	24.5
Other	0.2	0.2	0.0	0.5	0.0	0.6	11.0	4.0	0.0	34.0	0.0	34.0	3.7	0.6	0.0	10.0	0.0	20.8
Cool/moist Douglas-fir/ grand fir PVT--																		
PIPO_si	0.4	0.3	0.0	0.9	0.0	1.4	4.0	2.0	0.0	12.0	0.0	17.0	13.5	7.8	0.0	33.1	0.0	59.6
PIPO_seoc	2.3	0.4	0.1	6.5	0.0	12.2	11.0	5.0	1.0	24.0	0.0	31.0	10.8	6.9	1.6	24.7	0.0	39.8
PIPO_secc	0.1	0.0	0.0	0.2	0.0	0.3	1.0	0.0	0.0	2.0	0.0	4.0	5.0	0.0	0.0	14.3	0.0	32.9
PIPO_ur	2.0	0.3	0.0	6.5	0.0	7.6	12.0	4.0	0.0	34.0	0.0	59.0	9.4	7.7	0.0	21.4	0.0	34.0
PIPO_yfms	4.5	5.7	0.1	8.0	0.0	9.5	23.0	16.0	1.0	49.0	0.0	80.0	23.0	15.4	4.2	43.1	0.0	54.0
PIPO_ofms	1.0	0.2	0.0	2.7	0.0	4.0	4.0	5.0	0.0	8.0	0.0	12.0	16.4	3.7	0.0	42.6	0.0	75.5
PIPO_ofss	0.5	0.0	0.0	1.4	0.0	2.3	3.0	0.0	0.0	8.0	0.0	9.0	6.1	0.0	0.0	16.0	0.0	24.9
LAOC_si	0.2	0.0	0.0	0.7	0.0	1.2	3.0	0.0	0.0	9.0	0.0	21.0	6.1	0.0	0.0	18.4	0.0	37.2
LAOC_yfms	0.3	0.0	0.0	0.8	0.0	2.0	1.0	0.0	0.0	3.0	0.0	7.0	4.1	0.0	0.0	11.4	0.0	28.5
PICO_si	0.3	0.0	0.0	0.9	0.0	2.0	1.0	0.0	0.0	4.0	0.0	9.0	5.1	0.0	0.0	17.3	0.0	21.7
PICO_secc	2.7	0.0	0.0	7.6	0.0	17.6	2.0	0.0	0.0	5.0	0.0	9.0	33.3	0.0	0.0	96.0	0.0	192.6
PICO_ur	0.4	0.3	0.0	1.1	0.0	1.1	4.0	2.0	0.0	13.0	0.0	15.0	8.5	3.7	0.0	20.5	0.0	33.2
PICO_yfms	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	1.8	0.0	0.0	4.9	0.0	12.2
PSME_si	1.3	1.3	0.1	2.4	0.0	3.2	7.0	6.0	1.0	16.0	0.0	29.0	29.3	21.3	3.8	67.8	0.0	90.7
PSME_seoc	1.1	1.0	0.0	2.4	0.0	3.2	12.0	9.0	0.0	27.0	0.0	30.0	6.4	7.3	0.0	10.5	0.0	10.6
PSME_secc	0.5	0.5	0.0	1.1	0.0	1.4	4.0	3.0	0.0	9.0	0.0	15.0	14.1	9.4	0.0	34.2	0.0	40.0
PSME_ur	9.2	8.5	0.8	18.1	0.0	27.3	23.0	15.0	2.0	51.0	0.0	98.0	58.9	42.8	7.4	125.6	0.0	179.9
PSME_yfms	6.4	5.1	1.6	12.8	0.0	14.1	27.0	20.0	10.0	49.0	0.0	71.0	24.5	20.2	4.9	48.0	0.0	60.2
PSME_ofms	0.1	0.0	0.0	0.2	0.0	0.5	1.0	0.0	0.0	4.0	0.0	8.0	1.3	0.0	0.0	4.1	0.0	6.0
PSME_ofss	0.1	0.0	0.0	0.4	0.0	0.9	1.0	0.0	0.0	3.0	0.0	5.0	15.1	0.0	0.0	42.6	0.0	104.7
ABGR_si	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	1.8	0.0	0.0	5.7	0.0	8.6
ABGR_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.6	0.0	0.0	4.4	0.0	10.9
ABGR_ur	0.8	0.0	0.0	2.5	0.0	5.1	2.0	0.0	0.0	6.0	0.0	7.0	14.0	0.0	0.0	41.6	0.0	86.9
ABGR_yfms	0.5	0.0	0.0	1.5	0.0	3.5	1.0	0.0	0.0	4.0	0.0	8.0	7.3	0.0	0.0	22.0	0.0	42.9
ABLA2/PIEN_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	3.0	0.0	7.5
TSHE/THPL_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	2.5	0.0	6.2
HDWD_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	3.0	0.5	0.0	0.0	1.4	0.0	3.4
HDWD_seoc	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	1.0	0.0	2.0	1.5	0.0	0.0	4.1	0.0	10.3

	%Land						PD--patch density						MPS--mean patch size					
			80% Range		100% Range				80% Range		100% Range				80% Range		100% Range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - Percent land (%) - - - - - - -						*- - - - - - - N/10 000 ha - - - - - - - - -*						*- - - - - - - - - - Ha - - - - - - - - - -*					
HDWD_ur	0.2	0.0	0.0	0.5	0.0	1.2	1.0	0.0	0.0	3.0	0.0	8.0	2.2	0.0	0.0	6.0	0.0	15.1
HDWD_yfms	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	1.0	0.0	3.0	1.9	0.0	0.0	5.2	0.0	12.9
Herbland	0.1	0.0	0.0	0.3	0.0	0.5	11.0	4.0	0.0	30.0	0.0	50.0	0.5	0.4	0.0	1.0	0.0	1.1
Shrubland	0.0	0.0	0.0	0.1	0.0	0.1	1.0	1.0	0.0	4.0	0.0	6.0	2.9	0.4	0.0	8.2	0.0	8.9
Other	0.4	0.2	0.0	1.0	0.0	1.4	19.0	2.0	0.0	50.0	0.0	61.0	10.1	0.6	0.0	27.9	0.0	67.6
Cool/moist western hemlock/western redcedar PVT--																		
PIPO_yfms	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	3.0	0.0	8.0	0.2	0.0	0.0	0.5	0.0	1.3
LAOC_si	0.1	0.0	0.0	0.2	0.0	0.5	1.0	0.0	0.0	2.0	0.0	5.0	1.7	0.0	0.0	4.6	0.0	11.6
PICO_seoc	0.1	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	5.6	0.0	0.0	15.6	0.0	38.9
PICO_secc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.9	0.0	0.0	5.4	0.0	13.4
PICO_ur	0.0	0.0	0.0	0.1	0.0	0.3	1.0	0.0	0.0	2.0	0.0	4.0	0.9	0.0	0.0	2.5	0.0	6.1
PSME_secc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.7	0.0	0.0	2.0	0.0	4.9
PSME_ur	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	3.0	0.7	0.0	0.0	1.8	0.0	4.6
PSME_yfms	0.0	0.0	0.0	0.1	0.0	0.2	2.0	0.0	0.0	5.0	0.0	12.0	0.3	0.0	0.0	0.7	0.0	1.8
ABGR_ofms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	2.9	0.0	7.2
ABLA2/PIEN_yfms	0.1	0.0	0.0	0.4	0.0	0.9	0.0	0.0	0.0	1.0	0.0	3.0	4.5	0.0	0.0	12.6	0.0	31.5
TSHE/THPL_ur	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	2.1	0.0	0.0	5.8	0.0	14.4
HDWD_ur	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	1.2	0.0	0.0	3.4	0.0	8.6
Pacific silver fir PVT--																		
PIPO_ur	0.0	0.0	0.0	0.1	0.0	0.2	1.0	0.0	0.0	2.0	0.0	6.0	0.5	0.0	0.0	1.4	0.0	3.6
PIPO_yfms	0.1	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	1.0	0.0	2.0	2.9	0.0	0.0	8.2	0.0	20.6
LAOC_si	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.5	0.0	0.0	4.3	0.0	10.6
PSME_si	0.2	0.0	0.0	0.4	0.0	1.0	2.0	0.0	0.0	8.0	0.0	13.0	1.4	0.0	0.0	4.4	0.0	7.8
PSME_seoc	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	1.0	0.0	3.0	1.7	0.0	0.0	4.7	0.0	11.8
PSME_ur	0.1	0.0	0.0	0.3	0.0	0.7	1.0	0.0	0.0	4.0	0.0	8.0	2.4	0.0	0.0	8.4	0.0	8.6
PSME_yfms	0.2	0.0	0.0	0.5	0.0	0.9	2.0	0.0	0.0	6.0	0.0	8.0	2.1	0.0	0.0	6.5	0.0	11.1
ABGR_ur	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	3.6	0.0	0.0	10.0	0.0	25.0
ABGR_yfms	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.8	0.0	0.0	5.0	0.0	12.6
ABAM_si	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	1.0	0.0	2.0	2.5	0.0	0.0	6.9	0.0	17.2
ABAM_ur	1.0	0.0	0.0	3.2	0.0	4.9	1.0	0.0	0.0	3.0	0.0	5.0	35.8	0.0	0.0	108.6	0.0	209.2
ABAM_yfms	0.5	0.0	0.0	1.6	0.0	2.0	1.0	0.0	0.0	4.0	0.0	5.0	12.4	0.0	0.0	39.9	0.0	60.4
ABLA2/PIEN_yfms	0.1	0.0	0.0	0.2	0.0	0.5	1.0	0.0	0.0	2.0	0.0	6.0	1.3	0.0	0.0	3.6	0.0	9.0
Herbland	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	4.0	0.4	0.0	0.0	1.0	0.0	2.5
Other	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.0	0.0	3.0	0.7	0.0	0.0	1.9	0.0	4.9
Mountain hemlock PVT--																		
LAOC_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	3.2	0.0	7.9
PSME_si	0.1	0.0	0.0	0.2	0.0	0.3	1.0	0.0	0.0	2.0	0.0	4.0	3.2	0.0	0.0	10.2	0.0	14.9
PSME_ur	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	3.0	1.0	0.0	0.0	2.7	0.0	6.8
PSME_yfms	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	4.0	0.0	6.0	0.8	0.0	0.0	2.3	0.0	4.3
PSME_ofms	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	3.6	0.0	0.0	10.0	0.0	25.1
ABAM_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.6	0.0	0.0	1.5	0.0	3.8
ABAM_ur	0.1	0.0	0.0	0.3	0.0	0.3	1.0	0.0	0.0	4.0	0.0	7.0	2.8	0.0	0.0	8.5	0.0	16.3
ABAM_yfms	0.1	0.0	0.0	0.4	0.0	0.9	1.0	0.0	0.0	3.0	0.0	5.0	3.4	0.0	0.0	10.6	0.0	18.5
ABLA2/PIEN_si	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	2.0	0.0	4.0	0.6	0.0	0.0	1.5	0.0	3.8
ABLA2/PIEN_yfms	0.2	0.0	0.0	0.5	0.0	1.1	2.0	0.0	0.0	7.0	0.0	16.0	2.2	0.0	0.0	7.5	0.0	8.3
TSME_si	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	1.0	0.0	2.0	3.3	0.0	0.0	9.2	0.0	23.0
TSME_seoc	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.9	0.0	0.0	5.2	0.0	13.1
TSME_ur	1.3	0.0	0.0	4.2	0.0	7.0	1.0	0.0	0.0	2.0	0.0	4.0	68.9	0.0	0.0	232.8	0.0	283.1
TSME_yfms	0.6	0.0	0.0	1.7	0.0	4.2	1.0	0.0	0.0	2.0	0.0	6.0	10.2	0.0	0.0	28.4	0.0	71.1
PIMO_si	0.1	0.0	0.0	0.2	0.0	0.5	3.0	0.0	0.0	7.0	0.0	18.0	0.4	0.0	0.0	1.1	0.0	2.6
Warm/dry Subalpine fir/Engelmann spruce PVT--																		
PIPO_seoc	0.7	0.0	0.0	2.3	0.0	3.8	2.0	0.0	0.0	7.0	0.0	8.0	10.2	0.0	0.0	32.7	0.0	50.1
PIPO_yfms	0.1	0.0	0.0	0.2	0.0	0.3	1.0	0.0	0.0	4.0	0.0	6.0	1.7	0.0	0.0	5.4	0.0	8.7
LAOC_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.6	0.0	0.0	1.7	0.0	4.3
LAOC_yfms	0.1	0.0	0.0	0.2	0.0	0.5	1.0	0.0	0.0	2.0	0.0	4.0	1.9	0.0	0.0	5.4	0.0	13.5
PICO_si	0.1	0.0	0.0	0.1	0.0	0.3	1.0	0.0	0.0	2.0	0.0	4.0	1.2	0.0	0.0	3.2	0.0	8.1

	%Land						PD--patch density						MPS--mean patch size					
			80% Range		100% Range				80% Range		100% Range				80% Range		100% Range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - Percent land (%) - - - - - -						*- - - - - - - N/10 000 ha - - - - - - - - -*						*- - - - - - - - - - Ha - - - - - - - - - -*					
PICO_seocs	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	2.5	0.0	0.0	7.0	0.0	17.4
PICO_secc	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	1.1	0.0	0.0	2.9	0.0	7.3
PICO_ur	0.1	0.0	0.0	0.3	0.0	0.4	1.0	0.0	0.0	4.0	0.0	6.0	2.4	0.0	0.0	7.6	0.0	11.4
PSME_si	0.1	0.0	0.0	0.3	0.0	0.5	2.0	1.0	0.0	4.0	0.0	6.0	4.4	1.8	0.0	11.6	0.0	15.9
PSME_seoc	0.6	0.0	0.0	1.7	0.0	3.4	3.0	0.0	0.0	9.0	0.0	17.0	5.3	0.0	0.0	15.4	0.0	19.6
PSME_secc	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	1.0	0.0	3.0	1.8	0.0	0.0	5.2	0.0	12.9
PSME_ur	0.6	0.0	0.0	1.6	0.0	2.7	5.0	1.0	0.0	13.0	0.0	24.0	8.2	2.4	0.0	21.9	0.0	37.6
PSME_yfms	0.9	0.4	0.0	2.2	0.0	2.9	6.0	2.0	0.0	16.0	0.0	23.0	12.4	12.6	0.0	24.5	0.0	33.1
PSME_ofms	0.0	0.0	0.0	0.1	0.0	0.2	1.0	0.0	0.0	3.0	0.0	3.0	1.2	0.0	0.0	3.9	0.0	6.1
PSME_ofss	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.8	0.0	0.0	2.4	0.0	5.9
ABLA2/PIEN_si	0.2	0.0	0.0	0.6	0.0	0.7	2.0	0.0	0.0	7.0	0.0	8.0	5.9	0.0	0.0	15.8	0.0	23.5
ABLA2/PIEN_seoc	0.7	0.0	0.0	2.0	0.0	4.7	3.0	0.0	0.0	7.0	0.0	11.0	8.2	0.0	0.0	25.4	0.0	41.3
ABLA2/PIEN_secc	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	1.8	0.0	0.0	5.9	0.0	8.2
ABLA2/PIEN_ur	0.5	0.0	0.0	1.2	0.0	1.2	6.0	2.0	0.0	14.0	0.0	15.0	3.9	1.0	0.0	10.0	0.0	11.3
ABLA2/PIEN_yfms	0.4	0.4	0.0	0.7	0.0	0.8	4.0	3.0	0.0	11.0	0.0	13.0	5.7	4.2	0.0	13.1	0.0	15.4
PIMO_si	0.1	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	2.0	0.0	4.0	1.6	0.0	0.0	4.6	0.0	11.5
Herbland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.5	0.0	0.0	4.2	0.0	10.5
Other	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	2.0	0.0	3.0	0.6	0.0	0.0	1.7	0.0	4.1
Cool/moist subalpine fir/Engelmann spruce PVT--																		
PIPO_seoc	1.3	0.1	0.0	3.6	0.0	7.2	10.0	1.0	0.0	28.0	0.0	38.0	9.1	2.3	0.0	22.6	0.0	33.4
PIPO_ur	0.4	0.0	0.0	1.2	0.0	2.7	0.0	0.0	0.0	1.0	0.0	1.0	38.2	0.0	0.0	111.2	0.0	246.8
PIPO_yfms	0.0	0.0	0.0	0.1	0.0	0.2	2.0	1.0	0.0	6.0	0.0	8.0	0.6	0.1	0.0	2.0	0.0	2.4
PIPO_ofms	0.2	0.0	0.0	0.5	0.0	0.9	2.0	0.0	0.0	5.0	0.0	7.0	5.1	0.0	0.0	15.9	0.0	22.3
PIPO_ofss	0.1	0.0	0.0	0.2	0.0	0.6	2.0	0.0	0.0	5.0	0.0	12.0	0.7	0.0	0.0	2.0	0.0	5.0
LAOC_si	0.3	0.0	0.0	0.7	0.0	1.8	1.0	0.0	0.0	4.0	0.0	8.0	3.3	0.0	0.0	9.5	0.0	21.7
LAOC_seoc	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.0	0.0	1.0	1.8	0.0	0.0	5.6	0.0	9.5
LAOC_yfms	0.4	0.0	0.0	1.2	0.0	1.8	2.0	0.0	0.0	5.0	0.0	9.0	10.2	0.0	0.0	25.7	0.0	27.5
PICO_si	1.0	0.0	0.0	3.2	0.0	5.4	2.0	0.0	0.0	4.0	0.0	6.0	30.2	0.0	0.0	87.8	0.0	177.6
PICO_secc	0.2	0.0	0.0	0.6	0.0	1.3	4.0	0.0	0.0	14.0	0.0	21.0	1.1	0.0	0.0	3.6	0.0	5.9
PICO_ur	0.6	0.2	0.0	1.5	0.0	3.1	2.0	2.0	0.0	5.0	0.0	6.0	13.0	3.9	0.0	31.6	0.0	50.3
PSME_si	0.2	0.0	0.0	0.4	0.0	1.1	2.0	0.0	0.0	5.0	0.0	7.0	2.5	0.0	0.0	7.3	0.0	15.7
PSME_seoc	0.9	0.0	0.0	2.5	0.0	4.0	7.0	0.0	0.0	21.0	0.0	34.0	6.7	0.0	0.0	16.4	0.0	23.4
PSME_secc	0.4	0.0	0.0	1.0	0.0	2.5	1.0	0.0	0.0	3.0	0.0	8.0	4.7	0.0	0.0	13.1	0.0	32.7
PSME_ur	2.0	0.3	0.1	4.9	0.0	9.5	9.0	6.0	2.0	21.0	0.0	36.0	17.5	6.0	3.0	40.4	0.0	61.2
PSME_yfms	1.6	0.8	0.2	3.9	0.1	5.2	14.0	7.0	5.0	32.0	3.0	40.0	12.5	11.5	3.1	22.6	1.3	27.5
PSME_ofms	0.2	0.0	0.0	0.5	0.0	1.1	1.0	0.0	0.0	2.0	0.0	2.0	7.7	0.0	0.0	22.4	0.0	50.4
ABGR_yfms	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	3.3	0.0	0.0	9.2	0.0	23.0
ABLA2/PIEN_si	1.5	1.1	0.0	3.0	0.0	3.8	7.0	7.0	2.0	12.0	0.0	15.0	20.2	16.7	0.6	47.3	0.0	53.5
ABLA2/PIEN_seoc	2.9	0.1	0.0	7.4	0.0	13.5	11.0	3.0	0.0	30.0	0.0	58.0	22.2	3.4	0.0	57.5	0.0	97.7
ABLA2/PIEN_secc	0.4	0.1	0.0	1.1	0.0	1.5	2.0	2.0	0.0	4.0	0.0	5.0	11.1	8.6	0.0	26.3	0.0	26.9
ABLA2/PIEN_ur	4.1	1.8	0.4	9.5	0.4	10.6	4.0	3.0	1.0	9.0	1.0	11.0	119.9	45.8	31.9	299.7	24.9	415.5
ABLA2/PIEN_yfms	5.9	3.2	0.1	13.8	0.0	23.2	10.0	6.0	1.0	22.0	0.0	29.0	71.2	21.9	1.8	159.5	0.0	221.0
PIAL/LALY_seoc	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	3.0	0.0	3.0	0.6	0.0	0.0	1.8	0.0	4.3
PIMO_si	0.4	0.0	0.0	1.0	0.0	2.6	2.0	0.0	0.0	6.0	0.0	15.0	2.4	0.0	0.0	6.8	0.0	17.0
PIMO_yfms	0.1	0.0	0.0	0.4	0.0	1.0	1.0	0.0	0.0	2.0	0.0	5.0	3.0	0.0	0.0	8.5	0.0	21.2
Herbland	0.1	0.0	0.0	0.2	0.0	0.3	3.0	0.0	0.0	7.0	0.0	12.0	0.9	0.0	0.0	2.9	0.0	4.2
Shrubland	0.5	0.0	0.0	1.5	0.0	3.0	2.0	0.0	0.0	6.0	0.0	12.0	7.0	0.0	0.0	24.4	0.0	24.6
Other	0.9	0.7	0.1	1.9	0.0	3.2	21.0	21.0	7.0	36.0	0.0	39.0	4.5	3.1	0.2	9.8	0.0	16.0
Harsh/cold subalpine fir/Engelmann spruce PVT--																		
PIPO_seoc	0.2	0.0	0.0	0.6	0.0	1.1	3.0	0.0	0.0	8.0	0.0	18.0	4.1	0.0	0.0	11.9	0.0	21.0
PIPO_ofms	0.1	0.0	0.0	0.2	0.0	0.5	1.0	0.0	0.0	2.0	0.0	3.0	2.4	0.0	0.0	6.9	0.0	16.7
PIPO_ofss	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	3.0	0.3	0.0	0.0	0.9	0.0	2.3
PICO_si	0.3	0.0	0.0	0.9	0.0	2.2	1.0	0.0	0.0	3.0	0.0	3.0	10.3	0.0	0.0	29.7	0.0	68.2
PICO_seoc	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	3.0	1.0	0.0	0.0	2.8	0.0	7.0
PSME_seoc	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	3.0	1.0	0.0	0.0	2.7	0.0	6.7
PSME_ur	0.0	0.0	0.0	0.1	0.0	0.1	3.0	0.0	0.0	7.0	0.0	9.0	0.3	0.0	0.0	1.0	0.0	1.2

	%Land						PD--patch density						MPS--mean patch size					
			80% Range		100% Range				80% Range		100% Range				80% Range		100% Range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percent land (%)						*N/10 000 ha*						*Ha*					
ABLA2/PIEN_si	0.5	0.0	0.0	1.6	0.0	2.3	2.0	1.0	0.0	4.0	0.0	6.0	31.5	0.2	0.0	107.5	0.0	109.1
ABLA2/PIEN_seoc	0.8	0.0	0.0	2.5	0.0	4.7	2.0	0.0	0.0	5.0	0.0	9.0	14.7	0.0	0.0	50.8	0.0	54.5
ABLA2/PIEN_secc	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	3.0	0.0	4.0	1.2	0.0	0.0	3.8	0.0	5.5
ABLA2/PIEN_ur	0.2	0.0	0.0	0.6	0.0	0.7	6.0	0.0	0.0	20.0	0.0	22.0	2.1	0.0	0.0	6.2	0.0	10.7
ABLA2/PIEN_yfms	0.5	0.0	0.0	1.1	0.0	1.4	7.0	0.0	0.0	20.0	0.0	28.0	6.0	0.0	0.0	17.0	0.0	32.7
PIAL/LALY_si	0.6	0.0	0.0	2.2	0.0	2.7	2.0	0.0	0.0	6.0	0.0	12.0	15.1	0.0	0.0	46.8	0.0	83.3
PIAL/LALY_seoc	0.6	0.0	0.0	2.0	0.0	3.0	2.0	0.0	0.0	7.0	0.0	8.0	9.5	0.0	0.0	30.2	0.0	48.9
PIAL/LALY_ur	0.2	0.0	0.0	0.4	0.0	1.1	0.0	0.0	0.0	1.0	0.0	3.0	5.1	0.0	0.0	14.4	0.0	36.0
Herbland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.2	0.0	0.0	3.2	0.0	8.1
Shrubland	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	4.0	0.0	9.0	0.1	0.0	0.0	0.3	0.0	0.8
Other	0.1	0.0	0.0	0.2	0.0	0.2	3.0	2.0	0.0	6.0	0.0	11.0	1.3	0.2	0.0	3.4	0.0	6.0
Whitebark pine/ subalpine larch PVT--																		
LAOC_yfms	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	6.0	0.1	0.0	0.0	0.4	0.0	0.9
PICO_ur	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	6.0	0.2	0.0	0.0	0.6	0.0	1.4
PIAL/LALY_si	0.5	0.0	0.0	1.2	0.0	1.9	2.0	0.0	0.0	5.0	0.0	6.0	9.4	0.0	0.0	25.4	0.0	35.7
PIAL/LALY_seoc	0.7	0.0	0.0	1.8	0.0	3.8	1.0	0.0	0.0	4.0	0.0	5.0	14.7	0.0	0.0	38.2	0.0	70.6
PIAL/LALY_ur	0.1	0.0	0.0	0.2	0.0	0.3	1.0	0.0	0.0	2.0	0.0	3.0	2.9	0.0	0.0	10.0	0.0	10.5
Shrubland	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	4.0	0.0	9.0	0.2	0.0	0.0	0.6	0.0	1.4
Other	0.7	0.4	0.0	1.6	0.0	2.6	4.0	1.0	0.0	11.0	0.0	12.0	28.6	3.3	0.0	92.5	0.0	101.7
Fescue grassland PVT--																		
PSME_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	2.5	0.0	6.3
Herbland	1.3	0.0	0.0	3.6	0.0	8.7	1.0	1.0	0.0	3.0	0.0	7.0	20.2	0.1	0.0	55.2	0.0	117.6
Other	0.3	0.0	0.0	0.8	0.0	1.3	1.0	0.0	0.0	1.0	0.0	2.0	24.6	0.0	0.0	68.9	0.0	139.9
Mountain shrub PVT--																		
Shrubland	0.1	0.0	0.0	0.3	0.0	0.5	1.0	0.0	0.0	2.0	0.0	3.0	9.8	0.0	0.0	27.6	0.0	42.5
Riparian sedge (without *Salix* spp.) PVT--																		
Herbland	0.1	0.0	0.0	0.4	0.0	0.5	1.0	0.0	0.0	2.0	0.0	2.0	7.0	0.0	0.0	22.8	0.0	33.2
Other (nonforest-nonrangeland and anthropogenic types)--																		
PSME_ur	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	3.0	0.0	4.0	0.4	0.0	0.0	1.4	0.0	1.7
HDWD_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	2.7	0.0	6.8
Herbland	0.2	0.0	0.0	0.7	0.0	1.3	2.0	0.0	0.0	4.0	0.0	9.0	7.4	0.0	0.0	21.1	0.0	31.6
Shrubland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.7	0.0	0.0	1.9	0.0	4.9
Other	3.7	4.4	1.2	6.2	1.2	6.8	8.0	6.0	4.0	14.0	3.0	19.0	45.2	41.0	32.6	65.1	27.2	69.6

	%Land--						PD--Patch Density						MPS-Mean patch size ()					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - - *Percent land (%)* - - - - - - -						- - - - - - - *N/10 000 ha* - - - - - - - - - - - - - - - - - -						*Ha* - - - - - - - - - -					
Wet-frigid forests subregion (ESR 5) (n=7):																		
Warm/dry Douglas-fir/ grand fir PVT--																		
PIPO_seoc	0.5	0.0	0.0	1.5	0.0	3.7	2.0	0.0	0.0	5.0	0.0	13.0	4.0	0.0	0.0	11.1	0.0	27.7
PIPO_secc	0.5	0.0	0.0	1.5	0.0	3.2	1.0	0.0	0.0	3.0	0.0	4.0	12.9	0.0	0.0	40.0	0.0	70.6
PIPO_ur	0.4	0.0	0.0	1.4	0.0	1.7	3.0	0.0	0.0	9.0	0.0	11.0	4.6	0.0	0.0	15.1	0.0	21.6
PIPO_yfms	0.5	0.0	0.0	1.7	0.0	1.7	2.0	0.0	0.0	5.0	0.0	10.0	26.3	0.0	0.0	70.2	0.0	150.5
PIPO_ofms	0.9	0.0	0.0	3.0	0.0	4.0	2.0	0.0	0.0	5.0	0.0	9.0	28.3	0.0	0.0	88.0	0.0	153.8
PIPO_ofss	1.2	0.0	0.0	3.3	0.0	8.3	3.0	0.0	0.0	8.0	0.0	19.0	6.2	0.0	0.0	17.4	0.0	43.5
PICO_si	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0	1.0	5.1	0.0	0.0	14.4	0.0	35.9
PICO_seoc	0.2	0.0	0.0	0.6	0.0	1.5	0.0	0.0	0.0	0.0	0.0	1.0	19.9	0.0	0.0	55.8	0.0	139.5
PICO_secc	0.1	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	1.0	0.0	3.0	1.6	0.0	0.0	4.4	0.0	11.0
PICO_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.8	0.0	0.0	2.3	0.0	4.5
PICO_yfms	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	3.0	0.0	8.0	0.2	0.0	0.0	0.4	0.0	1.1
PSME_seoc	1.4	0.0	0.0	4.1	0.0	7.8	6.0	0.0	0.0	16.0	0.0	27.0	9.6	0.0	0.0	32.3	0.0	37.4
PSME_secc	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	4.0	0.3	0.0	0.0	1.0	0.0	2.4
PSME_ur	0.1	0.0	0.0	0.3	0.0	0.3	1.0	0.0	0.0	1.0	0.0	2.0	6.3	0.0	0.0	20.0	0.0	31.1
PSME_yfms	0.1	0.0	0.0	0.4	0.0	0.6	0.0	0.0	0.0	1.0	0.0	1.0	10.8	0.0	0.0	34.9	0.0	51.1
PSME_ofms	0.2	0.0	0.0	0.5	0.0	1.1	0.0	0.0	0.0	1.0	0.0	2.0	10.6	0.0	0.0	29.8	0.0	74.4
PIAL/LALY_seoc	0.2	0.0	0.0	0.4	0.0	1.1	0.0	0.0	0.0	1.0	0.0	2.0	7.1	0.0	0.0	19.9	0.0	49.7
HDWD_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.2	0.0	0.0	3.3	0.0	8.2
Herbland	0.0	0.0	0.0	0.1	0.0	0.2	3.0	0.0	0.0	7.0	0.0	18.0	0.2	0.0	0.0	0.5	0.0	1.3
Shrubland	0.0	0.0	0.0	0.1	0.0	0.2	3.0	0.0	0.0	8.0	0.0	19.0	0.7	0.0	0.0	2.3	0.0	4.1
Other	0.0	0.0	0.0	0.0	0.0	0.1	2.0	1.0	0.0	4.0	0.0	5.0	0.4	0.1	0.0	1.1	0.0	2.0
Cool/moist Douglas-fir/grand fir PVT--																		
PIPO_si	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	3.9	0.0	0.0	10.9	0.0	27.4
PIPO_seoc	0.4	0.0	0.0	1.4	0.0	2.0	2.0	0.0	0.0	8.0	0.0	10.0	5.9	0.0	0.0	18.5	0.0	31.6
PIPO_secc	0.7	0.0	0.0	2.2	0.0	3.0	1.0	0.0	0.0	4.0	0.0	6.0	24.0	0.0	0.0	73.4	0.0	137.6
PIPO_ur	0.9	0.0	0.0	2.8	0.0	5.5	2.0	0.0	0.0	8.0	0.0	10.0	9.7	0.0	0.0	30.1	0.0	53.4
PIPO_yfms	0.6	0.0	0.0	1.7	0.0	3.6	4.0	0.0	0.0	11.0	0.0	16.0	4.9	0.0	0.0	13.3	0.0	23.4
PIPO_ofms	0.3	0.0	0.0	0.8	0.0	1.3	2.0	0.0	0.0	8.0	0.0	12.0	2.9	0.0	0.0	10.3	0.0	10.3
PIPO_ofss	1.3	0.0	0.0	3.5	0.0	8.8	3.0	0.0	0.0	8.0	0.0	21.0	5.9	0.0	0.0	16.6	0.0	41.4
LAOC_seoc	0.4	0.0	0.0	1.0	0.0	2.6	1.0	0.0	0.0	2.0	0.0	6.0	5.9	0.0	0.0	16.4	0.0	41.1
PICO_si	1.7	0.0	0.0	5.2	0.0	9.3	6.0	0.0	0.0	18.0	0.0	39.0	11.5	0.0	0.0	37.0	0.0	57.1
PICO_seoc	0.5	0.0	0.0	1.5	0.0	3.1	3.0	0.0	0.0	9.0	0.0	10.0	5.4	0.0	0.0	16.2	0.0	31.9
PICO_secc	0.2	0.0	0.0	0.7	0.0	0.9	1.0	0.0	0.0	3.0	0.0	4.0	6.8	0.0	0.0	23.2	0.0	26.8
PICO_ur	0.2	0.0	0.0	0.5	0.0	0.8	0.0	0.0	0.0	1.0	0.0	2.0	12.3	0.0	0.0	37.2	0.0	73.0
PICO_yfms	0.4	0.0	0.0	1.2	0.0	1.4	2.0	0.0	0.0	5.0	0.0	10.0	10.7	0.0	0.0	32.1	0.0	63.6
PSME_si	0.3	0.0	0.0	0.8	0.0	1.9	0.0	0.0	0.0	1.0	0.0	3.0	8.7	0.0	0.0	24.4	0.0	61.1
PSME_seoc	0.9	0.5	0.0	2.3	0.0	3.6	7.0	2.0	0.0	20.0	0.0	40.0	11.6	9.0	0.0	26.9	0.0	34.7
PSME_secc	0.1	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	3.0	0.0	4.0	1.9	0.0	0.0	5.4	0.0	12.9
PSME_ur	0.7	0.0	0.0	1.9	0.0	4.6	1.0	0.0	0.0	3.0	0.0	4.0	16.9	0.0	0.0	48.8	0.0	110.1
PSME_yfms	0.7	0.0	0.0	2.0	0.0	4.7	4.0	0.0	0.0	12.0	0.0	17.0	5.0	0.0	0.0	14.5	0.0	28.2
PSME_ofms	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	4.0	0.0	8.0	2.1	0.0	0.0	6.3	0.0	13.5
PSME_ofss	0.1	0.0	0.0	0.3	0.0	0.5	1.0	0.0	0.0	4.0	0.0	5.0	2.6	0.0	0.0	7.9	0.0	14.2
ABLA2/PIEN_si	0.2	0.0	0.0	0.6	0.0	1.6	2.0	0.0	0.0	4.0	0.0	11.0	2.1	0.0	0.0	5.8	0.0	14.4
ABLA2/PIEN_seoc	0.3	0.0	0.0	0.8	0.0	2.0	2.0	0.0	0.0	7.0	0.0	11.0	2.9	0.0	0.0	8.4	0.0	18.5
ABLA2/PIEN_secc	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.0	0.0	1.0	1.9	0.0	0.0	5.5	0.0	10.1
ABLA2/PIEN_ur	0.3	0.0	0.0	0.8	0.0	1.1	5.0	0.0	0.0	14.0	0.0	20.0	1.8	0.0	0.0	5.9	0.0	6.5
ABLA2/PIEN_yfms	0.1	0.0	0.0	0.3	0.0	0.6	1.0	0.0	0.0	3.0	0.0	6.0	2.5	0.0	0.0	8.7	0.0	8.9
ABLA2/PIEN_ofss	0.1	0.0	0.0	0.3	0.0	0.6	2.0	0.0	0.0	5.0	0.0	12.0	0.8	0.0	0.0	2.2	0.0	5.4
PIAL/LALY_si	0.2	0.0	0.0	0.4	0.0	1.1	2.0	0.0	0.0	4.0	0.0	11.0	1.4	0.0	0.0	4.0	0.0	10.1
PIAL/LALY_seoc	0.4	0.0	0.0	1.3	0.0	1.9	3.0	0.0	0.0	7.0	0.0	11.0	5.5	0.0	0.0	18.8	0.0	20.4
HDWD_secc	0.0	0.0	0.0	0.1	0.0	0.3	1.0	0.0	0.0	2.0	0.0	5.0	0.8	0.0	0.0	2.2	0.0	5.5
HDWD_yfms	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	2.0	0.0	2.0	1.6	0.0	0.0	5.5	0.0	6.3
HDWD_ofss	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	3.0	0.7	0.0	0.0	1.9	0.0	4.8
Herbland	0.0	0.0	0.0	0.1	0.0	0.3	1.0	0.0	0.0	4.0	0.0	9.0	0.4	0.0	0.0	1.1	0.0	2.9
Shrubland	0.1	0.0	0.0	0.3	0.0	0.4	3.0	0.0	0.0	10.0	0.0	12.0	2.6	0.0	0.0	7.3	0.0	13.2
Other	0.2	0.2	0.0	0.6	0.0	0.6	8.0	3.0	0.0	22.0	0.0	33.0	2.2	1.7	0.0	4.8	0.0	5.6

	%Land--						PD--Patch Density						MPS-Mean patch size ()					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percent land (%)						*N/10 000 ha*						*Ha*					
Pacific silver fir PVT--																		
LAOC_ur	0.1	0.0	0.0	0.2	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.0	6.2	0.0	0.0	17.5	0.0	43.7
PICO_si	0.1	0.0	0.0	0.3	0.0	0.7	0.0	0.0	0.0	1.0	0.0	2.0	4.5	0.0	0.0	12.7	0.0	31.7
PICO_seoc	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0	1.0	4.8	0.0	0.0	13.4	0.0	33.4
PICO_secc	3.0	0.0	0.0	8.3	0.0	20.9	0.0	0.0	0.0	1.0	0.0	2.0	132.5	0.0	0.0	370.9	0.0	927.2
PICO_ur	0.1	0.0	0.0	0.2	0.0	0.5	1.0	0.0	0.0	2.0	0.0	6.0	1.3	0.0	0.0	3.7	0.0	9.3
PICO_yfms	0.3	0.0	0.0	0.7	0.0	1.7	0.0	0.0	0.0	1.0	0.0	2.0	11.0	0.0	0.0	30.9	0.0	77.1
PSME_seoc	0.8	0.0	0.0	2.3	0.0	4.7	1.0	0.0	0.0	4.0	0.0	6.0	16.1	0.0	0.0	52.0	0.0	78.5
PSME_ur	0.1	0.0	0.0	0.2	0.0	0.6	1.0	0.0	0.0	2.0	0.0	6.0	1.5	0.0	0.0	4.1	0.0	10.2
PSME_yfms	0.3	0.0	0.0	1.0	0.0	1.1	1.0	0.0	0.0	3.0	0.0	4.0	13.8	0.0	0.0	37.0	0.0	56.3
PSME_ofms	0.2	0.0	0.0	0.4	0.0	1.1	1.0	0.0	0.0	2.0	0.0	4.0	4.2	0.0	0.0	11.7	0.0	29.3
ABAM_seoc	0.1	0.0	0.0	0.3	0.0	0.8	0.0	0.0	0.0	1.0	0.0	3.0	4.0	0.0	0.0	11.2	0.0	28.0
ABAM_secc	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.9	0.0	0.0	2.6	0.0	6.5
ABAM_ur	0.3	0.0	0.0	0.8	0.0	2.0	1.0	0.0	0.0	2.0	0.0	6.0	5.3	0.0	0.0	14.8	0.0	37.0
ABAM_yfms	0.2	0.0	0.0	0.5	0.0	1.3	0.0	0.0	0.0	1.0	0.0	3.0	6.7	0.0	0.0	18.7	0.0	46.7
ABAM_ofms	0.3	0.0	0.0	0.8	0.0	2.1	0.0	0.0	0.0	1.0	0.0	2.0	16.3	0.0	0.0	45.6	0.0	114.1
ABLA2/PIEN_si	0.2	0.0	0.0	0.7	0.0	1.4	1.0	0.0	0.0	4.0	0.0	4.0	6.1	0.0	0.0	18.6	0.0	35.1
ABLA2/PIEN_seoc	3.3	0.0	0.0	9.5	0.0	15.7	11.0	0.0	0.0	36.0	0.0	37.0	29.7	0.0	0.0	89.9	0.0	158.9
ABLA2/PIEN_secc	0.8	0.0	0.0	2.6	0.0	3.4	2.0	0.0	0.0	6.0	0.0	9.0	16.1	0.0	0.0	47.3	0.0	86.0
ABLA2/PIEN_ur	1.7	0.0	0.0	5.4	0.0	5.7	3.0	0.0	0.0	9.0	0.0	11.0	27.5	0.0	0.0	82.2	0.0	129.6
ABLA2/PIEN_yfms	2.5	0.0	0.0	7.4	0.0	10.5	8.0	0.0	0.0	21.0	0.0	26.0	14.8	0.0	0.0	45.1	0.0	51.9
ABLA2/PIEN_ofms	1.3	0.0	0.0	3.8	0.0	8.3	2.0	0.0	0.0	6.0	0.0	13.0	14.9	0.0	0.0	50.1	0.0	61.3
ABLA2/PIEN_ofss	2.8	0.0	0.0	8.0	0.0	17.9	3.0	0.0	0.0	10.0	0.0	19.0	18.6	0.0	0.0	59.2	0.0	93.8
PIAL/LALY_si	0.2	0.0	0.0	0.7	0.0	1.6	1.0	0.0	0.0	2.0	0.0	4.0	6.7	0.0	0.0	20.3	0.0	39.6
PIAL/LALY_seoc	1.0	0.0	0.0	3.2	0.0	5.1	8.0	0.0	0.0	26.0	0.0	34.0	3.5	0.0	0.0	11.4	0.0	15.1
PIAL/LALY_ur	0.2	0.0	0.0	0.5	0.0	1.3	2.0	0.0	0.0	6.0	0.0	16.0	1.2	0.0	0.0	3.3	0.0	8.4
PIAL/LALY_yfms	0.5	0.0	0.0	1.5	0.0	3.6	2.0	0.0	0.0	5.0	0.0	12.0	4.2	0.0	0.0	11.7	0.0	29.3
PIAL/LALY_ofms	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	4.6	0.0	0.0	12.9	0.0	32.2
PIAL/LALY_ofss	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	2.6	0.0	0.0	7.3	0.0	18.4
Herbland	0.0	0.0	0.0	0.1	0.0	0.2	3.0	0.0	0.0	10.0	0.0	16.0	0.2	0.0	0.0	0.6	0.0	1.1
Shrubland	0.7	0.0	0.0	2.0	0.0	3.7	12.0	0.0	0.0	41.0	0.0	52.0	3.0	0.0	0.0	9.4	0.0	10.8
Woodland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.7	0.0	0.0	1.9	0.0	4.9
Other	0.6	0.0	0.0	1.5	0.0	1.7	23.0	0.0	0.0	58.0	0.0	75.0	1.3	0.0	0.0	3.4	0.0	4.5
Mountain hemlock PVT--																		
PSME_seoc	0.3	0.0	0.0	0.9	0.0	2.2	1.0	0.0	0.0	2.0	0.0	6.0	5.7	0.0	0.0	15.9	0.0	39.7
PSME_secc	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.8	0.0	0.0	5.2	0.0	12.9
PSME_ur	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	2.9	0.0	0.0	8.0	0.0	20.0
PSME_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	3.0	0.3	0.0	0.0	0.9	0.0	2.3
ABAM_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.8	0.0	0.0	2.1	0.0	5.3
ABAM_yfms	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	1.5	0.0	0.0	4.2	0.0	10.5
ABLA2/PIEN_si	0.2	0.0	0.0	0.5	0.0	0.9	1.0	0.0	0.0	3.0	0.0	4.0	5.2	0.0	0.0	17.4	0.0	23.1
ABLA2/PIEN_seoc	0.2	0.0	0.0	0.5	0.0	1.3	3.0	0.0	0.0	7.0	0.0	18.0	1.0	0.0	0.0	2.9	0.0	7.2
ABLA2/PIEN_ur	0.0	0.0	0.0	0.1	0.0	0.2	1.0	0.0	0.0	2.0	0.0	6.0	0.5	0.0	0.0	1.4	0.0	3.6
ABLA2/PIEN_yfms	0.4	0.0	0.0	1.2	0.0	2.9	2.0	0.0	0.0	7.0	0.0	17.0	2.5	0.0	0.0	7.1	0.0	17.7
TSME_seoc	0.1	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	2.0	0.0	4.0	1.5	0.0	0.0	4.3	0.0	10.7
TSME_ur	0.2	0.0	0.0	0.4	0.0	1.1	1.0	0.0	0.0	2.0	0.0	4.0	4.1	0.0	0.0	11.6	0.0	29.0
TSME_yfms	0.2	0.0	0.0	0.6	0.0	1.5	1.0	0.0	0.0	2.0	0.0	4.0	5.9	0.0	0.0	16.4	0.0	41.1
TSME_ofms	0.2	0.0	0.0	0.6	0.0	1.5	1.0	0.0	0.0	2.0	0.0	4.0	5.7	0.0	0.0	15.8	0.0	39.6
TSME_ofss	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	1.0	0.0	3.0	1.9	0.0	0.0	5.4	0.0	13.6
PIAL/LALY_seoc	0.1	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	2.0	0.0	4.0	1.5	0.0	0.0	4.2	0.0	10.5
PIAL/LALY_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.8	0.0	0.0	2.3	0.0	5.9
PIMO_seoc	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	4.4	0.0	0.0	12.2	0.0	30.6
Herbland	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	2.0	0.0	5.0	0.4	0.0	0.0	1.1	0.0	2.8
Shrubland	0.0	0.0	0.0	0.0	0.0	0.1	2.0	0.0	0.0	6.0	0.0	15.0	0.1	0.0	0.0	0.3	0.0	0.7
Other	0.1	0.0	0.0	0.1	0.0	0.3	3.0	0.0	0.0	8.0	0.0	21.0	0.2	0.0	0.0	0.6	0.0	1.6

Subregion	%Land-- Mean	Median	80% range Min	Max	100% range Min	Max	PD--Patch Density Mean	Median	80% range Min	Max	100% range Min	Max	MPS-Mean patch size () Mean	Median	80% range Min	Max	100% range Min	Max
	- - - - - - Percent land (%) - - - - - - - -						*- - - - - - - N/10 000 ha - - - - - - - - - - - - - - - - - -*						*Ha - - - - - - - - - -*					
Warm/dry subalpine fir/Engelmann spruce PVT--																		
PIPO_seoc	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	3.0	1.0	0.0	0.0	2.8	0.0	7.1
PIPO_yfms	0.1	0.0	0.0	0.3	0.0	0.6	0.0	0.0	0.0	1.0	0.0	2.0	5.9	0.0	0.0	16.4	0.0	41.0
PIPO_ofms	0.1	0.0	0.0	0.3	0.0	0.3	4.0	0.0	0.0	11.0	0.0	24.0	1.1	0.0	0.0	3.4	0.0	6.8
PIPO_ofss	0.1	0.0	0.0	0.3	0.0	0.8	1.0	0.0	0.0	4.0	0.0	9.0	1.3	0.0	0.0	3.6	0.0	9.1
PICO_si	0.1	0.0	0.0	0.3	0.0	0.4	0.0	0.0	0.0	1.0	0.0	1.0	9.1	0.0	0.0	30.6	0.0	38.6
PICO_secc	0.1	0.0	0.0	0.2	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.0	6.4	0.0	0.0	18.0	0.0	45.1
PICO_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.3	0.0	0.0	0.9	0.0	2.3
PSME_seoc	0.9	0.0	0.0	3.2	0.0	3.5	5.0	0.0	0.0	12.0	0.0	28.0	33.9	0.0	0.0	97.0	0.0	226.3
PSME_secc	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	3.0	1.0	0.0	0.0	3.0	0.0	6.7
PSME_ur	0.5	0.0	0.0	1.6	0.0	3.2	1.0	0.0	0.0	2.0	0.0	3.0	18.7	0.0	0.0	57.8	0.0	104.4
PSME_yfms	0.2	0.0	0.0	0.6	0.0	1.0	1.0	0.0	0.0	2.0	0.0	3.0	10.5	0.0	0.0	29.4	0.0	54.3
PSME_ofms	0.4	0.0	0.0	1.1	0.0	2.6	2.0	0.0	0.0	6.0	0.0	8.0	5.0	0.0	0.0	14.1	0.0	34.3
PSME_ofss	0.5	0.0	0.0	1.4	0.0	2.8	2.0	0.0	0.0	7.0	0.0	15.0	8.7	0.0	0.0	28.1	0.0	42.8
ABLA2/PIEN_si	0.2	0.0	0.0	0.6	0.0	1.5	1.0	0.0	0.0	2.0	0.0	6.0	3.8	0.0	0.0	10.7	0.0	26.8
ABLA2/PIEN_seoc	1.9	0.1	0.0	5.8	0.0	7.7	6.0	2.0	0.0	17.0	0.0	38.0	44.2	4.4	0.0	124.9	0.0	254.2
ABLA2/PIEN_secc	0.3	0.0	0.0	1.1	0.0	1.3	3.0	0.0	0.0	11.0	0.0	17.0	3.5	0.0	0.0	11.0	0.0	18.9
ABLA2/PIEN_ur	0.4	0.0	0.0	1.0	0.0	1.3	3.0	0.0	0.0	7.0	0.0	14.0	6.2	0.0	0.0	15.9	0.0	20.5
ABLA2/PIEN_yfms	0.5	0.0	0.0	1.3	0.0	2.0	4.0	0.0	0.0	11.0	0.0	25.0	14.9	0.0	0.0	41.5	0.0	81.5
ABLA2/PIEN_ofms	0.2	0.0	0.0	0.5	0.0	0.9	1.0	0.0	0.0	2.0	0.0	2.0	10.0	0.0	0.0	30.7	0.0	57.4
ABLA2/PIEN_ofss	0.2	0.0	0.0	0.7	0.0	1.7	1.0	0.0	0.0	3.0	0.0	8.0	3.1	0.0	0.0	8.7	0.0	21.8
Shrubland	0.2	0.0	0.0	0.7	0.0	0.8	4.0	0.0	0.0	11.0	0.0	21.0	4.2	0.0	0.0	12.1	0.0	15.9
Other	0.3	0.0	0.0	1.1	0.0	1.3	4.0	0.0	0.0	12.0	0.0	25.0	5.2	0.0	0.0	15.7	0.0	31.4
Cool/moist subalpine fir/Engelmann spruce PVT--																		
PIPO_seoc	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.5	0.0	0.0	4.2	0.0	10.4
PIPO_secc	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	4.0	0.3	0.0	0.0	0.9	0.0	2.1
PIPO_yfms	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	2.3	0.0	0.0	6.4	0.0	16.0
PIPO_ofms	0.0	0.0	0.0	0.1	0.0	0.3	1.0	0.0	0.0	3.0	0.0	4.0	0.9	0.0	0.0	2.5	0.0	6.0
PIPO_ofss	0.1	0.0	0.0	0.4	0.0	1.0	4.0	0.0	0.0	10.0	0.0	26.0	0.5	0.0	0.0	1.5	0.0	3.8
LAOC_seoc	0.5	0.0	0.0	1.4	0.0	3.4	3.0	0.0	0.0	10.0	0.0	24.0	2.0	0.0	0.0	5.7	0.0	14.2
PICO_si	1.7	0.0	0.0	4.9	0.0	10.2	7.0	0.0	0.0	19.0	0.0	42.0	9.6	0.0	0.0	31.3	0.0	41.4
PICO_seoc	0.4	0.0	0.0	1.3	0.0	1.4	2.0	0.0	0.0	5.0	0.0	8.0	8.1	0.0	0.0	26.0	0.0	40.7
PICO_secc	0.3	0.0	0.0	0.8	0.0	1.2	1.0	0.0	0.0	3.0	0.0	4.0	7.7	0.0	0.0	23.4	0.0	37.4
PICO_ur	0.2	0.0	0.0	0.7	0.0	1.0	1.0	0.0	0.0	1.0	0.0	2.0	12.9	0.0	0.0	43.7	0.0	44.1
PICO_yfms	0.1	0.0	0.0	0.4	0.0	0.8	2.0	0.0	0.0	5.0	0.0	11.0	2.4	0.0	0.0	8.2	0.0	9.9
PSME_si	0.4	0.0	0.0	1.2	0.0	2.6	1.0	0.0	0.0	2.0	0.0	2.0	26.1	0.0	0.0	75.1	0.0	172.7
PSME_seoc	0.5	0.1	0.0	1.4	0.0	1.7	6.0	3.0	0.0	15.0	0.0	25.0	5.8	2.3	0.0	15.1	0.0	18.4
PSME_secc	0.2	0.0	0.0	0.5	0.0	0.8	1.0	0.0	0.0	4.0	0.0	5.0	3.6	0.0	0.0	11.3	0.0	18.1
PSME_ur	0.1	0.0	0.0	0.2	0.0	0.3	1.0	0.0	0.0	3.0	0.0	4.0	4.2	0.0	0.0	10.8	0.0	10.9
PSME_yfms	0.2	0.0	0.0	0.6	0.0	1.5	1.0	0.0	0.0	4.0	0.0	9.0	2.5	0.0	0.0	7.2	0.0	16.0
PSME_ofms	2.2	0.0	0.0	6.0	0.0	15.1	0.0	0.0	0.0	1.0	0.0	2.0	141.6	0.0	0.0	396.4	0.0	991.1
PSME_ofss	0.0	0.0	0.0	0.1	0.0	0.2	1.0	0.0	0.0	3.0	0.0	4.0	0.8	0.0	0.0	2.3	0.0	5.4
ABLA2/PIEN_si	1.0	0.5	0.1	2.3	0.0	3.8	4.0	2.0	1.0	8.0	0.0	12.0	26.4	22.4	2.3	52.9	0.0	83.7
ABLA2/PIEN_seoc	2.9	2.0	0.9	5.4	0.0	6.5	10.0	9.0	2.0	19.0	0.0	19.0	25.3	24.3	10.3	40.6	0.0	50.8
ABLA2/PIEN_secc	1.5	1.2	0.0	3.5	0.0	3.8	4.0	4.0	0.0	7.0	0.0	8.0	40.8	18.0	0.0	102.6	0.0	155.6
ABLA2/PIEN_ur	3.7	2.6	0.3	8.6	0.3	13.6	6.0	4.0	2.0	10.0	1.0	12.0	50.8	33.2	11.6	115.2	10.9	121.1
ABLA2/PIEN_yfms	1.8	1.8	0.4	3.4	0.4	4.2	11.0	8.0	3.0	22.0	2.0	23.0	21.8	14.6	7.0	43.8	5.9	64.2
ABLA2/PIEN_ofms	0.4	0.0	0.0	1.2	0.0	1.6	1.0	0.0	0.0	4.0	0.0	7.0	23.8	0.0	0.0	68.6	0.0	149.6
ABLA2/PIEN_ofss	1.3	0.7	0.0	3.5	0.0	4.0	8.0	4.0	0.0	20.0	0.0	34.0	20.0	2.0	0.0	49.0	0.0	73.7
PIAL/LALY_si	0.0	0.0	0.0	0.1	0.0	0.1	2.0	0.0	0.0	6.0	0.0	8.0	0.3	0.0	0.0	1.0	0.0	1.5
PIAL/LALY_seoc	0.0	0.0	0.0	0.1	0.0	0.1	5.0	4.0	0.0	10.0	0.0	11.0	0.5	0.5	0.0	1.0	0.0	1.2
PIAL/LALY_yfms	0.1	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	1.0	0.0	1.0	5.0	0.0	0.0	15.9	0.0	24.8
HDWD_si	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	3.9	0.0	0.0	10.8	0.0	27.0
HDWD_secc	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	1.5	0.0	0.0	4.3	0.0	10.7
HDWD_yfms	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.0	0.0	3.0	0.6	0.0	0.0	1.6	0.0	4.0
HDWD_ofss	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	1.0	0.0	2.0	1.8	0.0	0.0	4.9	0.0	12.3

Subregion	%Land--						PD--Patch Density						MPS-Mean patch size ()					
			80% range		100% range				80% range		100% range				80% range		100% range	
	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percent land (%)						*N/10 000 ha*						*Ha*					
Herbland	0.1	0.0	0.0	0.3	0.0	0.4	3.0	1.0	0.0	7.0	0.0	8.0	4.3	0.5	0.0	12.2	0.0	20.8
Shrubland	0.5	0.1	0.0	1.4	0.0	2.1	4.0	2.0	0.0	9.0	0.0	10.0	9.0	2.5	0.0	23.6	0.0	46.6
Other	1.8	1.2	0.3	3.7	0.1	7.1	30.0	15.0	8.0	63.0	6.0	71.0	11.7	3.7	1.2	28.2	0.5	58.0
Harsh/cold subalpine fir/Engelmann spruce PVT--																		
PIPO_ofss	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	1.5	0.0	0.0	4.1	0.0	10.2
LAOC_si	0.1	0.0	0.0	0.3	0.0	0.7	0.0	0.0	0.0	0.0	0.0	1.0	8.9	0.0	0.0	25.0	0.0	62.6
LAOC_seoc	0.3	0.0	0.0	0.8	0.0	1.9	2.0	0.0	0.0	4.0	0.0	11.0	2.4	0.0	0.0	6.6	0.0	16.6
LAOC_yfms	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.9	0.0	0.0	5.2	0.0	13.0
PICO_si	0.2	0.0	0.0	0.5	0.0	1.2	2.0	0.0	0.0	5.0	0.0	12.0	1.4	0.0	0.0	4.0	0.0	9.9
PICO_seoc	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	3.0	0.0	4.0	0.6	0.0	0.0	1.7	0.0	3.2
PICO_secc	0.1	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	1.0	0.0	2.0	2.4	0.0	0.0	6.6	0.0	16.5
PICO_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	1.0	0.7	0.0	0.0	2.1	0.0	4.9
PICO_yfms	0.1	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	3.6	0.0	0.0	12.0	0.0	14.9
PSME_seoc	0.1	0.0	0.0	0.2	0.0	0.3	1.0	0.0	0.0	3.0	0.0	6.0	3.2	0.0	0.0	10.1	0.0	16.5
PSME_ur	0.1	0.0	0.0	0.2	0.0	0.5	2.0	0.0	0.0	6.0	0.0	15.0	0.5	0.0	0.0	1.3	0.0	3.3
PSME_yfms	0.0	0.0	0.0	0.1	0.0	0.2	1.0	0.0	0.0	3.0	0.0	6.0	2.8	0.0	0.0	7.8	0.0	19.3
PSME_ofms	0.2	0.0	0.0	0.4	0.0	1.1	3.0	0.0	0.0	8.0	0.0	21.0	0.7	0.0	0.0	2.0	0.0	5.0
PSME_ofss	0.5	0.0	0.0	1.5	0.0	3.7	1.0	0.0	0.0	3.0	0.0	8.0	6.9	0.0	0.0	19.2	0.0	47.9
ABLA2/PIEN_si	0.1	0.0	0.0	0.4	0.0	0.7	2.0	0.0	0.0	5.0	0.0	10.0	3.8	0.0	0.0	9.9	0.0	13.7
ABLA2/PIEN_seoc	1.2	0.6	0.0	3.0	0.0	5.0	4.0	5.0	0.0	6.0	0.0	6.0	24.6	10.9	0.0	62.7	0.0	109.3
ABLA2/PIEN_secc	0.1	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	3.0	0.0	4.0	5.6	0.0	0.0	15.6	0.0	37.9
ABLA2/PIEN_ur	0.5	0.3	0.0	1.2	0.0	1.6	2.0	2.0	1.0	3.0	0.0	5.0	19.9	19.7	0.1	37.1	0.0	47.5
ABLA2/PIEN_yfms	0.5	0.2	0.0	1.1	0.0	1.9	2.0	3.0	0.0	4.0	0.0	4.0	13.3	13.8	0.0	27.6	0.0	44.7
ABLA2/PIEN_ofss	0.2	0.0	0.0	0.6	0.0	1.1	1.0	0.0	0.0	3.0	0.0	5.0	6.7	0.0	0.0	23.0	0.0	23.3
PIAL/LALY_si	0.4	0.0	0.0	1.4	0.0	1.5	1.0	0.0	0.0	4.0	0.0	8.0	22.7	0.0	0.0	60.7	0.0	122.6
PIAL/LALY_seoc	1.8	1.1	0.1	3.8	0.0	5.4	9.0	6.0	1.0	20.0	0.0	25.0	17.2	11.8	4.7	34.3	0.0	52.8
PIAL/LALY_yfms	0.3	0.0	0.0	0.9	0.0	1.2	1.0	0.0	0.0	3.0	0.0	4.0	11.2	0.0	0.0	28.0	0.0	29.6
Shrubland	0.1	0.0	0.0	0.3	0.0	0.5	1.0	0.0	0.0	2.0	0.0	2.0	5.0	0.0	0.0	16.8	0.0	20.3
Other	0.2	0.1	0.0	0.4	0.0	0.4	13.0	11.0	2.0	28.0	0.0	34.0	1.2	1.3	0.1	2.3	0.0	2.6
Whitebark pine/ subalpine larch PVT--																		
PIPO_ofss	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	3.0	0.3	0.0	0.0	0.8	0.0	1.9
PICO_si	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	6.0	0.2	0.0	0.0	0.6	0.0	1.4
ABLA2/PIEN_si	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	1.2	0.0	0.0	3.5	0.0	7.8
ABLA2/PIEN_seoc	0.0	0.0	0.0	0.1	0.0	0.1	2.0	0.0	0.0	4.0	0.0	8.0	1.2	0.0	0.0	3.3	0.0	5.9
ABLA2/PIEN_secc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.8	0.0	0.0	2.4	0.0	5.8
ABLA2/PIEN_yfms	0.0	0.0	0.0	0.1	0.0	0.1	3.0	0.0	0.0	9.0	0.0	14.0	0.2	0.0	0.0	0.5	0.0	0.8
ABLA2/PIEN_ofss	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	4.0	0.3	0.0	0.0	0.9	0.0	2.3
PIAL/LALY_si	0.6	0.1	0.0	1.9	0.0	3.3	3.0	1.0	0.0	8.0	0.0	9.0	8.1	1.3	0.0	21.8	0.0	38.1
PIAL/LALY_seoc	4.2	4.7	1.6	7.3	1.5	7.9	9.0	6.0	5.0	14.0	3.0	17.0	48.2	41.4	26.0	70.2	24.2	76.0
PIAL/LALY_ur	0.1	0.0	0.0	0.2	0.0	0.5	1.0	0.0	0.0	2.0	0.0	4.0	1.6	0.0	0.0	4.4	0.0	10.9
PIAL/LALY_yfms	0.2	0.0	0.0	0.7	0.0	1.4	1.0	0.0	0.0	2.0	0.0	2.0	11.5	0.0	0.0	34.3	0.0	70.5
Herbland	0.2	0.0	0.0	0.7	0.0	0.7	1.0	0.0	0.0	1.0	0.0	2.0	13.5	0.0	0.0	44.2	0.0	61.9
Shrubland	0.4	0.0	0.0	1.1	0.0	1.4	2.0	0.0	0.0	6.0	0.0	10.0	7.9	0.0	0.0	19.6	0.0	27.3
Other	0.7	0.7	0.1	1.4	0.0	1.5	10.0	9.0	1.0	20.0	0.0	32.0	6.4	7.3	2.1	10.8	0.0	12.1
Cottonwood PVT--																		
HDWD_ofss	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.7	0.0	0.0	4.8	0.0	12.1
Fescue grassland PVT--																		
Herbland	0.2	0.0	0.0	0.7	0.0	1.6	0.0	0.0	0.0	0.0	0.0	1.0	22.5	0.0	0.0	63.0	0.0	157.4
Other	0.1	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	1.0	0.0	2.0	4.2	0.0	0.0	14.3	0.0	17.2
Mountain shrub PVT--																		
PSME_secc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	2.6	0.0	6.5
Herbland	0.1	0.0	0.0	0.3	0.0	0.4	1.0	0.0	0.0	3.0	0.0	5.0	3.0	0.0	0.0	10.3	0.0	11.4
Shrubland	3.6	0.5	0.0	11.0	0.0	13.9	7.0	2.0	0.0	19.0	0.0	24.0	26.9	26.2	0.0	57.6	0.0	87.4
Other	0.6	0.2	0.0	1.5	0.0	1.6	11.0	2.0	0.0	32.0	0.0	59.0	11.4	2.8	0.0	28.7	0.0	55.9
Riparian sedge (without *Salix* spp.) PVT--																		
Herbland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.4	0.0	0.0	4.0	0.0	10.1

	%Land--						PD--Patch Density						MPS-Mean patch size ()					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percent land (%)						*N/10 000 ha*						*Ha*					
Alpine herbland-low shrub PVT--																		
Herbland	0.3	0.0	0.0	0.8	0.0	2.0	1.0	0.0	0.0	3.0	0.0	7.0	3.9	0.0	0.0	10.9	0.0	27.3
Other	0.3	0.0	0.0	0.8	0.0	1.4	3.0	0.0	0.0	9.0	0.0	18.0	2.8	0.0	0.0	9.3	0.0	12.2
Other (nonforest-nonrangeland and anthropogenic types)--																		
LAOC_seoc	0.0	0.0	0.0	0.0	0.0	0.1	2.0	0.0	0.0	5.0	0.0	13.0	0.1	0.0	0.0	0.2	0.0	0.5
ABLA2/PIEN_si	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	2.0	0.5	0.0	0.0	1.5	0.0	3.2
ABLA2/PIEN_seoc	0.0	0.0	0.0	0.0	0.0	0.1	1.0	1.0	0.0	2.0	0.0	3.0	0.5	0.2	0.0	1.2	0.0	1.8
PIAL/LALY_seoc	0.0	0.0	0.0	0.1	0.0	0.1	3.0	4.0	0.0	6.0	0.0	6.0	0.5	0.3	0.0	1.5	0.0	1.8
Herbland	0.2	0.0	0.0	0.6	0.0	1.0	2.0	1.0	0.0	5.0	0.0	9.0	13.3	0.6	0.0	37.2	0.0	88.7
Other	9.5	7.2	1.4	20.8	0.0	21.8	7.0	6.0	2.0	12.0	0.0	13.0	129.1	69.7	31.2	270.3	0.0	403.3

	%Land						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - - *Percent land (%)* - - - - - -						- - - - - - - *N/10 000 ha* - - - - - - -						- - - - - - - - - - - *Ha* - - - - - - - - - - -					
Wet-cold forests subregion (ESR 6) (n=16):																		
Ponderosa pine PVT--																		
PIPO_si	0.0	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0	2.0	1.8	0.0	0.0	6.3	0.0	15.7
PIPO_seoc	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.0	0.5	0.0	0.0	0.0	0.0	8.3
PIPO_yfms	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	3.0	0.6	0.0	0.0	0.0	0.0	8.9
Shrubland	0.0	0.0	0.0	0.0	0.0	0.2	1.0	0.0	0.0	0.0	0.0	12.0	0.1	0.0	0.0	0.0	0.0	1.5
Warm/dry Douglas-fir/ grand fir PVT--																		
PIPO_si	0.3	0.0	0.0	0.7	0.0	3.1	1.0	0.0	0.0	3.0	0.0	17.0	3.9	0.0	0.0	18.9	0.0	24.7
PIPO_seoc	0.2	0.0	0.0	0.7	0.0	0.8	2.0	0.0	0.0	6.0	0.0	11.0	3.0	0.0	0.0	10.6	0.0	19.6
PIPO_secc	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	3.0	1.9	0.0	0.0	1.9	0.0	26.8
PIPO_ur	0.3	0.0	0.0	0.4	0.0	3.4	2.0	0.0	0.0	6.0	0.0	11.0	3.7	0.0	0.0	14.8	0.0	29.6
PIPO_yfms	0.3	0.0	0.0	1.3	0.0	2.2	2.0	0.0	0.0	6.0	0.0	13.0	5.7	0.0	0.0	14.2	0.0	41.0
PIPO_ofms	0.6	0.0	0.0	0.6	0.0	7.7	1.0	0.0	0.0	2.0	0.0	12.0	23.8	0.0	0.0	6.5	0.0	367.7
PIPO_ofss	0.2	0.0	0.0	0.6	0.0	1.1	1.0	0.0	0.0	3.0	0.0	4.0	6.0	0.0	0.0	16.8	0.0	51.9
LAOC_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.0	0.0	5.4
PICO_secc	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	3.0	1.8	0.0	0.0	1.9	0.0	24.4
PICO_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.8	0.0	0.0	0.0	0.0	13.3
PICO_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	4.0	0.1	0.0	0.0	0.0	0.0	1.6
PSME_si	0.3	0.0	0.0	0.9	0.0	1.3	2.0	0.0	0.0	6.0	0.0	9.0	11.1	1.3	0.0	32.4	0.0	63.0
PSME_seoc	0.7	0.1	0.0	1.7	0.0	4.4	4.0	3.0	0.0	8.0	0.0	18.0	11.3	4.8	0.0	29.6	0.0	52.7
PSME_secc	0.4	0.0	0.0	1.0	0.0	1.6	3.0	0.0	0.0	10.0	0.0	17.0	6.3	0.0	0.0	18.2	0.0	32.5
PSME_ur	0.6	0.0	0.0	2.0	0.0	3.0	6.0	0.0	0.0	17.0	0.0	27.0	5.1	0.8	0.0	11.9	0.0	30.2
PSME_yfms	0.5	0.2	0.0	1.2	0.0	2.1	5.0	2.0	0.0	12.0	0.0	21.0	9.7	8.2	0.0	19.2	0.0	52.2
PSME_ofms	0.2	0.0	0.0	0.4	0.0	2.1	2.0	0.0	0.0	8.0	0.0	11.0	4.7	0.0	0.0	15.7	0.0	25.4
PSME_ofss	0.2	0.0	0.0	0.4	0.0	1.5	1.0	0.0	0.0	2.0	0.0	5.0	15.5	0.0	0.0	27.0	0.0	176.7
ABGR_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.0	0.0	5.5
ABGR_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.4	0.0	0.0	0.0	0.0	5.9
HDWD_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.2	0.0	0.0	0.0	0.0	3.1
HDWD_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	6.0	0.1	0.0	0.0	0.0	0.0	1.5
Herbland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	2.0	0.0	5.0	0.2	0.0	0.0	0.4	0.0	2.2
Shrubland	0.1	0.0	0.0	0.2	0.0	1.1	1.0	0.0	0.0	2.0	0.0	16.0	2.6	0.0	0.0	7.3	0.0	26.4
Other	0.0	0.0	0.0	0.1	0.0	0.2	2.0	0.0	0.0	7.0	0.0	11.0	0.5	0.0	0.0	1.6	0.0	3.8
Cool/moist Douglas-fir/grand fir PVT--																		
PIPO_si	0.3	0.0	0.0	0.8	0.0	3.3	2.0	0.0	0.0	3.0	0.0	26.0	2.4	0.0	0.0	6.4	0.0	26.2
PIPO_seoc	0.3	0.0	0.0	1.0	0.0	2.8	3.0	0.0	0.0	9.0	0.0	29.0	2.0	0.0	0.0	7.4	0.0	16.8
PIPO_secc	0.1	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	5.0	1.4	0.0	0.0	1.4	0.0	19.5
PIPO_ur	0.3	0.0	0.0	0.9	0.0	2.5	1.0	0.0	0.0	6.0	0.0	10.0	4.5	0.0	0.0	16.8	0.0	39.0
PIPO_yfms	0.4	0.0	0.0	1.3	0.0	3.3	4.0	0.0	0.0	16.0	0.0	32.0	7.2	0.0	0.0	9.4	0.0	90.2
PIPO_ofms	0.3	0.0	0.0	0.6	0.0	4.1	2.0	0.0	0.0	10.0	0.0	15.0	2.7	0.0	0.0	6.8	0.0	29.2
PIPO_ofss	0.1	0.0	0.0	0.4	0.0	0.8	1.0	0.0	0.0	6.0	0.0	6.0	1.7	0.0	0.0	7.2	0.0	12.8
LAOC_si	0.1	0.0	0.0	0.3	0.0	1.2	0.0	0.0	0.0	0.0	0.0	3.0	6.0	0.0	0.0	18.2	0.0	59.7
LAOC_ur	0.1	0.0	0.0	0.2	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.0	12.1	0.0	0.0	12.9	0.0	168.1
LAOC_yfms	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	2.4	0.0	0.0	0.0	0.0	39.1
PICO_si	0.0	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0	3.0	1.7	0.0	0.0	6.0	0.0	14.9
PICO_seoc	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.2	0.0	0.0	0.0	0.0	18.7
PICO_secc	0.1	0.0	0.0	0.1	0.0	2.1	0.0	0.0	0.0	2.0	0.0	2.0	8.5	0.0	0.0	8.6	0.0	119.4
PICO_ur	0.1	0.0	0.0	0.3	0.0	0.5	0.0	0.0	0.0	1.0	0.0	2.0	5.3	0.0	0.0	17.2	0.0	51.0
PICO_yfms	0.2	0.0	0.0	0.4	0.0	1.5	0.0	0.0	0.0	1.0	0.0	1.0	16.6	0.0	0.0	50.2	0.0	158.0
PSME_si	0.4	0.0	0.0	1.5	0.0	2.2	2.0	0.0	0.0	6.0	0.0	19.0	10.2	0.0	0.0	33.2	0.0	42.0
PSME_seoc	0.7	0.1	0.0	1.6	0.0	6.6	3.0	2.0	0.0	8.0	0.0	13.0	12.3	2.2	0.0	26.2	0.0	95.8
PSME_secc	0.7	0.0	0.0	1.3	0.0	7.2	3.0	0.0	0.0	13.0	0.0	14.0	7.4	0.0	0.0	16.9	0.0	52.3
PSME_ur	2.0	0.0	0.0	4.4	0.0	18.3	7.0	1.0	0.0	18.0	0.0	34.0	12.3	0.6	0.0	18.5	0.0	106.5
PSME_yfms	1.0	0.8	0.0	2.4	0.0	4.5	7.0	3.0	0.0	16.0	0.0	40.0	13.8	9.5	0.0	33.4	0.0	77.6
PSME_ofms	0.4	0.0	0.0	1.3	0.0	3.1	2.0	0.0	0.0	10.0	0.0	12.0	6.7	0.0	0.0	23.6	0.0	37.5
PSME_ofss	0.1	0.0	0.0	0.5	0.0	0.9	1.0	0.0	0.0	3.0	0.0	4.0	4.9	0.0	0.0	17.1	0.0	22.1
ABGR_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.9	0.0	0.0	2.6	0.0	9.2
ABGR_seoc	0.1	0.0	0.0	0.1	0.0	0.5	0.0	0.0	0.0	0.0	0.0	2.0	2.5	0.0	0.0	10.0	0.0	20.2
ABGR_secc	0.0	0.0	0.0	0.1	0.0	0.5	0.0	0.0	0.0	0.0	0.0	3.0	2.3	0.0	0.0	7.5	0.0	22.4

	%Land						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percent land (%)						*N/10 000 ha*						*Ha*					
ABGR_ur	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	1.0	0.0	30.5
ABGR_yfms	0.1	0.0	0.0	0.2	0.0	0.6	0.0	0.0	0.0	2.0	0.0	4.0	4.6	0.0	0.0	19.2	0.0	28.2
ABLA2/PIEN_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	4.0	0.1	0.0	0.0	0.0	0.0	1.8
ABLA2/PIEN_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0	0.0	0.0	7.7
ABLA2/PIEN_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	3.0	0.2	0.0	0.0	0.1	0.0	2.6
PIMO_ofss	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	1.0	3.0	0.0	0.0	0.0	0.0	47.2
HDWD_si	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	7.0	0.5	0.0	0.0	0.0	0.0	8.3
HDWD_seoc	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	5.0	0.9	0.0	0.0	0.0	0.0	14.1
HDWD_yfms	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.0	0.9	0.0	0.0	0.0	0.0	13.6
HDWD_ofms	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	4.0	0.9	0.0	0.0	0.0	0.0	14.5
HDWD_ofss	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	3.0	0.2	0.0	0.0	0.0	0.0	3.4
Herbland	0.0	0.0	0.0	0.1	0.0	0.4	1.0	0.0	0.0	2.0	0.0	5.0	1.4	0.0	0.0	5.6	0.0	7.8
Shrubland	0.1	0.0	0.0	0.2	0.0	0.8	2.0	0.0	0.0	5.0	0.0	20.0	1.6	0.0	0.0	4.9	0.0	8.6
Other	0.1	0.0	0.0	0.5	0.0	0.7	5.0	1.0	0.0	12.0	0.0	37.0	2.0	0.2	0.0	5.4	0.0	12.9
Cool/moist Western hemlock/western redcedar PVT--																		
PIPO_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	4.0	0.2	0.0	0.0	0.0	0.0	3.4
PIPO_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.6	0.0	0.0	0.3	0.0	8.5
LAOC_si	0.0	0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.0	0.0	11.0	0.3	0.0	0.0	0.0	0.0	4.2
LAOC_secc	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	3.0	0.4	0.0	0.0	0.0	0.0	6.0
LAOC_ur	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.0	1.4	0.0	0.0	4.4	0.0	13.3
LAOC_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	3.0	0.2	0.0	0.0	0.0	0.0	2.7
PICO_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	2.0	0.5	0.0	0.0	0.7	0.0	7.2
PICO_secc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	2.0	0.0	10.7
PICO_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.8	0.0	0.0	0.3	0.0	11.7
PSME_si	0.3	0.0	0.0	1.1	0.0	2.0	3.0	1.0	0.0	9.0	0.0	13.0	3.7	0.5	0.0	11.9	0.0	17.2
PSME_seoc	0.6	0.1	0.0	1.7	0.0	2.8	4.0	1.0	0.0	14.0	0.0	27.0	13.0	8.3	0.0	27.7	0.0	79.2
PSME_secc	1.2	0.1	0.0	4.3	0.0	5.7	5.0	0.0	0.0	16.0	0.0	40.0	23.3	2.5	0.0	50.2	0.0	187.7
PSME_ur	1.2	0.6	0.0	4.0	0.0	5.0	7.0	3.0	0.0	18.0	0.0	24.0	22.5	10.5	0.0	26.7	0.0	183.4
PSME_yfms	0.6	0.5	0.0	1.4	0.0	1.8	6.0	5.0	0.0	13.0	0.0	18.0	6.9	8.3	0.0	11.9	0.0	13.5
PSME_ofms	1.3	0.0	0.0	5.9	0.0	7.3	3.0	0.0	0.0	10.0	0.0	17.0	49.9	0.2	0.0	45.3	0.0	653.9
PSME_ofss	0.3	0.0	0.0	1.1	0.0	2.0	2.0	0.0	0.0	6.0	0.0	9.0	7.6	0.0	0.0	28.0	0.0	39.4
ABGR_seoc	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	0.7	0.0	0.0	0.0	0.0	11.5
ABGR_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0	0.0	0.0	8.4
ABGR_yfms	0.0	0.0	0.0	0.1	0.0	0.5	0.0	0.0	0.0	1.0	0.0	3.0	1.9	0.0	0.0	7.4	0.0	15.0
ABLA2/PIEN_si	0.0	0.0	0.0	0.1	0.0	0.3	2.0	0.0	0.0	6.0	0.0	11.0	1.2	0.0	0.0	3.6	0.0	10.5
ABLA2/PIEN_seoc	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	3.0	0.0	4.0	0.6	0.0	0.0	2.2	0.0	4.7
ABLA2/PIEN_secc	0.1	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	6.0	0.9	0.0	0.0	0.0	0.0	13.9
ABLA2/PIEN_ur	0.1	0.0	0.0	0.3	0.0	0.8	1.0	0.0	0.0	4.0	0.0	4.0	2.9	0.2	0.0	8.4	0.0	22.9
ABLA2/PIEN_yfms	0.3	0.0	0.0	1.0	0.0	1.3	2.0	0.0	0.0	4.0	0.0	18.0	5.4	0.0	0.0	15.9	0.0	35.2
ABLA2/PIEN_ofms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	1.9	0.0	14.5
ABLA2/PIEN_ofss	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.7	0.0	0.0	1.2	0.0	24.4
TSHE/THPL_si	0.2	0.0	0.0	0.6	0.0	2.0	1.0	0.0	0.0	4.0	0.0	8.0	5.2	0.0	0.0	15.3	0.0	45.5
TSHE/THPL_seoc	0.5	0.0	0.0	0.9	0.0	4.7	1.0	0.0	0.0	2.0	0.0	6.0	17.4	0.0	0.0	59.1	0.0	107.9
TSHE/THPL_secc	1.1	0.1	0.0	4.1	0.0	6.4	3.0	0.0	0.0	10.0	0.0	15.0	22.9	9.0	0.0	63.2	0.0	70.8
TSHE/THPL_ur	2.8	0.1	0.0	4.9	0.0	29.2	2.0	0.0	0.0	6.0	0.0	15.0	65.6	8.2	0.0	67.2	0.0	766.9
TSHE/THPL_yfms	0.4	0.0	0.0	1.1	0.0	2.8	2.0	0.0	0.0	6.0	0.0	8.0	14.1	0.0	0.0	26.7	0.0	118.7
TSHE/THPL_ofms	0.4	0.0	0.0	1.1	0.0	2.9	2.0	0.0	0.0	4.0	0.0	16.0	10.0	0.0	0.0	37.9	0.0	56.7
TSHE/THPL_ofss	0.8	0.0	0.0	2.7	0.0	5.6	2.0	0.0	0.0	4.0	0.0	16.0	17.6	0.0	0.0	52.8	0.0	117.0
HDWD_si	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.0	0.9	0.0	0.0	0.0	0.0	14.8
HDWD_seoc	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	5.0	0.4	0.0	0.0	0.0	0.0	5.7
HDWD_ofss	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.3	0.0	0.0	0.0	0.0	5.5
Herbland	0.1	0.0	0.0	0.2	0.0	0.4	2.0	0.0	0.0	8.0	0.0	10.0	0.7	0.0	0.0	2.5	0.0	6.2
Shrubland	0.1	0.0	0.0	0.5	0.0	0.9	5.0	0.0	0.0	16.0	0.0	39.0	1.0	0.1	0.0	2.2	0.0	5.9
Other	0.2	0.0	0.0	0.5	0.0	1.1	9.0	2.0	0.0	25.0	0.0	42.0	2.4	0.7	0.0	7.8	0.0	10.2
Pacific silver fir PVT--																		
PIPO_si	0.0	0.0	0.0	0.1	0.0	0.2	1.0	0.0	0.0	4.0	0.0	12.0	0.2	0.0	0.0	0.6	0.0	2.3
PIPO_seoc	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	1.0	0.0	2.0	0.5	0.0	0.0	0.9	0.0	6.4

	%Land						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - - Percent land (%) - - - - - -						*- - - - - - - N/10 000 ha - - - - - - -*						*- - - - - - - - - - - Ha - - - - - - - - - -*					
LAOC_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.6	0.0	0.0	0.1	0.0	9.2
LAOC_secc	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.0	1.0	0.0	0.0	2.4	0.0	11.0
LAOC_ofms	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.2	0.0	0.0	0.0	0.0	19.7
PICO_si	0.1	0.0	0.0	0.5	0.0	0.9	0.0	0.0	0.0	2.0	0.0	5.0	7.0	0.0	0.0	22.3	0.0	66.8
PICO_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	4.0	0.6	0.0	0.0	0.7	0.0	8.7
PICO_secc	0.1	0.0	0.0	0.3	0.0	0.6	0.0	0.0	0.0	2.0	0.0	3.0	3.7	0.0	0.0	12.9	0.0	33.1
PICO_ur	0.1	0.0	0.0	0.1	0.0	1.1	0.0	0.0	0.0	1.0	0.0	5.0	2.5	0.0	0.0	9.1	0.0	22.2
PICO_yfms	0.3	0.0	0.0	0.7	0.0	2.6	0.0	0.0	0.0	2.0	0.0	2.0	15.4	0.0	0.0	35.8	0.0	174.4
PSME_si	1.4	0.3	0.0	4.7	0.0	5.6	10.0	2.0	0.0	30.0	0.0	44.0	9.0	7.2	0.0	20.9	0.0	41.6
PSME_seoc	1.3	0.3	0.0	4.0	0.0	7.1	6.0	2.0	0.0	16.0	0.0	38.0	18.4	8.8	0.0	36.6	0.0	120.1
PSME_secc	2.2	0.7	0.0	7.1	0.0	11.4	8.0	2.0	0.0	16.0	0.0	48.0	47.5	15.7	0.0	65.8	0.0	425.4
PSME_ur	2.5	2.1	0.0	4.8	0.0	9.7	14.0	8.0	0.0	36.0	0.0	40.0	18.0	15.4	0.0	40.5	0.0	57.2
PSME_yfms	1.9	0.7	0.1	3.8	0.0	16.1	11.0	6.0	0.0	33.0	0.0	34.0	11.1	9.1	1.2	15.9	0.0	46.8
PSME_ofms	1.0	0.0	0.0	2.8	0.0	8.6	4.0	1.0	0.0	15.0	0.0	21.0	9.1	2.8	0.0	26.6	0.0	41.5
PSME_ofss	0.7	0.2	0.0	2.2	0.0	4.0	3.0	2.0	0.0	8.0	0.0	21.0	17.8	5.3	0.0	52.0	0.0	105.6
ABGR_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.2	0.0	0.0	0.0	0.0	2.6
ABGR_secc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.4	0.0	0.0	3.5	0.0	14.9
ABGR_ur	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	1.0	0.0	1.0	3.2	0.0	0.0	7.0	0.0	37.3
ABGR_yfms	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	2.0	1.2	0.0	0.0	0.0	0.0	18.7
ABGR_ofss	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	0.0	0.0	14.2
ABAM_si	1.1	0.3	0.0	2.7	0.0	6.3	3.0	2.0	0.0	8.0	0.0	10.0	16.8	13.6	0.0	46.0	0.0	62.1
ABAM_seoc	2.0	2.2	0.0	4.4	0.0	6.4	6.0	3.0	0.0	14.0	0.0	25.0	30.5	22.0	0.0	69.4	0.0	104.2
ABAM_secc	3.7	0.7	0.0	13.2	0.0	14.5	5.0	2.0	0.0	14.0	0.0	18.0	40.9	17.1	0.0	93.0	0.0	188.0
ABAM_ur	3.7	2.3	0.0	9.7	0.0	11.6	8.0	5.0	0.0	20.0	0.0	29.0	44.4	30.8	0.0	98.7	0.0	173.9
ABAM_yfms	2.6	1.5	0.0	6.6	0.0	12.5	7.0	4.0	0.0	18.0	0.0	29.0	34.8	34.9	0.0	66.7	0.0	100.4
ABAM_ofms	1.1	0.0	0.0	2.0	0.0	10.5	1.0	0.0	0.0	4.0	0.0	4.0	31.9	0.0	0.0	73.1	0.0	276.2
ABAM_ofss	2.0	0.0	0.0	2.1	0.0	21.8	1.0	0.0	0.0	4.0	0.0	5.0	51.1	0.0	0.0	104.0	0.0	460.8
ABLA2/PIEN_si	0.9	0.0	0.0	1.3	0.0	9.6	6.0	2.0	0.0	16.0	0.0	30.0	6.3	0.5	0.0	20.7	0.0	33.2
ABLA2/PIEN_seoc	0.3	0.1	0.0	0.7	0.0	1.7	7.0	4.0	0.0	16.0	0.0	31.0	4.2	1.0	0.0	13.0	0.0	28.4
ABLA2/PIEN_secc	0.2	0.0	0.0	0.7	0.0	1.0	1.0	0.0	0.0	4.0	0.0	5.0	7.2	0.0	0.0	18.5	0.0	57.1
ABLA2/PIEN_ur	1.8	0.5	0.0	3.5	0.0	15.4	6.0	4.0	0.0	8.0	0.0	42.0	21.2	11.4	0.0	55.8	0.0	83.4
ABLA2/PIEN_yfms	1.4	0.4	0.0	3.7	0.0	7.9	16.0	11.0	0.0	46.0	0.0	53.0	8.0	5.4	0.0	24.8	0.0	31.0
ABLA2/PIEN_ofms	0.3	0.0	0.0	0.6	0.0	3.0	0.0	0.0	0.0	2.0	0.0	3.0	11.1	0.0	0.0	22.6	0.0	126.4
ABLA2/PIEN_ofss	0.2	0.0	0.0	0.3	0.0	2.1	1.0	0.0	0.0	2.0	0.0	7.0	8.1	0.0	0.0	20.1	0.0	89.7
TSHE/THPL_si	0.1	0.0	0.0	0.2	0.0	0.3	1.0	0.0	0.0	1.0	0.0	16.0	2.8	0.0	0.0	11.6	0.0	21.4
TSHE/THPL_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	4.0	0.4	0.0	0.0	0.4	0.0	5.0
TSHE/THPL_secc	0.3	0.0	0.0	1.0	0.0	1.8	3.0	0.0	0.0	13.0	0.0	24.0	3.5	0.0	0.0	13.7	0.0	18.4
TSHE/THPL_ur	0.6	0.1	0.0	2.0	0.0	2.7	3.0	1.0	0.0	11.0	0.0	18.0	9.5	2.3	0.0	26.0	0.0	60.3
TSHE/THPL_yfms	0.1	0.0	0.0	0.2	0.0	0.6	1.0	0.0	0.0	4.0	0.0	5.0	2.8	0.0	0.0	9.6	0.0	19.6
TSHE/THPL_ofms	0.6	0.0	0.0	0.6	0.0	8.3	2.0	0.0	0.0	6.0	0.0	17.0	5.4	0.0	0.0	17.3	0.0	49.5
TSHE/THPL_ofss	0.3	0.0	0.0	0.5	0.0	3.2	2.0	0.0	0.0	6.0	0.0	10.0	12.3	0.0	0.0	8.5	0.0	169.6
PIAL/LALY_si	0.1	0.0	0.0	0.2	0.0	0.8	1.0	0.0	0.0	4.0	0.0	9.0	1.0	0.0	0.0	2.5	0.0	11.1
PIAL/LALY_seoc	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	7.0	0.2	0.0	0.0	0.3	0.0	2.5
PIAL/LALY_yfms	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	8.0	0.3	0.0	0.0	0.8	0.0	2.9
PIMO_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	0.0	0.0	17.1
PIMO_ofss	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	3.0	0.2	0.0	0.0	0.0	0.0	3.3
HDWD_seoc	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	5.0	0.2	0.0	0.0	0.0	0.0	3.9
Herbland	0.2	0.1	0.0	0.5	0.0	1.3	8.0	4.0	0.0	14.0	0.0	50.0	3.0	1.4	0.0	7.0	0.0	18.1
Shrubland	0.3	0.1	0.0	0.7	0.0	1.2	13.0	5.0	0.0	38.0	0.0	57.0	2.3	1.7	0.0	5.9	0.0	8.3
Other	1.1	0.6	0.0	3.2	0.0	4.0	32.0	22.0	2.0	78.0	0.0	110.0	2.7	2.4	0.1	5.2	0.0	8.0
Mountain hemlock PVT--																		
PICO_secc	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	0.0	0.0	14.4
PSME_si	0.1	0.0	0.0	0.4	0.0	0.5	1.0	0.0	0.0	2.0	0.0	9.0	6.5	0.0	0.0	15.1	0.0	59.5
PSME_seoc	0.0	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	2.0	0.0	7.0	1.6	0.0	0.0	4.9	0.0	14.9
PSME_secc	0.1	0.0	0.0	0.5	0.0	0.9	1.0	0.0	0.0	3.0	0.0	13.0	2.6	0.0	0.0	9.8	0.0	15.7
PSME_ur	0.2	0.0	0.0	0.7	0.0	1.7	2.0	0.0	0.0	6.0	0.0	13.0	5.9	0.2	0.0	21.0	0.0	29.3
PSME_yfms	0.2	0.0	0.0	0.6	0.0	1.4	3.0	0.0	0.0	8.0	0.0	14.0	5.4	0.5	0.0	17.8	0.0	40.0
PSME_ofms	0.1	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	2.0	0.0	6.0	2.2	0.0	0.0	8.8	0.0	12.5
PSME_ofss	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	4.0	0.7	0.0	0.0	2.1	0.0	6.8

Subregion	%Land						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percent land (%)						*N/10 000 ha*						*Ha*					
ABAM_si	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0	0.0	5.0	0.7	0.0	0.0	0.9	0.0	10.0
ABAM_seoc	0.0	0.0	0.0	0.2	0.0	0.3	1.0	0.0	0.0	2.0	0.0	13.0	2.3	0.0	0.0	2.3	0.0	30.1
ABAM_secc	0.0	0.0	0.0	0.1	0.0	0.2	1.0	0.0	0.0	5.0	0.0	6.0	1.3	0.0	0.0	2.3	0.0	15.6
ABAM_ur	0.2	0.0	0.0	0.3	0.0	2.1	2.0	0.0	0.0	4.0	0.0	19.0	3.7	0.0	0.0	14.0	0.0	18.3
ABAM_yfms	0.1	0.0	0.0	0.1	0.0	0.8	1.0	0.0	0.0	2.0	0.0	5.0	1.6	0.0	0.0	4.9	0.0	16.4
ABAM_ofms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	3.0	0.2	0.0	0.0	0.0	0.0	3.8
ABLA2/PIEN_si	0.2	0.0	0.0	0.5	0.0	1.6	3.0	0.0	0.0	10.0	0.0	18.0	2.4	0.0	0.0	7.6	0.0	13.3
ABLA2/PIEN_seoc	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	3.0	0.0	9.0	1.5	0.1	0.0	5.5	0.0	6.6
ABLA2/PIEN_ur	0.4	0.0	0.0	0.5	0.0	5.5	2.0	0.0	0.0	6.0	0.0	16.0	20.1	0.1	0.0	14.6	0.0	288.0
ABLA2/PIEN_yfms	0.6	0.0	0.0	1.6	0.0	4.0	4.0	0.0	0.0	9.0	0.0	37.0	7.0	0.0	0.0	20.9	0.0	22.3
ABLA2/PIEN_ofms	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.0	1.1	0.0	0.0	0.0	0.0	17.7
TSHE/THPL_si	0.1	0.0	0.0	0.1	0.0	1.5	0.0	0.0	0.0	0.0	0.0	2.0	10.2	0.0	0.0	4.9	0.0	153.1
TSHE/THPL_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.4	0.0	0.0	0.0	0.0	6.8
TSHE/THPL_ur	0.3	0.0	0.0	1.1	0.0	2.1	1.0	0.0	0.0	3.0	0.0	8.0	17.3	0.0	0.0	58.7	0.0	123.6
TSHE/THPL_yfms	0.0	0.0	0.0	0.1	0.0	0.2	1.0	0.0	0.0	2.0	0.0	9.0	0.9	0.0	0.0	1.2	0.0	11.4
TSHE/THPL_ofms	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	3.0	1.7	0.0	0.0	5.6	0.0	15.9
TSHE/THPL_ofss	0.3	0.0	0.0	0.5	0.0	3.7	1.0	0.0	0.0	2.0	0.0	13.0	17.1	0.0	0.0	7.1	0.0	259.7
TSME_si	0.0	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	1.0	0.0	2.0	2.9	0.0	0.0	10.5	0.0	25.3
TSME_seoc	0.1	0.0	0.0	0.3	0.0	0.6	0.0	0.0	0.0	1.0	0.0	5.0	5.2	0.0	0.0	15.7	0.0	39.4
TSME_secc	0.4	0.0	0.0	1.0	0.0	3.8	0.0	0.0	0.0	2.0	0.0	3.0	24.5	0.0	0.0	56.3	0.0	225.5
TSME_ur	0.7	0.0	0.0	2.4	0.0	3.3	1.0	0.0	0.0	3.0	0.0	5.0	33.2	0.0	0.0	104.2	0.0	239.0
TSME_yfms	1.0	0.0	0.0	3.9	0.0	7.6	2.0	0.0	0.0	6.0	0.0	15.0	12.2	0.0	0.0	37.2	0.0	74.7
TSME_ofms	0.2	0.0	0.0	0.6	0.0	2.1	0.0	0.0	0.0	1.0	0.0	3.0	9.7	0.0	0.0	21.6	0.0	112.1
TSME_ofss	0.2	0.0	0.0	0.6	0.0	1.8	0.0	0.0	0.0	0.0	0.0	2.0	14.1	0.0	0.0	47.3	0.0	130.6
PIAL/LALY_si	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	1.0	4.8	0.0	0.0	0.0	0.0	76.7
Herbland	0.1	0.0	0.0	0.4	0.0	0.8	2.0	0.0	0.0	4.0	0.0	20.0	2.1	0.0	0.0	5.9	0.0	20.4
Shrubland	0.1	0.0	0.0	0.0	0.0	2.1	3.0	0.0	0.0	4.0	0.0	41.0	0.5	0.0	0.0	0.8	0.0	5.2
Other	0.3	0.0	0.0	1.4	0.0	2.0	7.0	0.0	0.0	24.0	0.0	50.0	2.3	0.0	0.0	4.4	0.0	15.0
Warm/dry Subalpine fir/Engelmann spruce PVT--																		
PIPO_si	0.1	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	3.0	1.5	0.0	0.0	0.5	0.0	23.0
PIPO_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	3.0	0.2	0.0	0.0	0.0	0.0	2.5
PIPO_ur	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	0.0	0.0	17.5
PIPO_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	4.0	0.7	0.0	0.0	1.3	0.0	9.1
PIPO_ofms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.5	0.0	0.0	0.4	0.0	6.7
PIPO_ofss	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	2.1	0.0	0.0	0.0	0.0	33.9
LAOC_ur	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.0	1.3	0.0	0.0	0.5	0.0	19.9
LAOC_yfms	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	3.0	0.7	0.0	0.0	0.0	0.0	10.4
PICO_si	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	1.0	0.0	6.0	1.1	0.0	0.0	4.3	0.0	8.6
PICO_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.0	0.0	5.4
PICO_secc	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.9	0.0	0.0	2.2	0.0	9.5
PICO_ur	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	2.0	0.0	5.0	0.7	0.0	0.0	2.8	0.0	5.8
PSME_si	0.2	0.0	0.0	0.7	0.0	1.3	2.0	1.0	0.0	6.0	0.0	9.0	5.8	2.1	0.0	14.5	0.0	17.8
PSME_seoc	0.3	0.0	0.0	0.8	0.0	1.2	2.0	0.0	0.0	6.0	0.0	9.0	5.3	0.1	0.0	13.7	0.0	18.6
PSME_secc	0.2	0.0	0.0	0.5	0.0	1.7	1.0	0.0	0.0	3.0	0.0	7.0	15.7	0.0	0.0	19.0	0.0	200.2
PSME_ur	0.4	0.0	0.0	1.5	0.0	2.3	3.0	0.0	0.0	8.0	0.0	15.0	6.5	1.7	0.0	18.8	0.0	32.8
PSME_yfms	0.3	0.1	0.0	0.8	0.0	1.6	3.0	2.0	0.0	6.0	0.0	9.0	7.2	4.4	0.0	17.8	0.0	21.8
PSME_ofms	0.1	0.0	0.0	0.5	0.0	0.6	1.0	0.0	0.0	3.0	0.0	5.0	3.7	0.0	0.0	14.6	0.0	25.9
PSME_ofss	0.1	0.0	0.0	0.5	0.0	0.5	1.0	0.0	0.0	4.0	0.0	6.0	5.7	0.0	0.0	13.0	0.0	46.9
ABGR_ur	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	3.0	0.7	0.0	0.0	1.9	0.0	6.5
ABAM_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0	0.0	0.0	8.3
ABAM_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.4	0.0	0.0	0.0	0.0	6.9
ABLA2/PIEN_si	0.5	0.2	0.0	1.1	0.0	2.4	3.0	1.0	0.0	8.0	0.0	16.0	11.1	6.5	0.0	27.5	0.0	57.5
ABLA2/PIEN_seoc	0.3	0.2	0.0	0.8	0.0	0.9	3.0	2.0	0.0	8.0	0.0	10.0	7.5	8.1	0.0	15.1	0.0	23.0
ABLA2/PIEN_secc	0.1	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	4.0	0.0	9.0	2.1	0.0	0.0	8.6	0.0	14.2
ABLA2/PIEN_ur	0.3	0.1	0.0	0.6	0.0	1.9	3.0	2.0	0.0	8.0	0.0	10.0	7.6	5.4	0.0	18.5	0.0	20.3
ABLA2/PIEN_yfms	0.8	0.6	0.0	1.8	0.0	2.3	8.0	6.0	1.0	17.0	0.0	19.0	9.2	9.0	0.4	16.9	0.0	24.3
ABLA2/PIEN_ofms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.3	0.0	0.0	0.0	0.0	5.0

	%Land						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percent land (%)						*N/10 000 ha*						*Ha*					
Herbland	0.1	0.0	0.0	0.1	0.0	0.4	2.0	0.0	0.0	4.0	0.0	14.0	1.3	0.0	0.0	3.2	0.0	8.6
Shrubland	0.3	0.0	0.0	1.1	0.0	1.7	3.0	0.0	0.0	8.0	0.0	10.0	3.8	0.1	0.0	13.3	0.0	22.2
Other	0.1	0.1	0.0	0.3	0.0	0.5	5.0	4.0	0.0	11.0	0.0	16.0	2.8	1.8	0.0	7.0	0.0	13.5
Cool/moist subalpine fir/Engelmann spruce PVT--																		
PIPO_seoc	0.1	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	3.0	2.7	0.0	0.0	0.1	0.0	42.8
PIPO_ur	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	16.0
LAOC_si	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	1.1	0.0	14.7
LAOC_seoc	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	2.0	1.2	0.0	0.0	0.0	0.0	19.1
LAOC_secc	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	0.0	0.0	0.0	14.1
LAOC_ur	0.1	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	1.0	11.0	0.0	0.0	0.0	0.0	175.6
LAOC_yfms	0.0	0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.0	0.0	12.0	0.3	0.0	0.0	0.0	0.0	4.4
PICO_si	0.2	0.0	0.0	0.4	0.0	2.2	1.0	0.0	0.0	3.0	0.0	5.0	4.5	0.0	0.0	8.7	0.0	53.9
PICO_seoc	0.1	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	4.0	1.9	0.0	0.0	0.0	0.0	30.0
PICO_secc	0.1	0.0	0.0	0.1	0.0	0.9	0.0	0.0	0.0	0.0	0.0	4.0	2.8	0.0	0.0	10.8	0.0	22.7
PICO_ur	0.1	0.0	0.0	0.1	0.0	0.8	0.0	0.0	0.0	1.0	0.0	3.0	3.5	0.0	0.0	4.0	0.0	48.3
PICO_yfms	0.0	0.0	0.0	0.1	0.0	0.3	1.0	0.0	0.0	2.0	0.0	7.0	2.2	0.0	0.0	1.6	0.0	32.0
PSME_si	0.3	0.1	0.0	0.4	0.0	3.0	3.0	0.0	0.0	8.0	0.0	15.0	5.0	0.8	0.0	17.0	0.0	20.1
PSME_seoc	0.1	0.0	0.0	0.3	0.0	1.2	2.0	0.0	0.0	3.0	0.0	13.0	12.9	0.0	0.0	27.4	0.0	145.1
PSME_secc	0.1	0.0	0.0	0.3	0.0	1.1	2.0	1.0	0.0	6.0	0.0	11.0	7.6	0.4	0.0	23.2	0.0	66.2
PSME_ur	0.2	0.0	0.0	0.6	0.0	1.1	4.0	0.0	0.0	14.0	0.0	17.0	4.0	0.5	0.0	12.3	0.0	17.6
PSME_yfms	0.2	0.0	0.0	0.7	0.0	1.3	4.0	3.0	0.0	10.0	0.0	19.0	3.1	0.7	0.0	7.8	0.0	15.4
PSME_ofms	0.1	0.0	0.0	0.2	0.0	0.3	1.0	0.0	0.0	4.0	0.0	6.0	2.1	0.0	0.0	7.6	0.0	14.0
PSME_ofss	0.0	0.0	0.0	0.1	0.0	0.3	1.0	0.0	0.0	2.0	0.0	3.0	1.5	0.0	0.0	4.2	0.0	12.8
ABGR_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.7	0.0	0.0	0.0	0.0	10.5
ABGR_ur	0.1	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	1.0	12.5	0.0	0.0	0.0	0.0	199.3
ABLA2/PIEN_si	1.2	0.6	0.1	2.9	0.0	6.6	7.0	4.0	0.0	16.0	0.0	28.0	15.8	15.5	3.3	31.2	0.0	32.2
ABLA2/PIEN_seoc	0.8	0.5	0.2	1.8	0.1	2.4	5.0	2.0	1.0	10.0	1.0	19.0	22.1	19.5	8.2	44.3	4.1	58.6
ABLA2/PIEN_secc	0.4	0.1	0.0	1.3	0.0	2.1	2.0	1.0	0.0	5.0	0.0	6.0	13.6	5.9	0.0	44.2	0.0	55.1
ABLA2/PIEN_ur	1.9	0.9	0.0	5.4	0.0	10.0	6.0	4.0	0.0	16.0	0.0	21.0	21.9	17.5	0.0	49.4	0.0	96.0
ABLA2/PIEN_yfms	2.5	2.1	0.1	5.3	0.0	9.7	15.0	12.0	1.0	32.0	0.0	37.0	14.8	14.3	3.1	22.7	0.0	42.6
ABLA2/PIEN_ofms	0.1	0.0	0.0	0.1	0.0	1.3	1.0	0.0	0.0	3.0	0.0	6.0	2.4	0.0	0.0	8.9	0.0	21.1
ABLA2/PIEN_ofss	0.3	0.0	0.0	0.1	0.0	5.3	0.0	0.0	0.0	1.0	0.0	2.0	28.0	0.0	0.0	10.8	0.0	426.6
PIAL/LALY_si	0.1	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	1.0	4.3	0.0	0.0	0.0	0.0	68.0
PIAL/LALY_seoc	0.1	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	4.0	1.6	0.0	0.0	0.5	0.0	24.8
PIAL/LALY_secc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.0	0.0	4.1
PIMO_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	16.1
HDWD_si	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	2.0	1.5	0.0	0.0	0.0	0.0	23.9
HDWD_seoc	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.0	3.6	0.0	0.0	0.0	0.0	58.1
Woodland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0	0.0	0.0	7.7
Herbland	0.3	0.2	0.0	0.8	0.0	1.2	5.0	3.0	0.0	12.0	0.0	14.0	9.3	4.4	0.2	19.7	0.0	52.6
Shrubland	0.3	0.1	0.0	0.8	0.0	1.2	4.0	2.0	0.0	10.0	0.0	23.0	8.6	1.9	0.0	28.2	0.0	48.2
Other	0.7	0.6	0.1	1.4	0.0	3.1	23.0	16.0	1.0	60.0	0.0	76.0	3.7	2.6	0.9	7.5	0.0	13.5
Harsh/cold subalpine fir/Engelmann spruce PVT--																		
PIPO_si	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	1.0	4.4	0.0	0.0	0.0	0.0	70.2
PIPO_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.8	0.0	0.0	0.0	0.0	13.2
LAOC_seoc	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	6.0	0.4	0.0	0.0	0.0	0.0	5.5
LAOC_yfms	0.1	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	3.0	2.8	0.0	0.0	0.0	0.0	45.2
PICO_si	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.0	1.4	0.0	0.0	4.4	0.0	13.0
PICO_seoc	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	4.0	0.5	0.0	0.0	0.0	0.0	8.1
PICO_ur	0.1	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	2.0	3.5	0.0	0.0	0.0	0.0	56.5
PSME_si	0.0	0.0	0.0	0.1	0.0	0.3	1.0	0.0	0.0	2.0	0.0	7.0	1.5	0.0	0.0	4.9	0.0	13.9
PSME_seoc	0.0	0.0	0.0	0.2	0.0	0.4	1.0	0.0	0.0	2.0	0.0	11.0	2.8	0.0	0.0	3.3	0.0	37.9
PSME_secc	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	2.0	0.0	5.0	1.7	0.0	0.0	0.3	0.0	26.6
PSME_ur	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.0	0.0	2.0	0.0	7.0	1.2	0.0	0.0	3.1	0.0	12.8
PSME_yfms	0.1	0.0	0.0	0.3	0.0	0.5	1.0	0.0	0.0	2.0	0.0	5.0	4.4	0.0	0.0	18.6	0.0	32.7
ABGR_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.4	0.0	0.0	0.0	0.0	5.9

	%Land						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	- - - - - - Percent land (%) - - - - - -						*- - - - - - - - N/10 000 ha - - - - - - -*						*- - - - - - - - - - - Ha - - - - - - - - - -*					
ABLA2/PIEN_si	0.9	0.0	0.0	3.9	0.0	5.1	3.0	0.0	0.0	11.0	0.0	16.0	8.2	0.0	0.0	31.3	0.0	43.9
ABLA2/PIEN_seoc	0.2	0.0	0.0	0.4	0.0	1.1	2.0	0.0	0.0	6.0	0.0	11.0	6.9	0.0	0.0	21.8	0.0	36.5
ABLA2/PIEN_secc	0.1	0.0	0.0	0.2	0.0	1.4	0.0	0.0	0.0	0.0	0.0	7.0	3.4	0.0	0.0	10.4	0.0	33.2
ABLA2/PIEN_ur	0.3	0.0	0.0	0.9	0.0	2.4	5.0	0.0	0.0	18.0	0.0	40.0	1.8	0.0	0.0	6.8	0.0	12.2
ABLA2/PIEN_yfms	1.2	0.2	0.0	2.2	0.0	11.3	9.0	2.0	0.0	34.0	0.0	37.0	11.6	4.1	0.0	21.5	0.0	103.8
PIAL/LALY_si	0.2	0.0	0.0	0.5	0.0	1.7	1.0	0.0	0.0	4.0	0.0	5.0	5.8	0.0	0.0	22.4	0.0	38.1
PIAL/LALY_seoc	0.1	0.0	0.0	0.4	0.0	1.2	2.0	0.0	0.0	4.0	0.0	21.0	1.7	0.0	0.0	5.2	0.0	17.2
PIAL/LALY_ur	0.1	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	3.0	3.7	0.0	0.0	0.0	0.0	58.9
PIAL/LALY_yfms	0.6	0.0	0.0	0.6	0.0	7.7	2.0	0.0	0.0	4.0	0.0	26.0	4.0	0.0	0.0	17.3	0.0	29.3
Herbland	0.2	0.0	0.0	0.2	0.0	2.0	1.0	0.0	0.0	2.0	0.0	4.0	5.7	0.0	0.0	6.4	0.0	76.1
Shrubland	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	2.0	0.0	4.0	1.2	0.0	0.0	2.8	0.0	11.5
Other	0.3	0.0	0.0	0.9	0.0	1.9	8.0	2.0	0.0	18.0	0.0	67.0	2.5	0.4	0.0	6.7	0.0	15.4
Whitebark pine/ subalpine larch PVT--																		
LAOC_si	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	1.3	0.0	0.0	0.0	0.0	21.1
PSME_yfms	0.0	0.0	0.0	0.0	0.0	0.2	1.0	0.0	0.0	0.0	0.0	9.0	0.1	0.0	0.0	0.0	0.0	2.0
ABLA2/PIEN_yfms	0.0	0.0	0.0	0.0	0.0	0.2	1.0	0.0	0.0	2.0	0.0	8.0	0.5	0.0	0.0	1.0	0.0	5.7
PIAL/LALY_si	0.1	0.0	0.0	0.2	0.0	0.9	1.0	0.0	0.0	2.0	0.0	7.0	3.5	0.0	0.0	11.9	0.0	20.0
PIAL/LALY_seoc	0.2	0.0	0.0	0.2	0.0	2.8	1.0	0.0	0.0	2.0	0.0	8.0	2.9	0.0	0.0	6.5	0.0	33.7
PIAL/LALY_yfms	0.3	0.0	0.0	0.3	0.0	4.2	1.0	0.0	0.0	1.0	0.0	9.0	6.1	0.0	0.0	25.6	0.0	46.1
Other	0.7	0.0	0.0	1.7	0.0	7.3	2.0	0.0	0.0	8.0	0.0	17.0	6.8	0.0	0.0	19.6	0.0	68.1
Wyoming big sage (warm sites) PVT--																		
Shrubland	0.2	0.0	0.0	0.1	0.0	2.3	0.0	0.0	0.0	0.0	0.0	2.0	9.9	0.0	0.0	11.1	0.0	136.2
Other	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	3.0	1.4	0.0	0.0	0.1	0.0	23.0
Fescue grassland PVT--																		
Herbland	0.1	0.0	0.0	0.2	0.0	1.1	0.0	0.0	0.0	1.0	0.0	2.0	9.5	0.0	0.0	14.7	0.0	122.8
Mountain big sage PVT--																		
Shrubland	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.8	0.0	0.0	0.0	0.0	13.4
Mountain shrub PVT--																		
PIPO_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.2	0.0	0.0	0.0	0.0	3.1
PICO_ur	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.4	0.0	0.0	0.0	0.0	6.8
PSME_ofms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	5.0	0.2	0.0	0.0	0.4	0.0	1.6
ABAM_seoc	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	1.8	0.0	0.0	0.0	0.0	29.3
ABAM_yfms	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.0	0.0	5.1
Herbland	0.1	0.0	0.0	0.2	0.0	1.4	1.0	0.0	0.0	4.0	0.0	5.0	2.3	0.0	0.0	3.9	0.0	28.8
Shrubland	1.4	0.0	0.0	3.0	0.0	10.5	4.0	0.0	0.0	12.0	0.0	20.0	12.7	4.7	0.0	28.3	0.0	52.8
Other	0.2	0.0	0.0	0.6	0.0	1.5	5.0	1.0	0.0	11.0	0.0	37.0	2.9	0.6	0.0	8.1	0.0	9.2
Riparian sedge (without *Salix* spp.) PVT--																		
Herbland	0.1	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	2.0	0.0	2.0	3.7	0.0	0.0	12.8	0.0	25.0
Other	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.0	2.4	0.0	0.0	3.3	0.0	32.0
Alpine herbland- low shrub PVT--																		
ABLA2/PIEN_si	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.0	0.0	7.0	0.2	0.0	0.0	0.6	0.0	1.1
ABLA2/PIEN_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0	0.0	0.0	7.4
ABLA2/PIEN_yfms	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	3.0	1.8	0.0	0.0	4.0	0.0	19.3
Herbland	0.5	0.0	0.0	1.6	0.0	2.6	2.0	0.0	0.0	6.0	0.0	17.0	14.5	0.0	0.0	37.6	0.0	101.1
Other	0.4	0.0	0.0	1.5	0.0	2.2	5.0	0.0	0.0	13.0	0.0	45.0	10.1	0.5	0.0	27.4	0.0	75.8
Other (nonforest-nonrangeland and anthropogenic types)--																		
PSME_si	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	3.0	0.0	7.0	0.1	0.0	0.0	0.5	0.0	0.9
PSME_secc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.0	4.0	0.1	0.0	0.0	0.3	0.0	1.3
ABLA2/PIEN_si	0.0	0.0	0.0	0.1	0.0	0.1	2.0	0.0	0.0	5.0	0.0	12.0	1.5	0.0	0.0	4.3	0.0	11.2
ABLA2/PIEN_seoc	0.0	0.0	0.0	0.1	0.0	0.2	1.0	0.0	0.0	2.0	0.0	4.0	0.7	0.0	0.0	3.1	0.0	4.7
ABLA2/PIEN_yfms	0.0	0.0	0.0	0.1	0.0	0.3	3.0	0.0	0.0	10.0	0.0	20.0	0.4	0.0	0.0	1.3	0.0	2.9
TSME_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	2.0	0.4	0.0	0.0	0.0	0.0	5.6
PIAL/LALY_seoc	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	2.0	0.0	2.0	0.5	0.0	0.0	0.7	0.0	6.7

	%Land						PD--patch density						MPS--mean patch size					
			80% range		100% range				80% range		100% range				80% range		100% range	
Subregion	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max	Mean	Median	Min	Max	Min	Max
	Percent land (%)						*N/10 000 ha*						*Ha*					
Herbland	0.1	0.0	0.0	0.4	0.0	0.6	6.0	0.0	0.0	11.0	0.0	52.0	2.6	0.1	0.0	6.4	0.0	21.6
Shrubland	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	4.0	0.0	5.0	0.3	0.0	0.0	1.3	0.0	2.2
Other	7.9	5.6	1.4	18.1	0.2	18.9	11.0	8.0	4.0	16.0	1.0	42.0	90.8	39.0	22.4	205.9	18.5	425.8

[a] Structural codes are si = stand initiation; seoc = stem exclusion, open canopy; secc = stem exclusion-closed canopy; ur = understory reinitiation; yfms = young-forest multistory; ofms = old-forest multistory; ofss = old-forest single story. Cover types are *PIPO* = ponderosa pine; *PSME* = Douglas-fir; *ABGR* = grand fir; *HDWD* = hardwood; *PICO* = lodgepole pine; *ABLA2 (=ABLA2/PIEN*) = subalpine fir/Engelmann spruce; *PIAL (=PIAL/LALY*) = whitebark pine/subalpine larch; herbland = all herbland cover types and structural classes combined; other = all nonforest/nonrangeland and anthropogenic types combined.

Appendix 3

Table 8—Landscape metric results for ecological subregions of the east side of the Cascade Range, Washington, where patch types were cover type-structural class couplets

	Ecological subregions				
Landscape metrics[a]	Dry and mesic forests (ESR2)	Mesic forests (ESR3)	Mesic and wet forests (ESR4)	Wet-frigid forests (ESR5)	Wet-cold forests (ESR6)
Richness and diversity:					
RPR_median[b]	38.89	42.39	41.51	38.18	35.26
RPR_mean	38.44	41.85	44.47	41.30	37.90
$RPR\_range_{100\%}$	13.33 - 53.33	23.91 - 56.52	26.42 - 69.81	27.27 - 54.55	26.92 - 65.38
$RPR\_range_{80\%}$	23.33 - 53.33	33.05 - 50.44	35.47 - 55.09	32.72 - 51.27	28.85 - 48.72
PR_median	17.50	19.50	22.00	21.00	27.50
PR_mean	17.30	19.25	23.57	22.71	29.56
$PR\_range_{100\%}$	6.00 - 24.00	11.00 - 26.00	14.00 - 37.00	15.00 - 30.00	21.00 - 51.00
$PR\_range_{80\%}$	10.50 - 24.00	15.20 - 23.20	18.80 - 29.20	18.00 - 28.20	22.50 - 38.00
SHDI_median	2.11	2.34	2.57	2.54	2.70
SHDI_mean	2.03	2.22	2.46	2.51	2.68
$SHDI\_range_{100\%}$	1.22 - 2.51	1.61 - 2.77	2.01 - 2.75	2.24 - 2.76	2.22 - 3.23
$SHDI\_range_{80\%}$	1.63 - 2.42	1.63 - 2.55	2.09 - 2.72	2.28 - 2.70	2.33 - 3.01
N1_median	8.26	10.30	13.04	12.72	14.90
N1_mean	8.12	9.78	12.10	12.44	15.10
$N1\_range_{100\%}$	3.39 - 12.33	4.98 - 15.98	7.48 - 15.71	9.36 - 15.73	9.17 - 25.33
$N1\_range_{80\%}$	5.15 - 11.28	5.11 - 12.89	8.09 - 15.24	9.79 - 14.85	10.30 - 20.13
N2_median	5.50	7.30	9.26	8.88	9.22
N2_mean	5.63	7.10	9.02	8.90	10.79
$N2\_range_{100\%}$	2.52 - 8.34	3.25 - 12.98	5.50 - 12.89	7.51 - 11.41	6.07 - 18.76
$N2\_range_{80\%}$	3.57 - 8.10	3.75 - 9.68	5.82 - 12.73	7.60 - 10.58	7.52 - 15.05
Evenness:					
MSIEI_median[c]	0.61	0.65	0.68	0.73	0.69
MSIEI_mean	0.60	0.64	0.69	0.70	0.69
$MSIEI\_range_{100\%}$	0.49 - 0.68	0.49 - 0.79	0.54 - 0.82	0.60 - 0.75	0.56 - 0.77
$MSIEI\_range_{80\%}$	0.51 - 0.68	0.49 - 0.73	0.58 - 0.81	0.64 - 0.75	0.63 - 0.76
R21_median	0.64	0.69	0.77	0.71	0.72
R21_mean	0.65	0.68	0.71	0.70	0.69
$R21\_range_{100\%}$	0.52 - 0.76	0.57 - 0.80	0.55 - 0.83	0.57 - 0.80	0.56 - 0.76
$R21\_range_{80\%}$	0.60 - 0.73	0.59 - 0.75	0.58 - 0.82	0.64 - 0.75	0.61 - 0.75
Contagion and interspersion:					
CONTAG_median	56.35	55.18	55.77	54.58	54.54
CONTAG_mean	57.18	57.02	55.22	54.37	54.37
$CONTAG\_range_{100\%}$	53.04 - 61.85	52.28 - 65.07	50.47 - 61.59	51.32 - 56.73	50.31 - 61.13
$CONTAG\_range_{80\%}$	53.78 - 61.65	53.96 - 62.63	51.08 - 58.91	52.51 - 56.59	51.02 - 57.26
IJI_median	66.73	70.81	67.37	72.62	71.68
IJI_mean	65.94	67.87	69.29	72.31	71.42
$IJI\_range_{100\%}$	58.04 - 71.30	49.04 - 77.54	63.30 - 76.09	69.83 - 73.84	64.36 - 77.24
$IJI\_range_{80\%}$	60.93 - 71.16	58.88 - 74.28	63.61 - 75.58	70.87 - 73.72	67.81 - 74.97
Edge contrast:					
AWMECI_median	38.23	36.97	39.34	41.16	42.47
AWMECI_mean	38.52	35.90	37.29	40.37	41.00
$AWMECI\_range_{100\%}$	27.13 - 56.18	28.85 - 47.7	27.25 - 47.29	36.01 - 44.33	31.07 - 48.56
$AWMECI\_range_{80\%}$	29.68 - 45.67	29.98 - 41.07	29.86 - 44.84	36.89 - 44.28	33.73 - 45.88

[a] RPR = relative patch richness; PR = patch richness; SHDI = Shannon diversity index; N1 = Hill's index N1 = e^{SHDI}; N2 = Hill's index N2 = 1/(1/SIDI); MSIEI = modified Simpson's evenness index; R21 = Alatalo's evenness index = (N2-1)/(N1-1); CONTAG = contagion index; IJI = interspersion and juxtaposition index; AWMECI = area-weighted mean edge contrast index (see also McGarigal and Marks 1995).

[b] RPR values represent percentage of relative patch richness where the observed number of patch types (cover-structure types) in subwatersheds of an ecological subregion is scaled against a realistic maximum number of patch types possible across the entire subregion. PR values represent the total number of patch types present within an ecological subregion. N1 is a simple transformation of SHDI; rare patch types are weighted less than in PR. N2 also counts numbers of patch types as RPR, but N2 gives increased weight to dominant patch types and can be considered a count of the average number of dominant patch types in an ecological subregion. With N2, rare patch types are weighted less than in N1.

[c] MSIEI is more sensitive to change in abundance among all patch types, whereas R21 is more sensitive to change in abundance of the dominant patch types. Large values indicate that area distributed among patch types is increasingly even. Small values indicate that some patch types are more abundant than others within an ecological subregion.

Appendix 4

Table 9—Landscape metric results for ecological subregions of the east side of the Cascade Range, Washington, where patch types were potential vegetation type-cover type-structural class triplets

	Ecological subregions				
Landscape metrics[a]	Dry and mesic forests (ESR2)	Mesic forests (ESR3)	Mesic and wet forests (ESR4)	Wet-frigid forests (ESR5)	Wet-cold forests (ESR6)
Richness and diversity:					
RPR_median[b]	25.44	26.25	30.25	28.84	21.78
RPR_mean	24.92	26.53	31.03	28.25	23.71
$RPR\_range_{100\%}$	10.78 - 42.67	21.27 - 34.39	20.17 - 45.80	16.10 - 38.20	12.41 - 47.54
$RPR\_range_{80\%}$	13.49 - 37.24	21.90 - 31.54	24.45 - 37.73	19.70 - 36.86	17.10 - 34.31
PR_median	59.00	58.00	72.00	77.00	93.00
PR_mean	57.80	58.63	73.86	75.43	101.25
$PR\_range_{100\%}$	25.00 - 99.00	47.00 - 76.00	48.00 - 109.00	43.00 - 102.00	53.00 - 203.00
$PR\_range_{80\%}$	31.30 - 86.40	48.40 - 69.70	58.20 - 89.80	52.60 - 98.40	73.00 - 146.50
SHDI_median	2.97	3.06	3.23	3.40	3.46
SHDI_mean	2.92	3.01	3.21	3.27	3.49
$SHDI\_range_{100\%}$	1.78 - 3.34	2.49 - 3.48	2.84 - 3.54	2.80 - 3.60	2.76 - 4.47
$SHDI\_range_{80\%}$	2.72 - 3.26	2.59 - 3.36	2.85 - 3.48	2.85 - 3.56	3.01 - 4.06
N1_median	19.50	21.39	25.40	29.95	31.76
N1_mean	19.75	21.32	25.68	27.61	35.95
$N1\_range_{100\%}$	5.93 - 28.34	12.05 - 32.48	17.14 - 34.61	16.49 - 36.59	15.84 - 87.46
$N1\_range_{80\%}$	15.64 - 26.01	13.32 - 29.01	17.31 - 32.59	17.37 - 35.17	20.36 - 58.16
N2_median	12.76	13.64	16.81	15.05	16.92
N2_mean	12.24	13.76	16.37	16.45	21.30
$N2\_range_{100\%}$	4.51 - 15.94	7.91 - 22.06	8.58 - 25.96	9.77 - 24.06	8.97 - 57.78
$N2\_range_{80\%}$	9.48 - 15.80	8.15 - 19.81	9.55 - 22.09	11.47 - 23.41	11.13 - 35.02
Evenness:					
MSIEI_median[c]	0.61	0.66	0.65	0.65	0.64
MSIEI_mean	0.62	0.63	0.64	0.64	0.64
$MSIEI\_range_{100\%}$	0.47 - 0.74	0.53 - 0.71	0.50 - 0.76	0.56 - 0.70	0.51 - 0.76
$MSIEI\_range_{80\%}$	0.55 - 0.70	0.54 - 0.70	0.56 - 0.72	0.58 - 0.70	0.59 - 0.72
R21_median	0.59	0.65	0.58	0.61	0.58
R21_mean	0.62	0.62	0.61	0.59	0.57
$R21\_range_{100\%}$	0.46 - 0.77	0.49 - 0.68	0.47 - 0.74	0.45 - 0.68	0.42 - 0.66
$R21\_range_{80\%}$	0.52 - 0.73	0.54 - 0.68	0.52 - 0.70	0.47 - 0.67	0.47 - 0.65
Contagion and interspersion:					
CONTAG_median	56.68	56.78	56.42	56.21	56.26
CONTAG_mean	57.22	57.50	56.93	56.67	56.38
$CONTAG\_range_{100\%}$	52.23 - 68.38	54.38 - 61.46	53.06 - 61.96	54.40 - 61.09	51.00 - 61.54
$CONTAG\_range_{80\%}$	53.45 - 59.50	54.95 - 60.92	54.59 - 59.54	54.78 - 59.24	53.63 - 60.13
IJI_median	62.79	64.03	62.04	65.40	65.02
IJI_mean	61.51	62.16	62.32	64.89	64.64
$IJI\_range_{100\%}$	47.60 - 66.87	53.15 - 65.85	59.00 - 65.75	61.20 - 68.30	62.57 - 66.24
$IJI\_range_{80\%}$	57.37 - 66.12	57.62 - 65.51	59.95 - 64.52	62.61 - 67.01	63.22 - 65.74

[a] RPR = relative patch richness; PR = patch richness; SHDI = Shannon diversity index; N1 = Hill's index N1 = e^{SHDI}; N2 = Hill's index N2 = 1/(1/SIDI); MSIEI = modified Simpson's evenness index; R21 = Alatalo's evenness index = (N2-1)/(N1-1); CONTAG = contagion index; IJI = interspersion and juxtaposition index; AWMECI = area-weighted mean edge contrast index (see also McGarigal and Marks 1995).

[b] RPR values represent percentage of relative patch richness where the observed number of patch types (potential vegetation type-cover-structure types) in subwatersheds of an ecological subregion is scaled against a realistic maximum number of patch types possible across the entire subregion. PR values simply represent the total number of patch types present within an ecological subregion. N1 is a transformation of SHDI; rare patch types are weighted less than in PR. N2 also counts numbers of patch types as RPR, but N2 gives increased weight to dominant patch types and can be considered a count of the average number of dominant patch types in an ecological subregion. With N2, rare patch types are weighted less than in N1.

[c] MSIEI is more sensitive to change in abundance among all patch types, whereas R21 is more sensitive to change in abundance of the dominant patch types. Large values indicate that area distributed among patch types is increasingly even. Small values indicate that some patch types are more abundant than others within an ecological subregion.

Appendix 5

Table 10—Edge contrast weights used in calculating the FRAGSTATS (McGarigal and Marks 1995) metric area weighted mean edge contrast index (AWMECI) in pattern analyses of patch types of sampled subwatersheds in ecological subregions of the east side of the Cascade Range, Washington

					Forest (by structural class[a])				
Physiognomic type	Nonforest and nonrange	Herbland	Shrubland	Woodland	*si*	*seoc* and *secc*	*ur* and *yfms*	*ofss*	*ofms*
Nonforest and nonrange	0.0[b]	0.2	0.3	0.4	0.5	0.6	0.8	0.9	1.0
Herbland		0.0	0.2	0.3	0.4	0.6	0.7	0.8	0.9
Shrubland			0.0	0.2	0.3	0.5	0.6	0.7	0.8
Woodland				0.0	0.3	0.4	0.5	0.6	0.7
Forest—*si*					0.0	0.3	0.4	0.5	0.6
Forest—*seoc* and *secc*						0.0	0.3	0.4	0.5
Forest—*ur* and *yfms*							0.0	0.3	0.4
Forest—*ofss*								0.0	0.3
Forest—*ofms*									0.0

[a] Forest structural classes are stand initiation (si); stem exclusion open canopy (seoc); stem exclusion closed canopy (secc); understory reinitiation (ur); young-forest multistory (yfms); old-forest single story (ofss); and old-forest multistory (ofms).

[b] Range of possible values is 0 to 1, with increasing values representing greater edge contrast. For example, an edge contrast weight of 0.8 for an edge shared by an ofms forest structure and shrubland indicates that this combination displays 80 percent of the maximum edge contrast possible when two patches share a common border. An AWMECI value of 0.49 indicates that 49 percent of all edge is high-contrast edge.

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Hessburg, Paul F.; Smith, Bradley G.; Salter, R. Brion. 1999. Using estimates of natural variation to detect ecologically important change in forest spatial patterns: a case study, Cascade Range, eastern Washington. Res. Pap. PNW-RP-514. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 65 p.

Using hierarchical clustering techniques, we grouped subwatersheds on the eastern slope of the Cascade Range in Washington State into ecological subregions by similarity of area in potential vegetation and climate attributes. We then built spatially continous historical and current vegetation maps for 48 randomly selected subwatersheds from interpretations of 1938-49 and 1985-93 aerial photos, respectively, and attributed cover types, structural classes, and potential vegetation types to individual patches by modeling procedures. We estimated a natural range of variation (NRV) in spatial patterns of patch types by subwatersheds and five forested ecological subregions. We illustrate how NRV information can be used to characterize the direction and magnitude of vegetation change occurring as a consequence of management.

Keywords: Natural range of variation, forest health, space-for-time substitution, ecosystem restoration, ecological monitoring, landscape patterns, spatial pattern analysis.

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