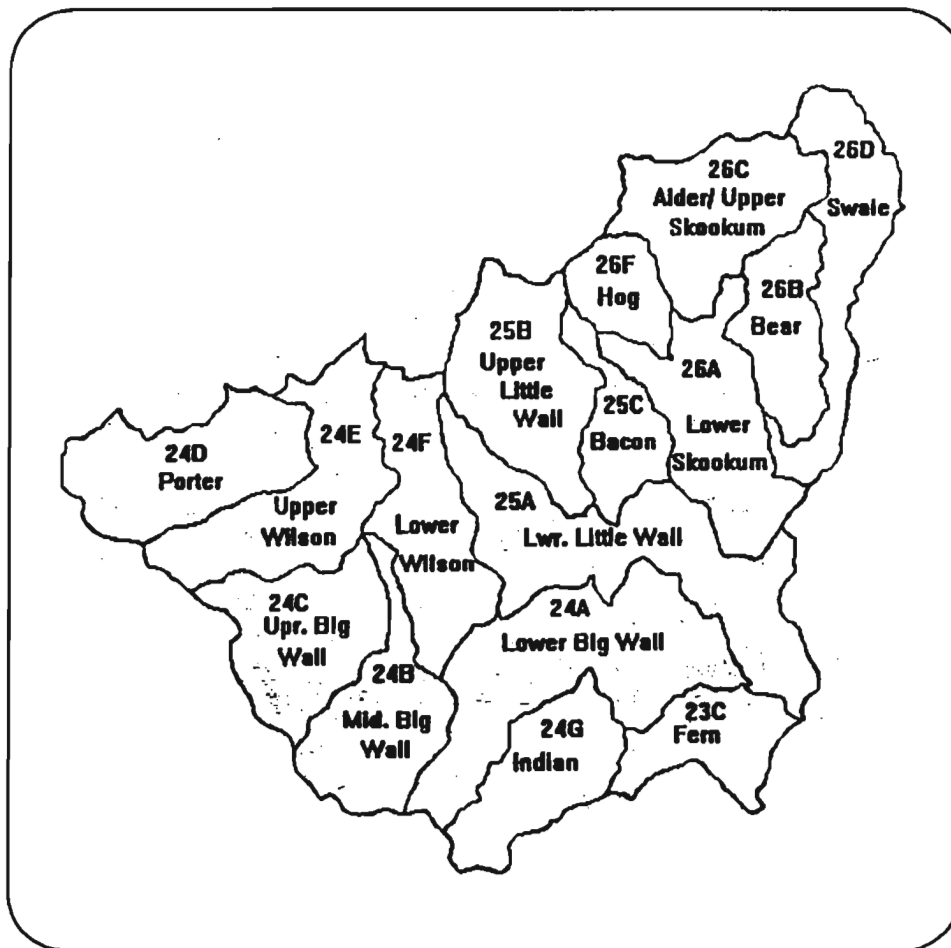


**Section VII. U.**

**Floristic Biodiversity and Related Botanical Resource Issues  
of the Wall Creek Ecosystem Analysis Area**

**Heppner Ranger District  
Umatilla National Forest**



by  
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## Floristic Biodiversity of the Wall Creek Ecosystem Analysis Area: Executive Summary

- ⚙ A Forest-wide floristic biodiversity database was developed based on species affinities for the seven plant association groups selected for this analysis.
- ⚙ Analysis was applied to the 614 plant species known to occur in the Wall Creek Ecosystem Analysis Area (data were compiled from species encounter lists from Sensitive Plant Surveys between 1982 and 1994).
- ⚙ This species list for the watershed provides guidelines for restoration opportunities with desirable native species within the seven plant association groups.
- ⚙ Of the 614 plant species of the Wall Creek Ecosystem, 79 or 12.8% are introduced species. This information provides estimates of the Historic Range of Variability for Floristic Biodiversity.
- ⚙ Through specific queries, the Floristic Biodiversity Database provided numbers and species lists by Plant Association Group. Database analysis determined that:
  - The greatest floristic richness of the Wall Creek Ecosystem is in the "non-forested" plant association groups, and specifically the "steppe" plant association group.
  - There is 92.3% floristic similarity between the Ponderosa Pine and Warm Grand Fir Plant Association Groups (Forest-wide this Coefficient of Similarity is 89%).
  - One presently-listed sensitive plant species occur in the Wall Creek Ecosystem Analysis Area but 13 historically-listed species occur there.
  - Thirty-three native species of the Wall Creek Ecosystem have apparent problematic combined distributional and abundance indices. However, on-the-ground experience indicates that only nine of these species are potentially "at-risk."
  - Ten species of noxious weeds that are "tracked" by the Forest have been encountered in the Wall Creek Ecosystem. Three additional species are potentially problematic.
  - Fifty-one culturally-significant (food) plants occur in the Wall Creek Ecosystem. The habitat of one of these, tufted buckwheat (*Eriogonum caespitosum*) is limited within the Analysis Area.
- ⚙ The Floristic Biodiversity Database enables potentially problematic plant species to be identified and integrated into management planning and activities in subwatersheds in which management opportunities are greatest.
- ⚙ Four issues related to vegetative ecology are also addressed: Juniper Encroachment; Restoration Activities on Highly-Erodible Soils; Shrub Restoration Activities in Riverine Corridors; and Sedge Restoration Activities in Riverine Corridors

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## Introduction

In the Floristic Biodiversity Analysis of the Forest Service-administered portion of the Wall Creek Ecosystem, a forest-wide Floristic Biodiversity Database was developed from the Forest's existing databases of plant species occurrences (UMA95), sensitive plant species occurrences (TEPO), native species database (UMA95), noxious weed database (UMANOX), and culturally-significant plant species database (UMACULT). Species habitat affinity values were determined from existing ecology guidebooks and from on-the-ground experience across the entire Umatilla National Forest. By linking the information contained in these databases at appropriate times in the analysis process and then performing precisely structured queries, it was possible to obtain most plausible answers to questions about many facets of the floristic biodiversity of the Wall Creek Ecosystem Analysis Area.

The use of the Floristic Biodiversity Database to screen plant species potentially at risk in the Wall Creek Ecosystem enables the issue of floristic biodiversity to be considered in the planning of management activities within the ecosystem. The inference is not that these "at risk" species are guaranteed to gain listing status within the near future. Rather, the purpose of this analysis is to assess the integrity, present and future, of the floristic biodiversity of a significant ecosystem within the Umatilla National Forest. This analysis enables the possible vulnerabilities of these "at risk" species and their respective microhabitats to impacts associated with management activities to be addressed.

The questions addressed in this floristic and vegetative analysis are:

- 1) What vascular plant species presently occur in the Wall Creek Ecosystem Analysis Area?
- 2) What is the floristic richness of the Wall Creek Ecosystem Analysis Area in comparison with the rest of the Heppner Ranger District, with the Umatilla National Forest, and with the Pacific Northwest Region?
- 3) What are the ecological distributions and habitat affinities of these species within the six plant association groups selected for this analysis? (The seventh plant association group, Subalpine Fir, is not represented in this ecosystem.)

- 4) What are the floristic similarities between the plants of one plant association group and the other plant association groups?
- 5) What are the occurrences of historically-listed or presently-listed sensitive plant species within the Wall Creek Ecosystem?
- 6) How might management activities occurring in the Analysis Area adversely impact plant species with an historic track of sensitivity?
- 7) What other plant species might be "at risk" in the Analysis Area and which of the Plant Association Groups support these potentially "at risk" species?
- 8) What is the ratio of native to introduced species in the Analysis Area? Is this ratio an accurate indicator of Historic Variability in Floristic Biodiversity?
- 9) What noxious weeds occur in the Analysis Area and what are their affinities for Plant Association Groups?
- 10) What are the culturally-significant plant species of the Analysis Area? Are any of them "at risk" because of management activities? Are any of these species so limited in abundance and/or geographical amplitude that they may become major issues in the future?

The Floristic Biodiversity Database was used to answer these questions. The answers were then integrated with the findings of other resource specialists working on the Wall Creek Ecosystem Analysis Team. The team collectively identified subwatersheds with greatest potential issues and potential opportunities for management activities as part of the "integration" step. Specific plant species which were determined to be "potentially at risk" as a result of the screening process provided by the application of the species habitat affinity database were then addressed at a subwatershed and critical microhabitat level of analysis which is incorporated into the "integration" section of this document.

## **Methods**

A Floristic Biodiversity Database which assigns habitat affinity values and their cumulative scores ( $\Sigma$ ) to the Umatilla National Forest's 1,232 vascular plant species in seven plant association groups was constructed using information available from existing ecological guidebooks, floras, and sensitive plant survey field records

extending back to 1982. The plant association groups in the Forest-wide analysis database follow the convention developed by Holsapple, Keersemaier, and Powell (1994) for the analysis area except that the "non-forested" plant association group was further divided into steppe and riverine plant association groups. The resulting plant association groups carried throughout the analysis were Ponderosa Pine, Warm Grand Fir, Cool Grand Fir, Lodgepole Pine, Subalpine Fir, Steppe (Grasslands/Shrublands), and Riverine-Lacustrine (Riparian). By determining the plant species common to both the steppe and riverine plant association groups, it was possible to generate a third "non-forested" plant association group, meadowlands. However, this association group was not carried through the analysis. Also, because the subalpine fir series is not represented in the Wall Creek Ecosystem Analysis Area, it was eliminated from this analysis.

Within the Floristic Biodiversity Database, numeric assignments of 3, 2, 1, or 0 were made for plant species occurring in each of the seven plant association groups listed above. Using this system, plants receiving a rating of 3 in a given plant association group exhibit a high affinity for that plant association group. In other words, such species are **always** to be found in that group. **This does not imply that such species exhibit ecological abundance in that group.** A value of 2 indicates a moderate affinity for a plant species for a plant association group and implies that the species is **sometimes** found in that plant association group. A value of 1 indicates that a plant species **may** be found in that plant association group. A value of 0 indicates that the habitat provided by the plant association group is unsuitable for a particular plant species.

Cumulative scores for each plant species were obtained for each of the 1,232 plant species known to occur on the Umatilla National Forest by adding the affinity values for the seven plant association groups. This  $\Sigma$  Value or "Signature" Value provides information about the ecological distribution of a given species of plant within seven plant association groups known to occur on the Umatilla National Forest.

Next, the species-encounter lists from sensitive plant surveys conducted in the Wall Creek Ecosystem Analysis Area were merged to obtain a comprehensive species

list for the Wall Creek Watershed. The Forest-wide species habitat affinity database was linked to each of the 614 species that appeared on the final Wall Creek checklist of plant species. Other Umatilla National Forest databases employed in the analysis were the Culturally-Significant Plants Database, the Noxious Weed Database, and the Native and Introduced Species Database. These are all relational databases that can be extracted easily from UMA95, a current checklist of plant species found on the Umatilla National Forest.

## **Results**

### **1) What vascular plant species presently occur in the Wall Creek Ecosystem Analysis Area?**

Sensitive plant survey species encounter lists maintained on the Umatilla National Forest indicate that 614 vascular plant species occur within the Wall Creek Ecosystem Analysis Area. This figure compares with 1,232 species on the checklist of plants for the Umatilla National Forest. A checklist of these 614 species is provided in Appendix A. **Additional appendices (B,C,D,E,F, and G) provide checklists of the native species of each of the plant association groups. These species list provide guidelines for restoration opportunities with desirable native species according to their placement in the six plant association groups.**

### **2) What is the floristic richness of the Wall Creek Ecosystem Analysis Area in comparison with the rest of the Heppner Ranger District, with the Umatilla National Forest, and with the Pacific Northwest Region?**

The 614 vascular plant species of the Wall Creek Ecosystem Analysis Area represent 71.6% of the 854 species of plants known to occur on the Heppner Ranger District and 49.8% of the 1,232 species of plants known to occur on the Umatilla National Forest. Although the exact number of plant taxa in Region 6 (Oregon and Washington) is unavailable at this time, a floristic database compiled at Oregon State University (Urban, 1989) indicates that approximately 5,100 plant taxa occur within the Region. Regionally, the Analysis Area supports a modest 12.01% of the vascular flora.

### **3) What are the ecological distributions and habitat affinities of these species**

**within the seven plant association groups selected for this analysis?**

Application of the Floristic Biodiversity Database enables the determination that 324 of the 614 plant species have affinity values in the Ponderosa Pine (PIPO) Plant Association Group. For the Watershed Area, this represents a Floristic Biodiversity Index of 52.8%. For the Warm Grand Fir (Warm ABGR) plant association groups the number of plant species is 326 and the Floristic Biodiversity Index is 53.18%. The Cool Grand Fir (Cool ABGR) Plant Association Group supports 246 species which translates to an Index of 40.1%. The Lodgepole Pine (PICO) Plant Association Group supports 202 species and its Index is 32.9%; the Subalpine Fir (ABLA2) Plant Association Group is not represented in the Wall Creek Watershed; the Steppe Plant Association Group supports 384 species (Index = 62.5%); and the Riverine-Lacustrine (Riparian) Plant Association Group supports 365 plant species (Index = 59.5%). If species common to both steppe and riverine groups are merged to obtain a "Meadowland" group, 153 species occur in this group and its Floristic Biodiversity Index is 24.9%. This portion of the analysis indicates that the greatest floristic richness in the Wall Creek Ecosystem Analysis Area is within the non-forested plant association groups, and specifically within the Steppe Plant Association Groups.

**4) What are the floristic similarities between the plants of one plant association group and the other plant association groups?**

Coefficients of floristic similarity were obtained by querying the Wall Creek Watershed Floristic Biodiversity Database (Species Habitat Affinity Database) for common species between any two plant association groups. Results of this query show that the greatest similarity in floristic composition occurs between the Ponderosa Pine and the Warm Grand Fir Plant Association Groups. The coefficient of floristic similarity between these two groups in the Analysis Area is 92.3%. This compares with a Forest-wide coefficient of floristic similarity for PIPO:WARM of 89%. Other coefficients of similarity having relatively high values include COOL:RIV = 84.4%. This indicates that the Grand Fir (*Abies grandis*) is an important component of the riparian communities in the Wall Creek Ecosystem. The Forest-wide value for this same comparison is 44%. This seemingly significant disparity probably occurs

because of the historic general diminished floristic richness of the riparian zones across the entire Heppner Ranger District. The least similarity occurs between the PICO and Steppe Plant Association Groups with a coefficient of similarity within the Ecosystem Analysis Area of 31.9%. The Forest-wide values for this coefficient is also quite low (24%). The conclusion here is that there is a tremendous similarity between the floristic composition of the Warm Grand Fir Plant Association Group and the Ponderosa Pine Plant Association Group within the Wall Creek Ecosystem Analysis Area. The major difference is that *Pinus ponderosa* as a plant association dominant is essentially missing from the tree synusium (layer) in the *Abies grandis* (Warm) Plant Association Group.

**5) What are the occurrences of historically-listed or presently-listed sensitive plant species within the Wall Creek Ecosystem?**

A query (saved as WALLSENS.DB) of the plant species habitat affinity (floristic biodiversity matrix) database for the Wall Creek Ecosystem Analysis Area indicates that a single presently-listed sensitive plant species, the Washington Monkeyflower (*Mimulus washingtonensis*), has been found in the Analysis Area. A query of the sensitive plant occurrence database for the Umatilla National Forest (TEPO) indicates that 65 populations of *Mimulus washingtonensis* occur in the Wall Creek Ecosystem of the Heppner Ranger District. These populations are concentrated along the lower reaches of Wilson Creek, Indian Creek, Big Willow Creek, and mainstem Wall Creek.

This sensitive species is well-known from the Heppner Ranger District where its distribution is limited to sites below 4,000 feet that have volcanic ash soils derived from the John Day Formation. One disjunct population of the Washington Monkeyflower has been documented on the adjacent North Fork John Day Ranger District. This species also occurs to the south and west of the Wall Creek Watershed on the Heppner Ranger District of the Umatilla National Forest and on the Prineville District of the Bureau of Land Management. A related variety, *Mimulus washingtonensis* var. *ampliatus*, is known to occur in northern Idaho.

Additionally, thirteen historically-listed sensitive (for both the Oregon and Washington portions of the Umatilla National Forest) plant species have known

occurrences in the Analysis Area. These species and their historic tracks of sensitivity are given below:

|                                                             |         |                                                          |         |
|-------------------------------------------------------------|---------|----------------------------------------------------------|---------|
| <i>Allium madidum</i> Blue Mountain Onion                   | HSO     | <i>Delphinium depauperatum</i> Slim or Dwarf Larkspur    |         |
| <i>Astragalus diaphanus diaphanus</i> Transparent Milkvetch | HSO;PSW |                                                          | HSW     |
| <i>Astragalus reventus reventus</i> Blue Mountain Milkvetch | HSO     | <i>Githopsis specularioides</i> Common Blue-cup          | PSW     |
| <i>Calypso bulbosa</i> Calypso Orchid                       | HSO     | <i>Mimulus washingtonensis</i> Washington Monkeyflower   | PSO;PSW |
| <i>Chaenactis douglasii glandulosa</i> Hoary Chaenactis     | HSW     | <i>Orobanche pinorum</i> Pine Broomrape                  | HSO;PSW |
| <i>Cirsium utahense</i> Utah Thistle                        | HSW     | <i>Ribes hudsonianum</i> Stinking Currant                | HSO     |
| <i>Cryptantha rostellata</i> Beaked Cryptantha              | HSO     | <i>Ribes oxyacanthoides cognatum</i> Umatilla Gooseberry | HSO;PSW |
| <i>Cypripedium montanum</i> Mountain Lady Slipper           | HSO     |                                                          |         |

The information above indicates whether the species is Historically Sensitive in Oregon (HSO); Historically Sensitive in Washington (HSW); Presently Sensitive in Oregon (PSO); or Presently Sensitive in Washington (PSW). Further analysis of these formerly listed sensitives shows that five species, *Chaenactis douglasii glandulosa*, *Cryptantha rostellata*, *Githopsis specularioides*, *Ribes hudsonianum*, and *Ribes oxyacanthoides cognatum* have signature scores of 3 and, therefore, should be subjected to further analysis.

Douglas' Chaenactis, Dusty Maiden, or Morning Bride (*Chaenactis douglasii glandulosa*) was never on the Oregon sensitive plant list but was on the Washington list until 1988. This species is abundant in dry cobbly soils and appears to increase with soil disturbance, especially along roads and trails. In the Wall Creek Ecosystem, this species is too abundant to be left in the "at risk" category.

Beaked Cryptantha, *Cryptantha rostellata*, was reported from Wilson Creek during a 1984 survey. There are no voucher specimens of the reported species but careful checking of *Cryptantha*'s in the watershed has indicated that what is present is *Cryptantha flaccida*, the Weak-stemmed Cryptantha. The 1993 treatment of the genus *Cryptantha* in the *Jepson Manual* reimmerses *C. rostellata* into *C. flaccida*. In other words, *Cryptantha rostellata* is no longer considered to be a valid taxon. Until definitive resolution of the taxonomic status of this species is completed, sensitive plant survey crews should continue to check the small *Cryptantha*'s, particularly in the Wall Creek and Bologna Creek drainages of the Heppner Ranger District.

Common Blue Cup, *Githopsis specularioides*, remains on the Washington sensitive species list but has never been listed in the State of Oregon. This annual species is very abundant in moist years on the lithosolic (cobbly) soils of the steppe plant association group within the Wall Creek Ecosystem. This is one of three watersheds on the Umatilla National Forest that support this species. In dry years, this species---like many other annuals of the steppe habitat---is scarcely to be found. Because the populations of this species are controlled by climatic conditions rather than management activities, it is a species to be informally monitored to insure that it is present in "wet" years.

The Umatilla Gooseberry, *Ribes oxyacanthoides cognatum*, was delisted because of its abundance within Oregon. It has also been proposed for delisting in the State of Washington (1993) because it has now been found in every low elevation riparian zone on the Washington portion of the Pomeroy Ranger District. This species is not "at risk." The Hudson's Bay Currant (*Ribes hudsonianum*) enjoyed a brief stint on the Oregon Rare Plants List in the 1970's. The resolution of a taxonomic synonymy problem which was centered on this species enabled the universal acceptance that the former *Ribes petiolare* was synonymous with *Ribes hudsonianum petiolare*. This riparian species has been known as the "worst" alternate host of White Pine Blister Rust since the 1930's. This "quality" is probably attributable to its relatively large leaf surface area which simultaneously provides an ideal environment for two developmental stages in the life cycle of White Pine Blister Rust (*Cronartium ribicola*) and (ironically) significant shading of waterways within riparian corridors. This species has been found in virtually all of the riparian zones that have ever been subjected to sensitive plant surveys on the Umatilla National Forest. Clearly, it is not a species "at risk."

6) How might management activities occurring in the Analysis Area adversely impact plant species with an historic track of sensitivity?

Within the context of the floristic composition of the Umatilla National Forest it is unlikely that small-scale impacts to the habitats of the twelve species listed in #5 (above) would adversely affect any of those species and translate to a "trend toward

Federal listing." Prescribed burning conducted in the spring months (May and June) would most likely impact *Allium madidum*. However, this onion is widespread on the Umatilla National Forest and it is unlikely that spring burning projects would diminish its status as fairly common on the Umatilla National Forest. The plants of the Wall Creek Ecosystem Analysis Area and the Umatilla National Forest, including those on the historically sensitive "tracking" list, have evolved under a natural cycle of periodic fire. Under natural conditions, the fire cycle begins in the late summer or autumn of each year. By that time, most plant species have entered a state of dormancy or have dispersed their propagules for the year. The species on this "historic track" list are, for the most part, abundant both within the Wall Creek Ecosystem Analysis Area and on the Umatilla National Forest.

**7) What other plant species might be "at risk" in the Analysis Area and which of the Plant Association Groups support these potentially "at risk" species?**

The Wall Creek Ecosystem Floristic Biodiversity Database (Wallbidi.db) was used to determine and list all plant species that might be "at risk" because of low  $\Sigma$  values ( $\Sigma \leq 3$ ). This value would indicate that the species either had a low cumulative affinity score or that it was found in a single plant association group. The result of this database query indicates that there are 189 such species within the Wall Creek Ecosystem Analysis Area.

By linking the entries in this "risk" category with the entries in the native vs. introduced species database for the Umatilla National Forest, it is possible to determine that 23 of the 189 species in the low  $\Sigma$  category are introduced, rather than native, species. Through selection criteria and the use of the Floristic Biodiversity Database for the Wall Creek Ecosystem Analysis Area, it is possible to limit further analysis to those species that are native and have low  $\Sigma$  (plant association "signatures" or affinity values). When the introduced species are eliminated from the list of species that have low signature values, 166 native plant species remain in a category "meriting further consideration because of potentially at risk status."

In the analysis of the remaining plant species in the "potentially at risk category," considerations of "relative abundance" and geographic distribution lead to

the screening of additional plant species. The occurrence of a species across the four districts of the Umatilla National Forest was used as a barometer of geographic distribution. Species found on a single district were assigned a distribution index of 1, species found on two districts were assigned a distribution index of 2, species found on three districts were assigned a distribution index of 3, and cosmopolitan (all districts) species were assigned a distribution index of 4. Relative abundance categories of LA (limited abundance), MA (moderate abundance), and VA (very abundant) were assigned on the basis of on-the-ground experience and sensitive plant survey field notes.

The "native species potentially at risk" species list (NATIRISK.DB) for the Wall Creek Watershed Analysis area contains 165 entries. Through the use of the Relative Abundance Table and the Forest-wide Distributional Index Table, it is possible to determine that **40 of these species have problematic combined distributional and abundance indexes**. These species are identified in the WALLABUN.DB table produced by the linking of relational databases. The following species warrant further consideration in the category of "limited abundance and limited distribution:"

|                                                                |                                                                  |
|----------------------------------------------------------------|------------------------------------------------------------------|
| <i>Arabis sparsiflora</i> Sicklepod Rockcress 2 MA             | <i>Lomatium nudicaule</i> Barestem Lomatium 2 VA                 |
| <i>Astragalus purshii</i> Woollypod Milkvetch 1 VA             | <i>Mimulus cusickii</i> Cusick's Monkeyflower 1 MA               |
| <i>Athysanus pusillus</i> Sandweed 2 LA                        | <i>Phoradendron bolleanum</i> Dense Mistletoe 1 VA               |
| <i>Brickellia grandiflora</i> Large Flowered Brickellbush 2 LA | <i>Phoradendron juniperinum</i> Juniper Mistletoe 1 VA           |
| * <i>Cardamine breweri</i> Brewer's Bittercress 1 LA           | <i>Polygonum spargulariaeforme</i> Fall Knotweed 1 MA            |
| <i>Chenopodium rubrum</i> Red Goosefoot 2 LA                   | * <i>Pyrola elliptica</i> White Wintergreen 1 LA                 |
| <i>Cirsium canovirens</i> Gray-green Thistle 2 MA              | <i>Ranunculus scleratus</i> Celeryleaved /Blister Buttercup 1 MA |
| <i>Cordylanthus ramosus</i> Bushy Birdbeak 2 VA                | <i>Rigiopappus leptocladus</i> Bristlehead 1 MA                  |
| <i>Cryptantha ambigua</i> Obscure Cryptantha 1 MA              | <i>Salix exigua melanopsis</i> Dusky Willow 2 LA                 |
| <i>Cryptantha flaccida</i> Weak-stemmed Cryptantha 1 VA        | * <i>Salix lasiolepis</i> Arroyo Willow 1 LA                     |
| <i>Crepis intermedia</i> Gray Hawksbeard 1 VA                  | * <i>Salix lasiandra caudata</i> Whiplash Willow 2 LA            |
| <i>Cryptantha rostellata</i> Beaked Cryptantha 1 VA            | * <i>Salix rigida mackenziana</i> Mackenzie Willow 2 LA          |
| * <i>Eriogonum caespitosum</i> Mat Buckwheat 1 LA              | * <i>Salix sitchensis</i> Sitka Willow 2 LA                      |
| <i>Erigeron coulteri</i> Coulter's Daisy 2 MA                  | <i>Scirpus americanus</i> Three-square Bulrush 2 MA              |
| <i>Erigeron tener</i> Slender Daisy 1 MA                       | <i>Scutellaria angustifolia</i> Narrowleaved Skullcap 2 MA       |
| <i>Githopsis specularioides</i> Common Blue-cup 2 MA           | <i>Sisyrinchium angustifolium</i> Blue-eyed Grass 2 LA           |
| <i>Gutierrezia sarothrae</i> Broom Snakeweed 2 VA              | <i>Stellaria nitens</i> Shining Chickweed 1 MA                   |
| * <i>Helianthus nuttallii</i> Nuttall's Sunflower 1 LA         |                                                                  |
| <i>Holodiscus dumosus</i> Bush Rockspiraea 2 LA                |                                                                  |
| <i>Lesquerella occidentalis</i> Western Bladderpod 2 VA        |                                                                  |
| * <i>Linum micranthum</i> Small-flowered White Flax 1 LA       |                                                                  |
| <i>Lomatium donnellii</i> Donnell's Desert Parsley 2 VA        |                                                                  |

\*Final "Potentially At-Risk" Species

Further analysis of the species on this list indicates that the 25 species that received an "MA" (moderately abundant) or "VA" (very abundant) ranking are not "at risk" in the Wall Creek Ecosystem. Fifteen species are in the "LA" (limited abundance) category. Nineteen of the forty species in this final list received a distributional score of "1" indicating that they occur on a single ranger district of the Umatilla National Forest. Six species have a distributional score of 1 (occur on a single district of the Forest) and an abundance ranking of "LA."

On-the-ground experience enables further refinement of the list of plant species that are truly at risk. For example, three species of willow (*Salix*) received scores of "2LA." Because of Heppner Ranger District's efforts to protect riparian corridors, these riparian species are presently making a comeback which is attributable to exclusion by fencing or "rest" periods in the grazing rotation system. Other species with distributional values of "2" do not merit further consideration in the "at risk" category because of on-the-ground abundance. Additional analysis and discussion is limited to those species which received a

"1LA" score (i.e., those species which occur on only one district and which are of limited abundance).

One willow species, *Salix lasiolepis*, received a score of "1LA." This species is infrequent in the Wilson Creek subwatershed. However, it is making a dramatic comeback since the Wilson riparian fence was completed. The other species in the final "at risk" category (i.e., received a score of "1LA") are *Cardamine breweri*, *Eriogonum caespitosum*, *Helianthus nuttallii*, and *Pyrola elliptica*. Because of its prolific seed production, *Cardamine breweri* is expected to increase in the riparian zones of the Wall Creek Ecosystem.

The Small-flowered White Flax (*Linum micranthum*) is apparently a disjunct from Central Oregon (Hitchcock et al, 1976) and grows only in the Skookum Grazing Exclosure. The rich steppe vegetation of this exclosure provides a barometer against which adjacent vegetational and edaphic conditions can be compared. The unique occurrence of this species within the exclosure could lead to the assumption that this species was historically more widespread within the Wall Creek Watershed, the Heppner District, and the Umatilla National Forest. Another plausible explanation for the relative scarcity of this species is that it is an accidental introduction into the Skookum Exclosure. Despite the questions concerning the apparent disjunction or possible introduction of this species, the species is not threatened by management activities unless the exclosure fence is not maintained or if wildfires destroy the protective structure that has been in place for some 60 years.

The microhabitats of both *Eriogonum caespitosum* and *Helianthus nuttallii* are extremely limited in the Wall Creek Ecosystem. The White Wintergreen, *Pyrola elliptica*, is extremely limited on the most mesic riparian fir forests of the north-facing slopes in the Indian Creek subwatershed. Responses of these final "at risk" species are addressed in the Integration section of this document.

Thus, nine species mentioned above remain on the list of plant species for further consideration in management decisions. With the exception of the willow species, most of these species occupy a unique microhabitat that is not well

represented on the Umatilla National Forest.

In summary, of the 165 native plant species received low ( $\leq 3$ ) Floristic Biodiversity Database analysis scores. Of these, forty have Distributional Indices  $\leq 2$  (occur on one or two districts of the Umatilla National Forest). Of these forty species, nineteen have a distributional value of 1. **Of these nineteen species, six have abundance values of "LA" (limited abundance). Additionally, three species of willows having distributional scores of "2" (but with limited abundance) fall into the final "at risk" category on the basis of limited abundance determined by on-the-ground analysis.**

The Floristic Biodiversity Database has also enabled finer focusing on the species with low  $\Sigma$  scores in each plant association group. Of the final nine "at risk" species, six species are principally riverine-lacustrine inhabitants and three are species of the steppe habitat. The responses of these nine potentially "at risk" species to various management activities are discussed later in this document.

**8) What is the ratio of native to introduced species in the Analysis Area? Is this ratio an accurate indicator of Historic Variability in Floristic Biodiversity?**

Among the 614 plant species presently found in the Wall Creek Ecosystem Analysis Area, 79 or 12.8% are introduced (non-North American) species and 535 (87.2%) are "native" within the convention of the Jepson Manual (1993). This figure indicates that the Watershed Analysis Area **probably** is floristically more diverse today than it was historically. This conclusion does not consider the **quality** of the vegetation. **The non-native species---whether aggressive noxious weeds or species introduced for management purposes---have diminished the habitat available for native species.**

**The Plant Association Group supporting the largest number of non-native species is the Steppe Plant Association Group** which has been historically altered through grazing activities and range improvement projects. **Interestingly, the non-native species appear to have "broad spectrum" affinities for virtually all of the plant association groups.** Many of the non-native plant species in the Wall Creek Watershed are grass species that have been historically included in seeding

prescriptions that have been part of management activities. The present goal of the Agency to revegetate exclusively with "native" species should reverse the trend of diminished habitat occupied by native plant species.

**9) What noxious weeds occur in the Analysis Area and what are their affinities for Plant Association Groups?**

Eight species presently placed on the Noxious Weed List for the Umatilla National Forest are found on the USFS-administered lands of the Wall Creek Ecosystem Analysis Area. Two additional species are known from adjacent private land. An additional three species which are not presently "tracked" by the Forest's Noxious Weed program are known to occur in the Wall Creek Ecosystem. The eight "tracked" species are *Arctium minus* (Common Burdock), *Centaurea maculosa* (Spotted Knapweed), *Centaurea nigra* (Black Knapweed), *Centaurea diffusa* (Diffuse Knapweed), *Cirsium arvense* (Canada Thistle), *Cirsium vulgare* (Bull Thistle), *Cynoglossum officinale* (Hound's Tongue), and *Hypericum perforatum* (Klamath Weed). *Convolvulus arvensis* (Morning Glory or Field Bindweed) and *Senecio jacobaea* (Tansy Ragwort) are known from lands immediately adjacent to Forest-service administered lands. An historic population of Tansy Ragwort at Bull Prairie Reservoir was apparently successfully eradicated following its discovery in 1988. Seven of the eight "tracked" species occur in all of the Plant Association Groups. Only the Common Burdock does not occur in all of the groups. Of these noxious weeds, Canada Thistle has the greatest potential for spreading and is the most widespread at the present time. Spotted Knapweed is spread primarily by vehicular traffic and, to a lesser extent, by animal vectors. Tansy Ragwort is spread by wind, contaminated hay, and animals. Additionally, one undesirable native species, Cocklebur (*Xanthium strumarium*) poses a threat as a "new invader" near the Forest Boundary on mainstem Wall Creek.

Two of the three "untracked" noxious weeds of the Wall Creek system are "new invaders." These species are Purple Field Mustard (*Chorispora tenella*) and Sulfur Cinquefoil (*Potentilla recta*). The third "untracked" noxious weed occupies significant habitat in the Wall Creek Watershed. Cheatgrass (*Bromus tectorum*) is

so widespread in the Pacific Northwest that it is impossible to eradicate.

- 10) What are the culturally-significant plant species of the Analysis Area? Are any of them "at risk" because of management activities? Are any of these species so limited in abundance and/or geographical amplitude that they may become major issues in the future?

Of great concern to Native Americans at the present time is the diminished habitat of food plants. Although a relational query (saved as WALLEDIB) of the Wall Creek Watershed Floristic Biodiversity Database and the Culturally-significant Species Database of the Forest (UMACULT.DB) indicates the occurrence of at least 51 culturally-significant edible plant species, nine of these species are of greatest importance. These nine species and their Floristic Biodiversity Database  $\Sigma$  scores are: Common Camas (*Camassia quamash*) {9}; Bitterroot (*Lewisia rediviva*) {3}; Cous Biscuitroot (*Lomatium cous*) {3}; Biscuitroot (*Lomatium macrocarpum*) {4}; Naked Stemmed Desert Parsley (*Lomatium nudicaule*) {3}; Arrow-leaved Balsamroot (*Balsamorhiza sagittata*) {9}; American Bistort (*Polygonum bistortoides*) {6}; Big Huckleberry (*Vaccinium membranaceum*) {7}; and Grouse Whortleberry (*Vaccinium scoparium*) {6}.

Common Camas and American Bistort principally inhabit the meadowlands of the Wall Creek Ecosystem Analysis Area, while the Biscuitroots and Desert Parsley are found in the Steppe plant association group. Bitterroot habitat is prevalent in the Wall Creek Ecosystem Analysis Area and, consequently, this culturally-significant species is quite abundant on the rocky scabland flats.

Distribution of the 51 culturally-significant plant species (food plants) within the Wall Creek Ecosystem Analysis Area is: PIPO = 35 species; Warm ABGR = 34 species; Cool ABGR = 21 species; PICO = 22 species; Steppe = 40 species; and Riverine = 24 species.

## **Synthesis, Integration, and Implications for Management Opportunities**

### **Synthesis**

The use of the Floristic Biodiversity Database to screen plant species potentially at risk in the Wall Creek Watershed has produced a list of nine native species that may be at risk within the geographical boundaries of the Wall Creek Watershed Analysis Area. It is important to reiterate that the inference is not that these "at risk" species are guaranteed to gain listing status within the near future. Rather, the purpose of this analysis is to assess the integrity, present and future, of the floristic biodiversity of a significant watershed within the Umatilla National Forest. Awareness of the possible vulnerabilities of these "at risk" species and their respective microhabitats to impacts associated with management activities is a final goal in this floristic analysis.

A summary of the findings which lists the species, its habitat affinity, its microhabitat, and probable response to management activities is provided in the table below:

| "At risk" Species                                   | Subwatershed of Occurrence                                            | Plant Association Group | Microhabitat                                                                                 | Probable Vulnerability to which Management Activities?                                                                                                             |
|-----------------------------------------------------|-----------------------------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Cardamine breweri</i> (Brewer's Bittercress)     | Upper Wilson (24E) and Upper Big Wall (24C)                           | Riverine-Lacustrine     | Permanently moist streambanks and mudflats                                                   | 1. Diminished stream flow                                                                                                                                          |
| <i>Eriogonum caespitosum</i> (Mat Buckwheat)        | Lower Wilson (24F); Lower Big Wall (24A); and Indian (24G)            | Steppe                  | Fractured rimrock; rocky outcroppings                                                        | 1. Seeding with annual brome grasses<br>2. Increased fuel loading<br>3. Susceptibility to Spring Prescribed Burn (ordinarily the habitat would not sustain a fire) |
| <i>Helianthus nuttallii</i> (Nuttall's Sunflower)   | Indian (24G) and Lower Little Wall (25A)                              | Steppe                  | Outcroppings of volcanic ash                                                                 | 1. Seeding with annual brome grasses<br>2. Increased fuel loading<br>3. Susceptibility to Spring Prescribed Burn (ordinarily the habitat would not sustain a fire) |
| <i>Linum micranthum</i> (Small-flowered White Flax) | Lower Skookum (26A)                                                   | Steppe                  | Known only from the Skookum Game Exclosure where under <i>Purshia</i> and <i>Cercocarpus</i> | 1. Breach in the exclosure fence                                                                                                                                   |
| <i>Pyrola elliptica</i> (White Wintergreen)         | Upper Big Wall (24C) and Middle Big Wall (24B)                        | Cool Grand Fir          | Cool, moist fir forest; north-facing slopes                                                  | 1. Canopy removal<br>2. Changes in light regime                                                                                                                    |
| <i>Salix lasiolepis</i> (Arroyo Willow)             | Lower Wilson (24F) and Lower Big Wall (24A)                           | Riverine-Lacustrine     | Gravel-bars and banks of low gradient streams; shade intolerant                              | 1. Grazing (Domestic and excessive Wild)<br>2. Spring Prescribed Burning                                                                                           |
| <i>Salix lasiandra caudata</i> (Whiplash Willow)    | Lower Wilson (24F); Lower Little Wall (25A); and Lower Big Wall (24A) | Riverine-Lacustrine     | Gravel bars of low gradient streams; shade intolerant                                        | 1. Grazing (Domestic and excessive Wild)<br>2. Spring Prescribed Burning                                                                                           |
| <i>Salix rigida mackenziana</i> (Mackenzie Willow)  | Lower Wilson (24F); Lower Little Wall (25A); and Lower Big Wall (24A) | Riverine-Lacustrine     | Gravel bars of low gradient streams; shade intolerant                                        | 1. Grazing (Domestic and excessive Wild)<br>2. Spring Prescribed Burning                                                                                           |
| <i>Salix sitchensis</i> (Sitka Willow)              | Lower Wilson (24F) and Lower Big Wall (24A)                           | Riverine-Lacustrine     | Gravel Bars of low gradient streams; shade intolerant                                        | 1. Grazing (Domestic and excessive Wild)<br>2. Spring Prescribed Burning                                                                                           |

## **Integration**

Several other issues related to vegetation and floristic biodiversity have been identified as a result of Watershed Team integration. Because these issues are related to the botanical resources of the Wall Creek Watershed, they are addressed in this document.

### **Plant Ecological Issue #1: Juniper Encroachment**

**Western Juniper, *Juniperus occidentalis*, encroachment is occurring into plant association groups that would not ordinarily support that species.** The juniper encroachment problem is most severe in the Steppe Plant Association Group, next most severe in the Ponderosa Pine Plant Association, and next most severe in the Warm Grand Fir Plant Association Group. There are many possible explanations for juniper encroachment but all of them seem related either directly or indirectly to fire suppression. A map is provided (Figure 1) which was reconstructed from on-the-ground experience and which shows areas of the Wall Creek Watershed in which juniper encroachment is considered to be problematic (from a botanical perspective).

The normal (i.e., natural) habitat of Western Juniper is crevices in rimrock associated with basaltic fracture zones. This habitat occupies approximately 4,686 acres of the Wall Creek Watershed (polygons 1 through 9 on the map provided). Areas in which unusually large populations of Western Juniper have been encountered during sensitive plant surveys are shown in polygons 10 through 20 on the Juniper encroachment map. The approximate area of the "encroached juniper" is 6,696 acres. The most plausible explanation of juniper encroachment, particularly into the warmer and drier plant association groups, is fire suppression. Grazing has contributed to a reduction in severity of fires by reducing fuel loads (grasses), particularly in the steppe plant association group.

Continued juniper encroachment will probably result in a diminished floristic biodiversity of the steppe plant association group since many of these species are shade intolerant. The juniper encroachment problem exacerbates the larger issue of diminished habitat for native species. Reintroduction of fire into the Wall Creek Ecosystem may provide an effective means of resolving this ecological problem.

Figure 1. Map showing natural juniper habitat (polygons 1 through 9) and areas of juniper encroachment (polygons 10 through 20) in the Wall Creek Watershed. Polygons reconstructed from on-the-ground experience during sensitive plant surveys.

## **Plant Ecological Issue #2: Stabilization of Highly-Erodible Shallow Soils**

The issue of highly erodible soils on steep slopes presents a rare opportunity for the District and the Agency to use a formerly-listed sensitive plant species, the transparent milkvetch (*Astragalus diaphanus diaphanus*), in restoration activities that will stabilize such soils. The roots of this annual to biennial member of the Pea Family (Fabaceae) harbor Nitrogen-fixing microorganisms. Because of this symbiotic relationship, this species could be used as a "workhorse" plant species to simultaneously enrich and stabilize the thin soils of the Upper Big Wall (24C), Middle Big Wall (24B); Lower Wilson (24F), Lower Big Wall (24A), Indian (24G), and Lower Little Wall (25A) subwatersheds. The northernmost geographic distribution of this species is apparently reached within the southern subwatersheds of the Wall Creek Watershed. A map showing the areas (zone) in which the Transparent Milkvetch could be used to stabilize thin, highly-erodible soils on steep slopes is provided in Figure 2.

Figure 2. Map showing areas in which the Transparent Milkvetch, *Astragalus diaphanus diaphanus*, could be used to stabilize thin, highly-erodible soils in the Wall Creek Watershed. **The potential use of this formerly-listed sensitive species in rehabilitation activities presents a rare management opportunity.**

### **Plant Ecological Issue #3: Increasing "At Risk" Willow Species and Using Them in Riparian Restoration**

There are other opportunities to increase populations of the willow species that were on the final list of "at risk" species in the Wall Creek Watershed. Guidelines for exact placement of willow transplants to ensure greatest probability of success are dependent upon microsite conditions. In general, willows prefer an open canopy, a low stream gradient, and a relatively broad floodplain. This combination of environmental factors occurs on the lower reaches of almost all of the stream courses in the Wall Creek System. The use of willows to stabilize streambanks and to reduce water temperatures is one of many ways in which native plant species can be put to "work" in resolving environmental problems. The Heppner Ranger District is already working to increase and protect riparian shrub species. Riparian restoration efforts along the main stem of Wall Creek are evidenced by significant regeneration of severely hedged plants. Figure 3 shows streams with suitable microsite profiles for successful willow regeneration. The "willow" zone continues off the map to the middle reaches of Swale Creek.

**Figure 3. Streams with suitable microsite habitat to support a successful willow component in the riparian corridor.**

#### **Plant Ecological Issue #4: Suitable Vegetation for Stream Channel Stabilization**

The use of another "workhorse" native plant species to achieve streambank stabilization in low-gradient streams below approximately 3,200 feet in the Wall Creek system is proposed. **Torrent Sedge (*Carex nudata*)** is an important species of the waterways of the Wall Creek Watershed and the North Fork John Day River Watershed System. This species can be multiplied by removing plugs from the centers of parental clumps. These plugs can be "increased" in a nursery or transplanted directly to a new location. They can also be stored for short durations under cool temperatures to allow removal and reintroduction. Depending upon the timing of the transplanting operations, leaves may or may not be pruned to reduce transpiration stress. This sedge is most effective in gravelly soils at the edge of a **permanent** stream channel. Figure 4 shows streams with microsite potential and suitable elevation for using the Torrent Sedge in riparian restoration and rehabilitation.

Figure 4. Streams with suitable microsite potential and elevation for using the Torrent Sedge in riparian restoration and rehabilitation.

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# APPENDIX A

## PLANT SPECIES OF THE WALL CREEK ECOSYSTEM WITH FLORISTIC BIODIVERSITY DATABASE SIGNATURE VALUE

(Note: Each entry contains the scientific name of the species, its common name, and its floristic biodiversity database signature value. The higher the signature value, the greater the number of plant association groups that provide suitable environmental conditions for the species.)

|                                                            |                                                               |
|------------------------------------------------------------|---------------------------------------------------------------|
| <i>Abies grandis</i> Grand Fir 11                          | <i>Arceuthobium campylopodum</i> Western Dwarf Mistletoe 15   |
| <i>Acer glabrum</i> Rocky Mountain Maple 9                 | <i>Arceuthobium douglasii</i> Douglas Dwarf Mistletoe 11      |
| <i>Achillea millefolium</i> Common Yarrow 13               | <i>Arctium minus</i> Common Burdock 10                        |
| <i>Aconitum columbianum</i> Columbia Monkshood 9           | <i>Arctostaphylos nevadensis</i> Pinemat Manzanita 10         |
| <i>Actaea rubra</i> Wild Red Baneberry 9                   | <i>Arctostaphylos uva-ursi</i> Bearberry 12                   |
| <i>Adenocaulon bicolor</i> Trail or Pathfinder Plant 10    | <i>Arenaria macrophylla</i> Bigleaf Sandwort 12               |
| <i>Agastache urticifolia</i> Nettleleaf Horsemint 12       | <i>Arenaria pusilla</i> Dwarf Sandwort 5                      |
| <i>Agoseris aurantiaca</i> Orange Agoseris 11              | <i>Arnica cordifolia</i> Heartleaf Arnica 17                  |
| <i>Agoseris glauca</i> Pale Agoseris 11                    | <i>Arnica longifolia</i> Longleaf Arnica 3                    |
| <i>Agoseris grandiflora</i> Large-flower Agoseris 13       | <i>Arnica parryi</i> Nodding Arnica 5                         |
| <i>Agoseris heterophylla</i> Annual Agoseris 14            | <i>Arnica sororia</i> Twin Arnica 5                           |
| <i>Agropyron cristatum</i> Crested Wheatgrass 6            | <i>Arrhenatherum elatius</i> Tall Oatgrass 13                 |
| <i>Agropyron inerme</i> Beardless Bluebunch Wheatgrass 6   | <i>Artemisia arbuscula</i> Low Sagebrush 4                    |
| <i>Agropyron intermedium</i> Intermediate Wheatgrass 9     | <i>Artemisia cana</i> Silver Sagebrush 3                      |
| <i>Agropyron repens</i> Quack Grass 5                      | <i>Artemisia ludoviciana</i> Prairie Sage 6                   |
| <i>Agropyron spicatum</i> Bluebunch Wheatgrass 6           | <i>Artemisia rigida</i> Stiff or Scabland Sagebrush 4         |
| <i>Agrostis diegoensis</i> Thin or Leafy Bentgrass 5       | <i>Artemisia tridentata</i> Big Sagebrush 4                   |
| <i>Agrostis exarata</i> Spike Bentgrass 10                 | <i>Artemisia tripartita</i> Three-tip Sagebrush 3             |
| <i>Agrostis scabra</i> Winter Bentgrass or Tickle-grass 10 | <i>Asarum caudatum</i> Wild Ginger 6                          |
| <i>Allium acuminatum</i> Tapertip Onion 3                  | <i>Asclepias speciosa</i> Showy Milkweed 7                    |
| <i>Allium fibrillum</i> Fringed Onion 7                    | <i>Aster chilensis</i> Long-leaved Aster 11                   |
| <i>Allium madidum</i> Blue Mountain Onion 8                | <i>Aster conspicuus</i> Showy Aster 14                        |
| <i>Allium tolmiei</i> tolmiei Tolmie's Onion 7             | <i>Aster foliaceus</i> Leafy Aster 14                         |
| <i>Alnus incana</i> Mountain Alder 10                      | <i>Astragalus diaphanus</i> diaphanus Transparent Milkvetch 5 |
| <i>Alnus sinuata</i> Sitka Alder 12                        | <i>Astragalus filipes</i> Basalt Milkvetch 5                  |
| <i>Alopecurus aequalis</i> Shortawn Foxtail 3              | <i>Astragalus lentiginosus</i> Specklepod Milkvetch 4         |
| <i>Alopecurus pratensis</i> Meadow Foxtail 9               | <i>Astragalus purshii</i> Woollypod Milkvetch 3               |
| <i>Alyssum alyssoides</i> Pale Alyssum 3                   | <i>Astragalus revertus</i> revertus Blue Mountain Milkvetch 5 |
| <i>Amelanchier alnifolia</i> Western Serviceberry 10       | <i>Athyrium filix-femina</i> Lady Fern 7                      |
| <i>Amsinckia retrorsa</i> Rigid Fiddleneck 3               | <i>Athysanus pusillus</i> Sandweed 3                          |
| <i>Anaphalis margaritacea</i> Common Pearleverlasting 11   | <i>Balsamorhiza careyana</i> Carey's Balsamroot 6             |
| <i>Anemone oregana</i> Oregon Anemone 12                   | <i>Balsamorhiza sagittata</i> Arrowleaf Balsamroot 9          |
| <i>Anemone piperi</i> Windflower 12                        | <i>Balsamorhiza serrata</i> Serrated Balsamroot 4             |
| <i>Antennaria anaphaloides</i> Tall Pussytoes 7            | <i>Barbarea orthoceras</i> American Wintercress 6             |
| <i>Antennaria dimorpha</i> Low Pussytoes 5                 | <i>Berberis nervosa</i> Cascade or Dull Oregongrape 14        |
| <i>Antennaria flagellaris</i> Stolonous Everlasting 3      | <i>Berberis repens</i> Low Oregongrape 7                      |
| <i>Antennaria luzuloides</i> Woodrush Pussytoes 10         | <i>Besseyia rubra</i> Red Kittentail or Red Besseyia 7        |
| <i>Antennaria neglecta</i> Field Pussytoes 10              | <i>Betula occidentalis</i> Red Birch or Water Birch 10        |
| <i>Antennaria racemosa</i> Raceme Pussytoes 11             | <i>Blepharipappus scaber</i> Blepharipappus 3                 |
| <i>Antennaria rosea</i> Rosy Pussytoes 8                   | <i>Boisduvalia densiflora</i> Dense Spike-primrose 8          |
| <i>Antennaria stenophylla</i> Narrow-leaf Pussytoes 5      | <i>Boisduvalia stricta</i> Brook Spike-primrose 8             |
| <i>Anthoxanthum odoratum</i> Sweet Vernalgrass 7           | <i>Brickellia grandiflora</i> Large Flowered Brickellbush 3   |
| <i>Apocynum androsaemifolium</i> Spreading Dogbane 10      | <i>Brodiaea douglasii</i> Douglas' Brodiaea 5                 |
| <i>Aquilegia formosa</i> Sitka or Red Columbine 11         | <i>Brodiaea hyacinthina</i> Hyacinth Brodiaea 8               |
| <i>Arabis divaricarpa</i> Spreadingpod Rockcress 8         | <i>Bromus brizaeformis</i> Rattlesnake Brome 7                |
| <i>Arabis drummondii</i> Drummond's Rockcress 4            | <i>Bromus carinatus</i> Mountain Brome 13                     |
| <i>Arabis glabra</i> Tower Mustard 9                       | <i>Bromus commutatus</i> Hairy Brome or Hairy Chess 10        |
| <i>Arabis holboellii</i> Holboell's Rockcress 9            | <i>Bromus inermis</i> Smooth Brome 17                         |
| <i>Arabis sparsiflora</i> Sicklepod Rockcress 3            | <i>Bromus japonicus</i> Japanese Brome 3                      |
| <i>Arceuthobium americanum</i> American Dwarf Mistletoe 11 |                                                               |

*Bromus mollis* Soft Brome 8  
*Bromus pumpellianus* Pumpelly Brome 10  
*Bromus tectorum* Cheatgrass Brome or Downy Chess 9  
*Bromus vulgaris* Columbia Brome 12  
*Calamagrostis inexpansa* Northern Reedgrass 3  
*Calamagrostis rubescens* Pinegrass 11  
*Calochortus elegans* Northwestern Mariposa 6  
*Calochortus eurycarpus* Bigpod Mariposa 10  
*Calochortus macrocarpus* Greenbanded Startulip 8  
*Calypso bulbosa* Calypso Orchid 8  
*Camassia quamash* Common Camas 9  
*Camelina microcarpa* Littlepod Falseflax 3  
*Capsella bursa-pastoris* Shepherd's Purse 12  
*Cardamine breweri* Brewer's Bittercress 3  
*Cardamine oligosperma* Little Western Bittercress 5  
*Carex amplifolia* Big Leaved Sedge 3  
*Carex aquatilis* Water Sedge 5  
*Carex aurea* Golden Sedge 11  
*Carex concinnoides* Northwest Sedge 9  
*Carex deweyana* Dewey's Sedge 6  
*Carex geyeri* Elk Sedge 11  
*Carex illota* Sheep Sedge 9  
*Carex lenticularis* Densely Tufted Sedge 6  
*Carex leptalea* Bristle-stalked Sedge 9  
*Carex microptera* Small-winged Sedge 6  
*Carex nigricans* Black Alp Sedge 9  
*Carex nudata* Torrent Sedge 3  
*Carex oederi* Green Sedge 8  
*Carex pachystachya* Thick-headed Sedge 7  
*Carex rossii* Ross Sedge 12  
*Carex stipata* Sawbeak Sedge 3  
*Carex subnigricans* Dark Alp Sedge 3  
*Castilleja applegatei* Wavy-leaved Paintbrush 6  
*Castilleja chromosa* Desert Paintbrush 7  
*Castilleja hispida* Harsh Paintbrush 9  
*Castilleja linariaefolia* Narrow-leaved Paintbrush 4  
*Castilleja miniata* Scarlet Paintbrush 9  
*Ceanothus integerrimus* Deerbrush Ceanothus 7  
*Ceanothus sanguineus* Redstem Ceanothus 9  
*Ceanothus velutinus* Snowbrush Ceanothus/Buckbrush 11  
*Centaurea cyanus* Bachelor's Button 5  
*Centaurea diffusa* Diffuse or Tumble Knapweed 11  
*Centaurea maculosa* Spotted Knapweed 11  
*Centaurea nigra* Black Knapweed 10  
*Cerastium arvense* Starry Cerastium 7  
*Cerastium nutans* Nodding Chickweed 7  
*Cercocarpus ledifolius* Curlleaf Mountain Mahogany 7  
*Chaenactis douglasii glandulosa* Hoary Chaenactis 3  
*Cheilanthes gracillima* Lace Lip-fern 6  
*Chenopodium ambrosioides* Mexican Tea Wormseed 3  
*Chenopodium rubrum* Red Goosefoot 3  
*Chimaphila umbellata* Common Prince's Pine 7  
*Chorispora tenella* Chorispora or Purple Field Mustard 3  
*Chrysanthemum leucanthemum* Oxeye Daisy 7  
*Chrysothamnus nauseosus* Gray Rabbitbrush 3  
*Chrysothamnus viscidiflorus* Green Rabbitbrush 3  
*Cicuta douglasii* Douglas' Waterhemlock 3  
*Circaea alpina* Enchanter's Nightshade 7  
*Cirsium arvense* Canada Thistle 7  
*Cirsium canovirens* Gray-green Thistle 3  
*Cirsium scariosum* Elk Thistle 6  
*Cirsium utahense* Utah Thistle 10

*Cirsium vulgare* Bull or Common Thistle 7  
*Clarkia pulchella* Deerhorn or Pink Fairies 6  
*Clarkia rhomboidea* Common Clarkia 9  
*Clematis ligusticifolia* Western Virginsbower or Clematis 9  
*Clintonia uniflora* Queen's Cup Beadlily 7  
*Collinsia parviflora* Small-flowered Blue-eyed Mary 12  
*Collomia grandiflora* Large-flowered Collomia 10  
*Collomia linearis* Narrow-leaf Collomia 11  
*Collomia tinctoria* Yellow-staining Collomia 11  
*Convolvulus arvensis* Field Morning-glory 8  
*Conyza canadensis* Horseweed 6  
*Corallorhiza maculata* Spotted Coral Root 6  
*Corallorhiza mertensiana* Merten's Coral Root 6  
*Corallorhiza striata* Striped Coral Root 6  
*Cordylanthus ramosus* Bushy Birdbeak 3  
*Cornus stolonifera* Red Osier Dogwood 3  
*Crataegus douglasii* Black Hawthorn 10  
*Crepis acuminata* Long-leaved or Tapertip Hawksbeard 3  
*Crepis atrabarba* Slender Hawksbeard 3  
*Crepis intermedia* Gray Hawksbeard 3  
*Crepis occidentalis* Western Hawksbeard 3  
*Crocidium multicaule* Spring Gold or Gold Fields 10  
*Cryptantha ambigua* Obscure Cryptantha 3  
*Cryptantha flaccida* Weak-stemmed Cryptantha 3  
*Cryptantha intermedia* Common Cryptantha 3  
*Cryptantha pterocarya* Winged Cryptantha 3  
*Cryptantha rostellata* Beaked Cryptantha 3  
*Cryptantha torreyana* Torrey's Cryptantha 3  
*Cryptogramma crispa* Rockbrake or Parsleyfern 3  
*Cynoglossum officinale* Common Houndstongue 12  
*Cypripedium montanum* Mountain Lady Slipper 9  
*Cystopteris fragilis* Brittle Bladderfern 12  
*Dactylis glomerata* Orchard Grass 7  
*Danthonia californica* California Danthonia 6  
*Danthonia spicata* Common Wild Oatgrass 6  
*Danthonia unispicata* Onespike Oatgrass 3  
*Delphinium depauperatum* Slim or Dwarf Larkspur 11  
*Delphinium nuttallianum* Upland Larkspur 10  
*Delphinium stachydeum* Tall Mountain Larkspur 10  
*Deschampsia cespitosa* Tufted Hairgrass 6  
*Deschampsia danthonioides* Annual Hairgrass 3  
*Deschampsia elongata* Slender Hairgrass 11  
*Descurainia richardsonii* Mountain Lady Tansymustard 7  
*Dianthus armeria* Deptford Pink 7  
*Dipsacus sylvestris* Teasel 5  
*Disporum trachycarpum* Wartberry Fairymbell 10  
*Dodecatheon conjugens* Slimpod Shootingstar 10  
*Dodecatheon cusickii* Cusick's Shootingstar 8  
*Dodecatheon pulchellum* Darkthroat Shootingstar 6  
*Draba verna* Spring Whitlow-grass 7  
*Eleocharis acicularis* Needle Spike-rush 3  
*Eleocharis palustris* Common or Creeping Spike-rush 3  
*Elymus cinereus* Great Basin Wildrye 7  
*Elymus glaucus* Blue Wildrye 12  
*Epilobium alpinum* Alpine Willow-herb 5  
*Epilobium angustifolium* Fireweed 13  
*Epilobium glaberrimum* Smooth Willow-herb 5  
*Epilobium glandulosum* Common Willow-herb 5  
*Epilobium minutum* Small-flowered Willow-herb 4  
*Epilobium paniculatum* Tall Annual Willow-herb 8  
*Epilobium watsonii* Watson's Willow-herb 3

*Equisetum arvense* Common or Field Horsetail 9  
*Equisetum hyemale* Common Scouringrush 3  
*Equisetum laevigatum* Smooth Horsetail 3  
*Equisetum variegatum* Northern Scouringrush 5  
*Erigeron chrysopsidis* Dwarf Yellow Fleabane 7  
*Erigeron chrysopsidis chrysopsidis* DwarfYellowFleabane 7  
*Erigeron corymbosus* Foothill Daisy or Longleaf Fleabane 7  
*Erigeron coulteri* Coulter's Daisy 3  
*Erigeron divergens* Spreading or Diffuse Fleabane 3  
*Erigeron eatonii* Eaton's Daisy 7  
*Erigeron filifolius* Threadleaf Fleabane 3  
*Erigeron linearis* Lineleaf Fleabane 3  
*Erigeron lonchophyllus* Spearleaf Fleabane 3  
*Erigeron philadelphicus* Philadelphia Fleabane 3  
*Erigeron pumilus* Low Fleabane 5  
*Erigeron speciosus* Showy Fleabane 12  
*Erigeron tener* Slender Daisy 3  
*Eriogonum caespitosum* Mat Buckwheat 3  
*Eriogonum compositum* Northern Buckwheat 5  
*Eriogonum heracleoides* Wyeth's Craamy Buckwheat 5  
*Eriogonum niveum* Snow Buckwheat 3  
*Eriogonum strictum* Strict Buckwheat 3  
*Eriogonum umbellatum* Sulphur Buckwheat 3  
*Eriogonum vimineum* Broom Buckwheat 4  
*Eriophyllum lanatum* Common Eriophyllum 10  
*Erodium cicutarium* Stork's Bill or Filaree 9  
*Erysimum repandum* Spreading Wallflower 7  
*Erythronium grandiflorum* Fawnlily or Glacierlily or Dogtooth Violet 15  
*Euphorbia glyptosperma* Corrugate-seed Spurge 7  
*Festuca idahoensis* Idaho Fescue 7  
*Festuca megalura* Foxtail Fescue 5  
*Festuca microstachys* Small Fescue 5  
*Festuca occidentalis* Western Fescue 8  
*Festuca octoflora* Sixweeks Fescue 8  
*Festuca pratensis* Meadow or English Fescue 6  
*Festuca rubra* Red Fescue 3  
*Festuca scabrella* Rough Fescue 3  
*Floerkea proserpinacoides* False Mermaid 5  
*Fragaria vesca* Woods Strawberry 12  
*Fragaria virginiana* Blueleaf or Broadpetal Strawberry 12  
*Frasera speciosa* Giant Frasera 9  
*Fritillaria atropurpurea* Checker or Chocolate Lily 8  
*Fritillaria pudica* Yellow Bell 6  
*Gaillardia aristata* Blanketflower 4  
*Galium aparine* Catchweed Bedstraw or Cleavers 7  
*Galium bifolium* Thinleaf Bedstraw 7  
*Galium boreale* Northern Bedstraw 7  
*Gaultheria ovatifolia* Oregon Wintergreen 4  
*Gayophytum diffusum* Spreading Groundsmoke 3  
*Gayophytum racemosum* Racemed Groundsmoke 4  
*Gayophytum ramosissimum* Hairstem Groundsmoke 4  
*Gentiana amarella* Northern Gentian 10  
*Geranium viscosissimum* Sticky Geranium 11  
*Geum macrophyllum* Largeleaf Avens 6  
*Geum triflorum ciliatum* Red Avens/Old Man's Whiskers 10  
*Gilia aggregata* Skyrocket Gilia 6  
*Gilia capillaris* Smoothleaved Gilia 8  
*Githopsis specularioides* Common Blue-cup 3  
*Glyceria elata* Tall Mannagrass 3  
*Glyceria grandis* American Mannagrass 3  
*Gnaphalium palustre* Lowland Cudweed 3  
*Goodyera oblongifolia* Rattlesnake-plantain 7  
*Grindelia nana* Low Gumweed 3  
*Grindelia squarrosa* Curly-cup Gumweed or Resinweed 3  
*Gutierrezia sarothrae* Broom Snakeweed 3  
*Habenaria dilatata* White Bog Orchid 3  
*Habenaria elegans* California Hillside Habenaria 8  
*Habenaria unalascensis* Alaska Rein Orchid 6  
*Haplopappus carthamoides* Large-flowered Goldenweed 4  
*Helianthella uniflora* Oneflower Helianthella 10  
*Helianthus nuttallii* Nuttall's Sunflower 3  
*Heracleum lanatum* Common Cowparsnip 3  
*Hesperochiron pumilus* Centaur Flower 9  
*Heterocodon rariflorum* Heterocodon 3  
*Heuchera cylindrica* Roundleaf Lava Alumroot 3  
*Hieracium albertinum* Western Hawkweed 7  
*Hieracium albiflorum* White Hawkweed 7  
*Hieracium cynoglossoides* Houndstongue Hawkweed 7  
*Holcus lanatus* Common Velvetgrass 3  
*Holodiscus discolor* Creambush Oceanspray 9  
*Holodiscus dumosus* Bush Rockspiraea 3  
*Holosteum umbellatum* Jagged Chickweed 3  
*Hydrophyllum capitatum* Ballhead Waterleaf or Woolly Breeches 10  
*Hypericum formosum* Western St. John's Wort 9  
*Hypericum perforatum* Klamathweed 7  
*Hypopitys monotropa* Pinesap 3  
*Idahoia scapigera* Scalepod 6  
*Iris missouriensis* Western Blue Flag/Rocky Mountain Iris 8  
*Juncus acuminatus* Tapered Rush 3  
*Juncus balticus* Baltic Rush 3  
*Juncus bufonius* Toad Rush 3  
*Juncus drummondii* Drummond's Rush 6  
*Juncus ensifolius* Swordleaf Rush 3  
*Juncus mertensianus* Merten's Rush 6  
*Juncus tenuis* Slender Rush 3  
*Juniperus occidentalis* Western Juniper 7  
*Kelloggia galioides* Kelloggia 3  
*Koeleria cristata* Prairie Junegrass 9  
*Lactuca serriola* Prickly Lettuce 7  
*Lagophylla ramosissima* Slender Rabbitleaf 3  
*Larix occidentalis* Western Larch 13  
*Lathyrus lanzwertii* Thickleaf Peavine 6  
*Lathyrus nevadensis* Sierra Peavine 9  
*Lathyrus pauciflorus* Few-flowered Peavine 7  
*Lemna minor* Duckweed or Water Lentil 3  
*Lepidium campestre* Field Pepperweed 3  
*Lesquerella occidentalis* Western Bladderpod 3  
*Lewisia pygmaea* Dwarf Lewisia 8  
*Lewisia rediviva* Bitterroot 3  
*Lewisia triphylla* Three Leaf Lewisia 8  
*Ligusticum canbyi* Canby Licoriceroot 8  
*Linanthus harknessii* Harkness' Linanthus 3  
*Linnaea borealis* American Twinflower 7  
*Linum micranthum* Sm.-Flwd. White Flax 1  
*Linum perenne* Blue Flax 3  
*Listera convallarioides* Broadlipped Twayblade 3  
*Lithophragma bulbifera* Bulbiferous Fringecup 9  
*Lithophragma glabra* Smooth Fringecup 8

*Lithophragma parviflora* Small-flowered Fringecup 8  
*Lithospermum ruderales* Wayside Gromwell 7  
*Lomatium ambiguum* Wyeth Biscuitroot 3  
*Lomatium cous* Cous Biscuitroot 3  
*Lomatium dissectum* Fernleaved Desert Parsley 6  
*Lomatium donnellii* Donnell's Desert Parsley 3  
*Lomatium grayi* Gray's Desert Parsley 4  
*Lomatium leptocarpum* Slenderfruit/Bicolor Biscuitroot 4  
*Lomatium macrocarpum* Big Seed Biscuitroot 4  
*Lomatium nudicaule* Barestem Lomatium 3  
*Lomatium triternatum* Nineleaf Desert Parsley 7  
*Lonicera ciliosa* Western Trumpet Honeysuckle 9  
*Lonicera involucrata* Bearberry Honeysuckle 7  
*Lonicera utahensis* Utah Honeysuckle 9  
*Lotus corniculatus* Birdsfoot Lotus 6  
*Lotus purshianus* Spanish Clover 7  
*Lupinus argenteus* Silvery Lupine 10  
*Lupinus caudatus* Tailcup Lupine 9  
*Lupinus laxiflorus* Spurred Lupine 5  
*Lupinus lepidus aridus* Prairie Lupine 3  
*Lupinus leucophyllus* Velvet or Woolly Lupine 4  
*Lupinus polyphyllus* Big Leaf Lupine 7  
*Lupinus sericeus* Silky Lupine 3  
*Lupinus sulphureus* Sulphur Lupine 11  
*Luzula campestris* Field Woodrush 10  
*Luzula parviflora* Small-flowered Woodrush 10  
*Luzula spicata* Spike Woodrush 10  
*Machaeranthera canescens* Hoary Aster 4  
*Machaeranthera shastensis* Shasta Aster 7  
*Madia citriodora* Lemon Tarweed 6  
*Madia exigua* Little Tarweed 6  
*Madia glomerata* Cluster Tarweed 6  
*Madia gracilis* Common or Slender Tarweed 6  
*Madia minima* Small-head Tarweed 6  
*Malva neglecta* Dwarf Mallow 5  
*Matricaria matricarioides* Pineapple Weed 7  
*Medicago lupulina* Black Medic 9  
*Medicago sativa* Alfalfa 3  
*Melica bulbosa* Oniongrass 9  
*Melica spectabilis* Showy Oniongrass 3  
*Melilotus officinalis* Yellow Sweetclover 3  
*Mentha arvensis* Field Mint 3  
*Mentha spicata* Spearmint 3  
*Mentzelia albicaulis* Whitestem Mentzelia 5  
*Mentzelia dispersa* Bushy Mentzelia 5  
*Mentzelia laevicaulis* Blazingstar Mentzelia 3  
*Mertensia ciliata* Broad-leaf Bluebells 6  
*Mertensia longiflora* Small Bluebells 8  
*Microseris nutans* Nodding Microseris 10  
*Microseris troximoides* False Agoseris 10  
*Microsteris gracilis* Pink Microsteris 11  
*Mimulus breviflorus* Short-flowered Mimulus 3  
*Mimulus breweri* Brewer's Monkeyflower 8  
*Mimulus cusickii* Cusick's Monkeyflower 3  
*Mimulus guttatus* Common Monkeyflower 3  
*Mimulus moschatus* Musk Monkeyflower 10  
*Mimulus nanus* Dwarf Monkeyflower 5  
*Mimulus washingtonensis* Washington Monkeyflower 5  
*Mitella breweri* Brewer Mitrewort 5  
*Mitella stauropetala* Side-flowered Mitrewort 10  
*Mitella trifida* Three-toothed Mitrewort 4  
*Monardella odoratissima* Pacific Monardella 3  
*Montia cordifolia* Heart-leaved Minerslettuce 6

*Montia linearis* Lineleaf Indianlettuce 8  
*Montia perfoliata* Minerslettuce 12  
*Myosotis micrantha* Blue Scorpion-grass 7  
*Navarretia intertexta* Needleleaf Navarretia 3  
*Nemophila breviflora* Great Basin Nemophila 7  
*Nemophila parviflora* Smallflower Nemophila 6  
*Nemophila pedunculata* Meadow Nemophila 6  
*Orobancha pinorum* Pine Broomrape 5  
*Orobancha uniflora* Oneflowered Broomrape 11  
*Orthocarpus hispidus* Hairy Owl Clover 3  
*Osmorhiza chilensis* Mountain Sweet-cicely 11  
*Osmorhiza depauperata* Bluntfruited Sweet-cicely 11  
*Osmorhiza occidentalis* Western Sweet-cicely 11  
*Pachistima myrsinites* Oregon Boxwood 12  
*Paeonia brownii* Brown's or Wild Paeony 8  
*Pedicularis racemosa* Leafy or Sickletop Lousewort 10  
*Penstemon attenuatus* Sulphur Penstemon 9  
*Penstemon deustus* Hot Rock or Scabland Penstemon 3  
*Penstemon gairdneri* Gairdner's Penstemon 7  
*Penstemon procerus* Littleflower Penstemon 3  
*Penstemon richardsonii* Richardson's Penstemon 5  
*Penstemon speciosus* Royal Penstemon 6  
*Penstemon venustus* Blue Mountain Penstemon 3  
*Perideridia bolanderi* Bolander's Yampah 6  
*Perideridia gairdneri* Gairdner's Yampah 3  
*Phacelia hastata* Whiteleaf Phacelia 9  
*Phacelia heterophylla* Varileaf Phacelia 9  
*Phacelia linearis* Threadleaf Phacelia 3  
*Philadelphus lewisii* Lewis Mockorange or Syringa 10  
*Phleum alpinum* Alpine Timothy 13  
*Phleum pratense* Common Timothy 11  
*Phlox diffusa* Spreading Phlox 3  
*Phlox hoodii* Hood's Phlox 3  
*Phoenicaulis cheiranthoides* Daggerpod Phoenicaulis 3  
*Phoradendron bolleanum* Dense Mistletoe 3  
*Phoradendron juniperinum* Juniper Mistletoe 3  
*Physocarpus malvaceus* Mallow Ninebark 9  
*Picea engelmannii* Engelmann Spruce 13  
*Pinus contorta* Lodgepole Pine 11  
*Pinus ponderosa* Ponderosa Pine 8  
*Plagiobothrys scouleri* Scouler's Popcornflower 3  
*Plantago lanceolata* Buckhorn Plantain 7  
*Plantago major* Nippleseed Plantain 7  
*Plectritis macrocera* Longhorn Plectritis 7  
*Poa annua* Annual Bluegrass 3  
*Poa bulbosa* Bulbous Bluegrass 11  
*Poa compressa* Canada Bluegrass 7  
*Poa leibergii* Leiberg's Bluegrass 6  
*Poa nervosa wheeleri* Wheeler's Bluegrass 8  
*Poa palustris* Fowl Bluegrass 3  
*Poa pratensis* Kentucky Bluegrass 10  
*Poa sandbergii* Sandberg's Bluegrass 3  
*Poa scabrella* Pine Bluegrass; Malpais Bluegrass 5  
*Polemonium micranthum* Littlebells Polemonium 5  
*Polemonium pulcherrimum* Showy or Skunkweed  
*Polemonium* or Jacob's Ladder 11  
*Polygonum aviculare* Prostrate Knotweed 3  
*Polygonum bistortoides* American or Western Bistort 6  
*Polygonum kelloggii* Kellogg's Knotweed 3  
*Polygonum majus* Wiry or Palouse Knotweed 3  
*Polygonum spargulariaeforme* Fall Knotweed 3  
*Polystichum munitum* Swordfern 8  
*Populus tremuloides* Quaking Aspen 6

*Potamogeton natans* Floatingleaf Pondweed 3  
*Potentilla biennis* Biennial Cinquefoil 6  
*Potentilla glandulosa* glandulosa Gland/Sticky Cinquefoil 13  
*Potentilla gracilis* Northwest or Slender Cinquefoil 13  
*Potentilla recta* Erect Cinquefoil 9  
*Prunella vulgaris* Common Salfheal 3  
*Prunus emarginata* Bittercherry 12  
*Prunus virginiana* Common Chokecherry 7  
*Pseudotsuga menziesii* Douglas Fir 10  
*Pteridium aquilinum* Bracken Fern or Brake Fern 10  
*Pterospora andromedea* Woodland Pinedrops 9  
*Purshia tridentata* Antelope Bitterbrush 9  
*Pyrola aphylla* Leafless Pyrola 3  
*Pyrola asarifolia* Common or Pink Wintergreen 6  
*Pyrola chlorantha* Green Pyrola 3  
*Pyrola elliptica* White Wintergreen 3  
*Pyrola picta* White-vein Pyrola 4  
*Pyrola secunda* Sidebells Pyrola 7  
*Pyrola uniflora* Woodnymph 6  
*Ranunculus aquatilis* White Water Buttercup 3  
*Ranunculus glaberrimus* Sagebrush Buttercup 11  
*Ranunculus orthorhynchus* Straightbeak Buttercup 3  
*Ranunculus repens* Creeping Buttercup 6  
*Ranunculus scleratus* Celeryleaved or Blister Buttercup 3  
*Ranunculus testiculatus* Hornseed Buttercup 3  
*Ranunculus uncinatus* Wood Buttercup 10  
*Rhamnus purshiana* Cascara 3  
*Ribes cereum cereum* Wax Currant 10  
*Ribes hudsonianum* Stinking Currant 3  
*Ribes inerme* Whitestem Gooseberry 3  
*Ribes lacustre* Prickly Currant or Swamp Gooseberry 9  
*Ribes oxycanthoides cognatum* Umatilla Gooseberry 3  
*Ribes viscosissimum* Sticky Currant 10  
*Rigiopappus leptocladus* Bristlehead 3  
*Rorippa curvisiliqua* Western Yellowcress 3  
*Rorippa nasturtium-aquaticum* Watercress 3  
*Rosa gymnocarpa* Baldhip Rose 11  
*Rosa nutkana* Nootka Rose 11  
*Rosa woodsii* Wood's Rose 11  
*Rubus idaeus* Red Raspberry 7  
*Rubus leucodermis* Whitebark Raspberry 8  
*Rubus parviflorus* Western Thimbleberry 6  
*Rudbeckia occidentalis* Blackhead/Western Coneflower 11  
*Rumex acetosa* Garden Sorrel 3  
*Rumex acetosella* Sheep or Red Sorrel 10  
*Rumex crispus* Curly Dock 8  
*Rumex salicifolius* Willow Dock 3  
*Salix amygdaloides* Peachleaf Willow 3  
*Salix commutata* Undergreen Willow 3  
*Salix exigua* Coyote Willow 3  
*Salix exigua melanopsis* Dusky Willow 3  
*Salix lasiandra* Pacific or Red Willow 3  
*Salix lasiandra caudata* Whiplash Willow 3  
*Salix lasiolepis* Arroyo Willow 3  
*Salix rigida* Rigid Willow 3  
*Salix rigida mackenziana* Mackenzie Willow 3  
*Salix scouleriana* Scouler Willow 11  
*Salix sitchensis* Sitka Willow 3  
*Sambucus cerulea* Blueberry Elder 12  
*Sambucus racemosa* Black Elderberry 11  
*Sanguisorba occidentalis* Annual Burnet 12  
*Sanguisorba sitchensis* Sitka Burnet 3  
*Saxifraga arguta* Brook Saxifrage 3  
*Saxifraga integrifolia* Swamp Saxifrage 5  
*Saxifraga integrifolia leptopetala* Swamp Saxifrage 5  
*Scirpus americanus* Three-square Bulrush 3  
*Scirpus microcarpus* Panicle Bulrush 3  
*Scrophularia lanceolata* Lanceleaf Figwort 11  
*Scutellaria angustifolia* Narrowleaved Skullcap 3  
*Scutellaria antirrhinoides* Snapdragon Skullcap 3  
*Sedum stenopetalum* Wormleaf Stonecrop 9  
*Senecio crassulus* Thicketleaf Groundsel 6  
*Senecio integerrimus* Western or Woolly Groundsel 11  
*Senecio serra* Butterweed Groundsel 3  
*Senecio triangularis* Arrowleaf Groundsel 3  
*Shepherdia canadensis* Russet or Canada Buffaloberry 6  
*Sidalcea oregana procera* Oregon Checkermallow 13  
*Silene antirrhina* Sleepy Cat 3  
*Silene douglasii douglasii* Douglas' Silene 10  
*Silene menziesii* Menzies' Silene 9  
*Silene oregana* Oregon Catchfly 9  
*Sisymbrium altissimum* Tumblemustard 3  
*Sisyrinchium angustifolium* Blue-eyed Grass 3  
*Sisyrinchium inflatum* Grass Widow 9  
*Sitanion hystrix* Bottlebrush Squirreltail 3  
*Smilacina racemosa* Feather Solomonplume 7  
*Smilacina stellata* Starry False Solomon's Seal 9  
*Solidago canadensis* Meadow Goldenrod 6  
*Solidago gigantea* Smooth Goldenrod 3  
*Solidago occidentalis* Western Goldenrod 9  
*Sonchus asper* Prickly Sow-thistle 6  
*Sorbus scopulina* Cascade Mountain Ash 10  
*Spergularia rubra* Red Sandspurry 3  
*Spiraea betulifolia* Birch or Shiny Leaf Spiraea 9  
*Stellaria crispa* Crisped Starwort 6  
*Stellaria longipes* Longstalk Starwort 3  
*Stellaria media* Chickweed 7  
*Stellaria nitens* Shining Chickweed 3  
*Stipa occidentalis* Western Needlegrass 8  
*Stipa thurberiana* Thurber's Needlegrass 3  
*Streptopus amplexifolius* Claspleaf Twistedstalk 3  
*Symphoricarpos albus* Common Snowberry 10  
*Symphoricarpos oreophilus* Mountain Snowberry 11  
*Taraxacum officinale* Common Dandelion 7  
*Taxus brevifolia* Pacific Yew 7  
*Thalictrum fendleri* Fendler's Meadowrue 7  
*Thalictrum occidentale* Western Meadowrue 11  
*Thermopsis montana* Mountain Thermopsis/Golden Pea 11  
*Thlaspi fendleri* Blue or Fendler's Pennycress 11  
*Thysanocarpus curvipes* Fringe Pod 3  
*Tiarella trifoliata* Coolwort Foamflower 5  
*Tragopogon dubius* Yellow Salsify 7  
*Tragopogon pratensis* Meadow Salsify 6  
*Trifolium cyathiferum* Cup Clover 3  
*Trifolium dubium* Suckling Clover 3  
*Trifolium hybridum* Alsike Clover 7  
*Trifolium longipes* Longstalk Clover 3  
*Trifolium macrocephalum* Bighead Clover 3  
*Trifolium microcephalum* Woolly or Smallhead Clover 3  
*Trifolium pratense* Red Clover 7  
*Trifolium repens* White Clover 7  
*Trillium ovatum* White Trillium 6

Trillium petiolatum Purple Trillium 4  
 Triticum aestivum Cultivated Wheat 3  
 Typha latifolia Common Cattail 3  
 Urtica dioica Stinging Nettle 15

Vaccinium caespitosum Dwarf Huckleberry 4  
 Vaccinium membranaceum Big Huckleberry 7  
 Vaccinium scoparium Grouse Huckleberry/Whortleberry 6  
 Valeriana sitchensis Sitka Valerian 7  
 Ventenata dubia Ventenata 9  
 Veratrum californicum California Falsehellebore 6  
 Verbascum thapsus Flannel Mullein 11  
 Veronica americana American Speedwell 3  
 Veronica anagallis-aquatica Water Speedwell 3  
 Veronica arvensis Common Speedwell 3  
 Veronica peregrina Purslane Speedwell 3  
 Veronica serpyllifolia Thyme-leaved Speedwell 9  
 Vicia americana American Vetch 7

Viola adunca Early Blue Violet 13  
 Viola glabella Stream Violet 3  
 Viola nuttallii Nuttall's Violet 7  
 Viola orbiculata Darkwoods Violet 5  
 Viola purpurea Goosefoot Violet 6  
 Woodsia oregana Oregon or Western Woodsia 6  
 Wyethia amplexicaulis Mule's Ears/ Northern Mule's Ear 4  
 Xanthium strumarium Cocklebur 7  
 Zigadenus paniculatus Panicked Death Camas 7  
 Zigadenus venenosus Meadow or Deadly Death Camas 7

## APPENDIX B

### NATIVE PLANT SPECIES OF THE PONDEROSA PINE PLANT ASSOCIATION GROUP

#### WALL CREEK ECOSYSTEM

**NOTE: THIS LIST MAY BE USED IN RESTORATION PRESCRIPTIONS WITHIN THIS PLANT ASSOCIATION GROUP. Species with highest numeric values should be expected to meet with greatest success.**

Abies grandis Grand Fir 1  
 Aconitum columbianum Columbia Monkshood 1  
 Acer glabrum Rocky Mountain Maple 1  
 Achillea millefolium Common Yarrow 2  
 Actaea rubra Wild Red Baneberry 1  
 Adenocaulon bicolor Trail or Pathfinder Plant 1  
 Agoseris aurantiaca Orange Agoseris 1  
 Agrostis exarata Spike Bentgrass 1  
 Agoseris glauca Pale Agoseris 3  
 Agoseris grandiflora Large-flower Agoseris 2  
 Agoseris heterophylla Annual Agoseris 3  
 Agrostis scabra Winter Bentgrass or Tickle-grass 1  
 Agropyron spicatum Bluebunch Wheatgrass 2  
 Agastache urticifolia Nettleleaf Horsemint 1  
 Allium fibrillum Fringed Onion 2  
 Allium madidum Blue Mountain Onion 1  
 Allium tolmiei tolmiei Tolmie's Onion 1  
 Amelanchier alnifolia Western Serviceberry 2  
 Antennaria anaphaloides Tall Pussytoes 1  
 Antennaria dimorpha Low Pussytoes 2  
 Antennaria luzuloides Woodrush Pussytoes 3  
 Anaphalis margaritacea Common Pearleverbasting 1  
 Antennaria neglecta Field Pussytoes 3  
 Anemone oregana Oregon Anemone 2  
 Anemone piperi Windflower 2  
 Antennaria rosea Rosy Pussytoes 2  
 Antennaria stenophylla Narrow-leaf Pussytoes 1  
 Apocynum androsaemifolium Spreading Dogbane 2  
 Aquilegia formosa Sitka or Red Columbine 1  
 Arceuthobium americanum American Dwarf Mistletoe 1  
 Artemisia arbuscula Low Sagebrush 1  
 Arceuthobium campylopodum Western Dwarf Mistletoe 3

Arnica cordifolia Heartleaf Arnica 3  
 Arabis divaricarpa Spreadingpod Rockcress 1  
 Arceuthobium douglasii Douglas Dwarf Mistletoe 1  
 Arabis glabra Tower Mustard 1  
 Arabis holboellii Holboell's Rockcress 1  
 Artemisia ludoviciana Prairie Sage 1  
 Arenaria macrophylla Bigleaf Sandwort 3  
 Arctostaphylos nevadensis Pinemat Manzanita 3  
 Arenaria pusilla Dwarf Sandwort 1  
 Artemisia rigida Stiff or Scabland Sagebrush 1  
 Arnica sororia Twin Arnica 1  
 Artemisia tridentata Big Sagebrush 1  
 Arctostaphylos uva-ursi Bearberry 3  
 Aster chilensis Long-leaved Aster 2  
 Aster conspicuus Showy Aster 1  
 Astragalus diaphanus diaphanus Transparent Milkvetch 1  
 Astragalus filipes Basalt Milkvetch 1  
 Aster foliaceus Leafy Aster 1  
 Astragalus lentiginosus Specklepod Milkvetch 1  
 Astragalus reventus reventus Blue Mountain Milkvetch 1  
 Asclepias speciosa Showy Milkweed 2  
 Balsamorhiza careyana Carey's Balsamroot 2  
 Balsamorhiza sagittata Arrowleaf Balsamroot 2  
 Balsamorhiza serrata Serrated Balsamroot 1  
 Berberis nervosa Cascade or Dull Oregongrape 1  
 Berberis repens Low Oregongrape 2  
 Besseyia rubra Red Kittenail or Red Besseyia 3  
 Boisduvalia densiflora Dense Spike-primrose 1  
 Boisduvalia stricta Brook Spike-primrose 1  
 Bromus carinatus Mountain Brome 3  
 Brodiaea douglasii Douglas' Brodiaea 1  
 Brodiaea hyacinthina Hyacinth Brodiaea 1

*Bromus vulgaris* Columbia Brome 1  
*Castilleja applegatei* Wavy-leaved Paintbrush 2  
*Castilleja chromosa* Desert Paintbrush 1  
*Carex concinnoides* Northwest Sedge 1  
*Calochortus elegans* Northwestern Mariposa 2  
*Calochortus eurycarpus* Bigpod Mariposa 1  
*Carex geyeri* Elk Sedge 3  
*Castilleja hispida* Harsh Paintbrush 3  
*Carex illota* Sheep Sedge 1  
*Calochortus macrocarpus* Greenbanded Startulip 2  
*Carex pachystachya* Thick-headed Sedge 1  
*Camassia quamash* Common Camas 1  
*Carex rossii* Ross Sedge 2  
*Calamagrostis rubescens* Pinegrass 3  
*Cerastium arvense* Starry Cerastium 1  
*Cercocarpus ledifolius* Curleaf Mountain Mahogany 2  
*Cerastium nutans* Nodding Chickweed 1  
*Ceanothus sanguineus* Redstem Ceanothus 3  
*Ceanothus velutinus* Snowbrush Ceanothus/Buckbrush 2  
*Cirsium utahense* Utah Thistle 2  
*Clematis ligusticifolia* Western Virginsbower/Clematis 3  
*Clarkia pulchella* Deerhorn or Pink Fairies 2  
*Clarkia rhomboidea* Common Clarkia 2  
*Conyza canadensis* Horseweed 2  
*Collomia grandiflora* Large-flowered Collomia 2  
*Collomia linearis* Narrow-leaf Collomia 2  
*Collinsia parviflora* Small-flowered Blue-eyed Mary 3  
*Collomia tinctoria* Yellow-staining Collomia 2  
*Crataegus douglasii* Black Hawthorn 1  
*Crocidium multicaule* Spring Gold or Gold Fields 2  
*Cystopteris fragilis* Brittle Bladderfern 1  
*Cypripedium montanum* Mountain Lady Slipper 1  
*Delphinium depauperatum* Slim or Dwarf Larkspur 1  
*Deschampsia elongata* Slender Hairgrass 2  
*Delphinium nuttallianum* Upland Larkspur 2  
*Descurainia richardsonii* Mountain Tansymustard 1  
*Delphinium stachydeum* Tall Mountain Larkspur 2  
*Dodecatheon conjugens* Slimpod Shootingstar 2  
*Dodecatheon cusickii* Cusick's Shootingstar 2  
*Draba verna* Spring Whitlow-grass 1  
*Elymus cinereus* Great Basin Wildrye 1  
*Elymus glaucus* Blue Wildrye 2  
*Epilobium angustifolium* Fireweed 2  
*Epilobium paniculatum* Tall Annual Willow-herb 1  
*Equisetum arvense* Common or Field Horsetail 1  
*Erigeron chrysopsidis* Dwarf Yellow Fleabane 2  
*Erigeron chrysopsidis chrysopsidis* DwarfYellowFleabane 2  
*Erigeron corymbosus* Foothill Daisy or Longleaf Fleabane 2  
*Eriogonum compositum* Northern Buckwheat 1  
*Erigeron eatonii* Eaton's Daisy 2  
*Erythronium grandiflorum* Fawnlily or Glacierlily or Dogtooth Violet 3  
*Eriogonum heracleoides* Wyeth's Creamy Buckwheat 1  
*Eriophyllum lanatum* Common Eriophyllum 2  
*Erigeron pumilus* Low Fleabane 1  
*Erigeron speciosus* Showy Fleabane 2  
*Eriogonum vimineum* Broom Buckwheat 1  
*Euphorbia glyptosperma* Corrugate-seed Spurge 1  
*Festuca idahoensis* Idaho Fescue 2  
*Festuca occidentalis* Western Fescue 1

*Festuca octoflora* Sixweeks Fescue 1  
*Fritillaria atropurpurea* Checker or Chocolate Lily 1  
*Fritillaria pudica* Yellow Bell 2  
*Frasera speciosa* Giant Frasera 3  
*Fragaria vesca* Woods Strawberry 1  
*Fragaria virginiana* Blueleaf or Broadpetal Strawberry 1  
*Galium aparine* Catchweed Bedstraw or Cleavers 2  
*Gaillardia aristata* Blanketflower 1  
*Galium bifolium* Thinleaf Bedstraw 1  
*Galium boreale* Northern Bedstraw 1  
*Gayophytum ramosissimum* Hairstem Groundsmoke 1  
*Gayophytum racemosum* Racemed Groundsmoke 1  
*Gentiana amarella* Northern Gentian 1  
*Geum triflorum ciliatum* Red Avens/Old Man's Whiskers 2  
*Geranium viscosissimum* Sticky Geranium 3  
*Gilia aggregata* Skyrocket Gilia 2  
*Gilia capillaris* Smoothleaved Gilia 2  
*Habenaria elegans* California Hillside Habenaria 2  
*Hesperochiron pumilus* Centaur Flower 2  
*Helianthella uniflora* Oneflower Helianthella 3  
*Hieracium albidiflorum* White Hawkweed 2  
*Hieracium albertinum* Western Hawkweed 2  
*Hieracium cynoglossoides* Houndstongue Hawkweed 3  
*Holodiscus discolor* Creambush Oceanspray 1  
*Hydrophyllum capitatum* Ballhead Waterleaf 3  
*Idaho scapigera* Scalepod 2  
*Iris missouriensis* Western Blue Flag/Rocky Mountain Iris 2  
*Juniperus occidentalis* Western Juniper 1  
*Koeleria cristata* Prairie Junegrass 2  
*Lathyrus lanzwertii* Thicketleaf Peavine 3  
*Lathyrus nevadensis* Sierra Peavine 3  
*Larix occidentalis* Western Larch 3  
*Lathyrus pauciflorus* Few-flowered Peavine 3  
*Lithophragma bulbifera* Bulbiferous Fringecup 2  
*Lithophragma glabra* Smooth Fringecup 1  
*Lithophragma parviflora* Small-flowered Fringecup 1  
*Lithospermum ruderales* Wayside Gromwell 3  
*Lonicera ciliosa* Western Trumpet Honeysuckle 2  
*Lomatium dissectum* Fernleaved Desert Parsley 1  
*Lomatium leptocarpum* Slenderfruit/Bicolor Biscuitroot 1  
*Lomatium macrocarpum* Big Seed Biscuitroot 1  
*Lotus purshianus* Spanish Clover 2  
*Lomatium triternatum* Nineleaf Desert Parsley 2  
*Lupinus argenteus* Silvery Lupine 3  
*Lupinus caudatus* Tailcup Lupine 2  
*Luzula campestris* Field Woodrush 1  
*Lupinus laxiflorus* Spurred Lupine 3  
*Lupinus leucophyllus* Velvet or Woolly Lupine 1  
*Luzula parviflora* Small-flowered Woodrush 1  
*Luzula spicata* Spike Woodrush 1  
*Lupinus sulphureus* Sulphur Lupine 3  
*Machaeranthera canescens* Hoary Aster 1  
*Madia citriodora* Lemon Tarweed 1  
*Madia exigua* Little Tarweed 1  
*Madia glomerata* Cluster Tarweed 1  
*Madia gracilis* Common or Slender Tarweed 1  
*Matricaria matricarioides* Pineapple Weed 1  
*Madia minima* Small-head Tarweed 1  
*Machaeranthera shastensis* Shasta Aster 2  
*Mentzelia albicaulis* Whitestem Mentzelia 2  
*Melica bulbosa* Oniongrass 1

*Mentzelia dispersa* Bushy Mentzelia 2  
*Mertensia longiflora* Small Bluebells 2  
*Microsteris gracilis* Pink Microsteris 2  
*Mimulus nanus* Dwarf Monkeyflower 2  
*Microseris nutans* Nodding Microseris 2  
*Mitella stauropetala* Side-flowered Mitrewort 2  
*Microseris troximoides* False Agoseris 2  
*Mimulus washingtonensis* Washington Monkeyflower 1  
*Montia linearis* Lineleaf Indianlettuce 3  
*Osmorhiza depauperata* Bluntfruited Sweet-cicely 2  
*Osmorhiza occidentalis* Western Sweet-cicely 3  
*Paeonia brownii* Brown's or Wild Paeony 2  
*Pachistima myrsinites* Oregon Boxwood 2  
*Penstemon attenuatus* Sulphur Penstemon 1  
*Perideridia bolanderi* Bolander's Yampah 1  
*Penstemon gairdneri* Gairdner's Penstemon 2  
*Penstemon richardsonii* Richardson's Penstemon 1  
*Penstemon speciosus* Royal Penstemon 2  
*Phacelia hastata* Whiteleaf Phacelia 1  
*Phacelia heterophylla* Varileaf Phacelia 1  
*Philadelphus lewisii* Lewis Mockorange or Syringa 2  
*Physocarpus malvaceus* Mallow Ninebark 3  
*Pinus contorta* Lodgepole Pine 1  
*Picea engelmannii* Engelmann Spruce 1  
*Pinus ponderosa* Ponderosa Pine 3  
*Plectritis macrocera* Longhorn Plectritis 2  
*Potentilla glandulosa* glandulosa Gland Cinquefoil 3  
*Potentilla gracilis* Northwest or Slender Cinquefoil 3  
*Poa leibergii* Leiberg's Bluegrass 2  
*Polemonium micranthum* Littlebells Polemonium 3  
*Poa nervosa wheeleri* Wheeler's Bluegrass 3  
*Polemonium pulcherrimum* Showy or Skunkweed  
*Polemonium* or Jacob's Ladder 1  
*Poa scabrella* Pine Bluegrass; Malpais Bluegrass 2  
*Prunus emarginata* Bittercherry 2  
*Prunus virginiana* Common Chokecherry 2  
*Pseudotsuga menziesii* Douglas Fir 2  
*Pterospora andromedea* Woodland Pinedrops 3  
*Pteridium aquilinum* Bracken Fern or Brake Fern 1  
*Purshia tridentata* Antelope Bitterbrush 3  
*Ranunculus glaberrimus* Sagebrush Buttercup 3  
*Ranunculus uncinatus* Wood Buttercup 3  
*Ribes cereum* cereum Wax Currant 3  
*Ribes viscosissimum* Sticky Currant 2  
*Rosa gymnocarpa* Baldhip Rose 2  
*Rosa nutkana* Nootka Rose 3  
*Rosa woodsii* Wood's Rose 1  
*Rubus idaeus* Red Raspberry 1

*Montia perfoliata* Minerslettuce 3  
*Myosotis micrantha* Blue Scorpion-grass 3  
*Nemophila breviflora* Great Basin Nemophila 3  
*Nemophila parviflora* Smallflower Nemophila 3  
*Nemophila pedunculata* Meadow Nemophila 3  
*Orobancha pinorum* Pine Broomrape 1  
*Orobancha uniflora* Oneflowered Broomrape 2  
*Osmorhiza chilensis* Mountain Sweet-cicely 2  
  
*Rubus leucodermis* Whitebark Raspberry 1  
*Sambucus cerulea* Blueberry Elder 1  
*Saxifraga integrifolia* Swamp Saxifrage 1  
*Saxifraga integrifolia leptopetala* Swamp Saxifrage 1  
*Sanguisorba occidentalis* Annual Burnet 2  
*Sambucus racemosa* Black Elderberry 1  
*Salix scouleriana* Scouler Willow 1  
*Scrophularia lanceolata* Lanceleaf Figwort 1  
*Senecio integerrimus* Western or Woolly Groundsel 3  
*Sedum stenopetalum* Wormleaf Stonecrop 2  
*Silene douglasii douglasii* Douglas' Silene 2  
*Sisyrinchium inflatum* Grass Widow 3  
*Silene menziesii* Menzies' Silene 3  
*Sidalcea oregana procera* Oregon Checkermallow 2  
*Silene oregana* Oregon Catchfly 2  
*Smilacina stellata* Starry False Solomon's Seal 1  
*Solidago occidentalis* Western Goldenrod 2  
*Spiraea betulifolia* Birch or Shiny Leaf Spiraea 2  
*Stipa occidentalis* Western Needlegrass 2  
*Symphoricarpos albus* Common Snowberry 2  
*Symphoricarpos oreophilus* Mountain Snowberry 1  
*Thlaspi fendleri* Blue or Fendler's Pennycress 1  
*Thalictrum fendleri* Fendler's Meadowrue 2  
*Thermopsis montana* Mountain Thermopsis/Golden Pea 1  
*Thalictrum occidentale* Western Meadowrue 1  
*Trillium petiolatum* Purple Trillium 3  
*Urtica dioica* Stinging Nettle 2  
*Veronica serpyllifolia* Thyme-leaved Speedwell 1  
*Viola adunca* Early Blue Violet 2  
*Vicia americana* American Vetch 3  
*Viola nuttallii* Nuttall's Violet 2  
*Wyethia amplexicaulis* Mule's Ears/Northern Mule's Ear 1  
*Xanthium strumarium* Cocklebur 1  
*Zigadenus paniculatus* Panicked Death Camas 2  
*Zigadenus venenosus* Meadow or Deadly Death Camas 2

## APPENDIX C NATIVE PLANT SPECIES OF THE WARM GRAND FIR PLANT ASSOCIATION GROUP WALL CREEK ECOSYSTEM

NOTE: THIS LIST MAY BE USED IN RESTORATION PRESCRIPTIONS WITHIN THIS PLANT ASSOCIATION GROUP  
 SPECIES WITH A HABITAT AFFINITY RANK OF "3" WILL MEET WITH GREATEST SUCCESS

*Abies grandis* Grand Fir 3  
*Acer glabrum* Rocky Mountain Maple 3  
*Achillea millefolium* Common Yarrow 2

*Aconitum columbianum* Columbia Monkshood 3  
*Actaea rubra* Wild Red Baneberry 3  
*Adenocaulon bicolor* Trail or Pathfinder Plant 3

*Agastache urticifolia* Nettleleaf Horsemint 3  
*Agoseris aurantiaca* Orange Agoseris 3  
*Agoseris glauca* Pale Agoseris 2  
*Agoseris grandiflora* Large-flower Agoseris 2  
*Agoseris heterophylla* Annual Agoseris 3  
*Agropyron spicatum* Bluebunch Wheatgrass 1  
*Agrostis exarata* Spike Bentgrass 1  
*Agrostis scabra* Winter Bentgrass or Tickle-grass 1  
*Allium fibrillum* Fringed Onion 2  
*Allium madidum* Blue Mountain Onion 1  
*Allium tolmiei tolmiei* Tolmie's Onion 1  
*Alnus sinuata* Sitka Alder 1  
*Amelanchier alnifolia* Western Serviceberry 2  
*Anaphalis margaritacea* Common Pearleverlasting 1  
*Anemone oregana* Oregon Anemone 3  
*Anemone piperi* Windflower 3  
*Antennaria anaphaloides* Tall Pussytoes 1  
*Antennaria luzuloides* Woodrush Pussytoes 2  
*Antennaria neglecta* Field Pussytoes 2  
*Antennaria racemosa* Raceme Pussytoes 2  
*Antennaria rosea* Rosy Pussytoes 2  
*Antennaria stenophylla* Narrow-leaf Pussytoes 1  
*Apocynum androsaemifolium* Spreading Dogbane 2  
*Aquilegia formosa* Sitka or Red Columbine 2  
*Arabis divaricata* Spreadingpod Rockcress 1  
*Arabis glabra* Tower Mustard 2  
*Arabis holboellii* Holboell's Rockcress 1  
*Arceuthobium americanum* American Dwarf Mistletoe 3  
*Arceuthobium campylopodum* Western Dwarf Mistletoe 2  
*Arceuthobium douglasii* Douglas Dwarf Mistletoe 3  
*Arctostaphylos nevadensis* Pinemat Manzanita 3  
*Arctostaphylos uva-ursi* Bearberry 3  
*Arenaria macrophylla* Bigleaf Sandwort 3  
*Arenaria pusilla* Dwarf Sandwort 1  
*Arnica cordifolia* Heartleaf Arnica 3  
*Arnica sororia* Twin Arnica 1  
*Asclepias speciosa* Showy Milkweed 2  
*Aster chilensis* Long-leaved Aster 2  
*Aster conspicuus* Showy Aster 2  
*Aster foliaceus* Leafy Aster 2  
*Astragalus diaphanus diaphanus* Transparent Milkvetch 1  
*Astragalus filipes* Basalt Milkvetch 1  
*Astragalus reventus reventus* Blue Mountain Milkvetch 1  
*Balsamorhiza careyana* Carey's Balsamroot 1  
*Balsamorhiza sagittata* Arrowleaf Balsamroot 2  
*Berberis nervosa* Cascade or Dull Oregongrape 2  
*Berberis repens* Low Oregongrape 2  
*Besseyia rubra* Red Kittentail or Red Besseyia 3  
*Boisduvalia densiflora* Dense Spike-primrose 1  
*Boisduvalia stricta* Brook Spike-primrose 1  
*Brodiaea douglasii* Douglas' Brodiaea 1  
*Brodiaea hyacinthina* Hyacinth Brodiaea 1  
*Bromus carinatus* Mountain Brome 3  
*Bromus vulgaris* Columbia Brome 1  
*Calamagrostis rubescens* Pinegrass 3  
*Calochortus elegans* Northwestern Mariposa 2  
*Calochortus eurycarpus* Bigpod Mariposa 2  
*Calochortus macrocarpus* Greenbanded Startulip 1  
*Calypso bulbosa* Calypso Orchid 1  
*Camassia quamash* Common Camas 1  
*Carex concinnoides* Northwest Sedge 2  
*Carex geyeri* Elk Sedge 3  
*Carex illota* Sheep Sedge 2  
*Carex pachystachya* Thick-headed Sedge 2  
*Carex rossii* Ross Sedge 3  
*Castilleja applegatei* Wavy-leaved Paintbrush 1  
*Castilleja chromosa* Desert Paintbrush 1  
*Castilleja hispida* Harsh Paintbrush 2  
*Castilleja miniata* Scarlet Paintbrush 1  
*Ceanothus integerrimus* Deerbrush Ceanothus 1  
*Ceanothus sanguineus* Redstem Ceanothus 2  
*Ceanothus velutinus* Snowbrush Ceanothus or Buckbrush 2  
*Cerastium arvense* Starry Cerastium 1  
*Cerastium nutans* Nodding Chickweed 1  
*Cercocarpus ledifolius* Curlleaf Mountain Mahogany 1  
*Cirsium utahense* Utah Thistle 2  
*Clarkia pulchella* Deerhorn or Pink Fairies 1  
*Clarkia rhomboidea* Common Clarkia 1  
*Clematis ligusticifolia* Western Virginsbower or Clematis 1  
*Clintonia uniflora* Queen's Cup Beadlily 1  
*Collinsia parviflora* Small-flowered Blue-eyed Mary 2  
*Collomia grandiflora* Large-flowered Collomia 2  
*Collomia linearis* Narrow-leaf Collomia 2  
*Collomia tinctoria* Yellow-staining Collomia 2  
*Conyza canadensis* Horseweed 1  
*Corallorhiza maculata* Spotted Coral Root 2  
*Corallorhiza striata* Striped Coral Root 2  
*Crataegus douglasii* Black Hawthorn 1  
*Crocidium multicaule* Spring Gold or Gold Fields 2  
*Cypripedium montanum* Mountain Lady Slipper 2  
*Cystopteris fragilis* Brittle Bladderfern 2  
*Delphinium depauperatum* Slim or Dwarf Larkspur 2  
*Delphinium nuttallianum* Upland Larkspur 2  
*Delphinium stachydeum* Tall Mountain Larkspur 2  
*Deschampsia elongata* Slender Hairgrass 2  
*Descurainia richardsonii* Mountain Tansymustard 1  
*Disporum trachycarpum* Wartberry Fairybell 2  
*Dodecatheon conjugens* Slimpod Shootingstar 2  
*Dodecatheon cusickii* Cusick's Shootingstar 2  
*Draba verna* Spring Whitlow-grass 1  
*Elymus glaucus* Blue Wildrye 2  
*Epilobium angustifolium* Fireweed 2  
*Epilobium paniculatum* Tall Annual Willow-herb 1  
*Equisetum arvense* Common or Field Horsetail 1  
*Erigeron chrysopsidis* Dwarf Yellow Fleabane 2  
*Erigeron chrysopsidis chrysopsidis* Dwarf Yellow Fleabane 2  
*Erigeron corymbosus* Foothill Daisy or Longleaf Fleabane 2  
*Erigeron eatonii* Eaton's Daisy 2  
*Erigeron pumilus* Low Fleabane 1  
*Erigeron speciosus* Showy Fleabane 2  
*Eriogonum compositum* Northern Buckwheat 1  
*Eriogonum heracleoides* Wyeth's Creamy Buckwheat 1  
*Eriophyllum lanatum* Woolly Sunflower 2  
*Erythronium grandiflorum* Glacier Lily 3  
*Euphorbia glyptosperma* Corrugate-seed Spurge 1  
*Festuca idahoensis* Idaho Fescue 1  
*Festuca occidentalis* Western Fescue 3  
*Festuca octoflora* Sixweeks Fescue 1  
*Fragaria vesca* Woods Strawberry 3  
*Fragaria virginiana* Blueleaf or Broadpetal Strawberry 2  
*Frasera speciosa* Giant Frasera 3  
*Fritillaria atropurpurea* Checker or Chocolate Lily 2  
*Fritillaria pudica* Yellow Bell 1

*Galium aparine* Catchweed Bedstraw or Cleavers 3  
*Galium bifolium* Thinleaf Bedstraw 2  
*Galium boreale* Northern Bedstraw 2  
*Gentiana amarella* Northern Gentian 2  
*Geranium viscosissimum* Sticky Geranium 2  
*Geum triflorum ciliatum* Red Avens 2  
*Gilia aggregata* Skyrocket Gilia 1  
*Gilia capillaris* Smoothleaved Gilia 2  
*Goodyera oblongifolia* Rattlesnake-plantain 2  
*Habenaria elegans* California Hillside Habenaria 2  
*Helianthella uniflora* Oneflower Helianthella 3  
*Hesperochiron pumilus* Dwarf Hesperochiron 2  
*Hieracium albertinum* Western Hawkweed 3  
*Hieracium albiflorum* White Hawkweed 3  
*Hieracium cynoglossoides* Houndstongue Hawkweed 2  
*Holodiscus discolor* Creambush Oceanspray 3  
*Hydrophyllum capitatum* Ballhead Waterleaf 2  
*Idahoia scapigera* Scalepod 1  
*Iris missouriensis* Western Blue Flag 2  
*Juniperus occidentalis* Western Juniper 1  
*Koeleria cristata* Prairie Junegrass 2  
*Larix occidentalis* Western Larch 3  
*Lathyrus lanzwertii* Thickleaf Peavine 2  
*Lathyrus nevadensis* Sierra Peavine 3  
*Lathyrus pauciflorus* Few-flowered Peavine 3  
*Ligusticum canbyi* Canby Licoriceroot 1  
*Linnaea borealis* American Twinflower 1  
*Lithophragma bulbifera* Bulbiferous Fringecup 2  
*Lithophragma glabra* Smooth Fringecup 1  
*Lithophragma parviflora* Small-flowered Fringecup 1  
*Lithospermum ruderales* Wayside Gromwell 2  
*Lomatium dissectum* Fernleaved Desert Parsley 1  
*Lomatium triternatum* Nineleaf Desert Parsley 2  
*Lonicera ciliosa* Western Trumpet Honeysuckle 2  
*Lotus purshianus* Spanish Clover 2  
*Lupinus argenteus* Silvery Lupine 1  
*Lupinus sulphureus* Sulphur Lupine 3  
*Luzula campestris* Field Woodrush 3  
*Luzula parviflora* Small-flowered Woodrush 3  
*Luzula spicata* Spike Woodrush 3  
*Machaeranthera shastensis* Shasta Aster 2  
*Madia citriodora* Lemon Tarweed 1  
*Madia exigua* Little Tarweed 1  
*Madia glomerata* Cluster Tarweed 1  
*Madia gracilis* Common or Slender Tarweed 1  
*Madia minima* Small-head Tarweed 1  
*Matricaria matricarioides* Pineapple Weed 1  
*Melica bulbosa* Oniongrass 3  
*Mertensia longiflora* Small Bluebells 1  
*Microseris nutans* Nodding Microseris 2  
*Microseris troximoides* False Agoseris 2  
*Microsteris gracilis* Pink Microsteris 2  
*Mimulus breweri* Brewer's Monkeyflower 1  
*Mimulus moschatus* Musk Monkeyflower 2  
*Mimulus washingtonensis* Washington Monkeyflower 1  
*Mitella stauropetala* Side-flowered Mitrewort 2  
*Mitella trifida* Three-toothed Mitrewort 3  
*Montia linearis* Lineleaf Indianlettuce 2  
*Montia perfoliata* Minerslettuce 3  
*Myosotis micrantha* Blue Scorpion-grass 2  
*Nemophila breviflora* Great Basin Nemophila 2  
*Nemophila parviflora* Smallflower Nemophila 2  
*Nemophila pedunculata* Meadow Nemophila 2  
*Orobanche pinorum* Pine Broomrape 3  
*Orobanche uniflora* Oneflowered Broomrape 2  
*Osmorhiza chilensis* Mountain Sweet-cicely 3  
*Osmorhiza depauperata* Bluntfruted Sweet-cicely 3  
*Osmorhiza occidentalis* Western Sweet-cicely 2  
*Pachistima myrsinites* Oregon Boxwood 2  
*Paeonia brownii* Brown's or Wild Paeony 2  
*Pedicularis racemosa* Leafy or Sickletop Lousewort 2  
*Penstemon attenuatus* Sulphur Penstemon 2  
*Penstemon gairdneri* Gairdner's Penstemon 2  
*Penstemon richardsonii* Richardson's Penstemon 1  
*Penstemon speciosus* Royal Penstemon 1  
*Perideridia bolanderi* Bolander's Yampah 3  
*Phacelia hastata* Whiteleaf Phacelia 1  
*Phacelia heterophylla* Varileaf Phacelia 1  
*Philadelphus lewisii* Lewis Mockorange or Syringa 2  
*Physocarpus malvaceus* Mallow Ninebark 3  
*Picea engelmannii* Engelmann Spruce 2  
*Pinus contorta* Lodgepole Pine 2  
*Pinus ponderosa* Ponderosa Pine 1  
*Plectritis macrocera* Longhorn Plectritis 2  
*Poa leibergii* Leiberg's Bluegrass 1  
*Poa nervosa wheeleri* Wheeler's Bluegrass 2  
*Polemonium micranthum* Littlebells Polemonium 2  
*Polemonium pulcherrimum* Jacob's Ladder 1  
*Polystichum munitum* Swordfern 1  
*Potentilla biennis* Biennial Cinquefoil 3  
*Potentilla glandulosa glandulosa* Sticky Cinquefoil 3  
*Potentilla gracilis* Northwest or Slender Cinquefoil 3  
*Prunus emarginata* Bittercherry 2  
*Prunus virginiana* Common Chokecherry 2  
*Pseudotsuga menziesii* Douglas Fir 3  
*Pteridium aquilinum* Bracken Fern 2  
*Pterospora andromedea* Woodland Pinedrops 2  
*Purshia tridentata* Antelope Bitterbrush 2  
*Pyrola secunda* Sidebells Pyrola 2  
*Ranunculus glaberrimus* Sagebrush Buttercup 2  
*Ranunculus uncinatus* Wood Buttercup 3  
*Ribes cereum cereum* Wax Currant 2  
*Ribes lacustre* Prickly Currant or Swamp Gooseberry 2  
*Ribes viscosissimum* Sticky Currant 2  
*Rosa gymnocarpa* Baldhip Rose 3  
*Rosa nutkana* Nootka Rose 1  
*Rosa woodsii* Wood's Rose 1  
*Rubus idaeus* Red Raspberry 1  
*Rubus leucodermis* Whitebark Raspberry 1  
*Rudbeckia occidentalis* Western Coneflower 1  
*Salix scouleriana* Scouler Willow 2  
*Sambucus cerulea* Blueberry Elder 3  
*Sambucus racemosa* Black Elderberry 2  
*Sanguisorba occidentalis* Annual Burnet 2  
*Saxifraga integrifolia* Swamp Saxifrage 1  
*Saxifraga integrifolia leptopetala* Swamp Saxifrage 1  
*Scrophularia lanceolata* Lanceleaf Figwort 3  
*Sedum stenopetalum* Wormleaf Stonecrop 2  
*Senecio integerrimus* Western or Woolly Groundsel 2  
*Sidalcea oregana procera* Oregon Checkermallow 2  
*Silene douglasii douglasii* Douglas' Silene 3  
*Silene menziesii* Menzies' Silene 3  
*Silene oregana* Oregon Catchfly 3  
*Sisyrinchium inflatum* Grass Widow 2  
*Smilacina stellata* Starry False Solomon's Seal 2  
*Solidago occidentalis* Western Goldenrod 2

*Spiraea betulifolia* Birch or Shiny Leaf Spiraea 3  
*Stipa occidentalis* Western Needlegrass 1  
*Symphoricarpos albus* Common Snowberry 3  
*Symphoricarpos oreophilus* Mountain Snowberry 2  
*Taxus brevifolia* Pacific Yew 1  
*Thalictrum fendleri* Fendler's Meadowrue 3  
*Thalictrum occidentale* Western Meadowrue 2  
*Thermopsis montana* Mountain Thermopsis 2  
*Thlaspi fendleri* Blue or Fendler's Pennycress 2  
*Trillium petiolatum* Purple Trillium 1  
*Urtica dioica* Stinging Nettle 3  
*Valeriana sitchensis* Sitka Valerian 1  
*Veronica serpyllifolia* Thyme-leaved Speedwell 1  
*Vicia americana* American Vetch 3  
*Viola adunca* Early Blue Violet 2

*Viola nuttallii* Nuttall's Violet 2  
*Xanthium strumarium* Cocklebur 1  
*Zigadenus paniculatus* Panicked Death Camas 1

*Zigadenus venenosus* Meadow or Deadly Death Camas 1

## APPENDIX D NATIVE PLANT SPECIES OF THE COOL GRAND FIR PLANT ASSOCIATION GROUP WALL CREEK ECOSYSTEM

**NOTE: THIS LIST MAY BE USED IN RESTORATION PRESCRIPTIONS WITHIN THIS PLANT  
 ASSOCIATION GROUP**

SPECIES WITH HABITAT AFFINITIES OF "3" WILL MEET WITH MOST SUCCESS

*Abies grandis* Grand Fir 3  
*Acer glabrum* Rocky Mountain Maple 1  
*Achillea millefolium* Common Yarrow 1  
*Aconitum columbianum* Columbia Monkshood 1  
*Actaea rubra* Wild Red Baneberry 1  
*Adenocaulon bicolor* Trail or Pathfinder Plant 2  
*Agastache urticifolia* Nettleleaf Horsemint 1  
*Agoseris aurantiaca* Orange Agoseris 2  
*Agoseris glauca* Pale Agoseris 1  
*Agoseris grandiflora* Large-flower Agoseris 1  
*Agoseris heterophylla* Annual Agoseris 1  
*Agrostis diegoensis* Thin or Leafy Bentgrass 2  
*Agrostis exarata* Spike Bentgrass 1  
*Agrostis scabra* Winter Bentgrass or Tickle-grass 1  
*Allium madidum* Blue Mountain Onion 2  
*Alnus incana* Mountain Alder 2  
*Alnus sinuata* Sitka Alder 3  
*Amelanchier alnifolia* Western Serviceberry 1  
*Anaphalis margaritacea* Common Pearleverlasting 3  
*Anemone oregana* Oregon Anemone 2  
*Anemone piperi* Windflower 2  
*Antennaria anaphaloides* Tall Pussytoes 1  
*Antennaria luzuloides* Woodrush Pussytoes 1  
*Antennaria neglecta* Field Pussytoes 1  
*Antennaria racemosa* Raceme Pussytoes 3  
*Antennaria rosea* Rosy Pussytoes 1  
*Apocynum androsaemifolium* Spreading Dogbane 1  
*Aquilegia formosa* Sitka or Red Columbine 3  
*Arabis divaricarpa* Spreadingpod Rockcress 1  
*Arabis glabra* Tower Mustard 3  
*Arabis holboellii* Holboell's Rockcress 1

*Arceuthobium americanum* American Dwarf Mistletoe 3  
*Arceuthobium campylopodum* Western Dwarf Mistletoe 2  
*Arceuthobium douglasii* Douglas Dwarf Mistletoe 2  
*Arctostaphylos nevadensis* Pinemat Manzanita 1  
*Arctostaphylos uva-ursi* Bearberry 1  
*Arenaria macrophylla* Bigleaf Sandwort 1  
*Arnica cordifolia* Heartleaf Arnica 3  
*Arnica parryi* Nodding Arnica 1  
*Asarum caudatum* Wild Ginger 3  
*Aster chilensis* Long-leaved Aster 1  
*Aster conspicuus* Showy Aster 3  
*Aster foliaceus* Leafy Aster 3  
*Athyrium filix-femina* Lady Fern 2  
*Barbarea orthoceras* American Wintercress 1  
*Berberis nervosa* Cascade or Dull Oregongrape 3  
*Betula occidentalis* Red Birch or Water Birch 3  
*Bromus carinatus* Mountain Brome 1  
*Bromus vulgaris* Columbia Brome 3  
*Calamagrostis rubescens* Pinegrass 1  
*Calochortus eurycarpus* Bigpod Mariposa 1  
*Calypso bulbosa* Calypso Orchid 3  
*Cardamine oligosperma* Little Western Bittercress 2  
*Carex aurea* Golden Sedge 2  
*Carex concinnoides* Northwest Sedge 2  
*Carex geyeri* Elk Sedge 1  
*Carex leptalea* Bristle-stalked Sedge 2  
*Carex oederi* Green Sedge 2  
*Carex pachystachya* Thick-headed Sedge 1  
*Carex rossii* Ross Sedge 1  
*Castilleja miniata* Scarlet Paintbrush 3  
*Ceanothus integerrimus* Deerbrush Ceanothus 3

*Ceanothus sanguineus* Redstem Ceanothus 1  
*Ceanothus velutinus* Snowbrush Ceanothus/Buckbrush 1  
*Cerastium arvense* Starry Cerastium 1  
*Cerastium nutans* Nodding Chickweed 1  
*Chimaphila umbellata* Common Prince's Pine 3  
*Circaea alpina* Enchanter's Nightshade 3  
*Clintonia uniflora* Queen's Cup Beadlily 3  
*Collinsia parviflora* Small-flowered Blue-eyed Mary 1  
*Collomia grandiflora* Large-flowered Collomia 1  
*Collomia linearis* Narrow-leaf Collomia 2  
*Collomia tinctoria* Yellow-staining Collomia 2  
*Corallorhiza maculata* Spotted Coral Root 3  
*Corallorhiza mertensiana* Merten's Coral Root 3  
*Corallorhiza striata* Striped Coral Root 3  
*Crataegus douglasii* Black Hawthorn 3  
*Crocium multicaule* Spring Gold or Gold Fields 3  
*Cypripedium montanum* Mountain Lady Slipper 3  
*Cystopteris fragilis* Brittle Bladderfern 3  
*Delphinium depauperatum* Slim or Dwarf Larkspur 3  
*Descurainia richardsonii* Mountain Tansymustard 1  
*Disporum trechycarpum* Wartberry Fairybell 3  
*Draba verna* Spring Whitlow-grass 1  
*Elymus glaucus* Blue Wildrye 3  
*Epilobium angustifolium* Fireweed 2  
*Epilobium glaberrimum* Smooth Willow-herb 2  
*Epilobium glandulosum* Common Willow-herb 2  
*Epilobium paniculatum* Tall Annual Willow-herb 1  
*Equisetum arvense* Common or Field Horsetail 2  
*Equisetum variegatum* Northern Scouringrush 2  
*Erigeron speciosus* Showy Fleabane 1  
*Erythronium grandiflorum* Fawnlily or Glacierlily 3  
*Euphorbia glyptosperma* Corrugate-seed Spurge 1  
*Festuca occidentalis* Western Fescue 2  
*Festuca octoflora* Sixweeks Fescue 3  
*Floerkea proserpinacoides* False Mermaid 1  
*Fragaria vesca* Woods Strawberry 2  
*Fragaria virginiana* Blueleaf or Broadpetal Strawberry 3  
*Frasera speciosa* Giant Frasier 1  
*Fritillaria atropurpurea* Checker or Chocolate Lily 3  
*Galium aparine* Catchweed Bedstraw or Cleavers 1  
*Galium bifolium* Thinleaf Bedstraw 3  
*Galium boreale* Northern Bedstraw 3  
*Gaultheria ovatifolia* Oregon Wintergreen 3  
*Gentiana amarella* Northern Gentian 3  
*Gilia capillaris* Smoothleaved Gilia 1  
*Goodyera oblongifolia* Rattlesnake-plantain 3  
*Habenaria unalascensis* Alaska Rein Orchid 3  
*Hieracium albertinum* Western Hawkweed 1  
*Hieracium albiflorum* White Hawkweed 1  
*Holodiscus discolor* Creambush Oceanspray 2  
*Hypopitys monotropa* Pinesap 3  
*Larix occidentalis* Western Larch 3  
*Lewisia pygmaea* Dwarf Lewisia 1  
*Lewisia triphylla* Three Leaf Lewisia 1  
*Ligusticum canbyi* Canby Licoriceroot 3  
*Linnaea borealis* American Twinflower 3  
*Listera convallarioides* Broadlipped Twayblade 3  
*Lithophragma glabra* Smooth Fringecup 2  
*Lithophragma parviflora* Small-flowered Fringecup 2  
*Lomatium dissectum* Fernleaved Desert Parsley 1  
*Lonicera ciliosa* Western Trumpet Honeysuckle 1  
*Lonicera involucrata* Bearberry Honeysuckle 2  
*Lonicera utahensis* Utah Honeysuckle 2

*Lupinus polyphyllus* Big Leaf Lupine 2  
*Luzula campestris* Field Woodrush 2  
*Luzula parviflora* Small-flowered Woodrush 2  
*Luzula spicata* Spike Woodrush 2  
*Melice bulbosa* Oniongrass 3  
*Microsteris gracilis* Pink Microsteris 1  
*Mimulus breweri* Brewer's Monkeyflower 1  
*Mimulus moschatus* Musk Monkeyflower 3  
*Mitella breweri* Brewer Mitrewort 2  
*Mitella stauropetala* Side-flowered Mitrewort 3  
*Montia cordifolia* Heart-leaved Minerslettuce 3  
*Montia perfoliata* Minerslettuce 2  
*Orobancha pinorum* Pine Broomrape 1  
*Orobancha uniflora* Oneflowered Broomrape 3  
*Osmorhiza chilensis* Mountain Sweet-cicely 3  
*Osmorhiza depauperata* Bluntfruited Sweet-cicely 3  
*Osmorhiza occidentalis* Western Sweet-cicely 1  
*Pachistima myrsinites* Oregon Boxwood 3  
*Pedicularis racemosa* Leafy or Sickletop Lousewort 3  
*Penstemon attenuatus* Sulphur Penstemon 3  
*Perideridia bolanderi* Bolander's Yampah 2  
*Phacelia hastata* Whiteleaf Phacelia 1  
*Phacelia heterophylla* Varileaf Phacelia 1  
*Philadelphus lewisii* Lewis Mockorange or Syringa 1  
*Phleum alpinum* Alpine Timothy 2  
*Picea engelmannii* Engelmann Spruce 2  
*Pinus contorta* Lodgepole Pine 1  
*Pinus ponderosa* Ponderosa Pine 1  
*Polemonium pulcherrimum* Showy Polemonium 2  
*Polystichum munitum* Swordfern 3  
*Potentilla glandulosa glandulosa* Gland Cinquefoil 1  
*Potentilla gracilis* Northwest or Slender Cinquefoil 1  
*Prunus emarginata* Bittercherry 1  
*Pseudotsuga menziesii* Douglas Fir 1  
*Pteridium aquilinum* Bracken Fern or Brake Fern 3  
*Pterospora andromedea* Woodland Pinedrops 1  
*Pyrola aphylla* Leafless Pyrola 3  
*Pyrola asarifolia* Common or Pink Wintergreen 3  
*Pyrola chlorantha* Green Pyrola 3  
*Pyrola elliptica* White Wintergreen 3  
*Pyrola picta* White-vein Pyrola 3  
*Pyrola secunda* Sidebells Pyrola 3  
*Pyrola uniflora* Woodnymph 3  
*Ranunculus uncinatus* Wood Buttercup 1  
*Ribes cereum cereum* Wax Currant 1  
*Ribes lacustre* Prickly Currant or Swamp Gooseberry 3  
*Ribes viscosissimum* Sticky Currant 1  
*Rosa gymnocarpa* Baldhip Rose 3  
*Rosa nutkana* Nootka Rose 1  
*Rosa woodsii* Wood's Rose 3  
*Rubus idaeus* Red Raspberry 1  
*Rubus leucodermis* Whitebark Raspberry 1  
*Rubus parviflorus* Western Thimbleberry 3  
*Rudbeckia occidentalis* Blackhead/Western Coneflower 2  
*Salix scouleriana* Scouler Willow 3  
*Sambucus cerulea* Blueberry Elder 2  
*Sambucus racemosa* Black Elderberry 2  
*Sanguisorba occidentalis* Annual Burnet 1  
*Scrophularia lanceolata* Lanceleaf Figwort 2  
*Shepherdia canadensis* Russet or Canada Buffaloberry 1  
*Sidalcea oregana procera* Oregon Checkermallow 1  
*Sisyrinchium inflatum* Grass Widow 1  
*Smilacina racemosa* Feather Solomonplume 3

*Smilacina stellata* Starry False Solomon's Seal 3  
*Sorbus scopulina* Cascade Mountain Ash 3  
*Symphoricarpos albus* Common Snowberry 1  
*Symphoricarpos oreophilus* Mountain Snowberry 1  
*Taxus brevifolia* Pacific Yew 3  
*Thalictrum fendleri* Fendler's Meadowrue 1  
*Thalictrum occidentale* Western Meadowrue 3  
*Thermopsis montana* Mountain Thermopsis/Golden Pea 3  
*Thlaspi fendleri* Blue or Fendler's Pennycress 3  
*Tiarella trifoliata* Coolwort Foamflower 3  
*Trillium ovatum* White Trillium 3  
*Urtica dioica* Stinging Nettle 3

*Vaccinium membranaceum* Big Huckleberry 3  
*Vaccinium scoparium* Grouse Huckleberry/Whortleberry 1  
*Valeriana sitchensis* Sitka Valerian 3  
*Veronica serpyllifolia* Thyme-leaved Speedwell 1  
*Vicia americana* American Vetch 1  
*Viola adunca* Early Blue Violet 3  
*Viola orbiculata* Darkwoods Violet 3  
*Woodsia oregana* Oregon or Western Woodsia 3  
*Xanthium strumarium* Cocklebur 1

## APPENDIX E NATIVE PLANT SPECIES OF THE LODGEPOLE PINE PLANT ASSOCIATION GROUP WALL CREEK ECOSYSTEM

**NOTE: THIS LIST MAY BE USED IN RESTORATION PRESCRIPTIONS WITHIN THIS PLANT  
 ASSOCIATION GROUP**  
**SPECIES WITH A HABITAT AFFINITY RANKING OF "3" WILL MEET WITH GREATEST SUCCESS**

*Abies grandis* Grand Fir 1  
*Achillea millefolium* Common Yarrow 2  
*Agoseris aurantiaca* Orange Agoseris 2  
*Agrostis exarata* Spike Bentgrass 1  
*Agoseris glauca* Pale Agoseris 1  
*Agoseris grandiflora* Large-flower Agoseris 2  
*Agoseris heterophylla* Annual Agoseris 1  
*Agrostis scabra* Winter Bentgrass or Tickle-grass 1  
*Agastache urticifolia* Nettleleaf Horsemint 2  
*Alnus incana* Mountain Alder 1  
*Alnus sinuata* Sitka Alder 2  
*Antennaria luzuloides* Woodrush Pussytoes 1  
*Anaphalis margaritacea* Common Pearleverlasting 1  
*Antennaria neglecta* Field Pussytoes 1  
*Anemone oregana* Oregon Anemone 1  
*Anemone piperi* Windflower 1  
*Antennaria racemosa* Raceme Pussytoes 1  
*Antennaria rosea* Rosy Pussytoes 1  
*Apocynum androsaemifolium* Spreading Dogbane 1  
*Aquilegia formosa* Sitka or Red Columbine 1  
*Arceuthobium americanum* American Dwarf Mistletoe 2  
*Arceuthobium campylopodum* Western Dwarf Mistletoe 3  
*Arnica cordifolia* Heartleaf Arnica 3  
*Arabis divaricarpa* Spreadingpod Rockcress 1  
*Arceuthobium douglasii* Douglas Dwarf Mistletoe 1  
*Arabis holboellii* Holboell's Rockcress 1  
*Arenaria macrophylla* Bigleaf Sandwort 1  
*Arctostaphylos nevadensis* Pinemat Manzanita 1  
*Arnica parryi* Nodding Arnica 1  
*Arctostaphylos uva-ursi* Bearberry 2  
*Aster chilensis* Long-leaved Aster 1  
*Aster conspicuus* Showy Aster 2  
*Aster foliaceus* Leafy Aster 2  
*Balsamorhiza sagittata* Arrowleaf Balsamroot 1  
*Berberis nervosa* Cascade or Dull Oregongrape 2  
*Betula occidentalis* Red Birch or Water Birch 1  
*Bromus carinatus* Mountain Brome 1  
*Bromus vulgaris* Columbia Brome 1

*Carex aurea* Golden Sedge 1  
*Castilleja chromosa* Desert Paintbrush 1  
*Carex concinnoides* Northwest Sedge 2  
*Calochortus elegans* Northwestern Mariposa 1  
*Calochortus eurycarpus* Bigpod Mariposa 1  
*Carex geyeri* Elk Sedge 2  
*Castilleja hispida* Harsh Paintbrush 1  
*Calochortus macrocarpus* Greenbanded Startulip 1  
*Castilleja miniata* Scarlet Paintbrush 1  
*Carex rossii* Ross Sedge 2  
*Calamagrostis rubescens* Pinegrass 2  
*Cerastium arvense* Starry Cerastium 1  
*Cercocarpus ledifolius* Curlleaf Mountain Mahogany 1  
*Cerastium nutans* Nodding Chickweed 1  
*Ceanothus velutinus* Snowbrush Ceanothus/Buckbrush 2  
*Chimaphila umbellata* Common Prince's Pine 1  
*Clarkia rhomboidea* Common Clarkia 1  
*Collinsia parviflora* Small-flowered Blue-eyed Mary 1  
*Cystopteris fragilis* Brittle Bladderfern 1  
*Cypripedium montanum* Mountain Lady Slipper 1  
*Deschampsia elongata* Slender Hairgrass 1  
*Delphinium nuttallianum* Upland Larkspur 1  
*Descurainia richardsonii* Mountain Tansymustard 1  
*Draba verna* Spring Whitlow-grass 1  
*Elymus glaucus* Blue Wildrye 1  
*Epilobium angustifolium* Fireweed 2  
*Epilobium paniculatum* Tall Annual Willow-herb 1  
*Equisetum arvense* Common or Field Horsetail 1  
*Erythronium grandiflorum* Fawnlily or Glacierlily 1  
*Erigeron speciosus* Showy Fleabane 2  
*Euphorbia glyptosperma* Corrugate-seed Spurge 1  
*Festuca occidentalis* Western Fescue 1  
*Frasera speciosa* Giant Frasera 1  
*Fragaria vesca* Woods Strawberry 3  
*Fragaria virginiana* Blueleaf or Broadpetal Strawberry 2  
*Gentiana amarella* Northern Gentian 2  
*Geum triflorum ciliatum* Red Avens/Old Man's Whiskers 1  
*Geranium viscosissimum* Sticky Geranium 1

*Habenaria elegans* California Hillside *Habenaria* 1  
*Helianthella uniflora* Oneflower *Helianthella* 1  
*Hieracium cynoglossoides* Houndstongue *Hawkweed* 1  
*Iris missouriensis* Western Blue Flag/Rocky Mountain *Iris* 1  
*Juniperus occidentalis* Western *Juniper* 1  
*Koeleria cristata* Prairie *Junegrass* 1  
*Lathyrus nevadensis* Sierra *Peavine* 2  
*Larix occidentalis* Western *Larch* 2  
*Lewisia pygmaea* Dwarf *Lewisia* 1  
*Lewisia triphylla* Three Leaf *Lewisia* 1  
*Linnaea borealis* American *Twinflower* 1  
*Ligusticum canbyi* Canby *Licoriceroot* 1  
*Lonicera ciliosa* Western *Trumpet Honeysuckle* 1  
*Lonicera involucrata* Bearberry *Honeysuckle* 1  
*Lonicera utahensis* Utah *Honeysuckle* 3  
*Lupinus argenteus* Silvery *Lupine* 2  
*Lupinus caudatus* Tailcup *Lupine* 2  
*Luzula campestris* Field *Woodrush* 2  
*Luzula parviflora* Small-flowered *Woodrush* 2  
*Luzula spicata* Spike *Woodrush* 2  
*Lupinus sulphureus* Sulphur *Lupine* 1  
*Mertensia longiflora* Small *Bluebells* 1  
*Mimulus breweri* Brewer's *Monkeyflower* 1  
*Microsteris gracilis* Pink *Microsteris* 1  
*Mimulus moschatus* Musk *Monkeyflower* 1  
*Microseris nutans* Nodding *Microseris* 1  
*Mitella stauropetala* Side-flowered *Mitrewort* 1  
*Microseris troximoides* False *Agoseris* 1  
*Osmorhiza chilensis* Mountain *Sweet-cicely* 1  
*Osmorhiza depauperata* Bluntfruited *Sweet-cicely* 1  
*Osmorhiza occidentalis* Western *Sweet-cicely* 1  
*Pachistima myrsinites* Oregon *Boxwood* 1  
*Penstemon attenuatus* Sulphur *Penstemon* 1  
*Pedicularis racemosa* Leafy or Sickletop *Lousewort* 2  
*Phleum alpinum* Alpine *Timothy* 2  
*Phacelia hastata* Whiteleaf *Phacelia* 1  
*Phacelia heterophylla* Varileaf *Phacelia* 1  
*Philadelphus lewisii* Lewis *Mockorange* or *Syringa* 1  
*Pinus contorta* Lodgepole *Pine* 3  
*Picea engelmannii* Engelmann *Spruce* 3  
*Pinus ponderosa* Ponderosa *Pine* 1  
*Potentilla glandulosa* glandulosa *Gland Cinquefoil* 1  
*Potentilla gracilis* Northwest or Slender *Cinquefoil* 1  
*Poa nervosa* wheeleri *Wheeler's Bluegrass* 1  
*Polemonium pulcherrimum* Showy *Polemonium* 3  
*Prunus emarginata* Bittercherry 1

*Pseudotsuga menziesii* Douglas *Fir* 1  
*Pterospora andromedea* Woodland *Pinedrops* 1  
*Pteridium aquilinum* Bracken Fern or Brake Fern 1  
*Ranunculus glaberrimus* Sagebrush *Buttercup* 1  
*Ranunculus uncinatus* Wood *Buttercup* 1  
*Ribes cereum cereum* Wax *Currant* 1  
*Ribes viscosissimum* Sticky *Currant* 2  
*Rosa gymnocarpa* Baldhip *Rose* 1  
*Rosa nutkana* Nootka *Rose* 1  
*Rosa woodsii* Wood's *Rose* 1  
*Rubus idaeus* Red *Raspberry* 1  
*Rubus leucodermis* Whitebark *Raspberry* 1  
*Rudbeckia occidentalis* Blackhead/Western *Coneflower* 2  
*Sambucus cerulea* Blueberry *Elder* 3  
*Sanguisorba occidentalis* Annual *Burnet* 2  
*Sambucus racemosa* Black *Elderberry* 3  
*Salix scouleriana* Scouler *Willow* 1  
*Scrophularia lanceolata* Lanceleaf *Figwort* 2  
*Senecio integerrimus* Western or Woolly *Groundsel* 1  
*Sedum stenopetalum* Wormleaf *Stonecrop* 1  
*Shepherdia canadensis* Russet or Canada *Buffaloberry* 3  
*Silene douglasii douglasii* Douglas' *Silene* 1  
*Sidalcea oregana procera* Oregon *Checkermallow* 1  
*Silene oregana* Oregon *Catchfly* 1  
*Solidago occidentalis* Western *Goldenrod* 2  
*Sorbus scopulina* Cascade Mountain *Ash* 1  
*Spiraea betulifolia* Birch or Shiny Leaf *Spiraea* 1  
*Stipa occidentalis* Western *Needlegrass* 1  
*Symphoricarpos albus* Common *Snowberry* 2  
*Symphoricarpos oreophilus* Mountain *Snowberry* 3  
*Thlaspi fendleri* Blue or Fendler's *Pennycress* 1  
*Thermopsis montana* Mountain *Thermopsis/Golden Pea* 1  
*Thalictrum occidentale* Western *Meadowrue* 2  
*Urtica dioica* Stinging *Nettle* 1  
*Vaccinium caespitosum* Dwarf *Huckleberry* 1  
*Vaccinium membranaceum* Big *Huckleberry* 2  
*Vaccinium scoparium* Grouse *Huckleberry/Whortleberry* 3  
*Valeriana sitchensis* Sitka *Valerian* 2  
*Veronica serpyllifolia* Thyme-leaved *Speedwell* 1  
*Viola adunca* Early Blue *Violet* 2  
*Viola orbiculata* Darkwoods *Violet* 1  
*Xanthium strumarium* Cocklebur 1  
*Zigadenus paniculatus* Panicked Death *Camas* 1  
*Zigadenus venenosus* Meadow or Deadly Death *Camas* 1

## APPENDIX F NATIVE PLANT SPECIES OF THE STEPPE PLANT ASSOCIATION GROUP

### WALL CREEK ECOSYSTEM

NOTE: THIS LIST MAY BE USED IN RESTORATION PRESCRIPTIONS WITHIN THIS PLANT  
 ASSOCIATION GROUP

SPECIES WITH HABITAT AFFINITY VALUES OF "3" HAVE GREATEST POTENTIAL FOR SUCCESS

*Achillea millefolium* Common *Yarrow* 3  
*Agastache urticifolia* Nettleleaf *Horsemint* 2

*Agoseris glauca* Pale *Agoseris* 3  
*Agoseris grandiflora* Large-flower *Agoseris* 3

*Agoseris heterophylla* Annual Agoseris 3  
*Agropyron spicatum* Bluebunch Wheatgrass 3  
*Agrostis exarata* Spike Bentgrass 3  
*Agrostis scabra* Winter Bentgrass 3  
*Allium acuminatum* Tapertip Onion 3  
*Allium fibrillum* Fringed Onion 3  
*Allium madidum* Blue Mountain Onion 1  
*Allium tolmiei tolmiei* Tolmie's Onion 3  
*Alnus incana* Mountain Alder 1  
*Amelanchier alnifolia* Western Serviceberry 1  
*Amsinckia retrorsa* Rigid Fiddleneck 3  
*Antennaria anaphaloides* Tall Pussytoes 3  
*Antennaria dimorpha* Low Pussytoes 3  
*Antennaria flagellaris* Stolonous Everlasting 3  
*Antennaria luzuloides* Woodrush Pussytoes 3  
*Antennaria neglecta* Field Pussytoes 3  
*Antennaria rosea* Rosy Pussytoes 1  
*Antennaria stenophylla* Narrow-leaf Pussytoes 3  
*Apocynum androsaemifolium* Spreading Dogbane 3  
*Arabis divaricarpa* Spreadingpod Rockcress 3  
*Arabis drummondii* Drummond's Rockcress 3  
*Arabis holboellii* Holboell's Rockcress 3  
*Arabis sparsiflora* Sicklepod Rockcress 3  
*Arctostaphylos uva-ursi* Bearberry 1  
*Arenaria pusilla* Dwarf Sandwort 3  
*Arnica sororia* Twin Arnica 3  
*Artemisia arbuscula* Low Sagebrush 3  
*Artemisia cana* Silver Sagebrush 3  
*Artemisia ludoviciana* Prairie Sage 3  
*Artemisia rigida* Stiff or Scabland Sagebrush 3  
*Artemisia tridentata* Big Sagebrush 3  
*Artemisia tripartita* Three-tip Sagebrush 3  
*Asclepias speciosa* Showy Milkweed 3  
*Aster chilensis* Long-leaved Aster 2  
*Astragalus diaphanus diaphanus* Transparent Milkvetch 3  
*Astragalus filipes* Basalt Milkvetch 3  
*Astragalus lentiginosus* Specklepod Milkvetch 3  
*Astragalus purshii* Woollypod Milkvetch 3  
*Astragalus reventus* Blue Mountain Milkvetch 3  
*Athyneanus pusillus* Sandweed 3  
*Balsamorhiza careyana* Carey's Balsamroot 3  
*Balsamorhiza sagittata* Arrowleaf Balsamroot 3  
*Balsamorhiza serrata* Serrated Balsamroot 3  
*Barbarea orthoceras* American Wintercress 3  
*Berberis repens* Low Oregongrape 3  
*Besseyia rubra* Red Kittenail or Red Besseyia 1  
*Blepharipappus scaber* Blepharipappus 3  
*Boisduvalia densiflora* Dense Spike-primrose 3  
*Boisduvalia stricta* Brook Spike-primrose 3  
*Brickellia grandiflora* Large Flowered Brickellbush 3  
*Brodiaea douglasii* Douglas' Brodiaea 3  
*Brodiaea hyacinthina* Hyacinth Brodiaea 3  
*Bromus carinatus* Mountain Brome 2  
*Calochortus elegans* Northwestern Mariposa 1  
*Calochortus eurycarpus* Bigpod Mariposa 3  
*Calochortus macrocarpus* Greenbanded Startulip 3  
*Camassia quamash* Common Camas 3  
*Carex aquatilis* Water Sedge 2  
*Carex aurea* Golden Sedge 3  
*Carex deweyana* Dewey's Sedge 3  
*Carex illota* Sheep Sedge 3  
*Carex lenticularis* Densely Tufted Sedge 3  
*Carex leptalea* Bristle-stalked Sedge 3  
*Carex microptera* Small-winged Sedge 3  
*Carex nigricans* Black Alp Sedge 3  
*Carex oederi* Green Sedge 3  
*Carex pachystachya* Thick-headed Sedge 3  
*Carex rossii* Ross Sedge 1  
*Castilleja applegatei* Wavy-leaved Paintbrush 3  
*Castilleja chromosa* Desert Paintbrush 3  
*Castilleja hispida* Harsh Paintbrush 3  
*Castilleja linariaefolia* Narrow-leaved Paintbrush 3  
*Ceanothus sanguineus* Redstem Ceanothus 1  
*Ceanothus velutinus* Snowbrush Ceanothus/Buckbrush 1  
*Cerastium arvense* Starry Cerastium 1  
*Cerastium nutans* Nodding Chickweed 1  
*Cercocarpus ledifolius* Curlleaf Mountain Mahogany 3  
*Chaenactis douglasii glandulosa* Hoary Chaenactis 3  
*Cheilanthes gracillima* Lace Lip-fern 3  
*Chenopodium rubrum* Red Goosefoot 3  
*Chrysothamnus nauseosus* Gray Rabbitbrush 3  
*Chrysothamnus viscidiflorus* Green Rabbitbrush 3  
*Cirsium canovirens* Gray-green Thistle 3  
*Cirsium scariosum* Elk Thistle 3  
*Cirsium utahense* Utah Thistle 3  
*Clarkia pulchella* Deerhorn or Pink Fairies 3  
*Clarkia rhomboidea* Common Clarkia 3  
*Clematis ligusticifolia* Western Virginsbower or Clematis 3  
*Collinsia parviflora* Small-flowered Blue-eyed Mary 3  
*Collomia grandiflora* Large-flowered Collomia 3  
*Collomia linearis* Narrow-leaf Collomia 3  
*Collomia tinctoria* Yellow-staining Collomia 3  
*Conyza canadensis* Horseweed 3  
*Cordylanthus ramosus* Bushy Birdbeak 3  
*Crataegus douglasii* Black Hawthorn 1  
*Crepis acuminata* Long-leaved or Tapertip Hawksbeard 3  
*Crepis atrabarba* Slender Hawksbeard 3  
*Crepis intermedia* Gray Hawksbeard 3  
*Crepis occidentalis* Western Hawksbeard 3  
*Crocidium multicaule* Spring Gold or Gold Fields 3  
*Cryptantha ambigua* Obscure Cryptantha 3  
*Cryptantha flaccida* Weak-stemmed Cryptantha 3  
*Cryptantha intermedia* Common Cryptantha 3  
*Cryptantha pterocarya* Winged Cryptantha 3  
*Cryptantha rostellata* Beaked Cryptantha 3  
*Cryptantha torreyana* Torrey's Cryptantha 3  
*Cryptogramma crispa* Rockbrake or Persleyfern 3  
*Cystopteris fragilis* Brittle Bladderfern 1  
*Danthonia californica* California Danthonia 3  
*Danthonia spicata* Common Wild Oatgrass 3  
*Danthonia unispicata* Onespike Oatgrass 3  
*Delphinium depauperatum* Slim or Dwarf Larkspur 1  
*Delphinium nuttallianum* Upland Larkspur 3  
*Delphinium stachydeum* Tall Mountain Larkspur 3  
*Deschampsia cespitosa* Tufted Hairgrass 3  
*Deschampsia danthonioides* Annual Hairgrass 3  
*Deschampsia elongata* Slender Hairgrass 3  
*Descurainia richardsonii* Mountain Tansymustard 1  
*Dodecatheon conjugens* Slimpod Shootingstar 3  
*Dodecatheon cusickii* Cusick's Shootingstar 2  
*Draba verna* Spring Whitflow-grass 1  
*Elymus cinereus* Great Basin Wildrye 3  
*Epilobium minutum* Small-flowered Willow-herb 1  
*Epilobium paniculatum* Tall Annual Willow-herb 3  
*Eriogon chrysopsidis chrysopsidis* DwarfYellowFleabane

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*Erigeron chrysopsidis* Dwarf Yellow Fleabane 3  
*Erigeron corymbosus* Foothill Daisy/Longleaf Fleabane 3  
*Erigeron eatonii* Eaton's Daisy 3  
*Erigeron filifolius* Threadleaf Fleabane 3  
*Erigeron linearis* Lineleaf Fleabane 3  
*Erigeron pumilus* Low Fleabane 3  
*Eriogonum caespitosum* Mat Buckwheat 3  
*Eriogonum compositum* Northern Buckwheat 3  
*Eriogonum heracleoides* Wyeth's Creamy Buckwheat 3  
*Eriogonum niveum* Snow Buckwheat 3  
*Eriogonum strictum* Strict Buckwheat 3  
*Eriogonum umbellatum* Sulphur Buckwheat 3  
*Eriogonum vimineum* Broom Buckwheat 3  
*Eriophyllum lanatum* Common Eriophyllum 3  
*Erythronium grandiflorum* Fawnlily or Glacierlily 3  
*Euphorbia glyptosperma* Corrugate-seed Spurge 1  
*Festuca idahoensis* Idaho Fescue 3  
*Festuca octoflora* Sixweeks Fescue 3  
*Festuca rubra* Red Fescue 3  
*Festuca scabrella* Rough Fescue 3  
*Floerkea proserpinacoides* False Mermaid 1  
*Frasera speciosa* Giant *Frasera* 1  
*Fritillaria atropurpurea* Checker or Chocolate Lily 2  
*Fritillaria pudica* Yellow Bell 3  
*Gaillardia aristata* Blanketflower 3  
*Gayophytum diffusum* Spreading Groundsmoke 3  
*Gayophytum racemosum* Racemed Groundsmoke 3  
*Gayophytum ramosissimum* Hairstem Groundsmoke 3  
*Geranium viscosissimum* Sticky Geranium 3  
*Geum macrophyllum* Largeleaf Avens 3  
*Geum triflorum ciliatum* Red Avens 3  
*Gilia aggregata* Skyrocket *Gilia* 3  
*Gilia capillaris* Smoothleaved *Gilia* 3  
*Githopsis specularioides* Common Blue-cup 3  
*Gnaphalium palustre* Lowland Cudweed 3  
*Grindelia nana* Low Gumweed 3  
*Gutierrezia sarothrae* Broom Snakeweed 3  
*Habenaria elegans* California Hillside *Habenaria* 3  
*Habenaria unalascensis* Alaska Rein Orchid 3  
*Haplopappus carthamoides* Large-flowered Goldenweed 3  
*Helianthella uniflora* Oneflower *Helianthella* 2  
*Helianthus nuttallii* Nuttall's Sunflower 3  
*Hesperochiron pumilus* Centaur Flower 3  
*Heterocodon rariflorum* *Heterocodon* 3  
*Heuchera cylindrica* Roundleaf Lava Alumroot 3  
*Holodiscus dumosus* Bush Rockspiraea 3  
*Hydrophyllum capitatum* Ballhead Waterleaf 3  
*Hypericum formosum* Western St. John's Wort 3  
*Idahoia scapigera* Scalepod 3  
*Iris missouriensis* Western Blue Flag/Rocky Mountain *Iris* 1  
*Juncus mertensianus* Merten's Rush 3  
*Juniperus occidentalis* Western Juniper 3  
*Kelloggia galioides* *Kelloggia* 3  
*Koeleria cristata* Prairie Junegrass 3  
*Lagophylla ramosissima* Slander Rabbitleaf 3  
*Lesquerella occidentalis* Western Bladderpod 3  
*Lewisia pygmaea* Dwarf *Lewisia* 3  
*Lewisia rediviva* Bitterroot 3  
*Lewisia triphylla* Three Leaf *Lewisia* 3  
*Linanthus harknessii* Harkness' *Linanthus* 3

*Linum micranthum* Sm. Flowered White Flax 1  
*Linum perenne* Blue Flax 3  
*Lithophragma bulbifera* Bulbiferous Fringecup 3  
*Lithophragma glabra* Smooth Fringecup 3  
*Lithophragma parviflore* Small-flowered Fringecup 3  
*Lithospermum ruderales* Wayside Gromwell 1  
*Lomatium ambiguum* Wyeth Biscuitroot 3  
*Lomatium cous* Cous Biscuitroot 3  
*Lomatium donnellii* Donnell's Desert Parsley 3  
*Lomatium grayi* Gray's Desert Parsley 3  
*Lomatium leptocarpum* Slenderfruit Biscuitroot 3  
*Lomatium macrocarpum* Big Seed Biscuitroot 3  
*Lomatium nudicaule* Barestem *Lomatium* 3  
*Lomatium triternatum* Nineleaf Desert Parsley 3  
*Lotus purshianus* Spanish Clover 3  
*Lupinus argenteus* Silvery Lupine 3  
*Lupinus caudatus* Tailcup Lupine 3  
*Lupinus laxiflorus* Spurred Lupine 2  
*Lupinus lepidus aridus* Prairie Lupine 3  
*Lupinus leucophyllus* Velvet or Woolly Lupine 3  
*Lupinus sericeus* Silky Lupine 3  
*Lupinus sulphureus* Sulphur Lupine 3  
*Machaeranthera canescens* Hoary Aster 3  
*Machaeranthera shastensis* Shasta Aster 3  
*Madia citriodora* Lemon Tarweed 3  
*Madia exigua* Little Tarweed 3  
*Madia glomerata* Cluster Tarweed 3  
*Madia gracilis* Common or Slender Tarweed 3  
*Madia minima* Small-head Tarweed 3  
*Matricaria matricarioides* Pineapple Weed 3  
*Melica spectabilis* Showy Oniongrass 3  
*Mentzelia albicaulis* Whitestem *Mentzelia* 3  
*Mentzelia dispersa* Bushy *Mentzelia* 3  
*Mentzelia laevicaulis* Blazingstar *Mentzelia* 3  
*Mertensia ciliata* Broad-leaf Bluebells 3  
*Mertensia longiflora* Small Bluebells 3  
*Microseris nutans* Nodding *Microseris* 3  
*Microseris troximoides* False *Agoseris* 3  
*Microsteris gracilis* Pink *Microsteris* 3  
*Mimulus breviflorus* Short-flowered *Mimulus* 3  
*Mimulus breweri* Brewer's Monkeyflower 3  
*Mimulus cusickii* Cusick's Monkeyflower 3  
*Mimulus nanus* Dwarf Monkeyflower 3  
*Mimulus washingtonensis* Washington Monkeyflower 3  
*Monardella odoratissima* Pacific *Monardella* 3  
*Myosotis micrantha* Blue Scorpion-grass 2  
*Navarretia intertexta* Needleleaf *Navarretia* 3  
*Orobancha uniflora* Oneflowered Broomrape 2  
*Orthocarpus hispidus* Hairy Owl Clover 3  
*Paeonia brownii* Brown's or Wild Paeony 3  
*Penstemon deustus* Hot Rock or Scabland *Penstemon* 3  
*Penstemon gairdneri* Gairdner's *Penstemon* 3  
*Penstemon procerus* Littleflower *Penstemon* 3  
*Penstemon richardsonii* Richardson's *Penstemon* 3  
*Penstemon speciosus* Royal *Penstemon* 3  
*Penstemon venustus* Blue Mountain *Penstemon* 3  
*Perideridia gairdneri* Gairdner's Yampah 3  
*Phacelia hastata* Whiteleaf *Phacelia* 3  
*Phacelia heterophylla* Varileaf *Phacelia* 3  
*Phacelia linearis* Threadleaf *Phacelia* 3  
*Philadelphus lewisii* Lewis Mockorange or *Syringa* 1  
*Phleum alpinum* Alpine Timothy 3  
*Phlox diffusa* Spreading *Phlox* 3

*Phlox hoodii* Hood's Phlox 3  
*Phoenicaulis cheiranthoides* Daggerpod Phoenicaulis 3  
*Phoradendron bolleanum* Dense Mistletoe 3  
*Phoradendron juniperinum* Juniper Mistletoe 3  
*Physocarpus malvaceus* Mallow Ninebark 3  
*Plectritis macrocera* Longhorn Plectritis 3  
*Poa leibergii* Leiberg's Bluegrass 3  
*Poa sandbergii* Sandberg's Bluegrass 3  
*Poa scabrella* Pine Bluegrass; Malpais Bluegrass 3  
*Polygonum aviculare* Prostrate Knotweed 3  
*Polygonum bistortoides* American or Western Bistort 3  
*Polygonum kelloggii* Kellogg's Knotweed 3  
*Polygonum majus* Wiry or Palouse Knotweed 3  
*Polygonum spargulariaeforme* Fall Knotweed 3  
*Populus tremuloides* Quaking Aspen 3  
*Potentilla glandulosa* glandulosa Gland Cinquefoil 2  
*Potentilla gracilis* Northwest or Slender Cinquefoil 1  
*Prunus emarginata* Bittercherry 1  
*Prunus virginiana* Common Chokecherry 2  
*Purshia tridentata* Antelope Bitterbrush 3  
*Ranunculus glaberrimus* Sagebrush Buttercup 3  
*Ribes cereum* cereum Wax Currant 1  
*Ribes viscosissimum* Sticky Currant 1  
*Rigiopappus leptocladus* Bristlehead 3  
*Rosa nutkana* Nootka Rose 1  
*Rosa woodsii* Wood's Rose 1  
*Salix scouleriana* Scouler Willow 2  
*Sanguisorba occidentalis* Annual Burnet 3  
*Saxifraga integrifolia leptopetala* Swamp Saxifrage 3  
*Saxifraga integrifolia* Swamp Saxifrage 3  
*Scrophularia lanceolata* Lanceleaf Figwort 1  
*Scutellaria angustifolia* Narrowleaved Skullcap 3  
*Scutellaria antirrhinoides* Snapdragon Skullcap 3

*Sedum stenopetalum* Wormleaf Stonecrop 3  
*Senecio crassulus* Thickleaf Groundsel 3  
*Senecio integerrimus* Western or Woolly Groundsel 3  
*Sidalcea oregana procera* Oregon Checkermallow 3  
*Silene antirrhina* Sleepy Cat 3  
*Silene douglasii douglasii* Douglas' Silene 3  
*Silene menziesii* Menzies' Silene 3  
*Silene oregana* Oregon Catchfly 3  
*Sisyrinchium inflatum* Grass Widow 3  
*Sitanion hystrix* Bottlebrush Squirreltail 3  
*Solidago canadensis* Meadow Goldenrod 3  
*Solidago occidentalis* Western Goldenrod 3  
*Spiraea betulifolia* Birch or Shiny Leaf Spiraea 1  
*Stellaria crispa* Crisped Starwort 3  
*Stellaria nitens* Shining Chickweed 3  
*Stipa occidentalis* Western Needlegrass 3  
*Stipa thurberiana* Thurber's Needlegrass 3  
*Symphoricarpos albus* Common Snowberry 1  
*Symphoricarpos oreophilus* Mountain Snowberry 1  
*Thysanocarpus curvipes* Fringe Pod 3  
*Trifolium macrocephalum* Bighead Clover 3  
*Urtica dioica* Stinging Nettle 1  
*Veratrum californicum* California Falsehellebore 3  
*Veronica serpyllifolia* Thyme-leaved Speedwell 1  
*Viola nuttallii* Nuttall's Violet 3  
*Viola purpurea* Goosefoot Violet 3  
*Wyethia amplexicaulis* Mule's Ears 3  
*Xanthium strumarium* Cocklebur 1  
*Zigadenus paniculatus* Panicked Death Camas 3  
*Zigadenus venenosus* Meadow or Deadly Death Camas 3

## APPENDIX G

### NATIVE PLANT SPECIES OF THE RIVERINE-LACUSTRINE PLANT ASSOCIATION GROUP

### WALL CREEK ECOSYSTEM

**NOTE: THIS LIST MAY BE USED IN RESTORATION PRESCRIPTIONS WITHIN THIS PLANT  
ASSOCIATION GROUP**

**SPECIES WITH HABITAT AFFINITY VALUES OF "3" WILL MEET WITH GREATEST SUCCESS**

*Abies grandis* Grand Fir 2  
*Acer glabrum* Rocky Mountain Maple 3  
*Achillea millefolium* Common Yarrow 1  
*Aconitum columbianum* Columbia Monkshood 3  
*Actaea rubra* Wild Red Baneberry 3  
*Adenocaulon bicolor* Trail or Pathfinder Plant 3  
*Agastache urticifolia* Nettleleaf Horsemint 1  
*Agoseris grandiflora* Large-flower Agoseris 1  
*Agoseris heterophylla* Annual Agoseris 1  
*Agrostis diegoensis* Thin or Leafy Bentgrass 3  
*Agrostis exarata* Spike Bentgrass 2  
*Agrostis scabra* Winter Bentgrass or Tickle-grass 2  
*Allium madidum* Blue Mountain Onion 3  
*Alnus incana* Mountain Alder 3  
*Alnus sinuata* Sitka Alder 3  
*Alopecurus aequalis* Shortawn Foxtail 3  
*Amelanchier alnifolia* Western Serviceberry 3  
*Anaphalis margaritacea* Common Pearleverlasting 2  
*Anemone oregana* Oregon Anemone 3

*Anemone piperi* Windflower 3  
*Antennaria racemosa* Raceme Pussytoes 3  
*Aquilegia formosa* Sitka or Red Columbine 3  
*Arabis glabra* Tower Mustard 3  
*Arabis holboellii* Holboell's Rockcress 1  
*Arceuthobium americanum* American Dwarf Mistletoe 1  
*Arceuthobium campylopodum* Western Dwarf Mistletoe 3  
*Arceuthobium douglasii* Douglas Dwarf Mistletoe 3  
*Arctostaphylos nevadensis* Pinemat Manzanita 1  
*Arctostaphylos uva-ursi* Bearberry 1  
*Arenaria macrophylla* Bigleaf Sandwort 2  
*Arnica cordifolia* Heartleaf Arnica 3  
*Arnica longifolia* Longleaf Arnica 3  
*Artemisia ludoviciana* Prairie Sage 2  
*Asarum caudatum* Wild Ginger 3  
*Aster chilensis* Long-leaved Aster 2  
*Aster conspicuus* Showy Aster 3  
*Aster foliaceus* Leafy Aster 3  
*Athyrium filix-femina* Lady Fern 3

*Berberis nervosa* Cascade or Dull Oregongrape 3  
*Betula occidentalis* Red Birch or Water Birch 3  
*Boisduvalia densiflora* Dense Spike-primrose 3  
*Boisduvalia stricta* Brook Spike-primrose 3  
*Brodiaea hyacinthina* Hyacinth Brodiaea 3  
*Bromus carinatus* Mountain Brome 2  
*Bromus vulgaris* Columbia Brome 3  
*Calamagrostis inexpansa* Northern Reedgrass 3  
*Calamagrostis rubescens* Pinegrass 1  
*Calochortus eurycarpus* Bigpod Mariposa 1  
*Calypso bulbosa* Calypso Orchid 3  
*Camassia quamash* Common Camas 3  
*Cardamine breweri* Brewer's Bittercress 3  
*Cardamine oligosperma* Little Western Bittercress 3  
*Carex amplifolia* Big Leaved Sedge 3  
*Carex aquatilis* Water Sedge 3  
*Carex aurea* Golden Sedge 3  
*Carex concinnoides* Northwest Sedge 1  
*Carex deweyana* Dewey's Sedge 3  
*Carex illota* Sheep Sedge 3  
*Carex lenticularis* Densely Tufted Sedge 3  
*Carex leptalea* Bristle-stalked Sedge 3  
*Carex microptera* Small-winged Sedge 3  
*Carex nigricans* Black Alp Sedge 3  
*Carex nudata* Torrent Sedge 3  
*Carex oederi* Green Sedge 3  
*Carex rossii* Ross Sedge 1  
*Carex stipata* Sawbeak Sedge 3  
*Castilleja miniata* Scarlet Paintbrush 1  
*Ceanothus integerrimus* Deerbrush Ceanothus 3  
*Ceanothus sanguineus* Redstem Ceanothus 2  
*Ceanothus velutinus* Snowbrush Ceanothus/ Buckbrush 1  
*Cerastium arvense* Starry Cerastium 1  
*Cerastium nutans* Nodding Chickweed 1  
*Cicuta douglasii* Douglas' Waterhemlock 3  
*Circaea alpina* Enchanter's Nightshade 3  
*Cirsium scariosum* Elk Thistle 3  
*Clarkia rhomboidea* Common Clarkia 1  
*Clematis ligusticifolia* Western Virginsbower or Clematis 2  
*Clintonia uniflora* Queen's Cup Beadlily 1  
*Collinsia parviflora* Small-flowered Blue-eyed Mary 1  
*Collomia grandiflora* Large-flowered Collomia 1  
*Collomia linearis* Narrow-leaf Collomia 1  
*Collomia tinctoria* Yellow-staining Collomia 1  
*Corallorhiza maculata* Spotted Coral Root 1  
*Corallorhiza mertensiana* Merten's Coral Root 1  
*Corallorhiza striata* Striped Coral Root 1  
*Cornus stolonifera* Red Osier Dogwood 3  
*Crataegus douglasii* Black Hawthorn 3  
*Cypripedium montanum* Mountain Lady Slipper 1  
*Cystopteris fragilis* Brittle Bladderfern 3  
*Danthonia californica* California Danthonia 3  
*Danthonia spicata* Common Wild Oatgrass 3  
*Delphinium depauperatum* Slim or Dwarf Larkspur 3  
*Delphinium nuttallianum* Upland Larkspur 1  
*Delphinium stachydeum* Tall Mountain Larkspur 3  
*Deschampsia cespitosa* Tufted Hairgrass 3  
*Deschampsia elongata* Slender Hairgrass 3  
*Descurainia richardsonii* Mountain Tansymustard 1  
*Disporum trachycarpum* Wartberry Fairybelle 3  
*Dodecatheon conjugens* Slimpod Shootingstar 1  
*Dodecatheon pulchellum* Darkthroat Shootingstar 3  
*Draba verna* Spring Whitlow-grass 1  
*Eleocharis acicularis* Needle Spike-rush 3  
*Eleocharis palustris* Common or Creeping Spike-rush 3  
*Elymus cinereus* Great Basin Wildrye 3  
*Elymus glaucus* Blue Wildrye 3  
*Epilobium alpinum* Alpine Willow-herb 3  
*Epilobium angustifolium* Fireweed 3  
*Epilobium glaberrimum* Smooth Willow-herb 3  
*Epilobium glandulosum* Common Willow-herb 3  
*Epilobium minutum* Small-flowered Willow-herb 3  
*Epilobium watsonii* Watson's Willow-herb 3  
*Equisetum arvense* Common or Field Horsetail 3  
*Equisetum hyemale* Common Scouringrush 3  
*Equisetum laevigatum* Smooth Horsetail 3  
*Equisetum variegatum* Northern Scouringrush 3  
*Erigeron coulteri* Coulter's Daisy 3  
*Erigeron divergens* Spreading or Diffuse Fleabane 3  
*Erigeron lonchophyllus* Spearleaf Fleabane 3  
*Erigeron philadelphicus* Philadelphia Fleabane 3  
*Erigeron speciosus* Showy Fleabane 3  
*Erigeron tener* Slender Daisy 3  
*Eriophyllum lanatum* Common Eriophyllum 1  
*Erythronium grandiflorum* Fawnlily or Glacierlily 1  
*Euphorbia glyptosperma* Corrugate-seed Spurge 1  
*Floerkea proserpinacoides* False Mermaid 3  
*Fragaria vesca* Woods Strawberry 1  
*Fragaria virginiana* Blueleaf or Broadpetal Strawberry 1  
*Galium aparine* Catchweed Bedstraw or Cleavers 1  
*Galium bifolium* Thinleaf Bedstraw 1  
*Galium boreale* Northern Bedstraw 1  
*Gaultheria ovatifolia* Oregon Wintergreen 1  
*Gentiana amarella* Northern Gentian 2  
*Geranium viscosissimum* Sticky Geranium 1  
*Geum macrophyllum* Largeleaf Avens 3  
*Geum triflorum ciliatum* Red Avens/Old Man's Whiskers 1  
*Glyceria elata* Tall Mannagrass 3  
*Glyceria grandis* American Mannagrass 3  
*Goodyera oblongifolia* Rattlesnake-plantain 1  
*Habenaria dilatata* White Bog Orchid 3  
*Heracleum lanatum* Common Cowparsnip 3  
*Hesperochiron pumilus* Centaur Flower 1  
*Holodiscus discolor* Creambush Oceanspray 3  
*Hydrophyllum capitatum* Ballhead Waterleaf 1  
*Hypericum formosum* Western St. John's Wort 3  
*Iris missouriensis* Western Blue Flag/Rocky Mountain Iris 1  
*Juncus acuminatus* Tapered Rush 3  
*Juncus balticus* Baltic Rush 3  
*Juncus bufonius* Toad Rush 3  
*Juncus drummondii* Drummond's Rush 3  
*Juncus ensifolius* Swordleaf Rush 3  
*Juncus mertensianus* Merten's Rush 3  
*Juncus tenuis* Slender Rush 3  
*Larix occidentalis* Western Larch 1  
*Lathyrus lanzwertii* Thicket Peavine 1  
*Lathyrus nevadensis* Sierra Peavine 1  
*Lathyrus pauciflorus* Few-flowered Peavine 1  
*Lemna minor* Duckweed or Water Lentil 3  
*Lewisia pygmaea* Dwarf Lewisia 1  
*Lewisia triphylla* Three Leaf Lewisia 1  
*Ligusticum canbyi* Canby Licoriceroot 1  
*Linnaea borealis* American Twinflower 1  
*Lithophragma bulbifera* Bulbiferous Fringecup 1  
*Lithophragma glabra* Smooth Fringecup 1  
*Lithophragma parviflora* Small-flowered Fringecup 1

*Lithospermum ruderales* Wayside Gromwell 1  
*Lomatium dissectum* Fernleaved Desert Parsley 3  
*Lonicera ciliosa* Western Trumpet Honeysuckle 3  
*Lonicera involucrata* Bearberry Honeysuckle 3  
*Lonicera utahensis* Utah Honeysuckle 3  
*Lupinus polyphyllus* Big Leaf Lupine 3  
*Luzula campestris* Field Woodrush 1  
*Luzula parviflora* Small-flowered Woodrush 1  
*Luzula spicata* Spike Woodrush 1  
*Madia citriodora* Lemon Tarweed 1  
*Madia exigua* Little Tarweed 1  
*Madia glomerata* Cluster Tarweed 1  
*Madia gracilis* Common or Slender Tarweed 1  
*Madia minima* Small-head Tarweed 1  
*Matricaria matricarioides* Pineapple Weed 1  
*Melica bulbosa* Oniongrass 2  
*Mentha arvensis* Field Mint 3  
*Mertensia ciliata* Broad-leaf Bluebells 3  
*Mertensia longiflora* Small Bluebells 1  
*Microseris nutans* Nodding Microseris 1  
*Microseris troximoides* False Agoseris 1  
*Microseris gracilis* Pink Microseris 1  
*Mimulus breweri* Brewer's Monkeyflower 1  
*Mimulus guttatus* Common Monkeyflower 3  
*Mimulus moschatus* Musk Monkeyflower 3  
*Mitella breweri* Brewer Mitrewort 3  
*Mitella stauropetala* Side-flowered Mitrewort 1  
*Mitella trifida* Three-toothed Mitrewort 1  
*Montia cordifolia* Heart-leaved Minerslettuce 3  
*Montia linearis* Lineleaf Indianlettuce 3  
*Montia perfoliata* Minerslettuce 3  
*Nemophila breviflora* Great Basin Nemophila 1  
*Nemophila parviflora* Smallflower Nemophila 1  
*Nemophila pedunculata* Meadow Nemophila 1  
*Orobanche uniflora* Oneflowered Broomrape 1  
*Osmorhiza chilensis* Mountain Sweet-cicely 1  
*Osmorhiza depauperata* Bluntfruited Sweet-cicely 1  
*Osmorhiza occidentalis* Western Sweet-cicely 3  
*Pachistima myrsinites* Oregon Boxwood 3  
*Paeonia brownii* Brown's or Wild Paeony 1  
*Pedicularis racemosa* Leafy or Sickletop Lousewort 1  
*Penstemon attenuatus* Sulphur Penstemon 2  
*Phacelia hastata* Whiteleaf Phacelia 1  
*Phacelia heterophylla* Varleaf Phacelia 1  
*Philadelphus lewisii* Lewis Mockorange or Syringa 3  
*Phleum alpinum* Alpine Timothy 3  
*Picea engelmannii* Engelmann Spruce 2  
*Pinus contorta* Lodgepole Pine 2  
*Pinus ponderosa* Ponderosa Pine 1  
*Plagiobothrys scouleri* Scouler's Popcornflower 3  
*Poa nervosa* wheeleri Wheeler's Bluegrass 1  
*Polemonium pulcherrimum* Showy Polemonium 1  
*Polygonum bistortoides* American or Western Bistort 3  
*Polystichum munitum* Swordfern 3  
*Populus tremuloides* Quaking Aspen 3  
*Potamogeton natans* Floatingleaf Pondweed 3  
*Potentilla biennis* Biennial Cinquefoil 3  
*Potentilla glandulosa glandulosa* Gland Cinquefoil 2  
*Potentilla gracilis* Northwest or Slender Cinquefoil 3  
*Prunella vulgaris* Common Selfheal 3  
*Prunus emarginata* Bittercherry 3  
*Prunus virginiana* Common Chokecherry 1  
*Pseudotsuga menziesii* Douglas Fir 2  
*Pteridium aquilinum* Bracken Fern or Brake Fern 2  
*Pterospora andromedea* Woodland Pinedrops 1  
*Purshia tridentata* Antelope Bitterbrush 1  
*Pyrola asarifolia* Common or Pink Wintergreen 3  
*Pyrola picta* White-vein Pyrola 1  
*Pyrola secunda* Sidebells Pyrola 1  
*Pyrola uniflora* Woodnymph 3  
*Ranunculus aquatilis* White Water Buttercup 3  
*Ranunculus glaberrimus* Sagebrush Buttercup 1  
*Ranunculus orthorhynchus* Straightbeak Buttercup 3  
*Ranunculus scleratus* Celeryleaved or Blister Buttercup 3  
*Ranunculus uncinatus* Wood Buttercup 1  
*Rhamnus purshiana* Cascara 3  
*Ribes cereum cereum* Wax Currant 1  
*Ribes hudsonianum* Stinking Currant 3  
*Ribes inerme* Whitestem Gooseberry 3  
*Ribes lacustre* Prickly Currant or Swamp Gooseberry 3  
*Ribes oxycanthoides cognatum* Umatilla Gooseberry 3  
*Ribes viscosissimum* Sticky Currant 1  
*Rorippa curvisiliqua* Western Yellowcress 3  
*Rorippa nasturtium-aquaticum* Watercress 3  
*Rosa gymnocarpa* Baldhip Rose 1  
*Rosa nutkana* Nootka Rose 3  
*Rosa woodsii* Wood's Rose 3  
*Rubus idaeus* Red Raspberry 2  
*Rubus leucodermis* Whitebark Raspberry 3  
*Rubus parviflorus* Western Thimbleberry 3  
*Rudbeckia occidentalis* Blackhead/Western Coneflower 3  
*Rumex salicifolius* Willow Dock 3  
*Salix amygdaloides* Peachleaf Willow 3  
*Salix commutata* Undergreen Willow 3  
*Salix exigua* Coyote Willow 3  
*Salix exigua melanopsis* Dusky Willow 3  
*Salix lasiandra caudata* Whiplash Willow 3  
*Salix lasiandra* Pacific or Red Willow 3  
*Salix lasiolepis* Arroyo Willow 3  
*Salix rigida mackenziana* Mackenzie Willow 3  
*Salix rigida* Rigid Willow 3  
*Salix scouleriana* Scouler Willow 1  
*Salix sitchensis* Sitka Willow 3  
*Sambucus cerulea* Blueberry Elder 2  
*Sambucus racemosa* Black Elderberry 2  
*Sanguisorba occidentalis* Annual Burnet 1  
*Sanguisorba sitchensis* Sitka Burnet 3  
*Saxifraga arguta* Brook Saxifrage 3  
*Scirpus americanus* Three-square Bulrush 3  
*Scirpus microcarpus* Panicked Bulrush 3  
*Scrophularia lanceolata* Lanceleaf Figwort 1  
*Senecio crassulus* Thicketleaf Groundsel 3  
*Senecio integerrimus* Western or Woolly Groundsel 1  
*Senecio serra* Butterweed Groundsel 3  
*Senecio triangularis* Arrowleaf Groundsel 3  
*Shepherdia canadensis* Russet or Canada Buffalobery 1  
*Sidalcea oregana procera* Oregon Checkermallow 3  
*Sisyrinchium angustifolium* Blue-eyed Grass 3  
*Smilacina racemosa* Feather Solomonplume 3  
*Smilacina stellata* Starry False Solomon's Seal 2  
*Solidago canadensis* Meadow Goldenrod 3  
*Solidago gigantea* Smooth Goldenrod 3  
*Sorbus scopulina* Cascade Mountain Ash 3  
*Stellaria crispa* Crisped Starwort 3  
*Stellaria longipes* Longstalk Starwort 3  
*Streptopus amplexifolius* Claspleaf Twistedstalk 3

*Symphoricarpos albus* Common Snowberry 1  
*Symphoricarpos oreophilus* Mountain Snowberry 1  
*Taxus brevifolia* Pacific Yew 3  
*Thalictrum fendleri* Fendler's Meadowrue 1  
*Thalictrum occidentale* Western Meadowrue 2  
*Thermopsis montana* Mountain Thermopsis/Golden Pea 3  
*Thlaspi fendleri* Blue or Fendler's Pennycress 1  
*Tiarella trifoliata* Coolwort Foamflower 2  
*Trifolium cyathiferum* Cup Clover 3  
*Trifolium longipes* Longstalk Clover 3  
*Trifolium microcephalum* Woolly or Smallhead Clover 3  
*Trillium ovatum* White Trillium 3  
*Typha latifolia* Common Cattail 3

*Urtica dioica* Stinging Nettle 3  
*Vaccinium membranaceum* Big Huckleberry 1  
*Valeriana sitchensis* Sitka Valerian 1  
*Veratrum californicum* California Falsehellebore 3  
*Veronica americana* American Speedwell 3  
*Veronica peregrina* Purslane Speedwell 3  
*Veronica serpyllifolia* Thyme-leaved Speedwell 3  
*Viola adunca* Early Blue Violet 3  
*Viola glabella* Stream Violet 3  
*Woodsia oregana* Oregon or Western Woodsia 3  
*Xanthium strumarium* Cocklebur 1

## APPENDIX H

### INTRODUCED SPECIES (NOT NATIVE TO NORTH AMERICA)

### WALL CREEK ECOSYSTEM

*Agropyron cristatum* Crested Wheatgrass  
*Agropyron inerme* Beardless Bluebunch Wheatgrass  
*Agropyron intermedium* Intermediate Wheatgrass  
*Agropyron repens* Quack Grass  
*Alopecurus pratensis* Meadow Foxtail  
*Alyssum alyssoides* Pale Alyssum  
*Anthoxanthum odoratum* Sweet Vernalgrass  
*Arctium minus* Common Burdock  
*Arrhenatherum elatius* Tall Oatgrass  
*Bromus brizaeformis* Rattlesnake Brome  
*Bromus commutatus* Hairy Brome or Hairy Chess  
*Bromus inermis* Smooth Brome  
*Bromus japonicus* Japanese Brome  
*Bromus mollis* Soft Brome  
*Bromus pumpellianus* Pumpelly Brome  
*Bromus tectorum* Cheatgrass Brome or Downy Chess  
*Camelina microcarpa* Littlepod Falseflax  
*Capsella bursa-pastoris* Shepherd's Purse  
*Centaurea cyanus* Bachelor's Button  
*Centaurea diffusa* Diffuse or Tumble Knapweed  
*Centaurea maculosa* Spotted Knapweed  
*Centaurea nigra* Black Knapweed  
*Chenopodium ambrosioides* Mexican Tea Wormseed  
*Chorispora tenella* Chorispora or Purple Field Mustard  
*Chrysanthemum leucanthemum* Oxeye Daisy  
*Cirsium arvense* Canada Thistle  
*Cirsium vulgare* Bull or Common Thistle  
*Convolvulus arvensis* Field Morning-glory  
*Cynoglossum officinale* Common Houndstongue  
*Dactylis glomerata* Orchard Grass  
*Dianthus armeria* Deptford Pink  
*Dipsacus sylvestris* Teasel  
*Erodium cicutarium* Stork's Bill or Filaree  
*Erysimum repandum* Spreading Wallflower  
*Festuca megalura* Foxtail Fescue  
*Festuca microstachys* Small Fescue  
*Festuca pratensis* Meadow or English Fescue  
*Grindelia squarrosa* Curly-cup Gumweed or Resinweed  
*Holcus lanatus* Common Velvetgrass  
*Holosteum umbellatum* Jagged Chickweed

*Hypericum perforatum* Klamathweed  
*Lactuca serriola* Prickly Lettuce  
*Lepidium campestre* Field Pepperweed  
*Lotus corniculatus* Birdsfoot Lotus  
*Malva neglecta* Dwarf Mallow  
*Medicago lupulina* Black Medic  
*Medicago sativa* Alfalfa  
*Melilotus officinalis* Yellow Sweetclover  
*Mentha spicata* Spearmint  
*Phleum pratense* Common Timothy  
*Plantago lanceolata* Buckhorn Plantain  
*Plantago major* Nippleseed Plantain  
*Poa annua* Annual Bluegrass  
*Poa bulbosa* Bulbous Bluegrass  
*Poa compressa* Canada Bluegrass  
*Poa palustris* Fowl Bluegrass  
*Poa pratensis* Kentucky Bluegrass  
*Potentilla recta* Erect Cinquefoil  
*Ranunculus repens* Creeping Buttercup  
*Ranunculus testiculatus* Hornseed Buttercup  
*Rumex acetosa* Garden Sorrel  
*Rumex acetosella* Sheep or Red Sorrel  
*Rumex crispus* Curly Dock  
*Sisymbrium altissimum* Tumblemustard  
*Sonchus asper* Prickly Sow-thistle  
*Spergularia rubra* Red Sandspurry  
*Stellaria media* Chickweed  
*Taraxacum officinale* Common Dandelion  
*Tragopogon dubius* Yellow Salsify  
*Tragopogon pratensis* Meadow Salsify  
*Trifolium dubium* Suckling Clover  
*Trifolium hybridum* Alsike Clover  
*Trifolium pratense* Red Clover  
*Trifolium repens* White Clover  
*Triticum aestivum* Cultivated Wheat  
*Ventenata dubia* Ventenata  
*Verbascum thapsus* Flannel Mullein  
*Veronica anagallis-aquatica* Water Speedwell  
*Veronica arvensis* Common Speedwell

# APPENDIX I

## CULTURALLY SIGNIFICANT FOOD PLANTS

### WALL CREEK ECOSYSTEM

|                                                        |                                                               |
|--------------------------------------------------------|---------------------------------------------------------------|
| <i>Abies grandis</i> Grand Fir                         | <i>Eriogonum caespitosum</i> Mat Buckwheat                    |
| <i>Achillea millefolium</i> Common Yarrow              | <i>Eriogonum compositum</i> Northern Buckwheat                |
| <i>Agoseris aurantiaca</i> Orange Agoseris             | <i>Erythronium grandiflorum</i> Fawnlily or Glacierlily       |
| <i>Agropyron cristatum</i> Crested Wheatgrass          | <i>Eriogonum heracleoides</i> Wyeth's Creamy Buckwheat        |
| <i>Agoseris glauca</i> Pale Agoseris                   | <i>Eriogonum niveum</i> Snow Buckwheat                        |
| <i>Agoseris grandiflora</i> Large-flower Agoseris      | <i>Eriogonum strictum</i> Strict Buckwheat                    |
| <i>Agropyron inerme</i> Beardless Bluebunch Wheatgrass | <i>Eriogonum umbellatum</i> Sulphur Buckwheat                 |
| <i>Agropyron intermedium</i> Intermediate Wheatgrass   | <i>Eriogonum vimineum</i> Broom Buckwheat                     |
| <i>Agropyron repens</i> Quack Grass                    | <i>Fritillaria pudica</i> Yellow Bell                         |
| <i>Agropyron spicatum</i> Bluebunch Wheatgrass         | <i>Fragaria vesca</i> Woods Strawberry                        |
| <i>Agastache urticifolia</i> Nettleleaf Horsemint      | <i>Fragaria virginiana</i> Blueleaf or Broadpetal Strawberry  |
| <i>Allium acuminatum</i> Tapertip Onion                | <i>Lewisia pygmaea</i> Dwarf Lewisia                          |
| <i>Allium fibrillum</i> Fringed Onion                  | <i>Lewisia rediviva</i> Bitterroot                            |
| <i>Allium madidum</i> Blue Mountain Onion              | <i>Lewisia triphylla</i> Three Leaf Lewisia                   |
| <i>Allium tolmiei</i> Tolmie's Onion                   | <i>Ligusticum canbyi</i> Canby Licoriceroot                   |
| <i>Amelanchier alnifolia</i> Western Serviceberry      | <i>Lomatium cous</i> Cous Biscuitroot                         |
| <i>Balsamorhiza careyana</i> Carey's Balsamroot        | <i>Lomatium macrocarpum</i> Big Seed Biscuitroot              |
| <i>Balsamorhiza sagittata</i> Arrowleaf Balsamroot     | <i>Lomatium nudicaule</i> Barestem Lomatium                   |
| <i>Berberis nervosa</i> Cascade or Dull Oregongrape    | <i>Lomatium triternatum</i> Nineleaf Desert Parsley           |
| <i>Berberis repens</i> Low Oregongrape                 | <i>Polygonum bistortoides</i> American or Western Bistort     |
| <i>Brodiaea douglasii</i> Douglas' Brodiaea            | <i>Typha latifolia</i> Common Cattail                         |
| <i>Brodiaea hyacinthina</i> Hyacinth Brodiaea          | <i>Urtica dioica</i> Stinging Nettle                          |
| <i>Calochortus eurycarpus</i> Bigpod Mariposa          | <i>Vaccinium caespitosum</i> Dwarf Huckleberry                |
| <i>Calochortus macrocarpus</i> Greenbanded Startulip   | <i>Vaccinium membranaceum</i> Big Huckleberry                 |
| <i>Camassia quamash</i> Common Camas                   | <i>Vaccinium scoparium</i> Grouse Huckleberry or Whortleberry |
| <i>Crataegus douglasii</i> Black Hawthorn              |                                                               |