Caltrans

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Cal Poly

Vegetation Establishment & Maintenance Study

Volume 2

District 5

Central Coast

Advisory Guide to

Plant Species Selection For Erosion Control

Prepared By

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Before You Begin

Read This…

Intended Usage of This Guide

This guide, and the GIS in development from which it is derived, are intended as *advisory* resources in the specification of plant species *to aid*, not replace or negate, district landscape architects, biologists, or other personnel primarily responsible for specifying plant species. These aids are in no way intended to supplant knowledge of local areas held by district personnel. Nor does use of these advisory tools obviate any need for site visits to proposed project locations before specifications of plant materials are made. The species lists provided are intended as recommendations, *not prescriptions*, of species that are appropriate for the climate zone surrounding a project site. However, not all of the species listed may be suitable for individual projects with special needs or with azonal conditions, especially wetlands. A consensus among Caltrans personnel regarding the finest level of spatial resolution at which the GIS and these guides will operate has yet to be reached.

Summary

Objective

As an aid to landscape architects, biologists, or other personnel responsible for specifying plant species for erosion control, a geographic information system (GIS) is being developed that combines state and district-level climatalogical, geological, topographical, and plant biogeographical data to define ecologically meaningful sub-district Plantclimate Zones. These climate zones form the foundation for rapid access to lists of plant species for revegetation that are both ecologically appropriate for a project site and useful in minimizing erosion, primarily on slopes up to 2:1 H:V (50% = 26.6°∠).

This hard-copy guide presents data tables from this GIS reformatted for access in book form. The focus here in this prototype is the synthesis of district-level data from the five counties (Santa Cruz, San Benito, Monterey, San Luis Obispo, and Santa Barbara) that constitute Caltrans District 5.

Needs Expressed by Caltrans

The development of this guide was shaped by the following parameters outlined during initial project planning meetings with Caltrans personnel:

- **Keep species selection process as simple as possible**
- **Use the University of California plant climate zone approach of the Sunset Western Garden Book**
- **Use previous specifications to create a master species list for each District**
- **Create species lists for seeding only, not for container stock planting**
- **Include only those species presently commercially available as seed**
- **State assumed general site conditions, caveats, qualifiers about zones and potential variability that may affect intended results.**

General Project Strategy

The ongoing process of delineating local plantclimates involves three basic processes:

1. Refine an existing statewide climate map (at ca 1:1,500,000) to a more local scale (ca 1:50,000);
2. Create a layer for plant species used in revegetation that scores individual presence or absence within landscape-level polygons that overlay California completely;
3. Intersect the climate and plant species distribution layers to obtain a plant/climate layer and data matrix from which plantclimate zones are delineated.

General Format

Users first locate a project site within one of the 21 Climate Zones through an index keyed by standard *county* + *route* + *mile* georeferencing. A selection between two lists (one for either topographic aspects northwest to east, or for aspects southeast to west) is of then made. The master list of species are those typically used in past seeding projects within District 5.

How to Use This Guide

A Brief Look

Where is the project site located?

1. Use the Index to Climate Zones to find the Climate Zone for a project site

- Turn to the **Index to Climate Zones** starting on page **5-1**;
- Select the appropriate **County** table;
- Read down the **Route** column and across either the **From_Mile** and **To_Mile**, or the **From_Km** and **To_Km**, columns to find the route segment that includes the project site of interest;
- The **Climate Zone** appropriate for that route segment is indicated in the rightmost column by a number and letter code.

For example, if a project site is in San Luis Obispo County along **SR 1 (001)** *at mile* **5.5**, *this occurs between mile* **3.7** *and* **6.9**, *so* **Climate Zone 15c** *is the appropriate selection.*

San Luis Obispo County

County	Route	From_Mile	To_Mile	From_Km	To_Km	Climate Zone
SLO	001	0.0	3.0	*0.0*	*4.8*	17b
SLO	001	3.0	3.5	*4.8*	*5.6*	15c
SLO	001	3.5	3.7	*5.6*	*6.0*	17b
SLO	**001**	**3.7**	**6.9**	***6.0***	***11.1***	**15c**
SLO	001	6.9	7.9	*11.1*	*12.7*	17b
SLO	001	7.9	10.4	*12.7*	*16.7*	15c

What is the general topographic aspect of the project site?

2. Find the Species List for the indicated Climate Zone (section 6)

- Find the two species lists for the **Climate Zone** indicated in step 1 above;
- Select the list appropriate for the general topographic aspect of the site, either ***northwest to east*** (NW to E), or ***southeast to west*** (SE to W);
- Use the list of shrub, forb, and grass species recommended as a guide in developing seed mixes.

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1. Introduction

1.1 Layout & Use of this Guide

This guide is divided into six additional sections. **Sections 5** & **6** pertain directly to users locating and using the species lists provided for each climate zone.

Section

2. **Project Methods**
   Synopsis of the conceptual foundation, methods, and references that form the basis for the sections that follow.
3. **Species Attributes**
   Nomenclature and establishment attributes for all species in the master matrix.
4. **Species By Climate Zone Master Matrix**
   Allocation of species across all climate zones displayed in a single matrix.
5. **Index to Climate Zones**
   Instructions on how to use the *County* + *Route* + *Mile/Km* index to locate the species list appropriate for the climate zone in which a road segment resides.
6. **Species Lists**
   Species lists for each climate zone sorted by primary aspect (NW–E, SE–W).
7. **References**

1.2 Objective

As an aid to landscape architects, biologists, or other personnel responsible for specifying plant species for erosion control, a geographic information system (GIS) is being developed that combines state and district-level climatalogical, geological, topographical, and plant biogeographical data to define ecologically meaningful sub-district Plantclimate Zones. These climate zones form the foundation for rapid access to lists of plant species for revegetation that are both ecologically appropriate for a project site and useful in minimizing erosion, primarily on slopes up to 2:1 H:V (50% = 26.6°∠).

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1.4 General Project Strategy

Because the task of creating species lists tailored to sub-District level climate zones requires overlay of various spatial data, a digital geographic information system (GIS) was specially created to enable complex queries and analyses of the necessary physiographic, biogeographic, political, and road data. Although the original contract for this project requires only paper guides for all Caltrans Districts as final products, the need for a GIS as a tool to allow Caltrans personnel to develop spatial queries and products of their own was anticipated by the Cal Poly VEMS team. Consequently, access to the digital version is forthcoming after completion of similar paper guides for the remaining Caltrans Districts, and after resolution of issues regarding how best to serve and maintain this GIS.

2. Methods

2.1 Background

Through road construction and maintenance activities, the California Department of Transportation (Caltrans) actively manages roadside rights-of-way that transect California's 41M ha (101M ac), spanning over 3,000 meters of elevational change from seashore to subalpine. Interactions among diverse climates, landforms, substrates, and floristic species “pools” produce a diversity of plant species in California that ranks among the highest of any comparably sized temperate region of the world, with about 4,900 native, and over 1,000 naturalized alien, vascular plant species known to occur within the state (Dallman 1998; Hickman 1993; Raven and Axelrod 1978).

State and federal highways are grouped into 12 districts varying in size from 207K ha (511K ac) to 7.3M ha (18M ac), each encompassing from one to 11 of California's 58 counties. District personnel are typically responsible for implementing site-specific adaptations of general statewide guidelines for short- to long-term erosion control following construction or storm damage. Many erosion control projects involve reestablishing vegetation through seeding where the precarious life-stages of germination and establishment are controlled by both unpredictable short-term weather events and often physically inappropriate seedbeds.

When such revegetation projects produce poor results, or fail altogether, a search for remediation ensues. Some revegetation failures likely result from the improper siting of species such that individual plants are expected to germinate, grow, and persist in locations or on topographic aspects that present physical extremes in solar radiation, temperature, precipitation, surface water flow, or wind beyond their genetically-determined physical tolerances. Other revegetation failures are due to poorly executed seeding or installation procedures even when the correct species are properly sited. Undoubtedly, many project failures result from a combination of both fundamental problems. Each district includes environmental heterogeneity such that revegetation using a few, district-wide, seed mixes will not adequately meet the need for erosion control among diverse project sites.

Proper siting of plant species or ecological races in locations that promote their establishment and persistence is fundamental to any successful revegetation effort. Where individual plant species grow and reproduce today, and have done so within the recent past, are places conducive to their establishment and persistence.

2.2 Development of a Geographic Information System

If geographical distributions of all plant species used in roadside revegetation were overlaid, and upon these distributions a road layer was superimposed, the presence or absence of individual species could be ascertained along a given route, and through a geographic information system (GIS), a site-specific species list for a revegetation project could be obtained. Thus, a solution to the problem of site-specific species delineation is seemingly simple in both the initial identification of data requirements, and in the finished presentation of processed data. However, the middle tasks of acquiring, processing, and synthesizing data have presented great obstacles to easy solutions.

Data are readily available for features such as hypsography (elevation) or road routes, but biogeographical data depicting the spatial extent and area-of-occupancy for individual plant species are largely unavailable owing to the high cost to produce such data layers from accurately identified herbarium specimens and field surveys. Consequently, surrogate distributions for individual species must be derived instead through the scoring of presence or absence within some reasonably sized, landscape-level polygons formed either by natural boundaries or by overlay of coordinate grids.

Such multi-species distribution layers are typically complex in the patterns depicted by the aggregate distributions of different species subsets. Thus, a common objective is further analysis to ascertain distributional patterns held in common by subsets. Generally, climate is the predominant factor controlling the presence or absence of plant species. The overall global distributions of solar radiation and precipitation determined by latitude result in climate zones commonly referred to as tropical, subtropical, temperate, and polar (Köppen and Geiger 1936; Trewartha and Horn 1983). Moving from global and continental to subcontinental and regional scales, these zonal climates are further modified by interactions among other major influences including *continentality* (distance from an ocean body), and landform size, shape, altitude, and orientation. Effects from these interactions are experienced at subcontinental scales as regional climates (see Bailey 1996 for a detailed discussion).

For example, much of California experiences a subtropical, summer-dry (Mediterranean) climate modified from place to place by the degree of continentality and topographic elevation (Bailey 1996; Brenzel 2001; Hornbeck et al. 1983; James 1966; Kesseli 1942; Kimball and Brooks 1959; Patton 1962; Russell 1926, 1931; Trewartha and Horn 1983; Yahr 1961). At increasingly local scales, topography and directional aspects combine to exacerbate or ameliorate zonal conditions and render *topoclimates*. Further modifications, such as the presence of overstory vegetation, produce *microclimates* at the scale of stands or individual plants. Topoclimates are typically paramount design factors in revegetation projects. Greater intensity and duration of solar radiation combined with lesser soil moisture and ambient humidity make south-facing slopes in the Northern Hemisphere especially difficult sites for the establishment and persistence of many plant species, especially in the more arid areas of interior California. Hence, site aspect figures prominently in the prescription of plant species for revegetation. Individuals of species improperly sited on aspects that will expose them to inadequate or extreme solar radiation, temperature, precipitation, surface water flow, or wind beyond their genetically-determined physical tolerances are destined to fail.

Thus, the process of delineating local plantclimates involves three basic processes:

1. Refine an existing statewide climate map (at ca 1:1,500,000) to a more local scale (ca 1:50,000);
2. Create a layer for plant species used in revegetation that scores individual presence or absence within landscape-level polygons that overlay California completely;
3. Intersect the climate and plant species distribution layers to obtain a plant/climate layer and data matrix from which plantclimate zones are delineated.

2.3 Local Climate Refinements

The 19 general climate zones were digitized and depicted on the California Plantclimates Map (UCCE 1989; ca 1:1,500,000), evolved from a map of 16 zones devised by the University of California Cooperative Extension Service in 1959 (Kimball and Brooks 1959), and revised by the UCCE to 19 zones in 1967. Recent revisions of mountain and northcoastal California climates expanded the zone number to 23 in the latest edition of the Sunset Western Garden Book (Brenzel 2001). While these latest revisions to mountain and north coast climate zones were generally reasonable and needed, the nearly complete elimination of mountain climates from the Peninsular Range in Southern California is untenable given the presence there of mixed conifer forests and ample snowfall. Therefore, the 1989 version is being used as the base map.

The 1989 map classifies over 54 percent of California to just three climate zones: Zone 1 (Highlands), Zone 11(Desert Lowlands), and Zone 7 (Interior Foothills and Valleys). More local refinements of these general climate zones are necessary because these zone delineations are disproportionately broad, encompassing areas with pronounced differences in seasonal temperatures and precipitation. This is especially true for Zone 7, a broad ring around California's Central Valley that includes coastal highland areas, Interior Coast Range valleys, and Sierran Foothills. Within District 5, Zone 7 includes portions of the Santa Lucia Mountains, with cool, humid summers and over 1,400mm (55in) of average annual precipitation, together with the Carrizo Plain and Cuyama River Valley, areas with very hot, arid summers and 125mm (5in) of average annual precipitation.

These 19 general climate zones statewide are now being refined using elevation contours and topographic aspects derived from digital elevation models, along with interpolated isohyets developed from annual precipitation data recorded at local weather stations, to permit assignment of different climates or subclimates to portions of landform units that exhibit steep elevational gains or considerable topographic diversity. Further local refinements use presence and type of tree cover as an indicator of long-term climate trends where weather station data are poor or nonexistent. This is especially necessary for the more arid areas where fewer people reside and few, if any, weather stations exist. For example, the presence of Blue Oak (*Quercus douglasii* H. & A.) typically indicates average annual precipitation of at least 250mm (10in), and Black Oak (*Quercus kelloggii* Newb.) at least 890mm (35in). For tree cover polygons, landcover data provided with the California Gap Analysis Project CD-ROM was used (Davis et al.1998).

2.4 Plant Species Distributions

As a means to link plant species distributions to landscape-level polygons hydrologic units of CALWATER 2.2 (CDFF 1999), a statewide polygon coverage digitized from 1:24000 scale U. S. Geological Survey (USGS) quads, were used to score presence or absence of selected plant species in each hydrologic unit.

The Master Species List for District 5 (Santa Cruz, San Benito, Monterey, San Luis Obispo, and Santa Barbara counties) includes readily available species used for erosion control on projects within the district during the past five years (Caltrans 1996, 1998, 1999, 2000a, 2000b, and other erosion specifications excerpted from past bid packages). Presence or absence decisions were made using herbarium specimens housed in the Hoover Herbarium at California Polytechnic State University, San Luis Obispo, and floras and floristic guides (too numerous to cite here but included in the GIS metadata) that pertain to varying portions, or the whole, of the five counties of

interest, or adjacent areas. On-line floristic resources of the Jepson Herbarium at the University of California, Berkeley (http://ucjeps.herb.berkeley.edu/jeps-list.html), and of the multi-agency CalFlora project (http://www.calflora.org/), were queried as well. Working knowledge of plant distributions in the region gained through past fieldwork also aided these decisions because even the most recent floral manual for California (Hickman 1993) contains many acknowledged errors of omission and commission in the distributional statements for both native and alien species (see http://ucjeps.berkeley.edu/all_corr2.html).

2.5 Plantclimate Zone Delineations

Overlay and intersection of the plant species distribution layer upon the revised climate layer, along with subsequent modifications to delineate "best-fit" boundaries, results in a secondary combined Plantclimate layer.

For District 5, this process resulted in the delineation of 24 Plantclimate Zones rather than the 10 Plantclimate Zones of the 1989 version of the University of California Map for the same spatial extent. Owing to reasons stated above, Zone 7 was split into six zones based largely on increasing continentality and aridity. Labeling of these 24 Plantclimate Zones follows the UC/Sunset System with the addition of an alphabetical suffix, e.g., 7a, 7b, 7c, 7d, 7e, and 7f.

2.6 GIS Query and Output

Through the overlay of other data depicting district and county boundaries, roads, and places, users will be able to locate project sites, query the plant species climate matrix, and export data tables to spreadsheets or reports.

2.7 Future Developments

An expansion of this GIS could include a statewide inventory of existing roadside and context-landscape vegetation much like the RoadVeg GIS developed for the Utah Department of Transportation (Bickford et al. 1998). Field inventories of species presence or absence would then provide the basic data for GIS layers of plant distribution

3. Species Attributes

3.1 Species Names

The master list for each included species the full scientific name as recognized in this guide, synonymous scientific names of regional importance, the most frequently used vernacular ("common") name, and plant family membership. Taxonomy conforms largely to the latest statewide flora for California (Hickman 1993). **Table 3–1** provides the Master Species List.

3.2 Species Establishment Attributes

For each species of the District master list, the following data are provided:

- Two fields indicating use for rapid cover or native revegetation
- Four fields of life-form and life-cycle attributes
- Ten fields furnishing data for each species regarding typical seed sample purity, seed germination rates, percent pure live seed (PLS), number of seeds per pound, seeding rates per acre, number of PLS and potential plants per square foot at recommended seeding rate, and low / high prices per pound. These data are also calculated in metric equivalents, as well for rapid conversion.

Table 3–2 provides definitions of the establishment attributes furnished for the species included in **Table 3–3**.

Table 3–1 Master Species List

No	Common Name	Scientific Name	Scientific Synonym	Family
		L E G U M E S		
		Annual Forbs		
35	Miniature Lupine	**Lupinus bicolor Lindley**		**Fabaceae**
36	Sky Lupine	**Lupinus nanus Douglas ex Benth.**		**Fabaceae**
37	Arroyo Lupine	**Lupinus succulentus Douglas ex Koch**		**Fabaceae**
40	Yellow Sweet Clover	**Melilotus officinalis (L.) Pall.**		**Fabaceae**
49	Pinpoint Clover	**Trifolium gracilentum Torr. & A. Gray**		**Fabaceae**
50	Rose Clover	**Trifolium hirtum All.**		**Fabaceae**
51	Tomcat Clover	**Trifolium willdenovii Sprengel**	Trifolium tridentatum Lindley	**Fabaceae**
52	Purple Vetch	**Vicia benghalensis L.**		**Fabaceae**
53	Hairy Vetch	**Vicia villosa Roth**	Vicia dasycarpa Ten.	**Fabaceae**
		N O N L E G U M E S		
		Perennial Forbs		
1	Common Yarrow	**Achillea millefolium L.**	Achillea lanulosa Nutt.	**Asteraceae**
		Annual Forbs		
14	Purple Owl's Clover	**Castilleja exserta (A.A. Heller) Chuang & Heckard**	Orthocarpus purpurascens Benth.	**Scrophulariaceae**
15	Winecup Clarkia	**Clarkia purpurea (Curtis) Nelson & J. F. Macbr.**		**Onagraceae**
16	Mountain Garland	**Clarkia unguiculata Lindley**		**Onagraceae**
26	California Poppy	**Eschscholzia californica Cham.**		**Papaveraceae**
30	Dwarf Goldfields	**Lasthenia californica DC. ex Lindley**	Lasthenia chrysotoma (Fischer & C. Meyer) E. Greene	**Asteraceae**
31	Tidy Tips	**Layia platyglossa (Fischer & C. Meyer) A. Gray**		**Asteraceae**
		Grasses		
2	Indian Ricegrass	**Achnatherum hymenoides (R. & S.) Barkworth**	Oryzopsis hymenoides (R. & S.) Ricker	**Poaceae**
3	Desert Needlegrass	**Achnatherum speciosum (Trin. & Rupr.) Barkworth**	Stipa speciosa Trin. & Rupr.	**Poaceae**
9	Common Wild Oat	**Avena fatua L.**		**Poaceae**
11	Arizona Brome	**Bromus arizonicus (Shear) Stebbins**	Bromus carinatus Hook. & Arn. var. arizonicus Shear	**Poaceae**
12	California Brome	**Bromus carinatus Hook. & Arn.**		**Poaceae**
13	Soft Chess	**Bromus hordeaceus L.**	Bromus mollis L.	**Poaceae**
17	Slender Hairgrass	**Deschampsia elongata (Hook.) Munro**		**Poaceae**
18	Squirreltail	**Elymus elymoides (Raf.) Swezey**	Sitanion hystrix (Nutt.) J.G. Sm.	**Poaceae**
19	Blue Wild Rye	**Elymus glaucus Buckley**		**Poaceae**
27	Meadow Barley	**Hordeum brachyantherum Nevski**		**Poaceae**
28	California Barley	**Hordeum californicum Covas & Stebbins**	Hordeum brachyantherum Nevski ssp. californicum (Covas & Stebb.) v.Bothmer, N. Jacobsen & O. Seberg	**Poaceae**
29	Cereal Barley	**Hordeum vulgare L.**		**Poaceae**
32	Creeping Wildrye	**Leymus triticoides (Buckley) Pilger**	Elymus triticoides Buckley	**Poaceae**
33	Annual Ryegrass	**Lolium multiflorum Lam.**		**Poaceae**
38	California Melic	**Melica californica Scribner**		**Poaceae**
39	Coast Range Melic	**Melica imperfecta Trin.**		**Poaceae**
42	Nodding Needlegrass	**Nassella cernua (Stebb. & Löve) Barkworth**	Stipa cernua (Stebbins & Love)	**Poaceae**
43	Foothill Needlegrass	**Nassella lepida (A.S. Hitchc.) Barkworth**	Stipa lepida A.S. Hitchc.	**Poaceae**
44	Purple Needlegrass	**Nassella pulchra (A.S. Hitchc.) Barkworth**	Stipa pulchra A.S. Hitchc.	**Poaceae**
48	Mediterranean Grass	**Schismus barbatus (L.) Thell.**		**Poaceae**
54	Small Fescue	**Vulpia microstachys (Nutt.) Benth.**	Festuca microstachys Nutt.	**Poaceae**
55	Rat-tail fescue	**Vulpia myuros (L.) K.C. Gmelin**	Festuca megalura Nutt.; F. myuros L.	**Poaceae**

(continued)

Table 3–1 Master Species List (continued)

No	Common Name	Scientific Name	Scientific Synonym	Family
		N O N L E G U M E S		
		Shrubs		
4	California Sagebrush	Artemisia californica Less.		Asteraceae
5	Fourwing Saltbush	Atriplex canescens (Pursh) Nutt.		Chenopodiaceae
6	Quail Brush	Atriplex lentiformis (Torr.) S. Wats.		Chenopodiaceae
7	Allscale	Atriplex polycarpa (Torr.) S. Wats.		Chenopodiaceae
8	Mojave Saltbush	Atriplex spinifera J. F. Macbr.		Chenopodiaceae
10	Chaparral Broom	Baccharis pilularis DC.		Asteraceae
20	Bush Sunflower	Encelia californica Nutt.		Asteraceae
21	Coastal California Buckwheat	Eriogonum fasciculatum Benth. var. fasciculatum		Polygonaceae
22	Interior California Buckwheat	Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) Abrams		Polygonaceae
23	Sea Cliff Buckwheat	Eriogonum parvifolium Smith		Polygonaceae
24	Golden Yarrow	Eriophyllum confertiflorum (DC.) A. Gray var. confertiflorum		Asteraceae
25	Lizard Tail	Eriophyllum staechadifolium Lagasca		Asteraceae
41	Sticky Monkeyflower	Mimulus aurantiacus Curtis	Diplacus aurantiacus (Curtis) Jepson	Scrophulariaceae
45	White Sage	Salvia apiana Jepson		Lamiaceae
46	Purple Sage	Salvia leucophylla E. Greene		Lamiaceae
47	Black Sage	Salvia mellifera E. Greene		Lamiaceae

Field Name	Definition
No	List item number used to maintain sorting order in Species Lists
Common Name	Local vernacular name for the species listed; other names may exist as well
Scientific Name	Latin name presently used by seed vendors for the species listed; most names here follow Hickman 1993
Scientific Synonym	Other scientific names by which the species is known in past or present floras, manuals, databases, or vendor lists
Family	Scientific name of the plant family to which the species is assigned

Table 3–2 Field Definitions of Establishment Attributes

Field Name	Definition
No	List item number used to maintain sorting order of species
Scientific Name	Latin name presently used by seed vendors for the species listed; most follow Hickman 1993
Common Name	Local vernacular name for the species listed; other names may exist as well
Rapid Cover	Whether or not (**Y** or **N**) the species named is capable of establishing cover rapidly (~ within 90 days with adequate ppt)
Native Reveg	Whether or not (**Y** or **N**) the species named is useful in native revegetation projects
Native	Whether or not (**Y** or **N**) the species named has native populations within District 5
Legume	Whether or not (**Y** or **N**) the species named is a member of the plant family Leguminosae/Fabaceae
Life_Form	Whether the species named is a: **S**, *shrub* (wholly or basally woody); **F**, *forb* (broadleaved herb); or **G**, *grass* (member of the Poaceae)
Life_Cycle	Whether the species named is: **P**, *perennial* (living two or more years); or **A**, *annual* (living one year or less
%P	Typical % *sample purity* for samples tested under lab conditions (stated in seed catalogs)
%G (Lab)	Typical % *germination* for samples tested under lab conditions (stated in seed catalogs)
PLS Factor	Typical % pure live seed (**%P x %G/100**) for samples tested under lab conditions (stated in seed catalogs); **multiply lbs/kg of bulk seed by PLS Factor to obtain net lbs/kg of Pure Live Seed**
S/lB (x1000)	Typical number (K) of *seeds* (preferably PLS) per *pound of sample* (often seed plus accessory plant parts)
lbsPLS/ac	Recommended number of *pounds* PLS per *acre* to ultimately result in a dense stand of the species
PLS/ft2	Number of *pure live seed* per *square foot* if seeded at the recommended number of *pounds* PLS per *acre*
S/kg (x1000)	Typical number (K) of *seeds* (preferably PLS) per *kilogram of sample* (often seed plus accessory plant parts)
kgPLS/ha	Recommended number of *kilograms* PLS per *hectare* to ultimately result in a dense stand of the species
PLS/m2	Number of *pure live seed* per *square meter* if seeded at the recommended number of *kilograms* PLS per *hectare*
Cost 2001	Typical price per pound (preferably PLS) among seed vendors during 2001 **$** = <$10; **$$** = $10 to $25; **$$$** = $26 to $50; **$$$$** = $51 to $75; **$$$$$** = > $75.

4. Master Climate Zone Matrix

The species lists provided in **Section 6** are based on the segregation of species by climate zone and topographic aspect obtained through data analysis using the GIS constructed for this project. The master matrix (**Table 4-1**) and the field definitions for the master matrix (**Table 4-2**) are included to enable rapid comparison of the presence and number of various species among climate zones. This matrix forms the central element of the system, as all of the derived species lists are merely reformatted versions of the allocation of species by climate zone displayed in the master matrix.

Table 4–1 Field Definitions of Master Species By Climate Zone Matrix

Field Name	Definition
No	List item number used to maintain sorting order of species
Scientific Name	Latin name presently used by seed vendors for the species listed; most follow Hickman 1993
Common Name	Local vernacular name for the species listed; other names may exist as well
7aN	Plant Climate Zone 7a—northwest to east aspect
7aS	Plant Climate Zone 7a—southeast to northwest aspect
7bN	Plant Climate Zone 7b—northwest to east aspect
7bS	Plant Climate Zone 7b—southeast to northwest aspect
7cN	Plant Climate Zone 7c—northwest to east aspect
7cS	Plant Climate Zone 7c—southeast to northwest aspect
7dN	Plant Climate Zone 7d—northwest to east aspect
7dS	Plant Climate Zone 7d—southeast to northwest aspect
7eN	Plant Climate Zone 7e—northwest to east aspect
7eS	Plant Climate Zone 7e—southeast to northwest aspect
7fN	Plant Climate Zone 7f—northwest to east aspect
7fS	Plant Climate Zone 7f—southeast to northwest aspect
14aN	Plant Climate Zone 14a—northwest to east aspect
14aS	Plant Climate Zone 14a—southeast to northwest aspect
14bN	Plant Climate Zone 14b—northwest to east aspect
14bS	Plant Climate Zone 14b—southeast to northwest aspect
14cN	Plant Climate Zone 14c—northwest to east aspect
14cS	Plant Climate Zone 14c—southeast to northwest aspect
15aN	Plant Climate Zone 15a—northwest to east aspect
15aS	Plant Climate Zone 15a—southeast to northwest aspect
15bN	Plant Climate Zone 15b—northwest to east aspect
15bS	Plant Climate Zone 15b—southeast to northwest aspect
15cN	Plant Climate Zone 15c—northwest to east aspect
15cS	Plant Climate Zone 15c—southeast to northwest aspect
15dN	Plant Climate Zone 15d—northwest to east aspect
15dS	Plant Climate Zone 15d—southeast to northwest aspect
16aN	Plant Climate Zone 16a—northwest to east aspect
16aS	Plant Climate Zone 16a—southeast to northwest aspect
16bN	Plant Climate Zone 16b—northwest to east aspect
16bS	Plant Climate Zone 16b—southeast to northwest aspect
16cN	Plant Climate Zone 16c—northwest to east aspect
16cS	Plant Climate Zone 16c—southeast to northwest aspect
16dN	Plant Climate Zone 16d—northwest to east aspect
16dS	Plant Climate Zone 16d—southeast to northwest aspect
17aN	Plant Climate Zone 17a—northwest to east aspect
17aS	Plant Climate Zone 17a—southeast to northwest aspect
17bN	Plant Climate Zone 17b—northwest to east aspect
17bS	Plant Climate Zone 17b—southeast to northwest aspect
23aN	Plant Climate Zone 23a—northwest to east aspect
23aS	Plant Climate Zone 23a—southeast to northwest aspect
24aN	Plant Climate Zone 24a—northwest to east aspect
24aS	Plant Climate Zone 24a—southeast to northwest aspect

5. Index to Climate Zones

The index to climate zones uses standard ***county*** + ***route*** + ***mile/km*** georeferencing to initially identify the climate zone within which a project site exists. To find the appropriate climate zone for a project site, first select the appropriate ***county table***, then read down the ***route*** column and across either the ***from_mile*** and ***to_mile***, or the ***from_km*** and ***to_km***, columns to find the route segment that includes the project site of interest. The ***climate zone*** appropriate for that route segment is indicated in the rightmost column by a number and letter code.

For example, if a project site is in San Luis Obispo County along SR 1 (**001**) at mile 5.5, this occurs between mile **3.7** and **6.9**, so **Climate Zone 15c** is the appropriate selection.

San Luis Obispo County

County	Route	From_Mile	To_Mile	From_Km	To_Km	Climate Zone
SLO	001	0.0	3.0	*0.0*	*4.8*	17b
SLO	001	3.0	3.5	*4.8*	*5.6*	15c
SLO	001	3.5	3.7	*5.6*	*6.0*	17b
SLO	**001**	**3.7**	**6.9**	***6.0***	***11.1***	**15c**
SLO	001	6.9	7.9	*11.1*	*12.7*	17b
SLO	001	7.9	10.4	*12.7*	*16.7*	15c

Next, find the species lists for **Climate Zone 15c** within the section **Species Lists**, as discussed in that section.

The Climate Zones delineated for this guide are derived from the 19 Climate Zones for California by the University of California Plantclimates Map, recently expanded to 22 Climate Zones in the latest edition of the Sunset Western Garden Book (Brenzel 2001). For greater resolution of climatic differences within District 5, subdivisions of these Climate Zones were made using the GIS. Labeling follows the UC/Sunset System with the addition of an alphabetical suffix. A crosswalk between Zone designations is presented at right.

Note that Climate Zones ***2a***, ***3a***, and ***18a*** are grayed to indicate that no species lists are provided for these Zones as no routes under the jurisdiction of Caltrans traverse these areas.

Climate Zone maps are provided at the end of this guide.

Climate Zone Crosswalk

UC / Sunset	This Guide
2A	*2a*
3A	*3a*
7	*7a, 7b, 7c, 7d, 7e, 7f*
14	*14a, 14b, 14c*
15	*15a, 15b, 15c, 15d*
16	*16a, 16b, 16c, 16d*
17	*17a, 17b*
18	*18a*
23	*23a*
24	*24a*

Table 5–1 Monterey County

County	Route	From_Mile	To_Mile	From_Km	To_Km	Climate Zone
Mon	001	0.0	1.7	0.0	2.7	16c
Mon	001	1.7	43.9	2.7	70.6	17b
Mon	001	43.9	45.0	70.6	72.4	15b
Mon	001	45.0	88.1	72.4	141.8	17b
Mon	001	88.1	102.0	141.8	164.1	17a
Mon	025	0.0	1.5	0.0	2.4	7c
Mon	025	1.5	11.7	2.4	18.8	7d
Mon	068	0.0	5.5	0.0	8.9	17b
Mon	068	5.5	14.7	8.9	23.7	16b
Mon	068	14.7	22.0	23.7	35.4	15b
Mon	101	0.0	4.0	0.0	6.4	7d
Mon	101	4.0	59.3	6.4	95.4	14b
Mon	101	59.3	94.3	95.4	151.8	15b
Mon	101	94.3	100.0	151.8	160.9	16a
Mon	146	0.0	4.0	0.0	6.4	15b
Mon	146	4.0	7.0	6.4	11.3	14b
Mon	146	7.0	9.9	11.3	15.9	7c
Mon	156	0.0	2.8	0.0	4.5	17a
Mon	156	2.8	6.5	4.5	10.5	16a
Mon	183	0.0	6.6	0.0	10.6	15b
Mon	183	6.6	10.0	10.6	16.1	17a
Mon	198	0.0	4.0	0.0	6.4	14b
Mon	198	4.0	10.4	6.4	16.7	7d
Mon	198	10.4	22.4	16.7	36.0	7c
Mon	218	0.0	2.2	0.0	3.5	17b
Mon	218	2.2	2.9	3.5	4.7	16b

End

Table 5–2 San Benito County

County	Route	From_Mile	To_Mile	From_Km	To_Km	Climate Zone
SBt	025	0.0	2.0	*0.0*	*3.2*	7d
SBt	025	2.0	34.1	*3.2*	*54.9*	7c
SBt	025	34.1	60.0	*54.9*	*96.6*	14a
SBt	101	0.0	4.6	*0.0*	*7.4*	16a
SBt	101	4.6	7.4	*7.4*	*11.9*	14a
SBt	129	0.0	2.5	*0.0*	*4.0*	16a
SBt	129	2.5	2.6	*4.0*	*4.2*	14a
SBt	146	0.0	2.4	*0.0*	*3.9*	7c
SBt	156	0.0	2.5	*0.0*	*4.0*	16a
SBt	156	2.5	17.4	*4.0*	*28.0*	14a

End

Table 5–3 San Luis Obispo County

County	Route	From_Mile	To_Mile	From_Km	To_Km	Climate Zone
SLO	001	0.0	3.0	0.0	4.8	17b
SLO	001	3.0	3.5	4.8	5.6	15c
SLO	001	3.5	3.7	5.6	6.0	17b
SLO	001	3.7	6.9	6.0	11.1	15c
SLO	001	6.9	7.9	11.1	12.7	17b
SLO	001	7.9	10.4	12.7	16.7	15c
SLO	001	10.4	11.9	16.7	19.2	17b
SLO	001	16.5	18.5	26.6	29.8	15c
SLO	001	18.5	21.3	29.8	34.3	16c
SLO	001	21.3	42.8	34.3	68.9	17b
SLO	001	42.8	44.0	68.9	70.8	16c
SLO	001	44.0	48.2	70.8	77.6	17b
SLO	001	48.2	49.2	77.6	79.2	16c
SLO	001	49.2	71.7	79.2	115.4	17b
SLO	001	71.7	72.1	115.4	116.0	16c
SLO	041	0.0	2.6	0.0	4.2	17b
SLO	041	2.6	6.3	4.2	10.1	16c
SLO	041	6.3	11.2	10.1	18.0	15c
SLO	041	11.2	19.1	18.0	30.7	7b
SLO	041	19.1	35.6	30.7	57.3	7c
SLO	041	35.6	36.1	57.3	58.1	7d
SLO	041	36.1	39.0	58.1	62.8	7c
SLO	041	39.0	48.3	62.8	77.7	7d
SLO	041	48.3	50.5	77.7	81.3	7e
SLO	046	0.0	1.6	0.0	2.6	17b
SLO	046	1.6	5.5	2.6	8.9	16c
SLO	046	5.5	9.4	8.9	15.1	15c
SLO	046	9.4	13.8	15.1	22.2	7a
SLO	046	13.8	18.1	22.2	29.1	7b
SLO	046	18.1	31.1	29.1	50.0	7c
SLO	046	31.1	53.0	50.0	85.3	7d
SLO	046	53.0	60.8	85.3	97.8	7e

Table 5-3 (continued) San Luis Obispo County

County	Route	From_Mile	To_Mile	From_Km	To_Km	Climate Zone
SLO	058	0.0	8.4	0.0	13.5	7b
SLO	058	8.4	33.9	13.5	54.6	7c
SLO	058	33.9	55.2	54.6	88.8	7e
SLO	058	56.8	58.0	91.4	93.3	7e
SLO	101	0.0	7.3	0.0	11.7	15c
SLO	101	7.3	7.6	11.7	12.2	16c
SLO	101	7.6	12.9	12.2	20.8	15c
SLO	101	12.9	13.1	20.8	21.1	17b
SLO	101	13.1	14.5	21.1	23.3	15c
SLO	101	14.5	22.5	23.3	36.2	17b
SLO	101	22.5	30.8	36.2	49.6	15c
SLO	101	30.8	34.3	49.6	55.2	16c
SLO	101	34.3	35.1	55.2	56.5	15c
SLO	101	35.1	50.7	56.5	81.6	7b
SLO	101	50.7	60.4	81.6	97.2	7c
SLO	101	60.4	69.2	97.2	111.4	7d
SLO	166	0.0	1.5	0.0	2.4	15c
SLO	166	1.5	4.0	2.4	6.4	16c
SLO	166	4.3	6.0	6.9	9.7	15c
SLO	166	5.6	15.0	9.0	24.1	14b
SLO	166	15.0	25.0	24.1	40.2	7c
SLO	166	24.5	28.0	39.4	45.1	7e
SLO	166	27.8	32.0	44.7	51.5	7f
SLO	227	0.0	3.1	0.0	5.0	15c
SLO	227	3.1	7.8	5.0	12.6	16c
SLO	227	7.8	13.2	12.6	21.2	15c
SLO	229	0.0	1.5	0.0	2.4	7b
SLO	229	1.5	9.0	2.4	14.5	7c

End

Table 5–4 Santa Barbara County

County	Route	From_Mile	To_Mile	From_Km	To_Km	Climate Zone
SB	001	0.0	1.9	0.0	3.1	24a
SB	001	1.9	1.9	3.1	3.1	23a
SB	001	1.9	17.6	3.1	28.3	16d
SB	001	17.6	17.6	28.3	28.3	16c
SB	001	17.6	23.5	28.3	37.8	15d
SB	001	23.5	31.3	37.8	50.4	16c
SB	001	31.3	35.1	50.4	56.5	15d
SB	001	35.1	35.7	56.5	57.5	16c
SB	001	35.7	38.0	57.5	61.2	15d
SB	001	38.0	39.5	61.2	63.6	16c
SB	001	40.0	49.0	64.4	78.9	15c
SB	001	49.0	53.0	78.9	85.3	17b
SB	033	0.0	7.0	0.0	11.3	7e
SB	033	7.0	8.4	11.3	13.5	7f
SB	101	0.0	50.7	0.0	81.6	24a
SB	101	50.7	50.7	81.6	81.6	23a
SB	101	50.7	56.4	81.6	90.8	14c
SB	101	56.4	57.8	90.8	93.0	15d
SB	101	57.8	65.0	93.0	104.6	14c
SB	101	65.0	78.3	104.6	126.0	14b
SB	101	78.3	90.9	126.0	146.3	15c
SB	135	0.0	13.7	0.0	22.0	15d
SB	135	13.7	15.2	22.0	24.5	16c
SB	135	15.2	25.0	24.5	40.2	15c
SB	144	0.0	1.9	0.0	3.1	24a
SB	150	0.0	2.2	0.0	3.5	24a
SB	154	0.0	25.7	0.0	41.4	14c
SB	154	25.7	29.6	41.4	47.6	23a
SB	154	29.6	32.3	47.6	52.0	24a

Table 5-4 (continued) Santa Barbara County

County	Route	From_Mile	To_Mile	From_Km	To_Km	Climate Zone
SB	166	0.0	0.8	0.0	1.3	17b
SB	166	0.8	8.9	1.3	14.3	15c
SB	166	8.9	17.6	14.3	28.3	14b
SB	166	17.6	19.8	28.3	31.9	7c
SB	166	19.8	27.7	31.9	44.6	7e
SB	166	27.7	38.7	44.6	62.3	7f
SB	192	0.0	3.7	0.0	6.0	24a
SB	192	3.7	4.0	6.0	6.4	23a
SB	192	4.0	21.1	6.4	34.0	24a
SB	217	0.0	2.7	0.0	4.3	24a
SB	224	0.0	0.7	0.0	1.1	24a
SB	225	0.0	4.6	0.0	7.4	24a
SB	246	0.0	13.9	0.0	22.4	15d
SB	246	13.9	14.2	22.4	22.9	16c
SB	246	14.2	14.6	22.9	23.5	16d
SB	246	14.6	15.4	23.5	24.8	15d
SB	246	15.4	21.0	24.8	33.8	16d
SB	246	21.0	28.4	33.8	45.7	15d
SB	246	28.4	34.2	45.7	55.0	14c

End

Table 5–5 Santa Cruz County

County	Route	From_Mile	To_Mile	From_Km	To_Km	Climate Zone
SCr	001	0.0	37.9	0.0	61.0	17a
SCr	009	0.0	1.3	0.0	2.1	17a
SCr	009	1.3	8.2	2.1	13.2	15a
SCr	009	8.2	13.1	13.2	21.1	7a
SCr	009	13.1	23.2	21.1	37.3	15a
SCr	009	23.2	25.9	37.3	41.7	7a
SCr	017	0.0	12.5	0.0	20.1	15a
SCr	035	0.0	7.5	0.0	12.1	15a
SCr	129	0.0	4.1	0.0	6.6	17a
SCr	129	4.1	11.3	6.6	18.2	16a
SCr	152	0.0	4.5	0.0	7.2	17a
SCr	152	4.5	7.1	7.2	11.4	16a
SCr	152	7.1	10.8	11.4	17.4	15a
SCr	236	0.0	4.5	0.0	7.2	7a
SCr	236	4.5	17.7	7.2	28.5	15a

End

6. Species Lists

Each Climate Zone has two pertinent species list; one for northwest to east (NW to E) topographic aspects, and one for southeast to west (SE to W) aspects. Field definitions of the species lists are provided in **Table 6-1** below.

The number of plants species listed per Climate Zone and aspect ranges from 36 on moist northwest to east aspects of Zones 14, 15 & 16, to 20 on arid southeast to west aspects of Zone 7d. The number of species listed for any zone/aspect combination should be considered as the number of ***possible*** species to include, **not** as the number that *should* be included, in a seed mix.

Species are sorted by the following criteria (listed in descending priority):

- **rapid cover** *or not*;
- **legume** *or not*;
- **life form:** *forb, grass, shrub***;**
- **scientific name** *in alphabetical order***.**

Table 6-1 Field Definitions of Species Lists

Field Name	Definition
Rapid Cover	Whether or not (**Y** or **N**) the species named is capable of establishing cover rapidly (~ within 90 days with adequate ppt)
Native Reveg	Whether or not (**Y** or **N**) the species named is useful in native revegetation projects
Legume	Whether or not (**Y** or **N**) the species named is a member of the plant family Leguminosae/Fabaceae
Life_Form	Whether the species named is a: **F**, *forb* (broadleaved herb); **G**, *grass* (member of the Poaceae); or **S**, *shrub* (wholly or basally woody)
Life_Cycle	Whether the species named is: **P**, *perennial* (living two or more years); or **A**, *annual* (living one year or less)
Native	Whether or not (**Y** or **N**) the species named has native populations within District 5
No	List item number used to maintain sorting order of species
Scientific Name	Latin name presently used by seed vendors for the species listed; most follow Hickman 1993
Common Name	Local vernacular name for the species listed; other names may exist as well
PLS Factor	Typical % pure live seed (**%**Purity x **%**Germination) for samples tested under lab conditions (stated in seed catalogs); **multiply lbs/kg of bulk seed by PLS Factor to obtain net lbs/kg of Pure Live Seed**
S/lB (x1000)	Typical number (K) of *seeds* (preferably PLS) per *pound of sample* (often seed plus accessory plant parts)
lbsPLS/ac	Recommended number of *pounds* PLS per *acre* to ultimately result in a dense stand of the species
PLS/ft2	Number of *pure live seed* per *square foot* if seeded at the recommended number of *pounds* PLS per *acre*
S/kg (x1000)	Typical number (K) of *seeds* (preferably PLS) per *kilogram of sample* (often seed plus accessory plant parts)
kgPLS/ha	Recommended number of *kilograms* PLS per *hectare* to ultimately result in a dense stand of the species
PLS/m2	Number of *pure live seed* per *square meter* if seeded at the recommended number of *kilograms* PLS per *hectare*
Cost 2001	Typical price per pound (preferably PLS) among seed vendors during 2001 **$** = <$10; **$$** = $10 to $25; **$$$** = $26 to $50; **$$$$** = $51 to $75; **$$$$$** = > $75.

Table 6-2

Aspect NW to E • Zone 7a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand

PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-3

Aspect SE to W • Zone 7a

Rapid Cover	Native Reveg	Native	Legume	Life_Form	Life_Cycle	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	Y	F	A	**35**	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	Y	F	A	**36**	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	Y	F	A	**37**	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	N	Y	F	A	**40**	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	N	N	Y	F	A	**50**	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	Y	F	A	**51**	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	N	Y	F	A	**52**	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	N	Y	F	A	**53**	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	Y	N	F	A	**15**	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	Y	N	F	A	**16**	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	Y	Y	N	F	A	**30**	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	Y	N	F	A	**31**	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	N	G	A	**9**	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	Y	N	G	P	**12**	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	N	G	A	**13**	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	N	G	A	**29**	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	N	G	A	**33**	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	Y	Y	N	G	A	**54**	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	N	G	A	**55**	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	Y	S	P	**34**	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	Y	N	F	P	**1**	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	Y	N	F	A	**14**	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	Y	N	G	P	**18**	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	Y	N	G	P	**19**	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	Y	N	G	P	**28**	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	Y	N	G	P	**32**	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	Y	N	G	P	**38**	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	Y	N	G	P	**39**	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	Y	N	G	P	**43**	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	Y	N	G	P	**44**	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	Y	N	S	P	**4**	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	Y	N	S	P	**22**	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	Y	N	S	P	**24**	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	Y	N	S	P	**41**	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	Y	N	S	P	**47**	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand

PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-4

Aspect NW to E • Zone 7b

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-5

Aspect SE to W • Zone 7b

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	42	**Nassella cernua** (Stebb. & Löve) Barkworth	Nodding Needlegrass	0.90	200	2	9	441	2	97	$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-6

Aspect NW to E • Zone 7c

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	42	**Nassella cernua** (Stebb. & Löve) Barkworth	Nodding Needlegrass	0.90	200	2	9	441	2	97	$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	22	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-7

Aspect SE to W • Zone 7c

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	**35**	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	**36**	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	N	Y	F	A	N	**40**	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	**49**	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	**50**	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	**51**	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	**52**	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	**53**	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	**15**	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	**26**	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	**30**	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	**31**	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	**9**	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	N	N	G	A	N	**13**	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	**29**	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	**33**	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	**48**	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	**54**	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	**55**	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	**34**	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	A	Y	**14**	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	**18**	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	**42**	**Nassella cernua** (Stebb. & Löve) Barkworth	Nodding Needlegrass	0.90	200	2	9	441	2	97	$$$
N	Y	N	G	P	Y	**44**	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	**22**	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	**24**	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-8

Aspect NW to E • Zone 7d

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	A	Y	11	**Bromus arizonicus** (Shear) Stebbins	Arizona Brome	0.90	100	4	9	220	5	97	$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	42	**Nassella cernua** (Stebb. & Löve) Barkworth	Nodding Needlegrass	0.90	200	2	9	441	2	97	$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	6	**Atriplex lentiformis** (Torr.) S. Wats.	Quail Brush	0.45	450	1	3	992	1	32	$
N	Y	N	S	P	Y	7	**Atriplex polycarpa** (Torr.) S. Wats.	Allscale	0.28	800	1	3	1764	1	32	$
N	Y	N	S	P	Y	22	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-9

Aspect SE to W • Zone 7d

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	**35**	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	**36**	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	N	Y	F	A	N	**50**	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	N	Y	F	A	N	**53**	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	**26**	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	**30**	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	**31**	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	**9**	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	A	Y	**11**	**Bromus arizonicus** (Shear) Stebbins	Arizona Brome	0.90	100	4	9	220	5	97	$
Y	N	N	G	A	N	**13**	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	**29**	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	**33**	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	**48**	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	**54**	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	**55**	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	N	G	P	Y	**18**	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	**42**	**Nassella cernua** (Stebb. & Löve) Barkworth	Nodding Needlegrass	0.90	200	2	9	441	2	97	$$$
N	Y	N	S	P	Y	**6**	**Atriplex lentiformis** (Torr.) S. Wats.	Quail Brush	0.45	450	1	3	992	1	32	$
N	Y	N	S	P	Y	**7**	**Atriplex polycarpa** (Torr.) S. Wats.	Allscale	0.28	800	1	3	1764	1	32	$
N	Y	N	S	P	Y	**22**	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$

Life Form F = forb; G = grass; S = shrub
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PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
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S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-10

Aspect NW to E • Zone 7e

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	A	Y	11	**Bromus arizonicus** (Shear) Stebbins	Arizona Brome	0.90	100	4	9	220	5	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	3	**Achnatherum speciosum** (Trin. & Rupr.) Barkworth	Desert Needlegrass	0.86	150	1	3	331	1	32	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	42	**Nassella cernua** (Stebb. & Löve) Barkworth	Nodding Needlegrass	0.90	200	2	9	441	2	97	$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	6	**Atriplex lentiformis** (Torr.) S. Wats.	Quail Brush	0.45	450	1	3	992	1	32	$
N	Y	N	S	P	Y	7	**Atriplex polycarpa** (Torr.) S. Wats.	Allscale	0.28	800	1	3	1764	1	32	$
N	Y	N	S	P	Y	22	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-11

Aspect SE to W • Zone 7e

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	A	Y	11	**Bromus arizonicus** (Shear) Stebbins	Arizona Brome	0.90	100	4	9	220	5	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	N	G	P	Y	3	**Achnatherum speciosum** (Trin. & Rupr.) Barkworth	Desert Needlegrass	0.86	150	1	3	331	1	32	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	42	**Nassella cernua** (Stebb. & Löve) Barkworth	Nodding Needlegrass	0.90	200	2	9	441	2	97	$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	6	**Atriplex lentiformis** (Torr.) S. Wats.	Quail Brush	0.45	450	1	3	992	1	32	$
N	Y	N	S	P	Y	7	**Atriplex polycarpa** (Torr.) S. Wats.	Allscale	0.28	800	1	3	1764	1	32	$
N	Y	N	S	P	Y	22	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-12

Aspect NW to E • Zone 7f

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	A	Y	11	**Bromus arizonicus** (Shear) Stebbins	Arizona Brome	0.90	100	4	9	220	5	97	$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	N	G	P	Y	2	**Achnatherum hymenoides** (R. & S.) Barkworth	Indian Ricegrass	0.38	140	2	3	309	3	32	$$$
N	Y	N	G	P	Y	3	**Achnatherum speciosum** (Trin. & Rupr.) Barkworth	Desert Needlegrass	0.86	150	1	3	331	1	32	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	42	**Nassella cernua** (Stebb. & Löve) Barkworth	Nodding Needlegrass	0.90	200	2	9	441	2	97	$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	5	**Atriplex canescens** (Pursh) Nutt.	Fourwing Saltbush	0.48	52	5	3	115	6	32	$
N	Y	N	S	P	Y	6	**Atriplex lentiformis** (Torr.) S. Wats.	Quail Brush	0.45	450	1	3	992	1	32	$
N	Y	N	S	P	Y	7	**Atriplex polycarpa** (Torr.) S. Wats.	Allscale	0.28	800	1	3	1764	1	32	$
N	Y	N	S	P	Y	8	**Atriplex spinifera** J. F. Macbr.	Mojave Saltbush	0.09	40	12	1	88	14	11	$
N	Y	N	S	P	Y	22	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-13

Aspect SE to W • Zone 7f

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	A	Y	11	**Bromus arizonicus** (Shear) Stebbins	Arizona Brome	0.90	100	4	9	220	5	97	$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	N	G	P	Y	2	**Achnatherum hymenoides** (R. & S.) Barkworth	Indian Ricegrass	0.38	140	2	3	309	3	32	$$$
N	Y	N	G	P	Y	3	**Achnatherum speciosum** (Trin. & Rupr.) Barkworth	Desert Needlegrass	0.86	150	1	3	331	1	32	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	42	**Nassella cernua** (Stebb. & Löve) Barkworth	Nodding Needlegrass	0.90	200	2	9	441	2	97	$$$
N	Y	N	S	P	Y	5	**Atriplex canescens** (Pursh) Nutt.	Fourwing Saltbush	0.48	52	5	3	115	6	32	$
N	Y	N	S	P	Y	6	**Atriplex lentiformis** (Torr.) S. Wats.	Quail Brush	0.45	450	1	3	992	1	32	$
N	Y	N	S	P	Y	7	**Atriplex polycarpa** (Torr.) S. Wats.	Allscale	0.28	800	1	3	1764	1	32	$
N	Y	N	S	P	Y	8	**Atriplex spinifera** J. F. Macbr.	Mojave Saltbush	0.09	40	12	1	88	14	11	$
N	Y	N	S	P	Y	22	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-14

Aspect NW to E • Zone 14a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	22	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-15

Aspect SE to W • Zone 14a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	42	**Nassella cernua** (Stebb. & Löve) Barkworth	Nodding Needlegrass	0.90	200	2	9	441	2	97	$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	22	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-16

Aspect NW to E • Zone 14b

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	**40**	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	**49**	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	**50**	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	**51**	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	**52**	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	**53**	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	**16**	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	**9**	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	**12**	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	**13**	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	**29**	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	**33**	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	**48**	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	**54**	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	**55**	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	**34**	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	**1**	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	**18**	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	**19**	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	**28**	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	**32**	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	**38**	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	**39**	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	**43**	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	**44**	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	**4**	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	**10**	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	**22**	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	**24**	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	**41**	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	**47**	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-17

Aspect SE to W • Zone 14b

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	42	**Nassella cernua** (Stebb. & Löve) Barkworth	Nodding Needlegrass	0.90	200	2	9	441	2	97	$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	22	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand

PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-18

Aspect NW to E • Zone 14c

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	22	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	45	**Salvia apiana** Jepson	White Sage	0.35	325	3	9	716	4	97	$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-19

Aspect SE to W • Zone 14c

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	42	**Nassella cernua** (Stebb. & Löve) Barkworth	Nodding Needlegrass	0.90	200	2	9	441	2	97	$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	22	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	45	**Salvia apiana** Jepson	White Sage	0.35	325	3	9	716	4	97	$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-20

Aspect NW to E • Zone 15a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-21

Aspect SE to W • Zone 15a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-22

Aspect NW to E • Zone 15b

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-23

Aspect SE to W • Zone 15b

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-24

Aspect NW to E • Zone 15c

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-25

Aspect SE to W • Zone 15c

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	38	**Melica californica** Scribner	California Melic	0.49	325	7	27	716	8	291	$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
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S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-26

Aspect NW to E • Zone 15d

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	45	**Salvia apiana** Jepson	White Sage	0.35	325	3	9	716	4	97	$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-27

Aspect SE to W • Zone 15d

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	45	**Salvia apiana** Jepson	White Sage	0.35	325	3	9	716	4	97	$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-28

Aspect NW to E • Zone 16a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-29

Aspect SE to W • Zone 16a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-30

Aspect NW to E • Zone 16b

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	23	**Eriogonum parvifolium** Smith	Sea Cliff Buckwheat	0.18	450	5	9	992	5	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-31

Aspect SE to W • Zone 16b

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-32

Aspect NW to E • Zone 16c

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	22	**Eriogonum fasciculatum** Benth. var. **foliolosum** (Nutt.) Abrams	Interior California Buckwheat	0.07	450	13	9	992	15	97	$
N	Y	N	S	P	Y	23	**Eriogonum parvifolium** Smith	Sea Cliff Buckwheat	0.18	450	5	9	992	5	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-33

Aspect SE to W • Zone 16c

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	23	**Eriogonum parvifolium** Smith	Sea Cliff Buckwheat	0.18	450	5	9	992	5	97	$$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-34

Aspect NW to E • Zone 16d

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	45	**Salvia apiana** Jepson	White Sage	0.35	325	3	9	716	4	97	$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-35

Aspect SE to W • Zone 16d

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	45	**Salvia apiana** Jepson	White Sage	0.35	325	3	9	716	4	97	$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-36

Aspect NW to E • Zone 17a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	25	**Eriophyllum staechadifolium** Lagasca	Lizard Tail	0.18	2500	1	9	5512	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
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PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-37

Aspect SE to W • Zone 17a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand

PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-38

Aspect NW to E • Zone 17b

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	Y	N	G	P	Y	17	**Deschampsia elongata** (Hook.) Munro	Slender Hairgrass	0.93	1800	1	27	3968	1	291	$$$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	27	**Hordeum brachyantherum** Nevski	Meadow Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	23	**Eriogonum parvifolium** Smith	Sea Cliff Buckwheat	0.18	450	5	9	992	5	97	$$$
N	Y	N	S	P	Y	25	**Eriophyllum staechadifolium** Lagasca	Lizard Tail	0.18	2500	1	9	5512	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-39

Aspect SE to W • Zone 17b

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-40

Aspect NW to E • Zone 23a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	20	**Encelia californica** Nutt.	Bush Sunflower	0.24	175	9	9	386	11	97	$$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	23	**Eriogonum parvifolium** Smith	Sea Cliff Buckwheat	0.18	450	5	9	992	5	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	45	**Salvia apiana** Jepson	White Sage	0.35	325	3	9	716	4	97	$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
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PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-41

Aspect SE to W • Zone 23a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	F	A	Y	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	20	**Encelia californica** Nutt.	Bush Sunflower	0.24	175	9	9	386	11	97	$$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	45	**Salvia apiana** Jepson	White Sage	0.35	325	3	9	716	4	97	$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-42

Aspect NW to E • Zone 24a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	16	**Clarkia unguiculata** Lindley	Mountain Garland	0.74	1580	1	27	3483	1	291	$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	19	**Elymus glaucus** Buckley	Blue Wild Rye	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	28	**Hordeum californicum** Covas & Stebbins	California Barley	0.93	100	4	9	220	5	97	$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	39	**Melica imperfecta** Trin.	Coast Range Melic	0.49	500	5	27	1102	5	291	$$$$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	20	**Encelia californica** Nutt.	Bush Sunflower	0.24	175	9	9	386	11	97	$$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	23	**Eriogonum parvifolium** Smith	Sea Cliff Buckwheat	0.18	450	5	9	992	5	97	$$$
N	Y	N	S	P	Y	25	**Eriophyllum staechadifolium** Lagasca	Lizard Tail	0.18	2500	1	9	5512	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	45	**Salvia apiana** Jepson	White Sage	0.35	325	3	9	716	4	97	$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
lbsPLS/ac Recommended # of lbs PLS per acre for a dense stand
PLS/ft2 Number of PLS per sq. ft at recommended # of lbs per acre
S/kg(x1000) Seeds per kg x 1000
kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

Table 6-43

Aspect SE to W • Zone 24a

Rapid Cover	Native Reveg	Legume	Life_Form	Life_Cycle	Native	No	Scientific Name	Common Name	PLS Factor	S/LB (x1000)	lbsPLS/ac	PLS/ft2	S/kg (x1000)	kgPLS/ha	PLS/m2	Cost 2001
Y	Y	Y	F	A	Y	35	**Lupinus bicolor** Lindley	Miniature Lupine	0.78	75	2	3	165	3	32	$$$
Y	Y	Y	F	A	Y	36	**Lupinus nanus** Douglas ex Benth.	Sky Lupine	0.69	45	4	3	99	5	32	$$$$
Y	Y	Y	F	A	Y	37	**Lupinus succulentus** Douglas ex Koch	Arroyo Lupine	0.83	15	10	3	33	12	32	$$
Y	N	Y	F	A	N	40	**Melilotus officinalis** (L.) Pall.	Yellow Sweet Clover	0.74	260	6	27	573	7	291	$
Y	Y	Y	F	A	Y	49	**Trifolium gracilentum** Torr. & A. Gray	Pinpoint Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	50	**Trifolium hirtum** All.	Rose Clover	0.64	140	4	9	308	5	97	$
Y	Y	Y	F	A	Y	51	**Trifolium willdenovii** Sprengel	Tomcat Clover	0.64	500	1	9	1102	1	97	$$
Y	N	Y	F	A	N	52	**Vicia benghalensis** L.	Purple Vetch	0.64	11	6	1	24	7	11	$
Y	N	Y	F	A	N	53	**Vicia villosa** Roth	Hairy Vetch	0.64	20	10	3	44	11	32	$
Y	Y	N	F	A	Y	15	**Clarkia purpurea** (Curtis) Nelson & J. F. Macbr.	Winecup Clarkia	0.83	1600	1	27	3527	1	291	$$
Y	Y	N	F	A	Y	26	**Eschscholzia californica** Cham.	California Poppy	0.74	275	2	9	606	2	97	$$
Y	Y	N	F	A	Y	30	**Lasthenia californica** DC. ex Lindley	Dwarf Goldfields	0.30	3250	1	27	7165	1	291	$$$$
Y	Y	N	F	A	Y	31	**Layia platyglossa** (Fischer & C. Meyer) A. Gray	Tidy Tips	0.60	350	2	9	772	2	97	$$$
Y	N	N	G	A	N	9	**Avena fatua** L.	Common Wild Oat	0.95	12	34	9	27	39	97	$
Y	Y	N	G	P	Y	12	**Bromus carinatus** Hook. & Arn.	California Brome	0.95	100	4	9	220	5	97	$$
Y	N	N	G	A	N	13	**Bromus hordeaceus** L.	Soft Chess	0.95	265	9	54	584	11	581	$
Y	N	N	G	A	N	29	**Hordeum vulgare** L.	Cereal Barley	0.95	13	32	9	29	36	97	$
Y	N	N	G	A	N	33	**Lolium multiflorum** Lam.	Annual Ryegrass	0.95	230	11	54	507	12	581	$
Y	N	N	G	A	N	48	**Schismus barbatus** (L.) Thell.	Mediterranean Grass	0.90	4000	1	54	8818	1	581	$
Y	Y	N	G	A	Y	54	**Vulpia microstachys** (Nutt.) Benth.	Small Fescue	0.90	800	3	54	1764	4	581	$$$
Y	N	N	G	A	N	55	**Vulpia myuros** (L.) K.C. Gmelin	Rat-tail fescue	0.95	800	3	54	1764	3	581	$
N	Y	Y	S	P	Y	34	**Lotus scoparius** (Nutt.) Ottley	Deer Lotus	0.54	450	1	3	992	1	32	$$
N	Y	N	F	P	Y	1	**Achillea millefolium** L.	Common Yarrow	0.69	2700	1	27	5952	1	291	$$$
N	Y	N	F	A	Y	14	**Castilleja exserta** (A.A. Heller) Chuang & Heckard	Purple Owl's Clover	0.25	11000	1	54	24251	1	581	$$$$
N	Y	N	G	P	Y	18	**Elymus elymoides** (Raf.) Swezey	Squirreltail	0.88	100	4	9	220	5	97	$$$$
N	Y	N	G	P	Y	32	**Leymus triticoides** (Buckley) Pilger	Creeping Wildrye	0.49	110	7	9	243	8	97	$$
N	Y	N	G	P	Y	43	**Nassella lepida** (A.S. Hitchc.) Barkworth	Foothill Needlegrass	0.90	320	1	9	705	2	97	$$$$$
N	Y	N	G	P	Y	44	**Nassella pulchra** (A.S. Hitchc.) Barkworth	Purple Needlegrass	0.93	150	3	9	331	3	97	$$$
N	Y	N	S	P	Y	4	**Artemisia californica** Less.	California Sagebrush	0.08	5500	1	9	12125	1	97	$$
N	Y	N	S	P	Y	10	**Baccharis pilularis** DC.	Chaparral Broom	0.01	5000	1	1	11023	2	11	$$
N	Y	N	S	P	Y	20	**Encelia californica** Nutt.	Bush Sunflower	0.24	175	9	9	386	11	97	$$$
N	Y	N	S	P	Y	21	**Eriogonum fasciculatum** Benth. var. **fasciculatum**	Coastal California Buckwheat	0.07	450	13	9	992	15	97	$$
N	Y	N	S	P	Y	24	**Eriophyllum confertiflorum** (DC.) A. Gray var. **confertiflorum**	Golden Yarrow	0.18	2750	1	9	6063	1	97	$$$
N	Y	N	S	P	Y	41	**Mimulus aurantiacus** Curtis	Sticky Monkeyflower	0.04	10000	1	9	22046	1	97	$$$$
N	Y	N	S	P	Y	45	**Salvia apiana** Jepson	White Sage	0.35	325	3	9	716	4	97	$$$
N	Y	N	S	P	Y	46	**Salvia leucophylla** E. Greene	Gray Sage	0.49	425	2	9	937	2	97	$$$$
N	Y	N	S	P	Y	47	**Salvia mellifera** E. Greene	Black Sage	0.35	625	2	9	1378	2	97	$$$

Life Form F = forb; G = grass; S = shrub
Life Cycle A = annual; P = perennial
PLS Factor **lbs/kg bulk seed X PLS Factor = net lbs/kg Pure Live Seed**
S/lb(x1000) Seeds per lb x 1000
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kgPLS/ha Recommended # of kg PLS per hectare for a dense stand
PLS/m2 Number of PLS per sq.m at recommended # of kg per hectare
Cost 2001 Relative cost in 2001; range $: <$10/lb to $$$$$: >$75/lb

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