

Field Key to Calveg Alliances

Central Coast and Montane - Zone 6

Revised March 3, 2010

Plant codes are from the NRCS Plants Database

Pseudospecies lists are used in accuracy assessment protocols

I. Key to Lifeforms

1A. If absolute canopy closure (cover) of trees (conifers and/or hardwoods) is $\geq 10\%$ of plot or area ... 2

1B. If absolute canopy closure (cover) of trees is $< 10\%$ of plot or area ... 4

2A. **Tree Dominated Order:** if conifers have relative canopy cover $> 80\%$ of total tree canopy closure ... **conifer lifeform** and go to **II. Key to Conifers**

2B. **Tree Dominated Order:** if conifers have relative canopy cover $\leq 80\%$ of total tree canopy closure ... 3

3A. If hardwoods have relative canopy cover $> 90\%$ of total tree canopy closure ... **hardwood lifeform** and go to **III. Key to Hardwoods**

3B. If hardwoods have relative canopy cover $\geq 20\%$ of total tree canopy closure and conifers have relative canopy cover $\geq 10\%$ of total tree canopy closure ... **mixed lifeform** and go to **II. Key to Conifers** for conifer component and **III. Key to Hardwoods** for hardwood component

4A. **Shrub Dominated Order:** if absolute cover of shrubs is $\geq 10\%$ of plot or area ... **shrub lifeform** and go to **IV. Key to Shrubs and Subshrubs**

4B. If absolute cover of shrubs is $< 10\%$ of plot or area ... 5

5A. **Herbaceous or Non-Vascular Dominated Order:** if absolute cover of other vascular vegetation is $\geq 10\%$ of plot or area ... **herbaceous lifeform** and go to **V. Key to Grasses and Forbs**

5B. If absolute cover of other vascular vegetation is $< 10\%$ of plot or area ... **sparsely vegetated or non-vegetated lifeform** and go to **VI. Key to Sparsely Vegetated and Non-Vegetated Types**

II. Key to Conifers

cc = conifer canopy cover

1A. A single naturally occurring conifer species has $\geq 50\%$ (cc) ... 2

1B. No single naturally occurring conifer species has $\geq 50\%$ cc ... 18

2A. Sargent Cypress (**CUSA3**) has $\geq 50\%$ cc ... **Sargent Cypress - MS**

2B. Otherwise ... 3

3A. Monterey Cypress (**CUMA2**) has $\geq 50\%$ cc ... **Monterey Cypress - MM**

3B. Otherwise ... 4

4A. Ponderosa Pine (**PIPO**) has $\geq 75\%$ cc ... **Ponderosa Pine - PP**

4B. Otherwise ... 5

5A. Bigcone Douglas-Fir (**PSMA**) has $\geq 75\%$ cc ... **Bigcone Douglas-Fir - DM**

5B. Otherwise ... 6

6A. Coulter Pine has $\geq 75\%$ cc alone or $> 50\%$ cc when combined with Bigcone Douglas-Fir (**PSEUDO17: PICO3, PSMA**) ... **Coulter Pine - PC**

6B. Otherwise ... 7

7A. Knobcone Pine (**PIAT**) has $\geq 75\%$ cc ... **Knobcone Pine - KP**

7B. Otherwise ... 8

8A. Gray Pine (**PISA2**) has $\geq 75\%$ cc ... **Gray Pine - PD**

8B. Otherwise ... 9

9A. Singleleaf Pinyon Pine (**PIMO**) has $\geq 75\%$ cc ... **Singleleaf Pinyon Pine - PJ**

9B. Otherwise ... 10

10A. Santa Lucia Fir (**ABBR**) has $\geq 75\%$ cc ... **Santa Lucia Fir - AB**

10B. Otherwise ... 11

11A. Pacific Douglas-Fir (**PSME**) has $\geq 75\%$ cc ... **Pacific Douglas-Fir - DF**

11B. Otherwise ... 12

12A. Monterey Pine (**PIRA2**) has $\geq 75\%$ cc ... **Monterey Pine - PR**

12B. Otherwise ... 13

13A. Redwood (**SESE3**) has $\geq 75\%$ cc ... **Redwood - RW**

13B. Otherwise ... 14

14A. Bishop Pine (**PIMU**) has $\geq 75\%$ cc ... **Bishop Pine - PM**

14B. Otherwise ... 15

15A. Incense-Cedar (**CADE27**) has $\geq 75\%$ cc ... **Incense-Cedar - MD**

15B. Otherwise ... 16

16A. Tree form California Juniper (**JUCA7CON**) has $\geq 75\%$ cc ... **California Juniper - JT**

16B. Otherwise ... 17

17A. Douglas-Fir (**PSME**) has $\geq 50\%$ cc; Redwood (**SESE3**) is present ... **Redwood - Douglas-Fir - RD**

17B. Otherwise ... 18

18A. Gowen Cypress (**CUGO**) has $\geq 75\%$ cc ... **Gowen Cypress - MG**

18B. Otherwise ... 19

19A. Santa Cruz Cypress (**CUAB**) has $\geq 75\%$ cc ... **Santa Cruz Cypress - MZ**

19B. Otherwise ... 20

REM: no native conifer species or genus is dominant

20A. Ponderosa Pine, Coulter Pine, Bigcone Douglas-Fir and/or Sugar Pine in combination, none dominant have $\geq 25\%$ cc; Jeffrey Pine (**PIJE**) has $< 10\%$ cc (**PSEUDO45: PIPO, PICO3, PSMA, PILA, PSME**) ... **Mixed Conifer-Pine - MP**

20B. Otherwise ... 21

21A. Non-native or ornamental conifers in mixture have $\geq 50\%$ cc and non-native or ornamental hardwoods in mixture have $\geq 50\%$ of hardwood canopy cover ... **Non-Native/Ornamental Conifer/Hardwood - IM**

21B. Otherwise ... 22

22 A. Non-native or ornamental conifers in mixture $\geq 50\%$ cc and non-native or ornamental hardwoods in mixture have $< 50\%$ of hardwood canopy cover ... **Non-Native/Ornamental Conifer/Hardwood - IC**

22B. Otherwise ... 23

23A. Single or multiple species of conifers on agricultural sites have $\geq 50\%$ cc and agricultural hardwoods have $< 20\%$ of total tree canopy cover ... **Conifer Agriculture - A1**

23B. Otherwise ... 24

24A. Single or multiple species of conifers on agricultural sites have $\geq 50\%$ cc and agricultural hardwoods have $\geq 20\%$ of total tree canopy cover ... **Agricultural Nurseries - A8**

24B. Otherwise ... **Conifer type not determined - XC**

III Key to Hardwoods

hc = hardwood canopy cover

1A. Single species or single genus of native hardwood dominates the canopy ... 2

1B. Otherwise ... 20

2A. Valley Oak (**QULO**) has $\geq 50\%$ hc ... **Valley Oak - QL**

2B. Otherwise ... 3

3A. Fremont Cottonwood (**PSEUDO21: POFR2, POFRA, POFRF3, POFRM, POFRP**) has $\geq 50\%$ hc; no other single hardwood species is co-dominant ... **Fremont Cottonwood - QF**

3B. Otherwise ... 4

4A. California Sycamore (**PLRA**) has $\geq 50\%$ hc ... **California Sycamore - QP**

4B. Otherwise ... 5

5A. Tree Willows (**PSEUDO27: SALIX**) alone or in combination have $\geq 50\%$ hc ... **Willow - QO**

5B. Otherwise ... 6

6A. Coast Live Oak (**QUAG**) has $\geq 50\%$ hc ... **Coast Live Oak - QA**

6B. Otherwise ... 7

7A. Black Oak (**QUKE**) has $\geq 50\%$ hc ... **Black Oak - QK**

7B. Otherwise ... 8

8A. Interior Live Oak (**QUWI2**) has $\geq 50\%$ hc ... **Interior Live Oak - QW**

8B. Otherwise ... 9

9A. Blue Oak (**QUDO**) has $\geq 50\%$ hc ... **Blue Oak - QD**

9B. Otherwise ... 10

10A. Canyon Live Oak (**QUCH2**) has $\geq 50\%$ hc ... **Canyon Live Oak - QC**

10B. Otherwise ... 11

11A. Tanoak (**LIDE3**) has $\geq 50\%$ hc ... **Tanoak - QT**

11B. Otherwise ... 12

12A. California Bay (**PSEUDO24: UMCA**) has $\geq 50\%$ hc ... **California Bay - QB**

12B. Otherwise ... 13

13A. Eucalyptus species (**EUCAL**) alone or in combination have $\geq 50\%$ hc ... **Eucalyptus - QZ**

13B. Otherwise ... 14

14A. California Buckeye (**AECA**) has $\geq 50\%$ hc ... **California Buckeye - QI**

14B. Otherwise ... 15

15A. Madrone (**ARME**) has $\geq 50\%$ hc ... **Madrone - QH**

15B. Otherwise ... 16

16A. Bigleaf Maple (**ACMA3**) has $\geq 50\%$ hc ... **Bigleaf Maple - QM**

16B. Otherwise ... 17

17A. Red Alder (**ALRU2**) has $\geq 50\%$ hc ... **Red Alder - QR**

17B. Otherwise ... 18

18A. Shreve Oak (**QUPAS2**) has $\geq 50\%$ hc ... **Shreve Oak - AS**

18B. Otherwise ... 19

19A. Tamarisk species have $\geq 50\%$ hc (**PSEUDO41: TAMAR2, TAAP, TAAF, TAAR5, TACH2, TAPA4, TAAP, TAGA, TAPE, TARA**) ... **Tamarisk - UT**

19B. Otherwise ... 20

REM: mixed species of hardwoods begin

20A. Cottonwood of any species and Tree Alder of any species in combination have $\geq 50\%$ hc (**PSEUDO40: ALRH2, ALRU2, ALNUS, POFR2, POFRA, POFRF3, POFRM, POFRP**) ... **Cottonwood-Alder - QJ**

20B. Otherwise ... 21

21A. Willow of any species and Tree Alder in combination have $\geq 50\%$ hc (**PSEUDO34: SALIX, ALRH2, ALRU2, ALNUS**) ... **Willow-Alder - QY**

21B. Otherwise ... 22

22A. A mixture of riparian hardwood species in which no one species occupies $\geq 50\%$ hc; mixture includes Fremont Cottonwood, Black Cottonwood, White Alder, Red Alder, California Sycamore, Tree Willows, Valley Oak, Bigleaf Maple, Ash, etc. (**PSEUDO22: POFR2, POFRA, POFRF3, POFRM, POFRP, POTR15, ALRH2, ALRU2, PLRA, SALIX, QULO, ACMA3, FRAXI**) ... **Mixed Riparian Hardwoods - NR**

22B. Otherwise ... 23

23A. A coastal mixture of hardwoods in which no one species occupies $\geq 50\%$ hc; mixture includes any of the following in combination: Coast Live Oak, California Bay, Tanoak, Madrone (**PSEUDO23: QUAG, UMCA, LIDE3, ARME**) ... **Coastal Mixed Hardwood - EX**

23B. Otherwise ... 24

24A. A mixture of interior hardwoods in which no one species occupies $\geq 50\%$ hc and where Blue Oak is usually present; mixture includes any of the following in combination: [**PSEUDO33: Canyon Live Oak (QUCH2), California Bay (UMCA), Blue Oak (QUDO), Interior Live Oak (QUWI2), Valley Oak (QULO), California Buckeye (AECA), California Black Walnut (JUGLA)**] ... **Interior Mixed Hardwood - NX**

24B. Otherwise ... 25

25A. Non-native or ornamental hardwood species alone or in combination have $\geq 50\%$ hc ... **Non-Native/Ornamental Hardwood - IH**

25B. Otherwise ... 26

26A. Agricultural lands have $\geq 50\%$ hc ... **Orchard Agriculture - A4**

26B. Otherwise ... **Hardwood type not determined - XH**

IV Key to Shrubs and Subshrubs

sc = shrub canopy cover

1A. A single native shrub species or genus has $\geq 50\%$ sc ... 2

1B. No single native shrub species or genus has $\geq 50\%$ sc ... 23

2A. Either Salal or California Huckleberry has $\geq 50\%$ sc (**PSEUDO35: GASH, VAOV2**) ... **Salal - California Huckleberry - CB**

2B. Otherwise ... 3

3A. Shrub Willow of any species alone or in combination has $\geq 50\%$ sc (**PSEUDO36: SASC, SALIX, SAGE2, SALE**) ... **Willow - WL**

3B. Otherwise ... 4

4A. Winterfat has $\geq 50\%$ sc (**PSEUDO37: KRLA2, EULA5**) ... **Winterfat - KL**

4B. Otherwise ... 5

5A. California Sagebrush (**ARCA11**) has $\geq 50\%$ sc ... **California Sagebrush - SS**

5B. Otherwise ... 6

- 6A. California Buckwheat (**PSEUDO49: ERFA2** -- SS and SH) has $\geq 50\%$ sc ... **California Buckwheat - SB**
 6B. Otherwise ... 7
- 7A. Riparian Baccharis species (**BAGL2**) have $\geq 50\%$ sc ... **Baccharis (Riparian) – ML**
 7B. Otherwise ... 8
- 8A. Coyote Brush has $\geq 50\%$ sc (**PSEUDO26: BAPI, BAPIC2**) ... **Coyote Brush - CK**
 8B. Otherwise ... 9
- 9A. Wedgeleaf Ceanothus (**CECU**) has $> 50\%$ sc ... **Wedgeleaf Ceanothus - CL**
 9B. Otherwise ... 10
- 10A. Red Shank has $\geq 50\%$ sc or Chamise has $\geq 25\%$ sc and Red Shank has $\geq 25\%$ sc (**ADSP, ADFA**) ... **Red Shank - CR**
 10B. Otherwise ... 11
- 11A. Chamise (**ADFA**) has $\geq 50\%$ sc ... **Chamise - CA**
 11B. Otherwise ... 12
- 12A. Shrub form of California Juniper (**JUCA7**) has $\geq 50\%$ sc ... **California Juniper - JC**
 12B. Otherwise ... 13
- 13A. Arrowweed (**PLSE**) has $\geq 50\%$ sc ... **Arrowweed - DE**
 13B. Otherwise ... 14
- 14A. Big Sagebrush (**ARTR2**) has $> 50\%$ sc ... **Big Sagebrush - BS**
 14B. Otherwise ... 15
- 15A Rabbitbrush species have $\geq 50\%$ sc (**PSEUDO29: ERNA10, CHRYS9**) ... **Rabbitbrush - BR**
 15B. Otherwise ... 16
- 16 A. Any Saltbush and/or Fourwing Saltbush have $\geq 50\%$ sc (**ATRIP, ATCA2**) ... **Saltbush - BC**
 16 B. Otherwise ... 17
- 17A. Scalebroom (**LESQ**) has $\geq 50\%$ sc ... **Scalebroom - LS**
 17B. Otherwise ... 18
- 18A. Xeromorphic or Desert Shrub Oaks alone or in combination have $\geq 50\%$ sc (**PSEUDO44: QUJO3, QUCO7**) ... **Tucker/ Muller Shrub Oak - CT**
 18B. Otherwise ... 19
- 19A. Chaparral Yucca (**YUWH**) has $\geq 50\%$ sc ... **Chaparral Yucca - SY**
 19B. Otherwise ... 20
- 20A. Shrub Oaks (including Scrub Oak, shrub forms of Canyon, Coast and Interior Live Oaks, Palmer, non-dominant Muller or Tucker, Brewer and Leather Oaks have $\geq 50\%$ sc (**PSEUDO1: QUERC, QUBE5, QUCHN, QUAGO, QUWIF, QUPA10, QUCO7, QUJO3, QUGAB, QUDU4**) ... **Scrub Oak - CS**

20B. Otherwise ... 21

21A. Ceanothus species (such as Cupleaf, Mojave, Hoaryleaf, Wavyleaf, Chaparral Whitethorn, Bigpod, Hairy, Jim Brush, Greenbark, non-dominant Wedgeleaf, and/or Wartleaf alone or in combination have $\geq 50\%$ sc (**PSEUDO3: CEANO, CECU, CEGRP2, CEGRV2, CECR, CEFO, CELE2, CEME, CEOL, CESO2, CESP, CEPA2**) ... **Ceanothus Chaparral - CC**

21B. Otherwise ... 22

22A. Manzanita species (such as Unknown Manzanita, non-dominant Greenleaf, Eastwood, Bigberry, Parry, Mexican, Glossyleaf or Santa Margarita) have $\geq 50\%$ sc (**PSEUDO4: ARCTO3, ARGL3, ARGL4, ARPA4, ARPA6, ARPI, ARPU5, ARNU3**) ... **Manzanita - SD**

22B. Otherwise ... **Unknown Shrub - XS**

Note: No single native shrub species or genus has $\geq 50\%$ shrub cover

23A. Riparian shrub species singly or in combination have $\geq 50\%$ sc, including species of Currant or Gooseberry, Rose, Mountain Alder, Shrub Willows, Elderberry, Red Osier Dogwood, Western Azalea, California Hazelnut, California Wild Grape, Dwarf Bilberry, Western Blueberry, and/or Vine Maple (**PSEUDO37: RIBES, RILA, ROSA5, ALTE2, SALIX, SAMBU, SAMI15, COST4, RHOC, COCOC, VITIS, VICA5, VACA13, VAUL, VAOC, ACCI**) ... **Riparian Mixed Shrub - NM**

23B. Otherwise ... 24

24A. A mixture of soft scrub species or hard chaparral and subshrub species which is often connected to specific edaphic or major disturbance events such as fire; species commonly found in the chaparral mix are those in the Lower Montane Chaparral group (**PSEUDO6**). The subshrub species include any of the following: Deerweed, Heartleaf Keckiella, and Thicketleaf Yerba Santa at $\geq 25\%$ sc (**PSEUDO14: ERCLR2, KECO, LOSC2, LOSCB**) and/or California Sagebrush, Northern Bush Monkeyflower, Fuchsia-flowered Gooseberry, White Sage, Cleveland Sage, Black Sage, Purple Sage, California Encelia, Golden Yarrow, California Goldenbush, unidentified Sage, any species of Saltbush, Desert Tea. species of Snakeweed, California Buckwheat, Winterfat, and/or Alkali Goldenbush at $\geq 25\%$ sc (**PSEUDO8: ARCA11, ENCA, ERCO25, ERER11, MIAU, RISP, SAAP2, SACL, SALE3, SALVI, SAME3, ATRIP, EPCA2, GUTIE, ERFA2, KRLA2, ISAC2**) at $\geq 25\%$ sc ... **Mixed Soft Scrub Chaparral - SQ**

24B. Otherwise ... 25

25A. A mixed coastal or inland dune condition in which shrubby Lupines (**LUPIN**) have $\geq 25\%$ sc and elevation is below 100 feet; shrub mixture may also have Fig Marigolds, Eastwood's Goldenbush, and/or Iceplant [**PSEUDO32: CARPO, CAAE8, CAED3, ERFA5, LUPIN (SS), LUPIN (SH), MECH4, MESEM**] combined for $\geq 50\%$ sc ... **Lupine - SL**

25B. Otherwise ... 26

26A. California Sagebrush and Sage species (California Sagebrush, California Encelia, Golden Yarrow, California Goldenbush, Northern Bush Monkeyflower, Fuchsia-flowered Gooseberry, Unknown Sage, White Sage, Cleveland Sage, Purple Sage, Black Sage; (**PSEUDO8: ARCA11, ENCA, ERCO25, ERER11, MIAU, RISP, SALVI, SAAP2, SACL, SALE3, SAME3**) combined have $\geq 50\%$ sc ... **California Sagebrush (Coastal Sage Scrub mixture) - SS**

26B. Otherwise ... 27

27A. Hard chaparral species (**PSEUDO6**) singly or in combination have $\geq 25\%$ shrub cover, none dominant and Great Basin shrub species (**PSEUDO2SHB**) have $\geq 25\%$ shrub cover ... **Great Basin – Mixed Chaparral Transition - BX**
27B. Otherwise ... 28

28A. Great Basin indicator shrub species in combination have $\geq 50\%$ sc, including Big Basin or unknown Sagebrush, Desert Bitterbrush, Tucker Oak, California Juniper, Curlleaf Mountain Mahogany, Unknown Rabbitbrush, Rubber Rabbitbrush, and/or Yellow Rabbitbrush (**PSEUDO42: ARTR2, ARTEM, PUGL2, QUJO3, JUCA7, CELE2, CHRYS9, ERNA10, CHVI8**); Mojave shrub species such as Creosote, Ephedra, Blackbush, White Bursage, Spiny Menodora, Spiny Hopsage, species of Horsebrush, Sonoran Scrub Oak and/or Opuntia species (**PSEUDO43: LATR2, EPHEM, EPNE, EPVI**), **CORA, AMDU2, MESP2, GRSP, TETRA3, QUTU2, OPUNT**) have $< 20\%$ sc ... **Basin Mixed Scrub - BQ**
28B. Otherwise ... 29

29A. A lower elevation mixture of common hard chaparral species (**PSEUDO6**) has $\geq 50\%$ sc and Great Basin indicator species (**PSEUDO2SHB**) have $< 25\%$ sc ... **Lower Montane Mixed Chaparral - CQ** [**PSEUDO6: Chamise, Hoary Manzanita, Eastwood Manzanita, Bigberry Manzanita, Santa Margarita Manzanita, Mexican Manzanita, Whiteleaf Manzanita, Unknown Ceanothus species, Birchleaf Mountain Mahogany, Hoaryleaf Ceanothus, Wedgeleaf Ceanothus, Wavyleaf Ceanothus, Chaparral Whitethorn, Bigpod Ceanothus, Redbud, Hairy Ceanothus, Wartleaf Ceanothus, Jim Brush, Greenbark Ceanothus, Pipestems Clematis, California Hazelnut, Broom, Bush Poppy, Lompoc Yerba Santa, Thicketleaf Yerba Santa, Unknown Yerba Santa, Woolly Yerba Santa, Trask's Yerba Santa, Ash species, California Ash, Wavyleaf Silktassel, Ashy Silktassel, Canyon Silktassel, Sawtooth Goldenbush, Toyon, Ocean Spray, Honeysuckle, Tree Tobacco, Montana Chaparral Pea, Hollyleaf Cherry, Shrub Coast Live Oak, Shrub Canyon Live Oak, Scrub Oaks, Shrub Oak species, Leather Oak, Unidentified shrub Oak, Tucker Oak, Palmer Oak, Sonoran Scrub Oak, Shrub Interior Live Oak, Coffeeberry, Redberry, Sugarbush, Unknown Currant, Chaparral Yucca; ADFA, ARCA5, ARGL3, ARGL4, ARPI, ARPU5, ARVI4, CEANO, CEBE3, CECR, CECU2, CEFO, CEGRP2, CEGRV2, CELE2, CEME, CEOCO, CEOL, CEPA2, CESO2, CESP, CLLA3, COCOC, CYTIS, DERI, ERCA7, ERCR2, ERIOD, ERTO, ERTR6, FRAXI, FRDI2, GAEL, GAFLP2, GAVE2, HASQ, HEAR5, HODI, LONIC, NIGL, PIMO5, PRIL, QUAGO, QUCHN, QUDU, QUBE5, QUDU4, QUERC, QUJO3, QUPA10, QUTU2, QUWIF, RHCA, RHCR, RHCRI2, RHOV, RIBES, YUWH]**

29B. Otherwise ... 30

30A. Non-native, invasive or ornamental cultivated shrubs have $\geq 50\%$ sc ... **Non-Native/Ornamental Shrub - IS**
30B. Otherwise ... 31

31A. Agricultural lands have $\geq 50\%$ sc ... **Vineyard – Shrub Agriculture – A2**
31B. Otherwise ... **Shrub type not determined-XS**

V. Key to Grasses and Forbs

hbg = herbaceous cover

1A. Natural habitat is seasonally flooded or permanently flooded or saturated ... 2
1B. Natural habitat is not seasonally flooded ... 5

- 2A. Coastal brackish or salt marshes surrounding open water containing mixtures of Common Pickleweed, Cordgrasses or Saltgrass in any combination have $\geq 50\%$ hbg ... **Pickleweed – Cordgrass - HC**
 2B. Otherwise ... 3
- 3A. Hydrophytic grasses and grass-like species (Sedges, Rushes, Bulrushes) in mixture with hydrophytic herbaceous species (False Hellebore, Lily, Shooting Star, Gentian, etc.) growing mainly in organic soil have $\geq 50\%$ hbg ... **Wet Meadow - HJ**
 3B. Otherwise ... 4
- 4A. Fresh to brackish marshes containing mixtures of Tule, other Bulrushes, Cattails, and Spikerushes in mixture with other hydrophytic forbs and grasses ... **Tule – Cattail - HT**
 4B. Otherwise ... **Unknown wet herbaceous (XJ) type**
- 5A. Annual grasses mixed with annual and/or perennial forbs which generally have limited surface or subsurface moisture in midsummer having $\geq 50\%$ hbg ... **Annual Grasses and Forbs - HG**
 5B. Otherwise ... 6
- 6A. Unmanaged or natural areas containing mixtures of grasses and/or forbs that retain some moisture in midsummer, such as those in middle or higher elevations having $\geq 50\%$ hbg... **Perennial Grasses and Forbs - HM**
 6B. Otherwise ... 7
- 7A. Agricultural lands have $\geq 50\%$ hbg in row crops and are not usually flooded ... **Grain and Crop Agriculture – A6**
 7B. Otherwise ... 8
- 8A. Agricultural lands have $\geq 50\%$ hbg in row crops and are usually flooded ... **Flooded Row Crop Agriculture – A5**
 8B. Otherwise ... 9
- 9A. Non-native cultivated grasses and herbaceous cover have $\geq 50\%$ hbg ... **Non-Native/Ornamental Grasses - IG**
 9B. Otherwise ... **Unknown dry herbaceous (XG) or wet herbaceous (XJ) type**

VI. Key to Sparsely Vegetated and Non-Vegetated Types

nvc = non-vegetated cover

- 1A. Agricultural uses comprise $\geq 50\%$ nvc ... Agriculture - AG
 1B. Otherwise ... 2
- 2A. Urban or otherwise developed landscapes (highways, etc.) $\geq 50\%$ nvc ... Urban or Developed - UB
 2B. Otherwise ... 3
- 3A. Open water or confined water courses occupy $\geq 50\%$ nvc ... Water - WA
 3B. Otherwise ... 4

4A. Otherwise naturally barren landscapes (cliffs, bedrock, etc.) and mine quarries occupy $\geq 50\%$ nvc ...

Barren - BA

4B. Otherwise ... 5

5A. Coastal or inland dunes comprise $\geq 50\%$ nvc ... Dunes - DU

5B. Otherwise ... 6

6A. Wet agricultural lands have $\geq 50\%$ nvc ... Agricultural Ponds or Surface Water – A7

6B. Otherwise ... 7

7A. Dry urbanized or developed lands have $\geq 50\%$ nvc ... Urban-related Bare Soil – IB

7B. Otherwise ... 8

8A. Dry agricultural lands have $\geq 50\%$ nvc ... Tilled Earth – A3

8B. Otherwise ... 9

9A. Wet urbanized or developed lands have $\geq 50\%$ nvc ... Developed Water Features – IW

9B. Otherwise... Unknown Non-vegetated type ... XZ