Nevada vegetation classes by group and numeric code. Cover-Type categories are listed by principal species which define the cover-type. Landscape scale cover-type mapping includes many prevalent primary associated species which can substantially occur as part of the cover-type in localized areas. This is not intended to be a complete species list, but rather an overview of the most common species associated with each cover-type. General descriptions of each cover-type and a brief distribution of the cover-type are included.

TREES

1.) ASH - Woodland dominated by velvet ash *Fraxinus velutina* and screwbean *Prosopis pubescens*.

- Primary associated shrub species includes *Baccharis emoryi*.
- Distribution - This cover-type is only found in the vicinity of Ash Meadows, near Amargosa Valley.

2.) ASPEN_2 - Deciduous forest principally dominated by quaking aspen *Populus tremuloides* at canopies from 30-60 percent.

- Primary associated tree species include pinyon *Pinus monophylla*, mountain mahogany *Cercocarpus ledifolius*, limber pine *Pinus flexilis*, white fir Abies concolor, subalpine fir Abies lasiocarpa, engelmann spruce Picea engelmannii, ponderosa pine Pinus ponderosa, lodgepole pine Pinus contortus, whitebark pine Pinus albicaulis, red fir Abies magnifica and jeffrey pine Pinus jeffreyi
- Primary associated shrub species include mountain shrubs listed in mountain shrub class.
- Distribution - Aspen is found in localized areas throughout Nevada, occurring at higher elevations and on cooler aspects. The largest areas of the class are in northeast Nevada.

3.) ASPEN_3 - Deciduous forest principally dominated by quaking aspen Populus tremuloides at canopies greater than 59 percent.

- Primary associated tree species include pinyon pinus monophylla., mountain mahogany Cercocarpus ledifolius, limber pine Pinus flexilis, white fir Abies concolor, subalpine fir Abies lasiocarpa, engelmann spruce Picea engelmannii, ponderosa pine Pinus ponderosa, lodgepole pine Pinus contortus, whitebark pine Pinus albicaulis, red fir Abies magnifica and jeffry pine Pinus jeffreyi
- Primary associated shrub species include mountain shrubs listed in mountain shrub class.
- Distribution - Aspen is found in localized areas throughout Nevada, occurring at higher elevations and on cooler aspects. The largest areas of the class are in northeast Nevada.

4.) ENGELMANN SPRUCE_2 - Conifer forest principally dominated by engelmann spruce Picea engelmannii at canopies between 30-60 percent.

- Primary associated tree species include white fir Abies concolor, doug fir Pseudotsuga menziesii, limber pine Pinus flexilis, whitebark pine Pinus albicaulis, bristlecone pine Pinus aristata and aspen Populus tremuloides.
- Primary associated shrub species include snowberry Symphoricarpos spp., buckbrush Ceanothus spp., dwarf juniper Juniperus communis and manzanita Arctostaphylos spp.
- Distribution - This class only occurs in the large mountain ranges of eastern Nevada.

5.) ENGELMANN SPRUCE_3 - Conifer forest principally dominated by engelmann spruce Picea engelmannii at canopies above 59 percent.

- Primary associated tree species include white fir Abies concolor, doug fir Pseudotsuga menziesii, limber pine Pinus flexilis, whitebark pine Pinus albicaulis, bristlecone pine Pinus aristata and aspen Populus tremuloides.
- Primary associated shrub species include snowberry Symphoricarpos spp., buckbrush Ceanothus spp., dwarf juniper Juniperus communis and manzanita Arctostaphylos spp..
- Distribution - This class only occurs in the large mountain ranges of eastern Nevada.

6.) GREAT BASIN SUBALPINE PINE_1- Conifer woodland principally dominated by limber pine Pinus flexilis, bristlecone pine Pinus aristata and whitebark pine Pinus albicaulis in canopies less than 30 percent.

- Primary associated tree species include white fir Abies concolor, spruce Picea engelmannii, doug fir Pseudotsuga menziesii, and sub-alpine fir Abies lasiocarpa.
- Primary associated shrub species include sagebrush Artemisia spp., snowberry Symphoricarpos spp., willow Salix spp., manzanita Arctostaphylos patula and dwarf juniper Junperus communis.
- Distribution - This class is distributed throughout central, eastern and northern Nevada on high elevation mountains. It occurs in lower elevations in eastern and northern Nevada (8000-10,000 feet), then in central Nevada (9500-11,000 feet). These three pine species can intermix, and their broad overlap belts are the reason they were not mapped independently. However, in many mountain ranges only one or two of the species will occur independently of the others, especially in northern Nevada where bristlecone pine is absent. As a general rule limber pine is predominate in northern Nevada and bristlecone in southern Nevada.

7.) GREAT BASIN SUBALPINE PINE_2- Conifer woodland principally dominated by limber pine Pinus flexilis, bristlecone pine Pinus aristata and whitebark pine Pinus albicaulis in canopies from 30-60 percent.

- Primary associated tree species include white fir Abies concolor, spruce Picea engelmannii, doug fir Pseudotsuga menziesii, and sub-alpine fir Abies lasiocarpa.
- Primary associated shrub species include sagebrush Artemisia spp., snowberry Symphoricarpos spp., willow Salix spp., manzanita Arctostaphylos patula and dwarf juniper Junperus communis. Distribution - This class is distributed throughout central, eastern and northern Nevada on high elevation mountains. It occurs in lower elevations in eastern and northern Nevada (8000-10,000 feet), then in central Nevada (9500-11,000 feet). These three pine species can intermix, and their broad overlap belts are the reason they were not mapped independently. However, in many mountain ranges only one or two of the species will occur independently of the others, especially in northern Nevada where bristlecone pine is absent. As a general rule limber pine is predominate in northern Nevada and bristlecone in southern Nevada.

8.) JUNIPER_1 - Conifer woodland principally dominated by Utah juniper Juniperus osteosperma at canopies less than 30 percent.

- Primary associated tree species include rocky mountain juniper Juniperus scopulorum, western juniper Juniperus occidentalis and single leaf pinyon Pinus monophylla.
- Primary associated shrub species include sagebrush Artemisia spp., rabbitbrush Chrysothamnus spp. and blackbrush Coleogyne ramosissima.
- Distribution - Juniper is widely distributed throughout Nevada in open canopy stands. It typically occurs at lower elevations below the pinyon-juniper zone. Northern Nevada contains only juniper, with small stands of western juniper in extreme northwest Nevada. In southern Nevada juniper occurs commonly with blackbrush.

9.) JUNIPER_2 - Conifer woodland principally dominated by juniper Juniperus osteosperma at canopies from 30-60 percent.

- Primary associated tree species include rocky mountain juniper Juniperus scopulorum, western juniper Juniperus occidentalis and single leaf pinyon Pinus monophylla.
- Primary associated shrub species include sagebrush Artemisia spp., rabbitbrush Chrysothamnus spp and blackbrush Coleogyne ramosissima.
- Distribution - Juniper is widely distributed throughout Nevada in open canopy stands. It typically occurs at lower elevations below the pinyon-juniper zone. Northern Nevada contains only juniper, with small stands of western juniper in extreme northwest Nevada. In southern Nevada juniper occurs commonly with blackbrush.

10.) MOJAVE BRISTLECONE_1 - Conifer forest principally dominated by bristlecone pine Pinus aristata at canopies less than 30 percent.

- Primary associated tree species include limber pine Pinus flexilis, engelmann spruce Picea engelmannii, white fir Abies concolor, and ponderosa pine Pinus ponderosa.
- Primary associated shrub species include sagebrush Artemisia spp. and snowberry Symphoricarpos spp. Distribution - This class is distributed in the Snake and Sheep Creek Mountains within the Mojave Desert usually from 9000-11,500 feet. It is distinguished as the largest, densest expanse of bristlecone pine within Nevada.

11.) MOJAVE BRISTLECONE_2 - Conifer forest principally dominated by bristlecone pine Pinus aristata at canopies from 30-60 percent.

- Primary associated tree species include limber pine Pinus flexilis, engelmann spruce Picea engelmannii, white fir Abies concolor, and ponderosa pine Pinus ponderosa.
- Primary associated shrub species include sagebrush Artemisia spp. and snowberry Symphoricarpos spp. Distribution - This class is distributed in the Snake and Sheep Creek Mountains within the Mojave Desert usually from 9000-11,500 feet. It is distinguished as the largest, densest expanse of bristlecone pine within Nevada.

12.) MOJAVE BRISTECONE_3 - Conifer forest principally dominated by bristlecone pine Pinus aristata at canopies greater than 60 percent.

- Primary associated tree species include limber pine Pinus flexilis, engelmann spruce Picea engelmannii, white fir Abies concolor, and ponderosa pine Pinus ponderosa.
- Primary associated shrub species include sagebrush Artemisia spp. and snowberry Symphoricarpos spp. Distribution - This class is distributed in the Snake and Sheep Creek Mountains within the Mojave Desert usually from 9000-11,500 feet. It is distinguished as the largest, densest expanse of bristlecone pine within Nevada.

13.) MOUNTAIN MAHOGANY_1- Woodland principally dominated by mountain mahogany Cercocarpus ledifolius at canopies less than 30 percent.

- Primary associated species include pinyon Pinus monophylla, juniper Juniperus spp. and sagebrush Artemisia spp.
- Distribution - This class occurs widely throughout Nevada, usually in elevations above the pinyon-juniper zone on steep, rocky, dry slopes. It is most abundant in central, eastern and northern Nevada.

14.) MOUNTAIN MAHOGANY_2 - Forest principally dominated by mountain mahogany Cercocarpus ledifolius at canopies from 30-60 percent.

- Primary associated species include pinyon Pinus monophylla, juniper Juniperus spp. and sagebrush Artemisia spp..
- Distribution - This class occurs widely throughout Nevada, usually in elevations above the pinyon-juniper zone on steep, rocky, dry slopes. It is most abundant in central, eastern and northern Nevada.

15.) MOUNTAIN MAHOGANY_3 - Forest principally dominated by mountain mahogany Cercocarpus ledifolius at canopies above 59 percent.

- Primary associated species include pinyon Pinus monophylla, juniper Juniperus spp. and sagebrush Artemisia spp..
- Distribution - This class occurs widely throughout Nevada, usually in elevations above the pinyon-juniper zone on steep, rocky, dry slopes. It is most abundant in central, eastern and northern Nevada.

16.) PINYON_1 - Conifer woodland principally dominated by single leaf pinyon Pinus monophylla at canopies less than 30 percent.

- Primary associated tree species include Utah juniper Juniperus osteosperma., ponderosa pine Pinus ponderosa, white fir Abies concolor, mountain mahogany Cercocarpus ledifolius and jeffrey pine Pinus Jeffreyi.
- Primary associated shrub species include sagebrush Artemisia spp., oak Quercus gambelii, alder leaf mountain mahogany Cercocarpus montanus, littleleaf mountain mahogany Cercocarpus intricatus, cliffrose Cowania mexicana, manzanita Arctostaphylos spp., shrub live oak Quercus turbinella, and bitterbrush Purshia tridentata.
- Distribution - Pinyon is most widely distributed throughout eastern, central and western Nevada at elevations above the pinyon-juniper zone. It is absent in northern Nevada.

17.) PINYON_2 - Conifer forest principally dominated by single leaf pinyon Pinus monophylla at canopies from 30-60 percent.

- Primary associated tree species include Utah juniper Juniperus osteosperma., ponderosa pine Pinus ponderosa, white fir Abies concolor, mountain mahogany Cercocarpus ledifolius and jeffry pine Pinus Jeffreyi.
- Primary associated shrub species include sagebrush Artemisia spp., oak Quercus gambelii, alder leaf mountain mahogany Cercocarpus montanus, littleleaf mountain mahogany Cercocarpus intricatus, cliffrose Cowania mexicana, manzanita Arctostaphylos spp., shrub live oak Quercus turbinella, and
- bitterbrush Purshia tridentata.
- Distribution - Pinyon is most widely distributed throughout eastern, central and western Nevada at elevations above the pinyon-juniper zone. It is absent in northern Nevada.

18.) PINYON-JUNIPER_1 - Conifer woodland principally co-dominated by single leaf pinyon Pinus monophylla and Utah juniper Juniperus osteosperma at canopies less than 30 percent.

- Primary associated tree species include mountain mahogany Cercocarpus ledifolius.
- Primary associated shrub species include sagebrush Artemisia spp., rabbitbrush Chrysothamnus spp., oak Quercus gambelii, alder leaf mountain mahogany Cercocarpus montanus, bitterbrush Purshia tridentata, littleleaf mountain mahogany Cercocarpus intricatus, and cliffrose Cowania mexicana.

- Distribution - Pinyon-Juniper is distributed throughout all but northern Nevada. It is most abundant in eastern and central Nevada. It typically occurs at elevations above the juniper zone and below the pinyon zone.

19.) PINYON-JUNIPER_2 - Conifer woodland principally co-dominated by pinyon Pinus monophylla and juniper Juniperus osteosperma at canopies from 30-60 percent.

- Primary associated tree species include mountain mahogany Cercocarpus ledifolius.
- Primary associated shrub species include sagebrush Artemisia spp., rabbitbrush Chrysothamnus spp., oak Quercus gambelii, alder leaf mountain mahogany Cercocarpus montanus, bitterbrush Purshia tridentata, littleleaf mountain mahogany Cercocarpus intricatus, and cliffrose Cowania mexicana.
- Distribution - Pinyon-Juniper is distributed throughout all but northern Nevada. It is most abundant in eastern and central Nevada. It typically occurs at elevations above the juniper zone and below the pinyon zone.

20.) PONDEROSA PINE_1/MOUNTAIN SHRUB - Conifer woodland principally dominated by ponderosa pine Pinus ponderosa at canopies less than 30 percent, co-dominant with mountain shrubs including oak Quercus gambelii, alder leaf mountain mahogany Cercocarpus montanus, snowberry Symphoricarpos spp., manzanita Arctostaphylos spp. and littleleaf mountain mahogany Cercocarpus intricatus.

- Primary associated tree species include pinyon Pinus monophylla, juniper juniperus osteosperma, white fir Abies concolor, limber pine Pinus flexilis, mountain mahogany Cercocarpus ledifolius and bristlecone pine Pinus aristata.
- Primary associated shrub species include sagebrush Artemisia spp..
- Distribution - This class is predominately found in the Spring, Sheep Creek and Clover mountains of southern Nevada.

21.) PONDEROSA PINE_2 - Conifer forest principally dominated by ponderosa pine Pinus ponderosa at canopies from 30-60 percent.

- Primary associated tree species include pinyon Pinus monophylla, juniper juniperus osteosperma, white fir Abies concolor, limber pine Pinus flexilis, mountain mahogany Cercocarpus ledifolius and bristlecone pine Pinus aristata.
- Primary associated shrub species include sagebrush Artemisia spp., oak Quercus gambelii, alder leaf mountain mahogany Cercocarpus montanus, snowberry Symphoricarpos spp., manzanita Arctostaphylos spp. and littleleaf mountain mahogany Cercocarpus intricatus.
- Distribution - This class is predominately found in the Spring, Sheep Creek and Clover mountains of southern Nevada, and the Snake, Wilson Creek, Quinn Canyon and Schell Creek mountains of eastern Nevada.

22.) SIERRA LODGEPOLE_1- Conifer woodland principally dominated by lodgepole Pinus contorta ,var. murrayana in canopies below 30 percent.

- Primary associated tree species include mountain hemlock Tsuga mertensiana, and whitebark pine Pinus albicaulis in the upper elevation zones and red fir Abies magnifica, western white pine Pinus monticola, whitebark pine Pinus albicaulis, white fir Abies concolor and jeffry pine Pinus jeffreyi, in the lower elevation zones.
- Primary associated shrub species include sagebrush Artemisia spp., manzanita Arctostaphylos spp., buck/snowbrush Ceanothus spp., ribes Ribes spp., willow Salix spp., potentilla Potentilla spp., labador tea Ledum glandulosum and mountain heather Phyllodoce breweri.

- Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 8000-9500 feet, but can range from 7200-10,000 feet on the east side of the Sierras. Lodgepole tends to be found in a wider elevation range towards the southern end of the Sierra mountains.

23.) SIERRA LODGEPOLE_2 - Conifer woodland principally dominated by lodgepole Pinus contorta ,var. murrayana in canopies between 30-60 percent.

- Primary associated tree species include mountain hemlock Tsuga mertensiana, and whitebark pine Pinus albicaulis in the upper elevation zones and red fir Abies magnifica, western white pine Pinus monticola, whitebark pine Pinus albicaulis, white fir Abies concolor and jeffry pine Pinus jeffreyi, in the lower elevation zones.
- Primary associated shrub species include sagebrush Artemisia spp., manzanita Arctostaphylos spp., buck/snowbrush Ceanothus spp., ribes Ribes spp., willow Salix spp., potentilla Potentilla spp., labador tea Ledum glandulosum and mountain heather Phyllodoce breweri.
- Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 8000-9500 feet, but can range from 7200-10,000 feet on the east side of the Sierras. Lodgepole tends to be found in a wider elevation range towards the southern end of the Sierra mountains.

24.) SIERRA LODGEPOLE_3 - Conifer woodland principally dominated by lodgepole Pinus contorta ,var. murrayana in canopies above 59 percent.

- Primary associated tree species include mountain hemlock Tsuga mertensiana, and whitebark pine Pinus albicaulis in the upper elevation zones and red fir Abies magnifica, western white pine Pinus monticola, whitebark pine Pinus albicaulis, white fir Abies concolor and jeffry pine Pinus jeffreyi, in the lower elevation zones.
- Primary associated shrub species include sagebrush Artemisia spp., manzanita Arctostaphylos spp., buck/snowbrush Ceanothus spp., ribes Ribes spp., willow Salix spp., potentilla Potentilla spp., labador tea Ledum glandulosum and mountain heather Phyllodoce breweri.
- Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 8000-9500 feet, but can range from 7200-10,000 feet on the east side of the Sierras. Lodgepole tends to be found in a wider elevation range towards the southern end of the Sierra mountains.

25.) SIERRA RED FIR_2 - Conifer forest principally dominated by red fir Abies magnifica in canopies between 30-60 percent.

- Primary associated tree species include lodgepole Pinus contorta, jeffrey pine Pinus Jeffreyi, western white pine Pinus monticola, mountain hemlock Tsuga mertensiana, white fir, Abies concolor and aspen Populus tremuloides.
- Primary associated shrub species include manzanita Arctostaphylos spp., buck/snowbrush Ceanothus spp., oak Quercus spp., ribes Ribes spp., bitter cherry Prunus emarginata, honeysuckle Lonicera conjugalis and snowberry Symphoricarpos spp..
- Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 7500-9000 feet. Red fir tends to be found in moist areas and shady aspects. Lodgepole is common within this zone on drier aspects.

26.) SIERRA RED FIR_3 - Conifer forest principally dominated by red fir Abies magnifica in canopies between above 59 percent.

- Primary associated tree species include lodgepole Pinus contorta, jeffry pine Pinus jeffreyi, western white pine Pinus monticola, mountain hemlock Tsuga mertensiana, white fir, Abies concolor and aspen Populus tremuloides.
- Primary associated shrub species include manzanita Arctostaphylos spp., buck/snowbrush Ceanothus spp., oak Quercus spp., ribes Ribes spp., bitter cherry Prunus emarginata, honeysuckle Lonicera conjugalis and snowberry Symphoricarpos spp..
- Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 7500-9000 feet. Red fir tends to be found in moist areas and shady aspects. Lodgepole is common within this zone on drier aspects.

27.) SIERRA WHITEBARK_1 - Conifer woodland principally dominated by whitebark pine Pinus albicaulis in canopies below 30 percent.

- Primary associated tree species include limber pine Pinus flexilis, mountain hemlock Tsuga mertensiana, and lodgepole Pinus contorta.
- Primary associated shrub species include ribes Ribes spp., potentilla Potentilla spp., epilobium spp., alpine laurel Kalmia polifolia, Penstemon spp. and white mountain heather Cassiope mertensiana. Distribution: This class is mostly local to the Sierra Nevada Mountains, with minor extensions as far east as the Wassuk Mountains. This type occurs usually in elevations from 9000-10,500 feet, and is characterized by an open forest canopy. The structure of the trees in this class can occur in shrubby form in the upper elevation zones.

28.) SIERRA WHITEBARK_2 - Conifer forest principally dominated by whitebark pine Pinus albicaulis in canopies between 30-60 percent.

- Primary associated tree species include limber pine Pinus flexilis, mountain hemlock Tsuga mertensiana, and lodgepole Pinus contorta.
- Primary associated shrub species include ribes Ribes spp., potentilla Potentilla spp., epilobium spp., alpine laurel Kalmia polifolia, Penstemon spp. and white mountain heather Cassiope mertensiana. Distribution: This class is mostly local to the Sierra Nevada Mountains, with minor extensions as far east as the Wassuk Mountains. This type occurs usually in elevations from 9000-10,500 feet, and is characterized by an open forest canopy. The structure of the trees in this class can occur in shrubby form in the upper elevation zones.

29.) SIERRA WHITE FIR_3 - Conifer forest principally dominated by white fir, Abies concolor var. lowiana in canopies greater than 59 percent.

- Primary associated tree species include douglas fir Pseudotsuga menziesii, jeffry pine Pinus Jeffreyi, ponderosa pine Pinus Ponderosa, sugar pine Pinus lambertiana, incense cedar Libocedrus decurrens, and red fir Abies magnifica.
- Primary associated shrub species include manzanita Arctostaphylos spp., buck/snowbrush Ceanothus spp., oak Quercus spp., ribes Ribes spp., bitter cherry Prunus emarginata, and willow Salix spp.
- Distribution - Sierra White Fir is localized to the Sierra Mountains. It typically occurs from 6500-8000 feet on the east side, usually located on cooler north or east aspects.

30.) SIERRA YELLOW PINE_1 - Conifer woodland principally dominated by jeffry pine Pinus Jeffreyi, ponderosa pine Pinus Ponderosa and washoe pine Pinus Washoensis in canopies less than 30 percent.

- Primary associated tree species include white fir, Abies concolor, sugar pine Pinus lambertiana, incense cedar Libocedrus decurrens, pinyon Pinus monophylla, and western juniper Juniperus

occidentalis on lower elevation zones. Red fir Abies magnifica, western white pine Pinus monticola, and lodgepole Pinus contorta are more common associates at upper elevation zones.

- Primary associated shrub species include sagebrush Artemisia spp., bitterbrush Purshia tridentata, and granite gilia Leptodactylon pungens in lower elevation areas, and manzanita Arctostaphylos spp., buck/snowbrush Ceanothus spp., oak Quercus spp., ribes Ribes spp., bitter cherry Prunus emarginata, and snowberry Symphoricarpos spp. in higher elevation areas.
- Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 5000-7500 feet on the east side of the Sierras. White fir is common within this zone, but usually on north facing aspects. Minor occurrences of this class can be found as far east as the Wassuk, Pine Nut and Virginia Mountains.

31.) SIERRA YELLOW PINE_2 - Conifer forest principally dominated by jeffry pine Pinus Jeffreyi, ponderosa pine Pinus Ponderosa and washoe pine Pinus Washoensis in canopies from 30-60 percent.

- Primary associated tree species include white fir, Abies concolor, sugar pine Pinus lambertiana, incense cedar Libocedrus decurrens, pinyon Pinus monophylla, and western juniper Juniperus occidentalis on lower elevation zones. Red fir Abies magnifica, western white pine Pinus monticola, and lodgepole Pinus contorta are more common associates at upper elevation zones.
- Primary associated shrub species include sagebrush Artemisia spp., bitterbrush Purshia tridentata and granite gilia Leptodactylon pungens in lower elevation areas and manzanita Arctostaphylos spp., buck/snowbrush Ceanothus spp., oak Quercus spp., ribes Ribes spp., bitter cherry Prunus emarginata, snowberry Symphoricarpos spp. in higher elevation areas.
- Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 5000-7500 feet on the east side of the Sierras. White fir is common within this zone, but usually on north facing aspects. Minor occurrences of this class can be found as far east as the Wassuk, Pine Nut and Virginia Mountains.

32.) SIERRA YELLOW PINE_3 - Conifer forest principally dominated by jeffry pine Pinus Jeffreyi, ponderosa pine Pinus Ponderosa and washoe pine Pinus Washoensis in canopies above 59 percent.

- Primary associated tree species include white fir, Abies concolor, sugar pine Pinus lambertiana, incense cedar Libocedrus decurrens, pinyon Pinus monophylla, and western juniper Juniperus occidentalis on lower elevation zones. Red fir Abies magnifica, western white pine Pinus monticola, and lodgepole Pinus contorta are more common associates at upper elevation zones.
- Primary associated shrub species include sagebrush Artemisia spp., bitterbrush Purshia tridentata, and granite gilia Leptodactylon pungens in lower elevation areas, and manzanita Arctostaphylos spp., buck/snowbrush Ceanothus spp., oak Quercus spp., ribes Ribes spp., bitter cherry Prunus emarginata, and snowberry Symphoricarpos spp. in higher elevation areas.
- Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 5000-7500 feet on the east side of the Sierras. White fir is common within this zone, but usually on north facing aspects.

33.) SIERRA YELLOW PINE_/MOUNTAIN SHRUB - Conifer woodland or forest principally dominated by jeffry pine Pinus Jeffreyi, ponderosa pine Pinus Ponderosa and washoe pine Pinus Washoensis co-dominant with Sierra foothill and montane chaparral shrub species including manzanita Arctostaphylos spp., buck/snow/tobacco brush Ceanothus spp., oak Quercus spp., currant Ribes spp., bitter cherry Prunus emarginata, and snowberry Symphoricarpos spp..

- Primary associated tree species include white fir, Abies concolor, sugar pine Pinus lambertiana, incense cedar Libocedrus decurrens, pinyon Pinus monophylla, and western juniper Juniperus occidentalis on lower elevation zones with red fir Abies magnifica, western white pine Pinus monticola, and lodgepole Pinus contorta more common associates on upper elevation zones.
- Primary associated shrub species include sagebrush Artemisia spp. and bitterbrush Purshia tridentata. Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 6000-7500 feet on the east side of the Sierras. It is especially prevalent in the Lake Tahoe area.

34.) SUB ALPINE FIR_2 - Conifer woodland principally dominated by sub-alpine fir Abies lasiocarpa at canopies from 30-60%.

- Primary associated tree species include limber pine Pinus flexilis, quaking aspen Populus tremuloides and whitebark pine Pinus albicaulis.
- Primary associated shrub species include snowberry Symphoricarpos spp.,dwarf juniper Juniperus communis and chokecherry Prunus virginiana.
- Distribution - This class is only distributed in northeast Nevada, in the Bull Run, Independence and Jarbidge mountains.

35.) SUB ALPINE FIR_3 - Conifer woodland principally dominated by sub-alpine fir Abies lasiocarpa at canopies greater than 59%.

- Primary associated tree species include limber pine Pinus flexilis, quaking aspen Populus tremuloides and whitebark pine Pinus albicaulis.
- Primary associated shrub species include snowberry Symphoricarpos spp., dwarf juniper Juniperus communis and chokecherry Prunus virginiana.
- Distribution - This class is only distributed in northeast Nevada, in the Bull Run, Independence and Jarbidge mountains.

36.) WHITE FIR_1 - Conifer forest principally dominated by white fir Abies concolor at canopies less than 30 percent.

- Primary associated tree species include ponderosa pine Pinus ponderosa, pinyon Pinus monophylla, mountain mahogany Cercocarpus montanus, engelmann spruce Picea engelmannii, limber pine Pinus flexilis and bristlecone pine Pinus aristata.
- Primary associated shrub species include sagebrush Artemisia spp., snowberry Symphoricarpos spp., buckbrush Ceanothus spp. and manzanita Arctostaphylos spp.
- Distribution - This class is distributed throughout eastern and southern Nevada typically above 7500 feet on north and east aspects.

37.) WHITE FIR_2 - Conifer forest principally dominated by white fir Abies concolor at canopies from 30-60 percent.

- Primary associated tree species include ponderosa pine Pinus ponderosa, pinyon Pinus monophylla, mountain mahogany Cercocarpus montanus, engelmann spruce Picea engelmannii, limber pine Pinus flexilis and bristlecone pine Pinus aristata.
- Primary associated shrub species include sagebrush Artemisia spp., snowberry Symphoricarpos spp., buckbrush Ceanothus spp. and manzanita Arctostaphylos spp..
- Distribution - This class is distributed throughout eastern and southern Nevada typically above 7500 feet on north and east aspects.

38.) WHITE FIR_3 - Conifer forest principally dominated by white fir Abies concolor at canopies greater than 60 percent.

- Primary associated tree species include ponderosa pine Pinus ponderosa, pinyon Pinus monophylla, mountain mahogany Cercocarpus montanus, engelmann spruce Picea engelmannii, limber pine Pinus flexilis and bristlecone pine Pinus aristata.
- Primary associated shrub species include sagebrush Artemisia spp., snowberry Symphoricarpos spp., buckbrush Ceanothus spp. and manzanita Arctostaphylos spp..
- Distribution - This class is distributed throughout eastern and southern Nevada typically above 7500 feet on north and east aspects.

SHRUBS

39.) BITTERBRUSH - Shrubland principally dominated or co-dominated by bitterbrush Purshia tridentata.

- Primary associated shrub species include sagebrush Artemisia spp., rabbitbrush Chrysothamnus spp., manzanita Arctostaphylos spp. and buckbrush Ceanothus spp..
- Primary associated tree species include juniper juniperus osteosperma, pinyon pinus monophylla., mountain mahogany Cercocarpus ledifolius, jeffry pine Pinus Jeffreyi, and ponderosa pine Pinus ponderosa.
- Distribution - Almost entirely confined to the shrublands and benches on the east slope of the Sierra Mountains. Bitterbrush rarely extensively dominates the cover-type, but typically occurs with the associated shrubs listed above. Bitterbrush occurs throughout Nevada, but usually as a component of other shrublands or in microsites not mappable at this scale.

40.) BLACKBRUSH - Shrubland principally dominated by blackbrush Coleogyne ramosissima.

- Primary associated tree species include juniper Juniperus osteosperma.
- Primary associated shrub species include spiny hopsage Grayia spinosa, mormon tea Ephedra spp., shadscale Atriplex confertifolia, desert thorn Lycium spp., snakeweed Xanthocephalum spp., and creosote Larrea tridentata.
- Other associated species include joshua tree Yucca brevifolia, and yucca Yucca spp..
- Distribution - Blackbrush is typically a transition vegetation class between mojave scrub and great basin shrubs. It typically occurs in elevation transition areas between 4000-5000 feet and in a latitude transition areas north of creosote-bursage.

41.) CREOSOTE-BURSAGE - Scrubland principally dominated by creosote Larrea tridentata and white bursage Ambrosia dumosa.

- Primary associated shrub species include blackbrush Coleogyne ramosissima, mormon tea Ephedra spp., dalea Dalea fremonti, shadscale Atriplex confertifolia, hopsage Grayia spinosa, desert thorn Lycium spp., ratany Krameriaceae parvifollia, burro bush Hymenoclea salsola, honey mesquite Prosopis glandulosa and brittlebush Encelia farinosa.
- Other associated species include joshua tree Yucca brevifolia, yucca Yucca spp., prickly pear Opuntia engelmannii and cholla.
- Distribution - This class occurs widely within the Mojave desert below 4000 feet, and typically is found in valley bottoms, lowlands and flatlands of mild slope.

42.) GREASEWOOD - Shrubland principally dominated by greasewood Sarcobatus vermiculatus.

- Primary associated shrub species include shadscale Atriplex confertifolia, iodine bush Allenrolfea occidentalis, basin sagebrush Artemisia tridentata var. tridentata and bailey greasewood Sarcobatus baileyi.
- Other associated species include seepweed Suaeda torreyana, halogeten Halogeten glomeratus and tumbleweed Salsolia iberica.
- Distribution - Greasewood is found throughout Nevada, typically in the salt desert scrub zone. It is very salt tolerant and can usually be found on flat valley floors.

43.) HOPSAGE - Shrubland characterized by the occurrence of hopsage Grayia spinosa, typically in concert with desert thorn Lycium spp, rabbitbrush Chrysothamnus spp., tea Ephedra spp. and shadscale Atriplex confertifolia.

- Primary associated shrub species include sagebrush Artemisia spp. blackbrush Coleogyne ramosissima, rabbitbrush Chrysothamnus spp., winterfat Ceratoides lanata, ratany Krameriaceae parvifollia, bursage Ambrosia dumosa and creosote Larrea tridentata.
- Distribution - This is a transition shrubland, typically between mojave and great basin ecosystems. This class occurs in the northern reaches of the mojave and the southern fringe of the great basin.

44.) MESQUITE - Shrubland dominated by mesquite Prosopsis glandulosa.

- Primary associated shrub species include salt cedar Tamarix pentandra, torrey saltbush Atriplex torreyi and creosote Larrea tridentata.
- Distribution - This cover-type is only found principally on the west side of the mojave desert in scattered clumps.

45.) MOJAVE MIXED SCRUB - Mojave desert mixed scrublands are usually characterized by the occurrence of creosote Larrea tridentata, in association with several possible species including bursage Ambrosia dumosa, dalea Psorothamnus fremontii, desert thorn Lycium spp., shadscale Atriplex confertifolia, hopsage Grayia spinosa, ratany Krameriaceae parvifollia and tea Ephedra spp..

- Primary associated shrub species include blackbrush Coleogyne ramosissima, brittlebrush Encelia farinosa, burro bush Hymenoclea salsola, bebbia Bebbia juncea, desert saltbush Atriplex polycarpa and desert holly Atriplex hymenelytra.
- Other associated species include joshua tree Yucca brevifolia., yucca Yucca spp., cacti Echinocereus spp. and cholla Opuntia biglovii.
- Distribution - This class typically occurs on slopes, washes or upland areas within the Mojave desert that are difficult to charactarize because of several mixed shrub species with no clear dominance.

46.) MOUNTAIN SAGEBRUSH - Mountain shrubland dominated or co-dominated by mountain big sagebrush Artemisia tridentata ssp. vaseyana, subalpine sagebrush Artemisia tridentata ssp. spiciformis, low sagebrush Artemisia arbuscula and silver sagebrush Artemisia cana, in concert with mountain shrubs, grasses and forbs.

- Primary associated tree species include pinyon pinus monophylla., mountain mahogany Cercocarpus ledifolius, limber pine Pinus flexilis, white fir Abies concolor, subalpine fir Abies lasiocarpa, engelmann spruce Picea engelmannii, ponderosa pine Pinus ponderosa, lodgepole pine Pinus contortus, whitebark pine Pinus albicaulis and jeffry pine Pinus jeffreyi.
- Primary associated shrub species include snowberry Symphoricarpos spp., alder leaf mountain mahogany Cercocarpus montanus, bitterbrush Purshia tridentata, littleleaf mountain mahogany

Cercocarpus intricatus, buckbrush Ceanothus spp., manzanita Arctostaphylos spp., ninebark Physocarpus alternans, currant Ribes spp., squawbush Rhus spp. and cliffrose Cowania mexicana.

- Distribution - This class is widespread throughout Nevada mountains usually at elevations from 650010,000 feet. It is especially prevalent in central and northern Nevada where mountain forests are minimal.

47.) MOUNTAIN SHRUB - Deciduous shrubland principally dominated by oak Quercus spp., maple Acer spp., alder leaf mountain mahogany Cercocarpus montanus, cliffrose Cowania mexicana, bitterbrush Purshia tridentata, serviceberry Amelanchier spp., buckbrush Ceanothus spp.,, snowberry Symphoricarpos spp., manzanita Arctostaphylos spp.,ninebark Physocarpus alternans, currant Ribes spp., squawbush Rhus spp. and littleleaf mountain mahogany Cercocarpus intricatus .

- Primary associated shrub species include sagebrush Artemisia spp. and rabbitbrush Chrysothamnus spp. Primary associated tree species include pinyon Pinus monophylla, juniper juniperus osteosperma, mountain mahogany Cercocarpus ledifolius, aspen Populus tremuloides, white fir Abies concolor, limber pine Pinus flexilis, ponderosa pine Pinus ponderosa, subalpine fir Abies lasiocarpa and engelmann spruce Picea engelmannii.
- Distribution - This is a wide-spread class in the foothills and mountains of Nevada. Because of the landscape scale of the mapping, many of these species could not be isolated. The largest concentrations of this class are found in the mountains of southern, eastern and northeastern Nevada.

48.) SAGEBRUSH - Shrubland principally dominated by big sagebrush Artemisia tridentata spp., black sagebrush Artemisia nova or low sagebrush Artemisia arbuscula.

- Primary associated tree species include juniper juniperus osteosperma, pinyon pinus monophylla., mountain mahogany Cercocarpus ledifolius, jeffry pine Pinus Jeffreyi and ponderosa pine Pinus ponderosa.
- Primary associated shrub species include rabbitbrush Chrysothamnus spp., snakeweed Gutierrezia sarothrae, blackbrush Coleogyne ramosissima, shadscale Atriplex confertifolia, greasewood Sarcobatus spp., spiny hopsage Grayia spinosa, and bitterbrush Purshia tridentata.
- Primary associated grass species include wheatgrasses Agropyron spp., cheatgrass Bromus tectorum, bluegrasses Poa spp., Needlegrasses Stipa spp. Fescues Festuca spp., and galleta Hilaria jamesii. Distribution - Sagebrush is the most widespread and abundant cover-type in Nevada. Typically this class occurs above 5000 feet with associated grass species making up less than 25% of the sagebrush canopy.

49.) SAGEBRUSH/PERENNIAL GRASS - Co-dominate sagebrush Artemisia spp. shrubland and perennial grassland. Co-dominance is defined by either shrub or grass occurring at canopies at least 25% of the other

- Principal grass species include wheatgrasses Agropyron spp., bluegrasses Poa spp., Needlegrasses Stipa spp. Fescues Festuca spp., ricegrass Oryzopsis hymenoides and galleta Hilaria jamesii.
- Primary associated shrub species include rabbitbrush Chrysothamnus spp., bitterbrush Purshia tridentata and cliffrose Cowania mexicana. Primary associated grass species include cheatgrass Bromus tectorum and squirreltail Elymus elymoides.
- Distribution - This class typically occurs mid-elevation between sagebrush and mountain sagebrush classes in central Nevada, and is wide-spread as part of the sagebrush steppe of northern Nevada.

50.) SALT DESERT SCRUB - Shrublands principally dominated by one or more of the following; shadscale atriplex confertifolia, desert holly Atriplex hymenelytra, bailey's greasewood Sarcobatus baileyi,

desert thorn Lycium spp., torrey saltbush Atriplex torreyi, winterfat Ceratoides lanata, budsage Artemisia spinescens, fourwing saltbush Atriplex canescens, mormon tea Ephedra spp., bailey's greasewood Sarcobatus baileyi, horsebrush Tetradymia canescens and snakeweed Gutierrezia sarothrae.

- Primary associated shrub species include greasewood Sarcobatus vermiculatus, sagebrush Artemisia spp. blackbrush Coleogyne ramosissima, iodine bush Allenrolfea occidentalis and creosote Larrea tridentata. Primary associated forb species includes halogeten Halogeten glomeratus.
- Primary associated grass species include saltgrass Distichlis spicata and cheatgrass Bromus tectorum. Distribution - This is a broad abundant class which can occur in a variety of physiographic areas throughout the state. Typically this class occurs below 5000 feet (except for central Nevada) and especially dominates the Lahontan basin of western Nevada.

51.) SIERRA MOUNTAIN SHRUB- Shrubland principally dominated or co-dominated by foothill and montane chaparral shrub species locally abundant in the Sierra mountains including manzanita Arctostaphylos spp., buck/snow/tobacco brush Ceanothus spp., oak Quercus spp., currant Ribes spp., bitter cherry Prunus emarginata, and snowberry Symphoricarpos spp..

- Primary associated shrub species include sagebrush Artemisia spp. and bitterbrush Purshia tridentata Primary associated tree species include pinyon pinus monophylla., mountain mahogany Cercocarpus ledifolius, jeffry pine Pinus Jeffreyi, ponderosa pine Pinus ponderosa, red fir Abies magnifica, western white pine Pinus monticola, lodgepole Pinus contorta, mountain hemlock Tsuga mertensiana, and whitebark pine Pinus albicaulis.
- Distribution - Confined to the east slope of the Sierra Mountains. This class contains a wide latitude of shrubs and elevations zones.

HERBACEOUS

52.) ALPINE - High elevation tundra vegetation, including forbs, sedges, grasses and shrubs.

- Principal forb species include alpine avens Geum rossii, Silene acaulis, Eriogonum spp., Draba spp.,
- Principal sedge species include Carex spp.,
- Principal grass species include tufted hair grass Deschampsia caespitosa, Trisetum spicatum, Agropyron scribneri, Festuca ovina, Phleum alpinum.
- Principal shrub species include willow Salix spp., cinquefoil Potentilla spp. and blueberry Vaccinium spp.. Primary associated tree species include limber pine Pinus flexilis, whitebark pine Pinus albicaulis and bristlecone pine Pinus aristata.
- Distribution - This class usually occurs above 10,000 feet on mountains throughout Nevada. Because there is a wide variation in floristic composition in alpine zones throughout Nevada, this list includes only a sample of some of the most common species.

53.) DRY MEADOW - Herbaceous dry meadow, including mostly forbs and grasses.

- Principal forb species include yarrow Achillea millefolium, dandelion Taraxacum officinale, richardson's geranium richardsonii, penstemon spp., mulesears Wyethia amplexicaulis, golden aster Chrysopis villosa, arrowleaf balsamroot Balsamorhiza sagittata, hawkbit Agoseris pumila, larkspur Delphinium spp. and scarlet gilia pulchella
- Principal grass species include alpine fescue Festuca spp., shorthair Calamagrostis spp., wheatgrass Agropyron spp., needlegrass Stipa spp, timothy Phleum spp., poa's poa spp., hairgrass Deschampsia caespitosa, spike trisetum Trisetum spicatum and sedges Carex spp..

- Primary associated shrub species include sagebrush Artemisia spp., rabbit brush Chrysothamnus viscidiflorus, cinquefoil Potentilla fruitcosa, alpine laurel Kalmia polifolia, snowberry Symphoricarpos spp. and elderberry Sambucus cerulea.
- Distribution - This class is widely distributed throughout Nevada foothills and mountains, with highest concentrations in northern Nevada and the Sierra mountains. Plant species are abundant and variable.

54.) GRASSLAND - Perennial and annual grasslands.

- Principal perennial grass species include wheatgrasses Agropyron spp., bluegrass Poa spp., basin wildrye Elymus cinereus, galleta Hilaria spp., needlegrass Stipa spp., sand dropseed Sporobolus cryptandrus, blue gramma Bouteloua gracilis, squirreltail Sitanion hystrix and indian ricegrass Oryzopsis hymenoides. Principal annual grass species include cheatgrass Bromus tectorum.
- Primary associated shrub species include sagebrush Artemisia spp., shadscale Atriplex confertifolia, greasewood Sarcobatus vermiculatus and creosote Larrea tridentata.
- Primary associated tree species include juniper Juniperus spp..
- Distribution - This is a wide-spread, broadly defined class distributed mostly in central and northern Nevada.. The majority of this class occurs as a result of seeded perennial grasslands or fire induced annual grasslands. However, it does also include valley, foothill and mountain native grasslands.

55.) WET MEADOW - Mountain meadows where soil moisture is abundant throughout the growing season.

- Principal species include sedges Carex spp., rushes Juncus spp., reedgrass Calamagrostis spp., timothy Phleum spp., bluegrass poa spp., hairgrass Deschampsia cespitosa, willowherb Epilobium spp., saxifrage Saxifraga spp., etc.
- Primary associated species include willow Salix spp., honeysuckle Lonicera spp., cinquefoil Potentilla spp. and blueberry Vaccinium spp..
- Distribution - This class is sparsely distributed throughout the Nevada mountains, with highest abundance in the Sierra mountains. Wet meadows can contain a wide variety of plant species.

MISCELLANEOUS

56.) AGRICULTURE - Row crops, irrigated pasture and hay fields, dry farm crops.

- Distribution - Located state-wide

57.) BARREN - Barren soil or rock with less than 5 percent total vegetative cover.

- Distribution - This class is distributed throughout Nevada with the majority being low elevation barren
- soil or high elevation rock cliffs and talus slopes.

58.) LOWLAND RIPARIAN - Localized vegetation influenced by the presence of abundant water in contrast to the surrounding landscape in lowland areas.

- Principal tree species include fremont cottonwood Populus fremontii and black cottonwood Populus trichocarpa.
- Principal shrub species include salt cedar Tamarix pentandra, velvet ash Fraxinus velutina, desert willow Chilopsis linearis and mesquite Prosopis glandulosa.

- Distribution - Riparian areas generally lower than 4000 feet in the mojave and 5000 feet in the remaining areas of Nevada. Velvet ash, desert willow and mesquite are only found in the mojave. This class is common along the Carson, Colorado, Humboldt, Truckee, Virgin and Walker rivers.

59.) MOUNTAIN RIPARIAN - - Localized vegetation influenced by the presence of abundant water in contrast to the surrounding landscape in highland areas.

- Principal tree species include narrowleaf cottonwood Populus angustifolia, thinleaf alder Alnus tenuifolia, quaking aspen Populus tremuloides, water birch Betula occidentalis, black hawthorn Crataegus douglasii, and rocky mountain maple Acer glabrum.
- Principal shrub species include willow Salix spp., red-osier dogwood Cornus stolonifera and wild rose Rosa woodsii.
- Distribution - This class is found throughout Nevada in high valley's, foothills and mountains.

60.) PLAYAS - Barren internal basin floors which can occasionally be covered by water.

- Distribution - Located state-wide on flat, low elevation valley floors.

61.) SAND DUNES - Sand dunes with less than 5 percent total vegetative cover.

- Distribution - Located state-wide, with major dunes near Winnemucca and Sand Mountain near Fallon.

62.) SNOW - High elevation snowdrifts still occurring when the satellite image was taken.

- Distribution - High elevation snowdrifts usually above 8000 feet. 3 principal locations in the state include the Ruby, Snake and Sierra Nevada Mountains.

63.) URBAN - Commercial, mining and residential areas.

- Distribution - Located state-wide

64.) WATER - Open water

- Distribution - Located state-wide.

65.) WETLAND - Low elevation marsh and wetland areas.

- Principal species include cattail Typha latifolia, bullrush Scirpus spp., burreed Sparganium spp., common reed grass Phragmites australis, pondweed Potamogeton spp. and sedge Carex spp..
- Distribution - This class occurs in limited areas throughout Nevada, typically in low elevation basins around a permanent water source. The largest expanses occur in Ruby valley and the Carson Sink.