## MIXED MONTANE CHAPARRAL

The mixed montane chaparral community comprises a significant portion of the area near the USFS/private land boundary in the vicinity of the town of Bear Valley and occurs on south facing slopes between the town of Bear Valley and Koala Rocks. This community is shrub-dominated and includes mostly huckleberry oak and pinemat manzanita (*Arctostaphylos nevadensis*), although snowbush is also present. Trees are scattered and uncommon and include white fir (*Abies concolor*) and Jeffrey pine.

## NON-FOREST VEGETATION

Non-forested areas within the BVMR project area include barren areas and constructed ski slopes.

There are 146 acres of barren areas. These areas are primarily on ridge tops, and most are lahar flows. There is some vegetation on them, including scattered herbaceous plants. In sparse pockets of deeper soil some shrub species (for example, pinemat manzanita) and trees such as incense cedar are found. The trees are small in size and provide little canopy cover.

Trees and shrubs on the constructed ski slopes are regularly trimmed back so as not to interfere with skiing. The result is that these slopes are now annual grassland.

## AQUATIC FEATURES

The California Wildlife Habitat Relationships (CWHR) data base indicates that there are 146 acres of wet meadow within the project area. Montane meadow vegetation is herbaceous, and dominant species observed in the project area include Pacific lupine (*Lupinus lepidus*), navarretia (*Navarretia spp.*), yarrow (*Achillea millefolium*), leafy aster (*Symphyotrichum foliaceum*), and mule's ears. Wet meadow habitat condition varies across the STF from early, mid to late seral ecological status condition. In general, wet meadows on the STF predominately fall in the mid ecological status category. This is probably also true within the project area. Wet meadow herbaceous ground cover ranges from sparse to dense depending upon the ecological status and management activities. Herbaceous height classes range from short to tall. Montane meadows provide habitat for a variety of wildlife species. Meadow pools and streams provide potential habitat for several species of amphibians. In summer, dry meadows may provide habitat for small mammals and hunting areas for raptors.

There is a small pond located at Bear Top (the highest point in the ski area) which was constructed for use in snowmaking. It is at the top of the Snow Valley Creek drainage. It is surrounded by rock, except at a few points where small stands of red fir abut the high water mark of the pond.

There are three perennial streams in the project area: Horse Canyon, Snow Valley Creek, and one small perennial stream in the BV TSI project area.

A portion of Horse Canyon forms the north boundary of the project area. The gradient is fairly steep.

In the Watershed Resources Technical Report for the Bear Valley Mountain Improvements Environmental Assessment (in the project record.), Snow Valley Creek was separated into two reaches. The upper reach runs from the headwaters to the downstream end of the culvert adjacent to the ski area work road. This reach has been altered by prior ski trail and work road construction. The result is that channel confinement is variable and consists of pockets of overland flow and narrow channels controlled by large boulders. Perennial flow is a minor component, estimated at 0.5 cubic foot per second. Low-gradient segments of this reach have abundant herbaceous vegetation.

The lower reach has gradients exceeding 70 percent in places. The channel is primarily a step pool system controlled by boulders. Riparian vegetation is thick in this reach and dominated by willows. (See Watershed Resources Technical Report for the Bear Valley Mountain Improvements Environmental Assessment, in the project record.)

The perennial channel in the BV TSI project area is spring-fed upslope of the project area. The Water and Soil Resource Report for the BV TSI project (in project record) describes the channel as follows:

> The perennial and intermittent channels are spring-fed upslope of the project area. These channels support vigorous riparian shrubs and scattered streamside hardwood trees (willow, alder, aspen). Stream gradients are mostly greater than 10% with some portions greater than 20%. Dominant substrate is boulder/cobble with gravels a lesser component . . . The perennial stream within the project area (the spring-fed channel immediately west of the water tank) is in excellent morphological and vegetative condition. The channel is not entrenched and streambank stability is excellent. Vigorous vegetative cover of shrubs and trees exist on the streambanks, and its immediate riparian area is well vegetated with dense stands of mountain alder. Water is clear and cold and there is no evidence of accelerated sedimentation in stream pools.

There is one intermittent channel in the project area, which flows into the western end of Bear Lake. It is approximately 0.7 mile in length. The Watershed Resources Technical Report for the Bear Valley Mountain Improvements Environmental Assessment (in the project record) describes the channel as follows:

During the field review, no flow was observed in this creek. General observations of the channel indicated boulder/cobble beds and a series of step-pools coming off slopes to the north. Field observations were consistent with high gradient snowmelt channels typical of higher elevation first order streams. The upper segments of the creek have gradients exceeding 20 percent, which decrease to 5 percent as the creek enters Bear Lake. Contributing slopes in the headwaters are relatively undeveloped, non forested areas on public lands. At lower elevations, mature red fir forest is prevalent with some pockets of dense alders between Bear Lake and Bear Valley Road. Several houses and two road crossings are present where the creek enters private lands prior to flowing into Bear Lake.

The Watershed Resources Technical Report states that water quality at the larger watershed scale for the Stanislaus and Mokelumne Rivers (to which streams in the project area are tributary) meets beneficial uses of water. Observations by USFS watershed staff over the past several years indicate water quality is very good in the North Fork Mokelumne and North Fork Stanislaus Rivers. Water temperature is suitable for beneficial uses, there is minimal instream sediment, and no apparent petrochemical issues are present. The Water and Soil Resource Report for the BV TSI project states the area streams are at desired condition. The ephemeral and intermittent channels in the TSI area are within the normal form for streams in this type of environment. Vegetation and ground cover are sufficient for stabilizing streambanks.

The elevation range of the proposed activities is 7,250 to 8,500 feet.

# A. BIRDS

## CALIFORNIA SPOTTED OWL (*STRIX OCCIDENTALIS OCCIDENTALIS*)

### Species Account

The California spotted owl is one of three recognized subspecies of spotted owls. This subspecies is a Forest Service sensitive species and a Management Indicator Species (MIS) for the STF. A petition to list the California spotted owl as threatened or endangered under the Endangered Species Act (ESA) was filed with the USFWS on September 1, 2004. On May 24, 2006, the USFWS announced their finding on this petition. The USFWS found that most owl populations were stable or increasing in the Sierra Nevada and that listing the species was not warranted (Federal Register 2006b).

The subspecies is presently found throughout its historic range in California, extending along the west side of the Sierra Nevada from Shasta County south to Tehachapi Pass, and in all major mountains of