Mapping Rules and Attributes for the Cañada de San Vicente Vegetation Map

Base imagery:

The 2010 National Aerial Imagery Program (NAIP) is the base imagery and map date, with other imagery such as Google Earth (2011, with 2010 imagery selected with the time slider) and Bing Maps (2011) used as ancillary data only. The map reflects the conditions on the ground at the time of the 2010 NAIP imagery.

Thematic resolution:

Mapping is to the association level for woodlands and shrublands; however, stands of vegetation are mapped to alliance only when there is not sufficient field data to verify an association, the association is not discernible on the imagery, or the association cannot be modeled with a high degree of certainty. Herbaceous vegetation is mapped to group or macrogroup, unless there is field data to verify the association or the association is modeled with a high degree of certainty.

Minimum mapping units (MMU) and Roads:

- Vegetation has an MMU of 1 acre. Occasionally, vegetation is mapped below MMU for special types including wetland, riparian, and native herbaceous and when it was possible to delineate smaller stands with a high degree of certainty (e.g., with available field data). Additionally, edge vegetation is mapped below MMU when a vegetation polygon is truncated at the project boundary.

- The MMU for polygons coded to map units in the 9000's (i.e., land use) is 1 acre.

- If the primary difference between mappable stands of vegetation is the result of a cover class break in the overstory layer, then the MMU is 2 acres. A few polygons resulting from cover class breaks are mapped below MMU because they are truncated at the project boundary.

- Roads are not pulled out as separate polygons.

Cover Attribution:

Cover ranges are as below, and are estimated based on percent bird's-eye cover, that is, no overlap of plants in the same or different layers. Because it is not possible to see understory cover on the imagery, cover is attributed for:

1) *emergent woody species*, i.e., emergent trees (conifer and hardwood, separately) over a shrub type or scattered shrubs over an herbaceous type;
2) *the dominant layer*, i.e., total cover of trees if it's a tree type, shrubs if a shrub type, and herbs if an herbaceous type;
3) *total bird's eye cover of woody vegetation*, i.e., trees plus shrub cover, with no overlap.

Understory shrub and herb cover is attributed or modeled for stands of vegetation with available field sample data.

Cover classes for Conifer Cover, Hardwood Cover, and Shrub Cover: These are based on the Braun-Blanquet scale, which has seven classes for estimating species cover and abundance. The relatively broad categories in scale help to promote agreement among different observers when estimating cover in the field and while mapping (Barbour et al. 1999).

code	range
0	none
1	>0-1%
2	>1-5%
3	>5-15%
4	>15-25%
5	>25-50%
6	>50-75%
7	>75
99	not applicable for types in 9000s

Cover classes for Herbaceous Cover:

code	range
1	0-2% herbaceous
2	>2-10%
3	>10-40%
4	>40-75%

5	>75-100%
9	not applicable for tree or shrub types or 9000s

Roadedness: Level of impact by paved and unpaved roads, OHV trails, visible hiking trails, railroads, etc. This is coded by estimating what percent of the entire polygon is represented by the largest portion of the polygon that does not have any roads through it.

A polygon that is bounded by a road or trail is coded as at least 1, regardless of how much of the boundary is a road. If it is further divided by roads it may have a higher code.

code	range
0	no roads through polygon (the poly is essentially whole)
1	from 2/3 to just below the entire poly is "whole", or some portion of the polygon boundary is a road or a trail
2	from 1/3 to 2/3 of the poly is "whole"
3	less than 1/3 of the poly is "whole"
9	not applicable, type in 9000s except 9500 and 9310

Development: Presence of structures (buildings, tanks, paved parking lots, trailers, utility and mining structures) and anthropogenic debris (junked vehicles, trash, collapsed structures), when present but below 1 acre MMU.

code	attribute
0	none visible
1	present and visible on imagery
9	not applicable, type in 9000s

Clearing: Disked and scraped areas below the 2 acre mmu.

code	range
0	none visible
1	less than 33% of polygon affected
2	between 33%-66% of the polygon affected
3	> 66% of polygon affected
9	not applicable, type in 9000s except 9500

Heterogeneity: Heterogeneity of the vegetation (i.e., of the composite species distribution and density) as determined by the photointerpreter (not the field observer) within the polygon. In some cases, this attribute reflects the presence of other vegetation stands within the polygon that are below MMU. For purely herbaceous types, this field does not represent heterogeneity of species, which largely can't be determined by photointerpretation; it may represent moisture variations (as in swales) or sub-MMU inclusions of other types.

code	range
1	less than 5% of the polygon is of a different composition, density, or type than it is attributed
2	5-40% of the polygon is of a different composition, density, or type than it is attributed
3	>40% heterogeneous of the polygon is of a different composition, density, or type than it is attributed
9	not applicable, type in 9000s