

1 snag recruitment over time should be considered. Den trees are partially live trees with
2 elements of decay which provide wildlife habitat. Nest trees have importance to birds
3 classified as a sensitive species.

4 **b. Downed large, woody debris:** Large downed logs (particularly
5 conifers) in the upland and near-water environment in all stages of decomposition
6 provide an important habitat for many wildlife species. Large woody debris of greatest
7 value consists of downed logs >16" diameter at the large end and >20 feet in length.

8 **c. Multistory canopy:** Upland multistoried canopies have a marked
9 influence on the diversity and density of wildlife species utilizing the area. More
10 productive timberland is generally of greater value and timber site capability should be
11 considered as a factor in an assessment. The amount of upland multistoried canopy
12 may be evaluated by estimating the percent of the stand composed of two or more tree
13 layers on an average per acre basis.

14 Near-water multistoried canopies in riparian zones that include conifer and hardwood
15 tree species provide an important element of structural diversity to the habitat
16 requirements of wildlife. Near-water multistoried canopy may be evaluated by
17 estimating the percentage of ground covered by one or more vegetative canopy strata,
18 with more emphasis placed on shrub species along Class III and IV streams (14 CCR
19 §§ 916.5, 936.5, or 956.5).

20 **d. Road Density:** Frequently traveled permanent and secondary roads
21 have a significant influence on wildlife use of otherwise suitable habitat. Large declines
22 in deer and bear use of areas adjacent to open roads are frequently noted. Road
23 density influence on large mammal habitat may be evaluated by estimating the miles of
24 open permanent and temporary roads, on a per-section basis, that receive some level
25 of maintenance and are open to the public. This assessment should also account for

1 the effects of vegetation screening and the relative importance of an area to wildlife on a
2 seasonal basis (e.g. winter range).

3 **e. Hardwood Cover:** Hardwoods provide an important element of habitat
4 diversity in the coniferous forest and are utilized as a source of food and/or cover by a
5 large proportion of the state's bird and mammal species. Productivity of deer and other
6 species has been directly related to mast crops. Hardwood cover can be estimated
7 using the basal area per acre provided by hardwoods of all species.

8 **[Northern and Southern only]:** Post-harvest deciduous oak retention for
9 the maintenance of habitats for mule deer and other hardwood-associated wildlife shall
10 be guided by the Joint Policy on Hardwoods between the California Board of Forestry
11 and Fire Protection and California Fish and Game Commission (5/9/94). To sustain
12 wildlife, a diversity of stand structural and seral conditions, and tree size and age
13 classes of deciduous oaks should be retained in proportions that are ecologically
14 sustainable. Regeneration and recruitment of young deciduous oaks should be
15 sufficient over time to replace mortality of older trees. Deciduous oaks should be
16 present in sufficient quality and quantity, and in appropriate locations to provide
17 functional habitat elements for hardwood-associated wildlife.

18 **f. Late Seral (Mature) Forest Characteristics:**

19 Determination of the presence or absence of mature and over-mature forest stands
20 and their structural characteristics provides characteristics provide a basis from which to
21 begin an assessment of the influence of management on associated wildlife. These
22 characteristics include large trees as part of a multilayered canopy, large decadent trees
23 and the presence of a large numbers of snags and downed logs, all of which that
24 contribute to an increased level of stand decadence and complexity. Late seral stage
25 forest amount may be evaluated by estimating the percentage of the land base within

Commented [DM2]: Decision Point: Should the reference the Joint Policy still be contained in TRA #2 guidance. If the FPC determines that this should be a regulatory standard, this text could be relocated to 912.9, or this SHALL could become a MAY in the appendix to reflect that this is "guidance".

1 the project and the biological assessment area occupied by areas conforming to the
2 following definitions:

3 Forests not previously harvested should be at least 80 acres in size to maintain the
4 effects of edge. This acreage is variable based on the degree of similarity in
5 surrounding areas. The area should include a multi-layered canopy, two or more tree
6 species with several large coniferous trees per acre (smaller subdominant trees may be
7 either conifers or hardwoods), large conifer snags, and an abundance of large woody
8 debris.

9 Previously harvested forests are in many possible stages of succession and may
10 include remnant patches of late seral stage which generally conform to the definition of
11 unharvested forests but do not meet the acreage criteria.

12 **g. Late Seral Habitat Continuity:** Projects containing areas meeting the
13 definitions for late seral stage characteristics must be evaluated for late seral habitat
14 continuity. The fragmentation and resultant isolation of late seral habitat types is one of
15 the most significant factors influencing the sustainability of wildlife populations not
16 adapted to edge environments.

17 This fragmentation may be evaluated by estimating the ~~amount of the on-site number~~
18 of acres within both the project area, and as well as the biological assessment area
19 occupied by portions of or entire late seral stands ~~greater than~~ at least 80 acres in size
20 (considering the mitigating influence of adjacent and similar habitat, if applicable) and
21 less than one mile apart or connected by a corridor of similar habitat.

22 **h. Special Habitat Elements:** The loss of a key habitat element may
23 have a profound effect on a species even though the habitat is otherwise suitable. Each
24 species may have several key limiting factors to consider. For example, a special need
25 for some large raptors is large decadent trees/snags with broken tops or other features.

1 Deer may have habitat with adequate food and cover to support a healthy population
2 size and composition but dependent on a few critical meadows suitable for fawning
3 success. These and other key elements may need special protection.

4 **D. Recreational Resources**

5 The recreational assessment area is generally the area that includes the logging area
6 plus 300 feet.

7 To assess recreational cumulative impacts:

8 **1.** Identify the recreational activities involving significant numbers of
9 people in and within 300 ft. of logging area (e.g., fishing, hunting, hiking, picnicking,
10 camping).

11 **2.** Identify any recreational Special Treatment Areas described in the Board
12 rules on the plan area or contiguous to the area.

13 **E. Visual Resources**

14 The visual assessment area is generally the logging area that is readily visible to
15 significant numbers of people who are no further than three miles from the timber
16 operation. To assess visual cumulative effects:

17 **1.** Identify any Special Treatment Areas designated as such by the Board
18 because of their visual values.

19 **2.** Determine how far the proposed timber operation is from the nearest
20 point that significant numbers of people can view the timber operation. At distances of
21 greater than 3 miles from viewing points activities are not easily discernible and will be
22 less significant.

23 **3.** Identify the manner in which the public identified in 1 and 2 above will
24 view the proposed timber operation (from a vehicle on a public road, from a stationary
25 public viewing point or from a pedestrian pathway).

F. Vehicular Traffic Impacts

The traffic assessment area involves the first roads not part of the logging area on which logging traffic must travel. To assess traffic cumulative effects:

1. Identify whether any publicly owned roads will be used for the transport of wood products.
2. Identify any public roads that have not been used recently for the transport of wood products and will be used to transport wood products from the proposed timber harvest.
3. Identify any public roads that have existing traffic or maintenance problems.
4. Identify how the logging vehicles used in the timber operation will change the amount of traffic on public roads, especially during heavy traffic conditions.

G. Greenhouse Gas (GHG) Impacts

Forest management affects GHG sequestration and emission rates of forests to the extent management activities affect forest inventory, growth, yield, and mortality. Timber operations and subsequent production of wood products, and in some instances energy, can result in the emission, storage, and offset of GHGs. Any one or a combination of the following options can be used to assess the potential for significant cumulative GHG effects:

1. Incorporation by reference, or tiering from, a programmatic assessment that was certified by the Board, CAL FIRE, or other State Agency, which analyzes the net effects of GHG associated with forest management activities.

- 1 2. Application of a model or methodology quantifying an estimate of greenhouse
2 gas emissions resulting from the project. The model or methodology should at
3 minimum consider the following:
- 4 a. Inventory, growth, and harvest over a specified planning horizon
 - 5 b. Projected forest carbon sequestration over the planning horizon
 - 6 c. Timber operation related emissions originating from logging equipment
7 and transportation of logs to manufacturing facility
 - 8 d. GHG emissions and storage associated with the production and life cycle
9 of manufactured wood products.
- 10
- 11 3. A qualitative analysis describing the extent to which the project in combination
12 with Past Projects and Reasonably Foreseeable Probable Future Projects may
13 increase or reduce GHG emissions compared to the existing environmental
14 setting. Such analysis should disclose if a known 'threshold of significance'
15 (PRC § 15064.7) for the project type has been identified by the Board, CAL FIRE
16 or State Agency, and if so, if the project's emissions in combination with other
17 forestry projects are anticipated to exceed this threshold.

18 **H. Wildfire Risk and Hazard**

19 Cumulative increase in wildfire risk and hazard can occur when the effects of two or
20 more activities from the same or different projects combine to produce a significant
21 increase in forest fuel loading in the vicinity of residential dwellings and communities.
22 Risk to life and property increases with increasing proximity to dwellings and
23 communities while hazard increases as a result of elevated forest fuel loads.
24
25

1 The following elements should be considered in the assessment of potential
2 cumulative effects:

- 3 • Regional fire hazard severity zoning
- 4 • Existing and future fuel conditions including vertical and horizontal continuity
- 5 • Location of existing fuel breaks and fuel hazard reduction activities
- 6 • Road access for fire suppression

7
8 Note: Authority cited: Sections 4551, 4551.5, 4553, 4562, 4562.5, 4562.7, and 21080.5,
9 Public Resources Code. Reference: Sections 4512, 4513, 4526, 4551.5, 4562, 4562.5,
10 4582.5, 5093.50, 21000(g), 21001(f), 21002, 21080.4, 21080.5 Public Resources Code.
11 Sections 100 Water Code; Section 5650c fish and game code.