**Board of Forestry and Fire Protection**

**“Botanical TRA2 Amendments”**

DRAFT DOCUMENT

**Title 14 California Code of Regulations**

**Division 1.5, Chapter 4**

**Subchapters 4,5 and 6, Article 2**

**§ 895.1 Definitions**

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“Substantial Evidence” means substantial evidence as defined in 14 CCR § 15384. *Provided here for context: means enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. Whether a fair argument can be made that the project may have a significant effect on the environment is to be determined by examining the whole record before the lead agency. Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, or evidence of social or economic impacts which do not contribute to or are not caused by physical impacts on the environment does not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.*

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**§ 912.9[932.9, 952.9]. Cumulative Impacts Assessment Checklist**

STATE OF CALIFORNIA BOARD OF FORESTRY AND FIRE PROTECTION

CUMULATIVE IMPACTS ASSESSMENT

(a) Do the assessment area(s) of resources that may be affected by the proposed Project contain any Past Projects or Reasonably Foreseeable Probable Future Projects?

Yes\_\_\_\_ No\_\_\_\_

If the answer is yes, identify the Project(s) and affected resource subject(s).

(b) Are there any continuing, significant adverse Impacts from past land use activities within the assessment area(s) that may add to the Impacts of the proposed Project?

Yes\_\_\_\_ No\_\_\_\_

If the answer is yes, identify the activities, describing their location, Impacts and affected resource subject(s).

(c) Will the proposed Project, as presented, in combination with Projects or Reasonably Foreseeable Probable Future Projects identified in items (a) and (b) above, have a reasonable potential to cause or add to significant adverse Cumulative Impacts in any of the following resource subjects?

|  |  |  |  |
| --- | --- | --- | --- |
| *Resource Subjects* | *Yes after mitigation (1)* | *No after mitigation (2)* | *No reasonably potential significant adverse impacts (3)* |
| (A) Watershed | \_\_\_\_\_\_ | \_\_\_\_\_\_ | \_\_\_\_\_\_ |
| (B) Soil Productivity | \_\_\_\_\_\_ | \_\_\_\_\_\_ | \_\_\_\_\_\_ |
| (C) Biological | \_\_\_\_\_\_ | \_\_\_\_\_\_ | \_\_\_\_\_\_ |
| (D) Recreation | \_\_\_\_\_\_ | \_\_\_\_\_\_ | \_\_\_\_\_\_ |
| (E) Visual | \_\_\_\_\_\_ | \_\_\_\_\_\_ | \_\_\_\_\_\_ |
| (F) Traffic | \_\_\_\_\_\_ | \_\_\_\_\_\_ | \_\_\_\_\_\_ |
| (G) Greenhouse Gases (GHG) | \_\_\_\_\_\_ | \_\_\_\_\_\_ | \_\_\_\_\_\_ |
| (H) Wildfire Risk and Hazard | \_\_\_\_\_\_ | \_\_\_\_\_\_ | \_\_\_\_\_\_ |
| (I) Other |  |  |  |

(1) “Yes after mitigation” means that potential significant adverse Cumulative Impacts are left after application of the Rules and mitigations or alternatives proposed by the Plan submitter.

(2) “No after mitigation” means that any potential for the proposed Timber Operation to cause or add to significant adverse Cumulative Impacts by itself or in combination with other Projects has been reduced to insignificance or avoided by mitigation measures or alternatives proposed in the Plan and application of the Rules.

(3) “No reasonably potential significant adverse Impacts” means that the operations proposed under the Plan and application of the Rules do not have a reasonable potential to join with the Impacts of any other Project to cause, add to, or constitute significant adverse Cumulative Impacts.

NOTE: Guidance on evaluating Impacts to resource subjects are provided within the Appendix to Technical Rule Addendum No. 2.

(d) If column (1) is checked in (c) above, describe why the expected Impacts cannot be feasibly mitigated or avoided and what mitigation measures or alternatives were considered to reach this determination. If column (2) is checked in (c) above, describe what mitigation measures or alternatives have been selected which will substantially reduce or avoid reasonably potential significant adverse Cumulative Impacts.

(e) Provide a brief description of the assessment area used for each resource subject.

(f) List and briefly describe the individuals, organizations, and records consulted in the assessment of Cumulative Impacts for each resource subject. Records of the information used in the assessment shall be provided to the Director upon request.

BOARD OF FORESTRY AND FIRE PROTECTION

TECHNICAL RULE ADDENDUM NO. 2

CUMULATIVE IMPACTS ASSESSMENT

**A. Introduction**

The purpose of this addendum is to provide a framework for the assessment of Cumulative Impacts as required in 14 CCR § 898 that may occur as a result of proposed Timber Operations. Cumulative Impacts, pursuant to 14 CCR § 15355, refers to two or more individual Effects which, when considered together, are considerable or which compound or increase other environmental Impacts. This assessment shall include evaluation of both on-site and off-site interactions of proposed Project activities with the Impacts of Past Projects and Reasonably Foreseeable Probable Future Projects.

Resource subjects to be considered in the assessment of Cumulative Impacts are listed in 14 CCR § 912.9(c) and described in greater detail in the Appendix to this Addendum.

In conducting an assessment, the RPF must distinguish between the potential on-site Impacts of the Plan's proposed activities (which may not be significant when considered alone) with Impacts of Past Projects and Reasonably Foreseeable Probable Future Projects pursuant to 14 CCR § 15130(b)(1)(A).

The RPF preparing a Plan shall conduct an assessment based on information that is reasonably available prior to submission of the Plan. If, during the Plan review period, a fair argument supported by Substantial Evidence is raised that a significant adverse impact or cumulative impact may occur from proposed Timber Operations, the Department shall evaluate the issues raised in the argument and ensure that those issues have been addressed. RPFs shall submit sufficient information, including any necessary site-specific information, observations, or data, to support their findings if significant issues are raised during the Department's review of the Plan.

Information used in the assessment of Cumulative Impacts may be supplemented during the Plan review period. Agencies participating in Plan review may provide input into the Cumulative Impacts assessment based upon their area of expertise. Agencies shall justify and support their recommendations with documentation.

The Department, as lead agency, shall make the final determination regarding assessment sufficiency and the presence or absence of significant adverse Cumulative Impacts. This determination shall be based on Substantial Evidence and a review of all sources of information provided and developed during review of the Plan.

**B. Identification of Assessment Areas**

The RPF shall establish and briefly describe the assessment area within or surrounding the Plan for each resource subject and shall briefly explain the rationale for establishing the assessment area. This shall be a narrative description and each established assessment area shall be shown on a map when a map adds clarity.

Resource assessment areas can vary based on the resource subjects being assessed and should be chosen to adequately assess potential direct and indirect Impacts related to proposed Timber Operations. Some resource subjects may require multiple specific or variable assessment areas in order to adequately capture and evaluate the variety or diversity of those subjects (i.e. flora, fauna, or specific species depended assessment areas related to biological resources). Examples of commonly used assessment areas include:

|  |  |
| --- | --- |
| **Resource Subject** | **Common Assessment Area** |
| Watershed Resources | Those CALWATER version 2.2 watersheds in which the Plan is located |
| Soil Productivity Resources | The Plan area. |
| Biological Resources | Variable based on Plan habitat and surrounding species and populations. Common assessment areas include a radial distance from the Plan area (i.e. 0.25, 0.5, 0.7, 1, or 1.3 mile from the Plan boundaries), or the watershed assessment area. These assessment areas should target those resources which have a likelihood of populating the area potentially impacted by Timber Operations. |
| Recreational Resources | The Plan area as well as 300 foot radial distance from the Plan boundaries |
| Visual Resources | The Plan area that is readily visible to significant numbers of people who are no further than three (3) miles from the Plan area. |
| Vehicular Traffic | The first roads not part of the Logging Area on which logging traffic must travel. |
| Greenhouse Gases  | The Plan area |
| Wildfire Risk and Hazard | The Plan Area as well as the Vehicular Traffic Assessment Area |

**C. Identification of Information Sources**

The RPF who prepares the Plan shall obtain information from Plan submitters (Timberland or Timber Owner), appropriate agencies, landowners, and individuals about past, and future land management activities. The RPF shall list and briefly describe the individuals, organizations, and records relied upon as sources of information in the assessment of Cumulative Impacts, including references for listed records and the names, affiliations, and contact information of specific individuals contacted. Records of information used in the assessment shall be provided to the Director upon request.

Common sources of information for the assessment of Cumulative Impacts are identified below. Sources to be used will depend upon the complexity of individual situations and the amount of information available from other Plans. Sources not listed below may have to be consulted based on individual circumstances. Not all sources of information need to be consulted for every Plan. Additionally, a poll of adjacent landowners is encouraged, and may be required by the Department, to identify past, and future land management activities and significant adverse environmental Impacts on adjacent ownerships.

1. Consultation with Experts and Organizations:

|  |  |
| --- | --- |
| a. County Planning Department; | b. Biologists;  |
| c. Geologists; | d. Soil scientists; |
| e. Hydrologists; | f. Federal agencies; |
| g. State agencies; | h. Public and private utilities. |

2. Records Examined:

|  |  |
| --- | --- |
| a. Soil maps; | b. Geology maps; |
| c. Aerial photographs; | d. Natural Diversity Data Base; |
| e. Plan records; | f. Special environmental reports; |
| g. Topographic maps; | h. Basin plans; |
| i. Fire history maps; |  |
| j. Relevant public agency documents or plans; |  |
| k. Relevant watershed or wildlife studies (published or unpublished); |  |
| l. Available modeling approaches. |  |

**D. Past Projects and Reasonably Foreseeable Probable Future Projects**

Past Projects and Reasonably Foreseeable Probable Future Projects included in the Cumulative Impacts assessment shall be described as follows:

1. Identify and briefly describe the location of Past Projects and Reasonably Foreseeable Probable Future Projects within assessment areas. Include a map or maps and associated legend(s) clearly depicting the following information:

a. Township and Range numbers and Section lines.

b. Boundary of the watershed(s) which the Plan area is located along with the CALWATER 2.2 Planning Watershed number(s).

c. Location and boundaries of Past Projects and Reasonably Foreseeable Probable Future Projects on land owned or controlled by the Timberland owner (of the proposed timber harvest) within the Planning Watershed(s) depicted in provision 2. above. For purposes of this provision, Past Projects shall be limited to those Projects submitted within ten years prior to submission of the Plan.

d. Silvicultural Methods for each of the Past Projects and Reasonably Foreseeable Probable Future Projects depicted in provision 3. above. Each specific Silvicultural Method must be clearly delineated on the map(s), and associated Plan number referenced in the legend or an annotated list. In addition, shading, hatching, or labeling shall be used which clearly differentiates Silvicultural Methods into one of the four categories outlined in Table 1.

e. A north arrow and scale bar (or scale text).

f. Source(s) of geographical information. The map scale shall be large enough to clearly represent one Planning Watershed per page or of a scale not less than 1:63,360. Planning Watersheds with densely situated or overlapping harvest units, or those which are large or irregular in size, may require multiple maps to achieve clarity. Color coding on maps may be used if they are able to be reproduced in black and white and clearly show all details. A legend shall be included indicating the meaning of the symbols used. Additionally, maps shall be submitted on 8.5 by 11 page(s).

Table 1

|  |  |
| --- | --- |
| *Silvicultural Category* | *Silvicultural Method* |
| Evenaged | Clearcutting, Seed Tree Seed Step, Seed Tree |
| Management | Removal Step, Shelterwood Preparatory Step, |
| 14 CCR § 913.1 | Shelterwood Seed Step, Shelterwood Removal |
|  | Step |
|  |  |
| Unevenaged | Selection, Group Selection, Transition |
| Management |  |
| 14 CCR § 913.2 |  |
|  |  |
| Intermediate | Commercial Thinning, Sanitation-Salvage |
| Treatments |  |
| 14 CCR § 913.3 |  |
|  |  |
| Special | Special Treatment Area Prescriptions, |
| Prescriptions and | Rehabilitation of Understocked Area |
| Other Management | Prescription, Fuelbreak/Defensible Space, |
| 14 CCR § 913.4 | Southern Subdistrict Special Harvesting |
|  | Method (14 CCR § 913.8), Variable Retention, |
|  | Conversion |

Alternative Prescriptions shall be put into the silvicultural category within which the most nearly appropriate or Feasible Silvicultural Method in the Rules is found pursuant to 14 CCR § 913.6(b)(3).

2. Identify and give the location and description of any known, continuing significant adverse environmental Impacts caused by Past Projects. The RPF shall use their knowledge of the assessment areas, if any, regarding past Impacts, Impacts of the proposed operations, rates of recovery and land uses.

**Appendix**

**Technical Rule Addendum No. 2**

**Cumulative Impacts Assessment Guidelines**

This Appendix provides guidelines for evaluating Cumulative Impacts to resource subjects listed in 14 CCR § 912.9(c). The Appendix includes factors, and methods for analysis, that can be considered or used to determine if the Project has a reasonable potential to cause or add to significant adverse Cumulative Impacts.

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**C. Biological Resources**

Significant adverse Cumulative Impacts may be expected where there is a substantial reduction in required habitat or the Project will result in substantial interference with the movement of resident or migratory Species. Biological assessment areas can vary with the habitat and Species being evaluated. Factors to consider in the evaluation of cumulative biological Impacts include:

1. Any known Listed Species that may be directly or indirectly affected by Project activities.

2. Any species which are not listed but which may be considered endangered, rare, or merit other special consideration based on other criteria, such as that within 14 CCR § 15380(b) or the Native Plant Protection Act (Fish and Game Code §§ 1900-1913), and supported with Substantial Evidence, which may be directly or indirectly affected by proposed Timber Operations.

3. Any previous biological resource surveys conducted within the biological assessment area which may assist in the evaluation of species distribution within the Project area

2. Any significant, known wildlife, botanical, or fisheries resource concerns within the immediate Project area and the biological assessment area (e.g. loss of oaks creating forage problems for a local deer herd, Species requiring special elements, and significant natural areas).

The significance of Cumulative Impacts on non-listed Species viability may be determined relative to the benefits to other non-listed Species. For example, the manipulation of habitat results in conditions which discourage the presence of some Species while encouraging the presence of others.

3. The aquatic and near-water habitat conditions within the Plan and immediate surrounding area. Habitat conditions of major concern are: Pools and riffles, large woody material in the Watercourse, and near-water vegetation. Much of the information needed to evaluate these factors is described in the watershed resources provision. A general discussion of their importance is provided below:

a. Pools and Riffles. Pools and riffles affect overall habitat quality and fish community Structure. Watercourses with little structural complexity offer poor habitat for fish communities as a whole, even though the channel may be stable. Structural complexity is often lower in Watercourses with low gradients, and filling of pools can reduce Watercourse productivity.

b. Large Woody Material. Large woody material in Watercourses play an important role in creating and maintaining habitat through the formation of pools. These pools comprise important feeding locations that provide maximum exposure to drifting food organisms in relatively quiet water. Removal of large woody material can reduce frequency and quality of pools.

c. Near-water Vegetation. Near-water vegetation provides many habitat benefits, including: shade, nutrients, vertical diversity, migration corridors, nesting, roosting, and escape. Recruitment of large woody material is also an important element in maintaining habitat quality.

4. The biological habitat condition of the Plan and immediate surrounding area. The following factors are commonly used when evaluating biological habitat. The factors described are general and may not be appropriate for all situations. The RPF may also need to consider factors which are not listed below. Each set of ground conditions are unique and the assessment conducted must reflect those conditions.

a. Snags/Den Trees/Nest Trees: Snags, den trees, Nest Trees and their recruitment are required elements in the overall habitat needs of more than 160 wildlife Species. Many of these Species play a vital role in maintaining the overall health of Timberlands. Snags of greatest value are >16 in. dbh and 20 ft. in height. The degree of Snag recruitment over time may be considered. Den trees are partially live trees with elements of decay which provide wildlife habitat. Nest Trees have importance to birds classified as Sensitive Species.

b. Downed Large Woody Material: Large downed logs (particularly conifers) in the upland and near-water environment in all stages of decomposition provide an important habitat for many wildlife Species. Large woody material of greatest value consists of downed logs >16 in. diameter at the large end and >20 ft. in length.

c. Multistory Canopy: Upland multistoried canopies have a marked influence on the diversity and density of wildlife Species utilizing the area. More productive Timberland is generally of greater value and timber site capability may be considered as a factor in an assessment. The amount of upland multistoried Canopy may be evaluated by estimating the percent of the stand composed of two or more tree layers on an average per-acre basis.

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

d. Road Density: Frequently traveled roads have a significant influence on wildlife use of otherwise suitable habitat. Declines in deer and bear use of areas adjacent to open roads are frequently noted. Road density influence on large mammal habitat may be evaluated by estimating the miles of roads, on a per-section basis, that are open to the public. This assessment can also account for the Effects of vegetation screening and the relative importance of an area to wildlife on a seasonal basis (e.g. winter range).

e. Hardwood Cover: Hardwoods are an important habitat component in Cumulative Impact assessment, because they often provide Snags, den trees, downed large woody material, multistory Canopy, cover, mast, late seral forest characteristics, and connectivity between habitats.

Hardwoods provide an important element of habitat diversity in the coniferous forest and are utilized as a source of food and/or cover by a large proportion of the state's bird and mammal Species. Productivity of deer and other Species has been directly related to mast crops.

Hardwood cover can be estimated using the Basal Area Per Acre provided by hardwoods of all Species.

f. Late Seral (Mature) Forest Characteristics:

Determination of the presence or absence of late seral (mature) forest characteristics provides a basis from which to begin an assessment of the influence of management on associated wildlife. These characteristics include large trees as part of a multilayered Canopy, large decadent trees, and the presence of large numbers of Snags and downed logs, all of which contribute to an increased level of stand decadence and complexity. Late seral forests may be evaluated by estimating the percentage of the land base within the Plan and the biological assessment area occupied by areas conforming to the following definitions:

• Forests not previously harvested that are at least 80 acres in size to maintain the effects of edge. This acreage is variable based on the degree of similarity in surrounding areas. The stand includes a multi-layered Canopy, two or more tree Species with several large coniferous trees per acre (smaller subdominant trees may be either conifers or hardwoods), large conifer Snags, and an abundance of large woody material.

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

g. Late Seral Habitat Continuity: The fragmentation and resultant isolation of late seral habitat types is one of the most significant factors influencing the sustainability of wildlife populations not adapted to edge environments.

This fragmentation may be evaluated by estimating the number of acres within the Project area, as well as the biological assessment area occupied by portions of or entire late seral stands at least 80 acres in size (considering the mitigating influence of adjacent and similar habitat, if applicable) and less than one mile apart, or connected by a corridor of similar habitat.

h. Special Habitat Elements:

Special habitat elements are specific physical and biological attributes of the landscape without which certain Species are not expected to be present or, if present, are at relatively low population numbers. The biological assessment area may contain special habitat or critical Functional elements that are not otherwise discussed within this Appendix (e.g., meadows that may be critical for fawning success of local deer population, etc...). Each Species may have several key limiting factors to consider during the assessment of Cumulative Impacts.

Where there exists a lack of sufficient information and knowledge available regarding specific species presence or distribution for the RPF to make an informed decision on the potential for significant cumulative impacts, the RPF should consider implementation of specific methods or techniques to develop such knowledge and information. Such methods or techniques may include species-specific surveys, monitoring, or additional LTO training.

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Note: Authority cited: Sections 4551, 4551.9 and 21080.5, Public Resources Code. Reference: Sections 4512, 4512.5, 4513, 4551.5, 4551.9, 4582.6, 21000(g), 21002 and 21080.5, Public Resources Code; Natural Resources Defense Council, Inc. v. Arcata Nat. Corp. (1976) 59 Cal.App.3d 959; 131 Cal.Rptr. 172; and Laupheimer v. State (1988) 200 Cal.App.3d 440; 246 Cal.Rptr. 82.