Late Seral Habitat and Habitat Elements

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Late Seral Habitat
LSH

Late Seral Elements Large Wildlife Trees

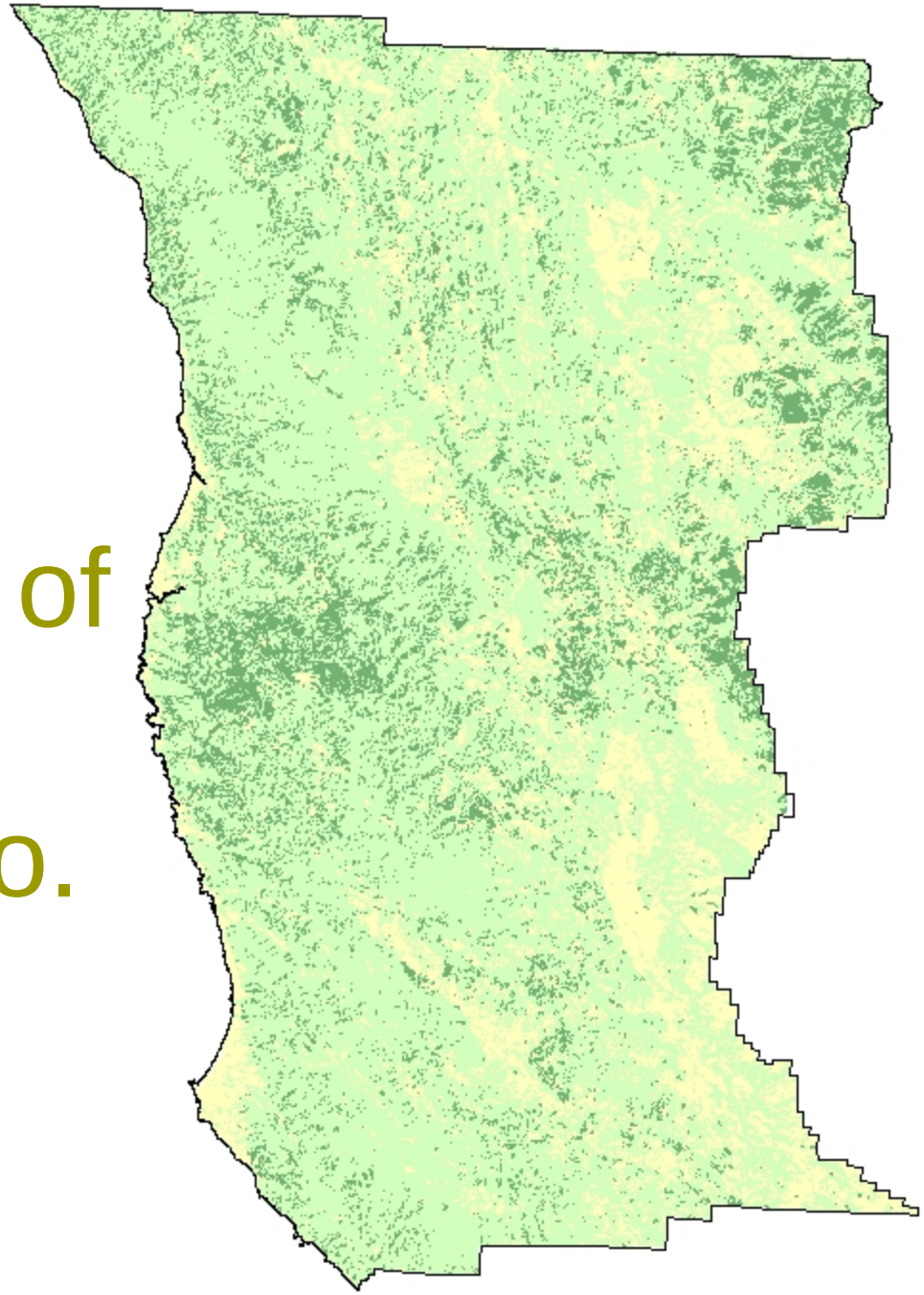



LSE

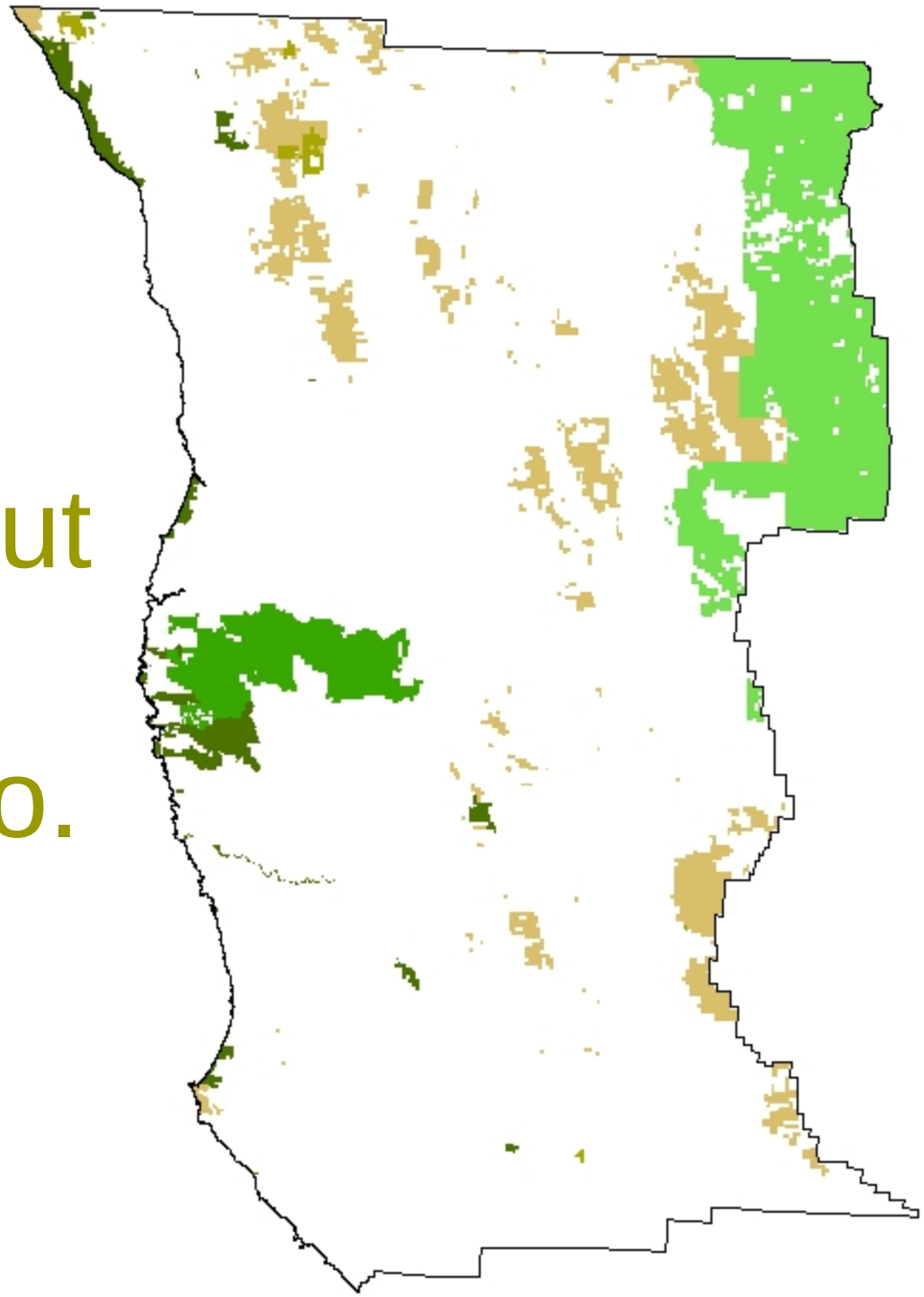



Old-Growth comprises less than 1% of the Redwood Region in Mendocino County

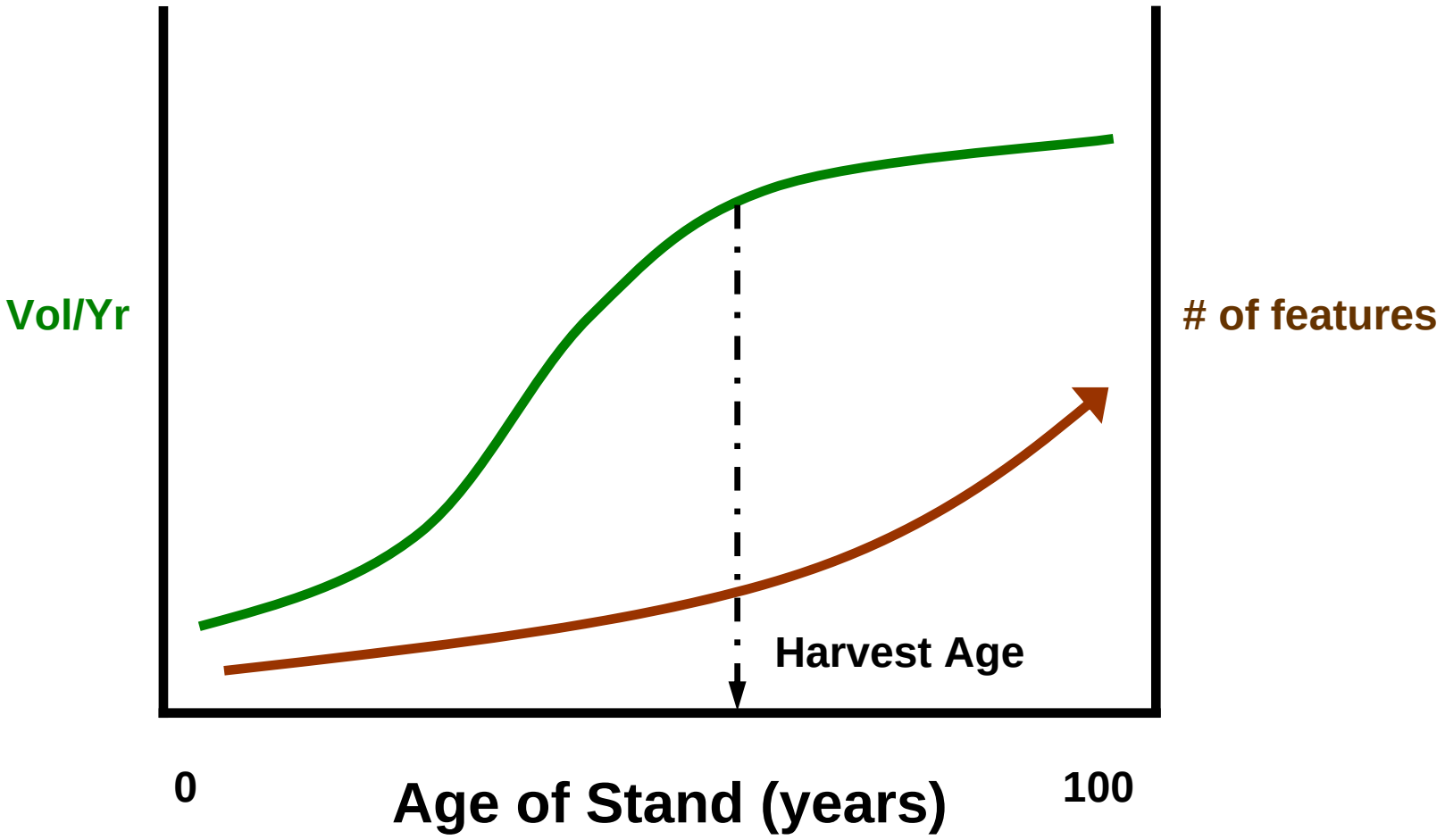
WHR 5 and 6 comprise a small fraction of forests in Mendocino Co.



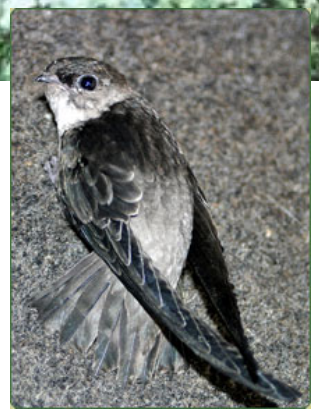
Private lands comprise about 85% of Mendocino Co.



Tree Growth **Late Seral Habitat**



Late Seral-associated Wildlife



A Critical Resource?

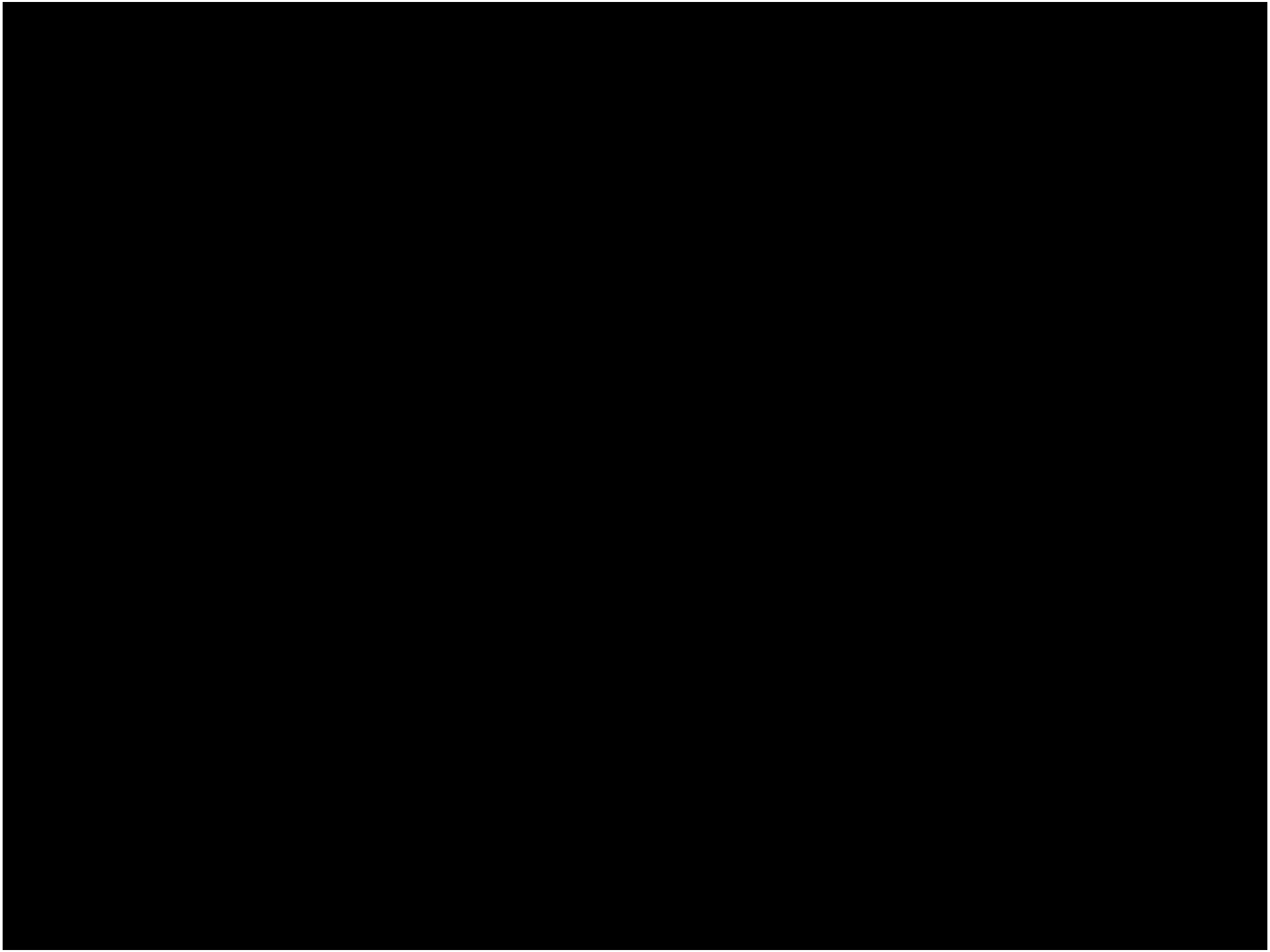
- FPRs address it
- CAL FIRE mass mailing addresses it
- Habitat Conservation Plans address it
- Academic research addresses it
- DFG addresses it
- Public comments address it, and…
- It's generally rare, and
- It takes a long time to develop, but…
- Is there a CEQA threshold of significance?

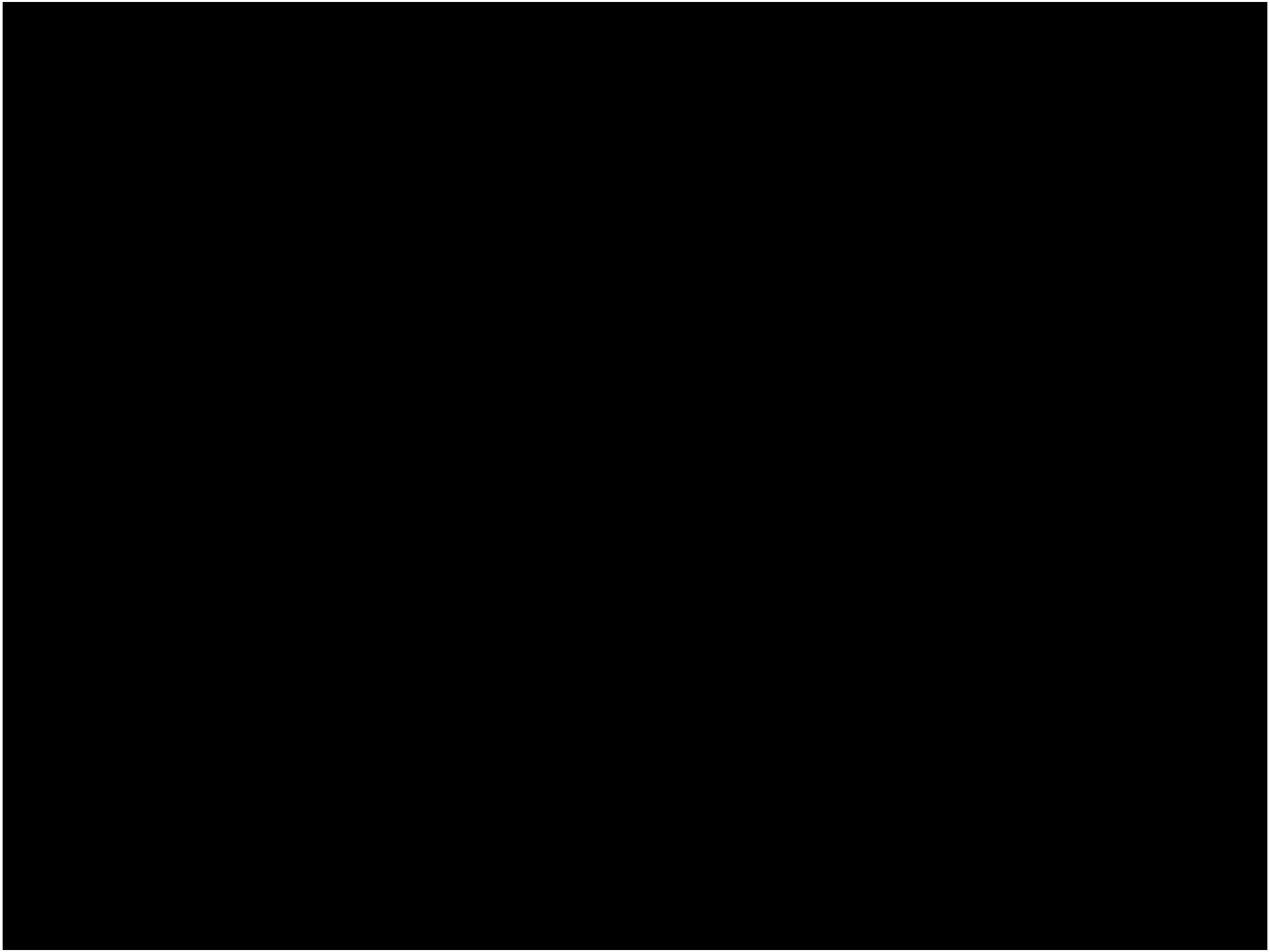
Assessment and Disclosure

- Assess and disclose LSH and LSE in project area and assessment area.
- Should be sufficiently detailed to allow the reviewer to determine project impacts, both current and cumulative
- THPs and NTMPs should address future recruitment

Mitigation Measures

	Maintain	Recruit
LSH		
LSE		





Key to Late Seral Element Scorecard

SIZE

Large Tree – Conifers 36 inches dbh or greater and hardwoods 24 inches dbh or greater are considered large trees. Trees not meeting the diameter threshold but exhibiting the described habitat elements should be considered as prime candidates for meeting the green tree retention guidelines.

BOLE FEATURES

Large Cavity/Hollow

Large cavity: A cavity (or void within a tree bole or large limb) with a relatively small entrance suitable for use by a variety of wildlife species, such as spotted owl, wood rats, Pacific fisher, or American marten, or colonies of Vaux's swift, purple martin, or bats. The small entrance precludes the entry of larger predators into the cavity. Cavities with larger entrances (classified as hollows, see below) may also be used by these species.
Description: A large cavity is generally several feet deep and at least 8 to 12 inches in diameter with an entrance size ranging from about 2.5 to 6 inches diameter. Entrance height is often at least 15 feet above the ground, but lower entrances may also be used. In practice, interior dimensions will usually just be a guess based on entrance size and appearance, as well as the characteristics of the tree, plus any observations of wildlife use of the cavity.

Hollow: A large cavity with an entrance or opening greater than 6 inches diameter.
Description: Hollows have similar interior dimensions as large cavities and may be used by the same suite of species for cover; however, the larger entrance size of a hollow may not prevent larger predators from entering the hollow.

Basal hollow (Goose pen): A large hollow at ground level typically created by fire that destroys the cambium on a portion of the bole's circumference. Repeated fires play an important role in maintaining and enlarging basal hollows.
Description: A basal hollow is a hollow that extends at least a third of the tree's diameter into the bole and is generally several feet in height. It should be capable of providing shelter to small or medium-sized wildlife.

Small Cavity/Rot/Mistletoe/Ledge

Small cavity: A cavity suitable for use by a variety of small to medium-sized wildlife species, such as small to large woodpeckers, secondary cavity-nesting birds, wood ducks, individual or small numbers of bats, northern flying squirrel, Douglas squirrel, and small owls.
Description: A small cavity is generally between about 7 inches and a few feet deep and between about 4 and 8 inches in diameter with an entrance size ranging from about 1.5 to 3 inches in diameter. Entrance height is often at least 10 feet above the ground, but lower entrances may also be used. Interior dimensions will usually be a guess based on entrance size and appearance, characteristics of the tree, plus observations of wildlife.

Internal decay (Heart rot): Widespread or localized heart rot fungus infection within the bole of a tree. Decayed, softened wood encompasses at least enough volume to allow excavation of a small cavity.
Description: Decayed wood in old scars may be visible at ground level or with binoculars well above the ground. Good indicators of internal decay include fungal fruiting bodies, such as conk, cavity entrances, and sloughing wood and bark. In practice, it may be difficult to discern the extent of internal decay in some cases.

Mistletoe broom (Witch's broom): A compact spray of branches infected with mistletoe.
Description: A tree should be scored for mistletoe broom if the structure is large and solid enough to provide an opportunity for resting or nesting of vertebrate wildlife, or if smaller brooms occur in multiple locations within the tree.

Ledge (Platform): A relatively horizontal portion of a tree limb, exposed old cavity, or cluster of epicormic branches on the bole of a tree.
Description: A ledge or platform must be of sufficient size and have adequate cover to provide a nesting or resting opportunity for a moderately large wildlife species, such as Pacific fisher or peregrine falcon.

Crevice Cover

Crack (Fissure): A longitudinal gap in the bole of a tree caused either by physical damage (including wind, lighting, or fire) or by growth of two trees or leaders into each other where the gap provides cover for wildlife.
Description: Cracks must be sufficiently deep relative to their width to provide partial cover for foraging birds or complete cover for nesting birds, roosting bats, or small- to medium sized mammals. Longitudinal indentations in which the deepest portions are visible from outside the tree are not considered cracks unless they are capable of providing cover for foraging or roosting small vertebrates.

Furrowed bark: A relatively deep linear indentation in the bark of a tree capable of providing cover for roosting bats or foraging bole-gleaners.
Description: Furrowed bark occurs where an underlying defect (crack, old lightning or fire scar, narrow strip of removed cambium) or the line of contact between two trees growing into each other has been covered by bark. The furrow is sufficiently deep and narrow to be capable of providing cover for small vertebrates. Furrowed bark should not be used to describe the bark of a large or fast-growing redwood tree on which the bark has developed a ropey or braided look, but does not provide cover for foraging or roosting small vertebrates.

Loose bark: A discrete, large piece of bark that has separated from the underlying tree bole but remains attached to the tree.
Description: "Loose bark" refers to a portion of a tree's bark that provides cover for roosting bats, nesting birds, or possibly foraging bole gleaners. Typically, such bark pieces provide relatively tight, stable cover for small animals. The distance of separation from the underlying tree should be 2 inches or less and should not be so loose that the bark piece flaps in the wind. As a general rule, loose bark is attached along at least one edge at least 1 foot long. Although some bear-stripped trees may meet the definition of "loose bark", most bear-stripped trees have bark that has been pulled away from the bole along most of the strip's edges, flaps against the underlying wood in the wind, and only provides a small amount of cover at one end of the strip. Such bear-stripped bark should not be scored as "loose bark".

CROWN FEATURES

Complex Crown

Dead top (Spike): A dead tree leader.
Description: "Dead top" refers to dead leaders that are evidenced by leaf die-back along at least the top one-fifth of the tree height or with a minimum diameter at the lowest extent of leaf die-back of about 12 inches.

Broken top: A tree with the original leader broken off.
Description: "Broken top" refers to broken-topped trees with a minimum diameter at the original break of about 12 inches.

Reiteration (Reiterated top, Bayonet, "Schoolmarm", Candelabra): A sprouted leader or limb that exhibits apical dominance.
Description: Reiterations vary greatly depending on relative age and position on tree. All reiterations include some vertical growth that gives them the appearance of a "tree-on-a-tree". Old reiterations may exhibit a high degree of decadence and may themselves have additional reiterations. A tree should be scored for reiteration only if the reiteration provides opportunities for resting, denning, or nesting, or includes a substrate or epiphytes providing foraging opportunities for vertebrate wildlife.

Forked top: A split in a tree's leader.
Description: A tree should only be scored for a forked top if the structure provides an opportunity for resting or nesting for vertebrate wildlife, or if defect associated with the fork suggests that other structures may be present (such as internal rot or cavity).

Large limb (Platform limb): A relatively horizontal limb of sufficient girth for vertebrate wildlife to use the structure for resting or nesting (but not including bird perches).
Description: A tree should be scored for large limbs if the limbs are distinctly larger than typical for similar size trees with good growth form. Generally, such trees in a stand of merchantable age will have at least two branches at least 12 inches in diameter.

UNIT FACTOR

Unit scarcity factor is determined at the THP level based on the number of residuals after harvest (conifers and hardwoods are to be evaluated separately) and is added to the score. The estimate is based on entire unit acres (including WLPZs). Common = average approximately 2 trees/acre or more; moderate = average approximately 1 tree/acre; rare = approximately 0.5 trees/acre or less.

PWS FACTOR

Planning watershed (PWS) factor is determined programmatically and is added to the total score.

The maximum score recorded is 10. Trees with a score equal to 7 are candidates for retention, and the decision to harvest or retain in terms of economic and wildlife value is subject to evaluation by Forestry and Wildlife. Trees with scores greater than 7 will be retained except under rare circumstances where operational constraints prohibit retention as justified by Forestry and Wildlife. Trees with scores less than 7 can be harvested.

Note: Trees not meeting the minimum retention score but exhibiting high potential defect ("standing slash") or high harvesting costs which negate their value should also be considered as prime candidates for meeting green tree retention guidelines.

LSE Scorecard THP _______________ Date ____________

Tree No.	Large tree conifer >36" dbh hardwood >24" dbh	Large cavity/ Hollow	Small cavity/ Rot,/Mistletoe/ Ledge	Crevice cover	Complex crown	Unit factor	PWS factor	Total score
	0/3	0/4	0/2	0/1	0/1	0/1/2	0/1	

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