

Representative Sample Area Assessment and Management

MENDOCINO-HUMBOLDT REDWOOD COMPANIES

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INTRODUCTION

Mendocino Redwood Company (MRC) and Humboldt Redwood Company (HRC) have established Representative Sample Areas (RSAs) that serve, along with High Conservation Value Forests¹ and protected habitat for rare, threatened and endangered species, as part of the reserve system on MRC and HRC (the Companies) forestlands.

The Forest Stewardship Council's *FSC-US Forest Management Standard* (July 2010) establishes the intent of RSAs in Criterion 6.4:

*Intent: **Representative Sample Areas (RSAs)** are ecologically viable representative samples designated to serve one or more of three purposes:*

- 1) To establish and/or maintain an ecological reference condition; or*
- 2) To create or maintain an under-represented ecological condition (i.e., includes samples of successional phases, forest types, ecosystems, and/or ecological communities); or*
- 3) To serve as a set of protected areas or refugia for species, communities and community types not captured in other Criteria of this Standard (e.g., to prevent common ecosystems or components from becoming rare).*

RSAs serving purposes 1 and 3 will generally be fixed in location. RSAs serving purpose 2 may move across the landscape as under-represented conditions change or may be fixed in area and manipulated to maintain the desired conditions.

*For the purposes of this Criterion, **ecosystem** (or ecological system) refers to mid-level classification level (i.e., a group of plant communities) or an approximately equivalent level of classification (i.e., forest type).*

Protection of High Conservation Value Forests, rare species, communities, and ecosystems with special ecological values are also addressed and protected in other parts of this Standard (see Criteria 6.2, 6.3, and Principle 9). One of the primary provisions in Criterion 6.4 is to ensure that examples of ecosystem types that are not protected elsewhere in this Standard are protected in their natural state within the landscape.

The ecosystems that are not sufficiently represented and protected off-property will be protected within the FMU in a system of RSAs.

BACKGROUND

Each company made its initial assessments of RSA/HCVF designations separately, through similar processes involving stakeholder input. MRC had developed a reserve system early in its tenure and later adapted it (around 2010) to designate reserves as either RSAs or HCVFs. HRC assessed its ownership for reserves that fit the HCVF and RSA designations soon after it was acquired in 2008.

¹ See *High Conservation Value Forest Assessment, Mendocino-Humboldt Redwood Companies* (July 2020)

Recently, the Companies produced an analysis of vegetation types on each ownership that assessed the presence and diversity of ecosystems across each ownership using available ecosystem datasets (*Mendocino and Humboldt Redwood Companies Representative Sample Area Analysis*, August 2019). This analysis resulted in a comprehensive list of ecosystems present on the properties, and updated acreages for each of the RSA and HCVF protected areas.

Subsequently, in 2020, the Companies produced a new HCVF assessment unifying the two ownerships' HCVF designations for a consistent approach. As a result, some of the originally designated RSAs were re-classified as HCVF. In this document, the updated RSAs are listed, along with their current known acreage and management prescriptions.

Following the currently underway re-inventory of the Companies' forestlands (to be completed late 2020 to early 2021), RSAs will be re-evaluated consistently for both ownerships, as was done for HCVFs, which will result in a revision of this document.

RSAs (as well as HCVFs) are mapped in an authoritative central GIS feature managed by Companies' GIS personnel. Timber Harvesting Plans (THPs) and other management activities reference this feature to ensure management prescriptions for each area are applied when operations are conducted in or near the RSA (or HCVF).

MRC REPRESENTATIVE SAMPLE AREAS

Sample areas in the following vegetation types and habitats have been identified as RSAs on MRC timberlands. RSAs for both ownerships are mapped in an authoritative GIS feature layer, in a central database.

<i>Representative Sample Area</i>	<i>Acres</i>
1. Bishop Pine Forest	384
2. Brush, Scrub, and Chaparral	1,058
3. Native Grassland	1,827
4. Conservation Easements	776
5. Deciduous Riparian Areas	64
6. Marsh	35
7. Rock Outcroppings	65

Descriptions and Management Prescriptions

1. Bishop Pine Forest

Description

Bishop Pine Forest is a coastal closed-cone coniferous forest distinguished from Pygmy Forest (an HCVF) by the prevalence of bishop pine and redwood/Douglas-fir. Moderate disturbance can mimic fire as a mechanism for regeneration in bishop pine forest. Experts/stakeholders consulted during initial assessment of this RSA included California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), and the MRC Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP) Science Panel. This forest type is preserved outside of the Companies' properties on coastal California State Parks (examples: Jughandle, MacKerricher) and national public

lands including the Stornetta National Monument. Additionally, bishop pine forest is a protected community under coastal commission development regulations.

Management Prescription

Management activities should be avoided in bishop pine forest if feasible. When conducting management activities within stands of bishop pine forest, management activities must maintain the key characteristics of the stand (for example, by retaining bishop pine trees, restricting tractor traffic to marked skid trails, and avoiding excessive disturbance to areas where bishop pine regeneration is observed). Road construction to allow access to adjacent timber stands will occur only if no other routes are possible.

2. Brush, Scrub, and Chaparral

Description

Coastal scrub, chaparral, or other brush-dominated vegetation types. These areas provide key habitat value to many bird, mammal, and reptile species but are low site, and not suitable for supporting forest.

Management Prescription

Brush dominated vegetation communities will not be converted to conifer forest. There is potential to apply surrogates for natural disturbance agents (e.g. fire) within brush areas.

3. Native Grasslands

Description

Natural grasslands in the plan area occur in forest openings or prairies. Grasslands are often on ridges and south-facing slopes (Mayer and Laudenslayer 1988). Natural openings can occur in areas where soil is alkaline and high in clay; this prevents trees or forests from establishing. Some grassland on the property may be the result of burns used to convert forestland to range or farm areas (Sawyer et al. 2000b). Experts/stakeholders consulted during initial assessment of this RSA included CDFW, USFWS, and the HCP/NCCP Science Panel. Native grassland preserves off Companies property occur at the Hopland Station.

Management Prescription

Management activities in grasslands shall be limited. New road construction to allow access to adjacent timber stands may occur only if no other routes are feasible. Treatments may be applied in grassland that improve habitat quality, including applying surrogates to natural disturbance agents (e.g. fire) and harvesting Douglas-fir.

4. Conservation Easements

Description

Conservation Easements are voluntary, legally binding agreements that limit MRC's activities on four individual easements on MRC forestlands.

Management Prescription

No harvest, limited road management for sediment control actions, and road maintenance shall occur in these areas. Current easements are held with Save the Redwoods League, Pacific Forest Trust, and Sonoma County Agricultural Preserve and Open Space District.

5. Deciduous Riparian Areas

Description

Deciduous Riparian Areas are riparian aquatic management zone stands dominated by hardwood species rather than conifers. This is a very rare habitat type on MRC forestlands. Experts/stakeholders consulted during initial assessment of this RSA included CDFW and USFWS.

Management Prescription

Management prescriptions follow other streamside zones, with the addition of prohibiting converting to conifer dominance.

6. Marsh

Description

Marsh areas are found in Ray Gulch in the Navarro watershed, Albion lagoon in the Albion River, and Nat's Opening in Big River. These marshes provide important habitat for various amphibian and bird species. Experts/stakeholders consulted during initial assessment of this RSA included CDFW and USFWS.

Management Prescription

Follow WLPZ and floodplain protections in marsh areas.

7. Rock Outcroppings

Description

Natural rocky outcrops are at least (a) 1 acre in size with ground cover entirely of rock or (b) near-vertical rock faces at least 50 feet high and 100 feet long. Experts/stakeholders consulted during initial assessment of this RSA included CDFW, USFWS, and the HCP/NCCP Science Panel.

Management Prescription

Survey for peregrine falcons when timber operations occur within 0.5 miles, or helicopter operations occur within 1.0 miles, of rocky outcrops. Survey newly discovered outcrops for sensitive species if there are plans to convert them to quarries. If sensitive species are present, do not convert the outcrop to a quarry).

HRC REPRESENTATIVE SAMPLE AREAS

The following vegetation types and habitats have been identified as Representative Sample Areas on HRC timberlands. RSAs for both ownerships are mapped in an authoritative GIS feature layer, in a central database.

<i>Representative Sample Area</i>	<i>Acres</i>
1. Bishop Pine Forest	5
2. Live Oak Stands	544
3. White Oak Woodlands	147
4. Prairies	5242
5. Peregrine Falcon Nest Cliffs	n/a
6. Serpentine Outcrops	n/a

Descriptions and Management Prescriptions

1. Bishop Pine Forest

See previous section.

2. Live Oak Stands

Description

True oak woodlands on HRC land are woodlands dominated by Oregon white oak and stands of coast live oak or canyon live oak. These stands are rare on the property but more common and extensive elsewhere. Oregon white oak woodland is designated by the Society of American Foresters as a distinct forest cover type. Experts/stakeholders consulted during the initial assessment for this RSA included Society of American Foresters, University of California Agriculture Extension Service (UC), Mattole Restoration Council, USDA Natural Resource Conservation Service (NRCS), the public via THP review, and Tribal groups. True oak woodland reserves outside of HRC property occur on Humboldt Redwoods State Park, Bureau of Land Management (BLM), and US Forest Service lands.

Management Prescription

These stands are managed to maintain the native species mix and to contribute to local and regional diversity. No harvest, firewood permits, or chipwood production are allowed in Oregon white oak woodlands. Selection harvest of conifers is allowed in live oak stands, provided the integrity of the stand in the overall landscape is maintained. True oak stands on HRC property are monitored for stand characteristics as part of the periodic timber inventory. These stands are ecologically stable and are identified from both aerial photos and on-ground surveys.

3. White Oak Woodlands

See Live Oak Stands above.

4. Prairies

Description

Prairies are areas naturally dominated by grass. HRC lands contain prairies that are dominated by grasses due to soil types and historic fire regimes. They are typically found on ridgetops and higher slopes in this region. They are uncommon on the forested landscape and provide habitat for various songbird, raptor, and mammalian species. Experts/stakeholders consulted during initial assessment of this RSA included UC, NRCS, and Tribal groups. Prairie reserves occur off-HRC property on Humboldt Redwoods State Park, Redwood National Park, and US Forest Service lands.

Management Prescription

Limited livestock grazing is controlled by leases to local ranchers. These leases limit the number of animals on a seasonal basis in order to reduce impacts to soils and streams and to minimize the introduction of invasive plant species that could occur by feeding imported hay during winter. Grazing contributes to lowering the amount of dry standing grass in the summer, which if present in quantity can contribute to the fire hazard to surrounding forests. Prairies on HRC property area monitored for changes in size and character as part of the periodic timber inventory. These are identified from both aerial photos and on-ground surveys. In addition, Companies have Private Lands Management (PLM) agreements with the CDFW to manage portions of our property for black-tailed deer. On the Rainbow Ridge PLM at HRC and the Ackerman-South Daugherty PLM on MRC a focus is on maintaining prairies and oak woodlands by removing conifer encroachment. See the Rainbow Ridge and Ackerman-South

Daugherty PLM documents for details. True oak woodlands may also be managed to prevent encroachment of Douglas-fir.

5. Peregrine falcon nest cliffs

Description

Peregrine falcon eyries/nest cliffs are steep cliffs, often situated along rivers, which are used as nesting sites by peregrine falcons. There are four such cliff eyries on or near HRC land. Peregrine falcons are fully protected by the Migratory Bird Treaty Act, among other laws. Experts/stakeholders consulted during initial assessment of this RSA included USFWS, CDFW, Santa Cruz Predatory Bird Research Group (SCPBRG), and the public via HCP consultation and THP review. Peregrine falcon nest cliffs are protected outside of HRC property at Moro Rock and Yosemite (in 2006, there were 154 confirmed active pairs in California, with 30 newly discovered sites Yosemite National Park, Moro Rock).

Management Prescription

Follow HCP prescriptions, THP enforceable language, and/or CEQA requirements as appropriate for buffers, set-backs, breeding season disturbance minimization and other operational restrictions. Annual surveys and monitoring are conducted by Forest Sciences staff at known and potential on property nesting sites of peregrine falcons. Results of this monitoring are reported annually to the Wildlife Agencies or to CDFW if part of a site-specific consultation.

6. Serpentine outcrops

Description

Serpentine and serpentinite (the State rock and mineral) occurrences are indicators of naturally occurring hazardous minerals (asbestiforms) as well as potential rare plant habitats. Certain local and State ordinances govern occurrences of asbestiforms in conjunction with grading and quarrying activities. Activities such as road construction, grading, quarrying, and surface mining operations in serpentine soil/rock types, and the use or supply of asbestos-containing materials are regulated by the California Air Resources Board (CARB). CARB has adopted a State-mandated program for controlling naturally occurring asbestos. This regulation is referred to as the Asbestos ATCM (Airborne Toxic Control Measure). These regulations are found in Title 17, Sections 93105 and 93106 of the California Code of Regulations. Experts/stakeholders consulted during the initial assessment of this RSA included California Native Plant Society (CNPS), "California State Rock," and Tribal groups. Serpentine outcrop reserves occur off HRC property on US Forest Service and BLM lands.

Management Prescription

Occurrences of serpentinite and serpentine discovered during grading and quarrying should be reported to the company Geologist. Recognize and avoid these sites whenever possible. For operations planned in and near serpentine outcrops, seasonally appropriate botanical surveys for the Kneeland Prairie pennycress are required at HRC. Notify the Botany Department and have the area surveyed for rare and endemic species before any activity is conducted that could affect the site. Botanical surveys of associated species are conducted in conjunction with operation projects.