

Jackson Demonstration
State Forest

DRAFT 2026
Forest Management
Plan

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Acronyms and Abbreviations

°C	Degrees Celsius
°F	Degrees Fahrenheit
'	foot or feet
"	inch or inches
AB	Assembly bill
AM	Arbuscular mycorrhizae
BLM	Bureau of Land Management
BMP	Best management practices
Board	California Board of Forestry and Fire Protection
BOF	California Board of Forestry and Fire Protection
CAL FIRE	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
CCZ	California Coastal Zone
CDTFA	California Department of Tax and Fee Administration
CEG	Certified Engineering Geologist
CEQA	California Environmental Quality Act
CFI	Continuous Forest Inventories
CGS	California Geological Survey
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
Department	California Department of Forestry and Fire Protection
DEIR	Draft Environmental Impact Report
EDDR	Early Detection and Rapid Response
EMC	Board's Effectiveness Monitoring Committee
EIR	Environmental Impact Report
ELZ	Equipment Limitation Zone
FFA	Future Farmers of America
FL	Forest Lands
FMP	Forest Management Plan
Forest	Jackson Demonstration State Forest
FORSEE	Forest and State Evaluation Environment
FPR	California Forest Practice Rules
FRI	Forest Resource Inventory
FRIF	Forest Resources Improvement Fund
ft	Foot or feet
GIS	Global information system
I&E	Interpretation and Education
in	Inch or inches
IPM	Integrated Pest Management

IWM	Integrated Weed Management
JAG	Jackson Advisory Group
JDSF	Jackson Demonstration State Forest
LMA	Land Management Allocation
LSDA	Late Seral Development Area
LUC	Land Use Classification
LWD	Large woody debris
MBF	Thousand board feet
MCV	Manual of California Vegetation
MEU	Mendocino Unit
MMBF	Million board feet
MOU	Memorandum of understanding
MP	JDSF Management Plan
NGO	Non-governmental organization
NOAA	National Oceanic and Atmospheric Administration
NRCS	USDA Natural Resource Conservation Service
NSO	Northern Spotted Owl
O&M	Recreation Operations and Maintenance
OFDA	Older Forest Development Area
OGR	Old Growth Reserves
Plan	JDSF Management Plan
PRC	California Public Resource Code
PS	Public Service
Quad	USGS topographic quadrangle
RAWS	Remote Automatic Weather Station
RCWG	Research Coordination Working Group
Rec Plan	Jackson Demonstration State Forest Recreation Plan
RL	Range Land
RMP	Road Management Plan
RMR	Remote Residential
RPF	Registered Professional Forester
RR	Rural Residential
RTF	Recreation Task Force
RWQCB	Regional Water Quality Control Board
SSC	California species of special concern
SDI	Stand Density Index
SOD	Sudden Oak Death
SR 20	State Highway 20
SW	Solid Waste Landfill
TAC	Tribal Advisory Council
Task Force	JDSF Recreation Task Force

TCR	Tribal Cultural Resource
THP	Timber Harvest Plan
TMDL	Total Maximum Daily Load
TPZ	Timber production zone
TRC	Tribal Cultural Resource
UCANR	University of California Agriculture and Natural Resources
USFS	United State Forest Service
USDA	United States Department of Agriculture
USGS	United States Geological Survey
WHR	Wildlife Habitat Relationship
WLPZ	Watercourse and Lake Protection Zone
ZOI	Zones of Infestation

1 Introduction

This section describes the California State Forest Program and how Jackson Demonstration State Forest is a part of that program, describing the purpose of the forest and the bodies that manage the forest. It describes a brief review of the history of the management of this forest. It includes the purpose of this management plan, its legislative basis, and relationship with other management plans. The management goals are outlined. And finally, it covers administration and collaborators, how the forest is funded, surrounding land use, and the legislative and policy context.

1.1 California's Demonstration State Forest Program

The concept of the Demonstration State Forest Program was created during the 1940s to demonstrate the restoration of cutover timberlands and showcase responsible and innovative forest management practices for California's private timberland owners, forest managers, policymakers, educators, researchers, and the public. As of 2025, the Demonstration State Forest Program consists of 14 forests totaling 85,135 acres representing the most common forest types in California.

The Department of Forestry and Fire Protection (CAL FIRE) and the Board of Forestry and Fire Protection (Board) share responsibility for effective management of the state forests. The Board sets state forest policy and approves management plans that provide guidance for 10-year periods. CAL FIRE manages the state forests according to those policies and management plans approved by the Board. This process provides for ongoing interaction between CAL FIRE and the Board, along with public input which has allowed the Demonstration State Forest Program to evolve with ongoing needs of society over its nearly 80-year existence.

1.2 Jackson Demonstration State Forest

At 48,652 acres in size, Jackson Demonstration State Forest (JDSF or Forest), located in the center of the coastal redwood region, is the largest forest in the Demonstration State Forest Program. JDSF is dedicated to increasing our understanding of forest management and providing recreational opportunities. JDSF has demonstrated sustainable management practices since 1947, balancing economical timber production with the protection of public trust resources. Due to the long-standing practice of harvesting less than growth, inventories of standing timber on JDSF continue to increase. Some of the densest and most ecologically complex, actively managed redwood forests can be observed on JDSF.

Coast redwood forests are among the most productive temperate forest ecosystems on Earth with a natural geographic range limited almost entirely within California. A unique feature of redwood forests is that over 80 percent of the land base is privately owned. Public demand for recreational opportunities, wildlife habitat, climate mitigation, forest products, and forest related science from these redwood forest ecosystems is increasing. With that demand comes intense public scrutiny of forest management practices within redwood forests. As one of the only large, actively managed public redwood forests, JDSF offers a unique opportunity to demonstrate the compatibility and

conflicts involved in managing for multiple uses even as population and development pressures increase.

Today's concept of sustainable forest management includes maintaining forest ecosystems that provide social, ecological, environmental, and economic benefits. Emerging topics requested of forest management at JDSF include: the reintroduction of beneficial fire; management that contributes to the State's climate change mitigation goals; and fostering relationships with local Tribes for co-stewardship of natural and cultural resources. Research projects under development at JDSF are already beginning to increase our knowledge in each of these topics. This management plan provides guidance on how management activities can advance these topics of public interest even further.

The JDSF management approach will provide for recreation, research, and sustainable forest management within a financially viable forest management program. The need to demonstrate this potential is compelling. Demonstration of diverse timber management practices within the context of a working forest helps guide private landowners on how best to allocate funds to those restoration efforts that will have the greatest likelihood of success. In addition, this plan is intended to guide timber management practices on JDSF that are compatible with local and state public interest values so that visitors and neighbors will continue to use and enjoy JDSF.

1.3 History of JDSF

The history of management at JDSF can be broken down into three general timeframes. The first period was one in which Native American tribes, including the Pomo, Wailaki, Yuki and other managed the forest through a deep understanding of the role of their presence within the forest ecosystem. The second period began in the mid-1800s and brought about a shift toward resource extraction with a focus on timber production, grazing, and profit. The third, contemporary management, recognizes the value of reciprocity, with greater acknowledgement of the interconnectedness of ecosystems and human activities. Economics are considered within a sustainability context and balanced with ecological and social needs. This section provides some detail into the history of management at JDSF.

1.3.1 Pre-contact History

The following pre-contact account was provided to CAL FIRE by the Mendocino Unit's Tribal Advisory Council in 2025 and characterizes the Native American relations with the landscape for at least 10,000 years prior to European arrival:

The area now known as Mendocino County was home to thousands of indigenous people. The people used hunting and gathering techniques to collect vital resources to sustain life on the land, its waterways, and the nearby ocean.

This region's health, abundance, and sacred management practices allowed the local Tribal people to live and flourish throughout the decades. Deer, rabbits, quails, and other small animals were taken for food. All parts of the animals were used for housing, clothing, and basketry. Berries, roots, and grasses were also used for food, household uses, basketry, and clothing. The Water was also a very important source for lifeways.

Sustenance harvesting, propagating, seeding, gathering of seeds, and burning on the land for forest health and for future generations to survive was a part of everyday life.

More Than a Land Acknowledgement

CAL FIRE respectfully acknowledges that Jackson State Demonstration Forest is located on the ancestral lands of the local Indigenous Peoples. Mendocino County was built upon the unceded territory of unique and distinct groups of indigenous people, including but not limited to the Northern Pomo, Central Pomo, Southern Pomo, Coastal Pomo, Noyo River, Coast Yuki, Yuki, Huchnom, Round Valley, Wailaki, and Cahto People.

We further acknowledge those who were forced here (Covelo) and are now part of the Round Valley Indian Tribes, including the Pit River, Nomlaki, and Concow People.

The Native Peoples of Mendocino County are past, present, and future stewards of this land. The broader history of colonization has had harmful impacts on Native Americans and their cultures.

It is important to acknowledge the history that has brought you to enjoy this forest and land.

We thank the Tribal Advisory Committee for reminding us that a Tribal ecological approach has kept the forest alive. We acknowledge this approach for today and towards the future.

1.3.2 Post-Contact

The structure and composition of JDSF today reflect a complex history of Indigenous stewardship, the era of unregulated logging, natural regeneration, and state-led forest management. Recognizing this legacy and understanding the principles of management for a diverse set of objectives, including habitat and biodiversity, is critical to shaping future management strategies, restoration efforts, and inclusive governance.

Beginning in the 1860s, JDSF lands were extensively logged by the Caspar Lumber Company (Andrews 1984), which relied on railroads and steam donkeys to transport logs, personnel, and equipment. The original old-growth forest was largely harvested between 1862 and 1945, with much of the activity centered along the Caspar, Hare, and South Fork Noyo, and Little North Fork of Big River Watersheds (Levulett and Bingham 1978). The harvesting practices employed broadcast burning of brush and slash to clear the way for log removal. Tanoak bark was removed from the forest as well for tanning hides (Ormsby 1972).

After World War II, logging became more selective and incremental. Larger trees were removed in early entries, followed by additional entries to harvest smaller trees. This resulted in uneven-aged stand structures on the east side of the forest including Chamberlain and James Creek watersheds (California Department of Forestry and Fire Protection (CDF) 2008). Tractors and truck roads replaced the railroad and steam donkeys. The use of tanoak bark and broadcast fire were no longer included in the management practices.

The State of California purchased the forest in 1947 and established JDSF in 1949, naming it after Jacob Green Jackson, founder of the Caspar Lumber Company. The forest was established as a site for restoration, applied silvicultural research, and sustainable timber production.

From the 1960s through the early 1990s, management activities included both partial cutting and clearcutting. Clearcutting over these three decades totaled less than 4% of the forest, with the resulting even-aged stands having limited understory development. By contrast, stands managed through partial, or selective, cutting retained greater structural complexity and supported more diverse vegetation. Selective harvesting techniques were developed and multiple studies examined variable density thinning, natural regeneration, and planting at JDSF during this period. These provide a baseline for the knowledge we have for today's multi-aged management that is common in redwood forestry.

Forest inventories show forest growth has consistently exceeded harvest within JDSF since the 1980's, demonstrating sustainable management and the ability to continually reevaluate constraints on harvest levels and intensity based on ecological and social values. Long-term sustainable forestry models consider non-timber resource values, affecting the level of timber production at JDSF. Some of the major considerations that temper harvesting activities include wildlife and watershed resources, recreation, climate mitigation, and aesthetic enjoyment by the public. These models are updated approximately every decade and look at the full suite of constraints and management goals in place at the time.

The forest continues to accumulate biomass in trees while increasing the complexity of structural conditions. The trend toward larger, older trees, higher species diversity, and greater spatial heterogeneity is expected to continue under this updated management plan, which has an increased emphasis on forest restoration while maintaining its mandate to investigate, demonstrate, and manage for sustainable timber production. The State's commitment to increase collaboration with local Tribes reflects a broader commitment to ecological integrity and social equity.

1.4 Purpose & Relationship to Other Plans

The Forest Management Plan (FMP) provides overarching goals and general parameters for the management of Jackson Demonstration State Forest for the next 10 years, or until a subsequent plan or major revision is approved. This FMP replaces the 2016 update to JDSF's 2008 FMP.

Per Board policy 0351.10, a thorough review of this FMP shall be presented, by CAL FIRE, to the Board of Forestry and Fire Protection every ten years. The Plan's purposes are to guide the integrated use and protection of the Forest's resources, to meet the requirements of legislation and Board policy, and to address local, regional, and statewide issues. This Plan presents and synthesizes current resource conditions and management techniques on JDSF, articulates the desired future forest stand conditions, and provides guidance on how that future condition might be achieved. In doing so, it serves as a guide to Forest managers, as well as a tool for public disclosure, of the policy goals of the Board with respect to JDSF and highlights some potential forestry activities that may take place on JDSF to further the important state policies championed by the Demonstration State Forest Program.

In 2020, the Board determined Demonstration State Forest management plans fall within the Class 6 categorical exemption from the California Environmental Quality Act. Class 6 consists of basic data collection, research, experimental management, and resource evaluation activities which do

not result in a serious or major disturbance to an environmental resource, including but not limited to forest surveys and soil erosion studies. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded. Consistent with this determination, Demonstration State Forest management plans do not dictate a specific course of action CAL FIRE must take with respect to the experimental management of Demonstration State Forests, but rather constitute a study of possible future forest management activities that would be both consistent with existing state law and policy and feasible given existing forest conditions and available resources.

California has ambitious plans for how state lands can contribute to the state's climate mitigation strategies, biodiversity goals, provide equitable outdoor recreation, and improve relationships with local Tribes. The FMP compliments these state plans and incorporates those activities into the goals set for JDSF to accomplish over the next decade where opportunities exist. These plans include but are not limited to California's Natural and Working Lands Strategy, California Forest Carbon Plan, Pathways to 30x30, Outdoors for All Strategy, California's Wildfire and Forest Resilience Task Force Action Plan, Strategic Plan for Expanding Use of Beneficial Fire, and the California Natural Resource Agency's Tribal Stewardship Policy and Tool Kit. We anticipate the state will continue to refine these current plans and develop new ones over the life of the FMP. This FMP is a "living" document which includes the flexibility to adapt to future changes in policy, public needs, or changed conditions.

Other plans that shape the management of JDSF are JDSF's Fire Plan, Road Management Plan, Recreation Plan, and Research Plan. These plans provide further details on how JDSF may accomplish the goals set forth in the FMP. When these other plans are updated, they will reflect any new policy goals or guidance provided in this FMP.

As the only large public redwood forest ownership where manipulative research and demonstrations on all aspects of sustainable forest management may take place, it's critical that the forest represents landscapes and economies relevant to the redwood region. Within the current range of redwood forests as of 2021, 16% is public ownership, 36% is owned by small landowners, and 48% by mid-size and large landowners. A growing number of these forests are shifting from private to community forests, Tribes, and non-governmental organizations (NGOs) with active management focused on accelerated restoration of older and more diverse forest structures.

This FMP builds upon the previous FMP and retains the established allocations of land (land management allocations or LMAs) that were adopted by the Board at the recommendation of their Jackson Advisory Group (JAG) in 2011. The establishment of these LMAs was a major evolution designed to guide management activities toward achieving a determined balance of ecological, environmental, economic, and research goals within JDSF.

The LMAs include old growth preservation (Old Growth Reserves), accelerated development of future reserves (Late Seral Management Areas), management for older forests (Older Forest Development Areas), and common management practices (Matrix). LMAs are described in greater detail in the Sustainable Forest Management section (2.5.1 – JDSF Desired Forest Structure).

The landscape allocation types represent common goals that landowners hold for their forest stands. Preserving existing old-growth stands and accelerating the development of selected younger stands to obtain old-growth characteristics is relevant to other public lands, NGOs, and some private landowners. Older Forest Development Areas management balances restoration and ecologic objectives in economically viable management regimes common to land trusts, NGOs, and small to medium sized private landowners. Matrix lands allow for the demonstration of the wide diversity of forest management allowed under the State's Forest Practice Rules and test the effectiveness of those rules in protecting public trust resources. An LMA is located in the Appendix.

1.5 Management Goals & Guidelines

The Goals and Objectives in the FMP are based upon legislative statutes, regulations, Board policies, and the direction provided by CAL FIRE and the Board. As discussed in the Administration section below, JDSF has several advisory groups and collaborators who help engage the public and design specific projects to achieve the FMP goals.

1.5.1 Sustainable Forest Management Goals

- Maintain a healthy, diverse, and dynamic matrix of forest habitats and seral stages that are suitable for a wide variety of native fish and wildlife populations and promote forest resilience to disturbances exacerbated by climate change.
- Maintain and protect old growth reserves and increase late seral forest and older forest structure and characteristics.
- Preserve and promote local native plant species and limit the invasion and spread of exotic plants. Protect native plant communities from insects, disease, and plant pests using the concept of integrated pest management.
- Promote and maintain mature hardwoods as important habitat elements within the forest ecosystem. In areas with either an overabundance of, or a lack of hardwoods, restore stands to the historic ratio of conifers to hardwoods.
- Utilize beneficial fire as a regular part of silvicultural treatments at a frequency and intensity that are in alignment with forest management goals and environmental protections.
- Conduct regular harvests to achieve continuous sustained yields of high-quality timber products that generate sufficient revenues to achieve the Management Plan goals while providing opportunities for local employment, tax revenue, forest restoration, carbon sequestration, watershed, wildlife, fisheries, research, aesthetic enjoyment, and recreational goals.
- Utilize forestry practices that protect and enhance watershed and ecological processes.
- Manage forest fuels to reduce the incidence and severity of wildfire.

1.5.2 Research, Demonstration, & Education Goals

- To the extent feasible and operationally appropriate, continue to implement the Research Plan, emphasizing adaptive management for disturbances such as climate change, the use of beneficial fire in forest management, and support investigations led by local Tribes when requested.

- Foster partnerships with universities, the U.S. Forest Service, public and private researchers, forest conservation organizations, and educators by hosting periodic collaborative discussions and pursuing joint research and demonstration projects.
- Conduct resource management demonstrations and investigations directed to the needs of the public, forest landowners, resource professionals, timber operators, and regulatory agencies.
- Develop demonstration areas showcasing a variety of forest management approaches, including multiple use compatibilities and conflicts, in compact, easily accessible locations.
- Collect, analyze, update, and organize information on the Forest and its resources, ensuring it is stored and indexed for use in planning, management, and as a baseline for research.
- Provide access to JDSF for educators and youth programs to support forestry and ecology curricula.
- Expand education and outreach on forest research and management findings through peer-reviewed publications, newsletters, message boards, interpretive signs, brochures, and online resources.

1.5.3 Recreation and Aesthetic Enjoyment Goals

- To the extent feasible and operationally appropriate, continue to implement the Recreation Plan and periodically conduct recreation surveys to plan for future improvement.
- Demonstrate that recreation is compatible with forest management, restoration, and research activities. Include appropriate mitigations in harvest plans that may impact recreation and aesthetic values.
- Utilize recreational facilities to explain forest research and forest management to visitors and recreationists.
- Consider aesthetic enjoyment when implementing forest research and forest management activities in heavily trafficked areas.
- Maintain campgrounds, picnic areas, trails and other recreational facilities in rustic, safe, healthy, and attractive conditions.
- Engage recreation user groups interested in cooperating in the design, implementation, and stewardship of recreational facilities and volunteer efforts.

1.5.4 Tribal Co-management Goals

- Collaborate, consult, and work with local Tribes on management projects and tribal uses.
- Provide early and meaningful opportunities for Tribal collaboration on management projects.
- Provide access for local Tribes to continue traditional lifeways, which may include cultural burning for forest health.

1.5.5 Forest Protection Goals

Wildfire Resiliency

- To the extent feasible and operationally appropriate, continue to implement the Fire Protection and Pre-attack Plan.

Cultural Resource

- Inventory, survey, and protect historic and pre-contact archaeological resources.
- Develop avoidance or protection measures for archaeological resources during project development in consultation with local Tribes and CAL FIRE Archaeologists.

Law Enforcement

- Maintain a physical presence in the forest to enforce recreation, forest management, and fire prevention regulations. Make regular contact with forest users to ensure understanding and compliance.

Pests

- Utilize integrated pest management (IPM) techniques to promote forest health.

1.6 Administration

Administration of JDSF, assigned to CAL FIRE by the Board and Legislature, is carried out utilizing policy, statutes, and guidance from advisory groups. CAL FIRE also works with Tribes, academics and other collaborators when managing JDSF. As explained below, funding for State Forests is unique and integral to achieving JDSF's purpose and FMP goals and guidelines.

1.6.1 CAL FIRE

The Board provides policy for the Demonstration State Forests which are administered by the Director of CAL FIRE. The Forest Managers for each state forest manage their forest's operations and report to their Unit Chief, with budget and policy support from the Demonstration State Forest Program in Sacramento. JDSF is located within the Mendocino Unit, headquartered in Willits. The JDSF office is co-located with the CAL FIRE Fort Bragg Fire Station.

The management team for JDSF includes both staff and outside consultants comprised of natural resource professionals such as Registered Professional Foresters (RPFs), wildlife and fisheries biologists, botanists, archeologists, and Professional Geologists.

1.6.2 Advisory Groups & Collaborations

JDSF has several advisory groups and collaborators that help ensure JDSF is managed in accordance with the policy goals set forth in the FMP. These advisory groups and collaborators assist in: (1) engaging the public; (2) developing, funding, and reviewing specific projects proposed at JDSF; (3) advising on long-term research projects; and (4) providing recommendations and support to improve proposed management activities, research focus, recreational facilities; and (5) guiding priorities for actions based on existing staff capacity and available funding during the life of the FMP.

Advisory groups include the JAG, Mendocino Unit's Tribal Advisory Council (TAC), and Recreation Task Force (RTF).

Collaborators include the Board's Effectiveness Monitoring Committee, California Department of Fish and Wildlife Coastal Fisheries Program, California Geological Services, Regional Water Quality Control Board (RWQCB), California Conservation Corps, University of California Agriculture and Natural Resources (UCANR), USDA Forest Service, Pacific Southwest Research Station, the Mendocino Coast Cyclists, Redwood Practical Shooters, Trout Unlimited, Mendocino Land Trust, Redwood Tree Improvement Cooperative, and numerous University and research partners.

1.6.3 Funding

Management of the Demonstration State Forest Program is funded through revenue generated through sustainable harvesting of timber, with small contributions coming from recreation and minor forest products such as mushroom collecting and firewood cutting permits. General funds are not regularly allocated for state forests in the state's annual budget.

All revenues are deposited in the Forest Resources Improvement Fund (FRIF), a special fund dedicated solely to management of the Demonstration State Forests. By statute, FRIF funds cannot be used for other purposes. The FRIF supports all aspects of state forest management including personnel, facilities, restoration, research, and recreation. The state has set a goal of a 3-year prudent operating reserve which has not been met in the 21st century due to interruptions in forest management, cyclical market conditions for forest products, and impacts of large fires limiting sawmill capacity for planned forest management activities.

In 2024 the overall budget for the Demonstration State Forest Program was approximately \$9.8 million, which included about \$6.6 million for personnel costs and \$3.2 million for operating expenses. Of that, JDSF was budgeted for approximately \$5 million dollars, which included \$3.5 million in personnel costs and \$1.5 million in operating expenses. The operating expenses at JDSF are split amongst the core program budgets with 25% for administration and facilities; 25% to the roads program, 25% to the research program, 15% to sustainably forestry, and 10% to recreation. Additional investments in the forest are made through reduced revenues from timber sales by incorporating restoration, recreation, and research activities into timber sale contracts.

The Demonstration State Forest Program generated on average \$8.2 million annually between 2014 and 2022. JDSF contributed approximately \$6.3 million annually during this same period through the sale of approximately 13 million board feet of timber annually from sustainable forest management projects.

JDSF is in a unique market relative to other state forests. Mendocino County has valuable tree species, a large and highly trained workforce, and robust forest product infrastructure that helps realize relatively high financial return for timber harvest. This allows a portion of revenues from JDSF to support activities on other Demonstration State Forests, such as conservation of giant sequoias at Mountain Home State Forest which has access to only one sawmill that serves all landowners south of Tuolumne County. Though Soquel also has redwood, there is a much smaller workforce and only a single local sawmill in Santa Cruz County and periodic interest from sawmills in Mendocino and Sonoma County to source forest products from that distance. This leads to

approximately 66% of the financial value realized at Soquel relative to JDSF for the same quantity and quality of forest products. Shortfalls in annual revenue require deferment of some planned operating expenses to future fiscal years.

The Demonstration State Forest Program is unique amongst state lands in that it pays both annual property taxes and yield taxes on timber harvested through sustainable forest management. Property taxes, owed annually whether timber is harvested or not, are approximately \$125,000 and are based on the timberland values set by the California Department of Tax and Fee Administration (CDTFA). Timber yield taxes are variable based on the amount of timber removed according to value schedules also set by CDTFA. These taxes have averaged approximately \$175,000 annually over the last decade and are paid by the timber purchaser as part of the timber sale agreement. Timber yield tax revenue collected by the CDTFA is allocated back to the county of harvest for the county auditor to distribute.

JDSF provides significant contributions to the local economy. Regular harvesting activities engage the local workforce for jobs in the woods and local manufacturing facilities. In addition, JDSF provides over 48 miles of multi-use trails connected by a well-maintained road system. JDSF has over 17 miles of State Highway 20 (SR 20) frontage, contributing to the redwood curtain experience for visitors entering the Fort Bragg coast from the east, and operates the only day use area welcoming visitors to stop and enjoy the river and redwoods along SR 20. JDSF offers unique opportunities compared to other public landowners such as single-track mountain biking, mushroom foraging, and firewood collecting. JDSF also supports numerous tours, special events, and research projects that bring visitors to the community. These opportunities are recognized and advertised by both the Fort Bragg and Mendocino County Tourism Bureaus in their public outreach to local and out-of-town visitors.

The uncertainties associated with harvest planning, lumber markets, and public acceptance of management activities impact the ability to achieve the goals set forth in the FMP. JDSF was unable to fill all the staff positions or have the resources to invest in achieving many of the goals envisioned in the 2008 and 2016 FMPs due to shortfalls in projected funding. This is partially due to the limited harvest volumes during this period, partially due to the 2008 recession causing low timber prices, and partially to the impacts of depleting FRIF financial reserves between 2002-2008.

Interruptions in management activities in 2022 have again weakened the financial position of the Demonstration State Forest Program, which now requires the use of reserves and the deferment of expenses to cover annual personnel and operating costs. JDSF works closely with the public and JAG to prioritize the use of scarce financial resources during these times. Achievement of the goals set forth in this FMP depends on the ability of the forest to generate consistent and adequate revenue and reserves to invest in the required personnel and resources to conduct the work.

1.6.4 Facilities & Improvements

Facilities on JDSF include Buildings, Roads, Trails, Campgrounds, Day Use areas, Domestic and municipal water supplies, and Research monitoring structures such as weirs and instruments.

Facilities are managed according to their function. The Recreation Management Plan discusses campgrounds, trails, buildings, and other infrastructure associated with these facilities. Safety, Security, & Access

The remote and rustic character of JDSF makes safety an important management consideration. JDSF visitors need to be informed of safety issues and hazards inherent to the forest. Roads, trails, campgrounds, emergency helicopter landings, and other facilities are annually evaluated and maintained to ensure they are in a safe condition. The Mendocino Unit Chief is responsible for forest and fire protection at JDSF. To achieve this, the JDSF Forest Manager, Unit Operations Chief, Fire Prevention Battalion Chief, and the local CAL FIRE Battalion Chief all work together to ensure an adequate forest and fire protection program is in place for JDSF.

Hazards are communicated to the public through signs, brochures, maps, press releases, and social media. Seasonal closures of roads and campgrounds also provide for greater public safety during winter months in addition to natural resource protection. Temporary closure for specific activities or specific areas is also regularly issued by the Forest Manager to provide for public and contractor safety during road work, timber operations, or other potentially hazardous activities.

Access to JDSF is primarily provided through entrances from SR 20 and along the western boundaries with local use from the coastal communities of Mendocino, Caspar and Fort Bragg. Access points from the eastern boundaries to JDSF are limited and are equipped with gates restricting vehicle access to the primary access points along SR 20.

1.6.5 Surrounding Land Use

JDSF is in central Mendocino County. Land Use Classification (LUC) to the north and south of JDSF are Forest Lands (FL) in the Mendocino County General Plan (as is JDSF). Lands directly on the eastern boundary of JDSF are classified as FL and Range Land (RL). Further to the east are the large areas of Rural Residential (RR) as well as the thousands of smaller residential lots in the Brooktrails development. The LUCs for the west side of JDSF are Rural Residential (RR), Remote Residential (RMR), Public Service (PS) and Solid Waste Landfill (SW) (Mendocino County 2003). Special considerations are necessary where timber harvesting or other activities utilizing heavy equipment are conducted immediately adjacent to Rural Residential areas.

Other important neighbors of JDSF on the west and southwest include several State Park units (Jug Handle State Natural Reserve, Russian Gulch State Park, Mendocino Woodlands State Park, and the Big River Unit of the Mendocino Headlands State Park). JDSF has numerous trail systems that connect these two public lands and collaborates with State Parks on management of the pygmy forest and the Mendocino Woodlands. The Conservation Fund holds lands in the Big River watershed, immediately to the south of the central part of JDSF. Mendocino Redwood Company is a major landowner to the north of JDSF. The Conservation Fund and Mendocino Redwood Company are industrial scale timberland owners that manage their lands for sustainable forest management.

1.6.6 Legislative and Policy Context

The State of California owns and stewards over 3.8 million acres of land. Land managing agencies include the Department of Fish and Wildlife, State Lands Commission, State Parks, CAL FIRE, Caltrans, various Conservancies, and the University of California Natural Reserve System. Each agency has a unique role and collectively represents the State's total interest in forests and natural lands. The Demonstration State Forest Program represents about 2% of total State ownership and fills the niche of demonstrating and advancing the understanding of sustainable forestry for social, ecological, and economic values.

The statutes governing the management of state forests are found in Division 4, Part 2, Chapter 9 of the Public Resources Code (PRC). The California State legislature describes the purpose of the Demonstration State Forests as addressing the State's interest in restoring cutover timberlands within PRC Section 4631, which states in part: "It is hereby declared to be in the interest of the welfare of the people of this state and their industries and other activities involving the use of wood, lumber, poles, piling, and other forest products, that desirable cutover forest lands, including those having young and old timber growth, be made fully productive and that the holding and reforestation of such lands is a necessary measure predicated on waning supplies of original old growth timber."

Responsibility for oversight and management of state forests is split between CAL FIRE and the Board. PRC section 4645 states "The department, in accordance with plans approved by the board, may engage in the management, protection, and reforestation of state forests." PRC section 4646 goes on to state: "The director, acting in accordance with policies adopted by the board, shall administer this chapter. He may exercise all powers necessary to accomplish its purposes and intent." These statutes vest the Board with authority to approve management plans and set policy for state forests, and CAL FIRE to manage state forests according to those plans and policies.

Management of state forests is further defined by the legislature in PRC section 4639 which states: "'Management' means the handling of forest crop and forest soil to achieve maximum sustained production of high-quality forest products while considering values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment."

The Board's policies for forest management are located in Chapter 0351 (0351-0351.10). Board Policy 0351.3 establishes "the primary purpose of the state forests is to conduct demonstrations, investigations, and education in forest management." Policy 0351.4 further defines timber management policies stating that state forest timberlands will be managed on the sustained yield principle, defined as management which will achieve and maintain continuous timber production consistent with environmental constraints;" and "Timber production and harvesting should provide for coordination with other state forest uses. Silvicultural practices should be compatible with recreation, soil, water, wildlife and fisheries values, carbon sequestration, and aesthetic enjoyment."

New statutes regarding Tribal Cultural Resources (TCRs) were enacted by Assembly Bill 52 in 2014 that require consideration of tribal cultural resources early in the CEQA process to ensure that local and tribal governments, public agencies, and project proponents would have information available

early in the project planning process to identify and address potential adverse impacts to tribal cultural resources.

As California's values and interests in its forest resources have evolved since the original state forest statutes were enacted by the legislature to primarily protect the State's interest in timber resources, the management of JDSF has also evolved. These values are incorporated into each iteration of the management plan and provide guidance on how forest managers can best meet the needs of our current society. This plan similarly shows the evolution of the State's values in forestlands and highlights opportunities to address emerging issues such as climate change mitigation, beneficial fire, accelerated forest restoration, and incorporating local Tribes in management actions.

Board Policy 0351.1 sums this up well with the following statement: "The value of the Demonstration State Forest Program will continue to increase as the demand for forest products, recreational opportunities, valuable wildlife habitat, and forest related science increases and as public interest in forest management practices intensifies. Demonstrations of the compatibility and conflicts involved in managing multiple use of forest land are essential as population and development pressures increase."

2 Forest Environment and Management Goals

Chapter 2, Forest and Management, describes the environmental setting of JDSF, including climate, water resources, soil and geology, vegetation and animals. This Chapter also includes further descriptions of high-level objectives of each management goal, as outlined in Chapter 1, Section 4 (1.4) above.

2.1 Location & Climate

Located at the geographic center of the coastal redwood forest range, the 48,652-acre JDSF provides a unique opportunity for demonstration of State managed redwood forestland. Surrounded by both private and public forest land, JDSF is a large contiguous tract of productive, working state forest that is managed for timber production, ecological benefits, water quality, research, education, and recreation.

The City of Fort Bragg, where JDSF headquarters is located, is two miles north of JDSF's northwestern property boundary, and the town of Mendocino is located two miles west of JDSF's southwest boundary. The town of Willits and the community of Brooktrails are located approximately 7 miles to the east, and Ukiah, the county seat, is 35 miles southeast of JDSF. The JDSF western boundary is within 1.5 miles of the coast, and the eastern boundary reaches nearly to the crest of the Mendocino Ridge separating the coastal slopes from the inland coastal range and valleys. JDSF spans portions of 8 different U. S. Geological Survey (USGS) 7.5' quadrangles: Fort Bragg, Mendocino, Noyo Hill, Mathison Peak, Northspur, Comptche, Burbeck, and Greenough Ridge.

The region's climate is characterized by warm, mild summers and cool, wet winters. Abundant ground moisture creates exceptional growing conditions, along with deep alluvial soils derived from coastal marine bedrock and ample winter rainfall and summer fog.

Elevations range from 80 feet, near seas level, to 2,200 feet above sea level near inland ridge tops. Temperatures range dramatically from the lower coastal regions with marine influence, to inland ridges, fluctuating from 25°F to 100°F seasonally, with wide variations based on aspect and microclimate.

Mean annual precipitation is 39 inches at Fort Bragg (National Oceanic and Atmospheric Administration, n.d.) inches (U.S.D.A., Forest Service, n.d.). Mean annual precipitation at the McGuire's Remote Automated Weather Station, near the middle of JDSF, is slightly higher at 63 inches (National Weather Service 2025). About 90 percent of the precipitation in this area falls between October and April, with the highest average monthly precipitation in January. Winter storms from the Pacific Ocean bring intense rainfall over several hours or days, particularly warmer storms from lower latitudes. Snow is infrequent and usually does not remain even at higher elevations inland.

Temperatures in the western portions of JDSF are greatly influenced by the Pacific Ocean and its moderating effect. Fog is a dominant climatic feature which can extend inland up to 20 miles or more during summer nights. Redwood trees thrive in this coastal environment, along with grand fir, western hemlock, tanoak, and Douglas-fir.

The higher elevations located in the eastern portions of JDSF have a distinctly drier and warmer climate in the summer, especially on ridges that have prolonged sun exposure. Douglas-fir and hardwoods such as madrone, California laurel, and tanoak often populate these reaches, with sparser redwood stands located on lower slopes adjacent to watercourses.

Summer fog is frequent and forms from warmer air rising over the cooler Pacific Ocean water. This fog is important for the vegetation that grows in JDSF, helping relieve summer drought-stress. Accordingly, coast redwoods are generally restricted to the fog-belt.

Redwood forests face increasing temperatures, leading to more frequent and intense heatwaves and greater evaporation of soil moisture and less predictable precipitation (Save the Redwoods League 2025). Changes in temperature and humidity regimes, including rainfall and fog drip patterns can alter forest flora and fauna and the associated ecological services they provide. Delay in the onset of the wet season and the intensity of periodic droughts are early indicators of climate change that have been evaluated in research at JDSF in the Caspar Creek Experimental Watersheds. These changes may impact forest species in different ways, making JDSF less suitable for some species and more favorable for others, which can lead to a change in forest species composition over time. The FMP contains multiple strategies to build resilience to the effects of a changing climate.

2.1.1 Plan Goals and Potential Actions – Climate Change

Plan Goals:

- Maintain a diverse, dynamic matrix of forest habitats and seral stages that are suitable for a wide variety of native fish and wildlife populations and provide forest resilience to disturbances exacerbated by climate change.
- Maintain and protect old growth reserves and increase late seral forest and older forest structure and characteristics on the Forest.

Potential Actions:

- Sustainable forest management - Sustainable forest management is a fundamental, natural solution to ensure that the forest continues to store and accrue biomass.
- Increase biomass in larger, older trees - The envisioned management activities described in this FMP will continue to increase forest biomass and its associated carbon storage in older and larger trees for decades to come, particularly within the LMAs devoted to old growth, late seral, and older forest management.
- Management for increased resilience - Ongoing harvest activities have a focus on ensuring healthy forest conditions by managing light and moisture competition, reducing fuel loads, and reintroducing beneficial fire so that forest stands have a better chance of resisting mass mortality and excessive emissions associated with wildfires.
- Research opportunities -The various types of silviculture envisioned in this management plan will provide a rich set of forest conditions for research and demonstration of climate change impacts and mitigation strategies.

2.2 Water Resources, Soil, & Geology

JDSF is located within the California Coast Range. It extends from the gently sloping marine terrace on the coastal plain near Caspar and Fort Bragg, to increasingly steep terrain in the eastern part of JDSF. JDSF lies within parts of two large river watersheds (Noyo and Big River) and several smaller watersheds that drain directly to the Pacific Ocean. Soils at JDSF are formed by a combination of geological, vegetative and climatic factors. Soils range from the unique acidic pygmy forest to productive alluvial ones. Legacy impacts from unregulated logging, road building, and other actions from the past are still visible in parts of JDSF.

2.2.1 Geology

The geomorphology of the coastal mountains of Mendocino County has been strongly influenced by two on-going processes: tectonic uplift and fluctuations in sea level. In general, the landscape is characterized by moderate to high topographical relief. Slopes are less steep in the western watersheds within JDSF and are steeper to the east in the watersheds nearer the crest of the Mendocino Coast Range.

The California Geological Survey (CGS) has mapped landslide features and relative landslide potential for much of JDSF. Additionally, widely available Lidar has allowed for a more rigorous study of these unstable areas and CGS staff assist with site specific evaluations for project planning.

2.2.2 Soil & Soil Productivity

Soil is a function of the underlying geology, natural vegetation, topographic relief and climate. Soil survey maps for Mendocino County (*Soil Survey of Mendocino County, California, Western Part* 2006) along with forest inventory plots formed the basis for estimates on site productivity on JDSF. Soil types throughout JDSF range from highly productive timber growing soils like the Dehaven-Hotel complex to the nutrient deficient soils with a hardpan like Blacklock and Aborigine soils associated with stunted growth in the pygmy forest region.

Best management practices minimize the loss of soil productivity. Loss of growing space associated with roads and tractor trails, compaction and loss of soil through management induced erosion are two primary issues affecting soil productivity associated with management of forest resources (Elliot et al. 1999). Proper planning of the forest road network in the Road Management Plan (RMP), application of the Forest Practice Regulations, and site-specific project review by the Geological Engineers protect soil resources during ground disturbing activities.

Current management recognizes that soil resources must be protected for native plant community health, water quality, aquatic habitats, and timber productivity. Forest roads can contribute sediment as well as result in geological instability, if not properly planned, sited, and drained (Weaver et al. 2015). One of the key FMP goals since 2008 was to move forest roads from less stable sites near watercourses to upslope locations. The result is approximately 28 miles of abandoned riparian roads, with approximately 10 miles remaining, most located within the Chamberlain and James Creek drainage areas.

An RMP was prepared and approved in JDSF's 2011 Management Plan as Appendix IV. Its implementation has resulted in reduced adverse effects of roads. Timber harvests and other management routinely include measures to minimize risk of erosion. Problematic areas are evaluated for restoration during timber harvest planning as well. Currently, road inventories are performed to assess and prioritize road points for improvements as well as problematic road segments. JDSF maintains this inventory geospatially and in a database of road points. The Road Management Plan outlines ongoing forest planning, monitoring, and maintenance practices.

2.2.3 Hydrology and Water Quality

JDSF lies in many different watersheds. A watershed is an area of land that drains all waterways to a common outlet. In JDSF, there are several major watersheds that drain directly into the Pacific Ocean. These include the Noyo River, Big River, Hare Creek, Jughandle Creek, and Caspar Creek, all of which are comprised of several major tributaries, each with their own sub-watersheds. The local stream (or watercourse) pattern is reminiscent of a trellis, where short tributary streams flow into larger streams at roughly right angles. Stream patterns are controlled in part by structural patterns in the bedrock. As is true throughout the Coast Ranges, the predominant structural drainage pattern trends northwesterly.

Watercourses and wetlands provide many beneficial uses, including habitat for freshwater and marine aquatic life, terrestrial wildlife, domestic water supply, groundwater recharge, recreation, and navigation. The vegetation located adjacent to or within these watercourses and wetlands are referred to as riparian and are an important part of riparian ecosystems. These plants and trees are adapted to flooding and saturated soil conditions and act as a natural filter strip for water and sediment to infiltrate into the ground when moving between the terrestrial upland communities and the watercourses or wetlands.

Wetland habitats on JDSF will continue to be managed in a manner that maintains or restores productivity and contributes to fish and wildlife habitat, water quality, and ecological functions and processes. The wetlands of JDSF are small in extent, but of high interest and value. They include two known Sphagnum bogs and numerous springs and seeps with aquatic habitat values.

Wetland habitat quality and hydrologic function are protected by regulatory requirements and site-specific analysis during project planning. The land allocations designate all Class I and Class II watercourses as Late Seral Development to ensure high levels of canopy cover and help restore forest structures such as large trees adjacent to aquatic habitats.

Watercourses can be classified in many ways. Generally, these systems are based on stream flow and presence of aquatic life (Kocher and Harris 2007). The classification system used on JDSF is based on the California Forest Practice Rules (California Department of Forestry and Fire Protection 2025), which defines watercourses in the following way:

Table 1: Watercourse Classifications

Class	Characteristic or Key Indicators
1	1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or

Class	Characteristic or Key Indicators
	2) Fish always or seasonally present onsite, includes habitat to sustain fish migration and spawning.
2*	Aquatic habitat for non-fish aquatic species
3	Evidence of sediment of transport No aquatic life present

★ Class 2 watercourses are composed of two types - Class 2-S and Class 2-L. See Forest Practice Rules for definition.

Water quality can be affected by many different contaminants including sediment and temperature, which are the primary concerns at JDSF. The loss of soil from the land by water runoff, wind, ice, gravity or other agents is called erosion (Helms and Society of American Foresters 1998). This soil can then wash into streams where it is measured as sediment (Murphy 1995). Soil can be exposed to erosive forces during management activities that create roads, skid trails, landings, or disturb the forest floor. Most erosion from logging originates from poorly maintained haul roads and skid trails (Lewis and Rice 1989, Weaver et al. 1995).

JDSF has a high percentage of its watercourse areas within inner gorges, which are steep, unstable slopes immediately adjacent to the stream channel. Inner gorges release sediment naturally as well as when disturbed by management activities. These areas are identified and protected as part of project planning. Carefully planned road and skid trail networks, application of the provisions in the Forest Practice Rules, and site-specific analysis and mitigation during project planning can reduce sediment delivery and protect water quality during ground disturbing activities.

Temperatures in streams and rivers are primarily influenced by atmospheric and hydrologic processes. Forest management activities also have the potential to affect water temperature by removal of nearby shade bearing trees. Water temperature can affect aquatic species through oxygen availability, fish metabolic rates, competition, rearing success and egg development. Water temperature can also affect photosynthetic rates for aquatic plants and algae as well as the solubility of gases and chemicals. JDSF has managed Class I and II watercourses as Late Seral Development Area since 2011 to recruit cooling dense canopy cover and large woody debris to stream.

Figure 1: Photo taken from 2024 large woody debris project



Water temperatures have been measured throughout JDSF since 1993, and periodically before that since 1965 (Cafferata 1990). With few exceptions the water temperature has been below thresholds detrimental to salmon species.

2.2.4 Plan Goals and Potential Actions – Water Resources, Soil, & Geology

Goal:

- Utilize forestry practices that protect and enhance watershed and ecological processes.

Potential Actions:

- Protect the beneficial uses of water.
- Maintain soil productivity and prevent, reduce, and mitigate erosion.
- Protect soil organic matter and reduce soil compaction by minimizing skid trails and intensity of broadcast burning.
- Protect and enhance water temperature parameters by maintaining a high level of canopy cover over streams and adjacent areas.
- In watercourse protection/ riparian zones continue to develop to late seral forest and provide habitat linkages.
- Systematically upgrade and modernize the road system, including decommissioning roads adjacent to watercourses where feasible, to reduce the risk of erosion and instability to geological, water, and soil resources.
- Via recreation planning, reduce the potential risk of erosion and sedimentation from recreation trails.
- Develop new approaches to improve aquatic system health via Caspar Watershed and the Research Plan's Watershed Science and Aquatic Recovery emphasis area.
- Monitor summer water temperatures and perform sediment sampling in select watersheds.
- Restore Large Woody Debris in priority drainages
- Provide appropriate forest management buffers around designated domestic water sources.

2.3 Vegetation

The vegetation within JDSF is primarily a north coast coniferous forest plant community; dominated by redwood (*Sequoia sempervirens*), Douglas-fir (*Pseudotsuga menziesii*), and tanoak (*Notholithocarpus densiflorus*) with minor associates madrone (*Arbutus menziesii*), grand fir (*Abies grandis*), western hemlock (*Tsuga heterophylla*), giant chinquapin (*Chrysolepis chrysophylla*) and bay laurel (*Umbellularia californica*). JDSF is also home to other unique plant communities and habitats, as well as rare and uncommon plants. A complete list of plant and fungi species found in the forest, to date, is in the Appendix.

Vegetative or natural communities are classification systems to characterize forests, woodlands, grasslands, meadows, wetlands, and riparian areas into different groups, or strata to organize them for research, planning and management purposes. In California, the CNPS Manual of California Vegetation (MCV) (Sawyer 2009) serves as a widely used standard for plant classification. It is based on the concept of species dominance within tree, shrub or herbaceous plant communities. The majority of JDSF has Redwood Forest (Upland* and Alluvial*), Douglas-fir Forest (Upland), Tanoak

Forest, and Mixed Evergreen Forest. Some are special status communities limited to specific soils like Northern Bishop Pine Forest*, Mendocino Pygmy Cypress Forest* (aka Mendocino Cypress Woodland), Sphagnum Bog* and Darlingtonia Bog*. Associated with water are limited areas of Red Alder Forest, Coastal and Freshwater Marsh* and Freshwater Seep*.

*Classified as Sensitive Natural Communities by CDFW because of rarity or other factors. See Appendix.

2.3.1 Special Status Plant Species of Concern

Special status plant species are those that are considered sufficiently rare and require special consideration and/or protection. They are protected by laws which include the federal Endangered Species Act, the California Endangered Species Act, and the California Native Plant Protection Act. Special status plants that are ranked rare and threatened are provided protection during management activities. A table of Rare Plants with the potential to be found within JDSF is in the Appendix.

2.3.2 Other Organisms including Fungi

The JDSF forest harbors a complex and rich soil microbiome containing invertebrates, fungi, algae and bacteria, which interact together with the plant community to form feedback loops critical to nutrient cycling processes and soil development. Fungi play an important role in forest ecosystems as decomposers, mutualists with algae (lichens) and vascular plants (mycorrhizae), and pathogens.

The coast redwood ecosystem is host to a diversity of fungi, both saprotrophic and mycorrhizal. All tree species on JDSF form mycorrhizae with several different fungal groups, including species that form large, fleshy fruiting bodies some of which are choice edibles for not only people but also food for a variety of wildlife species. Records generated from the annual Mendocino Foray have documented over 750 fungal species on JDSF. These include saprotrophic, mycorrhizal, lichenized, and pathogenic fungal species. Given the cryptic life history of many groups of fungi, it is likely that many more species remain to be discovered on JDSF.

Collecting fungi has occurred on JDSF for decades but has grown in popularity among a diverse group of stakeholders. Since 2016, permits issued annually have more than doubled, with 1,602 sold in 2024. These include commercial and weekend foragers, mycological clubs and societies, professional mycologists, biology students, culinary artists, fabric dyers, medicine hunters, and citizen scientists.

2.3.3 Invasive Plant Species and Vegetation Control

Invasive plants are defined as plants that are not native to an environment, and once introduced, they will establish quickly, reproduce, and spread, causing harm to the environment, economy, or human health (California Invasive Plant Council 2025).

Invasive plants rely on several different strategies that result in their success in dominating a landscape. Invasive plants are reported to be one of the main causes of a loss of biodiversity (Kumar Rai and Singh 2020).

Additionally, invasive plants can have the following impacts upon ecosystems:

- Displacing native plants by shading or depleting soil water or nutrients.
- Altered fire regimes
- Soil nutrient cycling

Locations within JDSF that are particularly vulnerable to invasive plant introductions are:

- Transportation corridors
- Road edges, particularly those with little native groundcover and high traffic
- Watercourses
- Powerline Right of Ways
- Illegal dump sites, particularly from discarded yard waste
- Disturbed soils with minimal groundcover. Especially adjacent to existing invasive plant populations.

The following invasive plants are problematic within JDSF:

Table 2: High Priority Invasive Plants in JDSF

Common Name	Scientific Name	Cal-IPC Rating
French broom	<i>Genista monspessulana</i>	High
Scotch broom	<i>Cytisus scoparius</i>	High
Gorse	<i>Ulex europaeus</i>	High
Yellow star thistle	<i>Centaurea solstitialis</i>	High
English ivy	<i>Hedera helix</i>	High
Tasmanian blue gum	<i>Eucalyptus globulus</i>	Limited
Jubata grass	<i>Cortaderia jubata</i>	High
Himalayan berry	<i>Rubus armeniacus</i>	High
Spanish broom*	<i>Spartium junceum</i>	High
Spanish Heather*	<i>Erica lusitanica</i>	Limited

* species observed near the forest

JDSF encourages the growth of vegetation that is native to our area as the primary barrier to invasive weeds. Since 2003 JDSF has used varying approaches to control invasive weeds through use of Integrated Weed Management (IWM) principles, a strategy within IPM. IWM at JDSF provides demonstration value at multiple scales to a range of customers.

IWM is a prevention-oriented, ecologically based approach to managing weeds cost-effectively with minimal risk to people and the environment. IWM emphasizes control of the environmental conditions that cause or promote weed infestations. IWM includes direct suppression of existing weeds as well as modifying environmental conditions to reduce their suitability for weeds by encouraging the weeds' natural enemies or increasing competition for the scarce resources they require. IWM may make use of the benefits of cultural, mechanical, chemical (herbicides), thermal (fire), biological agents, or other techniques to reduce invasive weed populations and to promote forest health. The most effective way to control weeds is to prevent their expansion into new areas while removing small, isolated infestations before they become problematic. As one of the management tools in IWM, herbicides will be used only when no other effective and feasible control methods are found after consideration of the scope of the problem, opportunities to

effectively manage the situation, and available alternatives and their potential effectiveness, costs, and risks. JDSF staff will seek opportunities to reduce risk by selecting appropriate herbicide formulations and application techniques, as well as taking additional precautions developed with a licensed pest control advisor and the County Agriculture Commissioner. Herbicide is an important tool for controlling invasive species to achieve restoration goals and limit the environmental consequences invasive plant infestations may cause.

2.3.4 Plan Goals and potential actions – Vegetation

Goal:

- Preserve and promote local native plant species and limit the invasion and spread of exotic plants. Protect native plant communities from insects, disease, and plant pests using the concept of integrated pest management.
- Promote and maintain mature hardwoods as important habitat elements within the forest ecosystem. In areas with either an overabundance of, or a lack of hardwoods, restore stands to the historic ratio of conifers to hardwoods.

Potential Actions:

- Promote native plants and their habitats
- Protect special status plants and sensitive natural communities
- Prevent introduction and establishment of invasive plant species
- Control existing invasive plant species
- Utilize the ‘Early Detection and Rapid Response’ (EDDR) management approach to effectively eradicate invasive plant species (California Invasive Plant Council 2025).
- Train JDSF staff and contractors in the identification of invasive weeds and general strategies to reduce their spread. Cooperate with local, state and federal agencies, forest landowners, private organizations, and public organizations to work towards control of regionally important invasive weeds.
- Monitor recreational harvest of fungi for long-term sustainability.
- Work with partner organizations and citizen scientists to document the presence of novel fungi on JDSF.

2.4 Animals

Animals comprise a diverse kingdom of multicellular organisms that are capable of movement, acquire energy from other living organisms in the environment, exhibit sexual reproduction, and have complex behaviors and ecological requirements. Most animal species are invertebrates (animals without backbones including worms, insects, crustaceans, mollusks, etc.) but vertebrates contain faunal groups (fish, amphibians, reptiles, birds, and mammals) that are more easily recognized by the public. Animal communities interact with each other, other life forms, and their physical environment. They may play critical roles in the food web as predators and/or prey, and in processes such as seed dispersal, pollination, decomposition and nutrient cycling. Depending on their specific life-history stages and physiologies, animals frequently change their behaviors with seasonal weather cycles, climate change, and various disturbance events. Animals require food, water, cover, space, and access to mates to survive. Each animal species is uniquely adapted to its approach to acquiring these resources.

Plant communities, through bottom-up processes, exert significant influence on animal species richness and composition. Plant species provide food and habitat structure to animal communities and are foundational to the flow of energy through the food web, which includes animals such as herbivores and predators. Animals have evolved specific behaviors and dietary requirements, and thus, use different habitats for food, reproduction, temperature and water regulation, concealment, and as a buffer to disturbance. For example, an open meadow or forest edge may support hunting opportunities for many bird species but would not provide nesting requirements for many of the species that hunt there. Conversely, dense forest cover may function as nesting or roosting habitat capable of sheltering species from climatic extremes, while more open areas supporting access to prey would not. Landscape heterogeneity (i.e. differences in vegetative species composition and structure) often supports different life-history functions for numerous species and overall animal diversity in these areas can be higher than areas that are vegetatively the same (or homogenous).

Forest management modifies the forest structure, age-class, and species composition of overstory and understory vegetation. By managing forests and other unique vegetative areas, JDSF can conserve a variety of habitats that will support a multitude of animal species. Disturbances such as fire, blow-down, and group selection timber harvests can provide patches of early seral habitat which browsing and forest edge species use. Single tree selection timber harvests can promote vigorous growth of large trees providing cover and concealment for nesting and denning as well cool and moist environments for species that must regulate water balance to avoid desiccation. Retention of habitat elements such as large, downed logs, snags, legacy old-growth stumps, and trees with large branches or deformed tops can further enhance habitat elements by providing refugia for specific species during inhospitable conditions and management activities.

Animals with habitat in JDSF are relatively diverse, although a few species are endemic (found only in this region) to the area. A query of the California Wildlife Habitat Relationships System (Biogeographic Branch, California Department of Fish and Wildlife 2021) for the Northern California Coast Eco-region (which includes JDSF) and for predominant forest types (Redwood, Douglas-fir, Montane Hardwood, Montane-Hardwood Conifer, and Montane Riparian) yielded a total of 288 species (170 birds, 21 reptiles, 19 amphibians, and 78 mammals) whose range includes a portion of this eco-region. This represents an estimate of the maximum number of species that could occur in the area for the forest types queried if other species' habitat requirements (e.g., minimum habitat patch size, adjacent habitats, and structural elements) are met and includes several species that have not yet been documented on JDSF. A list of animal species observed at JDSF is in the Appendix.

2.4.1 Special Status Animal Species of Concern

Special status animal species are those that are considered sufficiently rare that they require special consideration and/or protection. They may be state or federally listed under the federal Endangered Species Act or the California Endangered Species Act or considered a species of concern by the Board of Forestry, BLM or USFS. Special status animals are subject to legal protection.

Figure 2: Bobcat photographed using a trail camera in JDSF



2.4.2 Terrestrial Habitat

There are many special habitat elements within natural communities that provide for wildlife including:

- Snags (standing dead trees)
- Downed woody debris
- Dead treetops with platforms for perching and nesting
- Trees with cavities from rot and/or woodpeckers
- Granary trees
- Tree forks
- Furrowed bark
- Basal hollows
- Vegetation piles, including burn piles
- Rock and rocky areas
- Brush and bramble thickets
- Large, legacy stumps
- Live trees with reiterated tops, broken tops, platforms, and other deformities

2.4.3 Aquatic Habitat

Aquatic habitat is an area of water that supports organisms and vegetation. It includes freshwater, brackish and marine habitats. Lakes, ponds, wetlands, springs, seeps and watercourses can provide this habitat. Inputs into this system come from terrestrial sources, such as the riparian habitat which surrounds many waterways. Important elements within aquatic habitats include:

- Large woody debris i.e. downed trees and root wads
- Boulders
- Gravel
- Pools

- Riffles
- Hydrophytic and riparian vegetation

A legacy of extensive land use activities has left its imprint on aquatic habitats in JDSF. These activities include slash dams, railroads, timber harvesting, road building, and some residential and commercial development. Historic harvesting activities during the period of 1860 to 1940 included the building of a successive series of dams to back up large quantities of water to flush masses of cut logs downstream to sawmills followed by railroads that were often located adjacent to and sometimes in the streams. The Big River watershed is documented as having had as many as 27 dams (Jackson 1991).

The current condition of aquatic resources has been evaluated in multiple studies, including identification of sensitive aquatic resources and potential hazards affecting these resources. Much of the focus was on habitat conditions present for coho salmon and steelhead trout.

2.4.4 Plan Goals and Potential Actions – Animals

Goals:

- Maintain a diverse, dynamic matrix of forest habitats and seral stages that are suitable for a wide variety of native fish and wildlife populations and provide forest resilience to disturbances exacerbated by climate change.

Potential Actions:

- Maintain or enhance important terrestrial and aquatic habitats found in JDSF.
- Maintain and recruit special habitat elements necessary for properly functioning habitats
- Accelerate the development and maintenance of large, connected areas with late seral forest structure and characteristics important to wildlife.
- Protect special status animals and provide for their habitat.
- Enhance game species by providing a mix of habitat.
- Continue to manage the riparian zones as Late Seral Development areas.
- Improve habitat for aquatic species by continuing to implement the Road Management Plan, as feasible and operationally appropriate, to minimize riparian roads and reduce sediment input.

2.5 Sustainable Forest Management

Forest management is the active manipulation of forest stands to achieve desired forest structure, species composition, age class, and understory conditions. All forest management activities undergo extensive planning, rigorous permitting, and monitoring of implementation and ecological response. Management actions consider multiple ecological, social, and economic values in the context of our established land allocations.

The landscape approach to sustainable forestry undertaken at JDSF is most closely described as triad forestry (Himes 2022 and Seymour 1992) where the forest is zoned for reserves, ecological forestry, and more intensively managed sustainable forests. Each zone weighs the ecological, societal, and economic objectives slightly differently, and collectively they meet the multi-use

mandate of JDSF while minimizing conflicts that might arise when asking each acre to maximize all benefits.

Silviculture is often referred to as both the art and science of growing forests. Foresters, biologists, and scientists at JDSF consider the direction provided by the land allocations, public feedback received, and their knowledge of the forest to identify priorities for each plan that balances the multiple benefits provided by implementing the harvest plan within the area under consideration. There is no “right” management prescription that can be applied across the landscape. Rather a range of acceptable prescriptions that move forest conditions toward the desired future stand conditions while providing for the current ecological, social, and economic needs of the forest and community.

2.5.1 Desired Forest Structure - Land Management Allocations (LMAs)

The JAG, with extensive public participation, recommended that the Board adopt forest management zones, called Land Management Allocations (LMAs), in their 2011 JDSF FMP recommendations. The Board adopted these LMAs as proposed concepts for inclusion in the 2011 JDSF FMP. The provision includes a commitment to implement the LMA strategy over a 40-year period, to allow the forest stands to be treated multiple times and begin to differentiate based on the multiple objectives.

LMAs are built on legacy, geographic, and natural features such as watercourse buffers, old growth groves, or proximity to state parks. The description of each LMA and their core functions and management objectives were briefly stated in the 2016 Management Plan. The LMAs are summarized below.

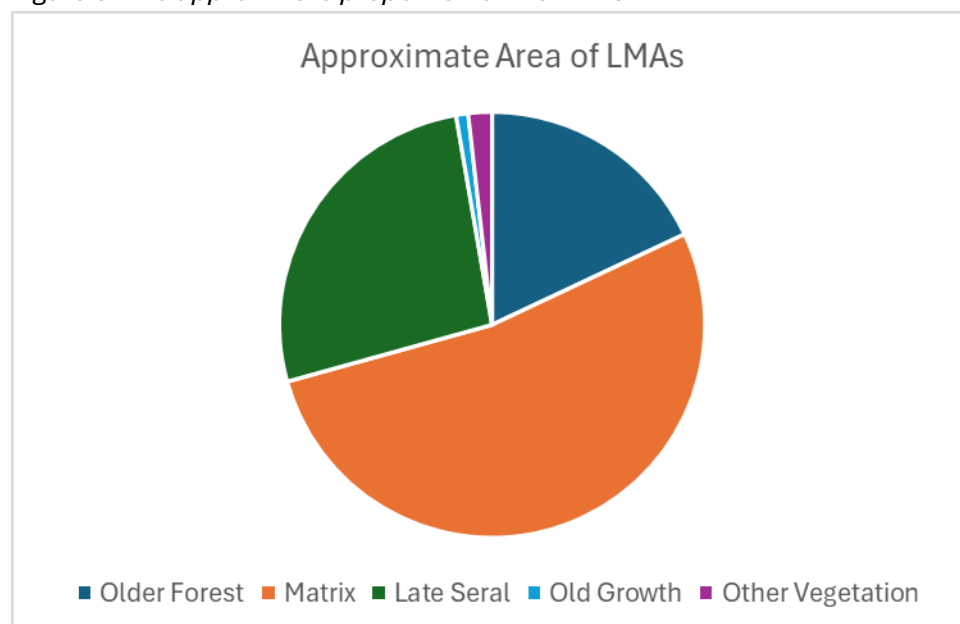
The Older Forest Structure Zones are distributed strategically across the forest to create an east-west and a north south link across the forest as well as through connected riparian corridors using three sub-classes of LMA types:

- Old Growth Reserves (OGR)- Continuous areas with substantial primary forest (i.e. Pre 1860 trees). Management is focused on protecting the ecological integrity of these forests and restoring natural processes such as beneficial fire.
- Late Seral Development Areas (LSDA)- Areas that are managed to accelerate the creation of old growth-like forests through limited harvests and other management activities. The stakeholders and interests are State Parks, non-profit conservation groups, and private forest landowners interested in restoring old forests as a primary goal.
- Older Forest Development Areas (OFDA)- Areas managed with a focus on older forest structure to improve older forest habitat connectivity (to OGRs and LSDAs). This will enable management strategies that explore climate strategies, carbon storage, and visual quality. Periodic harvests will provide opportunities for restoration and enhancement of ecological functions and opportunities for beneficial fire. Older Forest Development Area stakeholders and interest groups are small landowners, land trusts, community forests and other Non-Governmental Organizations.

The second major management area is referred to as Matrix, which is managed for a range of forest conditions. The predominant method of silviculture is uneven-age such as selection or group

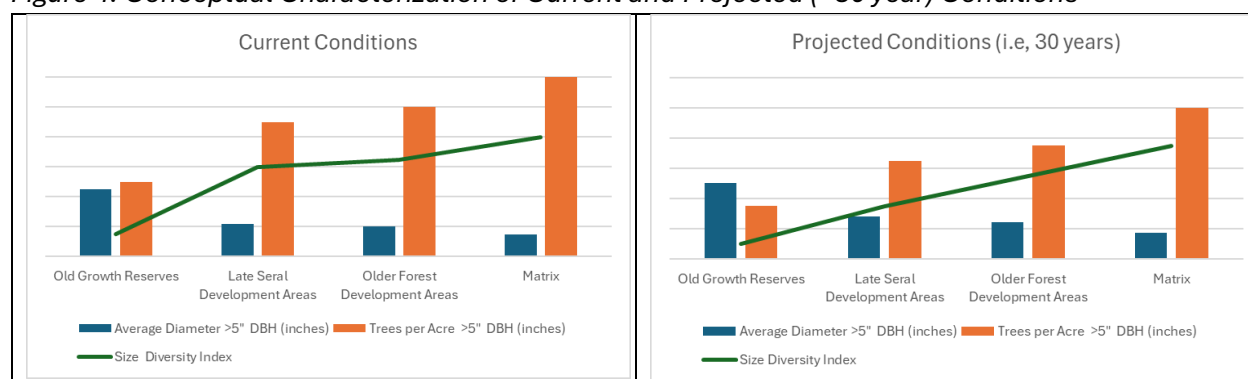
selection. Stakeholders and interest groups are a range of private landowners as well as regulators and others interested in commercial forest management.

Figure 3: The approximate proportion of the LMAs



This section provides greater details on the silvicultural goals of each Land Management Allocation (LMA) and outlines potential actions to meet those goals within each LMA. The chart below provides a graphical representation of the effect of management actions in the near term for each of the LMAs.

Figure 4: Conceptual Characterization of Current and Projected (~30 year) Conditions



Important aspects of the conceptual characterization include:

- Control distribution and number of understory trees to enhance resilience and forest health for all of the LMAs.
- Average diameters (>5" DBH) will increase throughout all LMAs as the result of understory thinning and increased growth and retention of larger trees, particularly within the LSDA and the OFDA, although tree size in matrix areas is also expected to increase.
- Diversity, in terms of tree sizes, varies based on the level of management.

2.5.2 Plan Goals and Potential Actions – LMAs

The plan goals and potential actions outlined below support the definition of each of the LMA described above.

Plan Goals:

- Maintain and protect old growth reserves and increase late seral forest and older forest structure and characteristics on the Forest.
- Promote and maintain mature hardwoods as important habitat elements within the forest ecosystem. In areas with either an overabundance of, or a lack of hardwoods, restore stands to the historic ratio of conifers to hardwoods.
- Utilize beneficial fire as a regular part of silvicultural treatments at a frequency and intensity that are in alignment with forest management goals and environmental protections.
- Manage forest fuels to reduce the incidence and severity of wildfire.

Potential Actions by Land Management Allocation:

Old Growth Reserves

- Strive to maintain forest health and resiliency.
- Manage understory forest structure to promote stand level fire resilience and allow re-introduction of beneficial fire. Support complex habitat structures including large trees and multiple canopy layers.
- Protect endangered species from disturbance by limiting opportunities for new trails.
- Improve mapping and documentation.

Late Seral Development Area

- Accelerated development of large trees and older forest structure through focused harvest that results in fewer, larger trees and increased complexity of forest structure.
- Promote wildlife habitat by retaining trees with unique structural characteristics, increase snag density, maintain large snags where possible, and promote large branch development.
- Provide demonstration opportunities for activities that accelerate late seral conditions.
- Reintroduce beneficial fire to improve resilience and accelerate late seral habitat conditions.
- Adapt approach to enhance specific landscapes such as riparian areas and Marbled Murrelet habitat.

Older Forest Development Areas

- Manage for high levels of biodiversity by increasing the number of large trees through silviculture strategies that manage across all size classes.
- Demonstrate how long-term sustainable harvests can support habitat restoration and aesthetic enhancement.
- Demonstrate options to manage for both high carbon storage and high rates of carbon sequestration using uneven-aged management silviculture with longer intervals between entries increasing the average age of harvest trees.
- Create a demonstration for small/non-profit landowners who manage for a variety of objectives (aesthetics, wildlife habitat, restoration, and sustainable forest management)

- Provide a contiguous mature forest habitat corridor across JDSF both East/West and North/South connecting Old Growth Groves and Late Seral Development Areas

Matrix

- Manage the forest with a variety of silvicultural methods to create a diverse library of forest structures for ecological, research, and demonstration opportunities that are not met by other LMAs.
- Retain healthy trees that can produce quality wood products while creating growing space for young trees.
- Create more open forest stands or early seral habitats with abundant forage resources while retaining vertical structures for cover and roosting.
- Provide opportunities for both short-and long-term research or demonstrations of novel management techniques and habitat elements through diverse forest management activities.

Limited use of even-age management to provide research, demonstration, and address forest health or problematic stand conditions for regeneration.

2.5.3 General Guidelines for Silviculture Treatments

Silviculture is the art and science of implementing management activities that control the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society such as wildlife habitat, timber, water resources, restoration, and recreation on a sustainable basis. In the case of JDSF, silviculture activities will be used to achieve research, economic, and restoration goals that are aligned with the vision of forest structure goals. While not every harvest activity is part of an explicit research effort, each silvicultural activity contributes to cultivating the range of desired forest structure conditions necessary to remain relevant for broad landscape research and to function as a working and demonstration forest.

The silviculture activities that will be applied at JDSF are aligned with sustainability objectives of increasing forest biomass and achieving the specific structural goals established for the different LMAs.

All silviculture methods will include objectives to retain unique habitat elements, such as broken tops, basal hollows, and more, in varying proportions aligned with the overall forest structure goals. The retention of these elements provides a refugia for soil mycorrhizae and epiphytes in between disturbance events. Within the general framework of contemplated silviculture strategies, research goals will result in varying specific approaches over time and space.

In the last planning period (from 2016 to 2026), uneven aged silviculture was utilized on approximately 93% (15,327 acres) of harvest areas and even aged silviculture was utilized on approximately 7% (1,133 acres) of harvest areas.

All silvicultural treatments include aesthetic considerations that provide opportunities for recreation, demonstration, and public education.

Uneven-aged management

Uneven-age management creates a forest with a mix of age classes. It results in contiguous forest with dispersed gaps of varying sizes. Since the 1980s it has been the dominant method used to transform the uniform second growth forest into more complex stands.

Uneven-aged management is the most common silviculture at JDSF. Uneven-aged management and thinning of the overstory trees is the primary approach in late seral development areas, including WLPZ areas. The Older Forest Development Areas and much of the Matrix area also utilize uneven-age management to achieve their silvicultural objectives. It will also take place in scenic viewsheds, and high-use recreation areas.

Uneven-aged management may consist of single tree selection, cluster selection, and group selection. Each of these approaches have the goal of creating forest stands with diverse tree sizes and age classes. The difference between the various approaches to uneven-aged management is the scale of the gaps where new trees become established. Single tree selection ranges from small canopy openings that may not exceed the size of the individual tree canopy, ranging up to removal of a cluster of trees resulting in a gap of up to ¼ acre. Group selection creates larger openings up to 2.5 acres in size and limits the number of groups that can be created at one harvest. The goal is to have patches that each represent an age class. As an example, when scheduled reentries are every 20 years, the forest will have patches of 20, 40-, 60-, 80-, and 100-year-old trees.

To maintain the mixed age stands, periodic harvests must be implemented. At JDSF they are usually at a 15-to-20-year interval. These entries open the canopy, creating growing space for the younger trees, maintain desired species composition and stand structure, and provide climatic conditions for diverse understory plants.

Criteria for selecting the sizes and configuration of group openings in a harvest unit may include:

- The presence and desire for varied structural conditions across the forest for future research and demonstration.
- The height of trees surrounding the opening. Taller trees require larger openings than smaller trees to achieve desired light conditions for regeneration as well as avoiding damage to retained trees.
- Logging systems used. Cable systems have less flexibility in terms of configuration than tractor systems.
- Orientation. Narrow openings with an east-west configuration with tall trees adjacent to the opening will remain shaded along the south edge of the opening, while a north-south alignment will enable more sunlight to reach the opening, which influences growth and species success. The aspect is also a consideration in managing opening configurations.
- Site preparation and artificial regeneration are more efficient when larger opening sizes are part of the design.
- Species composition and density.
- Specific demonstration and/or research objective.

Even-aged management

Even-aged management creates and develops stands that are largely of a similar age class. Even-aged management promotes rapid growth for species that grow well, as do redwoods and Douglas-

fir, with direct sunlight. Variations in even-aged management exist in the form of variable retention, which maintains trees in grouped and/or dispersed conditions at harvest, two-aged stands which contain an overstory of larger trees with an understory of shade tolerant understory trees, and clearcutting, in which the forest stand consists of largely one age class.

Based on direction in the 2008 Management Plan, even-aged management will be allocated sparingly. The purpose of including even age management is to develop the diverse set of structural classes needed to accommodate a range of research and demonstration opportunities. Additionally, even-aged management may be used to eliminate pest and disease issues and improve regeneration success on problematic sites.

2.5.4 Harvest Systems

JDSF has a diverse range of topography, access, and biological resources that directly influences the type of logging system used to harvest timber for forest products. The two primary logging systems used on JDSF are tractor and cable yarding systems. Yarding means the movement of forest products from the point of felling to a landing, where the forest product is loaded out onto trucks for delivery (14 CCR 895.1). The preferred logging system for a harvest for a specific unit is determined by terrain, site sensitivity, accessibility, and existing infrastructure. In the last planning period, projects utilized cable yarding on approximately 67% of harvest areas, tractor yarding on approximately 32% of harvest areas, and helicopter yarding on approximately 1% of harvest areas.

Tractor yarding utilizes “ground based” equipment that harvests timber and moves logs to landings. Typically, this system is reserved for low gradient slope areas with favorable access, existing landings for processing, and acceptable soil and environmental conditions. Heavy equipment is typically prohibited from entering environmentally sensitive areas such as riparian buffers and wetlands (14 CCR § 916.9), steep slopes over 50% (14 CCR § 921.5), and areas of high erosion or instability. Following timber operations, tractor roads are treated for erosion by installing water breaks and drainage that will ensure soil stability and water quality protection (14 CCR § 923.5). Most of the coast region was logged by tractor methods prior to the introduction of cable yarding methods in the 1970s and 80s.

Cable yarding is a system of skidding (transporting) logs by means of cable (wire rope) to the yarding machine (yarder) or a landing while the yarder remains stationary (14 CCR 895.1). This system can reduce ground disturbance but often requires trees to be cleared in “corridors” to allow the yarding of timber back up to the landing. Cable yarding is an effective method to move logs from areas with steep ground inappropriate for tractor logging or units with geological instability or high erosion hazard ratings. Landings and access roads must be properly located for cable operations. While beneficial in certain settings, cable yarding is more costly than tractor yarding and leaves visual clearings (corridors) through the logging unit.

Helicopter logging is a system of yarding logs with wire rope out of the woods with a helicopter. This system requires significant fuel and specialized crews, often from out of state. With significantly higher cost, helicopter logging is reserved for unique circumstances.

2.5.5 Long-term Planning, Forest Harvests, and Administration

The Forest Manager prepares and presents an Annual Work Plan for future projects, including Timber Harvesting Plans (THPs), in accordance with the FMP, to the JDSF Tribal Advisory Council (TAC) and the JAG for review and feedback. Secondary review by the TAC and JAG occurs when individual projects are under development and more project details can be provided. Staff follow the LMAs, special concern area requirements, the “Option A” maximum sustained productivity models, and identify any specific research or restoration needs in the area when developing Timber Harvesting Plans or other projects. The Forest Manager and Unit Chief receive input from the TAC during consultations and the Forest Manager and JDSF staff receive input from the JAG members and the public during publicly noticed JAG meetings.

Harvest planning begins with public outreach to seek input from a broad swath of the community. local Tribes, scientists, other land managers, conservationists, recreationists, and neighbors all have a deep affinity for JDSF and are provided with information and opportunities to comment on management activities and bring forward their use and knowledge of the forest to incorporate in the planning process. Early outreach is provided to local Tribes, information is made available through the website, and the public is welcome to join the JAG meetings. Finally, Timber Harvest Plans (THPs) go through a multi-agency review which includes another public comment period. Through the 12-18 months of planning and permitting, the forest remains open for the public to inspect the flagging, tree marking, and other preparatory work that occurs to make sure the project is implemented according to these plans.

THPs are prepared by a Registered Professional Forester (RPF) and are reviewed by a multi-agency review team including CAL FIRE, the Department of Fish and Wildlife, North Coast Water Quality Control Board, and the California Geologic Survey. Additional permits such as Lake and Streambed Alteration Agreements and Waste Discharge Requirements for Non-Point Sources may be required from these agencies in addition to the THP. THP review and inspection for the purpose of compliance with the Forest Practice Rules, Porter Cologne Water Quality Control Act, and the Fish and Game Code is performed by CAL FIRE Forest Practice inspectors or other agency inspectors, not State Forest staff. Internal administrative inspections by State Forest Staff provide an additional layer of oversight to ensure compliance with the THP, timber sale contract, Forest Practice Rules, and other laws and regulations. Pre-operations meetings and regular inspections during operations provide ongoing communications between JDSF staff and logging contractors for successful implementation of plans as designed. The contract administrator’s responsibilities extend beyond the completion of timber harvesting, to include inspection and maintenance of erosion control facilities during the maintenance period and ensuring that harvest units meet stocking requirements.

2.5.6 Timber Sales

JDSF has different guidelines governing timber sales based on the size of the sale. There were historically three classes of sales referred to as Class I (small sales), Class II (intermediate sales), and Class III (large sales). Class II sales were discontinued in 1976.

Class I sales are limited to 100 thousand board feet (MBF) and cannot exceed \$10,000. This type of sale is limited to salvage harvests, powerline clearing on right of ways, and small lots of timber. It can also include firewood, split products, poles, greenery, and mushrooms. Class I sales are exempt from competitive bidding. They can be put out to bid or negotiated directly with perspective buyers.

Class III sales cover any sales that are not included in the Class I sales. Class III sales require a competitive bidding process. Excluding the recent pause on projects, Class III sales average 2 to 3 sales per year, yielding between 4 million board feet (MMBF) and 15 MMBF of timber.

Class III sales are appraised for value and advertised by preparation of a prospectus, shared with listed purchasers, logging contractors, and other interested parties. Sales are published on the California State Contracts website in late winter or early spring and remain for a 4-to-5-week period. The length of the contracts depends on the size of the sale as well as any additional road work that is included but is usually no more than two operating years.

While the Forest supplies the project planning, permits, and administration oversight, the purchaser contracts to perform the work outlined in the THP, which often includes significant road remediation projects, in addition to harvesting operations.

2.5.7 Special Concern Areas

Special areas of concern are recognized in the FMP as areas that have management opportunities or constraints placed upon them, either through voluntary policies, regulation or through physical or biological limitations. Examples of special concern areas include unique habitats, habitat for both plant and animal species of concern, riparian areas, recreational areas, areas near residences and parks, research areas and water supplies.

Major areas affected by policy-driven and objective-driven management are:

- Reserved old growth groves
- Late seral development areas
- Older forest structure zone
- Campground and day-use area buffers
- Parlin Fork Conservation Camp
- Chamberlain Creek Fire Center
- Road and trail corridors
- Research areas
- Fuel breaks

Some constraints are imposed by external influences such as physical or biological limitations, legal requirements, or Forest Practice regulations. These areas may also be affected by management policy-driven and objective-driven constraints, such as structure targets established for riparian zones and buffers adjacent to non-timberland neighbors. The major areas affected by these constraints are:

- Mendocino cypress groups - typically Northern Bishop Pine
- Pygmy forest - typically Mendocino Cypress Woodland
- Jug Handle State Natural Reserve

- Inner gorges
- Geologically unstable areas
- Habitat areas such as NSO core areas
- Watercourse and Lake Protection Zones (WLPZs)
- Woodlands Special Treatment Area
- Domestic water supplies
- Non-timberland neighbor buffer
- Power line right-of-way
- State Park Special Treatment Areas
- Mushroom Corners Management Area
- Cultural Resources*
- Historic Resources*

* Not included on Special Concern Areas Map for purposes of confidentiality

A comprehensive reference list of the affected areas is in the Appendix.

During planning of regular harvesting operations, adjacent special concern areas will be evaluated for their suitability for concurrent management treatments. For some special concern areas, notably research areas, a dedicated timber harvest or other project may be designed specifically to fulfill the objective of that area.

2.5.8 Forest Inventories

Monitoring trees and tree growth is a critical component of any forest inventory. It is through ongoing forest inventory efforts that MP general goals, such as maintaining and increasing older forests and ensuring sustainable management, and the parameters outlined in JDSF's "Option A" maximum sustained productivity models are monitored and reported.

Forest inventories are a critical component of any forest management plan. They provide quantitative data on current forest conditions and create a feedback loop for adaptive management to assess progress toward desired future conditions. Inventories allow for assessment at multiple geographic scales including stands, management units, watersheds, and the entire forest, and guide management strategy modifications as needed. Inventories are a valuable tool for planning research as well.

Sample plots are the base units of forest inventory data. All inferred data comes from measured or observed sample plot data. The accuracy of these estimates depends on the number of plots, forest variability, and measurement precision. Key information from forest inventories includes:

- Forest volume by species and size class: Essential for interpreting timber and carbon stocking and assessing the outcomes of silviculture activities.
- Forest growth rates: Periodic remeasurement tracks growth over time.
- Forest structural conditions: Data on stand size and composition of forest stands, including unique structural elements such as snags and downed logs. Combined, these data provide the information needed to infer habitat quality.
- Forest health risks: Inventory data helps interpret forest resilience to fire, disease, and insects, with stand density estimates playing a critical role in the assessment.

JDSF has two types of inventories. Continuous Forest Inventories (CFI) are some of the longest continuously measured forest inventories in California, dating back to 1959. It uses permanent 1/5th acre circular plots, so each tree is remeasured at five-year intervals. The data provides excellent information on tree growth and fine scale tree interactions. With 141 plots across JDSF, CFI provides general trends in forest-wide growth, changes due to harvesting and species composition. The JDSF CFI dataset has been extensively reviewed and used by researchers.

The Forest Resources Inventory (FRI) system is based on several thousand temporary plots. This provides detailed information on growth and harvest and more localized trends. Plot measurements are converted to per-acre estimates and aggregated by management unit, habitat type (WHR class), or other spatial strata. Estimates can be derived at multiple spatial scales including:

- Stand average diameter and diameter distributions
- Species variation
- Density, including basal area, trees per acre, stand density index (SDI)
- Site quality
- Habitat quality (using WHR system)
- Volume, quantified in terms of gross and net board/cubic feet, biomass, and carbon

The value of this inventory data is expanded through its link to JDSF's Geographic Information System. Georeferenced data can be compiled forest wide, in zones or watersheds, or for detailed project planning. The 2017 Lidar augments this data with canopy heights and other attributes. Other landscape characteristics that can be interpreted from the inventory data and the stratification of vegetation characteristics include connectivity and fragmentation of forest vegetation types, edge habitat, patch size variation, and visual quality.

2.5.9 Beneficial Fire

Coast redwoods are particularly resilient to fire, with thick bark that protects the cambium from the intense heat. Additionally, their unique ability to coppice sprout allows them to regenerate even after their canopy has been completely killed. Their small seeds require bare mineral soil to germinate. Ironically, redwood is the species with the third most flammable litter (dead needles) (Varner and Jules 2017).

Since 2022, JDSF has begun demonstrating the re-introduction of fire into management and supported fire research. Historically, fire in the redwood region occurs at varying return intervals, dependent upon latitude and microclimate. Research from JDSF shows that in the pre-Euromerican era the fire return interval was about 20 years. Fire was sometimes used after the first cutting to improve livestock pasture and deer forage. Combined with accidental ignitions, this could result in forest damage and even cause deforestation. This damage was a major impetus to establish the Demonstration State Forest Program. The JDSF Pre-Fire and Attack Plan describes wildfire history since the 1930s. The use of fire on JDSF varied over the decades with use declining in the 1990s as other techniques for reforestation were developed. More recently, damaging wildfire in redwood forests has increased support of using prescribed fire to reduce the risk of severe impacts and restore ecological functions.

Figure 5: 12-acre burn conducted in coordination with Tribal Partners

Recent prescribed broadcast burns include post-harvest fuels reduction totaling 234 acres, fire mitigation research totaling 208 acres, and cultural resource enhancement totaling 6 acres. Additional broadcast burns are planned for upcoming seasons.

Continued monitoring and studies will help increase the understanding of how fire can be constructively used in redwoods and other coastal forests. Some initial concerns with fire reintroduction include the possible loss of young trees which simplifies the stand structure to an even-age stand, decline in surface soil organic matter, possible triggering germination of brush and invasive weed seeds, as well as the post-fire aesthetics. The result of prescribed fire operations can vary based on weather, topography, fuel load and arrangement, as well as firing techniques employed.

The adaptive management approach (learning by doing) will supplement more formal research and demonstrations to better understand the range of benefits and trade-offs. Evolving guidelines should be used to prevent the reintroduction of beneficial fire from resulting in long term negative effects.

2.5.10 Monitoring and Adaptive Management

Monitoring denotes the process used to evaluate progress toward the stated goals in the FMP. Adaptive management denotes the management strategies that will be implemented if analysis of monitoring results indicate that resource conditions begin to deviate from the desired trajectory. Analyses can range from data summaries coupled with professional judgment, in the case of high levels of uncertainty and lack of data, to formal statistical tests of hypotheses, addressing issues of sampling variation where such data is available. The conclusions, from the analysis stage, form the basis for adaptive management strategies.

JDSF's commitment to ongoing monitoring is an essential component of identifying the effects of changing conditions and its commitment to adaptive management will ensure management

activities are aligned with mitigating perturbation risks while increasing sequestered carbon in forest biomass.

2.5.11 Cultural Resources

Over the past 50 years, approximately 62% of JDSF has documented surveys for cultural resources, encompassing a total of 30,228 acres. Within that area, archaeologists and RPFs have recorded 48 pre-contact sites, 392 historic-era sites, and 7 multi-component sites.

2.5.12 Forest Economics

Timber sales make up 99% of the revenue that funds JDSF and other State Forest programs. A Timber Harvest Plan (THP) is prepared for each major timber sale by a Registered Professional Forester (RPF). THPs are considered the functional equivalent of an Environmental Impact Report (EIR) and are publicly reviewed under the California Environmental Quality Act (CEQA) and the California Forest Practice Rules (FPRs). Regular and periodic timber sales contribute to the vitality and stability of the workforce that JDSF depends on to meet its management goals.

Timber, agriculture, and tourism have long been the mainstays of Mendocino County economics. The timber contribution to the economy has waned since historical levels of unsustainable timber harvest. As timber harvest volume in Mendocino County has steadily decreased, the relative contribution from sustainable forest management at JDSF has increased. Restoration forestry, where management is focused on improving ecosystem processes through clear goals that include managing for forest resiliency, will help to build reliable, relatively good paying employment and build local prosperity. JDSF has a mission to demonstrate that sound restoration forestry can build local economies while improving ecosystem functions, viewsheds, and watershed functions.

JDSF's 2005 Management Plan EIR estimated that each 10 million board feet (MMBF) increment in harvest will generate 160 jobs, \$4.3 million in local wages, and \$184,000 in local tax revenue. The jobs associated with timber harvest can be direct, which include foresters, loggers, mill workers, truck drivers, and reforestation workers. Management activities that are based on restoration projects such as fire hazard reduction and stream habitat enhancement increase local restoration economy employment resulting in additional revenues to the local community.

JDSF also contributes to the local economy through recreational opportunities within the forest. The estimated 60,000 recreational user-days per year on JDSF are participating in mountain biking, horseback riding, hunting, dog walking, hiking, camping, and foraging for mushrooms and other forest products. While JDSF may not benefit monetarily from these activities directly, local restaurants, lodging, recreational equipment sales, gas stations, and rentals do benefit from the recreational opportunities the forest provides. Overnight campers and foragers pay nominal fees to JDSF to increase accountability, but the resulting funds do not fully cover the administration costs of these programs. As part of the demonstration mandate, JDSF is charged to ensure that recreational activities and timber harvest are compatible with each other.

2.5.13 Plan Goals and Potential Actions – Sustainable Forestry

Additional potential actions for the sustainable forest management plan goals are included in the sections above on climate change; water resources, soil, and geology; vegetation; animals; and Land Management Allocations.

Plan Goals:

- Maintain a diverse, dynamic matrix of forest habitats and seral stages that are suitable for a wide variety of native fish and wildlife populations and provide forest resilience to disturbances exacerbated by climate change.
- Maintain and protect old growth reserves and increase late seral forest and older forest structure and characteristics on the Forest.
- Preserve and promote local native plant species and limit the invasion and spread of exotic plants. Protect native plant communities from insects, disease, and plant pests using the concept of integrated pest management.
- Promote and maintain mature hardwoods as important habitat elements within the forest ecosystem. In areas with either an overabundance of, or a lack of hardwoods, restore stands to the historic ratio of conifers to hardwoods.
- Utilize beneficial fire as a regular part of silvicultural treatments at a frequency and intensity that are in alignment with forest management goals and environmental protections.
- Conduct regular harvests to achieve continuous sustained yields of high-quality timber products that contribute to local employment and tax revenue, while providing opportunities for forest restoration, carbon sequestration, watershed, wildlife, fisheries, research, aesthetic enjoyment, and recreational goals.
- Utilize forestry practices that protect and enhance watershed and ecological processes.
- Generate sufficient revenues from forest management to achieve the Management Plan goals.

Potential Actions

- Continue both existing broad-scale monitoring efforts and fine-scale research monitoring of forest growth, plants, fish, and animals; cultural resources; climate change impacts; roads; streams; and invasive pests. Use monitoring information to inform future actions.
- Maintain an ongoing pipeline of projects in the planning, permitting, implementation, and monitoring phases to maintain constant opportunities for research, restoration, and demonstrations.
- Restore site occupancy of conifers and hardwoods to historic proportions where appropriate to do so.
- Maintain and periodically update long term sustained yield projections to monitor forest growth and harvest levels relative to social, biological, and ecological constraints, and to meet LMA objectives.
- Restore site occupancy of conifers and hardwoods to historic proportions where appropriate to do so.
- Conduct additional public engagement when plans are near high use areas or neighborhoods to solicit community input.

- Provide early and meaningful opportunities for Tribal collaboration on management projects.
- Inventory, survey, and protect historic and pre-contact archaeological resources as part of project planning for any ground disturbing projects.
- Identify, record, and develop mitigation measures for archeological and historical sites that may be susceptible to disturbance prior to planned activities.
- Incorporate beneficial fire into forest management projects to reduce wildfire hazard, improve aesthetics, and achieve ecological benefits.
- Utilize management projects to enhance objectives of adjacent special concern areas.

2.6 Research, Demonstration, & Education

Research at JDSF is initiated when researchers' interest, funding priorities, and the capacity of the land base align. It is the goal of the JDSF Research Plan and of JDSF Research and Demonstration staff to aid in this alignment. Sustaining and improving the quality and quantity of research on JDSF supports PRC section 4631.5, which states that it is in the public interest to retain the land base of state forests in timber production for research and demonstration purposes.

Research on JDSF lands preceded the establishment of the State Forest. Starting with the Caspar Lumber Company's 1925 seedling study, the scope of research has since expanded well beyond practical forestry studies. For over 75 years, different types of harvests have been applied across JDSF, creating a living library of diverse forests. The 1961 establishment of the Caspar Experimental Watersheds, in partnership with the USDA Forest Service, Pacific Southwest Research Station, started a long record of multi-disciplinary studies. Many projects study the range of existing forest conditions at JDSF. For example, two new flux towers will measure carbon exchange and water use in an intermediate stand and a young stand. Some research and demonstration projects are integrated into planned management activities, such as timber harvests.

Funding for research is generated by researchers, their sponsoring organizations, or in cooperation with JDSF as part of a grant program. Support for individual projects at JDSF typically includes staff time and/or treatment implementation. Published results range from simple reports to peer-reviewed journal articles, as well as master's thesis and doctoral dissertations by university students.

Demonstrations can vary in complexity, from informal trials of new techniques to more formalized before-and-after comparisons at a local or landscape level. They can explore questions to be addressed by research or test the application of existing research concepts. They provide relevant education and outreach sites and material.

The implementation of forest zoning provides both constraints and opportunities for research on the forest. During research proposal review, staff discuss where and how the research project could be implemented at JDSF. Projects must be compatible with the LMA area they will be located in. Adaptive management is important within the context of the LMAs, particularly in the Late Seral Development Zones, where management objectives surpass human careers and lifespans. By implementing regular management activities, JDSF provides a chronosequence (different aged forests of the same type) of vegetation succession available for research projects. Long-term

chronosequence studies benefit from the forest's heterogeneity, shaped by different LMAs, and will continue to gain value as future activities further diversify stand-trajectories. Using a variety of harvest methods across the forest allows research to extend beyond a single location or point in time. The Matrix area offers the greatest management flexibility and is the only area that allows limited even-age management. For example, one study used a chronosequence of clear-cuts - from recent to over 60 years ago - to examine how understory plant communities change with time. The current Fire Fuels Mitigation study samples a clinosequence, comparing stands with similar harvest history from the cooler coast to warmer inland forest areas.

Fires, landslides, insect outbreaks, road failures, and other disturbance events present outside research opportunities that do not conform to normal research funding and planning cycles. The Board's Effectiveness Monitoring Committee Strategic Plan specifically calls out the importance of such monitoring, and a reserve fund is set aside to respond immediately following the occurrence of such events. (EMC SP Pg14).

2.6.1 Plan Goals and Potential Actions

Plan Goals:

- To the extent feasible and operationally appropriate, continue to implement the Research Plan, emphasizing adaptive management for disturbances such as climate change, the use of beneficial fire in forest management, and support investigations led by local Tribes when requested.
- Foster partnerships with universities, the U.S. Forest Service, public and private researchers, forest conservation organizations, and educators by hosting periodic collaborative discussions and pursuing joint research and demonstration projects.
- Conduct resource management demonstrations and investigations directed to the needs of the public, forest landowners, resource professionals, timber operators, and regulatory agencies.
- Develop demonstration areas showcasing a variety of forest management approaches, including multiple use compatibilities and conflicts, in compact, easily accessible locations.
- Collect, analyze, update, and organize information about JDSF and its resources, ensuring it is stored and indexed for use in planning, management, and as a baseline for research.
- Provide access to JDSF for educators and youth programs to support forestry and ecology curricula.
- Expand education and outreach on forest research and management findings through peer-reviewed publications, newsletters, message boards, interpretive signs, brochures, and online resources.

Potential Actions:

- Maintain long-term research installations and support additional stand entries to contribute to their longevity.

- Retain high-quality baseline data across the Forest through rigorous monitoring and data management to make it easily accessible for ongoing and future research. Current examples include:
 - RAWS stations
 - Stream temperature monitoring
 - Botanical Surveys
 - ESA species surveys
 - Forest Inventories
 - Caspar Creek Paired Watershed Experiment
 - Carbon Flux Towers
- Anticipate research trends and provide opportunities to upscale research
- Regularly attend and present at academic and professional conferences
- Continue to support research into carbon storage/sequestration
- Continue to conduct validation monitoring in support of adaptive management
- Support diverse forest management studies and demonstrations through cooperative agreements and accessible research areas.
- Partner with universities, agencies, Tribes, and forest management organizations to identify and conduct relevant studies.
- Expand educational opportunities, youth programs, and outreach materials to share forest management research and practices.
- Conduct studies on forest management impacts and multiple-use interactions.
- Collect, analyze, and share scientific data to support planning, inform stakeholders, and enhance public understanding of forest stewardship.
- Pursue opportunities for citizen science at JDSF Conduct resource management demonstrations and investigations directed to the needs of the public, small forest landowners, and industry.
- Identify opportunities to increase interpretive and educational signs for Forest users. Seek increased funding to support research and demonstration projects that increase knowledge about redwood forest management.
- Minimize research costs through nested research design and coordinating research around existing forest management activities <https://calfire-umb05.azurewebsites.net/media/lsvbbsyj/research-themes-and-critical-monitoring-questions.pdf>
- Include research and demonstration potential in planning of THPs and other forest management activities
- Coordinate research-driven manipulations at operational scales relevant to forest managers to: (see scale section of Research Plan)
 - Avoid edge effect
 - Anticipate follow-up research beyond original study design

- Allow for subsequent chronosequence research into secondary manipulation. For example, a burn plot may need to be split to study the effects of a re-burn (Walker et al. 2010)

2.7 Recreation & Aesthetic Enjoyment

Management of the Demonstration State Forests is required to address values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment (PRC 4639).

This section of the FMP refers specifically to the interaction between Recreation and Forest Management Activities. The 2016 Jackson Demonstration State Forest Recreation Plan (Rec Plan) provides details on management measures intended to support recreational enjoyment and safety. A priority is placed upon aesthetics near homes, recreational facilities, and main travel corridors. A detailed inventory and planning of recreation facility maintenance and improvements is presented in the Rec Plan, which is periodically updated. The Rec Plan includes:

- Facility Development
- Recreation Operations and Maintenance (O&M).
- Recreation Monitoring
- Resource Integration and Coordination
- RMP Review and Revision.
- Interpretation and Education (I&E).

Forest management activities such as Timber Harvest Plans provide the primary funding and regulatory means for permitting, improving, and adopting a strategic number of trails within the forest, as approximately 69 miles of unsanctioned trails exist on the forest. During the process of THP development, trails will be evaluated by Forest Staff and prioritized for adoption or remediation.

TABLE 3: Trail Rating Criteria

Trail Rating Criteria	Point Value	Rating
Trail has been surveyed for natural and archeological resources. Trails will not be built or adopted that negatively impact sensitive habitats or cultural resources. Surveys are required.	Y/N	
Trail routing minimizes impacts to streams, wet areas, sensitive environmental areas and erosion potential	30	
Trail connects to existing or planned public parking access areas	20	
Trail routing minimizes overlap with forest management activities	20	
Trail is part of a complete loop or is destination oriented	10	
Multi-use – trail benefits widest possible diversity of trail users	10	
Use Patterns – Allows staff to adjust score based on level of visitor use. Little or No Use = -1 to -10 points; High Use = +1 to +10 points	10±	
TOTAL	100	

* Criteria developed with input from JDSF Recreation Task Force

The JDSF Recreation Task Force (Task Force) provides a key interface between Forest Staff and Forest Users. According to the Charter for the JDSF Recreation Task Force, the Mission of the Task Force is to:

- Provide advice/recommendations to the Department of Forestry and Fire Protection (CAL FIRE) regarding issues relevant to the recreation program on JDSF, including those issues outlined in the FMP.
- Share in stewardship, review recreation policy and plans, develop policy recommendations, and carry out other responsibilities regarding recreation on JDSF.

The Task Force is composed of up to nine members, appointed by the Forest Manager, comprised of a range of recreational users as outlined in the charter. The Task Force seeks to engage various recreation user groups interested in cooperating in the design, implementation, and stewardship of a more extensive recreational facilities system.

The JDSF Rec Plan is updated periodically with input from the Task Force and recreation surveys of users that are conducted on the Forest. The State Forest examines recreational corridors within timber harvest areas prior to harvest, works with the recreation community to minimize impacts, and reopen them upon completion except for non-sanctioned trails in locations that are damaging to the environment.

Cyclist, equestrian, and shooting groups coordinate with the JDSF Recreation Manager for volunteer efforts and events. Other recreation interest groups that may be established during the next 10-year period will also be incorporated into these activities.

Recreational opportunities are recognized as an important and compatible use within JDSF. Public Resource Code 4639 defines management as "...the handling of forest crop and forest soil so as to achieve maximum sustained production of high-quality forest products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment".

Recreation is also considered within the Demonstration objective of the forest. Demonstrations of the compatibility and conflicts involved in multiple use of forest land are essential as population and development pressures increase on California's forest lands (Board policy 0351.1). Recreation is the most common way for members of the public to experience and enjoy the forest, and presents opportunities for education on the forest, its natural resources, and sustainable forest management.

The Forest Practice Rules provide strong protection for resources which, if properly communicated, will aid in demonstrating compatibility between recreation and forest management. In addition to the Forest Practice Rules, JDSF engages in the Management Measures for Recreation.

Per the Recreation Management Plan and part of the monitoring effort, recreation surveys are conducted every 10-12 years. The last survey was conducted in 2013 with a report published in 2014. The plan was established utilizing this report and recommendations from the JDSF Recreation Task Force and JDSF staff. Overall, the 2014 report indicated satisfaction with most facilities and services. Another recreation survey began in spring, 2025. The goals of this survey include complementing the same efforts in 2014 to show trends over time. Survey locations were

the same as in 2014 with a few added as requested by the public. In addition to surveying at points across the forest, in-depth interviews were performed to capture perceptions of recreation on JDSF. Interviewees included a broad range of user types and interests.

JDSF will seek joint efforts with the Department of Parks and Recreation and the Mendocino Woodlands Association to manage the area adjacent to the Mendocino Woodlands Outdoor Center for educational and recreational purposes.

2.7.1 Plan Goals and Potential Actions - Recreation

Plan Goals:

- To the extent feasible and operationally appropriate, continue to implement the Recreation Plan and periodically conduct recreation surveys to plan for future improvement.
- Demonstrate that recreation is compatible with forest management, restoration, and research activities. Include appropriate mitigations in harvest plans that may impact recreation and aesthetic values.
- Utilize recreational facilities to explain forest research and forest management to visitors and recreationists.
- Consider aesthetic enjoyment when implementing forest research and forest management activities in heavily trafficked areas.
- Maintain campgrounds, picnic areas, trails and other recreational facilities in rustic, safe, healthy, and attractive conditions.
- Engage recreation user groups interested in cooperating in the design, implementation, and stewardship of recreational facilities and volunteer efforts.

Potential Actions:

- Encourage user groups to enter Memorandums of Understandings with JDSF to support the Recreation Program.
- Include appropriate mitigations in harvest plans that may impact recreation and aesthetic values.
- Maintain select, high use road and trail corridors for aesthetic enjoyment, including Highway 20.
- Identify collaborative efforts with the Department of Parks and Recreation to manage areas adjacent to State Parks and trails that traverse across both ownerships.
- Improve signage to help direct visitors to the campgrounds, day-use facilities, and trails.
- For public safety, post and maintain signs around all areas closed to public access for timber operations that include information defining the period of closure.
- Maintain a physical presence in the forest to enforce forest and fire laws. Make regular contact with forest users to ensure understanding of and compliance with regulations and use limitations.
- Use public contact as an opportunity to deliver forest management education messages.
- During Planning of Forest Management Activities, opportunities for creating recreation improvements should be sought. These may include:
 - Tribal engagement and project co-development

- Road-to-trail conversion
- Riparian crossing improvement
- Trail re-routes away from roads that are important to management activities
- Cable yarding of infrastructure (bridges, benches, etc.)
- Volunteer opportunities and changes to current arrangements
- Non-timber resource harvesting activities
- Firewood sales
- Signage development providing education around forest management
- Co-location of demonstration projects to allow for Demonstration Trails

2.8 Tribal Co-Management

JDSF has committed to exceeding the legally required consultation requirements through the formation of the Tribal Advisory Council (TAC). The TAC consults with the Mendocino Unit Chief and JDSF Forest Manager to discuss projects before the planning process to identify sensitive resources, habitats, or landscapes and help shape projects to meet tribal goals in conjunction with forest goals. Tribes on the CAL FIRE, Northern Mendocino County, Native American Contact List are invited to have a representative become a member of JDSF's TAC.

In 2022, the JAG submitted to CAL FIRE, Tribal co-management recommendations within a white paper titled "Jackson Advisory Group Tribal Relations Subgroup Management Plan Review and Recommendations." This document serves as a useful reference on current state laws with recommendations for incorporating Tribal input at JDSF.

2.8.1 Recent Law and Policies

Since the release of the 2016 JDSF FMP, new legislation and Executive Orders have been enacted that have expanded the relationships between state agencies and California Tribes. These new laws and executive orders that may be advanced at JDSF include:

- AB 52 (2014, California Office of Planning and Research guidance issued 2017), which requires the analysis of tribal cultural resource impacts and tribal consultation requirements.
- Executive Order No. N-15-19 (2019) acknowledges and apologizes on behalf of the State of California for the historical "violence, exploitation, dispossession and attempted destruction of tribal communities" and the subsequent removal of California Native Americans from their ancestral lands.
- Statement of Administration Policy (2020)--encourages every State agency, department, board and commission subject to executive control to seek opportunities to support California tribes' co-management of and access to natural lands that are within a California tribe's ancestral land and under the ownership or control of the State of California, and to work cooperatively with California tribes that are interested in acquiring natural lands in excess of State needs.
- AB 923 (2021) (d) Supports the executive branch's commitment to government-to-government consultation by establishing whom in state agencies has authority to represent

the State of California in such consultations, providing for how such consultations will be conducted, and requiring training to support such consultations.

- AB 1284 (2024) California Natural Resources Agency granted the ability to enter into co-governance and management agreements with federally recognized Indian tribes and authorizes the agency to do so.
- Draft California Natural Resources Agency Tribal Consultation Policy Update (2025)- The California Natural Resources Agency (hereafter CNRA) and its departments, commissions, boards, and conservancies are committed to consulting and meaningfully engaging with California Native American tribes to restore, protect and manage the state's natural, historical and cultural resources for current and future generations using creative approaches and solutions based on science, collaboration and respect for all communities and interests involved.

2.8.2 Plan Goals and Potential Actions

Plan Goals:

- Collaborate, consult, and work with local Tribes on management projects and tribal uses.
- Provide early and meaningful opportunities for Tribal collaboration on management projects.
- Provide access for local Tribes to continue traditional lifeways, which may include cultural burning for forest health.

Potential Actions:

- The Mendocino Unit Chief and Forest Manager will continue to collaborate, consult, and make mutually beneficial agreements with Tribes that have JDSF within their ancestral lands.

2.9 Forest Protection

Forest health is affected by several different factors including wildlife, insect, disease, and invasive plant species. Additionally, damage can occur to forests from non-mitigatable, natural events such as snow break, blow down caused by wind, and earthquake induced landslides. This section will focus on fire protection and forest pests as invasive plants are covered in the Forest and Vegetation Management sections of the Plan.

2.9.1 Fire Protection & Prevention

Historic fire suppression, climate change, and a growing population of people moving into wildland areas increases the chances for ignition and increases the chances of human loss of life or property. Fire that results in the complete loss of forest resources and values can be coined catastrophic. These fires generally burn at very high temperatures and are becoming more frequent in terms of size (acreage) and burn severity throughout the West and even the entire United States.

JDSF operates under the goals and objectives of the Mendocino Unit Strategic Fire Plan. To complement the Unit's Fire Plan, the JDSF Fire Protection and Pre-Attack Plan was developed in 2016 and is updated by the Forest Manager and local CAL FIRE Battalion Chief. These Plans outline

resource protection strategies for JDSF as well as planning for fuel treatments, fire breaks, and ecosystem restoration.

2.9.2 Forest Pests

Forest pests include insects, diseases, and vertebrates. They generally occur at endemic levels. Endemic means a persistent, consistent, and reliable rate of infection and spread. In some cases, these rates can become epidemic and cause serious harm to their targets. The term ‘pest’ refers to those that are damaging. Populations of pests are dynamic and fluctuate in response to climatic and environmental changes such as drought, forest stocking, animal damage, windthrow, fire, and other site disturbances. The effects of pests may reduce tree growth, affect species composition, or impact forest stocking. At the same time, other forest resources, such as wildlife habitat, may be impacted by the change in forest structure brought upon by excessive tree mortality. Integrated forest pest management provides a means to address these issues.

The intent of an Integrated Pest Management (IPM) is to prevent or suppress forest pest problems with population suppression and the minimization of factors that predispose trees to infestation. IPM makes use of the benefits of cultural, mechanical, chemical, semi-chemical (e.g. synthetic pheromones), and biological pest management alternatives.

Pests known to have caused tree mortality within or adjacent to JDSF are listed in the Appendix. There may be other pests of local tree species that are seldom detected or reported.

JDSF is within two BOF Zones of Infestations (ZOI) for Sudden Oak Death (SOD) and Pitch Pine Canker, both introduced (non-native) pathogens. The BOF declares these ZOI for pests which are injurious to timber or forest growth. SOD is also regulated by the California Department of Food and Agriculture (CDFA), which is responsible for protecting the agricultural industry from the movement and spread of injurious plant pests within California. Both pathogens have specific regulations restricting their spread which are updated as needed (California Department of Forestry and Fire Protection 2025b).

2.9.3 Patrol and Education

The Forest Manager will coordinate efforts with the Mendocino Unit to determine necessary actions to deploy during periods of high fire danger, including increasing patrols of the forest, posting alert signs, increasing information and awareness to visitors and the public.

JDSF will coordinate with Fire Prevention to educate staff and neighboring communities on current information and technology used to prevent human-caused fires within the State Forest. Target groups may include neighbors, visitors, timber operators, contractors, school groups and local organizations. Fire safety information will be included in informational brochures at JDSF Headquarters and on the CAL FIRE webpages.

2.9.4 Plan Goals and Potential Actions

Plan Goals:

- To the extent feasible and operationally appropriate, continue to implement the Fire Protection and Pre-attack Plan for the Forest.

- Maintain a physical presence in the forest to enforce recreation, forest management and fire prevention regulations. Make regular contact with forest users to ensure understanding and compliance.

Potential Actions:

- Use Herbicides judiciously as part of an overall Integrated Pest Management strategy.
- BMPs should be developed and constantly reviewed as part of adaptive management to assess the adequacy of fire prevention measures and pest and pathogen management approaches.
- Minimize injuries to residual trees during forest management activities.
- Follow recommended guidelines to stop the spread of SOD, Pitch Pine Canker, and other pests and diseases threatening the ecological health of the forest.
- Maintain a physical presence in the forest by making regular contact with forest users to ensure understanding of and compliance with regulations and use limitations through both dedicated patrols and as part executing other duties on the forest.
- Maintain a strategic network of shaded fuel breaks where appropriate to serve as pre-planned wildfire control lines.

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2016 FMP

Appendices

LAND MANAGEMENT ALLOCATIONS MAP

FOREST AND ROADS MAP

ROAD ABANDONMENT AND RESTORATION MAP

INSTREAM HABITAT ENHANCEMENT MAP

SPECIAL STATUS SPECIES SCOPING LIST

SPECIES OBSERVED ON JDSF

SOILS

SPECIAL CONCERN AREAS

FOREST PESTS



Jackson Demonstration State Forest

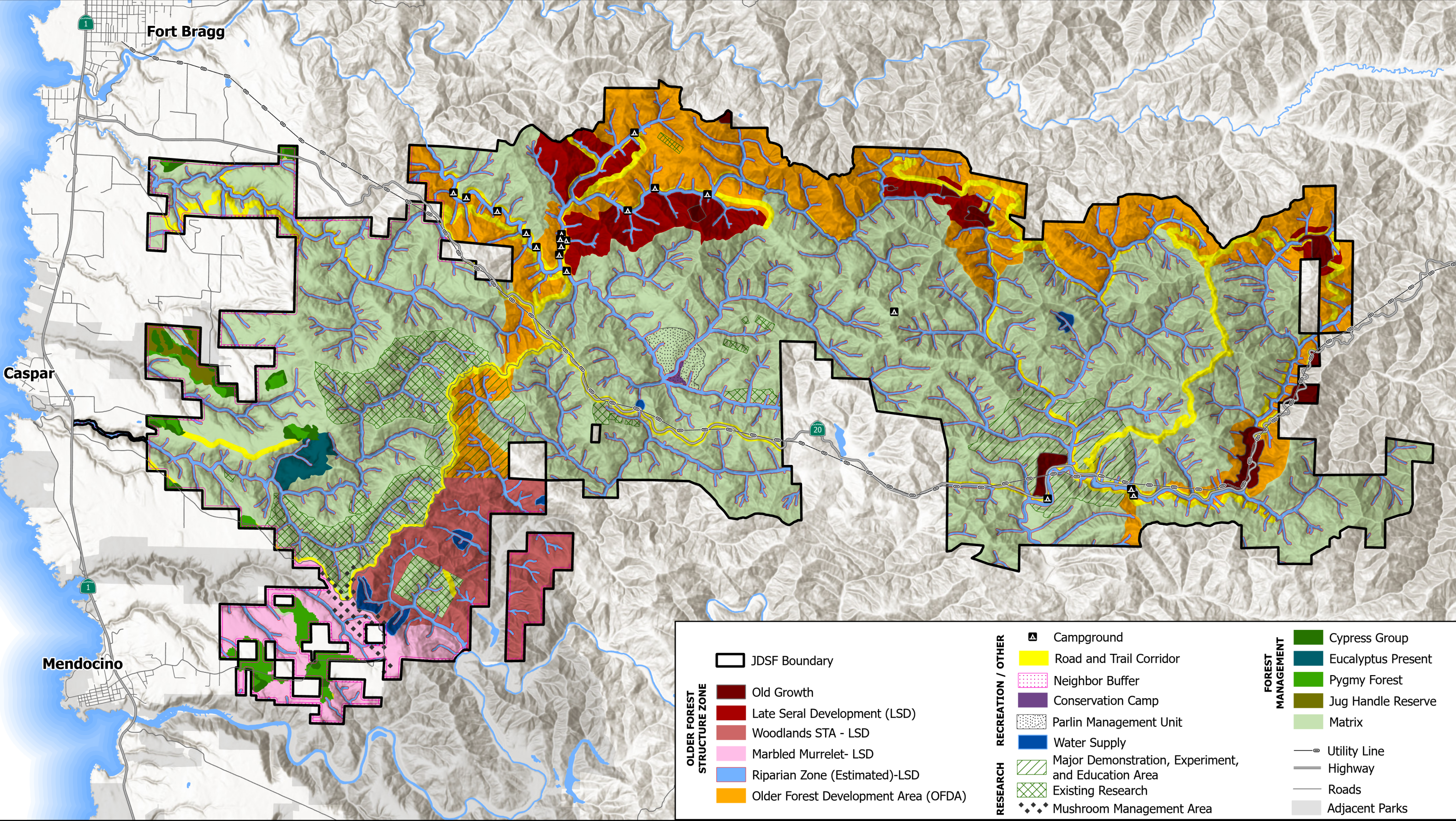
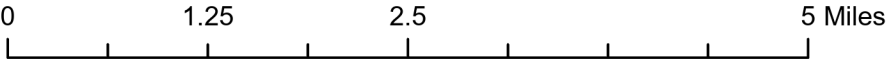
California Department of Forestry and Fire Protection-Mendocino Unit

Forest Management and Special Concern Areas



Projection: Teale Albers
Datum: NAD 83

1:76,000
Revision Date:10/2/2025





Jackson Demonstration State Forest

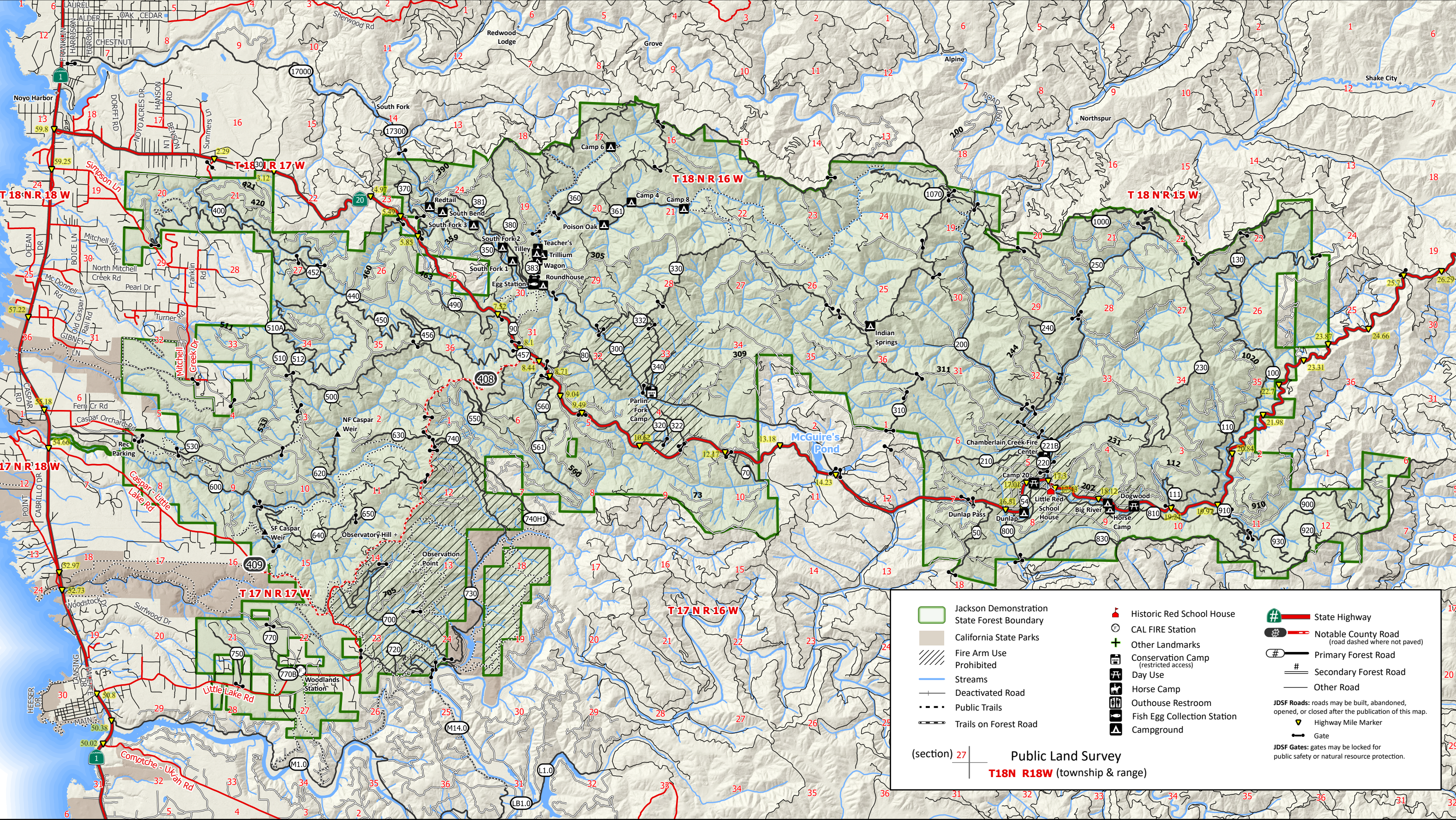
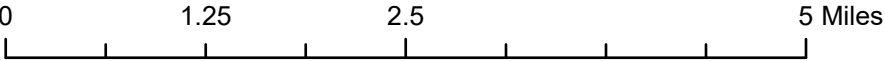
California Department of Forestry and Fire Protection-Mendocino Unit

Forest Ownership Map



Projection: Teale Albers
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Revision Date:10/9/2025





Jackson Demonstration State Forest

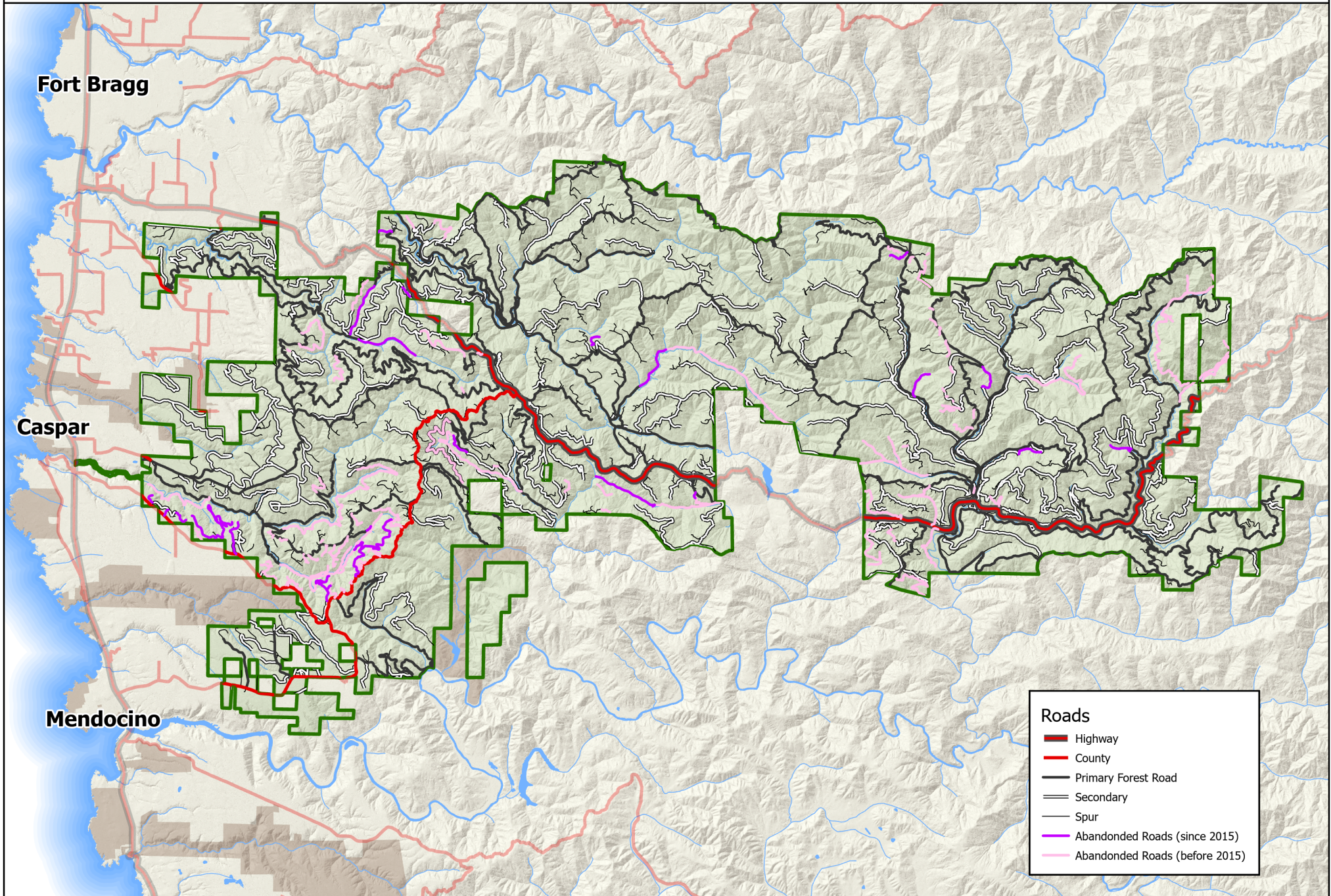
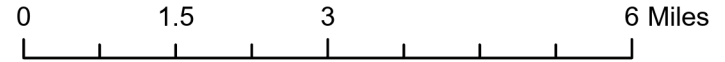
California Department of Forestry and Fire Protection-Mendocino Unit

Road Abandonment and Restoration



Projection: Teale Albers
Datum: NAD 83

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Revision Date: 10/9/2025





Jackson Demonstration State Forest

California Department of Forestry and Fire Protection-Mendocino Unit

Instream Habitat Enhancement



Projection: Teale Albers
Datum: NAD 83

1:120,000
Revision Date:10/9/2025

