A BIOECONOMY PLAYBOOK FOR TUOLUMNE COUNTY

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CLERE
California Law Empowering Renewable Energy

MARIPOSA COUNTY RESOURCE CONSERVATION DISTRICT

Central Sierra Economic Development District

CA Governor's Office of Land Use and Climate Innovation

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Contents

Current Bioeconomy Business Landscape in Tuolumne County

Introduction

This Bioeconomy Playbook examines the current business landscape in Tuolumne County and identifies strategic opportunities that advance wildfire mitigation and forest health objectives, which can strengthen and expand forest-based economic activities. The bioeconomy, encompassing biomass utilization, value-added forest products, and commercial timber activities, represents a critical economic engine for rural communities in the Sierra Nevada region. This plan was developed through a collaborative partnership between Tuolumne County, the Central Sierra Economic Development District (CSEDD), with financial support from the Mariposa RCD and the associated program funded by the Governor's Office of Land Use and Climate Innovation. By describing existing resources, stakeholder networks, regulatory frameworks, and infrastructure, this document provides a foundation for identifying barriers to bioeconomy development and proposing targeted improvements that can enhance economic opportunities, support sustainable forest management, and build community resilience in Tuolumne County.

The intended audience for this document are businesses, public agencies, and nonprofits from out of the area who want to get a succinct overview of the opportunities for the bioeconomy in Tuolumne County. Beyond just a "who's who" - this document also gives technical advice related to land use development, specifics about current competitive businesses developing in the area, and cites to other resources about biomass availability, economic development resources, and other information helpful to understanding the future of Tuolumne County in this Sector. To begin, the Playbook starts with an explanation of the different collaborative and advocacy groups and public organizations that are engaged in fuel reduction activities and describes their role in these projects. There are also some examples of recent successful public outreach on the topic of the bioeconomy. The last section of the first part goes over existing businesses in the space, as well as those in development.

The Second Part of the Playbook describes the critical process that new construction for any bioeconomy-based business would need to undergo. First, there is a brief description of the California Environmental Quality Act, and a general discussion about how this law works, and subsequent descriptions of more bioeconomy-specific issues. Also, the county regulatory environment is discussed, including the County General Plan and Zoning. This information forms the basis for any successful business development that would involve the construction of a new building or other facility. In summary, this Bioeconomy Playbook for Tuolumne County

can serve as an important first look at the region when considering the placement of a new wood products or bioenergy themed business in the area.

Local Collaborative and Advocacy Groups

Regional Collaboratives

Yosemite Stanislaus Solutions (YSS) is a collaborative group of diverse interests formed in 2010 to increase the pace and scale of restoration to prevent large wildfires in the Stanislaus National Forest. Following the 2013 Rim Fire that burned over 250,000 acres, YSS shifted from preventative to reactionary approaches, implementing habitat restoration projects with volunteer support and raising $4.5 million for habitat restoration. The group now focuses on unburned areas and is advancing a Forest Resiliency Pilot Project to demonstrate public support for science-based forest treatment.

YSS conducts regular public meetings to engage community members in forest restoration planning and implementation. Throughout 2012 and 2013, YSS held field trips and resource discussions to promote restoration treatments across the region, establishing a collaborative framework that brings together 25 local industry, environmental, and recreational groups. These field-based learning opportunities allow stakeholders to directly observe restoration needs and treatment outcomes, fostering informed dialogue and consensus-building on forest management approaches. YSS typically meets every other month on the third Friday of the month in Sonora and supplies woody biomass from Rim Fire remediation efforts to the Heartwood Biomass project in Tuolumne County. The USDA Forest Service Stanislaus Landscape Project flows the majority of work through four main partners: Tuolumne County, Yosemite Stanislaus Solutions, Great Basin Institute, and the Institute for Bird Populations.

Great Basin Institute (GBI) partners with the U.S. Forest Service on the Stanislaus Landscape Project to conduct forest health inventories, wildlife monitoring, and ecological restoration work in Tuolumne County. The Basin & Range Forestry Program provides forestry services to private landowners and public agencies to achieve forest restoration and fuels reduction goals.

GBI operates visitor centers with volunteer programs and offers comprehensive environmental education programs including Fire Ecology and Water Ecology field studies, along with science camps for students aged 8–12 from June to August. GBI's field studies provide hands-on experiences where students conduct experiments, engage in creative activities, and think critically about forest management processes. The organization has supported over 7,000 conservationists serving hundreds of projects across the western United States, providing environmental research, education, and conservation experiences.

Central Sierra Environmental Resource Center (CSERC) was founded in 1991 and is headquartered in Twain Harte, serving as an environmental advocate for over 2 million acres of forests, rivers, lakes, and wild places within the Northern Yosemite region of the Central Sierra Nevada. CSERC's staff scientists conduct fieldwork, monitoring, water quality sampling, and wildlife surveys across the region. The organization is a member of the Yosemite Stanislaus Solutions collaborative and played a critical role in developing the Social and Ecological Resilience Across the Landscape (SERAL) project alongside the U.S. Forest Service, Tuolumne County, Sierra Pacific Industries, and the Tuolumne River Trust.

CSERC presents free slide show programs about water, wildlife, and forests to more than 5,000 students and community group members annually. Since 1990, CSERC staff has given more than 3,000 separate presentations or talks to educate and inform students and community members about the region's natural resources. CSERC staff conducts periodic water quality sampling following strict protocols as part of surface water ambient monitoring projects in the Stanislaus National Forest, with results shared through interactive water quality maps and public reporting. CSERC advocates for balanced approaches to forest management that protect wildlife habitat, roadless areas, old-growth forests, and water quality while collaborating with diverse stakeholders.

County Agencies and Districts

Tuolumne County Resource Conservation District (TCRCD) was formed in 2005 and is governed by a 9-member voluntary Board of Directors, addressing forest fuel management, water and air quality, wildlife habitat restoration, soil erosion control, and conservation education. The district works with landowners, public agencies, nonprofits, and corporations to meet natural resource conservation needs across the county.

TCRCD co-hosts workshop series with UC Agriculture and Natural Resources covering topics such as biomass research and utilization, innovative biomass and wood products, biochar production and application, and land use and policy affecting biomass opportunities. The workshops welcome participants from throughout California and include in-person field activities that provide hands-on learning experiences. UC ANR's biomass workshops emphasize practical, science-based skills and include facility tours where participants can observe operational biomass processing equipment and ask questions of industry professionals. The Amador RCD, which covers Amador, Calaveras, and Tuolumne counties, provides free technical assistance to private landowners on forest health and fuels management, including one-on-one site visits and cost-share assistance.

The Tuolumne Fire Safe Council is a nonprofit organization incorporated in 2002. While it collaborates with government agencies like CAL FIRE, the U.S. Forest Service, and Tuolumne

County, it maintains its own governance and is self-funded through grants and donations. The Council administers the Firewise USA program locally, though that program itself is sponsored by the NFPA and federal agencies. It works on projects to protect Tuolumne County from wildfire, including a network of shaded fuel breaks. The Council participated in developing the 2023 Community Wildfire Protection Plan with stakeholders including county emergency services, fire agencies, government, private landowners, residents, and community groups. The Fire Safe Council holds quarterly public meetings throughout the year and conducts training, workshops, events, presentations, and field trips related to fire prevention. The Council's educational efforts span multiple platforms including website content, brochures, displays, social media, and advertising to reach diverse audiences. The Firewise Communities program coordinates annual meetings bringing together representatives from fourteen approved Firewise Communities to share best practices, coordinate activities, and celebrate their fire prevention accomplishments. These coordination meetings facilitate peer-to-peer learning and community networking around wildfire risk reduction strategies.

The Tuolumne County Natural Resources Advisory Committee serves as an advisory group to the Board of Supervisors on all natural resource's issues including water and power rights, fisheries, timber management, forest health, and access to recreation areas on public lands. The committee receives reports and updates on natural resource issues, including those related to biomass utilization and forest products development. Public forums on these topics are organized in coordination with county staff and partner organizations, providing venues for public comments on proposed projects, with community members able to voice concerns and support regarding environmental impacts, economic benefits, and operational considerations of bioeconomy initiatives.

State and Regional Organizations

Sierra Nevada Conservancy (SNC) partnered with the Rural Community Assistance Corporation (RCAC) to establish a $17 million Biomass Utilization Fund in 2020. This initiative emerged from the 2013 Rim Fire disaster recovery efforts when Tuolumne County and California's Department of Housing and Community Development received a $70.4 million National Disaster Resilience grant from HUD. The SNC-RCAC partnership provides low-interest loans to businesses in Tuolumne County that increase utilization of low-no value wood from surrounding forests and create permanent employment opportunities.

Rural Community Assistance Corporation (RCAC) administers the $17 million Biomass Utilization Fund for the Sierra Nevada Conservancy. The RCAC completed funding for the Heartwood Biomass project ($9.7 million from the BUF) and continues processing applications from applicants looking to create new or expand existing wood-utilization businesses in Tuolumne County.

Central Sierra Economic Development District (CSEDD) was formed in 1976 as a Joint Powers Authority and established as a federally recognized Economic Development District. CSEDD serves five California counties (Alpine, Amador, Calaveras, Mariposa, and Tuolumne), along with the cities of Sonora and Angels Camp, and is headquartered in Sonora. The organization's mission is to serve as an economic development resource and leader in communications between local counties and state or federal governments, focusing on workforce development, business resiliency, infrastructure improvements, and disaster planning. CSEDD develops and implements a five-year Comprehensive Economic Development Strategy (CEDS) that promotes economic vitality, partnering with local economic development offices, government agencies, educational institutions, and private stakeholders to support bioeconomy.

Public Outreach in Tuolumne County: Examples from recent years

Example 1: Tuolumne Fire Safe Council Community Wildfire Protection Plan Public Workshop Series (July-August 2023)

The Tuolumne Fire Safe Council conducted a series of four public workshops in mid to late summer 2023 as part of the collaborative development of the 2024 Community Wildfire Protection Plan (CWPP) for Tuolumne County. The workshops were held at multiple locations throughout the county to maximize community participation with the first workshop taking place at the Twain Harte Bible Church. These workshops brought together diverse community stakeholders including the Tuolumne Fire Safe Council, Tuolumne County Office of Emergency Services, federal, state, and county fire agencies, county and local government, private landowners, residents, and community groups. The public workshops identified key community concerns including ingress/egress and evacuation routes, funding for defensible space and home hardening, enforcement of defensible space codes, public education and Firewise Communities expansion, and fuel reduction around developed areas. In addition to the public workshops, the Fire Safe Council facilitated a Steering Group Meeting in early February 2023, a Key Stakeholders Meeting/workshop in mid June 2023, stakeholder group interviews in early fall 2023, and a final public meeting on the Draft CWPP in early November 2023. The completed CWPP was signed in 2024 and represents a collaborative planning document developed in accordance with the 2003 Healthy Forest Restoration Act to help the community reduce wildfire risk.

Example 2: UC ANR and Tuolumne County RCD Biomass Workshop Series and Heartwood Biomass Facility Tour (May-October 2025)

The University of California Agriculture and Natural Resources (UC ANR) and Tuolumne County Resource Conservation District co-hosted a comprehensive Biomass Workshop Series from May through October 2025. This free workshop series included three lecture sessions and three in-

person field days covering topics on biomass research and utilization, innovative biomass and wood products, biochar production and application, and land use and policy affecting biomass opportunities. The series kicked off with "Biomass 101" in May, 2025, in Sonora, followed by a hands-on Heartwood Biomass Facility Tour on June, 2025, from. The facility tour allowed participants to visit the newly developed Heartwood Biomass facility and learn about how the company utilizes woody biomass such as small-diameter trees and forest management residuals to make value-added products including bundled firewood, agricultural poles, wood straw, biochar, and wood chips. The workshop series concluded with Session 3 on Land Management and Policy on September 2025, featuring guest speakers from UC ANR and CAL FIRE, followed by an in-person field day on October 2025, in Sonora. The workshop series welcomed participants from throughout California and exemplified the collaborative educational efforts between UC ANR and TCRCD as described in your document.

Example 3: CSEDD First Annual LEAF Conference (November 13, 2025)

The Central Sierra Economic Development District (CSEDD), in partnership with Mother Lode Job Training, hosted the inaugural LEAF (Landscapes, Environment, Agriculture, and Forestry) Conference on November 13, 2025, at the Chicken Ranch Casino Resort in Jamestown. This free, hybrid event (both in-person and online) brought together landowners, farmers, entrepreneurs, forestry leaders, clean energy experts, educators, and community leaders from across the Sierra region to share knowledge, build partnerships, and tackle regional challenges. The day-long conference featured networking opportunities, workshops, breakout sessions on topics like agricultural resilience and natural working lands, and guidance on resources and funding opportunities. The event was funded in part by the California Jobs First Initiative to bolster the Natural and Working Lands and Sustainable Agriculture sectors within the Sierra Jobs First region, with additional support from Columbia College and Mariposa RCD. This conference exemplified CSEDD's mission to support communities by providing access to tools, resources, and collaboration opportunities at no cost to attendees. As noted in your document, CSEDD focuses on key regional issues including workforce development, business resiliency, infrastructure improvements, and disaster planning, with recent initiatives supporting bioeconomy development and forest-based entrepreneurship programs.

Historic Timber Industry and Biomass to Electricity Plants Today

Tuolumne County has a rich timber industry history dating to the Gold Rush era. By 1856, two dozen mills operated in the county. Major operations included West Side Lumber Company (reincorporated 1899, headquartered in Tuolumne) and Standard Lumber Company (incorporated 1901). Pickering Lumber Company was purchased by Fiberboard Paper Products in 1964, then by Louisiana Pacific, and finally by Sierra Pacific Industries in 1995. The Sierra

Railroad continues to haul freight and processed timber products and contracted logs to SPI facilities at Standard.

Timber Harvesting Activity

In California in 2021, approximately 1.62 billion board feet of timber was harvested statewide, of which 62% came from private timberlands and 10% came from national forests. In Tuolumne County, the Stanislaus National Forest dominates the landscape, encompassing approximately 898,099 acres primarily located in eastern Tuolumne County. Sierra Pacific Industries is the largest private timberland owner in the region, with operations in Tuolumne County. The remaining public lands are managed by the Bureau of Land Management, Yosemite National Park, and other state and local agencies

In April 2025, Tuolumne County approved the first project through its Master Stewardship Agreement with the U.S. Forest Service, which aims to remove five million board feet of commercial timber and 50,000 tons of biomass across nearly 1,000 acres of the Stanislaus National Forest. Five million board feet would produce enough lumber to build approximately 310 homes. The 50,000 tons of biomass is about one-third of the amount needed to power the Ultrapower Chinese Station biomass-energy plant in Chinese Camp for a whole year.

Operating Sawmills and Manufacturing in 2025

Sierra Pacific Industries (SPI) operates two facilities in Tuolumne County:

(SPI) Sonora Sawmill is an operating dimension lumber sawmill with a co-located biomass cogeneration facility. The biomass plant has a nameplate capacity of 7.5 MW, with 6 MW summer capacity and 6.4 MW winter capacity and has been operating since April 2018. The facility generated 34.9 GWh annually and 8.4 GWh during the three-month period from September to December 2024. The plant is classified as a Small Power Producer under FERC regulations and sells power to Pacific Gas & Electric through the California Independent System Operator. SPI is installing boiler upgrades at Sonora targeting completion in 2025.

(SPI) Chinese Camp Fencing Mill (14333 Perricone Road, Chinese Camp) operates as a specialized fencing manufacturing facility. The mill employs 132 people and manufactures fencing made of incense cedar, white fir, and ponderosa pine in six styles and various grades. The facility is located on ninety-one acres with three buildings: sawmill, warehouse, and machine shop. The mill was converted from dimension lumber production to fencing in 2009 when reduced timber harvesting on public land made operating the original mill configuration difficult. A McDonough twin horizontal band resaw was installed in 2022 as the most recent upgrade. Products are shipped throughout the U.S. to Home Depot distribution centers, independent lumber yards, and other customers. The mill utilizes 100 percent of the log, with

chips supplied for playground surfaces, and bark and sawdust supplied for mulch and garden products.

American Wood Fibers (AWF) operates a wood shavings and fiber processing facility in Jamestown, which was acquired from California Wood Shavings in January 2021. As the nation's largest supplier of wood flour and animal bedding, AWF produces wood shavings for equine bedding and livestock use, with products distributed nationwide from eleven manufacturing locations across the United States. The Jamestown facility processes fire, pest, and drought-affected timber into wood fiber products, supporting forest health management while providing raw material sourcing for the company's diverse product lines including equine bedding, small pet bedding, wood flour for industrial applications (decking, absorbents, adhesives), and wood pellets. AWF serves major retailers and specialized distributors, emphasizing total waste utilization of processed logs

Biomass Facilities

The Pacific Ultrapower Chinese Station (PUCS) is a twenty-five gross megawatt biomass power plant that has been operating since October 1986. The facility is a partnership venture between Jamestown Energy Inc. (55% ownership) and IHI Power Generation Corp. (45% ownership), with IHI Power Services Corporation providing operations and maintenance services. PUCS utilizes wood fuel from forest management operations such as pre-commercial thinning and dead tree removal, urban construction and demolition wood, and agricultural products including nut shells and orchard pruning’s. The power produced by PUCS is purchased by Pacific Gas & Electric and Southern California Edison under long-term Power Purchase Agreements. The facility offsets the equivalent of 457,000 barrels of oil annually, providing clean renewable energy to Central California.

Current Industry Challenges and Opportunities

Timber industry representatives note that the Tuolumne County Master Stewardship Agreement with the U.S. Forest Service is "really important" for keeping the local timber industry strong, creating jobs, preventing wildfires, and improving watershed health. Sierra Pacific Industries is one of twenty-four partners participating in the agreement and will donate biologists to conduct required wildlife and vegetation surveys prior to timber sales.

Recently Developed or Developing Bioeconomy Projects

Heartwood Biomass / Tuolumne Biomass

Heartwood Biomass operates a biomass processing facility in Tuolumne County under the business name Tuolumne Biomass LLC, which began operations in October 2024 on O'Byrnes Ferry Road near the Sierra Conservation Center in Jamestown, leasing seventeen acres from T-5

Ranches on property surrounded by an existing solar farm and cattle grazing operations. The $14-plus million project secured financing through a diversified funding package including a $4.2 million HUD National Resilience Program grant, a $3.5 million HUD grant, a $2 million HUD Residual Receipts Loan, a $2 million CAL FIRE Workforce Development Grant, an $800,000 US Forest Service Community Wood Grant, a $600,000 RCAC/EDA Revolving Small Business Loan, and $1.5 million in private equity. The facility processes approximately 30,000 tons of biomass annually, with a capacity to handle material ranging from three inches to twenty two inches in diameter. The facility manufactures bundled firewood, peeled agricultural poles, wood straw, biochar, and wood chips, with approximately 2,000 tons per year of residuals (wood chips) anticipated to be sold to Pacific Ultrapower Chinese Station, a biomass power plant located in Jamestown. The facility utilizes solar power and wood waste products to provide energy onsite, demonstrating integration of renewable energy systems within bioeconomy operations.

Yosemite Clean Energy Biomass-to-Hydrogen Facility

Yosemite Clean Energy, based in Mariposa and led by CEO Tom Hobby, is developing a state-of-the-art gasification bioenergy facility in partnership with the Chicken Ranch Rancheria Tribe, a federally recognized tribe since 1985, on 45 acres in Chinese Camp near the existing Pacific Ultrapower site in Tuolumne County. The partnership represents a groundbreaking collaboration between tribal government and a renewable energy developer, with the Tribe dedicated to providing cultural, environmental, and economic development to tribal members through sustainable forest enterprise within its traditional territory. The proposed facility will be a 50-megawatt thermal plant designed to process an estimated 90,000 bone dry tons (BDT) of forest biomass feedstock annually, converting this biomass into green (carbon-negative) hydrogen using proven Austrian-based dual-bed gasification technology operated by Repotec, which has over 200,000 hours of commercial run-time globally. The hydrogen production is anticipated at 7,000 tons per year, with an online date target of March 2027 and a capital investment of $250 million. Yosemite's feedstock supply model includes 70% from forest waste and 30% from agricultural waste, with 70 percent of feedstock already secured under long-term agreements with JW Bamford Inc. and Old Durham Wood, both seed investors in the project, and 30 percent being negotiated with local fire safe councils. The facility has secured $1 million in state grants from the California Department of Conservation through the "Forest Biomass to Carbon-Negative Biofuels" grant program, with additional funding being pursued through Cal Fire Climate Change Investment funding, USDA Wood Innovations, and federal grants. The project is supported through a 20-year Master Stewardship Agreement with the United States Forest Service for all 18 national forests in California's Region 5, providing secure long-term feedstock availability.

Golden State Natural Resources (GSNR) Forest Resiliency Project

GSNR, a nonprofit public benefit corporation, originally proposed constructing two industrial-scale wood pellet manufacturing facilities with a combined capacity of 1 million metric tons per year, supported through a 20-year Master Stewardship Agreement with the United States Forest Service for all 18 national forests in California's Region 5. The project released its Notice of Preparation under CEQA in November 2022, with a revised Notice of Preparation released in June 2023, and the Draft Environmental Impact Report (DEIR) released for public review on October 22, 2024, with the public review period extended from 60 days to 90 days, closing on January 20, 2025. The original DEIR exceeded 1,300 pages and evaluated potential environmental impacts of the proposed project. The 90-day review period generated significant public response with more than 5,500 formal comments received, particularly from Tuolumne County residents who participated in multiple public meetings held on October 28, October 30, and November 4, 2024. On June 25, 2025, the GSNR Board of Directors voted to revise the project fundamentally, canceling plans for the two industrial-scale wood pellet manufacturing facilities and the Port of Stockton export terminal. GSNR announced it is developing a reduced-scale project alternative that focuses on domestic rather than international usage of sourced wood material and produces wood chips instead of wood pellets.

The revised proposal includes development of two wood chip processing facilities at the original Tuolumne County and Lassen County project sites, designed to produce 1.14 million green metric tons per year of wood chips combined, with finished chips transported domestically by rail to downstream users and emerging market hubs in California and adjacent areas for use in sustainable aviation fuel, marine fuels, bioenergy with carbon capture and storage, or wood products such as oriented strandboard. GSNR is currently revising the DEIR to reflect these project changes and anticipates releasing a Revised DEIR with an updated evaluation of potential environmental impacts in early 2026, with final EIR publication and GSFA Board certification projected for 2026.

Jamestown Energy's Commitment to advanced energy development

Jamestown Energy Inc., a California-based Independent Power Producer, is the majority owner (55 percent) of Pacific Ultrapower Chinese Station, a 25 gross megawatt biomass power plant located in Jamestown that began operations in October 1986 and has been continuously operating for nearly 40 years, making it one of California's longest-operating biomass power plants. The facility currently generates approximately 142.7 gigawatt-hours annually and operates under a long-term Power Purchase Agreement with Southern California Edison (SCE), with electricity deliveries managed through the BioRAM program. PUCS utilizes wood fuel sourced from diverse materials including forest management operations such as pre-commercial thinning and dead tree removal (approximately 30 percent of fuel supply), urban

construction and demolition wood (approximately 40 percent), and agricultural products such as nut shells and orchard pruning's (approximately 30 percent).

The facility utilizes advanced pollution control equipment including a Selective Non-Catalytic Reduction (SNCR) system, limestone injection, and an electrostatic precipitator (ESP) to minimize criteria air pollutant emissions. The renewable electricity generation from PUCS offsets the equivalent of 457,000 barrels of oil annually and diverts materials that would otherwise have been open burned or disposed in landfills, reducing atmospheric pollution and maximizing utilization of renewable resources. Despite being one of the oldest biomass facilities in California, Jamestown Energy has demonstrated a commitment to remaining relevant in the evolving bioeconomy landscape, continuing to provide essential biomass disposal services that support forest health and wildfire prevention while serving as an anchor customer for emerging biomass processing facilities like Heartwood Biomass and partnering with next-generation projects like Yosemite Clean Energy's hydrogen facility being developed nearby

Public Fuel Reduction Efforts: The County Master Stewardship Agreement

In December 2024, the Tuolumne County Board of Supervisors signed a Master Stewardship Agreement with the U.S. Forest Service under which the county can conduct restoration projects on the Stanislaus National Forest. This agreement provides the mechanism to apply for and receive funding for supplemental project agreements and aims to restore forest health, reduce wildfire risk, support the local timber industry infrastructure, and improve watershed health. The original Master Stewardship Agreement was entered into in 2017. The partnership involves Tuolumne County, the U.S. Forest Service, and Yosemite Stanislaus Solutions (YSS), a collaborative that includes 24 to 25 participating partners including Sierra Pacific Industries, the Tuolumne River Trust, and the Central Sierra Environmental Resource Center.

Funding and Project Allocation

In September 2020, Tuolumne County received $8.67 million from the U.S. Forest Service, adding to $11.2 million already received from other grants and direct funding to support fuels reduction and other restoration work on the forest. In April 2025, Tuolumne County was awarded $5 million from California's Climate Investment Forest Health program through CAL FIRE to fund multiple projects that would remove an additional 125,000 tons of biomass across 12,550 acres of the forest. Additionally, the Stanislaus National Forest received $57.6 million in FY24 funding for its Wildfire Crisis Strategy Landscape program, which supports a ten-year, 305,000-acre project to reduce fuel loads through mechanical thinning and prescribed fire. In 2023, three projects in Tuolumne County received nearly $11 million in grant funding through the USDA Forest Service's Community Wildfire Defense Grant program.

Social and Ecological Resilience Across the Landscape (SERAL) Project

The SERAL project was developed through an ongoing partnership between the Forest Service, Yosemite Stanislaus Solutions, and Tuolumne County. The project encompasses 117,000 to 118,000 acres of public and private lands on the Stanislaus National Forest, with forest health treatments implemented on approximately 70,000 acres to protect and increase fire resiliency. The YSS group played a critical role in developing and funding this project and is comprised of a wide range of stakeholders including Sierra Pacific Industries, the Tuolumne River Trust, the Central Sierra Environmental Resource Center, and representatives from the timber industry, environmental groups, recreational users, and local government.

In January 2025, the Stanislaus National Forest signed the Record of Decision for SERAL 2.0, expanding the restoration effort to cover an additional 110,000+ acres. SERAL 2.0 integrates into the larger Stanislaus Landscape Project, a ten-year initiative covering 305,000 acres that is currently in its third year of implementation as of 2025. One component of SERAL 2.0 is the Excelsior Fuel breaks initiative, for which Tuolumne County issued a Request for Proposals in September 2025. The Excelsior project encompasses approximately 4,035 acres for fuel breaks and fuel reductions, with an estimated value of $2 million to $5 million and a contract performance period from November 2025 through October 2027.

Cedar Ridge and Cold Springs Community Protection

Tuolumne County implemented priority fuels reduction treatments around the communities of Cedar Ridge and Cold Springs using funding from the September 2020 federal allocation. The project included pre-implementation activities such as archaeological and botanical surveys, property line survey and posting, and road maintenance and reconstruction to support future restoration treatments. These treatments complemented the Strawberry Unified Prescribed Burn plan, which was located adjacent to Cold Springs and Strawberry and was funded through a California Climate Investment grant awarded to Tuolumne County on behalf of Yosemite Stanislaus Solutions.

Community Wildfire Defense Grant Projects

Three projects in Tuolumne County received nearly $11 million in 2023 through the USDA Forest Service's Community Wildfire Defense Grant program. Tuolumne County received $10 million to facilitate defensible space work on approximately 1,290 homesite parcels, roadside vegetation management on 22.67 miles of road, and public outreach to create additional Firewise Communities and fire-adaptive cohorts within at-risk and low-income communities. The current project areas include Cedar Ridge, Mi-Wuk Village, and Columbia (Yankee Hill side), with scheduling preference given to clusters of five or more adjacent parcels on the community perimeter.

First Timber Sale Project

In April 2025, the Tuolumne County Board of Supervisors unanimously approved the first project through the Master Stewardship Agreement that aims to remove 5 million board feet of commercial timber and 50,000 tons of biomass across nearly 1,000 acres of the Stanislaus National Forest. Five million board feet of timber would produce enough lumber to build approximately 310 homes. The 50,000 tons of biomass is approximately one-third of the amount needed to power the Pacific Ultrapower Chinese Station biomass-energy plant in Chinese Camp for a whole year. Sierra Pacific Industries is one of 24 partners participating in the agreement and will donate its biologists to conduct the required wildlife and vegetation surveys prior to the timber sale. The project will be structured as a commercial timber sale, with all profits going back into the agreement for future projects, and the Forest Service will contribute $160,000 for the project.

Wood Waste Pathways in Tuolumne County

Tuolumne County no longer operates any active landfills within its boundaries. The county's two municipal landfills, the Tuolumne County Central (Jamestown) Landfill and the Big Oak Flat (Groveland) Landfill, were both permanently closed and are now in post-closure maintenance status, operating with passive gas vents under strict monitoring and maintenance plans. Solid waste from Tuolumne County is transported to regional facilities outside the county, primarily the Highway 59 Landfill in Merced County. This Class III municipal solid waste facility, operated by the Merced County Regional Waste Management Authority, accepts general municipal waste, organics, treated wood, construction debris, and household hazardous materials. The landfill is actively compliant with California's SB 1383 organic waste reduction mandates and operates an expanded composting facility managed by Agromin that processes up to 100,000 tons per year of green waste and food scraps. While there is no formal inter-county waste disposal agreement between Tuolumne and Merced counties, the arrangement operates through Tuolumne County's franchise agreements with private haulers who contract directly with Highway 59 for disposal services. Wood waste is processed at dedicated facilities: the Cal Sierra Earth Resource Facility is a green waste processing site that accepts untreated wood and lumber, the Plainview Slash Site (operated by Wise Wood Works) is a slash processing site that accepts untreated lumber and brush, and the Cal Sierra Transfer Station accepts treated wood waste following state variance approval.

Land use and CEQA Law; its application to Fuel Reduction & Biomass Use Projects

What is CEQA?

The California Environmental Quality Act (CEQA) stands as a foundational pillar of environmental governance in California, mandating rigorous assessment and mitigation of environmental impacts for both public and private projects requiring governmental approval. Enacted in 1970, CEQA has evolved into a complex regulatory framework that still acts to support decision-makers and the public by ensuring that both are fully informed about the environmental consequences of proposed actions, while promoting sustainable outcomes through mitigation measures and alternatives. By requiring transparency and public participation, CEQA fosters accountability in land use planning and project development, making it one of the most influential environmental laws in the United States.

CEQA's regulatory structure is codified in the California Public Resources Code (PRC) and further elaborated in the CEQA Guidelines, administrative rules maintained by the Governor's Office of Planning and Research (OPR) and the Natural Resources Agency. The law defines a "project" as any activity undertaken, funded, or approved by a public agency that may cause direct or indirect physical changes to the environment. This broad definition encompasses everything from infrastructure development and zoning changes to regulatory approvals for private construction. However, not all projects require full environmental review, as certain activities may qualify for exemptions, including statutory exemptions created by the Legislature and categorical exemptions for classes of projects determined to have no significant environmental effect enacted through regulation. When environmental review is required, agencies may prepare either a Negative Declaration (ND or MND) for projects with potentially significant impacts that can be reduced to less than significant levels through mitigation measures, or a comprehensive Environmental Impact Report (EIR) for projects with unavoidable significant environmental effects that require detailed analysis of impacts, alternatives, and mitigation measures.

Central to CEQA's framework is the concept of the "lead agency," the public entity with primary authority to approve or carry out a project. The lead agency is responsible for determining the appropriate level of environmental review, preparing necessary documentation, and ensuring compliance with CEQA's procedural requirements. Other entities, termed "responsible agencies" and "trustee agencies," may also participate by providing expertise on specific resources such as water quality or endangered species.

The CEQA Process: Initial Determinations, Exemptions, and Analysis

The California Environmental Quality Act (CEQA) establishes a structured environmental review process designed to systematically evaluate potential impacts, engage stakeholders, and ensure informed decision-making. This process unfolds through distinct phases, each with specific requirements and opportunities for public participation, while incorporating various exemptions to streamline review for projects with minimal environmental effects.

Threshold Determination and Exemption Analysis

The initial phase of CEQA compliance involves determining whether a proposed activity that requires a permit from a public agency qualifies as a "project" under the law. A "project" is broadly defined as any activity undertaken, funded, or approved by a public agency that may cause direct or indirect physical changes to the environment. This includes both public infrastructure initiatives and private developments requiring discretionary government approvals. If the activity is not a "project" then the CEQA is not triggered and no further analysis or action need be taken.

If an activity that needs a permit is considered a project under CEQA, the next question to ask is whether the project qualifies for one of the multiple pathways for exemption, which fall into two primary categories: statutory exemptions and categorical exemptions. Statutory exemptions, established by the California Legislature, removes activities from the definition of "project" thereby completely exempting the activity from CEQA review. These activities include ministerial actions (e.g., issuing building permits), emergency projects (e.g., disaster response), and activities explicitly excluded by law. For instance, emergency repairs to roads following landslides or wildfires qualify for statutory exemptions under CEQA Guidelines Section 15269. Such exemptions are absolute and apply regardless of environmental impacts.

Categorical exemptions, outlined in CEQA Guidelines Sections 15301–15333, apply to classes of projects typically deemed to have minimal environmental impacts, such as minor land alterations, routine maintenance of existing facilities, or small-scale construction. Examples include replacing a commercial structure of less than 10,000 square feet or minor repairs to existing facilities. If the activity does not fall within a specific exemption, there is also a commonsense exemption which applies when a project's environmental impacts are plainly nonexistent, such as administrative actions with no physical footprint.

Categorical exemptions are not absolute, however, as there are exceptions which apply if a project affects sensitive resources such as scenic highways, hazardous waste sites, or historical resources. For example, a minor land division that encroaches on a designated historic district would lose its categorical exemption. Lead agencies must carefully evaluate whether exemptions are appropriate, considering both the project's characteristics and potential

exceptions. If an exemption applies, the agency may proceed without further environmental documentation, though some jurisdictions require a notice of exemption (NOE) to be filed.

Initial Study and Scoping Determination

If a project is not exempt, the lead agency conducts an Initial Study (IS) to identify potential environmental effects. This preliminary assessment is described in a "CEQA Checklist," which evaluates impacts across 18 environmental factors, including air quality, biological resources, cultural heritage, noise, traffic, greenhouse gas emissions, and fire impacts. This process also examines cumulative impacts when combined with past, present, or reasonably foreseeable projects. For instance, a proposed housing development might be assessed for its contribution to regional traffic congestion or habitat fragmentation when considered alongside nearby industrial expansions.

Based on the Initial Study's findings, the lead agency prepares one of three environmental documents:

A Negative Declaration (ND) is issued if the study concludes the project will have no significant environmental impacts. *A Mitigated Negative Declaration (MND)* is used when identified impacts can be reduced to less-than-significant levels through enforceable measures, such as modifying construction schedules to protect nesting birds or installing noise barriers. These documents must be available for public review for 30 days before project approval, and the lead agency must respond to any comments received and file a Notice of Determination within five days of adopting the ND or MND.

For projects with unavoidable significant impacts, if significant impacts remain after mitigation, the agency must adopt a Statement of Overriding Considerations justifying the project's benefits despite environmental costs. This statement might emphasize economic benefits, housing needs, or public safety imperatives, as seen in approvals for critical infrastructure projects in fire-prone areas, and an *Environmental Impact Report (EIR)* is required. The EIR provides a comprehensive analysis of impacts, proposes mitigation strategies, and explores alternatives, including the "no project" option. Alternatives must achieve most of the project's basic objectives while minimizing harm; for example, a highway expansion might consider route modifications or public transit enhancements as alternatives to reduce air pollution.

For projects requiring an Environmental Impact Report (EIR), a Notice of Preparation (NOP) is issued, initiating a 30-day comment period to identify key issues and alternatives. Scoping meetings may be held for complex projects, particularly those of regional significance, to ensure all concerns are addressed early in the process. This phase is critical for avoiding oversights and reducing litigation risks by incorporating diverse perspectives. The EIR preparation process includes a draft phase released for public review (typically 30–45 days) and

a final phase incorporating responses to comments. For state-level projects, the draft EIR undergoes a 45-day review through the State Clearinghouse to coordinate agency feedback.

Public Review and Agency Decision

CEQA mandates transparency through public review periods, allowing community members, organizations, and agencies to submit comments on environmental documents. For EIRs, the review period is typically 30–45 days, while Negative Declarations require at least 20 days. During this phase, the lead agency must address substantive comments in writing, explaining how concerns were resolved or why they were dismissed. For example, if residents raise concerns about a project's impact on local water quality, the agency might revise mitigation measures or provide additional data on groundwater monitoring. Note that during any of the pathways, the lead agency solicits input from other agencies, tribal governments, and the public to refine the analysis.

Final approval requires the agency to certify by making findings that the EIR or a Mitigated Negative Declaration accurately reflects the project's environmental consequences and that mitigation measures are feasible.

Mitigation Measures and Alternatives

CEQA requires lead agencies to adopt all feasible measures to mitigate significant environmental impacts. Mitigation strategies include avoidance (e.g., rerouting a road to protect wetlands), minimization (e.g., using low-noise pavement), rectification (e.g., restoring degraded habitats), and compensation (e.g., funding off-site conservation easements). For example, a coastal development project might mitigate habitat loss by purchasing and preserving equivalent acreage elsewhere. These measures require lead agencies to continue to monitor how projects are meeting these requirements.

The law also mandates analysis of project alternatives that could achieve similar objectives with fewer impacts. Alternatives must be "feasible" and "capable of avoiding or substantially lessening environmental harm." In urban infill projects, alternatives might include reducing building height, increasing green space, or incorporating renewable energy systems. The "no project" alternative serves as a baseline for comparison, illustrating the environmental consequences of inaction.

By integrating rigorous analysis, public engagement, and adaptive mitigation, the CEQA process ensures that environmental considerations remain central to California's development trajectory while providing flexibility for projects with minimal impacts through well-defined exemptions.

CEQA Requirements for Fuel Reduction versus Bioeconomy Business Development

Fuel reduction projects enjoy access to multiple categorical exemption pathways beyond the commonly used Class 4 exemption. In addition, certain fuel reduction projects on federal lands may qualify for a statutory exemption under Public Resources Code Section 4799.05(d)(1), which applies to prescribed fire, thinning, and other fuel reduction activities that have completed NEPA review where the primary role of the state or local agency is to provide funding or staffing support. Emergency project exemptions under Section 15269(c) are available for fuel management activities that constitute "specific actions necessary to prevent or mitigate an emergency," where "emergency" is statutorily defined as "a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services". This exemption is particularly applicable for fire or catastrophic risk mitigation around existing facilities, provided the threat is immediate and substantial rather than speculative or long-term. Each time such an exemption is used, the use must be documented and explained in order for the exemption to hold up under scrutiny.

There are several differences in what a wood products business faces in terms of environmental impacts and policy objectives, which leads to differing regulatory frameworks than fuel reduction projects. Although both types of projects are important to meet state climate and safety goals, fuel reduction initiatives are more straightforward rural impacts on forested lands, and the policy objectives are clear: reduce fire risk. As such, they are granted streamlined regulatory pathways and multiple environmental review exemptions to facilitate wildfire prevention. Fuel reduction in most cases is treated as an emergency response activity deserving expedited regulatory treatment[1].

Enterprises that can handle wood waste disposal are largely treated as unrelated to the fuel reduction effort. This is because wood product businesses that use forest residue are one step removed from the work in the forest. While it is essential to drive markets and make entire projects feasible, sometimes their purpose is lost on those who are not following the issue. Also, some wood products businesses do have environmental impacts that must be mitigated. As such, they encounter more intricate commercial and industrial permitting processes, limited exemptions, and more extensive environmental review requirements[2][3]. Despite this confusion

[1] California Code of Regulations, Article 2, Section 1052 - Emergency Notice | California Code of Regulations | Justia

[2] California Streamlines CEQA for Housing and Public Projects

[3] With growing fire risk, Governor Newsom proclaims state of emergency to fast-track critical wildfire prevention projects statewide | Governor of California

about the value of wood utilization in some circles, the state's recognition that biomass residual waste management cannot solely be managed by prescribed fire or chip-and-scatter methods lead squarely to the need to develop other methods for disposal.

Wood product businesses contribute to climate goals and rural economic development but operate within a regulatory framework that emphasizes procedure over action. Recently proposed categorical exemptions for wood utilization facilities represent recognition that current CEQA requirements may impede beneficial biomass utilization projects[4].

Tribal Consultation Requirements and Early Coordination (AB 52)

Assembly Bill 52 (2014) amended the California Environmental Quality Act (CEQA) to formally recognize tribal cultural resources and establish a consultation process between lead agencies and California Native American tribes. Under this framework, tribes that are traditionally and culturally affiliated with a project area may request notification of projects subject to CEQA. If a tribe requests consultation, the lead agency is required to initiate consultation within 30 days and engage in good faith discussion prior to making environmental determinations.

AB 52 defines “tribal cultural resources” to include sites, features, places, cultural landscapes, sacred places, and objects that are significant to a tribe. These resources may or may not be formally listed in historical registers. During consultation, the lead agency and tribe may identify potential impacts to tribal cultural resources and consider measures to avoid or mitigate those impacts, including project redesign, preservation in place, or cultural monitoring during ground-disturbing activities.

The statute also provides confidentiality protections for sensitive tribal information, allowing certain details, such as the location of cultural sites, to be withheld from public disclosure. Because consultation must occur prior to the completion of environmental review, AB 52 can influence project timelines, environmental analysis, and site planning, particularly for projects involving ground disturbance.

In practice, early coordination with tribes prior to formal CEQA milestones may help streamline the AB 52 process. Lead agencies and applicants could consider initiating informal outreach during pre-application or early project design phases to better understand whether tribal cultural resources may be present and whether design adjustments may be appropriate. Early communication may allow potential concerns to be identified before formal consultation is triggered, which can reduce the likelihood of later project changes, delays, or the need for substantial mitigation measures during environmental review.

[4] WFR_May_2024_GovUpdate05_07.pdf

Specific CEQA Issues with Bioeconomy Business Development

There are several aspects of CEQA review that are particularly important when developing a project that uses forest residue as its base material. One area that needs special attention is the air quality and the greenhouse gas analysis.

The air quality analysis is crucial because bioeconomy operations, including biomass processing, biofuel production, biochar generation, and agricultural waste conversion may emit criteria air pollutant emissions that trigger CEQA significance thresholds. Some facilities may generate operational emissions of nitrogen oxides, particulate matter (PM2.5 and PM10), volatile organic compounds, carbon monoxide, and sulfur dioxide, pollutants that are subject to federal and state ambient air quality standards and that determine whether a project requires a full Environmental Impact Report versus a Negative Declaration. The analysis must quantify these emissions against regulatory requirements and NAAQS attainment designations and evaluate whether the project's incremental contribution is cumulatively considerable when combined with past, present, and reasonably foreseeable future projects in nonattainment or near nonattainment air basins.

Tuolumne County presents a markedly different air quality regulatory context than California's larger, urbanized air basins. The Tuolumne County Air Pollution Control District (TCAPCD) is classified as a small air district that employs a single Air Pollution Control Specialist and Deputy managing two Title V permit holders across the county. The county's portion of the Mountain Counties Air Basin is designated as nonattainment only for state ozone standards, while remaining in attainment for federal ozone standards and all criteria pollutants including CO, nitrogen dioxide, sulfur dioxide, PM10, PM2.5, and lead. Critically, the California Air Resources Board has determined that Tuolumne County's ozone levels result from "overwhelming transport" of emissions from upwind industrialized areas rather than local emission sources, and consequently the TCAPCD is relieved from preparing a state implementation plan for ozone. Unlike the Northern San Joaquin Valley, which faces substantial cumulative air quality challenges from multiple stationary and area sources, Tuolumne County's air quality framework is fundamentally transport-driven and unconstrained by dense local industrial activity. Consequently, while air quality analysis for bioeconomy facilities must still account for construction phase fugitive dust emissions, operational criteria pollutant emissions, mitigation measures including Best Available Control Technology (BACT) when needed, and dust suppression practices, as well as potential exposure to sensitive receptors, the cumulative significance determination may reach different conclusions than would apply in nonattainment or heavily impacted air basins. The TCAPCD's established emissions thresholds for CEQA purposes should guide the analysis, and lead agencies must carefully evaluate whether a bioeconomy project's incremental contribution, when combined with the relatively limited

number of other major emission sources in the district, would result in significant adverse impacts to air quality or public health given the area's current attainment status and transport-dominated air quality challenges

As to GHG analysis, General technical guidance on the subject from the Governor's Office of Land Use and Climate Innovation emphasizes that lead agencies "should make a good-faith effort, based on available information, to calculate, model, or estimate the amount of CO2 and other GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities." This requirement, established in their 2008 Technical Advisory on CEQA and Climate Change, provides the foundational framework for greenhouse gas emissions analysis under CEQA review, with updated CEQA Guidelines Section 15064.4 now mandating that agencies "shall" make this good faith effort as part of their environmental impact assessment process.

Other impact areas such as traffic, noise, water quality, biological and cultural resources, soils and geology, aesthetics, and hazards must also be evaluated under CEQA. It is important to remember that the Air quality analyses assess criteria pollutants not just from chip processing and transport as discussed above, but also traffic studies must model the additional vehicle trips generated by material deliveries and operations. Noise assessments examine construction, and equipment impacts on nearby receptors, and water quality reviews address potential runoff and sedimentation from storage and handling areas. Biological and cultural resource evaluations identify and protect sensitive habitats and archaeological sites, and soils and geology studies ensure safe grading and erosion control. Aesthetic and visual impact reviews consider changes to landscape character, and hazards analyses evaluate fire risk, chemical storage, and emergency access activities.

Suggestions to Improve CEQA for Bioeconomy Development

CEQA Exemption Application and Expansion

Statutory CEQA Exemptions for Advanced Manufacturing

In June 2025, Senate Bill 131 added Public Resources Code Section 21080.69(a)(4), creating a new statutory CEQA exemption for certain advanced manufacturing projects, including industrial biotechnology facilities as defined in Public Resources Code Section 26003. When applicable, this exemption eliminates the requirement to prepare an Environmental Impact Report and allows qualifying projects to proceed without full CEQA review. The exemption applies only to projects located exclusively on land zoned for industrial use and expressly

excludes projects located on natural and protected lands, wetlands, prime farmland, hazardous waste sites, or projects involving oil and gas infrastructure or large warehouse distribution centers. The exemption took effect immediately upon enactment and is intended to expedite development of specified clean technology and biomanufacturing facilities while maintaining restrictions on sensitive locations.

Because the exemption expressly includes industrial biotechnology and advanced manufacturing, certain bio industrial facilities that process or convert biomass feedstocks into fuels, chemicals, or bio-based products may qualify, provided all statutory siting and eligibility criteria are met. Projects that do not meet these requirements remain subject to standard CEQA review.

Limits of Categorical Exemptions and Regulatory Agency Actions

Certain categorical exemptions under the CEQA Guidelines apply only to actions taken by regulatory agencies and do not extend to project approvals sought by private or commercial applicants. For example, revisions adopted by air districts to implement or update permitting requirements for biomass boilers have relied on the Class 8 categorical exemption under CEQA Guidelines Section 15308, which applies to actions by regulatory agencies for the protection of the environment. This exemption may be used for rulemaking or permitting actions undertaken by an air district but does not apply to the approval of new bioenergy or wood products facilities proposed by private parties.

In addition, many existing categorical exemptions are limited to modifications of existing facilities and do not apply to the construction of new facilities. As a result, while limited exemption pathways exist for certain regulatory actions or facility upgrades, most new bioeconomy development projects must rely on statutory exemptions such as SB 131, where applicable, or proceed through standard CEQA review processes.

CEQA Process in Tuolumne County: What Applicants Should Know

Tuolumne County's CEQA review process reflects the characteristics of a rural jurisdiction with recurring project types, a program-level General Plan Environmental Impact Report (certified in 2018), and a digital permitting platform (OpenGov). Projects are typically evaluated within a framework that emphasizes consistency with General Plan policies, known environmental conditions, and coordination across County departments and partner agencies.

For applicants considering bioeconomy, wood products, or biomass-related projects, several key factors may influence the pace and predictability of CEQA review.

1. Application Completeness and Early Project Definition

CEQA review timelines are often influenced by the completeness of initial submittals. Projects that clearly define operational characteristics, site conditions, and potential environmental impact areas at the outset are generally better positioned to move efficiently through the review process.

Early identification of likely impact areas, including traffic, air quality, wildfire risk, and water supply, can help focus environmental analysis and reduce the need for multiple resubmittals.

Benefit: More complete applications may reduce review delays and improve timeline predictability.

2. Use of Existing Environmental Analysis and Tiering

Tuolumne County's General Plan EIR provides a program-level environmental analysis that can support CEQA tiering for projects consistent with adopted land use designations. Where applicable, this allows environmental review to focus on site-specific impacts rather than reanalyzing issues that have already been addressed at the program level.

Applicants may benefit from reviewing prior CEQA documents in the County to understand typical impact areas and mitigation approaches.

Benefit: Use of existing analysis may reduce redundancy and support more efficient environmental review.

3. Early Coordination with County Staff and Agencies

Pre-application coordination with County staff can help clarify CEQA pathways, identify required technical studies, and align project design with local requirements. This may be particularly important for projects involving biomass processing or industrial operations.

Projects may also require coordination with external agencies, including the Tuolumne County Air Pollution Control District and state or federal resource agencies, depending on project characteristics.

Benefit: Early coordination may reduce uncertainty and help avoid delays later in the process.

4. Common Environmental Review Considerations

CEQA review in Tuolumne County frequently focuses on a consistent set of environmental topics, including air quality, greenhouse gas emissions, traffic, noise, wildfire risk, water supply, and biological resources. For biomass and wood products projects, air quality and transportation impacts are often key considerations.

Incorporating these factors into early project planning may help streamline environmental analysis and support more predictable review outcomes.

Benefit: Anticipating common impact areas may reduce the likelihood of significant issues arising during CEQA review.

Potential CEQA Process Improvements (For County Consideration)

The following concepts reflect potential approaches that could further improve the efficiency, consistency, and predictability of CEQA review processes in Tuolumne County. These ideas are based on common challenges observed in environmental review processes and emerging practices in other jurisdictions.

1. AI-Supported Completeness Review and Document Management

Tuolumne County's current completeness review process relies on manual document review and coordination across departments. Introducing AI-supported tools could assist in identifying missing application materials, organizing environmental documentation, and tracking interagency coordination.

These tools could be layered onto existing systems, such as the OpenGov platform, to support administrative efficiency while maintaining full staff oversight of substantive decisions.

Potential Benefit: Reduced resubmittal cycles, improved document organization, and more efficient use of staff time.

2. Standardized Mitigation Measures and Tiered Review Framework

Mitigation measures are often developed on a project-by-project basis, even when similar impacts recur across projects. Developing a standardized mitigation library, supported by the existing General Plan EIR, could allow for greater consistency and reduce repetitive analysis.

A more formalized tiered review framework could also support streamlined CEQA pathways for projects consistent with General Plan assumptions.

Potential Benefit: Reduced redundancy in environmental analysis and shorter review timelines for routine project types.

3. Defined Decision Timelines and Expanded Applicant Guidance

Applicants may experience uncertainty related to CEQA timelines and permitting decisions. Establishing and communicating target timeframes for key milestones, along with expanded applicant education resources, could improve transparency and reduce incomplete submittals.

This could include workshops, guidance materials, and expanded pre-application support.

Potential Benefit: Improved predictability for applicants and more efficient review processes.

Community Engagement in CEQA: Applicant Considerations and Local Practices in Tuolumne County

GSNR Project Example

The Golden State Natural Resources Forest Resiliency Project CEQA process revealed both effective practices and gaps in community engagement. What worked: holding multiple in-person scoping meetings across different counties and a virtual option, maintaining accessible meeting times (afternoons and evenings), documenting all public comments, and conducting a separate small-group listening session with environmental justice stakeholders. What created delays and challenges: finalizing key project details late in the process, failing to identify and proactively engage environmental justice communities until 14 months after the initial scoping (requiring additional engagement, health risk assessments, and potential EIR revisions), providing only 30-day comment periods for a complex multi-county project, and lacking language translations that would have served non-English speakers in affected communities.

Community Engagement in CEQA: What Applicants Should Know in Tuolumne County

Community engagement is a central component of the CEQA process in Tuolumne County and can influence both project timelines and outcomes. Public participation occurs through formal CEQA review periods as well as public hearings before the Planning Commission and Board of Supervisors. In addition, local organizations, collaboratives, and community groups often play an active role in shaping public understanding and response to proposed projects.

Recent project experience in Tuolumne County, including large-scale proposals such as the Golden State Natural Resources Forest Resiliency Project, demonstrates that the timing, clarity, and accessibility of outreach can significantly affect the level of public interest, the volume of comments received, and the potential for project delays.

For applicants, understanding how community engagement functions in practice can help support a smoother CEQA process.

1. Early and Ongoing Engagement Can Influence Project Outcomes

Projects that engage community members early, particularly during or before the Notice of Preparation phase, are often better positioned to identify concerns and incorporate feedback into project design. When engagement occurs later in the process, new issues may emerge during formal review periods, potentially requiring additional analysis or revisions.

Benefit: Early engagement may help identify key concerns in advance and reduce the likelihood of significant issues arising during formal CEQA review.

2. Clear and Accessible Communication Matters

CEQA documents are often technical and lengthy. Projects that provide clear, concise, and accessible explanations of project purpose, scale, and potential impacts may be more easily understood by the public. In some cases, supplemental materials such as fact sheets, maps, or summaries can support broader understanding.

Benefit: Clear communication may improve the quality of public input and reduce misunderstandings that can lead to opposition or delay.

3. Community Interest May Extend Beyond Formal Noticing Requirements

While CEQA establishes minimum public noticing requirements, community awareness of projects in Tuolumne County is often influenced by informal communication networks, local organizations, and stakeholder groups. Projects that generate regional interest or involve forest management, biomass utilization, or industrial activity may receive heightened public attention.

Benefit: Recognizing broader community interest may help applicants anticipate participation levels and prepare appropriate outreach strategies.

4. Environmental Justice and Accessibility Considerations May Be Relevant

Some projects may affect communities with varying levels of access to technical information or public processes. In these cases, accessibility considerations such as language, meeting format, and availability of information may influence participation.

Benefit: Considering accessibility early may support broader participation and reduce the likelihood of engagement gaps that could affect the CEQA process.

5. Public Comment Volume and Timing Can Affect CEQA Timelines

Large or complex projects may generate substantial public comment, particularly during Draft EIR review periods. In some cases, extended review periods or additional outreach may be warranted to address community interest.

Benefit: Anticipating higher levels of public engagement may help applicants plan for potential schedule adjustments and resource needs.

Potential Future Actions that Require Rulemaking or Legislation

The Joint Institute for Wood Products proposed several amendments to CEQA guidelines in its recent CEQA Handbook[5] including plans to "create a categorical exemption for projects that utilize forest biomass waste located on properties zoned as industrial and outside zones of extreme air quality nonattainment," this exemption remains only as a proposal in 2026. Other parts of the Handbook recommendations focus on reducing procedural burdens for projects on previously developed sites and incorporating lifecycle emission benefits into CEQA's energy-efficiency guidelines. A proposed new brownfield reuse exemption could allow redevelopment of former industrial properties, as long as the new exemption provided that existing environmental baselines are maintained and no new significant impacts occur, such a new idea could improve project success. Also, enhancements to the energy-efficiency checklist would recognize the full life-cycle advantages of bioenergy facilities—extending beyond onsite efficiency to include avoided emissions from alternative waste-disposal methods. Together, these reforms seek to balance environmental protection with the urgent need to scale up renewable energy and sustainable forest management.

The Tuolumne Air District could also consider copying the Yolo-Solano Air Quality Management District's revision of Rule 2.43 for biomass boilers demonstrates one available exemption pathway within air district permitting, which relies on the Class 8 categorical exemption under Section 15308 as an "Action by Regulatory Agency for Protection of the Environment". This exemption applies specifically to regulatory agency actions for environmental protection and cannot be used by private or commercial parties for their own project approvals but could be useful for public agency development projects.

General Plan and Zoning related to the Wood Products Businesses

County land use regulations play an important role in the development of wood products businesses. The General Plan is the guiding document within the County for how land is developed and is an important reference for moving any project forward.

Currently this is the General Plan Goal that is important to consider:

> *Goal 4.C: The General Plan encourages well-planned timber related uses in commercial timberland areas. Policy 4.C.1 states the county will encourage local timber production by expanding or considering the expansion of permitted uses in the Timberland Production Zone (TPZ) district and other zoning districts which permit timber operations to include facilities which are integrally related to the growing, harvesting* ***and***

[5] CEQA Handbook for Bioenergy and Wood Products Businesses page 113

processing of forest products. *Policy 4.C.2 supports the timber industry by considering the expansion of conditionally permitted uses in the TPZ zoning district and agricultural zoning districts compatible with Williamson Act land conservation contracts to include timber support services or timber-compatible uses.*

The General Plan references implementation programs to consider expanding permitted uses in the TPZ zoning district and agricultural zoning districts to include facilities integrally related to the growing, harvesting and processing of forest products. The county also intends to develop programs that encourage enhanced carbon storage in forests, use of durable wood products, and use of wood biomass for energy, while maintaining healthy forest ecosystems. To implement these programs, the County adopted zoning ordinance amendments in April 2024 that allow biomass facilities as a permitted use in the AE-160, AE-80, and AE-37 Exclusive Agricultural zoning districts (on property with direct access from a state highway), and as a conditional use in the Timberland Production Zone district, M-1 Light Industrial district, and M-2 Heavy Industrial district. These amendments directly fulfill General Plan Implementation Programs 6.E.l (supporting biomass energy facilities as an alternative to traditional forms of energy) and 6.E.p (expediting all permits under the County's jurisdiction which are necessary for the development of energy generating facilities using renewable resources and enterprises engaged in energy conservation programs, such as biomass co-generation facilities, businesses which utilize recycled products and materials, and recycling facilities). The 2024 zoning code amendments also establish buffer zones to separate new residential development projects and sensitive receptors from existing industrial sites that emit criteria and toxic air pollutants, and create adequate distance between new air pollution sources such as biomass processing facilities and residential areas, fulfilling Implementation Programs 15.A.g and 15.A.h

Zoning: Industrial and Commercial Zones

Another important aspect of land development is how property is zoned by the County, which helps maintain community health and character. Currently these four zones are the most relevant to the development of the Bioeconomy. A zoning map of the County can be found online and is an important part of determining location for business development.

Wood Products Manufacturing: The M-1 Light Industrial zoning district allows sawmills as a conditional use, and the M-2 Heavy Industrial zoning district allows sawmills as a permitted use (Tuolumne County Ordinance Code Chapter 17.16, Table 17.16.1). A proposed woody biomass pellet manufacturing facility was reviewed under M-2 Heavy Industrial zoning, which was found consistent with surrounding zoning and land uses.

Biomass Facilities for Power Generation: Both the M-1 Light Industrial and M-2 Heavy Industrial zoning districts allow biomass facilities as a permitted use without discretionary review

(Tuolumne County Ordinance Code Chapter 17.16, Table 17.16.1). Additionally, solar power generation facilities and equipment are permitted uses in both M-1 and M-2 districts (Tuolumne County Ordinance Code Chapter 17.16, Table 17.16.1). The Tuolumne County General Plan specifically supports biomass energy facilities as an alternative to traditional forms of energy (General Plan Policy 4.H.3), and Implementation Program 4.F.a requires the county to expedite all permits under the County's jurisdiction which are necessary for the development of energy generating facilities using renewable resources and enterprises which are engaged in other types of energy conservation programs, such as biomass co-generation facilities (Tuolumne County General Plan, Natural Resources Conservation - Open Space Element, Chapter 4).

On-Site Processing: Sawmills for processing timber grown only on the same parcel where the sawmill is located are permitted uses in certain agricultural and residential zones (Tuolumne County Ordinance Code Chapter 17.10, Table 17.10.1 and Chapter 17.12, Table 17.12.1). In the Timberland Production Zone (TPZ), sawmills are a conditional use (Tuolumne County Ordinance Code Chapter 17.18, Table 17.18.1). In residential zones, such sawmills are permitted for a period not to exceed 60 days (Tuolumne County Ordinance Code Chapter 17.12, Table 17.12.1).

Off-Site Processing: Sawmills for processing timber not grown on the same parcel require conditional use permits in M-1 districts and are permitted uses in M-2 districts (Tuolumne County Ordinance Code Chapter 17.16, Table 17.16.1). The zoning code distinguishes between on-site processing and commercial sawmill operations through these different permit requirements.

It is important to recognize that it is possible to request a zoning amendment, but in order to get this done it does require approval from the Board of Supervisors. Zoning amendments can take additional time and resources to accomplish, and other community needs will be taken into consideration.

ATTACHMENT A

Key Contacts, Planning Portals, Fee Schedules, and Guidance Resources for Tuolumne County

Tuolumne County provides a set of centralized online resources and departmental points of contact that support land use approvals, CEQA review, permitting, and project coordination. The County utilizes an integrated permitting platform and maintains departmental resources for Planning, Building, Environmental Health, and air quality review.

Tuolumne County Community Development Department – Planning Division (Land Use and CEQA Lead Agency)
The Planning Division, within the Community Development Department, serves as the primary point of contact for discretionary permits, zoning interpretation, General Plan implementation, and CEQA review. The Division manages use permits, subdivisions, and environmental review, and provides access to application materials and land use guidance.

- Website: https://www.tuolumnecounty.ca.gov/96/Planning
- Forms and Applications: https://www.tuolumnecounty.ca.gov/1301/Permit-Applications-and-Forms
- Phone: (209) 533-5633
- Address: 2 South Green Street, Sonora, CA 95370

The Planning Division website also provides access to General Plan materials and zoning regulations:

- General Plan: https://www.tuolumnecounty.ca.gov/96/Planning
- Zoning Code (Title 17): https://library.municode.com/ca/tuolumne_county/codes/code_of_ordinances

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Online Permit Center (OpenGov Portal)
Tuolumne County utilizes the OpenGov platform as its primary online permitting system for Planning, Building, and related development applications.

- Online Permit Center: https://tuolumnecountyca.portal.opengov.com

This portal allows applicants to submit applications, upload documents, track project status, and communicate with County staff throughout the review process.

Building Division (Permitting and Inspections)
The Building Division provides permit processing, plan review, and inspection services for residential and commercial construction and coordinates with Planning during project review.

- Website: https://www.tuolumnecounty.ca.gov/171/Building-Division
- Forms and Documents: https://www.tuolumnecounty.ca.gov/1301/Permit-Applications-and-Forms

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Fee Schedules and Cost Information
Tuolumne County maintains department-level fee information through a centralized fee page rather than a single static fee document.

- Fee Information: https://www.tuolumnecounty.ca.gov/1328/Fees

Fees are periodically updated and may vary depending on project scope, required technical studies, and the level of CEQA review. Applicants are encouraged to confirm current fee structures with County staff.

Environmental Health Division
The Environmental Health Division regulates septic systems, water supply, food facilities, and environmental health compliance, and may participate in CEQA review depending on project characteristics.

- Website: https://www.tuolumnecounty.ca.gov/140/Environmental-Health
- Phone: (209) 533-5588

Tuolumne County Air Pollution Control District (APCD)
The Tuolumne County APCD regulates air quality permitting and may act as a responsible agency under CEQA for projects involving emissions, including biomass and combustion-related operations.

- Website: https://www.tuolumnecounty.ca.gov/123/Air-Pollution-Control-District
- Phone: (209) 533-5693

Planning Commission (Public Hearings and Decisions)

The Tuolumne County Planning Commission conducts public hearings and makes recommendations or decisions on discretionary land use applications. Meeting agendas and supporting materials are available through the County website.

- Planning Commission Page: https://www.tuolumnecounty.ca.gov/134/Planning-Commission

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Practical Use of County Resources

In practice, applicants typically begin with the Planning Division to confirm zoning, permitting requirements, and CEQA pathways, and then submit applications through the County's OpenGov permit portal. Tuolumne County's use of a centralized online permitting system allows for coordinated review across Planning, Building, Environmental Health, and other departments. Early engagement with County staff can help clarify submittal requirements, reduce resubmittal cycles, and improve overall processing timelines.

ATTACHMENT B

Getting Started in Tuolumne County: CEQA FAQ and Submittal Checklist

1. What level of CEQA review will my project require?
The level of CEQA review depends on the project's size, location, and potential environmental impacts. Smaller or lower-impact projects may qualify for an exemption or a Mitigated Negative Declaration, while larger or more complex projects may require an Environmental Impact Report. The appropriate level of review is determined by the lead agency based on an Initial Study and available evidence.

2. Who determines the level of CEQA review?
The lead agency, typically the County, determines the appropriate level of CEQA review. Applicants may provide supporting information and technical studies, but the final determination is made by the agency in accordance with CEQA requirements.

3. How long does CEQA review typically take in Tuolumne County?
CEQA timelines vary depending on project complexity, completeness of the application, level of environmental analysis required, and the extent of public and agency review. State law establishes minimum public review periods, including at least 20 days for Negative Declarations and 30 days for Environmental Impact Reports, with longer periods required when circulated through the State Clearinghouse. Overall project timelines may vary based on these and other factors.

4. What are the most common issues for biomass or wood products projects?
Common CEQA issue areas include air quality and emissions, traffic and haul routes, noise, wildfire risk, water supply, and biological resources. Addressing these topics early in project planning may help support a more efficient environmental review process.

5. Should I meet with the County before submitting an application?
Pre-application meetings are not required but are commonly used to help applicants understand local requirements, identify potential issues early, and align project design with County expectations.

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6. Will my project require coordination with other agencies?
Many projects require coordination with other agencies, such as the Tuolumne County Air Pollution Control District, state resource agencies, or federal land management agencies, depending on project characteristics. CEQA requires consultation with responsible and trustee agencies where applicable.

7. How can I reduce the risk of delays during CEQA review?

Submitting a complete and well-organized application, identifying potential environmental impacts early, and coordinating with County staff and relevant agencies may help reduce the likelihood of delays and improve overall predictability of the review process.

ATTACHMENT C

Prepare Your CEQA Submittal: Applicant Checklist

Before submitting a project application in Tuolumne County, applicants may benefit from confirming the following:

Project Definition

- Clear description of project purpose and operational characteristics
- Site plan showing layout, access, and infrastructure.
- Identification of equipment, processing activities, and expected throughput

Environmental Considerations

- Preliminary identification of potential impact areas, including:
    - Air quality and emissions
    - Traffic and haul routes
    - Noise
    - Water supply and drainage
    - Wildfire risk and defensible space
- Initial consideration of potential mitigation measures

CEQA Strategy

- Preliminary understanding of the likely CEQA pathway (as determined by the lead agency)
- Review of applicable General Plan land use designations
- Consideration of consistency with prior CEQA documents and program-level analysis

Technical Studies (as applicable)

- Air quality or emissions estimates
- Traffic or transportation analysis
- Biological or cultural resource review, if required based on site conditions

Coordination

- Pre-application meeting with County staff (recommended but not required)
- Identification of other agencies that may require permits, approvals, or consultation.

Application Materials

- Complete and organized submittal aligned with County requirements.
- Supporting documents clearly labeled and formatted.
- Contact information for applicant and project team.

Benefit: A complete and well-prepared submittal may help reduce resubmittal cycles, support more efficient review, and improve overall predictability of the CEQA process.