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CEQA Handbook for Bioenergy and Wood Products Businesses Prepared for the Joint Institute for Wood Products Innovation

11/19/2024

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Acknowledgments

This report was funded by the Joint Institute for Wood Products Innovation

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Additional Support
Many thanks to several entities for review, including..

Add Joint Institute work product language (Katie?)

Note that while the Governor's Office of Land Use and Climate Innovation (LCI) participates in the Joint Institute for Wood Products Innovation, the views expressed herein do not necessarily reflect the views of that organization.

Introduction

The California Environmental Quality Act, or CEQA, is often considered on one hand, a powerful environmental protection tool, and on the other hand one of the greatest barriers to land development in California. In any case, bioenergy and wood products businesses must comply with this law. This handbook is dedicated to explaining the California Environmental Quality Act (CEQA) and addressing issues that are particular to bioenergy and wood products businesses. CEQA requires state, regional, and local agencies to identify and mitigate to the extent feasible the significant environmental impacts of their actions, which can lead to lengthy and costly review processes. CEQA compliance can be time consuming, which in turn affects the financial feasibility and investment attractiveness of bioenergy and wood product businesses, making it difficult for developers to proceed. This is particularly true when detailed environmental impact reports (EIRs) or complicated mitigated negative declarations (MND) are required, which take even longer and are expensive. The complex issues associated with CEQA compliance can be cost-prohibitive, especially for smaller companies or startups in the bioenergy and wood product sectors. CEQA compliance can also lead to legal uncertainty and potential litigation when a project is opposed by third parties.

The Little Hoover Commission's May 2024 report on CEQA highlights these challenges, stating that while CEQA “has been a bedrock of environmental protection, … it is also true that CEQA, like any law, can have damaging, often unintended, consequences. It is an expensive and lengthy process that can add years to project timeframes. It can be used for purposes that have little relationship to environmental protection.” In summary, the Commission recommended that “CEQA should be retained as a strong form of environmental protection, however, we also recommend targeted and limited reforms.”

The bioenergy and wood products sectors face significant hurdles under the current CEQA framework. Addressing these challenges through reform and modernization of CEQA processes could help unlock the potential for sustainable development in these critical industries. Until such reforms occur, however, project proponents must comply with the law as it currently exists.

This handbook was commissioned by the Joint Institute for Wood Products Innovation (Joint Institute) to help guide project developers, land use staff, local government leaders and other interested parties through the CEQA process. The specific language directing this project stated:

This document is “intended to be used by consultants, businesses, and local governments interested in wood products businesses. The guidebook will review

scenarios when exemptions might apply, topics that will be covered during environmental review, and agencies (other than the lead agency) with whom project proponents should consult. Baseline considerations, mitigation and monitoring, air quality, and recommendations around community input and involvement will also be addressed. The handbook is designed to specifically support the development of bioenergy and wood product businesses using forest biomass. By providing detailed guidance on navigating the complexities of CEQA and related regulatory frameworks, the handbook aims to facilitate the growth and success of these enterprises.

Additionally, the insights and strategies outlined in this handbook can also be beneficial for bioenergy projects using wood from other sectors, and for forest fuel reduction projects. By understanding the regulatory landscape, overcoming CEQA hurdles, and leveraging available tools and exemptions, proponents of these initiatives can achieve sustainable development, improve public health, and contribute to effective climate change mitigation. This comprehensive approach supports the primary goal of advancing wood product businesses and enhances broader efforts towards environmental responsibility and economic resilience.”

Part One: CEQA and Woody Biomass Use in Bioenergy or Wood Products

Introducing CEQA

Enacted in 1970, CEQA is a significant environmental statute in California. It requires state, regional, and local agencies to analyze and disclose the environmental impacts of proposed projects and to adopt all feasible measures to mitigate any significant environmental impacts. Supplementing the statutory provisions of CEQA are administrative regulations known as CEQA Guidelines, which are developed by the Governor's Office of Planning and Research (OPR) and officially promulgated by the California Natural Resources Agency (CNRA). The CEQA Guidelines reflect statutory requirements and incorporate court decisions interpreting and implementing these statutes. The name "Guidelines" is somewhat misleading, in that they are not merely advisory but are duly enacted regulations with the force of law (and for that reason are codified in Title 14 of the California Code of Regulations). In this respect, they differ from the purely advisory "General Plan Guidelines" published and periodically updated by OPR, which are not found in the California Code of Regulations.

CEQA applies to a wide range of projects undertaken, funded, or approved by government agencies in the state, making its scope quite extensive. One of the primary objectives of CEQA is to ensure environmental protection. The Act compels decision-makers to consider the environmental consequences of a project before giving it the green light. This statutory objective is complemented by the law's emphasis on public participation, providing the public with opportunities to engage in the decision-making process. Moreover, CEQA aims to foster transparency in government decisions affecting the environment. It requires that significant environmental effects of a project are disclosed, ensuring that the public is adequately informed of them.

The environmental review process under CEQA includes several key steps. Where a proposed project is determined to be subject to CEQA (i.e., the activity in question qualifies as a "project" and is not subject to any exemption), the first step is to prepare an Initial Study to determine if a project may have a significant effect on the environment. If no potentially significant impacts are found, a Negative Declaration is issued and circulated for public comment. In cases where potentially significant impacts are identified but can clearly be mitigated to less than significant levels through measures agreed to by a project applicant, a Mitigated Negative Declaration is prepared. However, if substantial evidence shows that a project may have significant environmental impacts, an Environmental Impact Report (EIR) is required. An EIR provides (1) detailed information on a project's potential environmental effects, (2) potentially feasible mitigation measures to minimize any significant effects, and (3) potentially feasible alternatives to the project that would meet most project objectives while reducing the severity of one or more significant effects. If a project proponent or lead agency determines from the outset that an EIR will be required for a project, the

preparation of an Initial Study is optional. While an Initial Study may still be desirable in some cases, it is not mandatory if the lead agency can clearly determine that an EIR will be necessary.

CEQA has been a subject of debate, with critics arguing that it can be used to delay or halt development, while proponents stress its essential role in protecting environmental quality and community health. Since its original enactment in 1970, the Act has been a cornerstone in California's environmental policy, influencing a variety of sectors, including land use, transportation, housing development, and natural resource conservation. Over the years, CEQA has been subject to various amendments, reflecting evolving environmental concerns and the need to streamline its implementation process.

OPR studies future research and planning needs, fosters goal-driven collaboration, and delivers guidance to state partners and local communities, with a focus on land use and community development, climate risk and resilience, and locally driven economic development. It is also the agency that considers changes to the CEQA Guidelines regulations and issues CEQA guidance documents. According to OPR's website[1]:

CEQA "is intended to:

1) inform government decision makers and the public about the potential environmental effects of proposed activities.
2) identify the ways that environmental damage can be avoided or significantly reduced.
3) prevent significant, avoidable environmental damage by requiring changes in projects, either by the adoption of alternatives or imposition of mitigation measures; and
4) disclose to the public why a project was approved if that project has significant environmental impacts that cannot be mitigated to a less than significant level."

When it comes to bioenergy and wood products businesses, CEQA can provide the project review that quells community concerns and ensures that businesses develop consistent with the local government's vision for its community. CEQA informs the community and the decision makers. However, the authority to dictate how projects are built does not come from the CEQA statute itself, but rather from the innate powers of the agency that is approving a project (statutory authority in the case of state agencies and the local police power in the case of local agencies). While the CEQA process can be intimidating, there are ways to reduce time and money on environmental compliance

[1] http://opr.ca.gov/ceqa/docs/20210809-CEQA_101.pdf

by hiring the right people, being proactive with your community, and being technically and legally prepared to efficiently complete the work with the specific agency governing a project. This handbook should help facilitate that effort and improve the efficiency of CEQA compliance.

The Importance of Bioenergy and Wood Products Projects in California for Public Health and Climate Goals

Wood products created from forest-derived biomass offer a myriad of benefits that positively influence public health and environmental sustainability. Wildfires, known for releasing vast amounts of smoke and fine particulate matter (PM), pose a significant threat to respiratory and cardiovascular health and contribute to climate change. By putting to use biomass that would otherwise be left in the forest to decompose, to be pile burned, or to help fuel the next wildfire, people and property are protected and harmful emissions are substantially diminished, leading to improved air quality and reduced health risks. Removing excess biomass also supports healthy forests, which contribute to better air quality, improved plant and animal biodiversity, and water conservation, all of which directly or indirectly benefit human health.

Wood products businesses established close to the fiber source support rural forested economies and offer the climate benefits of a reduced carbon footprint as well as sequestering carbon in long-lived wood products. The livable-wage jobs created by these businesses can expand the economic base of many of the regions that currently rely upon tourism, making them more resilient to climate-related economic impacts and diversifying community prosperity.

Utilizing biomass and wood waste plays an important role in mitigating climate change, offering significant climate benefits. It achieves this outcome by storing carbon in the wood products instead of releasing it as carbon dioxide (CO_2) during open burning. Given that climate change impacts a range of health areas, including increased heat-related illnesses and altered disease patterns, mitigating its effects through such practices is vital.

The 2022 CARB Scoping Plan endorses fuel reduction as a strategy to enhance climate resilience in the state. This comprehensive strategy is aimed at guiding California towards achieving carbon neutrality and drastically reducing greenhouse gas (GHG) emissions. The plan sets ambitious targets, aiming to reduce GHG emissions by 85% below 1990 levels by 2045, aligning with the state's statutory goal of carbon neutrality. To achieve the ambitious goal of becoming carbon-neutral by 2045, California must focus on avoiding emissions of approximately 125 million tons of CO_2 annually that would otherwise go into the atmosphere.

The Scoping Plan and its appendices state that this objective is attainable at a reasonable cost, utilizing in-state resources, workforce, and existing or near-mature technologies associated with biomass conversion that occurs alongside carbon capture and storage (CCS) technology. To reach this level of negative emissions, California needs to manage its natural and working lands differently, develop biomass processing facilities across the state for carbon-negative fuel production, construct and operate direct air capture machines, and permit and operate the facilities located at optimal underground CO_2 storage sites. California has a unique opportunity to lead in carbon capture and storage. The state's history of implementing aggressive efficiency, renewable energy, and carbon reduction policies, combined with its suitable geology and skilled workforce, positions it well for this role.

California can be a pioneer in climate solutions, technologies, and policies essential for addressing the global climate crisis. Sustainable wood products, including biochar, are also possible avenues for making use of forest biomass waste that could bring about positive climate outcomes.

Increasing Pace and Scale of Wood Waste Utilization is at Odds with Local Government Capacity

The land use entitlement approvals needed for wood products and forest biomass-related bioenergy projects face challenges as environmental permitting in California is particularly complex, largely due to the state's comprehensive approach to environmental protection and sustainable development. While CEQA is not the only hurdle, the substantial requirements of the Act make it the most important permitting related hurdle for these projects. It is important to not only understand the various components of a CEQA review, but also to recognize the dependencies and interrelationships among various other environmental laws. Depending on the nature of a project, other laws related to water resources, septic systems, and utility conveyance, among others, will need to be addressed during the permit process.

CEQA covers a number of major environmental issues affecting California, as outlined in the State CEQA Guidelines Appendix G Environmental Checklist. They make up the bulk of the analysis needed for the environmental review process. One prominent environmental issue is water. California frequently faces droughts and water shortages, making the management of water resources a critical concern. Projects that might impact water availability are rigorously reviewed, triggering the evaluation of topics such as the potential effects of forest biomass harvesting on watersheds and water cycles. Water quality is also of great importance, and information will be needed to understand how any project may affect local water quality.

Another important environmental issue covered by CEQA pertains to air quality. The state's air quality standards are among the strictest in the U.S., often triggering the need for detailed analysis and mitigation plans for any emissions that projects might generate. Additionally, CO_2 and other GHGs that may be emitted from a project will also need to be described and mitigated, to the extent feasible. This is particularly relevant for bioenergy projects, which must be viewed through a lifecycle analysis to be fully understood from a climate perspective.

Biological resources play a large part of any environmental review, as the state's diverse ecosystems and habitats, which include forests, coastal areas, and wetlands, are home to numerous endangered and sensitive species. Proponents of projects in areas of sensitive biological concern must navigate laws and regulations designed to protect special species or habitats.

Other issues are also considered, such as toxics within the soil, seismic issues, natural hazards, noise, and aesthetic concerns, such as light and glare. In addition, vehicle miles traveled, public safety, and compliance with the local ordinances, plans, and applicable general plan policies intended to protect the environment are also part of environmental review.

The biomass project approval process is further complicated by the need for interagency coordination. Biomass projects typically require approvals from multiple government agencies at various levels. At the federal level, the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service, Army Corps of Engineers, or U.S. Forest Service may be required to participate in the environmental review process, depending on resources and location. At the state level, permits might be needed from the Department of Toxic Substances Control (for projects on brownfield sites) or the Department of Transportation (related to state highway access); the Department of Fish and Wildlife (for incidental take of state-listed species or disturbance of steams or lakes, plus payment of a CEQA review fee). Additionally, the local agency that is the “lead agency” under CEQA will require its own review of documentation. This multi-agency process requires careful coordination. Navigating these economic factors is crucial for the success of wood product projects.

Biomass utilization projects, particularly in rural areas, are often hampered by the staffing challenges at local agencies arising from the complexities of CEQA. The in-depth environmental review demanded by CEQA necessitates staff with a rare blend of expertise in environmental planning, science, and CEQA's specific protocols. This expertise is especially hard to find in rural areas, where the talent pool is more limited. Finding long-term, dedicated personnel at salaries that rural communities can afford often results in vacancies remaining unfilled for extended periods. This situation leads to

delays, increased costs, and, in some cases, projects being delayed for years. This situation underscores the urgent need for capacity building in rural community planning staff, including focused training and support to enhance capabilities in managing these resource-intensive projects.

A shortage of qualified planning and environmental staff is occurring throughout California and can affect biomass projects in larger cities and more populous counties, as well. For example, staffing shortages in the building plan review and inspection teams in the City of Oxnard are significant, a city where agricultural biomass projects could be located in the future due to the agricultural biomass in the area.

The U.S. Forest Service (USFS) and California Department of Forestry and Fire Protection (CAL FIRE) are experiencing significant workforce shortages, impacting their ability to carry out forest restoration efforts in California. Employees of these agencies are crucial for implementing projects to enhance forest resilience, and their numbers may be seen as a conservative indicator of the overall workforce need. There are also some open positions for foresters, civil engineers, and other professionals, vital for forest health and wildfire prevention. As of August 2024, the USFS reported 2,417 unfilled requests for critical fire resources nationwide, including essential operational roles. The USFS currently has hundreds of job openings in California, particularly in wildfire management and forestry technician roles. Recruitment efforts include recent events aimed at filling positions across various national forests such as Los Angeles, Cleveland, Eldorado, and Inyo. These positions are critical for fire suppression, management, and forest health maintenance. The USFS is utilizing Direct Hire Authority to expedite the hiring process, reflecting the urgency to address severe staffing shortages exacerbated by increasing wildfire risks.

In summary, those who support, or develop, bioenergy and wood products businesses will need to face the technical *and* administrative challenge of environmental review at the federal and state agencies, and also at California's local agencies.

CEQA, the Public, and the Little Hoover Commission Report

In March 2023, the Little Hoover Commission initiated a series of public hearings to gather insight from stakeholders, academic researchers, environmental experts, and policymakers on the current state of CEQA and the necessity for amendments. These discussions culminated in a comprehensive report[2] in May 2024 where the Commission outlined several suggested reforms aimed at enhancing the efficacy of CEQA.

[2] https://lhc.ca.gov/report/california-environmental-quality-act-ceqa/

As that report states, “CEQA has changed considerably over its lifespan. What began as a 4-page statute is now almost 160 pages. The administrative CEQA Guidelines that explain the operation of the law and interpret 50 years of judicial rulings stretch for a further 150 pages, with an additional 50 pages of appendices.” There have also been considerable changes made to CEQA through legislation, with 73 related bills being passed by the Legislature in the past five years. The report continues with making several key recommendations:

- To lessen the use of CEQA for non-environmental goals, the Commission recommends strengthening the standing requirements needed for a person or organization to be able to sue for alleged violations of the law. The state should adopt the standing requirement of the National Environmental Policy Act.
- The Legislature should revise CEQA to limit the submission of public input that occurs after a public comment period.
- The state should exempt all infill housing from CEQA review.
- The state should provide funding for additional judicial training regarding CEQA.
- The Legislature should reaffirm that courts should show greater deference to statute and CEQA guidelines.
- The state should develop clearer parameters for significance thresholds and mitigations.

The report highlighted the need for an in-depth exploration and study of five areas: the establishment of specialized CEQA courts, translation of CEQA documents, bonding requirements for plaintiffs, the impact of Vehicle Miles Traveled analysis, and the stabilization of analytical models that can be used for a reasonable period without having to be updated. These recommendations aim to streamline CEQA processes and ensure more effective environmental protection and compliance.

The most relevant reform suggested by the Commission is also its highest ranked reform: limit the use of CEQA for pursuing non-environmental goals by strengthening standing requirements for persons or entities to be able to sue for alleged violations of CEQA. The Commission calls for strengthening the prerequisites for suing over alleged legal breaches. This is relevant to bioenergy and wood products businesses because many projects are faced with union-funded law firms that are directed to file CEQA challenges on projects to attempt to coerce project developers to agree to use union labor. Even if a project is thoroughly reviewed and supported by a community, the delays from these challenges can undermine project success.

In response to the Commission’s recognition of this inappropriate use of CEQA, the Commission suggests adopting the standing requirements similar to those in the

National Environmental Policy Act, so that groups have to at least articulate some environmental basis for their challenge to a project. Project opponents with non-environmental purposes may still offer disingenuous references to the environment, meaning that this recommended reform by itself may do little to quell CEQA abuse. Other reforms will be necessary if policy makers want to limit this use of CEQA.

In summary, the Commission report has several interesting ideas and describes many of the challenges and differences of opinions related to CEQA. It is recommended reading for CEQA practitioners but does not directly address one of the key issues related to the impact of non-environmental abuse of the law in opposing bioenergy and wood products business development. The other general recommendations, however, will help to improve the overall use of CEQA in California, if implemented.

An Explanation of Biomass Waste and Its Utilization

Biomass Types

Forestry, agriculture, and urban wood waste streams produce woody biomass residuals that could be used for wood or bioenergy products. In some instances, it may be advantageous to mix these sources of wood waste to maximize the success of a project.

Agricultural biomass waste is sourced from farming activities. It encompasses a variety of materials, such as crop residues (like straw, husks, and leaves), animal manure, and other organic byproducts of farming and livestock operations. The composition of agricultural waste is more diverse than forest waste and includes both plant- and animal-based materials. This waste is used in several ways, including bioenergy production, as fertilizer in crop fields through composting or direct application, and sometimes as feed for animals. Another agricultural waste is dairy manure; however, the impacts of that type of project are quite different from wood waste, so it is not addressed in this report.

One distinguishing factor within the agricultural wood waste stream is what is considered “processed” vs. “unprocessed.” Processed wood is considered urban wood waste, while unprocessed is considered agricultural. For example, under the California Bioenergy Market Adjusting Tariff (Bio MAT) program definitions, fruit pits are considered “urban wood” because they are processed using mechanical equipment.[3] Vineyard and orchard clippings, pruning, and vineyard removal projects fall under the agricultural waste definition.

[3] CPUC D. 14-12-081.

Forest biomass waste comes from forests and includes organic materials like branches, twigs, leaves, bark, sawdust, wood chips, dead trees, and stumps. It is often a byproduct of natural processes within forests or forest management activities such as habitat restoration, establishing fuel breaks for wildfires, or trail maintenance. This type of waste is rich in woody materials and is commonly used for bioenergy production, manufacturing wood-based products, or soil amendment. Forest biomass is the cleanest wood waste stream and does not include any “treated” lumber (wood stained or treated with chemicals).

Urban biomass waste is predominantly generated from residential properties and includes material such yard clippings, mowed grass, and sometimes household compost. It can also include wood waste from food processing, as described above. Wood removed for the development of land for housing or other development is also considered urban biomass waste. The definitions of these different wood waste sources are important to investigate and the regulatory implications of using them should be fully understood if they will be used in a bioenergy or wood products business.

While all three sources of wood waste are of considerable concern in California and need alternative disposal options, this handbook is focused primarily on the direct, indirect, and cumulative impacts associated with sourcing forest biomass wood waste for projects. In some cases, this handbook will be useful in the more generalized context, but caution is needed. Projects that are primarily using agricultural or urban wood waste streams will need to consult additional resources beyond this handbook to understand the impacts of those specific waste streams under CEQA because forest, agricultural, and urban waste each originate from different material sources, and there is a range in the contaminants that can be associated with the conversion of each biomass type. It is important to distinguish these biomass types due to this factor as well as the life cycle analysis of these streams and the economic and societal value of removal.

Forest Biomass

The focus on forest biomass waste in this handbook is to support the Joint Institute and Board of Forestry and Fire Protection’s interest in promoting forest biomass utilization for fire reduction and forest health reasons. However, the topics of agricultural and urban wood waste were also briefly covered, recognizing that depending on specific project requirements, local availability, and sustainability considerations, some projects may use all three waste streams. Forest biomass wood waste can also be used for wood products, as opposed to most agricultural or urban waste streams, which cannot. All three streams of wood waste need attention from society. Utilization is important so that open pile burning can be avoided. Open burning is the standard process for getting

rid of wood waste. This approach poses environmental challenges due to criteria air pollutants and GHG emissions from the open combustion of wood and concerns about the health effects of wood smoke. Also, the costs associated with forest biomass waste management often exceed its value, making alternative uses economically challenging. However, the Placer County Air Pollution Control District (PCAPCD) and other agencies are exploring its use for energy production as an environmentally beneficial alternative.

To quantify the environmental benefits of using biomass waste for energy, the PCAPCD developed a framework to measure the reduction in air emissions compared to open burning. A demonstration project in the Sierra Nevada foothills processed and transported 6,096 bone-dry metric tons of mixed conifer forest slash for use at a biomass power cogeneration facility. The demonstration project, a collaboration between the PCAPCD, County of Placer Biomass Program, USFS, Sierra Pacific Industries, and the Sierra Nevada Conservancy, focused on converting woody biomass waste from USFS fuel reduction contracts into energy. Results included significant emission reductions, such as a 98% decrease in PM and substantial reductions in nitrogen oxides (NOx), non-methane volatile organics, carbon monoxide (CO), and CO_2 equivalents. There is also the benefit of the production of 7,710 MWh of electricity. The quantification of emission reductions achieved through biomass conversion to electricity can help justify such practices -- showing the benefits to both the environment and business management objectives.

Composting Forest Biomass

The difficulties in composting wood waste center around several critical aspects, including legislative and market dynamics. The influence of laws like AB 1826 and SB 1383, which mandate diverting organics, including wood waste from landfills, underscores the absence of places to dispose of such waste. This shortfall for forest biomass is particularly evident given that funding provided by CalRecycle for compost and anaerobic digestion facilities excludes wood waste, leaving the disposition of such materials without sufficient financial support or a clear plan.

The challenge facing urban wood waste in the biomass energy sector is significant. The bioenergy industry's preference for forest and agricultural wood chips has led to a notable decline in the use of urban wood waste for biomass energy – falling from 1.76 million tons in 2015 to just 895,000 tons in 2022. Additionally, composting any wood waste faces tough hurdles, such as the need for a balanced carbon to nitrogen ratio and the requirement for finely ground material to achieve proper porosity. While integrating wood waste with food waste in compost facilities shows promise in small quantities, there are constraints in using it as a compost ingredient. Moreover, emerging regulations concerning PFAS (per- and polyfluoroalkyl substances) pose additional

challenges, potentially limiting the composting of biosolids and affecting the use of urban wood waste in compost. This situation underscores the need for unified policies that effectively utilize all kinds of biomass both as biofuels and a dependable bioenergy source as well as the varied products, including in engineered woods, landscape mulch, and soil conditioners. The processing of wood waste, which involves cleaning and grinding or chipping depends on the specific end use. It is also important to note that within urban wood waste, the wood from demolitions is often less desirable due to its inconsistent nature and contamination with other materials.

Additionally, the concept that forest biomass can be “chipped and scattered” and left on the forest floor or on the fields where an orchard once grew is not possible given the large volume of material needed to be disposed. There is significant scientific evidence that leaving too much scattered and chipped biomass in the forest can exacerbate fire risk, and in the agricultural setting it can be detrimental to healthy soils and water absorption.[4] Land managers, such as USFS, are increasingly requiring that forest biomass be removed from the landscape. Therefore, converting wood waste into energy or wood products has been a preferred pathway for many decades worldwide. Regulating the development of bioenergy facilities in California is accomplished through a few different pathways, which will now be discussed.

Bioenergy

Bioenergy projects are diverse and vary significantly in their approach and application. Biomass power plants generate electricity by burning organic materials like wood waste or energy crops. Some power plants co-fire biomass with coal to reduce fossil fuel use. For heating, biomass boilers burn biomass to produce heat, and anaerobic digestion facilities convert organic waste into biogas for heating. In transportation, ethanol production plants transform crops like corn into ethanol for fuel, and biodiesel is produced from vegetable oils or animal fats. Bioenergy is also used in waste management. Biogas projects at landfills capture methane for fuel, and waste-to-energy plants combust municipal solid waste for energy. Advanced biorefineries produce a range of products, including fuel, power, and chemicals, by integrating various biomass conversion processes. In agriculture, crop residues are used for energy production, and specific crops are grown for biomass. Small-scale applications like pellet stoves and boilers provide biomass heating for homes and small businesses. The chosen bioenergy project depends on biomass availability, regional energy needs, and

[4] Masticated forest material can exacerbate surface fire risk (compared to having that material removed)- a Fecon type head will get the material closest to what chipped material looks like, but still can be branchy. Depending on how much material there is, it can make it difficult to conduct a prescribed burn or potentially can lead to mortality by significant bark heating in a prescribed fire or wildfire. Treatment Scott Stevens Et al, 2009.

economic factors. With evolving technology and increasing renewable energy demand, the range of bioenergy projects is expanding.

Forest waste bioenergy projects utilize the by-products of forest management and timber processing, such as branches, stumps, and sawdust, to produce renewable energy. The process begins with the collection and processing of these forest residues, which are often scattered and varied. Once gathered, they're processed into a uniform size for easier handling. The conversion of forest waste into energy primarily occurs through direct combustion, where the biomass is burned to generate heat and electricity. Other methods include gasification, which produces a gas mixture from heated biomass in a low-oxygen environment, and pyrolysis, which heats biomass in the absence of oxygen to produce bio-oil, syngas, and biochar. Forest biomass for use in hydrogen production and for linear generators is also being explored. These projects offer environmental benefits by reducing wildfire risks and dependency on fossil fuels as well as economic opportunities for rural communities.

Development of Bioenergy Plants over 50 MWs

The Warren-Alquist State Energy Resources Conservation and Development Act, enacted in 1974, is a cornerstone in the regulation of energy projects in California. This act led to the creation of the California Energy Commission (CEC), defining its pivotal role in energy policy, planning, and specifically in the oversight of large energy projects. One of the significant provisions of this act is the exclusive jurisdiction it grants to the CEC over the siting of thermal power plants with a capacity of 50 megawatts (MW) or more, which can encompass bioenergy projects. This means that for large bioenergy plants, the CEC manages a comprehensive review process, ensuring that these projects align with state energy, environmental, and public health objectives.

The CEC oversees the licensing of thermal power plants of 50 MW or larger under CEQA. This process includes an Application for Certification (AFC), which is functionally equivalent to an EIR under CEQA. In 2022, Assembly Bill (AB) 205 established an Opt-in Certification program, which offers an alternative certification process for eligible non-fossil-fuel power plants, energy storage, and certain manufacturing facilities. This program streamlines the approval process for these facilities, allowing them to opt-in for certification by the CEC instead of obtaining multiple permits from different agencies. The certification from the CEC under this program serves in place of various state, local, and regional permits, significantly simplifying the regulatory landscape for eligible projects. Additionally, there is a Small Power Plant Exemption (SPPE) program that allows the CEC to exempt thermal power plants from its licensing authority that do not exceed 100 MW. Under this program, the CEC conducts a review pursuant to CEQA and can grant an exemption if the proposed facility is determined not to create a

substantial adverse impact on the environment or energy resources. As the lead agency under CEQA, the CEC prepares the appropriate CEQA document for each project, such as an MND or an EIR. If an exemption is granted, a project developer must secure necessary permits to construct and operate the plant from local, state, and federal agencies.

For specific bioenergy projects, the CEC has funded several initiatives under its Electric Program Investment Charge (EPIC) program. The EPIC program in California is designed to drive innovation in the electric sector by funding research and development of clean energy technologies. Managed by the California Public Utilities Commission (CPUC) and involving the state's largest investor-owned utilities, EPIC is funded by electricity ratepayers. EPIC's focus is on developing technologies for renewable energy, energy efficiency, system integration, and storage, aiming to improve electric grid reliability and affordability. The program is structured around competitive grants, attracting a diverse range of proposals from businesses, research organizations, and nonprofits. It aims to deliver concrete outcomes like reducing GHG emissions, increasing energy efficiency, and lowering electric system costs, while also fostering economic growth and job creation in the clean energy sector. Projects that have been funded through this program include the American Biogas Electric project, which is focused on dairy manure biogas production at Lakeview Farms Dairy in Bakersfield and West Star North Dairy in Buttonwillow. West Biofuels received funding to advance a project that transforms forest residues into renewable grid power through a biomass gasification system. InnoSepra's project revolved around demonstrating biogas upgrader technology, a critical step for biogas and landfill gas pre-treatment. Finally, Lawrence Berkeley National Laboratory conducted research to align California's waste biomass resources with various energy needs, bridging gaps between waste biomass availability and energy demand. Each project represented a unique approach to harnessing bioenergy, contributing to the state's broader renewable energy goals.

In summary, the Warren-Alquist State Energy Resources Conservation and Development Act has been pivotal in shaping California's energy landscape. By establishing the CEC and setting a comprehensive framework for the oversight and approval of large energy projects, the act integrates environmental stewardship, public involvement, and strategic energy planning, ensuring that California's energy development aligns with its broader environmental and societal goals.

Development of Bioenergy Plants under 50 MWs

In California, the governance and regulation of bioenergy plants with a capacity under 50 MW differ from those of larger facilities. These smaller-scale bioenergy projects typically fall under the jurisdiction of local government authorities, such as county or city

planning departments. Local agencies are pivotal in the oversight of these projects, managing the permitting process, and ensuring compliance with local zoning and land-use regulations. This local-level oversight is critical in managing the balance between energy development and community interests, ensuring that bioenergy projects align with local development goals and standards.

CEQA applies to these projects as well, with the primary responsibility for environmental review lying with cities and counties; however, occasionally an Air Quality Management District (AQMDs) or Air Pollution Control District (APCDs) will take lead-agency status. Even when an air district is not the lead agency, such districts play a crucial role in regulating smaller bioenergy plants. These districts are tasked with ensuring that the plants meet state and federal air quality standards. They issue permits that regulate emissions and monitor compliance with the Clean Air Act and other air quality regulations. This aspect of regulation is particularly important for bioenergy plants, which can have air quality impacts.

The Raven SR Bioenergy Project in Richmond, California exemplifies a successful Bay Area bioenergy initiative under CEQA. This project involves building a bioenergy system that converts green waste and food waste into renewable hydrogen using a steam/CO_2 reforming process. It aims to divert up to 99 wet tons of waste per day, potentially reducing landfill CO_2 emissions by 7,200 metric tons annually. The project also plans to generate over 60% of its own electricity, reducing grid dependency. Involvement of the Bay Area Air Quality Management District (BAAQMD) is critical to the project's CEQA process. BAAQMD's role includes conducting air quality analyses, reviewing environmental documents, recommending mitigation measures, and issuing necessary air permits. Their oversight ensures that projects like Raven SR meet air quality standards. The project has received approval from the Richmond City Council and is nearing the final stage of obtaining a permit from BAAQMD. Raven SR expects to receive the "authority to construct" from BAAQMD and to begin construction in the summer of 2024, with full commercial operations anticipated to start in the first quarter of 2025. This step is crucial for the project, which focuses on producing clean hydrogen and aligns with regional air quality goals.

Bioenergy Technology Success as a CEQA Issue

One aspect of navigating CEQA that should be considered is the project's economic viability. While not a typical environmental concern, local leaders will often ask for details about how a project plans to succeed financially. This is because projects that fail can turn into blighted industrial sites that are challenging for local governments to manage. These questions are more likely to be asked in relation to bioenergy projects due to the technological and economic challenges these projects often face.

Appropriate responses to these concerns could include information about the state's commitment to renewable energy projects (including smaller-scale bioenergy projects), state incentive programs, and supportive legislation. These initiatives often take the form of financial incentives, grants, or even streamlined permitting processes. Such measures are specifically designed to facilitate the adoption of renewable energy, helping to reduce barriers to entry and making it more feasible for smaller projects to get off the ground. This approach aligns with California's broader environmental and energy goals, aiming to foster a more sustainable and diverse energy portfolio across the state.

The BioMAT program is a specialized initiative aimed at promoting the generation of energy from bioenergy sources within the state. This program is specifically tailored to encourage the production of electricity from various organic waste materials, such as agricultural waste, forest biomass, food waste, and even municipal solid waste. The intention is to transform these materials into a sustainable and renewable source of energy. A notable feature of the BioMAT program is its adaptive pricing mechanism. This system is designed to adjust the price paid for bioenergy based on current market conditions and the cost of production. This dynamic pricing ensures that the production of bioenergy remains economically viable and competitive compared to other energy sources. It also incentivizes producers to engage in bioenergy production by providing a more stable and predictable revenue stream. The program also has stringent regulatory frameworks that govern its operation. These regulations define the criteria for eligibility, establish pricing structures, set contract terms, and ensure that the production of bioenergy adheres to high environmental standards. This is particularly crucial in California, given the state's rigorous environmental laws and its commitment to minimizing the ecological impact of energy production. Therefore, participants in the BioMAT program are required to comply with these environmental standards, ensuring that the bioenergy produced is not only renewable but also contributes positively to California's environmental goals.

Other examples of state-sponsored support programs for forest biomass utilization include CAL FIRE grant programs that are tailored to meet specific goals within the state's broader environmental and forestry management strategies. The Wildfire Prevention Grant Program, with up to $117 million in funding, is focused on enhancing the safety and resilience of communities against wildfires. This program plays a critical role in mitigating the threat of wildfires in vulnerable areas. The Forest Health Program, with up to $120 million in funding, concentrates on projects related to forest fuel reduction, prescribed fires, pest management, and reforestation. It also has $50 million available to aid in post-fire reforestation and regeneration efforts.

CAL FIRE's $4.5 million Forest Health Research Grant Program supports scientific studies that delve into vital issues of forest health and wildland fire science. These

projects aim to yield scientific publications and tools that assist in decision making and policy formulation regarding forest management and wildfire mitigation. Moreover, the Business and Workforce Development Grants are designed to bolster wood products infrastructure in the state. These grants encourage innovation in bioenergy and wood products, promoting innovative technologies for bioenergy production and sustainable forest product utilization. They also support workforce development, which bolsters local capacity for effective forest management and fuels treatment, and they support small forest operations and milling businesses, assisting in equipment purchases and capacity expansion. Additionally, the Tribal Wildfire Resilience Grants, part of CAL FIRE's Climate and Energy Program, offer support to California Native American tribes. These grants are pivotal in helping manage ancestral lands, implementing traditional environmental knowledge for wildfire resilience, and enhancing the safety of tribal communities from wildfire threats.

California has implemented a range of streamlined permitting processes for renewable energy and bioenergy projects, reflecting the state's commitment to accelerating the transition to clean energy. The state has made various legislative changes to expedite the permitting process for these projects. These include simplifying construction procurement processes, authorizing expedited judicial review to avoid lengthy delays post-environmental review, and streamlining procedures around document retention and review. These reforms are part of California's efforts to reduce project timeframes and costs, thereby facilitating faster development of renewable energy projects.

Relevant Legislation in the Bioenergy Space

Assembly Bill (AB) 205 (Statutes of 2022) has been instrumental in giving the CEC the authority to bypass local permitting and ordinances for large-scale renewable energy projects. It explicitly supersedes local permitting and ordinances, which plays a key role in expediting the judicial review process. The law mandates that the CEC's issuance of a certificate for a renewable energy project will replace any permit, certificate, or similar document required by any state, local, or regional agency. This law also mandates a rapid review process, requiring the commission to review applications within 30 days of submission to determine their completeness. A final decision on the certification of an EIR and the issuance of a certificate must be made no later than 270 days after the application is deemed complete, unless an exception applies. This expedited process is a significant part of California's legislative efforts to streamline the development of large-scale renewable energy projects and reduce project delays.

Senate Bill (SB) 905 (Statutes of 2022) represents a significant legislative step in California's environmental policy, primarily focusing on the advancement and regulation of Carbon Capture, Utilization, and Storage (CCUS) and CO_2 removal (CDR)

technologies. The bill directs the California Air Resources Board (CARB) to establish a streamlined permitting process for CCUS and CDR projects by 2025. This process is designed to reduce bureaucratic delays and expedite the implementation of these crucial technologies. In addition to the permitting process, SB 905 emphasizes the development of a comprehensive regulatory framework for CCUS and CDR technologies. This framework is expected to provide clear guidelines for both the development and deployment of these technologies, balancing potential benefits with the risks they might pose. This includes a thorough assessment and management of environmental, seismic, and air quality risks, ensuring that the projects contribute effectively to carbon reduction while maintaining safety and sustainability. This bill also mandates CARB to develop a public database to track CCUS and CDR projects, enhancing transparency and enabling effective monitoring by the public and government entities.

A key component of SB 905 is the establishment of the Geologic Carbon Sequestration Group within the Department of Conservation (DOC). This group will offer independent expertise and guidance on safe injection sites and best practices for handling captured CO_2. Further provisions of the bill include the prohibition of using captured CO_2 for enhanced oil recovery in California. This aligns with the state's broader goal of transitioning away from fossil fuel dependence and underlines its commitment to innovative solutions for carbon reduction and environmental protection. Overall, SB 905 represents a comprehensive approach to integrating emerging carbon management technologies into California's environmental strategy while ensuring public safety and ecological sustainability.

There is an effort to support working lands strategies through SB 27 (Statutes of 2021), which creates an online billboard for working lands projects that qualified for a state grant but were not awarded due to lack of funds that are looking for sponsors. It will also include other projects that can demonstrate climate benefit through a state-approved quantification methodology. While it remains unclear if bioenergy projects will be included, it is likely biochar and other wood products projects will be[5].

Another important topic is the possibility that bioenergy will be added to the state's Central Procurement Strategy. AB 1373 (Statutes of 2023) is a legislative measure in California aimed at advancing the state's clean energy goals, particularly focusing on offshore wind development and long-duration energy storage. Signed into law by Governor Gavin Newsom, the bill establishes a centralized procurement system, allowing the California Department of Water Resources (DWR) to act as a central buyer for clean energy resources until January 1, 2035. This system is designed to tackle the

[5] https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Expanding-Nature-Based-Solutions/SB27ConceptDiscussionDraft32723.pdf

challenges of developing large-scale, long lead-time energy projects that might be difficult for individual entities to manage independently.

The bill could incorporate bioenergy in the future by utilizing its centralized procurement system to include bioenergy projects alongside offshore wind and other clean energy sources. Adding advanced technology bioenergy opportunities to this energy procurement program aligns with public interest and policy goals, such as affordability, reliability, and environmental stewardship, thereby ensuring that bioenergy projects contribute effectively to California's energy mix and long-term sustainability goals.

Wood Products Business Development

Wood products can be categorized into two main groups: dimensional lumber for construction and wood that is not dimensional lumber. Additional considerations for wood product end use include the species of wood (which may or may not be suitable for construction) and its size. Wood that measures as small as 4.5 inches in diameter (trunk size) can be used for dimensional lumber, while smaller trees or biomass is generally suitable for other products and materials. Note that some specific advanced building materials such as mass timber of cross laminated timber are also dependent on the tree diameter of 16 inches or greater. Note that mass timber and CLT, as well as traditional commercial timber, are not the focus of this handbook, although some of the sections could be useful for those operations. This handbook is focused on using small trees and fuel break biomass like bushes, tops and limbs, and other low-grade woody biomass. Experimental wood products using small-diameter timber and low-grade wood residuals represent an innovative and growing field that often uses larger diameter biomass. This includes the development of engineered wood products like glued laminated timber (glulam), acoustic panels, bioplastics, insulation, pet bedding, landscaping materials, biochar, and more.

Wood-Based Acoustic Panels

Wood-based bioplastics are an emerging sustainable alternative to traditional petroleum-based plastics. They are developed from lignocellulosic biomass found in trees and plants. This biomass, composed of cellulose, hemicellulose, and lignin, is processed into bioplastics through methods like hydrolysis, fermentation, and polymerization. There are various types of wood-based bioplastics. Cellulose-based plastics, such as cellulose acetate and cellophane, are used for films and fibers. Lignin-based plastics, derived from a complex organic polymer in wood, are still largely experimental but have potential for diverse applications. The Wood Veneer Hub using this technology offers interior decorative slat wood panels, designed for both aesthetic and acoustic improvement. These panels are made from high-quality materials,

featuring a combination of veneered lamella strips and acoustic felt backing. They are available in various finishes, including oak and walnut, and come in varied sizes and colors to suit diverse design preferences. The panels are easy to install and suitable for both walls and ceilings, enhancing spaces with a modern and refined look while providing soundproofing benefits. The environmental benefits of wood-based bioplastics are significant, as they are derived from renewable resources and are often biodegradable or compostable. This makes them a more ecofriendly option, especially in terms of carbon footprint and waste management.

Wood-Based Building Insulation

Materials such as pet bedding, litter, landscaping materials, and firewood are some of the current products that can be derived from small-diameter biomass. Small-diameter mills, kilns, and other products can also use this material. The businesses are generally small in scale, yet they have a significant role in the economic and environmental landscape. Their primary focus is on leveraging the potential of low-value timber from small-diameter trees, which are typically undervalued or ignored in commercial forestry. This approach not only elevates the economic value of this material, but also plays a crucial role in forest management. These smaller enterprises are pivotal in maintaining forest health and have a considerable impact on both the economy and the environment. An example of this is TimberFill, which is a natural insulation made from Forest Stewardship Council (FSC) certified softwood residuals, offering a high-performance and sustainable solution to reducing the carbon footprint of buildings. It features a borate treatment for fire resistance, excellent thermal performance (R-3.8 per inch), moisture control, and noise reduction. It is carbon-negative, renewable, recyclable, and contributes to certifications like LEED and Passive House. TimberFill can be installed as loose-fill or dense pack and remains stable over time without settling.

Biochar

Biochar is a specialized form of charcoal produced from plant matter and organic waste through a process called pyrolysis, which involves heating biomass in a low-oxygen environment. This prevents full combustion, allowing the material to thermally decompose into a stable, carbon-rich form of charcoal. Its unique characteristics make it highly beneficial in various applications, particularly in agriculture and environmental management.

One of the primary uses of biochar is as a soil enhancer. It improves soil fertility by retaining nutrients and water, which can lead to increased crop yields and more efficient use of water and fertilizers. Additionally, biochar is instrumental in carbon sequestration,

helping mitigate climate change by storing carbon in the soil for extended periods, thereby removing it from the atmosphere. The porous nature and large surface area of biochar make it effective for water purification, filtering out impurities and contaminants. This feature also benefits soil health by providing a habitat for beneficial microorganisms, which are essential for nutrient cycling and overall soil fertility. Moreover, the production of biochar can contribute to waste reduction by transforming agricultural residues and other organic materials into a valuable product. This conversion process also has the potential to reduce soil emissions by stabilizing nutrients and diminishing the reliance on chemical fertilizers. The specific properties of biochar can vary depending on the feedstock used and the production conditions, such as temperature and residence time during pyrolysis. This versatility underscores biochar's role as a valuable tool in sustainable agriculture, environmental management, and climate change mitigation efforts.

While California business innovators explore the future use of this hard-to-dispose, never ending waste stream, they also need to understand how to navigate through the CEQA process. Next, the handbook will look into the most challenging issues CEQA will present for wood utilization projects.

Challenging CEQA Hurdles for Forest Biomass Wood Utilization

Real and Perceived Air Quality and Climate Impacts

Biomass bioenergy and wood product projects must plan for the reduction of air pollution known as “criteria pollutants” from the equipment and machinery used onsite. Biomass energy production can emit PM, NOx, sulfur oxides (SOx), and volatile organic compounds (VOCs). Wood product processing activities also release these pollutants. Projects must conduct detailed analyses of these emissions to demonstrate compliance with permissible levels set by both state and federal air quality standards, including those established by CARB and EPA. When these projects are in rural locations, the air quality challenges are much less of a barrier to development, because these criteria pollutants are associated generally with vehicle pollution, which does not affect rural areas to the same degree. This topic will be explored more in-depth in the Air quality analysis in Part 3.

As mentioned earlier, a significant study[6] produced by the Placer APCD describes how using biomass wastes for electricity reduces regional criteria and air toxic emissions compared with open pile burning. This citation can help with this project hurdle.

Projects will often also be required to prepare health risk assessments when sensitive receptors are located nearby. Many air districts interpret other air quality laws as mandating these technical assessments for projects that are likely to emit hazardous air pollutants. The assessments involve evaluating the potential health risks associated with emissions from a project, particularly concerning nearby population exposure to pollutants. Identifying and implementing effective mitigation measures is crucial. These may include advanced pollution control technologies or operational changes to reduce emissions.

CEQA also requires an assessment of cumulative impacts, not just individual impacts. Projects must consider the combined effects of their emissions with those from past, existing, and reasonably foreseeable future projects. This cumulative impact analysis is especially critical in areas already facing air quality issues. Furthermore, projects undergoing CEQA review are subject to public scrutiny, especially from local communities and environmental groups concerned about air quality. Addressing public concerns and objections, which often focus on emissions and health risks, is a significant part of the compliance process.

GHG emissions are another important issue. While biomass is considered a renewable resource, its transport to a bioenergy plant and combustion for energy production release GHGs. Projects must assess their GHG emissions and demonstrate efforts to minimize them, aligning with California's climate goals. Using a life cycle analysis, these projects are considered carbon neutral by many scientists, a point that often gets overlooked by community members. It is critical to understand it is not meaningful to compare “stack” emissions of biomass electricity with fossil fuels or electricity grid average burden. Considering only the electricity generation operation “stack,” GHG emissions per kWh net electricity for California biomass electricity plants (around 4,000 lb/MWhe) are approximately two times higher than coal, around four times higher than natural gas, and around eight times higher than the average California grid. However, this comparison is not complete because: (1) biomass wastes are generated regardless of their use for electricity, so that the alternate management liability of open pile burning or in-field decay/decomposition must be accounted for; and (2) underground fossils fuel sources, if not burned for fuel, would be permanently sequestered, yet, when burned for

[6]https://www.hcd.ca.gov/community-development/disaster-recovery-programs/ndrc-attachment-f/docs/aw_article_pcapcd_20120321.pdf

fuel, they will be removed from permanent storage and reintroduced to the Earth's carbon cycle.

Navigating air quality requirements under CEQA for biomass bioenergy and wood product projects involves a multifaceted approach. It requires meticulous planning, technological solutions, public engagement, and ongoing management to minimize environmental impacts and ensure compliance. This handbook will go into more detail in Section Three related to this topic.

Brownfields Project Development

The terms "brownfields" and "greenfields" signify different types of land development, each with their unique implications in the context of CEQA. “Greenfield projects” are projects built on undeveloped land. Development of greenfield sites usually involves converting these natural or agricultural landscapes into residential, commercial, or industrial areas. The conversion of greenfields is easier from the developer’s perspective because the land has not been subject to other developed uses that could impact desired future uses, but the conversion of greenfield sites is less popular from the community perspective, and often agencies will prefer brownfield project development, if possible.

“Brownfields” refers to previously developed land, often used for industrial or commercial purposes, which may be contaminated by hazardous substances. The process of redeveloping brownfield sites, which includes cleaning and repurposing them, is reviewed under CEQA. Societally, redevelopment is generally viewed positively as it re-uses land that has already been developed, helps avoid greenfield development, and can mitigate environmental hazards. Brownfield redevelopment under CEQA requires consideration of any existing contamination to ensure both environmental safety and compliance with CEQA’s stringent guidelines and will also require compliance with statutes and regulations implemented by the California Department of Toxic Substance Control (DTSC), which will be discussed further in this handbook.

Choosing between biomass projects on brownfield or greenfield sites involves a complex consideration of environmental, economic, and community factors, each offering distinct advantages depending on the situation. Biomass projects on brownfield sites are often favored due to their role in environmental remediation and reuse of neglected lands. When these sites are converted into biomass energy projects, such conversion can transform underutilized areas into productive, eco-friendly energy sources. This approach is in line with sustainable land use and urban regeneration. Additionally, since brownfields are already disturbed lands, using them for biomass projects minimizes further disruption to untouched ecosystems, a critical concern with greenfield development. Often, brownfields, particularly former industrial sites, come

with existing infrastructure, such as roads, utilities, and transportation links, which can significantly reduce the cost and environmental footprint of developing new facilities for biomass projects. Biomass projects on brownfields can also drive local economic development, creating jobs and potentially using local biomass resources, an aspect that might be more challenging in greenfield areas. The challenge is, however, that brownfield sites are typically more costly and are often more difficult to permit through CEQA and other laws. Consideration of the addition of exemptions from CEQA or streamlining other regulations may be in order so that these projects could be facilitated on brownfield sites.

In conclusion, the decision between brownfield and greenfield sites for biomass projects should involve a comprehensive evaluation of multiple factors. While brownfield development is generally preferred for its environmental benefits and alignment with sustainable urban development, many factors should be considered when choosing a location, including contamination risk and proximity to biomass sources and sensitive receptors, balancing environmental impacts, site suitability, economic viability, and the potential for community benefits.

Labor Cost Challenges for Biomass Bioenergy and Wood Products

The need for specialized labor markets and union control of non-specialized markets can impact the economic viability of bioenergy projects and should be carefully built into a pro forma for a business. The specialized skill requirements for operating advanced bioenergy technologies, including feedstock sourcing and processing, focused training, and ongoing skill development, can be a challenge, especially in rural areas lacking such expertise. Negotiating fair wages, working conditions, and benefits while ensuring sustainable operations in the biomass and wood products industry is important.

These negotiations are further complicated by varying degrees of labor union representation across regions, with some areas experiencing strong union presence and others having limited labor representation. In areas where there is union presence, bioenergy projects can expect that unions will fund law firms to closely scrutinize environmental document preparation and approvals under CEQA. They will also demand union Project Labor Agreements to be entered into for a project to avoid litigation, regardless of the quality of the environmental review. A project could be delayed by several months, or even years, if the unions choose to litigate the matter. As the law currently stands, there is nothing that prevents this use of CEQA, and indeed some would say this is an appropriate use of the law.

Regardless of the opinions about whether this is a proper use of CEQA, project developers should be mindful of the impact of Union participation in their project locations.

Rural Locations

CEQA poses unique challenges for both rural and urban projects in California, each reflecting their distinct characteristics and priorities.

As mentioned earlier, rural projects are typically able to avoid air quality constraints relating to criteria pollutants, and even toxic air contaminants, in many cases. However, they also tend to lack robust infrastructure, specialized workforce, and available local government staff. Rural projects also often have challenges with financing that can come more easily to urbanized projects. While rural projects may attract less public attention overall, they can face intense local opposition from communities that are unsure about the impacts. On the positive side, these projects are located near forest biomass sources, which is ultimately why most of these projects take place in rural areas.

Projects located in more urbanized locations will face a heavy burden related to air quality and climate challenges, and they will need to demonstrate aggressive advanced emission control device implementation to complete CEQA review. Addressing climate change impacts is a ubiquitous concern, with projects in both urban and rural settings required to consider their contributions to such issues. This will be discussed in more detail later in the handbook.

Effective community engagement remains crucial in both rural and urban environments to ensure concerns are addressed early in the project process, so feedback can be incorporated. Projects, irrespective of their location, are susceptible to cost and time overruns due to the demanding nature of the CEQA process. Additionally, legal challenges are a common hurdle, with the potential to delay or derail projects in both urban and rural settings.

Understanding and addressing these challenges is vital for the successful planning and implementation of projects under the CEQA framework, ensuring that environmental considerations are adequately balanced with developmental needs. This handbook will go into more detail on these items.

Disadvantaged Communities and Environmental Justice

Another aspect of this issue is understanding that California has a methodology for determining if a community, whether rural or urban, is disadvantaged. CalEnviroScreen 4.0, developed by California's Office of Environmental Health Hazard Assessment, is a sophisticated tool designed to identify communities in California facing significant environmental burdens. This tool evaluates a wide range of factors, combining them into a comprehensive assessment of environmental health risks. In assessing pollution

burden, CalEnviroScreen examines various indicators such as air and water quality, pesticide use, and the presence of toxic releases from facilities. It also investigates traffic density, the prevalence of cleanup sites, groundwater threats, hazardous waste, and the presence of impaired water bodies and solid waste sites. Each of these aspects plays a crucial role in determining the level of environmental pollution to which a community might be exposed. Alongside the pollution burden, CalEnviroScreen also focuses on population characteristics, which include health outcomes like asthma rates, low birth weight, and cardiovascular diseases. It considers socioeconomic factors such as education levels, linguistic isolation, poverty, and unemployment. These factors help users of the tool to understand how different communities might be able to cope with, or are affected by, environmental health hazards.

However, there are concerns about the fairness and inclusivity of this tool, particularly regarding its ability to accurately represent all socioeconomically disadvantaged populations, including rural communities. It appears that CalEnviroScreen gives significant weight to density of population, while some people who are living in sparsely populated areas may be as exposed to toxics and other environmental harm as people living in cities. The methodology used to calculate and weight the composite scores can also influence which communities are identified as most at risk, potentially overlooking populations impacted by environmental hazards, but not fitting the typical profile identified by such tools. Data limitations are another challenge. The availability and quality of data on various environmental and health factors can restrict the tool's ability to accurately reflect the situation in all communities. These limitations underscore the need for regular reviews and updates of the tool, incorporating feedback from diverse communities and experts. Such engagement can help in understanding unique challenges and perspectives, leading to the continuous refinement of methodologies and data sources. This process ensures that the tool remains inclusive, capturing a more accurate picture of environmental health risks across all communities, irrespective of their location and demographic makeup.

When developing a bioenergy or wood products project, the issues of environmental justice could arise, especially if the project is in the San Joaquin Valley or Southern California. Consider issues such as historical marginalization, the use of CalEnviroScreen, and the legacy of any previous facilities in that area. These issues are embedded in many aspects of the CEQA process and are important to address for project success. This will be addressed further later in the handbook.

Beyond enviroscreen issues, environmental justice is a complex and multifaceted issue that stems from the disproportionate exposure of marginalized communities to environmental hazards and the inequitable distribution of environmental resources and benefits. This problem has deep historical roots, often tied to systemic racism and

socio-economic disparities. Historically, industrial facilities, waste dumps, and other environmental hazards have been preferentially situated near low-income or minority communities. Communities that face environmental injustice often suffer from higher rates of health problems, including respiratory issues, cancer, and other illnesses due to exposure to pollutants and toxic substances. These problems are compounded by socio-economic factors, as lower-income and minority communities typically lack the financial resources and political clout to oppose the setting of harmful industries in their neighborhoods. As a result, these communities continually face environmental risks, perpetuating a cycle of inequality and health disparities. Adding to these difficulties is the fact that, historically, biomass-to-electricity plants were often located in disadvantaged communities within the San Joaquin valley, where air quality is some of the worst in the country.

New Approaches to Wood Waste

Today state policy makers are focused on ensuring that a community-based approach is used when choosing where to site wood products and biomass project locations, so that such projects do not overburden disadvantaged communities. The wood waste these communities deal with, which would otherwise be open burned, decompose into methane, or burn in a wildfire, must be dealt with to improve public health and support California's shift away from fossil fuels[7]. This community-based approach prioritizes community input about where facilities should be built and about the technology used for such projects. New technologies can be used on standard equipment that significantly reduce criteria pollutants (i.e., ceramic filtration), and technology is being developed that can store the CO_2 produced during bioenergy productions. For example, the Sierra Energy Research Park in Davis is exploring technology for waste conversion with zero emissions. Similarly, as mentioned earlier, Raven SR in the San Francisco Bay Area plans to build "hydrogen hubs" for converting organic waste into renewable hydrogen for zero-emission vehicles.

There are also innovative projects using carbon capture and storage (CCS) technology to combat climate change and reduce carbon emissions. Among them is the Sutter Decarbonization Project in Yuba City. This initiative involves a commercial-scale carbon capture system at the Sutter Energy Center, a natural gas power plant. A unique aspect of this project is its proposed use of an air-cooling system to minimize freshwater usage, which is a critical concern in the area. The CO_2 captured from this process will be stored safely in underground saline formations. Another significant project is the California Direct Air Capture (DAC) Hub, which received an $11.8 million grant from the U.S. Department of Energy (DOE). Led by a consortium including CTV Direct and Kern

[7] https://gs.llnl.gov/sites/gs/files/2021-08/getting_to_neutral.pdf

Community College District, this project aims to establish the state's first full-scale DAC and storage network in Kern County. This hub could potentially remove over 1 million metric tons of CO_2 annually, akin to removing 220,000 gasoline vehicles from the road. Additionally, this project is expected to provide high-paying jobs and workforce development programs.

Chevron is also spearheading a project in Kern County that focuses on CCS. The project involves injecting captured CO_2 deep underground into a storage reservoir. This project aligns with Chevron's objectives to reduce its operational carbon intensity and support California's emission reduction goals. Lastly, the Elk Hills Carbon Capture Plant, backed by DOE and the oil and gas industry, is set to remove CO_2 emissions from burning natural gas. This project is part of a broader strategy to advance carbon capture technologies and contribute to emission reduction efforts. These projects collectively represent significant advancements in CCS technologies and are crucial for California to achieve its ambitious climate and environmental targets.

There is significant concern that these projects will extend the lives of fossil fuel-based energy sources, rather than support new technologies, such as bioenergy, because of the potential for continued pollution burden experienced by disadvantaged communities near fossil-fuel facilities. It is critical that any project developer planning on using CCS technologies clearly distinguish their projects from fossil fuel-based projects and describe the overall benefits of wood waste disposal through utilization.

Creating the Foundation for CEQA Success

Assess Your Lead Agency and Build Your Consultant Team

Navigating CEQA is a complex task that demands an in-depth understanding of environmental regulations, strategic foresight, and collaborative effort. The selection and evaluation of the CEQA consultant is a critical aspect of the CEQA process. The lead government entity bears the primary responsibility for approving and implementing a project. Its role encompasses overseeing the entire CEQA process, including the vital task of preparing comprehensive environmental documents such as EIRs or negative declarations. The lead agency is responsible for scrutinizing any information provided by developers. Typically, lead agencies require project developers either to fund or to provide CEQA documentation prepared by a third-party consultant, which is then reviewed by lead agency planning staff. In rural areas, where planning staff tend to be smaller and less experienced, the reliance on consultants is more likely, and consultants will likely work closely with planning staff, especially if the project’s technology is new.

Even where developers are asked to fund consultants under contract to lead agencies, developers should also consider hiring their own environmental consultants with extensive CEQA knowledge and expertise in conducting detailed environmental impact assessments, as such assessments will identify crucial potential environmental issues and develop strategies to address them. Consultants should include legal advisors with a focus on environmental law. Specialists in areas such as biology, cultural resources, traffic, or air and water quality might also be needed to ensure a comprehensive environmental evaluation.

Furthermore, engaging professionals skilled in public relations and community engagement is vital, as public involvement is an integral part of the CEQA process. These experts can effectively manage community outreach, addressing concerns and fostering a positive public perception of the project. Ensuring effective integration and collaboration among all involved parties, including the lead agency and various consultants, is key to the success of the CEQA process. These processes involve coordinated efforts and consistent sharing of information and insights as well as regular meetings and updates to keep all parties on the same page and responsive to new challenges. Proactive planning is critical in anticipating potential environmental and community issues, allowing the team to develop effective contingency plans. Adopting a long-term view is also important, recognizing that the CEQA process can be lengthy and subject to unexpected delays. Proper planning and preparedness for such scenarios can significantly improve a project's chances of successful and timely completion.

Public Outreach: Early and Often

Public outreach is a key element in the CEQA process, providing essential local insights that lead to more effective environmental assessments. This early and ongoing engagement helps in preemptively identifying and addressing potential issues, facilitating better project planning, and establishing community trust, ensuring that projects not only comply with environmental standards, but also resonate with local values and needs. Far from being a mere procedural step, public outreach under CEQA is fundamental to the overall success and seamless progression of projects, underscoring its importance beyond regulatory compliance.

The rationale behind early and frequent public outreach is rooted in the very objective of CEQA itself – to assess and mitigate to the extent feasible the significant environmental impacts of proposed projects. Engaging the public at the outset allows for a comprehensive identification of environmental concerns. Residents and local communities often possess unique knowledge about their environment that can be invaluable in recognizing potential issues. This local insight can highlight aspects that may be overlooked by project developers or planners, ensuring a more thorough

environmental review. Moreover, early public engagement is crucial for building trust and support within the community. Projects that are developed with significant public input tend to be more favorably received. This is because when people feel that their opinions are valued and that they have a stake in the decision-making process, they are more likely to support a project. In contrast, projects that advance without adequate public involvement often face skepticism and resistance, leading to challenges that could be avoided.

Another significant aspect of early public outreach is the potential to identify and mitigate conflicts proactively. Addressing community concerns early in a project planning phase can prevent these issues from escalating into major obstacles. This early outreach not only saves time but also conserves resources that might otherwise be spent addressing conflicts at later stages. Furthermore, early resolution of conflicts can prevent delays in a project's timeline, a common pitfall in many development projects. Public input is not just about addressing concerns. It can also contribute positively to a project's design and planning. Community members may propose innovative solutions or alternatives that have not been considered by the project team. Such contributions can lead to a more sustainable and community-friendly project outcome. Incorporating public suggestions can enhance a project's environmental and social compatibility, ensuring it aligns better with the community's needs and values.

Compliance with legal and regulatory requirements is another critical reason for early and frequent public outreach. CEQA mandates public participation as specific points in its process, but additional outreach can be valuable. By engaging with the public early and consistently, project proponents can increase their chances of addressing all applicable legal issues raised by project opponents. This approach significantly reduces the risk of legal challenges based on claims of inadequate public participation. Lawsuits and legal disputes can be costly and time-consuming, potentially derailing or delaying projects for extended periods. Early and frequent public outreach can also streamline the CEQA process. By incorporating public feedback early, environmental reviews can be more efficient. This efficiency is particularly important in the context of CEQA, where the environmental review process can be lengthy and complex. Streamlining this process helps in reducing the delays and costs associated with extensive environmental impact assessments and potential litigation.

In conclusion, early and frequent public outreach in the context of CEQA is more than a procedural requirement. It is a strategic approach that enhances the effectiveness and efficiency of the environmental review process. It leads to better identification of environmental concerns, builds community trust, mitigates potential conflicts, improves project design, facilitates legal compliance, and streamlines the overall process.

Therefore, it should be viewed as an integral and proactive part of project planning and execution under CEQA.

Seek Public Funding for CEQA Support (and Other Work)

Project developers should know that there are significant sources of public money to help projects pay for environmental review. The two primary funding sources in California for biomass project development that private entities are eligible for are the California Department of Forestry and Fire Protection (CAL FIRE) Biomass and Workforce Development Grant Program and the USFS Wood Innovations Program. The CEC has also funded planning (including permitting) and development of biomass facilities through its EPIC program in the past but does not have a consistent program for funding biomass-to-energy projects.

If a biomass facility sources woody biomass feedstock from private lands, those activities are subject to CEQA or the California Forest Practices Act (See the Forest Practice Act discussion in Section Three for detail on the interplay between CEQA and forest practices.). There are several state grant programs that will fund planning costs associated with forest restoration and fuels reduction activities on private lands that generate woody biomass, including CEQA or California Forest Practice Act compliance. The most significant funding opportunities include the Sierra Nevada Conservancy's Wildfire Recovery and Forest Resilience grant for projects based in the Conservancy's region, CAL FIRE Forest Health[8] grants, and CAL FIRE Wildfire Prevention[9] grants. Eligible recipients of these grants are typically non-profits, tribes, resource conservation districts, and local governments. Private entities are not eligible.

CAL FIRE Grants

The CAL FIRE Wood Products and Bioenergy program works to support the creation of a robust and diversified wood products industry to facilitate the economic and sustainable management of California's forests. Specifically, CAL FIRE's Biomass and Workforce Development grants fund private business development projects for bioenergy facilities, wood processing and manufacturing operations, in-woods logging operations, and tree nurseries. Eligible activities under this program include planning, organizational and business capacity building, and workforce and infrastructure development as components of proposed projects. Up to $2 million is available for business development projects, with varying matching requirements depending on the amount of funding requested.

[8] https://www.fire.ca.gov/what-we-do/grants/forest-health
[9] https://www.fire.ca.gov/what-we-do/grants/wildfire-prevention-grants

Permitting new and/or expanding forest-sector businesses is currently an eligible activity under this program, meaning that these funds are available to support project developers with moving a project through the permitting and CEQA review process. However, projects that demonstrate “readiness” and have permitting completed prior to a submitted application are more competitive in the review process.

Grant solicitations are typically offered two to three times per year, though this frequency can vary depending on availability of state funding and amount allocated to this program by the Legislature. To learn more about CAL FIRE Biomass and Workforce Development Grants, visit the Wood Products Program website[10].

CAL FIRE sponsors many other grants as well, including Forest Health, Urban and Community Forestry, California Forest Improvement Program and Wildfire Prevention grants. In October of 2024 a new memo was issued by CAL FIRE that clarifies that work done in the woods that is “incidental” to Timber Operations can only be considered “incidental” under the Forest Practices Act (i.e. part of Timber Operations) if there is a commercial purpose. Non-timber vegetation treatment objectives are different, because the cutting and removal of trees for commercial purposes is not being conducted. In these instances, use of a harvest document for CEQA compliance is not appropriate because the Forest Practice Act and Rules do not apply, and so CEQA must be done outside of the Forest Practice Rules through the local agency. The memorandum is attached to this Guidebook as an Appendix for review. See the Memorandum [11] attached to this Handbook for more information.

U.S. Forest Service Wood Innovations Grants

The USFS Wood Innovations Grant program is another funding opportunity for which private entities are eligible to apply. It is a national grant program and supports projects that will substantially expand and accelerate wood products and wood energy markets throughout the U.S. to support forest management needs in the National Forest System and on other forest lands. Development of wood energy and wood utilization facilities is an eligible activity under this program, including permitting activities associated with facility development, and therefore CEQA compliance for California-based projects. This grant program is offered nationwide annually, with proposals typically due in December - January of each year. More information can be found on the USFS Wood Innovations grant program website[12].

[10] https://www.fire.ca.gov/what-we-do/natural-resource-management/environmental-protection-program/wood-products-and-bioenergy
[11] https://files.constantcontact.com/3c053c7a901/3741984a-549e-4f4f-afb5-40cd95ebaba0.pdf?rdr=true
[12] https://www.fs.usda.gov/science-technology/energy-forest-products/wood-innovation

Summary of a Strong CEQA Foundation

Navigating CEQA is important for biomass and bioenergy projects due to its role in ensuring environmental protection while facilitating sustainable development. Increasing the pace of biomass utilization in California is essential to meet the state's ambitious renewable energy goals and reduce GHG emissions. A substantial portion of California's waste biomass remains underutilized, presenting significant opportunities for bioenergy production and the development of innovative wood products. By expediting the use of these resources, California can bolster its energy security while simultaneously advancing its landfill diversion efforts. Navigating the CEQA process is critical in this context, as environmental review and permitting can greatly impact project implementation. By having a team that is familiar with CEQA procedures and completing environmental review, projects can commence sooner, leading to faster deployment of clean energy technologies, job creation, and economic growth, while also ensuring that environmental protection measures are thoroughly addressed.

Overcoming CEQA hurdles for biomass and bioenergy projects involves addressing several significant challenges. Ensuring air quality and climate impacts are minimized requires comprehensive assessments and mitigation strategies, which can be time-consuming and costly. Projects located in rural areas often face additional logistical and infrastructure challenges, such as limited access to necessary resources and transportation networks. Environmental justice concerns must be meticulously addressed, ensuring that vulnerable communities are not disproportionately affected by the project’s impacts. Labor cost challenges may also arise, as these projects require skilled labor for both construction and ongoing operation, potentially driving up costs. Addressing these hurdles requires thorough planning, stakeholder engagement, and strategic investment to balance environmental protection with project feasibility and community benefits.

Accessing the essential tools in the CEQA "toolbelt" is crucial for the successful development of biomass and bioenergy projects. Key strategies include engaging with the lead agency early to guide the CEQA process and ensure compliance with regulatory requirements. Building a robust consultant team with expertise in environmental impact analysis, permitting, and mitigation is vital for navigating CEQA's complexities. Conducting public outreach early and often helps garner community support, address concerns, and incorporate valuable feedback into the project design. Seeking public funding and grants, such as the CAL FIRE Biomass and Workforce Development Grants and the U.S. Forest Service Wood Innovations Grants, provides critical financial support, offsets costs, and demonstrates public sector backing, which can enhance project credibility and feasibility. These grants support sustainable forestry, innovative uses of wood and biomass, and economic development, ultimately

reducing wildfire hazards and fostering rural economic resilience. Utilizing these tools effectively can help streamline the CEQA process and facilitate the successful implementation of sustainable energy projects.

Part Two: CEQA: The Key Law for Environmental Review

CEQA operates through a process that mandates public agencies to evaluate the environmental implications of projects they propose to undertake or approve. This process includes the preparation of various documents, such as notices of exemption (NOE), negative declarations (ND), mitigated negative declarations (MND), and environmental impact reports (EIR), depending on the potential impact of a project. The Public Resources Code establishes the obligations of public agencies to mitigate significant effects on the environment to the extent feasible. It covers construction and infrastructure projects as well as changes in land use (including planning documents), among other topics. This statute provides the legal framework within which environmental considerations must be integrated into project planning and decision-making processes.

Complementing the CEQA statute are the State CEQA Guidelines, which are the regulations implementing the statute. These guidelines are developed and maintained by OPR and adopted by the California Natural Resources Agency (CNRA). The CEQA Guidelines provide detailed instructions on how to comply with the act, including the preparation and content of environmental documents, the process for public review, and the criteria for determining the significance of environmental impacts. The CEQA Guidelines also include appendices that offer additional guidance on topics such as thresholds of significance, an environmental checklist form, and sample notices. These regulatory guidelines are essential for agencies in interpreting and applying CEQA's statutory requirements, ensuring a comprehensive approach to environmental impact assessment across the state.

Note that there are also other sections of California law that relate to environmental review. For example, sections like the Porter-Cologne Water Quality Control Act (found in the Water Code) and the California Clean Air Act (part of the Health and Safety Code) set forth state-specific requirements for maintaining water and air quality, respectively, which inform thresholds for the significance determinations of environmental impacts. The California Land Environmental Restoration and Reuse Act, passed in 2000, created a hazardous materials cleanup program for local agencies to help brownfield properties become productive and could be relevant depending on the location of a project. In addition, the California Land Reuse and Revitalization Act (CLRRA) and the Small Business Liability Relief and Brownfields Revitalization Act may also inform environmental review under CEQA. These laws, among others, require assessments and potentially mitigations that complement CEQA's environmental review process.

The First Steps of CEQA Review

Most cities and counties have websites that explain how to enter into an environmental review process for a project. There is often an agency staff person acting as the

environmental review coordinator who can meet with the project representatives and there are staff available for drop-in initial discussions at agency offices. The extent of staff resources and level of CEQA expertise can vary a great deal between local governments. Doing initial research into the jurisdiction of the project is important to understanding that jurisdiction's practices and procedures, fees, and staffing expertise and availability. Much of this information will be available online, but reaching out via the phone or in person can be useful to begin to establish a rapport with staff.

To determine whether the entitlements (permission to build) a proposed biomass facility will need environmental review through CEQA requires a staff person at the agency to conduct preliminary review of the proposal. The first question they will consider is whether the activity is a "project" as defined by the Act.

The Critical Threshold: What is a Project?

To fall under CEQA, the action or activity taken must be considered a "project." Under section 21065 of the California Public Resources Code, a project is generally defined as "an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." When determining whether a proposed agency action or activity meets the definition of a "project," it is important to remember that a project includes the "whole action." Courts have enforced what they characterize as "the mandate of CEQA that environmental considerations do not become submerged by chopping a large project into many little ones—each with a minimal potential impact on the environment—which cumulatively may have disastrous consequences." As a result, all the stages of a project must be evaluated, not just parts of a project that on their own might have circumvented CEQA requirements.

To support the analysis to determine if the nature of the proposed action or activity is a project, the CEQA Guidelines define the term "effects," and provide guidance as to what constitute both "direct or primary effects" and "indirect or secondary effects." Section 15064(d)(1) of the Guidelines states that "a direct physical change in the environment is a physical change in the environment which is caused by and immediately related to a project." In practice, these direct changes are perceptible at the site of a project in that they can be seen, heard, felt, or measured. Examples of a direct physical change are altering, building, or demolishing infrastructure; traffic noise; and water or air quality changes. Other examples include tree removal, vegetation clearing, or habitat modifications.

According to section 15064(d)(2), an indirect physical change is a change in the environment that is not "immediately related to a project." The indirect physical change could happen at a later time and may not occur at a project site, but the change must be

caused by the project and must be reasonably foreseeable. Note that causation and reasonable foreseeability are key concepts in this formulation. Examples of indirect physical changes are “growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.” Indirect effects can also include downstream flooding and habitat fragmentation when, for example, a new road disrupts wildlife.

Although CEQA is concerned with reasonably foreseeable indirect environmental effects, CEQA does not require agencies to engage in pure speculation. “[W]here future development is unspecified and uncertain; no purpose can be served by requiring an [agency] to engage in sheer speculation as to future environmental consequences.” In other words, purely speculative impacts are not reasonably foreseeable. “CEQA review is premature if the agency action in question occurs too early in the planning process to allow meaningful analysis of potential impacts. Although environmental review must take place as early as is feasible, it also must be ‘late enough to provide meaningful information for environmental assessment.’”

In assessing the potential direct and reasonably foreseeable indirect effects of an agency action or activity for purposes of determining whether it qualifies as a project, it is important to remember that, according to the courts, whether an activity constitutes a project is a “*categorical* question” respecting whether the activity is “of a *general* kind with which CEQA is concerned, without regard to whether the activity will actually have environmental impact.” Stated another way, the question is whether, “by its general nature, the activity is capable of causing a direct or reasonably foreseeable indirect physical change in the environment.” Thus, not every project will have actual environmental impacts. An action or activity is a project if the action falls into a general category of actions (e.g., an airport land use compatibility plan or an amendment to a zoning code) that, at least in some factual circumstances, could have direct or reasonably foreseeable indirect environmental effects.

After determining whether the proposed action or activity may cause direct or reasonably foreseeable indirect effects that appears to make it a project, the lead agency or applicant must determine whether the action or activity falls within one of the three broad categories of discretionary actions that are potential projects: (1) activities undertaken by a public agency, (2) activities funded or provided other forms of assistance by a public agency, or (3) activities permitted by a public agency. If an activity does not fit into one of those three categories, then even though it appears at first blush to be a “project” as defined by the Act, the activity does not qualify as a project subject to CEQA.

The first category includes activities that are “directly undertaken by any public agency,” meaning that government agencies must look at the environmental impacts of their own activities before moving forward. Examples include road projects, government buildings, landfills, vegetation work on public lands, and legislative actions such as General Plan amendments and zoning changes. Sometimes legislative actions such as General Plan amendments and zoning changes are required in connection with specific private projects that also require permits of various kinds. Thus, what seem to be purely private actions could actually be seen as partly agency-generated, at least from a legal standpoint.

The second category are activities “undertaken by a person which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.” Activities that fall under this category are those that receive public agency funding or approvals. Examples include tax incentives, public financing, or public land leases that might be necessary for a proposed development to succeed.

The third category of activities comprises the majority of CEQA projects - “an activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.” This same category of action overlaps with what the courts call “adjudicatory actions” or “quasi-adjudicatory actions” (in contrast with legislative or quasi-legislative actions). Adjudicatory actions involve agency “decisions that determine what the facts are in relation to specific private rights or interests.” Common examples are conditional use permits, variances, tentative subdivision maps, and design review permits.

Under these three categories of projects, some type of discretionary approval by a public agency is required, triggering CEQA. Two very common examples are a conditional use permit and design review under a local agency’s zoning code. Other examples include projects requiring local health and safety permits for a concert venue, state licenses to dispense cannabis, or leases on public land allowing the erection of cell towers.

In short, if an activity may cause a direct or reasonably foreseeable indirect impact on the environment, and falls under one of the three areas of public agency involvement, it is considered a project under CEQA. Therefore, it must undergo environmental review unless a project can be determined to be exempt from CEQA under a recognized “statutory exemption,” “categorical exemption,” or “common sense exemption.”

Project Application Submittal

Once staff have reviewed the proposed action or activity and determined legally that it is a project, a formal application will be required by a project applicant. Once the application is submitted, the agency will inform the applicant if the project can qualify for an exemption or if the staff or a consultant will need to write an Initial Study (meaning the project does not qualify for an exemption). Note that there are often many months that pass between an initial application submission and the determination by the agency that the "application has been deemed complete." Staff often need more information than is required in the standard application to make the determination about the needed level of environmental review.

In most cases, if a project does not qualify for an exemption, a project will need an Initial Study to determine if it will be reviewed through the ND process or the EIR process (both will be covered later in this section). The Initial Study can be prepared by agency staff, but oftentimes agencies look to a project developer to pay for this work to be done through a third-party consultant. Sometimes agencies will provide approved lists of contractors and other times the applicant can suggest a company which will prepare the document and submit it to the agency on the applicant's behalf.

If the Initial Study determines that there are no potentially significant impacts that cannot clearly be mitigated to less than significant levels, a project can proceed with a ND or MND (which is a ND premised on a project proponent's agreement to carry out whatever mitigation measures are needed to avoid the occurrence of potentially significant effects).

Otherwise, a project will require an EIR. A project proponent may reduce time and effort by stipulating at the start to prepare an EIR, thus skipping the Initial Study step, for instance, if a potentially significant effect is already known. The most common approach to preparing an EIR is by a third-party consultant working for the lead agency but paid for by the applicant. This is the accepted protocol for preparation of documents by most agencies in California, though state law also permits the applicant to retain its own consultant to prepare and submit an administrative draft EIR to the agency. Under this latter scenario, the agency is free to modify or augment the document submitted by the applicant and may not issue the document for public review until it reflects the agency's own "independent judgment." Most public agencies disallow this second option as a matter of custom or local ordinance or policy, but many do allow it. Nothing in state law precludes it. Many applicants prefer to use this second option when the agency allows it.

As previously mentioned, if a project can qualify for a statutory exemption, categorical exemption, or common-sense exemption, the paperwork required from the agency will be far less than if an Initial Study is required.

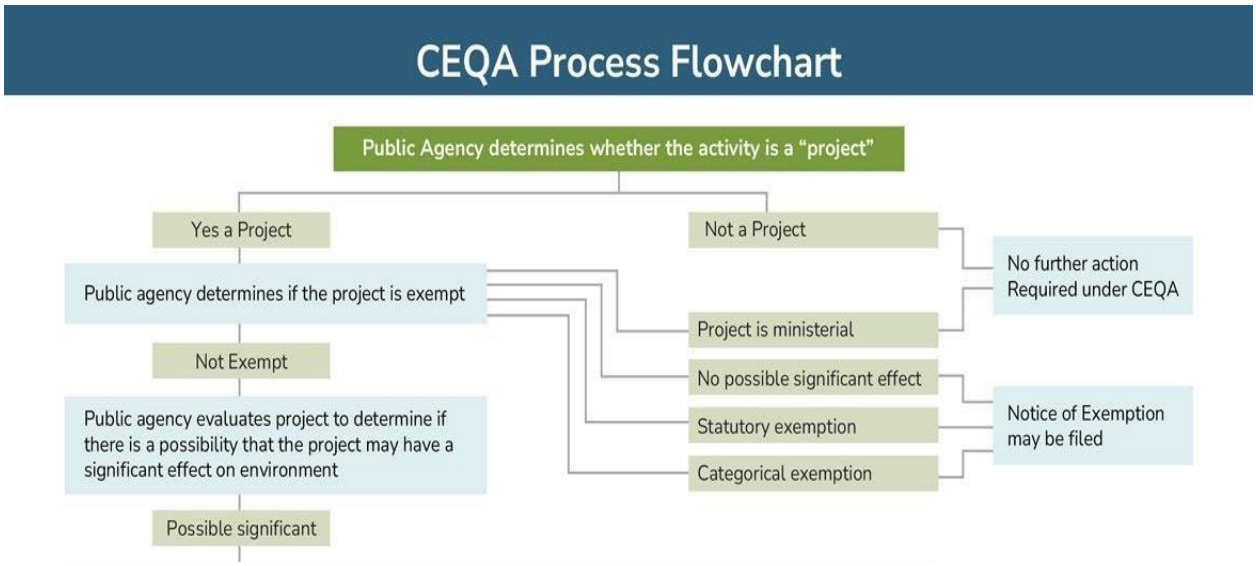


Image courtesy of: California Native Plant Society

Overview of Exemptions in Environmental Review Process

General Principles

After determining a project action or activity I is a project as defined by CEQA, an agency will determine if a project qualifies for a statutory or categorical exemption during a 30-day preliminary review period, which starts once a project application is submitted and recognized as complete (Public Resources Code 21080.2; CEQA Guidelines 15102, 15061, 15062). This period can be extended by 15 days with the agreement of both the lead agency and a project applicant (Public Resources Code 21080.2).[13]

[13] These timelines do *not* apply to projects coming under the other two categories of agency actions mentioned earlier (actions undertaken by public agencies or actions subsidized by public agencies). Thus, the fact that a project requires a General Plan amendment or rezone will deprive the applicant of the benefits of these short timelines.

The review of a project for the applicability of an exemption is described in Section 15061 of the CEQA Guidelines, which states the five ways a project could be found exempt: (1) by statute, (2) by regulation, which is called a “categorical exemption,” (3) by “common sense” exemption; (4) if a project is rejected, and (5) if it falls under a class of exempt projects related to housing (as set forth in Article 12.5 of the CEQA Guidelines).

A statutory exemption is one that the Legislature has granted to a class of projects that it deems should be completed without CEQA review, or in some cases, should be relieved of some of the requirements of the Act. CEQA is based on statutory rather than constitutional law, granting the Legislature authority to establish exemptions from its mandates. These exemptions, which the Legislature can enact as the lawmakers see fit, might either partially or wholly excuse projects and activities from CEQA, irrespective of their potential environmental impacts. These statutory exemptions are justified by the Legislature's judgment that the type of project at issue is sufficiently important to California to warrant bypassing environmental review.

Statutory exemptions can be found within CEQA itself or in other codes beyond the Public Resources Code. Some exemptions are not formally codified and can only be located in the annual records of enacted statutes. These exemptions vary in nature – some are partial, others are complete, and some come with specific conditions. Therefore, it's crucial to closely examine the text of any relevant statute to understand the exact nature and extent of an applicable exemption.

Categorical exemptions are established through the regulatory action of the CNRA, which adopts the CEQA Guidelines. In contrast to statutory exemptions created by the Legislature, categorical exemptions are created by the CNRA with input from OPR and anyone who wants to comment on the draft exemptions as they work their way through a formal rulemaking process can do so.

Categorical exemptions are only appropriate for categories of projects that CNRA has determined do not typically have a significant effect on the environment. Note that categorical exemptions are not absolute. They can be subject to any one of six enumerated “exceptions” outlined in CEQA Guidelines section 15300.2 and Public Resources Code section 21084. In situations where opponents to a project believe that an exception to the exemption applies, the onus shifts to those challenging the project to prove that the exception applies. Where an agency has found that no exception applies, often the burden of proof lies with the opponent, requiring the opponent to show that the agency’s determination is not supported by substantial evidence.

The third pathway to an exemption, also discussed below, is for the agency to rely on the “common sense exemption,” which applies “[w]here it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on

the environment[.]" To rely on this exemption, the agency must create some sort of written record addressing the specific facts supporting its determination. The courts have said that this exemption has narrow applicability.

The fourth way a project is exempt is when projects are rejected by a lead agency decision-making body under CEQA. If disgruntled parties still pursue litigation against a project that has been rejected by a lead agency and is no longer moving forward, it is very unlikely the court would allow the case to proceed.

The final group of exemptions pertains to housing. California has implemented several legislative measures to streamline housing development, such as the Affordable Housing Exemption (detailed in Section 15194 of the Guidelines) and Assembly Bill 1449, which also addresses affordable housing by providing a CEQA exemption for certain projects. Since this handbook is not intended to address housing, no further discussion of these exemptions will be covered, but keep these items in mind if a bioenergy or wood products project is considering workforce housing associated with a project.

Once a lead agency has determined that an exemption applies, there are several steps that are desirable to take to document the reasons why the exemptions apply. These steps are described below.

Procedures for Establishing an Exemption

Under CEQA there is no prescribed procedure for an agency to determine that a project is exempt. Agencies are not obligated to engage the public or other agencies in the exemption decision, nor are they required to conduct a public hearing. In support of a statutory exemption, formal findings are not mandated. Even in disputed cases, there is no necessity for an on-record hearing.

Agencies are advised, however, to document their exemption analysis in the record, despite the lack of any legal mandate for a preliminary study. This is because if the action is challenged, the agency's record must show substantial evidence for every aspect of the claimed exemption. Courts will uphold an agency's exemption decisions if it is backed by substantial evidence. While courts can apply the "substantial evidence" test even without a record on the exemption, it's prudent for agencies to document their exemption analysis for potential judicial review.

In situations where litigation by project opponents seems very likely, the level of analysis during the preliminary review stage might be similar to that in the initial study phase, where the agency evaluates a project's environmental impacts. However, they do not need to rely on the checklists provided by the state, and generally, the information is less detailed.

For the common-sense exemption,[14] a higher level of evidentiary support may be required, given the vague character of its operative language. As one court said, "[t]he exemption can be relied on only if a factual evaluation of the agency's proposed activity reveals that it applies."

It is important to note that there are no potentially significant environmental impacts that can be at play when a project is relying on an exemption. Therefore, a project description itself must include all facets of the project that ameliorate any negative environmental aspects of a project. Case law holding that agencies may not "mitigate their way into a categorical exemption," requires any project attributes intended to reduce or avoid environmental effects to be characterized as project components or elements, and not as externally imposed measures or ad hoc conditions of approval. An exemption to this prohibition applies where what might be conceived of as "mitigation" is required by ordinance or by standard conditions of approval.

If an agency is using the common-sense exemption approach, details should be included to the same degree as a categorical exemption, and arguably, at even greater detail, for reasons described in more detail below. When using any of these exemptions, consideration of whether the lead agency should prepare a Notice of Exemption (NOE) after project approval is critical.

Specifically for statutory exemptions, the only required analysis is to ensure that a project fits under the applicable statute. Depending on the terms of the applicable exemption, factual showings might be necessary. This means that with statutory exemptions you do not need to worry about exceptions that are in play with the regulatory (categorical) exemptions (with some exceptions, as the Legislature, for a few statutory exemptions, has built in exceptions by statute), so there is typically no need to develop evidence for statutory exemptions.

Notice of Exemption

Filing an NOE with the county clerk and OPR used to be optional, but as of 2023, both local and state projects must now file their NOEs with the State Clearinghouse at OPR[15]. (Previously, local agencies only had to submit their NOEs to their county clerks.)

Agencies are encouraged to make NOEs available online, in addition to fulfilling CEQA Guidelines and Public Resources Code requirements. The advantage to posting an NOE is the resulting post initiates a short 35-day limitation period for legal challenges to a project approval and exemption decision. An NOE is effective only after project

[14] The common-sense exemption applies to **projects that don't necessarily fit within a statutory or categorical exemption**, but "where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment," the activity is exempt from CEQA (CEQA Guidelines Section 15051(b)(3).
[15] https://www.opr.ca.gov/

approval. Premature filing does not start the 35-day period. If the agency does not file an NOE, or if the notice is significantly flawed, the period to challenge the exemption determination extends to 180 days. Thus, filing an NOE can shave 145 days off the statute of limitations period.

CEQA Categorical Exemptions

Categorical exemptions under the CEQA Guidelines refer to a set of projects that have been determined not to have a significant effect on the environment. These exemptions are outlined in the CEQA Guidelines sections 15300 to 15333. Categorical exemptions are commonly used for several reasons, all of which align with the core objectives of CEQA to streamline the environmental review process for specific types of projects. These exemptions significantly save time and resources for both project applicants and reviewing agencies by exempting certain classes of projects typically found to have minimal environmental impacts. This is especially beneficial for small-scale or routine projects where significant environmental damage is unlikely.

Undertaking a full environmental review under CEQA, such as preparing an EIR, can be a costly and complex endeavor. Categorical exemptions simplify the project review and approval process and reduce the financial and administrative burden on various entities, including small businesses, local governments, and individual property owners. Moreover, categorical exemptions provide clarity and predictability. They offer clear criteria and definitions, making it easier for project planners and developers to ascertain whether their project qualifies for an exemption. This level of predictability is invaluable in the planning and execution of projects, providing a greater degree of certainty about the required environmental review process. These exemptions also enhance efficiency in public service and infrastructure maintenance. Many of the common exemptions, such as those for minor alterations to existing facilities or minor land alterations, enable routine maintenance and minor upgrades of public infrastructure and services. This efficiency ensures that public facilities and services can be maintained and improved without unnecessary procedural delays.

There is a substantial legal and regulatory framework surrounding these exemptions that has evolved over time, offering a body of precedent that will be discussed later in this handbook. This case law precedent provides additional confidence in using these exemptions appropriately, ensuring compliance with environmental standards while facilitating project development.

Defined Categories of Categorical Exemptions

As noted above, the 33 categorical exemptions are found in Sections 15301 to 15333 of the CEQA Guidelines, which are found in Title 14 of the California Code of Regulations. The term "classes" in the context of CEQA exemptions refers to the categorization of

projects that are grouped together based on their similar characteristics and potential environmental impacts. These sections provide detailed guidelines and criteria for each class of exemption, outlining examples of the specific types of projects and activities that qualify. This range of sections comprehensively covers various aspects of minor construction, environmental conservation, and administrative activities, ensuring that projects with minimal environmental impact can proceed more efficiently while maintaining the core environmental protection objectives of CEQA.

Classes 1 to 5 encompass existing facilities, replacement or reconstruction of structures, new small structures, minor land alterations, and minor changes in land use limitations. These categorical exemptions are frequently utilized by businesses, local governments, and private developers for small-scale construction or modification projects that do not significantly alter the environment. For instance, minor modifications to buildings or slight zoning changes fall under these classes.

Classes 6 to 10, which include information collection, actions by regulatory agencies for natural resource and environmental protection, inspections, and loans, are essential for government agencies, academic institutions, and financial bodies. They cover activities like data collection for research, environmental protection measures, routine safety inspections, and financial transactions for acquiring existing structures.

Classes 11 to 15 relate to accessory structures, surplus property sales, land acquisition for wildlife conservation, minor school additions, and minor land divisions. These exemptions are pivotal for property owners, government entities, environmental organizations, educational institutions, and developers. They facilitate small-scale construction, efficient property management, conservation efforts, and minor subdivision of land for limited kinds of urban development consistent with existing general plan and zoning designations.

Classes 16 to 20 involve the transfer of land for parks, open space contracts, wilderness area designations, and organizational changes in local agencies, primarily used by governments, non-profits, and conservation groups. These classes are crucial for establishing parks, preserving open spaces, and efficiently managing governmental bodies.

Classes 21 to 25 focus on regulatory enforcement, educational programs, operations of public gathering facilities, working conditions, and land transfers for preservation. Government agencies, educational institutions, facility managers, labor agencies, and conservation groups find these exemptions vital for regulatory actions, educational program alterations, managing public spaces, labor regulations, and land preservation.

Classes 26 to 30 include housing acquisitions for assistance programs, leasing new facilities, small hydroelectric and cogeneration projects, and minor actions for

hazardous waste management. Housing authorities, non-profits, energy companies, utilities, and industrial entities benefit from these exemptions, enabling housing projects, energy production, and environmental hazard mitigation.

Finally, Classes 31 to 33, covering historical resource restoration, in-fill development in cities, and small habitat restoration projects, are essential for preservation organizations, urban developers, and environmental groups. These exemptions facilitate the restoration of historical sites, urban development in existing communities, and ecological conservation efforts.

Documentation and Analysis for Exemptions

Agencies must have substantial evidence to support the use of a categorical exemption. Formulating this substantial evidence involves documenting the nature of a project, its potential impacts, and the rationale for determining if it falls within an exempt category without triggering any of the limitations. Public comments and concerns could play a significant role if those groups have identified any potential exceptions to the exemptions for a project. Agencies are advised to consider public input, especially in cases where there might be evidence of unusual circumstances giving rise to potentially significant impacts. Incorrect application of categorical exemptions can lead to legal challenges. Courts review whether agencies have properly applied the exemptions, particularly examining if any of the limitations were overlooked. So, it is important that the lead agency documents the exemption and ensures that none of the exceptions to exemptions apply. This process typically involves an initial review to confirm that a project indeed falls within an exempt category. Documentation and process are critical aspects of applying categorical exemptions. Proper documentation ensures that the decision to exempt a project from further environmental review is well-supported, transparent, and legally defensible. An overview of the key elements involved in the documentation and process for categorical exemptions follows:

1. Initial Project Review

- Project Assessment: The first step is to determine whether a project falls within one of the categorical exemptions. This involves a detailed assessment of a project's nature, size, scope, and location.
- Environmental Checklist: Often, agencies use an environmental checklist to evaluate a project against various potential environmental impacts to determine if it qualifies for an exemption. Depending on the elements of a particular exemption, an abbreviated checklist might suffice. For example, the Class 32 exemption for infill development of five acres or less in cities requires agencies and applicants to focus on general plan and zoning consistency, whether a project site is substantially surrounded by urban uses, the value of a site for

habitat for endangered and threatened species, whether the site can be served by all needed utilities and public services, and whether a project would result in significant effects relating to traffic, noise, air quality, or water quality.

2. Considering Exceptions to Exemptions

- Exceptions Analysis: Even if a project fits a categorical exemption, certain exceptions might preclude its use. Key exceptions include location in an environmentally sensitive area (for some classes[16] of exemptions only), cumulative impacts, significant effect due to unusual circumstances, damage to scenic highways, or adverse changes to historical resources.
- Documentation of No Exceptions: If a project qualifies for an exemption, the agency should document that none of the exceptions apply. Although the law does not specifically mandate such analysis, prudence dictates that the analysis be undertaken to increase legal defensibility. The consideration of potential exceptions often involves an analysis of a project setting, surrounding land uses, and potential project impacts.

3. Preparing Exemption Findings

- Written Findings: Agencies should prepare written findings of a NOE detailing how a project fits within a specific categorical exemption and addressing any pertinent exceptions. Although the law does not mandate the adoption of findings, prudence dictates the creation of a written record demonstrating the evidentiary and analytical bases for an agency's factual determinations regarding potential exceptions.
- Substantial Evidence Requirement: Any findings prepared by the agency should be supported by substantial evidence.

4. Public Disclosure and Filing

- Notice of Exemption: Once the agency decides that a project is exempt, it may file an NOE with the county clerk in the county where a project is located and with the State Clearinghouse within the OPR. Filing an NOE is not mandatory but is commonly done to substantially shorten the statute of limitations for a legal challenge based on CEQA.
- Public Access to Information: The documentation supporting a categorical exemption typically becomes available for public consideration a limited period of time prior to consideration of a proposed project by agency decision makers or

[16] https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-19-categorical-exemptions

advisory bodies. At the local level, such documentation would be published in advance of meetings of Planning Commissions, City Councils, and Boards of Supervisors. To ensure compliance with the Brown Act, public notice documents for hearings or meetings on pending projects should mention the exemptions on which agencies intend to rely. State agencies subject to the parallel Bagley-Keene Open Meeting Act should do the same. Sometimes the documentation made available to the public about exemptions includes staff reports, draft resolutions, or draft NOEs that lay out the local agency's reasoning for relying on categorical exemptions. This limited transparency is far less than is required when a project is subject to formal review (30 or 45 days) because a ND, MND, or EIR is required for a project. Still, the limited amount of transparency associated with exemptions, and the fact that they can often be discussed in public hearings on proposed projects, helps to maintain public trust and can reduce the likelihood of legal challenges. Project proponents are free to discuss an agency's intention to rely on an exemption in advance of the formal release of documents before a public meeting or hearing. Such outreach can generate good will and lead to advance awareness of concerns that citizens might have about a project.

5. Legal Considerations

- Potential for Litigation: Incorrect application of exemptions can lead to legal challenges. Therefore, the process must be thorough, transparent, and well-documented.
- Statute of Limitations: The filing of the NOE starts the statute of limitations for legal challenges. If an NOE is filed, challenges must be brought within 35 days of NOE posting. Without an NOE, the limitation period is 180 days from project approval.

6. Record Keeping

- Maintaining Records: Agencies are advised to keep comprehensive records of their decision-making process, including all documentation supporting the exemption determination and any public comments received. Internal and external emails regarding a project should also be preserved. If litigation is filed over a project, the agency must prepare an administrative record. Time can be saved in that process if the agency maintains orderly files prior to the time of action on a project.

7. Addressing Public Comments

- Public Engagement: While public comment is not required for categorical exemptions, such input is often beneficial. Agencies may consider public input, especially in borderline cases or where there's substantial public interest.

8. Ongoing Monitoring

- Post-Approval Monitoring: In some cases, ongoing monitoring of a project might be needed to ensure compliance with the conditions under which the exemption was granted.

Key Limitations and Considerations for Categorical Exemptions (Exceptions):

Agencies must consider the following exceptions (CEQA Guidelines section 15300.2) when intending to use a categorical exemption.

1. Location in Sensitive Environments: Projects located in environmentally sensitive areas may not qualify for certain categorical exemptions (Classes 3, 4, 5, 6, and 11). A sensitive environment in this context is described as “an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.” Under this exception, courts have emphasized the need for some sort of official agency “designation” identifying an area as “an environmental resource of hazardous or critical concern.” Courts have found that projects located in rural areas or in parks lacking such official designations are not subject to this exception.
2. Cumulative Impact: Categorical exemptions may not be used where “the cumulative impact of successive projects of the same type in the same place, over time is significant.” Consideration of such potential cumulative impacts is particularly important when multiple similar projects are proposed in the same area. Importantly, the concept of cumulative impact is geographically narrower here than would be applied in a ND, MND, or EIR. The courts have explained that **“**without a limitation as to the location of the projects whose cumulative impact must be considered, agencies deciding whether the exception applies to a project would be required, in every instance, to consider the cumulative environmental impact of all successive similar projects in their jurisdictions, at least, and perhaps regionally or even statewide. If this were the case, the exception would swallow the rule, and the utility of the [categorical] exemption would be vitiated.”
3. Significant Effect Due to Unusual Circumstances: A project that typically falls under a categorical exemption may require a more detailed environmental review if there are unusual circumstances that could lead to a significant environmental impact. This clause serves as a safeguard against exempting projects that, due to local

conditions, might pose unexpected risks to the environment. This exception has been heavily litigated, and the California Supreme Court has held that the exception requires two distinct analytical steps. The first is whether a project involves “unusual circumstances.” If the answer is yes, then the agency must ask whether such unusual circumstances give rise to “a reasonable possibility that the activity will have a significant effect on the environment.” The agency is entitled to deference from a court on the first question if the determination is supported by substantial evidence. The agency gets less deference on the second question, as the exemption can be defeated by an opponent with substantial evidence that the unusual circumstances may cause a significant environmental effect.

Factors to consider in assessing whether circumstances are unusual include, among other things, conditions in the immediate vicinity of a proposed project; whether a project is consistent with the surrounding zoning and land uses; project features differing from those typical of projects in the exempt class; the proximity of sensitive land uses close to proposed activities generating noise and dust; the scope and size of a project; and “new scientific evidence showing a possible significant effect on the environment that was not available when a previous exemption was granted” for an earlier version of the same project.

4. Damage to Scenic Highways or Historical Resources: Projects that could damage state scenic highways or historical resources cannot be categorically exempt. This includes developments that might alter the visual aesthetics of a scenic highway or adversely affect the integrity of a historical site.

5. Hazardous Waste Sites: A categorical exemption may not be used for a project located on a site which is included on any list of hazardous waste sites compiled pursuant to Section 65962.5 of the Government Code. This list is initially prepared by DTSC and is submitted to the Secretary for Environmental Protection. The list is supposed to be updated periodically, but many sites remain on the list even after they are cleaned up. Project proponents should check to see whether potential sites for proposed projects are on this list. If they are, a categorical exemption is not available, regardless of how clean the site may be.

6. Historical Resources: A categorical exemption shall not be used for a project that may cause a substantial adverse change in the significance of a historical resource. “Historical resource” is a legal term of art defined at length in CEQA Guidelines section 15064.5. Among such resources are those listed in, or eligible for, listing on the California Register of Historical Resources or in a local register of historical resources. The phrase “substantial adverse change in the significance of an historical resource” means “physical demolition, destruction, relocation, or alteration

of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired."

In summary, the process of documenting and applying categorical exemptions under CEQA requires careful consideration and thorough analysis of the applicability of the above exceptions to reduce the risk of legal challenges.

The Most Commonly Used Exemption: The Ministerial Projects Exemption

The most commonly used CEQA exemption – a statutory exemption – applies to "ministerial projects." A ministerial decision is characterized by limited or no personal judgment by the official regarding potential means of reducing or ameliorating the environmental effects of a project. The official's role is mainly to apply existing laws to the presented facts without exercising any significant discretion or judgment with respect to the potential environmental effects of a project.

Examples of ministerial approvals include the routine issuance of building permits and business licenses. The exemption does not apply if the regulatory authority under which a project is reviewed for approval includes applicable discretionary language, by which the approving official may exercise deliberation or judgment with respect to means of reducing or ameliorating a project's environmental effects. Depending on the applicable laws, what is ministerial in one jurisdiction may be discretionary in another. Thus, for example, grading permits can be discretionary or ministerial, depending on the wording of the governing local ordinance. The same is true with respect to building permits, though they are ministerial under most local ordinances. Sometimes an ordinance might include both discretionary and ministerial elements. Whether CEQA applies to such a project depends on whether a project implicates the discretionary elements.

Courts decide on a case-by-case basis when determining if a project is ministerial or discretionary, assessing the level of personal decision making required of the agency official and whether any discretion involved relates to environmental impacts. For example, if an agency has discretion over environmental impacts, even if the authority is not used to deny a permit, the agency action would likely be ruled discretionary. The authority to impose conditions of approval addressed regarding environmental impacts is enough to make an approval discretionary. On the other hand, if an agency has some discretion over the process, but does not have discretion over environmental impacts, the decisions are ministerial in nature, and the exemption applies.

Like with all projects, outcomes depend largely on the agency's level of discretion under applicable laws. For example, in Natural Resources Defense Council, Inc. v. Arcata National Corporation (1976) 59 Cal.App.3d 959, the California Court of Appeal held that CEQA applies to timber harvesting plans (THP). The state forester exercised both

discretionary and ministerial functions. This was because review of the THPs for conformity under the California Forest Practice Rules is essentially ministerial, but the state forester also exercised discretionary review and approval of the plans. The discretionary aspects required the state forester to use personal judgment in evaluating the timber operations, imposing conditions, and determining that the operation follows requirements found in the Forest Practice Act.

For further review, the criteria for distinguishing between ministerial and discretionary projects are elaborated in the 2024 CEQA Statute and Guidelines[17] Chapter IV, Section B covering statutory, regulatory, and judicial guidelines.

"Emergency Actions" Exemption in CEQA

CEQA includes a crucial statutory exemption for actions necessary to prevent or mitigate emergencies. This exemption applies to specific, immediate responses to urgent situations. For example, the immediate threat of wildfire could justify fuel reduction work and the associated handling of forest biomass waste, as further considered below.

Definition of "Emergency" (Public Resources Code Section 21060.3)

Public Resources Code section 21060.3 defines an "emergency" as a sudden and unexpected event that poses a clear and imminent danger, necessitating immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. Examples include fires, floods, earthquakes, or geological disturbances, as well as riots, accidents, or sabotage. This definition emphasizes the need for immediate action in the face of a clear and imminent danger. Notably, long-term projects aimed at preventing or mitigating low-probability future situations do not fall under this definition.

CEQA Guidelines section 15269 outlines specific "emergency projects" exempt from CEQA. These include:

- Projects to maintain, repair, restore, demolish, or replace property or facilities damaged or destroyed in a declared state of emergency.
- Emergency repairs to service facilities necessary for maintaining essential public services.
- Highway projects within existing rights-of-way initiated within a year after damage from natural occurrences like fires, floods, or landslides. This exemption does not apply to scenic highways or highway expansion projects.

[17] https://www.califaep.org/docs/2024_CEQA_Statute_and_Guidelines_Handbook.pdf

- Seismic work on highways and bridges under the Streets and Highways Code section 180.

Case Study One: Western Municipal Water District v. Superior Court (1986) 187 Cal.App.3d 1104

In this case, the Court of Appeal ruled against a water district's misuse of the emergency exemption. The district treated a long-term groundwater level issue as an emergency, despite a low annual probability of a major seismic event that could cause problems. The court emphasized a narrow interpretation of "emergency" to prevent undermining CEQA's environmental protection goals, arguing that broad application could exempt large-scale projects like deforestation or new highways under the guise of mitigating disaster impacts.

Case Study Two: Los Osos Valley Associates v. City of San Luis Obispo (1994) 30 Cal.App.4th 1670

In this case, the city of San Luis Obispo claimed an emergency exemption to address subsidence damage from its groundwater pumping program. However, the Second District Court of Appeal dismissed this claim. The city had filed a notice of exemption citing the statutory emergency action exemption, but the court noted that CEQA's emergency exemption should not be used to circumvent environmental review for actions responding to long-term issues.

Case Study Three: *CalBeach Advocates v. City of Solana Beach* (2002) 103 Cal.App.4th 529

In this case, the project at issue involved the proposed construction of a seawall on a bluff below several existing homes. After the city lead agency prepared a proposed MND for the seawall, the applicant’s engineer concluded, based on a recent site visit, that it had become necessary for the homeowners to take “immediate action” to protect their homes by construction of the seawall. The engineer added that if the affected bluff were not stabilized, “there is a high likelihood that this section of coastal bluff will also collapse this winter, placing the bluff-top residences in immediate peril.” He also said that, if the city were required to prepare a full EIR, as project opponents were demanding, “there is no question” that the bluff would collapse before the EIR was completed. In light of these concerns, the city approved the seawall based on the statutory exemption for emergencies. The court rejected the project opponents’ argument that bluff failure was not “unexpected” and thus should not fall within the exemption. The court agreed that bluff failure was not unexpected but found that “anticipation of a collapse does not prevent it from being an emergency.” Though a bluff failure was anticipated in the relatively near future, its exact timing could not be

predicted. The exemption for emergencies applies not only to “projects that mitigate the effects of an emergency but also projects that prevent emergencies.”

A biomass utilization project could possibly be associated with the removal of fire salvage operation serving to dispose of wood associated with a fire. Such a project would be mitigating the effects of an emergency after it has occurred. While this would be a novel use of the exemption, the disposal of fire salvage can be a critical part of an emergency response plan, particularly when environmental consequences of leaving the wood waste on the forest floor is considered. Toxins can leach into the water table from such wood waste, methane is emitted as wood rots, and impacts on wildlife can be dire. Serious consideration of this exemption should be a part of any wood waste processing that is associated with wildfire recovery.

CEQA Statutory Exemptions Located Outside of the Public Resources Code

The Legislature has incorporated numerous statutory exemptions into CEQA, some of which are significant. However, a challenge for locating such exemptions within the mass of California codes and statutes arises because many of these exemptions are not included in CEQA itself but in other statutes, making them hard for the public to find. Despite this difficulty, the CEQA Guidelines section 15282, added in 1997, has made many of these exemptions more accessible. One such exemption is financial instruments and waste management plans.

> *“Financial Instruments: Issuance or refunding of bonds under the California Pollution Control Financing Authority Act.” (California Health and Safety Code, Section 44500 - 44559.14)*

The California Pollution Control Financing Authority (CPCFA) Act establishes a framework for financial assistance to environmentally beneficial projects in California. The CPCFA assists businesses, non-profits, and public agencies in obtaining financing for projects that improve air and water quality, waste disposal improvements, and other environmentally focused activities. The Act offers financial support through tax-exempt bonds, loans, and credit enhancements, primarily targeting projects focused on pollution control and resource recovery. This support could be pivotal for projects that convert forest biomass into energy, biofuels, or other products, and given the capital-intensive nature of these projects, CPCFA's financial assistance can make them more viable for businesses or public entity developers.

Applicants seeking CPCFA financing must demonstrate their project's environmental benefits, financial viability, and regulatory compliance. This financing is particularly advantageous for small and medium-sized enterprises (SMEs), which might otherwise struggle to find such funding. It is particularly useful that any refunding of a bond under the CPCFA Act does not trigger additional environmental review. A project will only

have to go through the CEQA process at the time the project is funded, and not again when the bond is paid back.

> *Industrial Development: Actions by industrial development authorities under the California Industrial Development Financing Act. (California Government Code, Title 10 Chapter 1 § 91500-91562)*

The California Industrial Development Financing Act of 1976 set up the Industrial Development Authority[18] (IDA) in California to boost economic growth. The IDA issued tax-exempt industrial development bonds (IDBs) to finance the construction or improvement of manufacturing facilities. These bonds offered lower interest rates than traditional financing, aiding businesses in expansion and modernization. The Act aimed to create jobs, stimulate local economies, and increase the state's industrial capacity. Over time, details such as eligibility and bond issuance[19] processes may have evolved, so current legal texts or state resources should be consulted for the latest information. The California Industrial Development Financing Act could play a significant role in supporting the forest biomass industry by providing financial incentives through tax-exempt industrial development bonds. This support could make it more economically viable for companies to establish or expand forest biomass processing facilities, aligning with the Act's goal of stimulating economic growth and job creation, particularly in forested regions.

> *Waste Management: County adoption of a "non-disposal facility element" required by the California Integrated Waste Management Act. (Cal. Pub. Resources Code § 40050)*

The California Integrated Waste Management Act of 1989, commonly known as AB 939 (Statutes of 1989), is a significant law focused on waste management and recycling in California. This Act led to the creation of the California Integrated Waste Management Board (CIWMB) and set challenging targets for reducing landfill waste. When the CIWMB was dissolved by statute in 2010, its duties fell to CalRecycle. Under AB 939, local jurisdictions were required to create waste management plans that emphasized source reduction, recycling, and composting, and they had to report on their progress to CalRecycle, which enforced compliance. The Act also set standards for the operation of waste facilities and included initiatives for public education on recycling and waste reduction. The plans developed under AB 939 could encourage the utilization of forest biomass, such as using wood waste in energy production, and support the development of new markets and technologies for forest biomass. The contents of these Plans could

[18] https://www.ibank.ca.gov/bonds/industrial-development-bonds/
[19] https://www.ibank.ca.gov/bonds/industrial-development-bonds/

be helpful for projects looking to align with Waste Management Authority Disposal efforts.

The different exemptions discussed above could be associated with financial instruments used to pay for bioenergy or wood products facilities. They could also provide an exemption for planning documents that contain local government plans to process forest biomass, which could be helpful when working on such projects in conjunction with public entities or public funding support.

Exemptions Specific to Bioenergy or Wood Products

Depending on the project, there could be an application of several of the exemptions listed above. Two exemptions of particular interest are the exemption for co-generation facilities and the exemption for projects that curb the release of hazardous substances.

CEQA Exemption 15329

CEQA Categorical Exemption 15329 is a specific provision under the CEQA Guidelines that pertains to cogeneration projects at existing facilities. This exemption is found in Cal. Code Regs. tit. 14 § 15329. The exemption covers the installation of cogeneration equipment with a capacity of 50 MWs or less at existing industrial facilities or “commercial and industrial” facilities. If an existing industrial facility installs a cogeneration facility, it can be exempt if it results in no net increases in air emissions from the industrial facility, or the emissions produced are lower than the amount that would require review under the new source review rules applicable in the county. Moreover, the installation must comply with all applicable state, federal, and local air quality laws. Where the facility is a “commercial and industrial” facility (a term that is not defined), two additional requirements apply. First, the project must result in no noticeable increase in noise to nearby residential structures. And second, the project must be contiguous to other commercial or institutional structures.

An example of a project that would fall under this exemption is the development and demonstration of distributed biomass Combined Heat and Power based microgrid systems. This involves developing and operating a novel dispatchable multi-modal biomass energy microgrid at an existing facility. Such projects are considered exempt under this specific section of the CEQA exemptions, as a multi-modal biomass energy microgrid could align with the conditions outlined for cogeneration projects at existing facilities.

While Section 15329 specifically addresses cogeneration projects at existing facilities, applying this exemption to brownfield sites would require a project to meet the defined criteria, such as no net increases in air emissions and compliance with all applicable air quality laws. For brownfields, this could mean that if a redevelopment project includes

the installation of cogeneration equipment as part of a broader plan to rehabilitate and repurpose the site, and if a project adheres to the conditions set out in Section 15329, it might qualify for this categorical exemption under CEQA, if the site is not located on a site included on the Cortese list compiled pursuant to Government Code section 65962.5.

The application of any CEQA exemption to a brownfield project also necessitates a careful analysis of potential environmental impacts, as highlighted by the California Supreme Court's guidance on categorical exemptions. This includes determining whether there are "unusual circumstances" associated with a project that could result in significant environmental effects, which would then require a more thorough environmental review process. In the context of brownfields, these unusual circumstances could include factors like site contamination levels, location, previous industrial uses, or proximity to “sensitive receptors” which refers to locations or entities that are particularly susceptible to noise impacts (e.g., residential areas or protected natural habitats). Agencies and developers must assess whether the specific conditions of a brownfield site, combined with the proposed redevelopment plans, might present unusual circumstances that would preclude the use of a categorical exemption. If a project could have significant environmental impacts due to these circumstances, then a more detailed EIR or a MND might be required instead of relying on an exemption.

Ultimately, applying CEQA exemptions like Section 15329 to brownfields involves a careful, project-specific analysis that balances the goals of redevelopment with the protection of environmental and public health. Agencies and developers must ensure that substantial evidence supports the use of any exemption and that all potential environmental impacts are adequately addressed in line with CEQA Guidelines and judicial interpretations.

CEQA Exemption 15330

The categorical exemption found in CEQA Guidelines section 15330 is another exemption that could apply, as it specifically addresses certain minor actions to prevent, minimize, stabilize, mitigate, or eliminate the release of hazardous wastes or substances. This exemption is applicable when the action involves cleanup efforts that comply with all applicable federal, state, and local laws and regulations regarding hazardous waste and substances. It is particularly relevant for small-scale cleanup projects that do not have a significant effect on the environment.

Using this exemption would be novel in the biomass context, as none of enumerated examples of “minor cleanup actions” that fall under the exemption are analogous to activities clearing forest floors of accumulated vegetative fuel, but the list is not intended

to be all inclusive, and such forest-clearing activities are arguably analogous to the enumerated examples, at least where the materials are contaminated with some sort of potentially hazardous materials. The application of CEQA exemption 15330 to biomass utilization projects involves certain specific scenarios, albeit under stringent conditions.

Biomass utilization generally refers to the conversion of organic materials like forest waste, agricultural residues, or urban wood waste into energy, bioproducts, wood products, or soil enhancement products. This exemption could play a role in cases where biomass accumulation presents an environmental hazard. For instance, in regions where the buildup of dry biomass significantly increases the risk of wildfires, projects aimed at removing or treating this biomass could potentially qualify for the exemption. This is under the premise that these projects are small-scale and do not significantly impact the environment, aligning with the core requirements of CEQA exemption 15330.

Projects within this scope might include small facilities converting hazardous biomass into biochar or energy. These initiatives must strictly adhere to environmental, health, and safety standards to qualify for the exemption. They should not pose additional environmental risks and must comply with all regulatory requirements related to emissions, waste disposal, and other environmental impacts. Additionally, biomass utilization can be part of broader environmental restoration efforts. In such cases, if a project includes the removal or treatment of hazardous substances as a component of ecological rehabilitation, it might be considered for exemption. This is particularly relevant when the utilization of biomass directly contributes to mitigating environmental hazards, such as reducing GHG emissions or preventing soil erosion.

Using this exemption would be a novel approach, so it is crucial that the lead agency and developer have explored this avenue fully, keeping in mind that it does not exempt projects from complying with other applicable laws and regulations. Therefore, any biomass utilization project seeking this exemption should undergo a comprehensive evaluation to ensure it meets the necessary criteria.

CEQA Exemption 15332

CEQA Guidelines section 15332 creates a categorical exemption for “in-fill development” located on sites of no more than five acres located within city limits. Although not available for projects located on land in unincorporated areas within counties, this exemption is available for biomass projects in cities that meet the criteria and limitations set forth in section 15332. To quality, all of the following conditions must be met: (a) a project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations; (b) the proposed development occurs within city limits on a project site of

no more than five acres substantially surrounded by urban uses; (c) a project site has no value as habitat for endangered, rare, or threatened species; (d) approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and (e) the site can be adequately served by all required utilities and public services. There is no minimum size for the city in which such infill development can be proposed. Thus, small cities in relatively rural regions could qualify. Nor is there any definition of what “urban uses” means for this exemption.

This exemption has enormous potential for projects proposed within incorporated cities (of any size) on sites of no more than five acres, provided that the proposed industrial use is allowed under the general plan and zoning. The key to making as defensible an administrative record as possible is to generate supporting substantial evidence on each of the required elements of the exemption, such as, for example, the “urban” character of surrounding uses, the absence of “endangered, rare, or threatened species” (see Guidelines, § 15380 and Nassiri v. City of Lafayette (2024) 103 Cal.App.5th 910), the absence of significant effects relating to traffic, noise, air quality, or water quality, and the availability of utilities to serve the site. The approving agency (with an applicant’s help) should also document with evidence and analysis the absence of any exceptions to the use of the exemption (e.g., the cumulative impact, unusual circumstances, hazardous waste sites, and historical resources exceptions). A well-documented exemption will get the benefit of a deferential judicial standard of review in the event of any legal challenge.

The Common-Sense Exemption and its Narrow Applicability

Another interesting exemption is found in CEQA Guidelines section 15061, subdivision (b)(3). The “common sense” exemption is a limited “catch-all” exemption that may be applicable if a project does not qualify for any statutory or categorical exemption. This exemption applies “where it can be seen with certainty that there would be no possibility that the activity in question may have a significant effect on the environment.” The exemption “provides a short way for agencies to deal with discretionary activities which could arguably be subject to the CEQA process, but which common sense provides should not be subject to the Act.” Thus, the exemption only applies if the absence of environmental impact is so clear and obvious that requiring an EIR would be a waste of time and resources. CEQA errs on the side of conducting review when in doubt, and the same applies to this exemption, which results in narrow applicability.

When relying on the general language of this exemption, agencies have some obligation to lay out, in some form or fashion, the evidence from their administrative records on which they are relying. This court-imposed requirement is understandable given that, when compared with fact-specific language found in statutory and

categorical exemptions, the language in the common-sense exemption is vague and open-ended, creating the potential for abuse. Even so, "[d]etermining whether a project qualifies for the common-sense exemption need not necessarily be preceded by detailed or extensive fact finding. Evidence appropriate to the CEQA stage in issue is all that is required."

In trying to imagine what kinds of impacts a project might cause, agencies should use their common sense. As one court explained, "[a] remote or outlandish possibility of an environmental impact will not remove a project from the common--sense exemption, but if legitimate, reasonable questions can be raised about whether a project might have a significant impact, the agency cannot find with certainty a project is exempt."

Although the CEQA Guidelines provide no examples of qualifying projects, possible examples could include interior remodeling, small structures like sheds, or other minor or temporary land uses. After careful review and examination, issues may come to light on a project that appeared at first glance not to have an environmental impact. An example would be clearing brush for fire prevention, which could impact sensitive species or potentially cause soil erosion.

Courts have upheld the common-sense exemption in appropriate fact situations; however, due to the complex nature of bioenergy projects, it may not apply to a bioenergy or wood products project. Yet, if a bioenergy project is small, rurally located, and the air emissions are controlled, the common-sense exemption could be applicable. Typically, it has been applied in cases of minor retrofits and small, tightly regulated and temporary pilot projects. If the biomass project is larger and/or located near neighborhoods, environmental impacts like noise, traffic, fire risk, water, waste, and land use are more likely, thus necessitating review. The exemption has not been approved for projects involving experimental technologies, processing substantial amounts of feedstock, increasing truck traffic, or when additional infrastructure is a concern. While projects are examined on a case-by-case basis, more often than not they do not qualify for the common-sense exemption.

The Application of Exemptions in 2023: A Case Law Overview

A discussion of a year's worth of case law on CEQA exemptions helps to illustrate how they function in practice, and what potential pitfalls agencies and project applicants should keep in mind. Below is a discussion of such cases from 2023.

In *United Neighborhoods for Los Angeles v. City of Los Angeles* (2023) 93 Cal.App.5th 1074, the Court of Appeal rejected a city's attempt to rely on the Class 32 exemption for infill development within cities. The project at issue was a proposed hotel that would

replace 40 apartments subject to the city's rent stabilization ordinance. The city had not demonstrated that the project was consistent with all relevant general plan policies and had not shown that the project complied with housing element policies mandating the preservation of affordable housing stock.

In *Arcadians for Environmental Preservation v. City of Arcadia* (2023) 88 Cal.App.5th 418, the Court of Appeal upheld the use of the Class 1 categorical exemption for the minor alteration of a private structure. The project at issue involved a proposal to expand the first story of a 1,960-square-foot single-family ranch-style home and to add a second story. Neighbors attacked the project on several counts, including an allegation that exceptions for unusual circumstances and cumulative impacts should defeat the city's ability to rely on the Class 1 exemption. With respect to the cumulative impact exception, opponents noted that other projects were proposed in the same general vicinity, but offered only speculation as to how those projects, combined with the project at issue, could result in significant cumulative impacts.

In *Pacific Palisades Residents Assn., Inc. v. City of Los Angeles* (2023) 88 Cal.App.5th 1338, the Court of Appeal upheld a city's use of the Class 32 exemption for infill projects in connection with approval of an eldercare facility. The court rejected the opponents' contention that the city had erred in finding that the project complied with general plan policies governing compatibility with adjacent land uses. The court also rejected the argument that the affected suburban neighborhood was insufficiently "urban" to allow the project to qualify for the exemption.

In *Coalition for Historical Integrity v. City of San Buenaventura* (2023) 92 Cal.App.5th 430, the Court of Appeal upheld a city's reliance on the "common sense" exemption for its decision to remove and relocate a controversial statue of a Spanish missionary priest. The opponents' main argument, which the court rejected, was that the city was required to treat the statute as an "historical resource" entitled to special protection under CEQA.

In *Anderson v. County of Santa Barbara* (2023) 94 Cal.App.5th 554, the Court of Appeal upheld the use of the Class 1 (existing facilities) and Class 4 (minor alterations to land) categorical exemptions in connection with a county's decision to enforce a prohibition against unpermitted encroachments onto a public right of way. Violation of this prohibition was a misdemeanor. Over a period of years, landowners along a county road had placed boulders, landscaping, and other impediments within the right of way, eliminating parking places for a popular nearby trailhead. When the county told the landowners to clear away these impediments, the landowners sued under CEQA, claiming that the effects on the environment would be adverse. They argued that

clearing up the right of way would create additional parking spaces, which would attract more hikers and complicate evacuation efforts during a wildfire. The court rejected these claims, holding that "CEQA is not a defense to the commission of a crime." The landowners had violated the law and had to remove their physical objects from public property. The court also rejected the contention that the county's enforcement action was part of a larger "parking creation" project that required environmental review. Clearing out the right of way was a legitimate stand-alone project that could go forward on its own.

In *Historic Architecture Alliance v. City of Laguna Beach* (2023) 96 Cal.App.5th 186, the Court of Appeal upheld a city's reliance on the Class 31 categorical exemption for the restoration or rehabilitation of historical resources. In approving the proposed remodeling and expansion of an historic residence, the city had concluded that the project plans were consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties, as required for the exemption. The opponents argued that there was substantial evidence supporting a "fair argument" that the project plans were not consistent with these standards, and that such a fair argument was sufficient to defeat the categorical exemption. The court disagreed, holding that a deferential standard of judicial review applied, by which the city's determination of consistency must be upheld if supported by substantial evidence. Finding such substantial evidence, the court upheld the city's finding of consistency and reliance on the exemption.

Finally, in *California Construction and Industrial Materials Association v. County of Ventura* (2023) 97 Cal.App.5th 1, the Court of Appeal upheld a county action creating a wildlife corridor overlay zone, which the county had treated as categorically exempt from CEQA under the Class 7 and Class 8 categorical exemptions for actions taken by regulatory agencies to maintain, restore, or enhance natural resources and the environment. A trade organization representing mining operators was concerned that the overlay might preclude future mining operations. The court found that wildlife is an example of a "natural resource" that can be protected under the Class 7 exemption and rejected arguments raising potential exceptions to the two exemptions.

An Exemption Does Not Apply: Next Step is the Initial Study

Once an agency has determined that there is no exemption that can apply for a project, the next step is to determine if a project "may" have a *significant* impact on the environment, as defined by CEQA. This preliminary analysis is accomplished through the Initial Study, but if it is already clear to a project proponent or lead agency during preliminary review that a significant impact may exist, the proponent may at its discretion with lead agency agreement stipulate during to do an EIR and forego the Initial Study as a time and effort-saving decision.

To complete the Initial Study, the lead agency staff may review any information submitted to them, as well as rely on expert opinion or other substantial evidence. If a delay is necessary, the Initial Study may be deferred until all the needed input is received. As mentioned earlier, agencies often rely on third party consultants to draft these documents on behalf of projects. As part of the process, the lead agency must consult with all other impacted agencies to solicit their input and recommendations, including providing transportation agencies with all related environmental documents for larger projects. This consultation may or may not occur during the initial study development stage, or later in the process. For private projects, the lead agency may also consult with the applicant to determine the applicant's willingness to reduce potentially significant impacts through project revisions.

The format of the Initial Study may vary; however, there are required elements. CEQA Guidelines section 15063, subdivision (d)[20] states what must be included. It states the Initial Study must have a description of a project, its location, environmental setting, and environmental effects with explanations, attachments, and source references as necessary. Also required is information regarding (1) who prepared the report, (2) whether a project is in line with existing zoning and land use regulations, and (3) if possible, measures to mitigate any significant or potentially significant environmental effects.

Overview

CEQA's Appendix G: Environmental Checklist is a sample Initial Study checklist that is widely used by lead agencies and environmental consultants. It is used as a screening tool to help lead agencies determine the potential environmental impact of a proposed project, formulate proposed mitigation measures, and determine whether an EIR (as opposed to a ND or MND) might be required for a project.

While Appendix G contains language stating that agencies need not follow its exact format, it also includes language stating that the questions and topics included within it should be addressed if they are relevant to a project. Although the list of topics is comprehensive and represents an attempt to cover virtually all environmental issues that might arise in connection with a project, the courts have held that some projects raise issues that are not covered in Appendix G. Thus, there may be some instances in which a CEQA analysis will be found deficient for failing to address topics not mentioned in Appendix G. Therefore, people who prepare Initial Studies should try to

[20] https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-5-preliminary-review-of-projects-and-conduct-of-initial-study/section-15063-initial-study

ascertain whether particular projects may raise environmental impact issues beyond those mentioned in Appendix G. An example of an environmental impact category not mentioned in Appendix G is “urban decay,” which sometimes results from retail projects that can put competitors out of business and lead to the abandonment of formerly economically productive property. This impact involves the physical deterioration of such property and is analogous to the concept of “blight” that once existed in California Redevelopment law. The potential for urban decay often comes up when communities raise concerns that a bioenergy business may fail and leave old equipment on the property. Consideration of urban decay and other impacts not listed in Appendix G may sometimes be essential to address how projects might affect the social fabric and cultural identity of communities, particularly those that are historically marginalized or vulnerable.

Answers to the questions posed in Appendix G (or a similar checklist) guide the lead agency directly to the appropriate level of project review. The key question is whether substantial evidence supports a fair argument that the project may have a significant environmental effect and therefore trigger the need for an EIR rather than an ND or an MND. With this fundamental question in mind, the individual checklist questions for individual environmental categories attempt to determine whether a project may have significant environmental effects in particular impact categories. Sometimes the initial answer is yes, but the effects can be mitigated to a less than significant level by mitigation measures to which a project proponent has agreed.

With respect to these individualized checklist questions, the form allows for one of four responses: Potentially Significant Impact, Less Than Significant with Mitigation Incorporated, Less Than Significant Impact, and No Impact. Once answered, a brief explanation is required for all answers except a No Impact response based on non-applicability. The explanations must speak to the whole action, not just parts of a project. As stated in Appendix G, the “whole action” includes “off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.” The explanation should also include the criteria used to evaluate significance. Where the initial conclusion is that an impact would be potentially significant, the explanation may include any mitigation measure that would render the impact less than significant. For such a measure to be considered sufficient to avoid triggering the need for an EIR, the measure must be one to which the project proponent or applicant has agreed. To support their factual conclusions, lead agencies are encouraged to reference, cite, and/or attach supporting documents.

When complete, the Initial Study process states whether a project is eligible for an ND or MND or will instead require an EIR. An ND will be appropriate where all impacts will

be less than significant even without mitigation measures and there is no substantial evidence that any impacts may be significant. An MND will be appropriate where all impacts are either less than significant without mitigation or less than significant with mitigation measures to which the project proponent or applicant has agreed, and there is no substantial evidence that any impacts may be significant.

An EIR will be necessary where substantial evidence supports a fair argument that one or more impacts may be significant. Sometimes an Initial Study can be used as a basis for limiting the topics that will be addressed in detail in the EIR. In such circumstances, the Initial Study can be circulated as an appendix to the EIR in satisfaction of the requirement that the EIR "contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."

Negative Declaration and Mitigated Negative Declaration

As explained above, the Initial Study is the tool that the lead agency uses to determine what, if any, environmental impacts may result from a project, and thus what further review is necessary. If there is substantial evidence showing that a project may have a significant environmental impact in any category, the more comprehensive EIR is required. If there is no such substantial evidence and a project has been determined to have no potentially significant impacts that require mitigation, then an ND can be used for review. If any impacts are potentially significant but can be clearly mitigated to less than significant levels by taking certain actions to which a project proponent or applicant has agreed, then an MND is the document applied to a project, which is discussed more below. The appropriateness of either an ND or an MND is subject to change, depending on whether the lead agency, during formal public review of either type of document, receives comments from other agencies or members of the public that include substantial evidence that a project may have a significant effect on the environment.

Negative Declaration

If a lead agency determines that there is no substantial evidence of a reasonably foreseeable significant adverse environmental impact from the proposed project, an ND is issued. In making this determination, the whole record is considered. The ND must contain the following information: (a) a brief description of the project, including a commonly used name for the project, if any; (b) the location of the project, preferably shown on a map, and the name of the project proponent; (c) a proposed finding that the project will not have a significant effect on the environment; and (d) an attached copy of the Initial Study. It is good practice to also include the current environmental setting and

land uses in which the project will be located, a list of public agencies whose approvals will be required, and information regarding tribal consultation.

The ND cannot be adopted until after there is a public review period of either 20 or 30 days and the agency has taken into consideration any comments received during the review period. Then that information is presented to the agency decision maker. However, a longer review period of at least 30 days (rather than 20) is necessary whenever any one of the following circumstances is present: (1) a state agency is the lead agency, a responsible agency, or a trustee agency; (2) a state agency otherwise has jurisdiction by law with respect to a project; or (3) the proposed project is of sufficient statewide, regional, or areawide significance. This 30-day comment period is more common than a 20-day comment period because many projects can be considered to have some regional impact, and it may be legally risky to undertake a 20-day review period when it is unclear whether there are circumstances requiring the additional 10 days.

“Adoption” of an ND is not the same as “approval” of the overall project for which the ND was prepared. Rather, in the absence of any CEQA exemption, such adoption may be a necessary (though separate) step to be taken before project approval can occur. Environmental impacts of a proposed project are just one of many factors that agency decision makers must weigh when considering whether to approve a project. Although CEQA does not require the adoption of any formal findings at the time of ND adoption, lead agencies may choose to approve such findings to create a strong administrative record where a legal challenge seems possible. After the agency decision makers approve a project, the agency has five working days in which to transmit a Notice of Determination (NOD) to the State Clearinghouse and (for local approvals) to the County Clerk of the county in which a project is located. As a reminder, the posting of the NOD by the County Clerk or State Clearinghouse commences a 30-day statute of limitations for the filing of CEQA lawsuits challenging the agency’s project approval.

In the context of bioenergy and wood products projects, the ability to approve a project through an ND is rare as there will likely be at least some impacts to the environment that would require mitigation, which are handled through MND.

Mitigated Negative Declaration

After an Initial Study review, an MND may also be issued. This approach is used when a project may potentially have significant adverse environmental effects, but they can clearly be reduced to less than significant levels by requiring mitigation measures to which the project proponent or applicant has agreed. Examples of mitigation measures include actions such as: halting work upon encountering archaeological resources during construction and then assessing and either avoiding or cataloging those

resources; limiting tree removal; creating permanent conservation easements to protect sensitive habitat or valuable farm land; agreeing to undertake best management practices to reduce air or water pollution; imposing traffic management plans; using energy efficient lighting; and using design standards to reduce aesthetic effects. Generally, mitigation is set to occur in two phases, either during construction or during ongoing project life. Within these two timeframes, mitigation implementation may vary: additional survey work may need to occur prior to construction; noise mitigation may be necessary during construction; extending utilities could be constructed prior to or after Certificate of occupancy; and limiting hours of operation could occur after project completion.

A complex issue relating to the timing of mitigation is whether a project is "deferring mitigation." The first case addressing deferred mitigation was issued in 1988 (Sundstrom v. County of Mendocino 202 Cal.App.3d 296, 306-309) and the first case allowing it in some circumstances was in 1991 (Sacramento Old City Association v. City of Sacramento 229 Cal.App.3d 1011, 102-1029). Currently, CEQA Guidelines state the applicable rules as follows:

> "Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures shall not be deferred until some future time. The specific details of a mitigation measure, however, may be developed after project approval when it is impractical or infeasible to include those details during a project's environmental review provided that the agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard and that will considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar process may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards."

Another important aspect of applying the appropriate mitigation for an impact is that there must be a "nexus" and "rough proportionality" between the impact and the mitigation. These are principles derived from the U.S. Constitution. The concept of "nexus" is that mitigation measures must be aimed at environmental harm that would be caused by a project. In other words, an agency may not use the fact that a project proponent requires a permit or other approval to extract some sort of public benefit unrelated to the actual impacts of a project. The concept of "rough proportionality" requires that the extent of mitigation required for a project must, at most, generally

match the extent of the environmental harm to which it is addressed. Private applicants cannot be made to go beyond mitigating the impacts of their projects so that they are providing net benefits to the public at large.

Though clear in principle, this latter constitutional limitation is sometimes challenging in practice, as the impossibility of replacing a lost resource in the short term or the uncertainty associated with the success of replacing the resource in the long term, might justify what seems like over mitigation. For example, it may be necessary to plant more than one small sapling to replace the loss of a mature 250-year-old heritage oak tree. Since one sapling will not be an adequate replacement for a very long period of time, opinions can differ as to how many saplings would be necessary to achieve a "roughly proportional" mitigation response.

In general, it is important that mitigation measures be appropriate, accurate, clear, measurable, sufficiently detailed, and allow for modification if necessary. The mitigation plan must include details of what is required, how the requirements will be satisfied, and who is responsible. It should provide assurances that the mitigation will be implemented in time to resolve identified potential environmental harm. The responsible agency must either have the expertise and equipment to achieve the mitigation, or it must bring in outside assistance. The mitigation must be within the discretionary powers of the lead agency and be fully enforceable, as CEQA does not grant agencies new powers beyond those they already possess. An example of a legally problematic mitigation measure would be one where a city requires public improvements on federal land over which the city has no control or jurisdiction or one in which a special district with limited powers requires actions outside its territorial boundaries and beyond its legal authority.

The MND must document the substantial evidence supporting the conclusions that various impacts will either be less than significant without mitigation or less than significant with mitigation and provide an evaluation of how the required mitigation measures will clearly reduce potentially significant impacts to less than significant levels. If a mitigation measure will itself create an environmental impact, that impact also must be evaluated. If the lead agency determines that an impact is still significant after mitigation is applied, then a project must move forward with the preparation of an EIR rather than an MND.

The mitigation measures that are added to a project through the Initial Study process must be agreed upon by the applicant and lead agency, along with monitoring and reporting that ensures mitigation implementation. The documents are then circulated for a 20- or 30-day public review period (30 is the normal period), and any comments must be considered, although no written responses are required. Depending on the nature and substance of comments received during this period, a project may be ready for

consideration on its merits or recirculation of the MND for an additional 30 days might be necessary.

"A lead agency is required to recirculate an ND when the document must be substantially revised" after the close of the public review period. A "substantial revision" is either (1) "[a] new, avoidable significant effect is identified, and mitigation measures or project revisions must be added to reduce the effect to insignificance", or (2) "[t]he lead agency determines that the proposed mitigation measures or project revisions will not reduce potential effects to less than significance and new measures or revisions must be required." In other words, recirculation of an MND is required: (1) where public comments have identified a new significant impact that must be mitigated with new measures to become less than significant or (2) where it has become clear that the previously proposed mitigation measures actually are not sufficient to reduce impacts to less than significant levels, and new or strengthened measures are needed to get the impacts to less than significant levels.

MNDs can be adopted in one of three ways, depending on: (1) the nature of the project approvals required, (2) the rules governing those approvals, and (3) the identity of the initial or ultimate decision maker for the approvals. The three options are adoption by the planning director (or equivalent staff person); adoption by the planning commission; or adoption by the main governing board of the entity, such as a county board of supervisors, a city council, or other elected or appointed body. After approval, there is a 30-day statute of limitations for those who may wish to file litigation under CEQA.[21] This 30-day clock begins to run from the date that the NOD is posted by the State Clearinghouse or the County Clerk of the county in which a project is located.[22]

Environmental Impact Reports

If the lead agency determines that there is substantial evidence that any aspect of a project (either on its own or in sum) may cause a significant environmental impact and there is no possibility that mitigation measures can clearly reduce any such impact to a less than significant level, the lead agency must prepare an EIR for a project. Though the agency might be persuaded by other substantial evidence indicating that all impacts will be less than significant, an EIR is still required if it can be fairly argued based on substantial evidence that one or more impacts may be significant. This is particularly true where the evidence that the impacts may be significant has been submitted by a qualified expert. The CEQA Guidelines state that, "If there is disagreement among

[21] PRC 21167
[22] PRC 21108

expert opinion supported by facts over the significance of an effect on the environment, the Lead Agency shall treat the effect as significant and shall prepare an EIR."

The EIR is more comprehensive and time consuming to complete than the ND or MND, although MNDs may be quite detailed depending on the complexity of issues. The EIR provides detailed information on a project's potential environmental effects, ways to minimize those effects, and alternatives to the project. Specifically, the report contains a summary of the project, its impacts, and recommended mitigation measures. Details about the project and the environmental setting, along with applicable regulations, establishes the baseline for the impact analysis section, which examines impacts on air quality, noise, transportation, and many other environmental and natural resources. The significance of the impact, along with proposed mitigation measures, is also included within the impact analysis. Possible cumulative impacts over time are explored as well as an analysis of reasonable, potentially feasible alternatives that could reduce any of the significant impacts of the proposed project while attaining most of the basic objectives of the project.

Other sections within the EIR include information on project impacts that would induce growth, significant irreversible environmental changes, and effects that would not be significant. Significant unavoidable impacts that cannot be mitigated to less than significant must be summarized. The EIR must also have a table of contents; a list of the agencies, other organizations, or private individuals consulted during the EIR process; and the identities of the persons, firm, or agency that prepared the EIR.

Guidelines Section 15082 outlines specific scoping meeting requirements for projects of statewide, regional, or areawide significance as defined by Section 15206. For such projects, the lead agency must conduct at least one scoping meeting. This meeting should be held as soon as possible, but no later than 30 days after it's requested. If the project may affect facilities under the Department of Transportation's jurisdiction and the department requests a meeting, it must be called within 30 days of receiving the request.

The lead agency is required to provide notice of the scoping meeting to any county or city that borders on a county or city within which the project is located, any responsible agency, any public agency with jurisdiction by law over the project, and any organization or individual who has filed a written request for the notice. A scoping meeting held pursuant to the National Environmental Policy Act (NEPA) in the city or county where the project is located can satisfy this requirement, provided the lead agency meets the specified notice requirements. To determine if a project is of statewide, regional, or areawide significance, the lead agency must evaluate it against the criteria outlined in Section 15206. These criteria include projects with potential significant environmental

effects extending beyond the local area, large-scale developments, projects affecting sensitive environmental areas or wildlife habitats, those interfering with regional water quality standards, and projects providing housing or jobs for 500 or more people within 10 miles of a nuclear power plant.

To begin the EIR process, a brief Notice of Preparation (NOP) is circulated for 30 days. This document is prepared by the lead agency and shared with responsible agencies, trustee agencies, OPR, the county clerk in which the proposed project would be located, and individuals and organizations that have requested NOPs. The purpose of the NOP is to obtain input as to the EIR scope and content. The next step is the draft EIR, which is usually prepared by consultants under the direction of the lead agency. The draft EIR is the initial version of the document made available to the public. It is created using input received from the NOP process.

Once the draft EIR is ready, a Notice of Completion is filed with OPR, and the public notice is published in one or more newspapers of general circulation. The draft EIR is then circulated for a minimum of 45 days, though some agencies provide for longer periods. Public review periods should not be longer than 60 days except in “unusual circumstances.” This public review period allows agencies and the public to provide feedback regarding the EIR and the project. In the final EIR, the lead agency responds to comments and makes any necessary revisions to the draft. In addition to the information in the draft EIR, the final EIR includes copies of the public comments, written responses to significant environmental issues raised in the comments on the draft EIR, and any revisions or clarifications made in response to the comments.

After the final EIR is completed, the lead agency’s decision-making body is able to “certify” the document. This step simply verifies that the EIR was completed in compliance with CEQA, the decision-making body reviewed the document, and the document reflects the agency’s independent judgment.

If the decision-making body chooses to approve a project, the body must first adopt “CEQA Findings” addressing the disposition of the significant environmental effects identified in the EIR, and whether mitigation measures and/or a project alternative are being adopted to reduce the severity of the significant impacts. At this time, both mitigation measures and alternatives can be rejected as “infeasible.” Under CEQA, “feasible” is defined as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” The courts have interpreted the concept of feasibility to allow a decision-making body to reject alternatives and mitigation measures as infeasible because they represent undesirable policy outcomes or fail to meet, or fully meet, project objectives.

At the time the decision-making body adopts its CEQA Findings, the body must also adopt a “mitigation monitoring or reporting program” committing the agency to carry out all feasible mitigation measures. These measures must also be “fully enforceable through permit conditions, agreements, or other measures.”

Where, even after the adoption of all feasible mitigation measures and the consideration of the feasibility of alternatives, the proposed project would still have significant, unavoidable impacts, the decision-making body, to approve the project, must adopt a “statement of overriding considerations.” This special finding must identify “the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits,” of a project that “outweigh the unavoidable adverse environmental effects,” thereby rendering them “acceptable.”

An EIR can be time consuming and expensive. On average, it can take 12 -18 months to complete, while a complex project can take over two years, and an expedited EIR involving a simpler project can take six to nine months. Most EIRs cost between $100,000 and $400,000; however, larger projects can cost as much as a million dollars. Factors that affect cost and time include the level of technical studies and environmental impacts, required mitigation, analysis of alternatives, recirculation of the EIR, public controversy, and whether prior studies can be utilized. Litigation over the legal adequacy of the EIR can delay project implementation long after an agency has certified an EIR and approved a project. An EIR can be expedited through the approval process for similar projects using a checklist and "within the scope" findings. An example is the CalVTP Project-Specific Analysis (PSA) checklist which is used to determine if their proposed activities fall within the scope of the Program EIR, which will be discussed in the CalVTP section.

Benefits and Drawbacks of Negative and Mitigated Negative Declarations

The ND and MND allow for a quicker and often simpler CEQA review process in comparison to an EIR. ND and MND documents efficiently address any potential issues, with factual support, and appropriate findings made by the lead agency, along with approved conditions of approval. These documents are faster to develop and approve than an EIR.

The 30-day public review period is also not as lengthy as with the EIR process, which requires a 45-day review period followed by the preparation of written responses to comments submitted regarding the draft EIR. In the end, the ND and MND streamline the environmental review process by saving time and money for both the applicant and the lead agency. Also, as is the case with an EIR, any adopted mitigation measures are built into the project approval and are binding, providing commitment by project

developers to take actions to protect the environment. However, these documents provide less legal protection to project developers.

In making its determination regarding further review, the lead agency must utilize the "fair argument" test. The "fair argument" test asks if there can be a fair argument made that a project may have a significant environmental impact. When uncertainty exists, or even evidence to the contrary exists, the "fair argument" test, as applied by the courts since the mid-1970s, errs on the side of requiring EIRs rather than ND or MND. Under this test, a significant impact does not have to be proven. There just needs to be substantial evidence and a reasonable argument that a significant impact could occur. The courts have described this trigger for an EIR as a "low threshold." Under this legal test, an agency may be required to prepare an EIR even though the agency is persuaded by substantial evidence that a project's impact will not be significant. As the courts have explained, "if a lead agency is presented with a fair argument that a project may have a significant effect on the environment, the lead agency shall prepare an EIR even though it may also be presented with other substantial evidence that a project will not have a significant effect." Stated another way, "[i]f such substantial evidence exists ... preparation of an EIR is mandatory. Consideration is not to be given contrary evidence supporting the preparation of a negative declaration."

This "fair argument" standard opens the door for many judges to side with complainants in lawsuits challenging ND and MND. By their very nature, such documents are more difficult to successfully defend in court than EIRs. Therefore, caution is advised in any circumstance where significant community concerns are raised. If project opponents, in their comments on an ND or MND, have produced credible substantial evidence showing that a project may have significant environmental impacts, then those opponents are well-positioned to prevail in court and force the agency to prepare an EIR. It is possible for an agency to believe that an ND or MND is appropriate when public review is commenced, only to learn, after receiving a barrage of negative comments from project opponents, that such documents are no longer legally appropriate and that an EIR is required. In other words, it is common for project opponents to force the preparation of EIRs.

Part Three: In The Weeds with CEQA and Wood Products/Bioenergy

Every area of impact under CEQA is an important part of any overall analysis, but in the case of bioenergy and wood products project development, there are five impact areas that we have identified as the most important areas to spend resources providing detailed data and analysis. The first and most important impact area relates to water and air quality, followed by climate impacts, traffic impacts and transportation-related issues, biological issues, and non-health related issues (noise, light, and aesthetics). There are many other impacts areas, but these five typically have the most relevance to bioenergy or wood products business development.

Air Quality Analysis - In Detail

A complete air quality analysis should contain the information necessary to demonstrate whether a project will cause significant air quality impacts as described in CEQA's Appendix G, which asks whether a proposed project would:

a) *Conflict with or obstruct implementation of the applicable air quality plan.*
b) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.*
c) *Expose sensitive receptors to substantial pollutant concentrations; or*
d) *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.*

The most recent version of the CEQA Guidelines, Appendix G, should be consulted to confirm that the checklist questions have not been updated, as the California Natural Resources Agency periodically revises these guidelines to reflect changes in environmental regulations and best practices.

Establishing the Setting

To begin the analysis, it is essential to first establish the environmental and regulatory setting for a project. This process begins with the identification of the regulatory agency with jurisdictional authority over air quality at a project's proposed location. In California, this authority typically lies with one of the 35 local air quality management and air pollution control districts authorized by the California Health & Safety Code to review air quality impacts and issue air quality permits to stationary sources of air pollution. In rare circumstances where the proposed project is on tribal land, or a local district does not have delegated authority over a specific federal air program, the permitting responsibilities may belong to the U.S. Environmental Protection Agency's (EPA)

Region 9 air permitting division; however, it is most common that the local air district completes this review.

Note that in most cases the agency with the land use authority remains the lead agency for the purposes of CEQA. The lead agency will look to the air agency for guidance in completing environmental review, but the lead agency is ultimately responsible for the content of the work. In rare circumstances, a lead agency and an air district may decide to make the air agency the "lead" agency for a particular project. These projects tend to be ones where air quality is the only appreciable impact, the district has sufficient capable staff to prepare documentation, and other factors indicate that the district would be a better fit for the work.

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the significance determinations regarding the criteria listed in Appendix G (inquiries a) through d) above).

Once the regulatory jurisdiction has been identified, the air district's attainment status with regards to the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) should be identified. The EPA established the NAAQS under the federal Clean Air Act for six "criteria pollutants," which consist of PM, Ozone (O3), nitrogen dioxide (NO2), sulfur dioxide (SO2), CO, and lead (Pb). Similarly, California established the CAAQS (initially through the California Department of Public Health and later through CARB) for the six federal criteria pollutants as well as sulfates, visibility reducing particles, hydrogen sulfide, and vinyl chloride. Attainment of the NAAQS usually takes precedence over attainment of the CAAQS due to federal penalties for failure to meet the federal attainment deadlines and the absence of fixed attainment timelines for the California standards. That is not to imply that complying with the state standards is not a priority for the air districts, but rather to emphasize that most of a district's rulemaking activity and regulatory efforts typically revolve around complying with the NAAQS.

Now a more in-depth discussion of the five sections of the air quality checklist sections will be provided.

a) *Conflict with or obstruct implementation of the applicable air quality plan.*

Districts that are in non-attainment of one or more NAAQS are required by the federal Clean Air Act to contribute to State Implementation Plan (SIP) rules and regulations at the local (district) level, which will support attainment of the applicable standard within the timeline specified by federal law. To demonstrate that a project will not conflict with or obstruct the implementation of an air quality plan, the analysis should address State and

local air quality rules and regulations that are in the applicable SIP. By identifying these SIP-approved rules and regulations and methodically describing how a project either currently is, or will be (with appropriate mitigation), in compliance with the rule requirements, the analysis will be able to make an effective determination regarding whether a project would conflict with or obstruct implementation of an applicable air quality plan.

Alternatively, if the local air district and/or lead agency has adopted thresholds of significance for criteria air pollutants, a comparative analysis of a project's potential to emit (PTE) against the applicable thresholds of significance may be used to demonstrate compliance with this requirement. To conduct this analysis, the analyst should calculate the potential emissions of criteria pollutants associated with a project and then compare those values against the applicable thresholds of significance adopted by the air district and/or the lead agency. A project's emissions analysis should include PTE from the construction phase, PTE from a project's operational phase, and a cumulative PTE assessment for a project's operational phase. Construction-related emissions typically include temporary sources of emissions such as offroad construction equipment, portable engines/equipment, fugitive dust, offsite haul trucks, etc., whereas, the operational phase emissions typically include employee vehicles, operational offroad equipment, and stationary sources of emissions. Once the PTE has been determined for the various phases, the analyst should identify the applicable thresholds of significance and compare them against a project's emissions. Where appropriate, mitigation measures should be identified and implemented to reduce the impacts from these emissions.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard

To answer this inquiry, it is important to distinguish the potential cumulative impacts of a project versus the individual impacts. "Cumulative impacts" refers to the incremental effect of several projects that may have an individually minor, but collectively significant, impact on air quality. This analysis should identify any additional past, present, and reasonably foreseeable probable future projects that are closely related to the proposed project as well as those that have the potential to produce additional emissions of criteria air pollutants. If such projects exist and are determined to have cumulative impacts, the emissions from the proposed project should be combined with the emissions from the related project(s) for the purpose of comparing against the respective thresholds of significance. However, the ultimate focus is whether a project's incremental contribution to the combined emissions levels is itself significant ("cumulatively considerable" in CEQA). Where appropriate, mitigation measures should be identified and implemented to reduce the impacts from these emissions.

c) Expose sensitive receptors to substantial pollutant concentrations

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes include people who are considered more sensitive than others, and so air quality laws are generally more stringent around such uses. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. CARB has identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups and called "receptors" in CEQA. Additionally, residential areas are considered more sensitive to air quality conditions than commercial and industrial areas because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions.

In cases where the proposed project is in a very rural location, far removed from any nearby potential receptors, demonstrating that a project will not expose sensitive receptors to substantial air pollution can be done qualitatively by simply speaking to that fact. If the air district or lead agency has a threshold of significance established regarding proximity to a sensitive receptor, a quick comparative analysis may effectively satisfy this requirement. In the absence of a proximity-based threshold of significance, or where a project has receptors in relatively close proximity, a health risk assessment (HRA) may need to be completed to demonstrate that the air impacts are not significant. The results of an HRA are often compared to risk-based thresholds of significance adopted by the air district or lead agency.

An HRA uses air dispersion modeling (similar to what was described earlier in this section) to determine the relative location and ground-level concentrations of specific pollutants emitted by the proposed project and evaluates specific health impacts from the pollutants released by a project's emission source(s). In this analysis, the air pollutants that are modeled are hazardous air pollutants (HAPs) and toxic air contaminants (TACs), which have known acute, chronic, or carcinogenic health impacts and are emitted by a project's emission sources. Individual receptors that are relatively close to a project are identified and then evaluated for potential health impacts associated with the release of HAP/TAC emissions. In most HRAs, the acute, chronic, and cancer impacts are evaluated and quantified for the following categories: point of maximum impact (PMI), maximally exposed individual residence (MEIR), and maximally exposed individual worker (MEIW). The resulting analysis is then compared against the district's thresholds of significance for the various health impacts to determine whether the air impacts are significant. It is worth noting that many districts have published air dispersion modeling and health risk assessment guidelines, which set forth the recommended air modeling parameters, meteorological data selection procedures, and HRA inputs and scenarios. In the absence

of district-specific guidelines, a preparer can use the Air Toxics Hot Spots Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments (2015)[23], published by the California Office of Environmental Health and Hazard Assessment (OEHHA) to provide guidance on the preparation of air dispersion models and HRAs.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no widely agreed upon quantitative or formulaic methodologies to determine the presence of a significant odor impact. Assessments made regarding the potential for odor impacts from projects must usually be made using qualitative analysis methods. These methods should attempt to clearly identify the potential sources of odor from a project as well as the relative location and direction of potential receptors and the local meteorological trends that may play a role in potential odor impacts. The intensity of an odor source's operations and its proximity to receptors influences the potential significance of odor emissions. Depending on the specific scenario, placing an emphasis on wind speed and wind direction relative to nearby receptors can help to form a basis supporting a less than significant impact determination.

Leading Court Cases on Air Quality

Over the years, the courts have provided important guidance on how air quality analysis should be addressed under CEQA. One leading case is *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, in which the court found flaws in a city's EIR for a proposed coal-fired cogeneration facility within an existing tire manufacturing plant. The court's discussion of air quality impacts involved a number of discrete issues worth discussing here.

1. The city had wrongly assumed that, simply because a project applicant had obtained permits from other agencies concerned with the plant's on-site emissions, the city could therefore automatically conclude that the overall project-specific impacts on air quality were less than significant. The city erred by failing to grasp that CEQA requires the lead agency to examine the whole project, which in this case included truck and train traffic resulting in sizable secondary emissions of various air pollutants.

[23] https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0

2. Project-specific contributions to O3 pollution, how the topic was covered in the EIR, and its conclusion that impacts would be insignificant, was flawed for two reasons. One problem was the city's assumption that, because regional O3 levels were "already bad," the incremental additions from a project must be treated as minor. As the court explained, "[t]he EIR's analysis uses the magnitude of the current O3 problem in the air basin to trivialize a project's impact." Another problem was that, as with the analysis of particulates, the discussion of O3 failed to assess the combined effects of both on-site and secondary emissions.

3. The approach to assessing the significance of cumulative air quality impacts in the EIR was based on a misunderstanding of the applicable legal requirements. Both the city and a project applicant urged that a project could not be said to cause a significant environmental effect even if "expected future projects...may, in combination, result in a substantial increase in PM10 or O3 precursor emissions." Instead, they argued that a proper analysis of cumulative impacts should focus on an "individual project's effects rather than the combined effects." The court strongly disagreed, holding that such a method would "avoid analyzing the severity of the problem and allow approval of projects which, when taken in isolation, appear insignificant, but when viewed together, appear startling." Under the city's overruled "'ratio' theory, the greater the overall problem, the less significance a project would have had in a cumulative impacts analysis.

When properly conducted, an EIR should assess "the collective or combined effect" of both the project in question and other foreseeable projects. In other words, the more severe existing environmental problems are, the lower the threshold for treating the contribution of a project to cumulative impacts as significant.

The city found the air quality impacts of the project to be less than cumulatively considerable because the emissions would represent only a very small percentage of overall pollution in the affected air basin, which was already highly polluted (one of the worst in the country). The court said that "[t]he relevant question to be addressed in the EIR is not the relative amount of precursors emitted by the project when compared with pre-existing emissions, but whether a*ny* additional amount of precursor emissions should be considered significant in light of the serious nature of the O3 problems in this air basin."

Finally, the court also held that the city had unduly limited the geographic scope of its analysis of cumulative air quality impacts, which should have encompassed the entire San Joaquin Valley Air Basin rather than just the Mid-San Joaquin Valley. The court explained that cumulative impact analyses are legally deficient (1) when they omit projects that are "reasonable and practical" to include, and (2) when the analysis understates "the severity and significance of the cumulative impacts." The court cited evidence in the record indicating that the city could have feasibly included energy projects

from the entire San Joaquin Valley (in which 116 cogeneration projects were proposed), rather than from just a portion thereof. On the question of whether the analysis understated the severity and significance of the cumulative impacts, no definitive answer could be drawn from the record; but that very omission rendered the EIR inadequate: "[t]o conclude otherwise would place the burden of producing relevant environmental data on the public rather than the agency and would allow the agency to avoid an attack on the adequacy of the information contained in the report simply by excluding such information."

Later court decisions have not required that the cumulative impact analysis for air quality effects undertake analysis over such a vast geographic area. In *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal.App.4th 899, the court held that, where an air district has recommended quantitative significance thresholds that take cumulative impacts into account, a lead agency's reliance on such a threshold may obviate the need for an elaborate geographical analysis.

Another important decision on air quality is *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, commonly known as the "Friant Ranch" decision. In that decision, which involved a challenge to an EIR for a specific plan allowing the construction of 2,500 new residential units, the California Supreme Court discussed the extent to which the air emissions of a project should be connected (if feasible) to concrete effects on human health. In general, an EIR must show a "reasonable effort to substantively connect a project's air quality impacts to likely health consequences." However, the court acknowledged that it might "not be scientifically possible" or "scientifically feasible" to make such connections. This is particularly true of regional pollutants as opposed to localized pollutants such as toxic air contaminants.

With respect to all types of impacts, an EIR must "reasonably describe the nature and magnitude of the adverse effect." The evaluation does not need to be exhaustive but will be judged "in light of what is reasonably feasible." With respect to air quality, an EIR must reflect "a reasonable effort to discuss relevant specifics regarding the connection between" the estimated amount of a given pollutant a project will produce, and the health impacts associated with that pollutant. Further, the EIR must show a "reasonable effort to put into a meaningful context" the conclusion that a project will cause a significant air quality impact. Although CEQA does not mandate an in-depth health risk assessment, it does require an EIR to adequately explain either (a) how "bare [emissions] numbers" translate to or create potential adverse health impacts or (b) what the agency does know, and why, given existing scientific constraints, it cannot translate potential health impacts further.

The EIR at issue in the Friant Ranch case quantified how many tons per year the project would generate of ROG and NOx (both of which are O3 precursors) but did not quantify

how much O3 these emissions would create. Although the EIR explained that O3 can cause health impacts at exposures of 0.10 to 0.40 parts per million, this information was meaningless because the EIR did not estimate how much O3 the project would generate. Nor did the EIR disclose at what levels of exposure PM, CO, and SO2 would trigger adverse health impacts. In short, the EIR made "it impossible for the public to translate the bare numbers provided into adverse health impacts or to understand why such translation is not possible at this time (and what limited translation is, in fact, possible)."

In response to amicus briefs from the San Joaquin Valley Air Pollution Control District and the South Coast Air Quality Management District, which raised issues about whether it is even possible to identify the specific health effects of O3 precursor emissions, the court stated that "if it is not scientifically possible to do more than has already been done to connect air quality effects with potential human health impacts, the EIR itself must explain why, in a manner reasonably calculated to inform the public of the scope of what is and is not yet known about the project's impacts."

In response to the *Friant Ranch* decision, many agencies have continued to prepare health risk assessments for localized pollutants but have taken the position that it is not scientifically feasible to generate meaningful analysis of the extent to which O3 precursor emissions from geographically confined projects will lead to specific health effects from the O3 formed through these precursor emissions. The following is a typical discussion from an EIR on this latter subject:

> O3 concentrations, for instance, depend upon various complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground level O3 concentrations related to the NAAQS and CAAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds. To achieve the health-based standards established by the EPA, the air districts prepare air quality management plans that detail regional programs to attain the Ambient Air Quality Standards (AAQS). However, if a project within a particular air district exceeds the regional significance thresholds, the proposed project could contribute to an increase in health effects in the basin until the attainment standards are met in air basin.
>
> Notably, during the litigation process that led to the California Supreme Court decision in Sierra Club v. County of Fresno, the San Joaquin Valley Air Pollution Control District (SJVAPCD) submitted an amicus curiae brief that provided scientific context and expert opinion regarding the feasibility of performing regional dispersion modeling for O3. In the brief, SJVAPCD

states that “CEQA does not require an EIR to correlate a project’s air quality emissions to specific health impacts, because such an analysis is not reasonably feasible.” As SJVAPCD explains (SJVAPCD 2015b [footnotes omitted]):

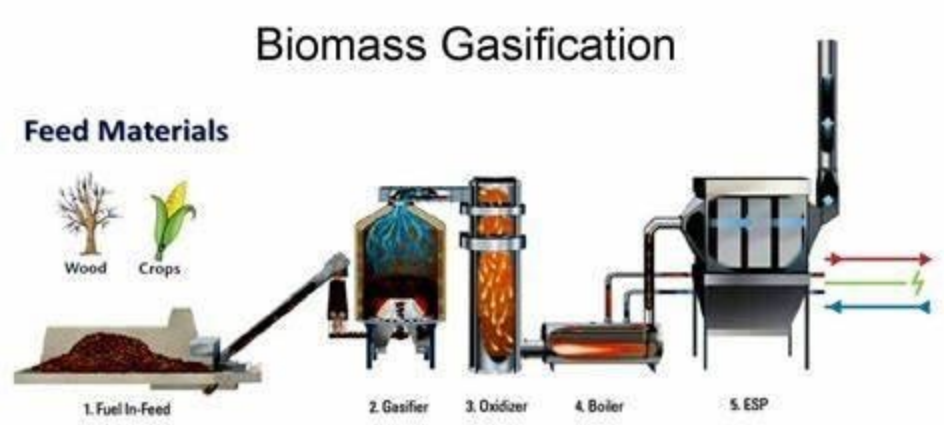
> Attainment of a particular NAAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region. For example, the San Joaquin Valley attained the 1-hour O3 NAAQS when O3 concentrations remained at or below 0.124 parts per million valley-wide on 3 or fewer days over a 3-year period. Because the NAAQS are focused on achieving a particular concentration of pollution regionwide, air district tools and plans for attaining the NAAQS are regional in nature.
>
> For instance, the computer models used to simulate and predict an attainment date for the O3 or PM NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NOx, Sox, and VOCs) and the atmospheric chemistry and meteorology of the valley. At a very basic level, the models simulate future ozone or PM levels based on predicted changes in precursor emissions valley wide. Because the NAAQS are set levels necessary to protect human health, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.
>
> The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date the valley attains the NAAQS. Rather, the air district's modeling and planning strategy is regional in nature and based on the extent to which all of the emission-generating sources in the valley (current and future) must be controlled to reach attainment.
>
> Accordingly, the air district has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the [SJVAB] can accommodate without affecting the attainment date for the NAAQS. The air district has tied its CEQA significance thresholds to the level at which stationary pollution sources must “offset” their emissions. Thus, the CEQA air quality analysis for criteria air pollutants is not really a localized, project-level impact analysis but one of regional cumulative impacts.

The brief explains that these CEQA thresholds of significance are not intended to be applied such that any localized human health impact associated with regional pollutant emissions from a project could be identified. Rather, CEQA thresholds of significance are used to determine whether emissions from a project would obstruct a region's capability of attaining the NAAQS and CAAQS according to the emissions inventory prepared in a SIP, which is then submitted and reviewed by the ARB and EPA. This sentiment is corroborated in an additional brief submitted by the South Coast Air Quality Management District (SCAQMD 2015). The lead agency has therefore concluded that it is not scientifically feasible to predict in a meaningful manner how mass emissions of pollutants of regional concern from the proposed project could lead to specific public health consequences, changes in pollutant concentrations, or changes in the number of days for which the air basin affected by the project will be in nonattainment for regional pollutants.

Special Area Highlight One: Emerging Technologies and Criteria Pollutant Emissions

Emerging Technologies and Criteria Air Pollutants

In nearly all successfully implemented modern biomass projects, the main pillars for effectively reducing impacts from criteria and toxic air emissions from a facility and obtaining an authority to construct and permit to operate from the regulating air agency include: 1) implementation of effective biomass conversion and pollution control technologies relative to the regulatory setting, 2) general project siting relative to potentially exposed receptors and communities, and 3) appropriate project scaling relative to the biomass fuel sources available. While this section focuses on the first of these three pillars, it's important to maintain perspective on the other two pillars throughout the conversation to be able to effectively speak to the *net impacts from a proposed project* as well as addressing the individual project elements.



Biomass Conversion Technologies and Products

The basic operating principle behind traditional biomass boilers was developed over a century ago in the pursuit of obtaining useful energy from an abundant and readily available fuel source – woody biomass. Using heat exchangers to harness the energy released from the controlled combustion of wood has proven to be highly effective for the purpose of producing thermal, mechanical, and electrical energy across various industries. However, from the air quality perspective, the most obvious hurdle associated with traditional biomass technology is the combustion byproducts which most notably include combustion gases like NOx, CO, VOCs, SOx, as well as soot particles or PM.

Over the years, different types of air pollution control systems have been developed and implemented to reduce the levels of criteria air pollutants released by the traditional combustion process in biomass boilers. These systems vary widely in principle and are designed based on the individual pollutant(s) of concern for a specific project. As an example, for the overall reduction of combustion gases (NOx, CO, and VOCs), the use of advanced staged combustion and over-fire and under-fire air can be implemented to ensure stable combustion across the firebox and prevent pockets of excessively high temperatures from forming. For the direct reduction of NOx, the use of upstream ammonia injection through either selective non-catalytic reduction (SNCR) or selective catalytic reduction (SCR) systems is used. And for the capture and collection of PM emissions, exhaust cyclones, fabric filter baghouses, and electrostatic precipitators (ESPs) can be added downstream of the biomass combustion process. As effective as these pollution control systems are at reducing emissions from traditional combustion boilers, recent years have seen an emergence of non-traditional biomass conversion technologies which are able to further reduce the air quality impacts associated with the utilization of biomass fuels. In addition to these emerging conversion technologies, new developments in air pollution control systems are changing the emissions landscape for newly proposed community-scaled traditional biomass boilers. In some cases, these emerging conversion

technologies can be paired with new air pollution control systems to even further reduce the emissions profile of a modern biomass facility.

Controlled Pyrolysis and Gasification

The distinguishing characteristic of a non-traditional biomass conversion technology is that the woody biomass is not directly burned in a combustion chamber to release heat, but rather the solid fuel is thermochemically reduced into products which can be utilized across different pathways. Where traditional solid biomass combustion is typically limited to thermal loads and electrical power generation, non-traditional biomass conversion technologies can produce thermal and electrical energy as well as a range of gaseous fuels, liquid biofuels, and solid biochar.

The two primary methods of thermochemically reducing woody biomass are pyrolysis and gasification. Pyrolysis entails thermal decomposition of solid fuel in an oxygen-starved environment at temperatures that are relatively lower than gasification (300 - 800°C) resulting in solid biochar, liquid bio-oil, and syngas, which is a mixture of hydrogen and organic gasses. In gasification, a limited amount of oxygen is introduced during the thermal decomposition reaction and temperatures are generally higher (700 - 1,500°C) than that of a pyrolysis reaction. The aim of gasification is to produce syngas for use in downstream processes. Solid biochar and bio-oils may still be produced in the gasification process, but usually in smaller quantities than an equivalent pyrolysis process. Both pyrolysis and gasification require large amounts of energy (heat) to initiate the thermochemical reactions, but once initiated, these systems can generate their own fuel as a product of the reaction and with that fuel provide the energy needed to sustain the reaction. The pyrolysis and gasification of woody biomass are highly versatile processes due to the broad range of products that can be produced. Because of this, specific technologies can be implemented at a site to accommodate different commercial and industrial-scale processes.

Syngas, Hydrogen, and Renewable Natural Gas

The production of syngas is considered by many to be one of the more desirable products from the gasification/pyrolysis process. The syngas generated during the thermochemical reaction can be directly combusted as a gaseous fuel in a traditional external combustion system (boiler, furnace, etc.) with minimal fuel treatment required or it can be further cleaned and conditioned for use in combination with other technologies which may be more sensitive to fuel quality. Examples of this include using conditioned syngas as fuel for precisions combustion-based technologies such as internal combustion engines, turbines, or linear generators.

In conversion systems that that are designed to produce hydrogen, the hydrogen is separated from the syngas that is initially produced, and the remaining CO in the syngas

is reacted with water to form more hydrogen and CO_2 via a water gas shift reaction. The produced hydrogen is then stored and can be used to fuel an electrochemical reaction across a catalyst in a fuel cell, resulting in electrical power generation. These electrochemical or “fuel cell” technologies are diverse in how they can be applied throughout different industries, ranging from small-scale commercial backup power systems to modular utility-scale power generation facilities. The produced hydrogen can also be compressed and transported to dispensing locations to serve as fuels which support transportation networks for private and commercial fuel cell vehicles.

Like the hydrogen production process, biomass-derived syngas can also be conditioned and passed through a “methanization catalyst” to promote a reaction between the available hydrogen and CO gases to produce biomethane or renewable natural gas (RNG). This biomethane can then serve as fuel for existing natural gas combustion processes such as engines, turbines, boilers, heaters, etc., or it can be compressed and injected into nearby natural gas transmission pipelines and infrastructure as a renewable supplemental fuel.

Bio-oil

In addition to producing syngas, thermochemical processes have the potential to produce an energy-dense bio-oil. The generation of bio-oil is most frequently associated with pyrolysis due to the relatively low energy reaction and the absence of oxygen, resulting in the formation of longer hydrocarbon chains. The liquid bio-oil produced in pyrolysis reactions is frequently atomized and entrained in the syngas; however, the oil can be harvested by routing the produced syngas through a series of heat exchangers and cooling coils which condenses and allows for the accumulation and collection of the oil. Once collected, the bio-oil can be cracked and further processed at most existing crude oil refineries with minimal modifications required on the part of the refinery willing to accept the oil. The final products from the refined bio-oil include everyday liquid fuels such as diesel, kerosene, heating oils, and aviation fuels, all derived from woody biomass.

Biochar

As a non-fuel product of pyrolysis, biochar is a solid carbonaceous substance that has become increasingly popular in recent years due to its favorable physical properties and environmental attributes. Used as a soil amendment, biochar enables agricultural soils to retain additional moisture and nutrients and, because of its large amount of surface area relative to its volume, biochar harbors beneficial microorganisms which lead to an increase in the quality and yield of harvested crops. Additionally, the high carbon content of biochar, combined with the very stable molecular structure that it forms, serves as an excellent means of long-term carbon sequestration.

Though not the focus of this handbook, some forms of open pyrolysis (not occurring at designated facilities) have the potential to produce biochar; however, these systems, commonly referred to as burn boxes, air curtain burners, or biochar kilns, are much more primitive in design, so there is no potential to harvest syngas or bio-oils from the reaction. Burn boxes, air curtain burners, and biochar kilns are portable in nature and may include an air curtain over the top of the combustion chamber for the reduction of smoke (PM) emissions. The syngas and oils that are created during the pyrolysis process are combusted in the chamber with no post-combustion controls for gaseous pollutants such as NOx. The purpose of these systems is generally centered around on-site biomass disposal with the added benefit of the biochar product and the associated carbon sequestration. There is no marketable product produced by these systems, except for the biochar, which often is simply re-integrated into the native soils where the burn took place. With that said, because of the added biochar and carbon sequestration benefits, these systems are much preferred over open pile burning, in which the only desirable result is the destruction of excess woody biomass waste.

Ongoing studies continue to identify the increasingly positive impacts that biochar can have in the agricultural sector, while additional studies point to biochar as having net benefits towards global decarbonization efforts due to its carbon sequestration potential. Though not typically used as a fuel source for downstream processes, biochar's value as a product of pyrolysis will likely continue to increase in the future due to the net environmental and ecological benefits.

Criteria Pollutant Emissions Impacts

Criteria pollutant emissions from biomass conversion technologies are as varied as the end products which the technologies produce. Both the pyrolysis and gasification processes generate gaseous hydrocarbon products in the syngas which, if left unabated, would result in emissions of VOCs; however, the distinguishing feature of these technologies is that most of the syngas produced is conditioned, converted, or refined into alternative fuel sources for downstream processes instead of being released as air emissions. In both systems, a relatively small amount of syngas is typically needed to fuel the initial reaction, which results in criteria pollutants being emitted from the rapid oxidation or combustion of the syngas. That is to say that the external combustion of syngas needed to provide heat in the reaction is something that most pyrolysis and gasification systems have in common. This combustion process generates NOx, CO, PM, VOCs, and at times, SOx (depending on the sulfur content in the fuel). In general, however, the criteria pollutants released directly from gasification and pyrolysis operations at a specific facility is usually much smaller per ton of solid biomass compared to existing solid wood combustion facilities. Aside from combusting the syngas, which is needed to supply the heat input for the reaction, the criteria pollutants that are emitted are from the associated downstream process.

Facilities which produce bio-oils, gaseous biofuels (i.e., hydrogen, biogas, biomethane, etc.), or biochar only combust enough syngas to sustain the reaction while the end-products are formed. Because of that, most of the energy remains with the product which may be used as a fuel in another process or as feedstock for a different operation. As such, the amount of fuel combusted is much smaller and the criteria pollutants produced are proportionally smaller as well. If needed, the pollutants can also be abated using traditional air pollution control technologies.

For traditional biomass combustion facilities, as well as gasification facilities where the produced syngas is combusted on site for the purpose of thermal energy production or electrical power generation, recently developed post-combustion air pollution control systems, such as ceramic catalytic filtration with upstream ammonia injection, have streamlined the reduction of criteria air pollutants and greatly reduced the net impacts from pollutants compared to traditional pollution control systems. With this technology, the ammonia injection system, combined with the downstream catalytic filter banks, successfully controls excess NOx emissions by upwards of 90% via selective catalytic reduction. Additionally, the filters can effectively capture and control over 95% of PM emissions in the ceramic mesh prior to exhausting into the atmosphere. The enhanced PM controls directly correspond to the reduction of emissions of toxic air contaminants (TACs) found in the particulate fraction of the exhaust pollutants. This includes the control and capture of inorganic compounds and heavy metals such as mercury, nickel, and chromium. Additionally, the ceramic filters can be paired with an upstream sorbent injection system to neutralize any acid gases which may be present in the exhaust stream to non-detect levels.

While advanced biomass conversion and air pollution control solutions already exist today, industry continues to see glimpses of newer and more cutting-edge systems for the future. Some of these systems, such as electrochemical fuel cells and linear generators have already been implemented for direct hydrogen and natural gas fuel sources, so it's only a matter of time before the biomass industry sees these utilized in tandem with a gasification system capable of producing and fully isolating hydrogen gas and biomethane. While already technically possible, both fuel cells and linear generators require very pure fuel inputs to ensure reliable operation and equipment longevity, so the work needed is mostly on the product (fuel) refinement side of the biomass conversion technology.

While syngas can be used to produce large amounts of hydrogen and biomethane, there are additional contaminants in the gases which could cause issues with the ultra-precise operations in fuel cells and linear generators. However, once that is solved, the potential benefit to air pollution impacts is sizeable. On the fuel cell side, emissions of criteria air pollutants are effectively zero when hydrogen is being used to fuel the cells. For linear

generators, due to their unique flameless combustion technology, they can achieve ultra-low NOx emissions comparable to the most modern natural gas combustion sources *after* advanced post-combustion controls. While promising, these technologies are not quite commercially available for biomass utilization and will likely remain a more expensive solution due to the complexity and costs incurred during development.

Another example of an emerging technology that is quickly breaking ground is the implementation of combined capture and storage (CCS) of CO_2. Although it is not regulated as a criteria or toxic air pollutant, the reduction of CO_2 emissions on a global scale is a challenge that leading scientists and climatologists are aggressively pursuing to mitigate the impacts from human-induced climate change caused by the release of GHGs. In short, CCS allows for the capture of CO_2 from industrial sources, such as power plants, refineries, and other large emitters. Once captured, the CO_2 is transported to a naturally formed underground storage facility where it remains indefinitely, preventing entrainment of the captured CO_2 into the atmosphere. While proven in concept, this technology is still in its infancy. If it is successful, it has the potential to support the biomass industry well into the future and may ultimately be part of the broader GHG and climate change solution across various industries.

In summary, the integration of emerging biomass conversion technologies and advanced air pollution control systems in modern biomass facilities greatly reduces the net air impacts from both criteria and toxic air pollutants and is key to the successful utilization of biomass in California.

Greenhouse Gas Emissions (Climate) Impacts Analysis

As compared to pollutants with localized effects which have relatively short atmospheric lifetimes (several days at most), GHGs have long atmospheric lifetimes (one to a hundred years) and persist in the atmosphere for long enough to be dispersed around the globe. GHGs trap heat by impeding the exit of solar radiation, causing the surface of the Earth and the lower atmosphere to warm up, and increase the average global temperature over time. This gradual increase in temperature drives changes in regional and global climate patterns, earning GHGs recognition as “climate change” pollutants.

After identifying and estimating the quantity of GHG emissions resulting from a project, a complete GHG analysis should contain the information necessary to demonstrate whether a project will have the potential to impact the criteria set forth in the Environmental Checklist Form in Appendix G of the CEQA Guidelines.

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

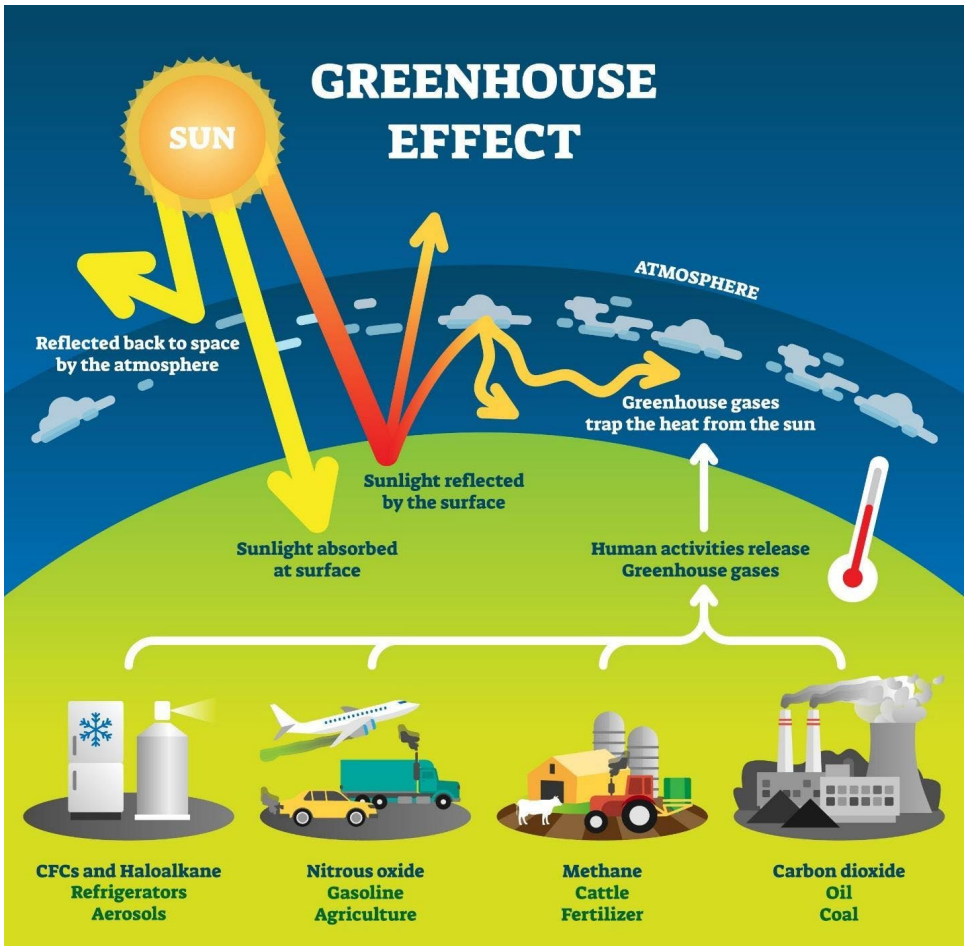


Image courtesy of: shalom-education.com

Establishing the Setting

To begin the analysis, it is useful to provide a definition of GHGs, as well as a general description of their contribution to global climate change, based on what is currently understood and accepted. This should include the identification of the GHGs defined in AB 32 (California Global Warming Solution Act of 2006) as well as the short-lived climate pollutants, defined in SB 605 (Short-Lived Climate Pollutants), which may be released as a result of a project.

AB 32 defines six (6) gaseous compounds as GHGs: CO_2, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. SB 605 defines three: (3) short-lived climate pollutants: black carbon, fluorinated gases (or F-gasses), and methane. These are the current gaseous compounds considered by

California to be associated with climate change. Although a precise causational formula has not yet been derived which ties the release of a specific amount of GHGs to a known increase in global temperature, the quantity of GHGs required to contribute to a measurable amount of climate change is enormous, and no individual project would release sufficient GHGs to single handedly cause such changes.

A project's incremental contribution may be determined to be cumulatively considerable even if it appears relatively small compared to statewide, national, or global emissions; however, the incremental contribution to cumulative GHG emissions impacts may also be determined not to be cumulatively considerable if it meets substantive requirements set by the lead agency. With that said, many land-use agencies, air districts, and reviewing authorities have adopted quantitative thresholds which are used to determine whether the incremental contribution from a project has the potential to be cumulatively considerable in impacting climate change.

> *CEQA Guidelines Appendix G (a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.*

To be able to compare GHG emissions against a reviewing authority's established significance threshold(s), a project should first identify which type of GHG sources will be created by a project. This assessment should include all operational sources of GHG emissions, such as point sources (and other direct emissions associated with on-site activities) and indirect sources of GHG emissions (i.e., motor vehicle emissions associated with a project, such as transport of biomass resources to a facility). Operational sources of GHG emissions may include, but aren't limited to:

- Point source emissions such as on-site stationary combustion activities or industrial processes.
- Area source emissions where GHGs emanate from a broad area (e.g., composting, landfills, etc.)
- Mobile and off-road equipment used in industrial operations (e.g., loaders, haul-trucks, air compressors, etc.)
- GHG impacts from on-site electricity and natural gas/propane consumption.
- Motor vehicle emissions from a traffic study estimating additional daily trips, including haul trips for biomass resources, average traveling distance, and total vehicle miles traveled (VMT)

In assessing operational GHG impacts, consideration should be given to the proposed project characteristics, such as the location and land-use setting. All assumptions and emission rates applied for direct and indirect sources should be clearly stated.

Once the sources of GHGs have been identified, the unmitigated annual GHG impacts should be quantified in a manner that's consistent with the reviewing authority's GHG

estimations procedures for CEQA analysis, and then compared against the established significance thresholds. Every lead agency and air district may have its own adopted thresholds, so it is important to coordinate with these agencies early in the EIR process to define acceptable thresholds and methods. In the absence of specific lead agency or air district directions about thresholds, three commonly used thresholds are:

1) Total GHG emissions are less than the "De Minimis Level" of 1,100 MT CO_2e/year.
   A project can be considered as less than cumulatively considerable since its contribution is relatively minor compared to the cumulative GHG emissions in the area. No further GHG analysis will be required. However, a project will still be required to be in compliance with state and local regulations such as building codes and energy efficiency standards.

2) Total GHG emissions are between 1,100 MT CO_2e/year (De Minimis Level) and 10,000 MT CO_2e/year (Bright-line threshold)
   A project may be required to conduct additional analysis to further identify whether a project would satisfy established GHG efficiency requirements. Note that this process will likely vary across different reviewing authorities and may not be an option in all jurisdictions. The lead agency should identify appropriate mitigation measures for a project.

3) Total GHG emissions exceed the "Bright line" threshold of 10,000 MT CO_2e/year.
   Project-related GHG impacts are considered cumulatively considerable and all feasible mitigation measures should be identified to mitigate related GHG emissions.

Where project GHG emissions fall under the De Minimis Level, no additional analysis would be required prior to advancing to the next and final step in the significance determination. Where the estimated unmitigated GHG emissions exceed the Bright-Line threshold or the intermediate threshold but fail to satisfy the efficiency standards (where applicable), the next step is the identification of mitigation measures and potential emission reductions to reduce project GHG impacts. Mitigation measures may be in the form of special features or designs included within a project's description, proposed measures within supplemental CEQA-compliant environmental documents, identified measures from previously approved CEQA documents, or regulatory measures as required by the reviewing authority. Special attention should be given to authority-specific CEQA guidance with regards to GHG impact analysis and mitigation preparation where the preparation of mitigation measures is required.

The final step is making the impact significance determination. The total mitigated operational GHG emissions should be presented and compared against the applicable significance thresholds. If the final GHG impact results are under the De Minimis Level, the resulting conclusion would be less-than-significant impact. If the final GHG impact results (requiring mitigation), including the implementation of all mitigation measures,

reduces the GHG emissions to below the thresholds, a project's related GHG impacts would be reduced to less-than-significant with mitigation. If the GHG emissions, after mitigation, still exceed the Bright-line threshold, a project would be considered to have a potentially significant impact on the environment.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

To demonstrate that a project will not conflict with an applicable plan, policy, or regulation adopted for reduction of GHG emissions, the most important step will be the proper identification of any such plans, policies, or regulations on local and state levels. While local requirements are subject to change based on the regulatory setting of the proposed project, a project should be prepared to demonstrate compliance with applicable permitting requirements at the county and/or city level, as well as all applicable land use plans.

To demonstrate compliance with state requirements, the analysis should speak to how the implementation of a project is consistent with the most recent version of CARB's Scoping Plan, which is the State's strategy for achieving the legislatively mandated GHG target. Large industrial projects which have direct emissions with the potential to exceed 10,000 MT CO_2e/year would be subject to CARB's Mandatory GHG Emission Reporting Regulation (MRR) and the Cap on GHG Emissions and Market-Based Compliance Mechanisms Regulation (Cap-and-Trade). Showing how the proposed project would be in compliance with these regulations would be necessary to make a determination that a project would have a less-than-significant impact.

Furthermore, CCR section 15130(d) specifies that previously approved land use documents may be used in a project's cumulative GHG impact analysis. Where a project is consistent with a general, specific, master, or comparable programmatic plan and where the lead agency determines that the regional or areawide cumulative GHG impacts of the proposed project have already been adequately addressed in a certified EIR for that plan, no further cumulative impact analysis is required. In these cases, the pertinent discussion of GHG cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs.

Additionally, pursuant to CCR section 15064, a lead agency may make the determination that incremental GHG contribution of a project to the cumulative effect is not cumulatively considerable if a project can be shown to comply with a previously approved plan or mitigation program (i.e., regulations for the reduction of GHGs) that provides specific requirements that will avoid or substantially lessen the cumulative GHG impacts. To be able to defend this analysis, the referenced plan or program must be specified in law or adopted by a public agency with jurisdiction over GHGs through a public review process.

The lead agency should then be able to explain how implementing the requirements of the referenced plan or program will ensure that incremental contribution of a project to the cumulative effect is not cumulatively considerable.

Important Case Law Related to Climate Impacts

The California Supreme Court has issued two major decisions providing guidance to lead agencies regarding how to address, and assess the significance of, the environmental effects of GHG emissions from proposed projects. The first was Center for Biological Diversity v. California Department of Fish and Wildlife (2015) 62 Cal.4th 204 and the second was Cleveland National Forest Foundation v. San Diego Association of Governments (2017) 3 Cal.5th 497.

In Center for Biological Diversity v. California Department of Fish and Wildlife (2015) 62 Cal.4th 204 (CBD), the California Supreme Court found problems with the GHG analysis performed in the EIR for certain biological permits needed for the proposed Newhall Ranch project (a new city-sized development in the northern part of the Los Angeles Basin). These permits were going to be issued by the California Department of Fish and Wildlife (CDFW). The Court concluded that, although a project's consistency with statewide GHG emissions reduction targets were relevant and legally permissible considerations, DFW's significance finding for the Newhall Ranch project was not supported by a reasoned explanation based on substantial evidence.

In finding a project's GHG-related impacts to be less than significant, DFW had accounted for the fact that, under AB 32, the State was required by 2020 to reduce GHG emissions by approximately 29 percent from what would have occurred under a hypothetical future scenario in which AB 32 had never been enacted. This counterfactual statewide scenario was called a "business as usual" ("BAU") scenario. CDFW reasoned by analogy that, if Newhall Ranch reduced its own GHG emissions 29 percent or more below a project-specific BAU scenario, the GHG impacts of a project would be less than significant. Because a project's emissions would be 31 percent below a project-specific BAU scenario, DFW found the impacts to be less than significant. The Court faulted DFW's approach as being, in essence, too simplistic:

> the administrative record discloses no substantial evidence that Newhall Ranch's project-level reduction of 31 percent in comparison to business as usual is consistent with achieving AB 32's statewide goal of a 29 percent reduction from business as usual …. Even using the EIR's own significance criterion, the EIR's analysis fails to support its conclusion of no significant impact.

> The Scoping Plan set out a statewide reduction goal and a framework for reaching it—a set of broadly drawn regulatory approaches covering all sectors of the California economy and projected, if implemented and followed, to result in a reduction to 1990–level GHG emissions by the year 2020. The plan expressed the overall level of conservation and efficiency improvements required as, among other measures, a percentage reduction from a hypothetical scenario in which no additional regulatory actions were taken. But the Scoping Plan nowhere related that statewide level of reduction effort to the percentage of reduction that would or should be required from individual projects, and nothing DFW or Newhall have cited in the administrative record indicates the required percentage reduction from BAU is the same for an individual project as for the entire state population and economy.
>
> ***
>
> The EIR's deficiency stems from taking a quantitative comparison method developed by the Scoping Plan as a measure of the GHG emissions reduction effort required by the state as a whole, and attempting to use that method without consideration of any changes or adjustments, for a purpose very different from its original design - to measure the efficiency and conservation measures incorporated in a specific land use development proposed for a specific location. The EIR simply assumes that the level of effort required in one context, a 29 percent reduction from business as usual statewide, will suffice in the other, a specific land use development. From the information in the administrative record, we cannot say that conclusion is wrong, but neither can we discern the contours of a logical argument that it is right.
>
> (62 Cal.4th at pp. 225-227, italics original.)

Earlier in the decision, the Court had explained that "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself. The challenge for CEQA purposes is to determine whether the impact of a project's emissions of greenhouse gases is cumulatively considerable, in the sense that 'the incremental effects of [the] individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.'" (62 Cal.4th at p. 219.) "'With respect to climate change, an individual project's emissions will most likely not have any appreciable impact on the global problem by themselves, but they will contribute to the significant cumulative impact caused by greenhouse gas emissions from other sources around the globe. The question therefore

becomes whether a project's incremental addition of greenhouse gases is 'cumulatively considerable' in light of the global problem, and thus significant.'" (Ibid.)

The Court went on to say that "[a]s noted by the Natural Resources Agency in its amicus curiae brief, 'a discussion of a project's consistency with the State's long-term climate stabilization objectives ... will often be appropriate ... under CEQA,' provided the analysis is 'tailored ... specifically to a particular project.' Indeed, to proceed in this manner is consistent with CEQA's 'inherent recognition ... that if a plan is in place to address a cumulative problem, a new project's incremental addition to the problem will not be 'cumulatively considerable' if it is consistent with the plan and is doing its fair share to achieve the plan's goals.'" (Ibid., italics added.)

In remanding the matter back to DFW for further work on the EIR, the Court offered DFW (and other lead agencies) some potential suggestions for how to assess the significance of effects caused by GHG emissions. One possible approach was that a lead agency may use "geographically specific GHG emission reduction plans" such as climate action plans or GHG emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis. (62 Cal.4th at p. 230.) As the Court mentioned, CEQA Guidelines section 15183.5[24] creates a roadmap for the preparation of such "plans for the reduction of greenhouse gas emissions." Such plans allow for the future CEQA streamlining of projects that meet their requirements, including mitigation measures intended to reduce GHG emissions.

Another option for GHG impact assessment suggested by the Court is for lead agencies to rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts. (62 Cal.4th at pp. 230-231.) The Court noted that, in 2010, the Bay Area Air Quality Management District had proposed an annual numerical threshold of 1,100 metric tons of "carbon dioxide equivalent" ("CO2E"). (Id. at p. 230.) Earlier in its opinion, the Court had referred to the concept of a quantitative "efficiency metric" that did not use an "absolute number" but instead accounted for the fact that "the future residents and occupants of development enabled by Project approval would exist and live somewhere else if this Project is not approved." (Id. at p. 220.) The point of such an efficiency metric would be to ensure that new development is as GHG efficient as possible, as measured not based on total emissions but on a per capita basis or some other basis focused on overall efficiency.

Yet another option mentioned by the Court was that a lead agency "might assess consistency with AB 32's goal in whole or part by looking to compliance with regulatory

[24] https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-12-special-situations/section-151835-tiering-and-streamlining-the-analysis-of-greenhouse-gas-emissions

programs designed to reduce greenhouse gas emissions from particular activities." (62 Cal.4th at p. 229.) The Court explained that, "[t]o the extent a project's design features comply with or exceed the regulations outlined in the Scoping Plan and adopted by CARB or other state agencies, a lead agency could appropriately rely on their use as showing compliance with 'performance based standards' adopted to fulfill 'a Statewide . . . plan for the reduction or mitigation of greenhouse gas emissions[.]'" (Ibid. at p. 229, citing CEQA Guidelines, § 15064.4, subds. (a)(2), (b)(3).).

In Cleveland National Forest Foundation v. San Diego Association of Governments (2017) 3 Cal.5th 497, the Supreme Court addressed the extent to which, if any, an EIR for a Metropolitan Planning Organization's Regional Transportation Plan (RTP) with a Sustainable Communities Strategy (SCS) must address the RTP's consistency with the 2050 GHG emissions reduction target set forth in former Governor Arnold Schwarzenegger's 2005 Executive Order S-03-05 (i.e., 80 percent below 1990 levels). The Court held that the San Diego Area Council of Governments (SANDAG) did not abuse its discretion by failing to treat the 2050 GHG emissions target as a threshold of significance. However, the Court cautioned that its decision applies narrowly to the facts of the case and that the analysis in the challenged EIR should not be used as an example for other lead agencies to follow going forward. Notably, the RTP itself covered a planning period that extended all the way to 2050.

The Court acknowledged the parties' agreement that "the Executive Order lacks the force of a legal mandate binding on SANDAG[.]." (Id. at p. 513.) However, the Court noted, and did not question, the parties' agreement that "the Executive Order's 2050 emissions reduction target is grounded in sound science." (Ibid.) Indeed, the Court emphasized that, although the Executive Order "is not an adopted GHG reduction plan" and "there is no legal requirement to use it as a threshold of significance," the 2050 goal nevertheless "expresses the pace and magnitude of reduction efforts that the scientific community believes necessary to stabilize the climate. (Id. at p. 515.)

This scientific information has important value to policymakers and citizens in considering the emission impacts of a project like SANDAG's regional transportation plan." (Ibid.) Towards the end of the decision, the Court even referred to "the state's 2050 climate goals" as though the 2050 target from Executive Order S-03-05 had standing under California law. (Id. at p. 519.) The Court seemed to reason that, because the Legislature had enacted both AB 32 and SB 32 (setting a 2030 goal of statewide GHG emissions forty percent below 1990 levels), which followed the downward GHG emissions trajectory recommended in the 2005 Executive Order, the Legislature, at some point, was also likely to adopt the 2050 target as well: "SB 32 … reaffirms California's commitment to being on the forefront of the dramatic greenhouse gas emission reductions needed to stabilize the

global climate." (Id. at p. 519.)[25] Finally, the Court explained that "planning agencies like SANDAG must ensure that CEQA analysis stays in step with evolving scientific knowledge and state regulatory schemes." (Ibid.)

In sum, the Court recognized that the Executive Order did not carry the force of law, but nevertheless considered it to be part of "state climate policy" because the Legislature, in enacting both AB 32 and SB 32, seemed to be following both evolving science and recommendations made by the Intergovernmental Panel on Climate Change. However, nothing in the decision suggests that all projects, regardless of their buildout period, must address the 2050 target or treat it as a significance threshold.

In addition to the two California Supreme Court decisions described above, three subsequent Court of Appeal decisions are also noteworthy. These are Golden Door Properties, LLC v. County of San Diego (2018) 27 Cal.App.5th 892, 901-905 (Golden Door I); Golden Door Properties, LLC v. San Diego County (2020) 50 Cal.App.5th 467 (Golden Door II); and Tsakopoulos Investments, LLC v. County of Sacramento (2023) 95 Cal.App.5th 280 (Tsakopoulos).

In Golden Door I, the court set aside San Diego County's approval of a countywide significance threshold - an efficiency metric - for effects from GHG emissions. The threshold was derived from statewide data rather than county-level data. Citing the Supreme Court's CBD decision as disfavoring the formulation of land use thresholds based only on statewide data, the Court expressed its misgivings about the County's efficiency metric as follows:

> The Efficiency Metric, which relies on statewide standards, must be justified by substantial evidence to explain why it is sufficient for use in projects in the County. The [County's] 2016 Guidance Document explains the recommended Efficiency Metric "represents the rate of emissions needed to achieve a fair share of the State's emissions mandate embodied in AB 32 and Executive Orders B-30-15 and S-3-05." It identifies a quantitative efficiency metric for 2020 to be 4.9 metric tons of CO2e per service population per year. The County argues this supplies San Diego specific data. However, as noted by the trial court, the service population number relies on statewide service population and GHG inventory data; it does not address the County specifically, and it does not explain why using

[25] The Court was prescient in impliedly predicting that the Legislature would continue to mandate statewide GHG reductions as aggressive as, or even more aggressive than, those found in S-03-05. In 2022, the Legislature enacted AB 1279 (Stats. 2022, ch. 337), which declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. The bill also requires that by 2045, statewide anthropogenic GHG emissions be reduced to at least 85 percent below 1990 levels. (Health & Saf. Code, § 38562.2.)

> statewide data is appropriate for setting the metric for the County. Additionally, the Efficiency Metric "allows the threshold to be applied evenly to most project types," but it does not account for variations between different types of development; nor does it explain why the per person limit would be appropriately evenly applied despite project differences. Without substantial evidence explaining why statewide GHG reduction levels would be properly used in this context, the County fails to comply with CEQA Guidelines.
>
> (27 Cal.App.5th at p. 905.)

Two years later, the same Court of Appeal, in Golden Door II, found problems with San Diego County's Supplemental EIR for a Climate Action Plan (CAP) adopted as a mitigation measure for the County's 2011 General Plan Update (GPU). Of particular interest is the court's holding finding fault with a mitigation measure that allowed the use of GHG "offsets" as mitigation for new development not contemplated in the GPU. The Court found numerous problems with this measure, known as M-GHG-1.

Citing CEQA Guidelines section 15126.4, subdivision (c)(3), the court explained that while it is well-established that the use of offsets can be part of a GHG mitigation strategy, the use of such offsets must be "properly restricted" with "verified offsets" that ensure that GHG reductions in fact occur. Relying heavily on the standards governing the State Cap-and-Trade Program under AB 32 and related CARB regulations, the court found that M-GHG-1 lacked sufficient performance standards to ensure the offsets relied on are "real, permanent, verifiable, and enforceable." Specifically, the court noted that, while M-GHG-1 contained some standards governing the entities through which offsets may be purchased, namely, a CARB-approved registry or "any other reputable registry or entity that issues carbon offsets consistent with … [Health and Safety Code] section 38562 [subdivision] (d)(1)," M-GHG-1 did not include any standards or protocols that such qualifying registries must implement to ensure the validity of the offset credits claimed. In the absence of such standards or safeguards, the court found that M-GHG-1 failed to adequately ensure that offsets are real, additional, and enforceable. (50 Cal.App.5th at pp. 507-518.)

In addition to the lack of sufficient standards for out-of-County carbon offsets, the court also held that M-GHG-1 violated CEQA because the measure improperly deferred mitigation. Under M-GHG-1, the County planning director was afforded discretion to approve the use of particular offsets, including determinations such as whether the issuing entity is "reputable" and whether there are no other "financially feasible" offsets "available" in a closer location. On this issue, the court explained that while CEQA allows the specific details of a mitigation measure to be developed after project approval where

it is impractical or otherwise infeasible to do so during the environmental review process, the agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard. In this case, the court held that M-GHG-1 failed to meet these requirements.

The court emphasized that the measure contained no objective standards for the director to apply in determining whether offsets originating in foreign countries are real, permanent, verifiable, enforceable, and/or additional. The court strongly implied that offsets in foreign countries are problematic under CEQA. The court identified as a "fundamental problem" the fact that the County "has no enforcement authority in … a foreign country." (Id. at pp. 512-513.) The court added that "obtain[ing] offset credits originating in foreign countries under M-GHG-1 is particularly concerning because '[i]n a developing country where one relies upon records that may not exist, and testing technology that may be inadequate or fraudulent, it can be difficult if not impossible' to verify GHG reductions." (Id. at p. 513.)

In Tsakopoulos, the Court of Appeal upheld GHG significance thresholds consisting of efficiency metrics for different categories of land use. In doing so, the court found that the metric-based thresholds avoided the flaws in the thresholds found wanting in CBD and Golden Door I.

The case involved a challenge to the County of Sacramento's certification of an EIR for, and approval of, the 848-acre Mather South Community Master Plan, which authorized up to 3,522 residential dwelling units, a 28-acre environmental education campus with 200 multi-family dwelling units, a 21-acre research and development park, two elementary schools, a six-acre community center, 21 acres of commercial-retail, 44 acres of parkland, and 157 acres of open space.

Unlike the thresholds in CBD and Golden Door I, which relied solely on statewide data, Sacramento County's thresholds were derived from its 2011 General Plan EIR and drew on regional data relating to all of the different GHG-emitting economic sectors reflected in the Master Plan (i.e., residential, commercial, industrial, transportation, agriculture, etc.). The 2011 General Plan EIR established three thresholds — one for residential, one for commercial and industrial, and one for transportation activities—based on the strategy and assumptions underlying AB 32's year 2020 GHG emissions reduction goal, estimated in the 2008 Scoping Plan as being 15 percent below 2005 levels. In addition to incorporating the 2011 General Plan EIR and its significance thresholds, the project EIR divided its operational GHG emissions into two sectors—energy use and transportation—and updated the 2020 thresholds to 2030 thresholds to reflect SB 32's reduction targets using the same General Plan EIR methodology used to develop the 2020 thresholds.

Impacts from energy-related GHGs from residential and from non-residential land uses, and from transportation, were separately assessed and quantified, with GHG emissions from all sectors also totaled.

The court rejected the appellant's arguments that the County employed "the same methodology" and "significance thresholds indistinguishable" from those involved in CBD and Golden Door I. Rather, the court found County's thresholds of significance distinguishable on numerous grounds. The County did not simply compare the project's GHG emissions to the statewide BAU goal; the County "instead developed county-specific thresholds of significance for different sectors and then compared the project's emissions against those thresholds." (95 Cal.App.5th at p. 307.) The court quoted CARB as saying that "[s]ince the statewide per capita targets are based on the statewide [GHG] emissions inventory that includes all emissions sectors in the State, it is appropriate for local jurisdictions to derive evidence-based local per capita goals based on local emissions sectors and population projections that are consistent with the framework used to develop the statewide per-capita targets." (Id. at p. 308.)

Unlike the threshold rejected in Golden Door I, Sacramento County's thresholds were developed with county-specific data, and rather than being "applied evenly to most project types," the thresholds were developed for different sectors and then compared to an individual project's estimated GHG emissions in each of those sectors, thereby accounting for variations between different types of development. (Id. at p. 309.)

In addition to the GHG impact assessment approaches addressed in the judicial decisions discussed above, CARB has suggested another possible approach, which is found in Appendix D (Local Actions) to their 2022 Scoping Plan. In that document, CARB notes that local agencies have the option of making a significance determination "based on whether the project would result in net-zero GHG emissions." (CARB, 2022 Scoping Plan, Appendix D, p. 24) Such a threshold represents a legally conservative approach, but CARB's recommendation has no legal force of law behind it, and may not be appropriate for many projects, as CARB itself recognizes. "Although achieving net-zero GHG emissions may be an appropriate overall objective, it should be noted this approach may not be feasible or appropriate for every project."

CARB further suggests that, in trying to calculate a proposed project's net GHG emissions, agencies should consider whether land uses replaced at a project site may relocate and continue their GHG emissions somewhere else. "[I]n determining a project's net GHG impacts, agencies should carefully consider how to view the GHG emissions implications of changes to existing land uses at a project site, particularly where such uses may simply relocate to another location. Lead agencies should consider whether there is substantial evidence that the GHG emissions generated by existing uses of a

project site will cease to exist as a direct result of the proposed project and will not merely occur at a different location after the proposed project is developed. If substantial evidence demonstrates that emissions from existing sources currently operating or generating emissions at a project site would continue elsewhere, lead agencies should account for those emissions when calculating the net change in emissions associated with the proposed project." (Ibid.)

Transportation Network and Truck Traffic Impacts

Impacts relating to traffic are evaluated, disclosed, and addressed under CEQA as examples of impacts occurring under a broader concept of transportation-related activities with the potential for causing significant impacts on the environment. Bioenergy projects can generate substantial traffic from feedstock deliveries. Traffic levels may be increased or changed at intersections, freeways, freeway ramps, and traffic can cause adverse effects transit, pedestrian, and bicycle facilities and use. These potential traffic impacts must be analyzed. Safety is also considered, as more trucks on the roads, especially near intersections or school zones, can raise concerns. The potential deterioration of the physical roadways, due to the increased heavy truck traffic, is also examined. This review helps promote sustainable development practices and efficient use of resources. Mitigation options are available if the transportation impacts are found to be potentially significant.

For many decades, Level of Service (LOS) was the primary method used to evaluate congestion and delay as the primary traffic impacts under CEQA. LOS looked at increased traffic volume and its impact on the flow of traffic, with a focus on infrastructure capacity and travel conditions. LOS was on a scale from A to F, with A indicating free-flowing traffic and F indicating extensive delays, gridlock and stoppages.

In late 2018, however, section 15064.3 was added to the CEQA Guidelines. It provides that Vehicle Miles Traveled (VMT) is now the required method for evaluating transportation impacts. This change in approach was part of a larger mandate in SB 743 (Statutes of 2013) to promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. Under the focus on VMT, the key question under CEQA is whether a proposed project will conflict with, or be inconsistent with, the criteria and methods set forth in Section 15064.3. The first step is to look at the number of vehicle trips that will be generated by a project. Next, the origin and destination of the trips are estimated, along with the trip lengths. The mode of transportation must be detailed, including walking, biking, public transport, or vehicles, which includes the types of vehicles. From this information, a project's total VMT is calculated. The total VMT is compared to baseline VMT conditions. If there is a significant increase in VMT, mitigation measures may be required. Such mitigation may involve

funding or constructing improvements to transportation infrastructure. It can also include promoting alternative modes of transportation and other solutions.

Regarding modes of transportation, there are several different trucks that are utilized by bioenergy businesses. One commonly used vehicle is a wood chip van, which collects, transports, and can deliver biomass materials like wood chips, sawdust, bark, or other feedstock from collection sites to the bioenergy facility. These trucks have a large cargo capacity, along with conveyor belts for loading and unloading. Some chip vans may have on-board processing equipment to reduce the biomass materials during transportation. Chip vans are typically about 48 feet long, and typically have a maximum weight capacity of around 80,000 pounds (approximately 36.3 metric tons) in many regions. This total weight includes both the weight of the truck and trailer and the payload of chips. The payload itself usually ranges from about 42,000 to 52,000 pounds (approximately 19 to 23.6 metric tons), depending on the specific configuration and legal weight limits in the area.

An ash truck can be needed for bioenergy businesses that have combustion systems that create ash. Ash may be transported to landfills or to other construction or manufacturing sites for reuse. These same trucks may also be used to transport biochar, which is the byproduct of gasification. These trucks safely transport ash with the use of sealed compartments and dust suppression systems.

Log trucks are used to transport logs to wood processing facilities. They are usually a flat bed or a trailer with stakes to hold the logs in place. The trucks may be equipped with cranes or winches to help lift and stack the logs onto and off the truck. Log trucks must comply with weight limits, security requirements, and permits. Log trucks are heavy and have more impact on roadways than other types of vehicles, but most bioenergy facilities will not be receiving whole logs. However, some wood products businesses may accept whole logs and will need to consider the impact of this vehicle on the roads.

Another truck often used by bioenergy businesses is a firewood truck. These trucks can range in size and are used to transport firewood between distribution points. They are flatbeds or can have an enclosed area to carry the firewood. These vehicles have off-road capability and can be customized for specific needs. They typically do not have any more impact than a traditional lightweight duty truck or passenger vehicle.

Due to the possibility that increased traffic from a project could impact public or private rights-of-way, mitigation may be required. Options include redesigning a projects layout, acquiring easements, and traffic calming measures like speed bumps or buffering visual impacts. Widening the road or adding turn lanes are other options. To make these improvements, a project must obtain an encroachment permit from California Department

of Transportation (Caltrans) for state highways or a local government for city or county roads.

The third aspect reviewed regarding traffic is whether a project will include a change in road design that may increase hazards. Such changes could create sharp curves, intersections with poor sight distances, or inadequate space for larger vehicles. Incompatible uses are also considered, like slow-moving farm equipment on roads or routing high volumes of traffic through areas with heavy pedestrian use. Mitigation would include redesigning roadways, improving signage, adding turn lanes, or separating incompatible vehicle types.

Adequate emergency access is also a consideration. Road capacity, congestion, street design, and the possibility of temporary road closures are considered. The analysis also includes on-site access, narrow roads, and tight turning areas. If found to be an issue, mitigation could include secondary emergency access or fire line requirements.

Transportation Analysis Example

As an example, a bioenergy project recently conducted a traffic analysis through CEQA for a project in Shasta County. Along with the bioenergy facility, the proponents have sawmill operations on the same site. Construction was estimated to take two years. Traffic consisted of trips associated with construction workers and the transportation of construction equipment and materials. During that time, 24 to 48 employees would exit and enter the site each day during morning and evening peak hours.

Under normal operations, a facility will utilize 55,000 BDT of woody biomass per year, which equates to an estimated 2,640 truckloads annually, with each truck carrying 20 tons of feedstock. Approximately 10 feedstock trucks will arrive daily Monday through Friday. In the case of forest fire recovery or log market volatility, up to 50 trucks may deliver to a facility per day. For the sawmill, up to 15 trucks will deliver logs daily Monday through Friday. Each log truck can carry 40 tons of logs. On Monday through Friday, there will be an average of four firewood truck deliveries to customers per day. There will also be an average of 40 pickup truck loads received Mondays, Wednesdays, and Fridays from public biomass drop offs.

Other traffic impacts will come from deliveries, staffing, and other visitors, but these are generally considered minor. Occasionally, there may be a truck needed to transport ash, move supplies, or carry out repairs or refueling. The biomass facility will have 10 employees entering and exiting each day (seven days a week), and the sawmill will have three to six employees working.

When estimating VMT averages, the county lead agency looked at both the daily peak and daily average VMT. Average daily VMT estimates were 1,600 miles for chip vans, 200 miles for ash trucks, 3,000 miles for log trucks, and 2,000 miles for firewood trucks as well as 171 public pickup miles and 360 employee miles. Looking at one of the key motivations behind the enactment of that provision, which is to reduce VMT as a means of helping to reduce GHG emissions as required by AB 32 and later GHG-reduction laws, a project would result in a significant VMT impact if the project conflicted with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. The county found that this project did not conflict with policies to reduce GHG emissions. In fact, a project may have a potential positive GHG environmental benefit as it reduces open burning and advances renewable energy objectives. Therefore, the VMT resulted in a less-than-significant impact under CEQA.

The county also determined that a project did not include a change in road design that would create hazards. The proposed road use was compatible with existing uses. Emergency access was also found to have no impact, as a project could be accessed from several different driveways. However, a review by the local fire protection district was required to ensure adequate emergency access.

When analyzing traffic, wear and tear on the roadways due to increased traffic can be of interest to a lead agency, but it is generally not an environmental impact within the definitions of CEQA. Additional truck traffic with heavy axle loads may exert pressure on a small area through their tires. This pounding, vibration, braking, and accelerating can damage pavement through rutting, cracking, disintegration, and moisture damage. In the bioenergy example above, the connecting road had to be widened four feet to allow for ingress and egress of large equipment and to minimize deterioration of the roadway. Environmental impacts of the road widening, such as removal of riparian habitat at a creek crossing, would need to be covered under CEQA.

Noise, Light, and Aesthetics

The final impacts analysis includes a trio of impact areas that may not generally be as challenging as the ones listed above but are nevertheless topics that can come up in a typical CEQA review of bioenergy and wood products facility development.

Noise

CEQA mandates state and local agencies in California to identify and mitigate the significant environmental impacts of their actions, including noise, which is recognized as an important factor under this statute. Noise impacts resulting from construction, operation, traffic, and other project-related activities are considered. Noise can be a relevant issue for bioenergy and wood products businesses because of the heavy

equipment used on site. To understand noise impacts that may be caused by proposed projects, it is critical to understand the baseline noise conditions, so existing noise levels must be evaluated in a projects area. Significance criteria (which can vary by jurisdiction, but generally align with state or local noise standards and guidelines) are then applied to determine the point at which noise impact becomes significant. An analysis follows, predicting the noise levels a project would generate and comparing those levels against the baseline and significance thresholds. This often involves sophisticated noise modeling, especially for complex projects. In general, a noise impact analysis should consider project noise increases over existing ambient conditions without a project and whether such noise increases are within the maximum noise levels allowed or conditionally allowed in a General Plan Noise Element, a city or county Noise Ordinance, or similar planning document.

In the context of a bioenergy plant or wood products facility undergoing a CEQA analysis, several sources of noise are particularly relevant. One of the primary sources is industrial noise, which stems from the operation of the plant, including the use of machinery and equipment for processing biomass or wood products. This type of noise can be continuous or intermittent, depending on the operational processes involved. Another significant source of noise is associated with the construction phase of such facilities, though most jurisdictions have ordinances that exempt temporary construction noise from meeting noise standards if construction would occur during non-noise sensitive hours of the day (e.g., 7:00 a.m. to 7:00 p.m.) and on weekdays. The activities involved in building the plant, such as site preparation, building construction, and the installation of equipment, contribute to temporary but potentially elevated levels of noise. Traffic noise also plays a crucial role due to the increase in vehicles transporting material to the plant and distributing finished products. This includes noise from trucks and other heavy vehicles that are essential for the logistical operations of a facility. Furthermore, stationary source noise, which includes emissions from fixed installations like cooling towers, exhaust systems, and generators, can be significant, especially if these systems operate continuously. In cases where a facility is linked with rail transport, either for receiving raw materials or shipping products, railroad noise becomes an additional factor. For bioenergy plants specifically, the process of handling biomass (i.e., chipping, grinding, pelletizing) generates notable noise. The operation of extensive ventilation and air handling systems required for maintaining operational safety and efficiency can also contribute to the overall noise level.

A key point is noise perception and regulatory standards for noise impact assessments in environmental projects. According to "Architectural Acoustics[26]" by Egan, a minimum of 3 decibels (dB) increase in noise is generally required for most people to notice a

[26] https://www.scribd.com/document/433541294/Architectural-Acoustics

change, while a 6 dB increase is clearly noticeable. The Federal Interagency Commission on Noise (FICON) has developed a nuanced scale for assessing increases in project-related noise, taking into account the base level of ambient noise. This scale shows that reactions to noise increases vary, with larger increases needed to affect individuals in quieter environments compared to those in louder ones.

FICON's standards are described as more conservative than other California state agencies, establishing lower thresholds for significant noise impacts, sometimes as low as a 1.5 dB increase over existing conditions. This contrasts with Caltrans, which considers a 12 dB increase significant, and the CEC, which views increases of 5-10 dB as significant, depending on local conditions. A 5 dB increase in noise levels is considered significant if the ambient noise is below 60 dB day-night average sound level (Ldn). This threshold is applicable to the nearest residential areas to a project, where noise levels were recorded below 60 dB Ldn. A leading court case involving a proposed oil and gas ordinance in Kern County indicated that a 5 dB increase over existing ambient noise levels could constitute a significant noise impact, regardless of the maximum levels allowed under their General Plan.

Reducing noise pollution in bioenergy plants involves strategies like designing quieter buildings and equipment enclosures, setting operational noise limits, and using sound barriers. Effective site planning and layout are vital, emphasizing distance from sensitive areas and leveraging natural landscapes to shield noise. Identifying "sensitive receptors" is crucial in sound management because it directly influences the choice and design of mitigation strategies. Knowing the locations of residences, schools, hospitals, and other sensitive areas helps in planning the positioning of noise sources and noise barriers as well as operational schedules.

A detailed noise impact assessment is a critical part of the CEQA documentation process, ensuring that a project complies with local noise ordinances and the broader guidelines set by CEQA.

Light

Under the standard Initial Study checklist found in Appendix G to the CEQA Guidelines, concerns about “light and glare” are encompassed within a larger category of impacts relating to Aesthetics, with the focus being on how light and glare could adversely affect day or nighttime views in an area. However, excessive light and glare can also have other types of environmental impacts. Light pollution, characterized by skyglow, glare, light trespass, and over-illumination, can significantly affect both human communities and wildlife. Excessive artificial lighting disrupts the natural cycles of wildlife, impacting behaviors such as migration, reproduction, and feeding. CEQA mandates that projects

likely to contribute to light pollution must evaluate and mitigate impacts if they are significant.

CEQA also examines the wider environmental consequences of projects, including energy usage and GHG emissions associated with outdoor lighting. By advocating for energy-efficient lighting solutions, such as LED technology and intelligent lighting systems, projects can lessen their energy consumption and contribute to broader environmental sustainability objectives. The aesthetic impacts of a project's lighting are further considerations. Inappropriate or excessive lighting can negatively affect the visual appeal of a community or natural setting.

Establishing a baseline of existing light conditions and identifying sensitive areas such as residential neighborhoods and natural habitats is a key part of any light analysis. A project's lighting plans are scrutinized for fixture types, intensity, directionality, color temperature, and operational hours to understand their potential effects on the environment and human communities. Color temperature is a measure of the color characteristics of a light source, expressed in degrees Kelvin (K). It describes how "warm" or "cool" light appears to the human eye. Quantitative measurements (i.e., photometric analysis) and qualitative assessments are employed to gauge the distribution and intensity of light, while adherence to guidelines and standards from organizations like the International Dark-Sky Association and the Illuminating Engineering Society help frame the evaluation within established best practices.

The intensity of light emissions from bioenergy plants or wood product businesses is closely tied to their operational size. Larger operations demand a more elaborate lighting setup for functionality, security, and safety, leading to an escalation in light pollution. Such operations typically incorporate an array of lighting technologies, including floodlights and security systems, to ensure the grounds are well lit. Additionally, these facilities often operate for extended hours, with some remaining active around the clock, further amplifying the likelihood of nighttime light pollution. In urban areas, already subjected to significant light pollution, experience a compounding effect with the addition of light from large facilities. While the immediate ecological impacts may be less pronounced due to the pre-existing diminished presence of wildlife, the incremental contribution to light pollution exacerbates issues like the urban heat island effect and can further reduce residents' ability to see the night sky.

Overall, in the CEQA review process for bioenergy or wood products projects, the approach to lighting is multifaceted, aiming to mitigate environmental impacts, promote energy efficiency, and maintain harmony with the local community's visual landscape. Implementing thoughtful lighting designs and technologies is essential to minimize adverse effects while supporting a project's sustainability and operational goals.

Aesthetics

In CEQA, aesthetics plays a significant role in evaluating the environmental impacts of projects. This includes assessing the visual and sensory qualities that contribute to the environment's overall beauty and visual harmony. For such projects, aesthetic considerations encompass a range of impacts, from the visual intrusion of large structures and processing equipment to the effects of light and glare emanating from the facility's operations. CEQA mandates an assessment of these impacts and requires projects to implement mitigation measures if necessary and feasible. Strategies might include architectural design that blends with the natural surroundings, landscaping to screen facilities, directional lighting to minimize glare, and surface treatments to reduce reflective impacts.

Projects involving biomass harvesting or wood product manufacturing can alter landscapes, affecting the area's aesthetic value. This could involve vegetation removal, landform alterations, and the construction of new infrastructure. Mitigation under CEQA might involve restoring disturbed areas, adopting sustainable practices, and ensuring landscape changes are in harmony with the area's character. Additionally, the cumulative aesthetic impact of multiple similar projects in a region is a significant consideration, as the collective visual effect can be more substantial than that of a single project. Ensuring a project aligns with community character and addresses public perceptions of environmental aesthetics is also vital. Projects that starkly contrast with existing community aesthetics or are perceived negatively can face community opposition. Engaging with local communities to understand and incorporate their aesthetic values into project design is an essential step in the CEQA review process, aiming to minimize significant aesthetic impacts and integrate projects seamlessly into their environmental and community context.

Biological Resources, Water Supply, and Water Quality Impacts

Biological Impacts

In the context of assessing the environmental impacts of a bioenergy plant within the scope of CEQA, it's important to examine the potential biological consequences on biodiversity, ecosystems, and habitats for various species. A primary issue is the habitat degradation and division resulting from building a facility and its related structures, like roads and power lines. This construction phase can lead to the direct elimination of habitats for numerous species, causing fragmentation that isolates populations and hinders their movement and genetic interchange. Wildlife experiences disturbances through noise, light pollution, and human presence, which can drastically change their

behavior, reproductive success, and survival chances. The noise from construction and plant operations can interfere with animals' communication, feeding, and mating activities. Light pollution disrupts the natural behaviors of nocturnal animals, impacting their predation and migratory behaviors. Moreover, the increase in human presence can force wildlife to relocate, moving away from their natural settings to escape human interactions, which might result in decreased genetic diversity and an unbalanced ecosystem. Plant communities can be similarly impacted by development. Clearing land for projects can directly eliminate plant species and modify local vegetation dynamics, diminishing biodiversity and affecting the ecosystem at large, including the animals that rely on these plants for sustenance and shelter. Additionally, alterations in soil composition, water supply, and lighting from projects can hinder the growth of indigenous plants and encourage the spread of invasive species, further changing and degrading natural environments.

Water Supply and Water Quantity

The impacts on water quality from bioenergy plants can arise from the discharge of pollutants. Facilities involved in processes such as anaerobic digestion or biomass processing might release effluents containing organic materials (nutrients like nitrogen and phosphorus) and other pollutants into water bodies. If these effluents are not adequately treated, they can harm water quality. Additionally, bioenergy plants might contribute to thermal pollution through the discharge of heated water used in cooling processes, altering the temperature of receiving water bodies and potentially impacting aquatic ecosystems. For projects generating wastewater that is neither domestic nor related to stormwater, comprehensive environmental evaluation is crucial to address and mitigate impacts on water quality and ecosystems. This requires analysis detailing the wastewater's characteristics, volume, and potential environmental effects. Mitigation strategies, such as employing advanced wastewater treatment technologies, water recycling, and rigorous monitoring, are vital to minimize environmental impacts and comply with water quality regulations. The complexity of managing wastewater adds to the CEQA review process duration, necessitating thorough analysis and oversight to ensure environmentally responsible project advancement. This thorough approach, though time consuming and resource intensive, is essential for safeguarding environmental integrity while enabling project development.

Water consumption is also an important aspect of bioenergy plant operations, varying significantly with the type of bioenergy process and technology employed. These plants rely on water for cooling systems to maintain appropriate operational temperatures and protect equipment. Water is also vital for generating steam, necessary for biomass pretreatment methods such as steam explosion, and for powering steam turbines to produce electricity. Moreover, water is essential for cleaning, ensuring the biomass

feedstock, equipment, and facility remain uncontaminated, thus upholding operational efficiency and safety standards. In processes like bioethanol production, water is a fundamental part of the biomass conversion process itself. Consequently, the water footprint of bioenergy facilities can be considerable, underscoring the need for efficient water management, particularly in regions facing water scarcity. The industry is increasingly adopting measures to reduce water consumption, including recycling water within a facility and exploring alternative cooling technologies that require less water.

While the development of bioenergy plants necessitates thorough assessments of potential biological impacts and water usage implications under CEQA, these considerations do not inherently demand more effort or scrutiny than what is typical for other industrial projects subject to CEQA. Both biological impacts and water usage are common concerns for a wide range of developments, each requiring detailed evaluation of effects on biodiversity, ecosystems, water supply, and water quality.

Special Issue Highlight Two: Feedstock Sources and Reliance on Previously Produced Environmental Review: The California Vegetation Treatment Program

Bioenergy and wood products businesses typically rely on forest biomass residuals from forest treatments that would be generated by vegetation treatment whether or not the utilization business is built. Fuel treatments must be done to protect communities from wildfire[27], and in many cases it is better for the environment if the wood waste from a project is removed (rather than left in burn piles on the forest floor). It is important for the environmental documents for biomass projects to describe the existence of wood waste that will foreseeably be removed from the forest floor as the baseline condition that would exist with or without a project. Doing so will make it clear that a project is not causing forest biomass to be cut and removed just for the sake of a project. Rather, the project is making use of an existing waste stream. This information is important because this means that the impacts from forest health and fuel treatment projects are not the responsibility of a project, but rather, the project is helping solve a waste problem.

In the interest of being thorough, it is also a good idea to document the fuel reduction activity that is the source of a project's feedstock within a CEQA analysis. The Final EIR for the Board of Forestry and Fire Protection's California Vegetation Treatment Program (CalVTP) can provide much needed technical data for this type of analysis and can help lead to the conclusion that the removal of biomass used as feedstock results in a less-than-significant impact.

[27] https://www.sciencedirect.com/science/article/abs/pii/S0378112705004470

If Existing Feedstock That Would Have Been Removed Regardless of Biomass Utilization Project

In Section II, Subsection d) of the Appendix G Sample Initial Study Checklist, the question is asked about whether a project would "result in the loss of forest land or conversion of forest land to non-forest land." Section II. e) inquires whether a project involves any other changes to the existing environment that could result in such a conversion.

To begin, a project should determine if the biomass it plans to use will be removed no matter whether or not the project is built. If it is the case that the biomass will be removed regardless, then that point should be strongly made. In any case, the response to this Section should include information about the sources of biomass feedstock for a project, such as whether it is projected to come from community forest biomass green waste programs, USFS health projects, power line clearance forest biomass waste, or CAL FIRE projects to reduce wildfire on State Responsibility Areas or State Parks. Biomass projects typically use pre-existing feedstock from wooded areas for fuel reduction purposes, thereby promoting forest health. The removal of existing waste like branches, downed logs, stumps, and standing burned trees from wildfires must be dealt with to reduce wildfire risks and promote forest health.

In these examples, the wood waste removal and subsequent use by the bioenergy or wood products business should be compared in a CEQA document's consideration of alternatives against what would happen if the biomass was otherwise left in place. Discussion around the massive amounts of woody residuals left decaying in forests around the State can be used to bolster this position. It is critical that the environmental documentation explains these alternative fates in order to explain potential outcomes.

If Consideration of a Feedstock Source Is Included as an Impact, What Should Be Discussed?

If biomass waste removal is deemed necessary to include in an environmental document, the lead agency can reference the CalVTP to address impacts from fuel reduction and forest health projects that serve as the source of biomass for a project. Likely CEQA Checklist questions include wildlife resources, water quality, and other topics related to the methods and quantities of biomass removal. It might be argued that even if biomass feedstock would be removed regardless of a project, the market created by the business might increase pressure to expand biomass removal. In such cases, biomass projects can refer to prior CEQA documentation under CalVTP provisions.

CalVTP, established by Senate Bill 1260 in 2018, is a streamlined environmental review process for forest health projects aimed at reducing wildfire risk in California. It covers over 20 million acres of non-federal, fire-prone land, ensuring environmental standards are maintained while expediting project approvals.

At the heart of CalVTP is the Programmatic Environmental Impact Report (PEIR), which reduces redundancies and maintains environmental quality by evaluating the effects and feasible mitigation measures of projects within a broader framework. This approach simplifies the process, minimizing the need for separate environmental assessments. Collaborations with partner departments, such as the State and Regional Water Boards and the CDFW, ensure that environmental standards are integrated into the CalVTP, facilitating necessary approvals. Once a Project-specific Analysis (PSA) under the CalVTP is completed and approved, it remains valid for as long as conditions do not change in a way that would create new significant impacts or substantially increase previously identified significant impacts, allowing for multiple rounds of vegetation treatment and maintenance, thereby streamlining future applications.

This expedited process is important for rapidly implementing vegetation treatments, which are essential for reducing wildfire risks. To facilitate the implementation of this streamlined process, CalVTP provides various resources like a CEQA Flow Chart, templates for CEQA Findings, and a Mitigation Monitoring and Reporting Program. These tools aid project proponents in navigating the streamlined process, making it more manageable and accessible. The most important tool provided is the PSA, which is a project-specific checklist that identifies the specific, unique work that will be needed for a project.

As of April 2024, 91 CalVTP projects had been approved and another 47 were in progress, totaling 138 projects that have utilized this expedited tool. Those projects coordinated with multiple state and federal agencies, including the California Coastal Commission and the State Water Resources Control Board, to streamline future project consultations.

An example of PEIR's effectiveness is the Alder Creek Sequoia Resilience and Post-Fire Restoration Project, proposed by the Sierra Nevada Conservancy and Save the Redwoods League. This complex, multi-jurisdictional project included vegetation treatment, road repair, and decommissioning, with the latter two not covered in the CalVTP. These activities were addressed in an addendum, integrated with a project-specific analysis. The entire process, including consultations with the US Fish and Wildlife Service and the CDFW, was completed in just three months.

The East Bay Hills Vegetation Treatment Project, managed by the East Bay Regional Park District (EBRPD), was approved on July 18, 2023. This project aims to mitigate wildfire risks through various vegetation management techniques across approximately

2,280 acres in the East Bay Hills. The primary objective is to reduce wildfire likelihood by effectively managing vegetation and promoting ecological health. Key strategies include creating fuel breaks to slow the spread of wildfires and access for firefighting. Additionally, a project focuses on Wildland-Urban Interface (WUI) fuel reduction, targeting areas where urban environments meet wildlands. Ecological restoration efforts aim to replace hazardous trees with fire-resistant vegetation such as oak-bay woodlands or native grasslands, thereby enhancing biodiversity and ecosystem resilience.

The CalVTP was essential to this project, offering a structured framework for environmental compliance, standardized treatment methods, and continuous monitoring and mitigation. Its detailed guidelines enabled the selection of the most effective vegetation treatment methods, including manual and mechanical vegetation removal, prescribed burning, herbicide application, and prescribed herbivory using grazing animals. It ensured consistent and effective fuel load reduction across a projects area. The East Bay Hills Vegetation Treatment Project PSA/Addendum to the CalVTP PEIR (SCH# 2019012052; approved in July 2023) was an important document in this process. It provided a detailed assessment of the specific environmental conditions and needs of the project area, ensuring tailored vegetation management strategies, including comprehensive impact assessments and mitigation measures to protect local ecosystems. The Addendum supplemented the original CalVTP PEIR with project-specific information, ensuring a project aligns with broader objectives while addressing unique local requirements.

CalVTP has faced bureaucratic delays and complexities in implementation which have hindered its effectiveness in some cases. For example, it requires separate applications for each CAL FIRE unit involved in a project, and a potential lack of training and understanding may exist amongst Cal Fire staff about the program. However, despite these challenges, the program’s streamlined approach is advantageous for bioenergy and wood product businesses. The established standard practices and mitigation measures in CalVTP work to both reduce redundancies and provide cost savings without compromising environmental quality. This can be especially valuable to smaller organizations that may lack experience in creating their own projects and may face larger financial challenges. It also facilitates quicker access to forest resources for sustainable management, which aligns with bioenergy and wood products' needs for operational efficiency and environmental stewardship. Therefore, despite its operational hurdles, CalVTP holds the potential to positively impact these sectors.

If an environmental document is going to include a feedstock impact analysis, then it could include within Appendix G, Section VIII (h) (where it asks if a project would “expose people or structures to a significant risk of loss, injury, or death involving

wildland fires…") an analysis around the benefits of the removal of the biomass waste and studies that show how fuel reduction, and particularly biomass removal, reduces the risk of exposure to wildfires[28]. There is also a quantification methodology that can demonstrate the benefits of avoided wildfire available to the public[29]. Additionally, the analysis could include information about a reduction of open pile burning leading to less smoke in an air shed, thereby allowing, land managers to implement more indigenous burning and prescribed fire projects.

Biomass Utilization Using CalVTP Documentation[30]

Vegetation treatment projects under CalVTP are increasingly proposing the use of specialized biomass processing technologies as an alternative to traditional pile burning. These portable, on-site technologies aim to reduce the costs and environmental impacts associated with transporting biomass to processing sites. Compared to pile burning, these specialized technologies can also significantly lower GHG emissions and criteria air pollutants on site, including particulates found in smoke. By aligning with CalVTP objectives without introducing new, significant environmental impacts, these methods help reduce GHG emissions and air pollutants from biomass processing, making them valuable considerations for PSAs or addenda to the PEIR for evaluating their benefits in vegetation management projects.

Using CalVTP for biomass projects offers several benefits that can potentially expedite the process as it relates specifically to sourcing of biomass. The structured framework and comprehensive guidelines provide clear pathways for environmental compliance, streamlining the permitting process and reducing regulatory uncertainties. By adhering to established procedures for environmental reviews and impact assessments, projects can avoid delays often associated with regulatory approvals. Its emphasis on standardized treatment methods helps efficiently identify suitable biomass feedstocks, leading to more effective resource management and faster project execution. Detailed impact assessments and mitigation strategies ensure that ecological impacts are addressed upfront, minimizing the risk of unforeseen issues that could delay progress. A biomass project using CalVTP would primarily rely on the PEIR for comprehensive environmental assessments and compliance guidelines, the PSA for tailored impact evaluations and mitigation measures, and Mitigation and Monitoring Plans to ensure environmental protections are sustainable and effective. Additionally, Addendums to the PEIR would provide project-specific updates and additional information, keeping a project aligned with regulatory standards and environmental objectives.

[28] https://fireecology.springeropen.com/articles/10.1186/s42408-022-00159-y
[29] https://climateforward.org/wp-content/uploads/2022/03/FM_AWE_v1.0_WG-Mtg-1_post.pdf
[30] https://bof.fire.ca.gov/media/cbfggsgi/biomass-specialized-processing-technologies-technical-paper_ada.pdf

Forest Practice Act

Another consideration if a project will be using woody biomass from private lands is making mention of the Forest Practice Act. The Z'berg-Nejedly Forest Practice Act was originally established in 1973 and is found in the Public Resources Code, starting at section 4511. Rules implementing the Act can be found in Title 14, Division 1.5, Chapter 4 of the California Code of Regulations, commencing with section 890. The goal of the Forest Practice Act is to foster responsible forest management by considering the public interest in both the logging industry and environmental conservation by assessing whether a project, outside of the harvesting itself, will likely have a significant adverse impact on the environment. Considerations include logging methods and equipment, erosion, water issues, road construction, disease control, and fire prevention.

The Forest Practice Act rules are intended to implement provisions found in the Z'berg-Nejedly Forest Practice Act while complying with other environmental laws, including CEQA. Whereas CEQA covers a wide array of project types, the Forest Practice Act only regulates the commercial harvesting of timber on private land. This is done through a permitting process that requires a Timber Harvesting Plan (THP). THPs are reviewed, approved, and enforced by nine districts throughout California, all of which fall under the umbrella of the CAL FIRE. Enforcement is carried out via onsite inspections, and violations result in penalties and fines.

A THP under the Forest Practice Act comes into play when projects involve activities on private land that are directly related to logging and are commercial in nature. Examples include clearing timber on a parcel over three acres in size, cutting more than 70% of existing trees within a five-year period, harvesting in a "special treatment area," and logging land with an average slope greater than 50%.

Exceptions do exist. THPs are not required for smaller projects or if the trees taken down are dead, dying, diseased or affected by a wildfire. Personal-use harvesting, emergency cutting, and Christmas tree farms are also not required to submit a THP.

The projects that do require a THP must contain detailed plan information, such as detailed mapping, the project's timeline, and the planned use for the timber. It must also include how environmental impacts will be handled, including actions to avoid or reduce significant impacts such as soil erosion, damaged water quality, wildlife habitat loss, and more. Beyond these topics, a project must also use allowable timber harvesting methods; address public safety protections regarding fire, traffic, herbicide use, etc.; and comply with the Endangered Species and Clean Water Acts.

THPs are the “functional equivalent” of a CEQA document, such as a negative declaration or EIR. Many of the environmental concerns under CEQA are addressed within a THP. There are situations, however, where a limited or full review under CEQA may apply. One example is when a permit required for a THP is needed from another California state agency and that other agency must still meet full CEQA requirements. Additionally, if the timber project is part of a bigger project that has environmental impacts beyond those that are forestry related, a full CEQA review will be required. If the THP involves transitioning the property to another commercial use, like building homes or starting a vineyard, a full CEQA analysis may be required. Other scenarios are when a project is close to a protected wilderness, impacts an old growth forest, or the THP creates habitat or species concerns. Also triggering a more extensive CEQA review may be a THP that uses experimental forestry management techniques or if the public has raised supportable environmental concerns.

Consider a hypothetical scenario where “ABC Timber Co.” plans to conduct a timber harvest operation in a forested area in Northern California. The area in question includes a stream classified as a "Class I" watercourse, which serves as a habitat for fish and other aquatic life. To proceed with the timber harvest, ABC Timber Co. must obtain a THP permit from CAL FIRE. However, because the proposed operation impacts a watercourse, they also need a separate permit from the CDFW. Specifically, CDFW requires ABC Timber Co. to apply for a Lake or Streambed Alteration Agreement (LSAA) under Section 1602 of the California Fish and Game Code. This permit is essential because the timber harvest operation might substantially divert or obstruct the natural flow of the stream or significantly alter its bed, channel, or bank. Although the THP is handled under the Forest Practices Act, CDFW is a responsible agency due to the location of the waterway, and so must also comply with CEQA requirements for the LSAA permit. This means conducting its own environmental review to ensure that the timber harvest activities will not have significant adverse impacts on the stream and its habitat. While CDFW reviews the THP and any associated environmental documents prepared by CAL FIRE, it may also require additional studies or mitigation measures to address specific concerns related to the watercourse and its ecosystem.

In summary, ABC Timber Co.'s timber harvest operation necessitates a multi-agency permitting process where both CAL FIRE and CDFW must ensure CEQA compliance. CAL FIRE focuses on the overall timber harvesting activities, whereas CDFW concentrates on the specific impacts on the watercourse and its habitat, reflecting the collaborative, yet thorough approach to environmental protection in California.

Program Timberland EIR

A Program Timberland Environmental Impact Report (PTEIR) governed by the California Code of Regulations (CCR) Title 14, Section 1092.01 is a specialized

document designed for long-term forest management and timber harvesting programs. Unlike standard EIRs, PTEIRs are prepared in accordance with both CEQA requirements and California Forest Practice Rules. This dual compliance allows for a more comprehensive evaluation of forest management effects over time. PTEIRs offer several advantages over standard EIRs. Once certified, they enable streamlined approval of future timber harvesting activities through a Project Consistency Checklist. This checklist demonstrates that a specific project falls within the scope of analysis covered by the approved PTEIR, focusing on site-specific impacts and practices described therein. The checklist serves multiple purposes, including indicating which mitigation measures from the PTEIR should be applied to the individual project for resource protection. It also lists any alternate practices that deviate from the standard operational rules analyzed in the PTEIR. This ensures that mitigations developed during the PTEIR process are recognized and implemented at the project level.

The PTEIR serves as an efficient compliance mechanism for the environmental analysis required under the Forest Practice Act. It addresses how Maximum Sustained Production of high-quality timber products will be achieved, a key requirement of the Act. PTEIRs can also propose alternative standards to the operational rules in the Forest Practice Act, provided they offer equal or better protection to affected resources. Program Timber Harvest Plans (PTHPs) can be submitted that tier to the practices and analysis found in the certified PTEIR, streamlining the approval process for individual harvest operations while ensuring compliance with the Forest Practice Act.

In essence, PTEIRs provide a specialized, comprehensive, and efficient approach to evaluating and managing long-term forest management activities. They bridge CEQA requirements and the Forest Practice Act, offering a streamlined process for timber harvesting while ensuring environmental protection and sustainable forest management.

Part Four: When Other Laws Interact with CEQA: National Environmental Policy Act and Tribal Law

The National Environmental Policy Act

The National Environmental Policy Act (NEPA), enacted in 1970 and amended most recently in 2023, stands as a cornerstone for environmental legislation in the US, setting forth a framework for integrating environmental considerations into federal decision making. The essence of NEPA is to ensure that federal agencies are informed of the environmental consequences of their actions before the decisions are made. It mandates a process of environmental assessment (EA) or, in cases of significant effects on the human environment, a more detailed environmental impact statement (EIS).

Categorical exclusions (CEs) are categories of actions that federal agencies have determined do not individually or cumulatively have a significant effect on the human environment. These actions are excluded from the requirement to prepare an environmental assessment or environmental impact statement under NEPA. However, it's important to note that CEs are not exemptions from NEPA review, but rather a type of NEPA review that requires less extensive documentation.

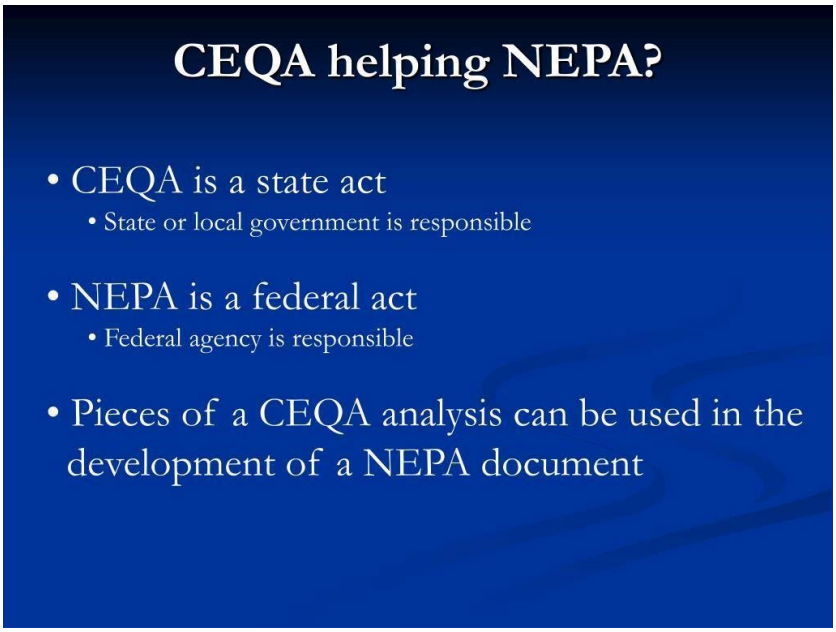
To apply a categorical exclusion, federal agencies must still conduct a brief environmental analysis to confirm that the proposed action fits within the defined category and that no extraordinary circumstances exist that would require further environmental review. Extraordinary circumstances may include potential impacts on protected species, historic properties, or environmentally sensitive areas. If such circumstances are present, the agency may need to prepare an environmental assessment or environmental impact statement instead.

A significant aspect of NEPA is its emphasis on public involvement. NEPA democratizes environmental decision making by requiring federal agencies to engage the public during the assessment process. This involvement ensures a level of transparency and allows for the collective examination of both the proposed actions and reasonable alternatives. Through public comments, agencies can receive valuable input, which can be instrumental in identifying potential environmental impacts and alternatives that may not have been initially considered.

NEPA also fosters interagency cooperation. By encouraging collaboration among federal, state, and local agencies, NEPA aims to reduce redundancy and ensure that the environmental standards and policies are consistently applied across different levels of government. This cooperative approach promotes a more holistic and efficient process of environmental review and decision making.

Furthermore, NEPA includes provisions for ongoing monitoring and mitigation to manage any adverse environmental effects that arise during construction or project

implementation. It is not just about understanding the potential impacts, but also about taking steps to mitigate adverse effects and monitor the outcomes. Notably though, mitigation is not mandatory under NEPA like it is under CEQA where impacts are significant, and mitigation is feasible. Although federal agencies commonly adopt mitigation based on information obtained through an EA or EIS, they are not under any legal compulsion under NEPA to do so.



Joint CEQA and NEPA Documents

NEPA and CEQA can apply together when a project involves both federal and state/local agency actions or approvals in California. This typically occurs when a project requires discretionary approvals from both federal and California state or local agencies, or when it receives federal funding, work, or needs federal permits. Joint NEPA-CEQA reviews are common for transportation projects involving federal funding, where Caltrans often oversees the process. Large-scale infrastructure projects, such as those along the Colorado River, and landscape-scale actions like the Desert Renewable Energy Conservation Plan may also necessitate combined environmental reviews. When both laws apply, agencies may prepare a joint environmental document to satisfy both sets of requirements and avoid duplication of effort. However, federal agencies can enter into memoranda of understanding with California state or local agencies to facilitate coordination and potentially reduce direct federal agency involvement in some cases.

Article 14, Sections 15220-15229 of the CEQA Guidelines applies to projects that are subject to both CEQA and NEPA, in that they involve state or local agencies, along with one or more federal agencies. In this case, the time limits of one year and 105 days applicable to some classes of CEQA projects may both be waived. Creating joint NEPA/CEQA documents is a method aimed at streamlining the environmental review process by fulfilling the requirements of both NEPA and CEQA in a consolidated manner. This method capitalizes on the similarities between NEPA and CEQA document types. For instance, a joint document known as an Environmental Impact Report/Environmental Assessment (EIR/EA) can be created to meet the requirements of both acts.

A primary difference between NEPA and CEQA is the way significance is determined and discussed in environmental documents. Under NEPA, significance of impacts is used only to decide the level of documentation required, while CEQA mandates the identification and mitigation of each significant effect on the environment. Understanding and addressing these differences in joint documents is crucial for compliance with both acts.

Efforts have been made to harmonize the processes under NEPA and CEQA to promote efficient and effective environmental reviews. The Council on Environmental Quality (CEQ) and the California Governor's Office of Planning and Research (OPR) have issued a handbook for integrating State and federal environmental reviews, aimed at streamlining the environmental review process by harmonizing the mandates of NEPA and CEQA. NEPA and CEQA share similarities in intent and the review process, which include aspects like analyses, public engagement, and document preparation. These similarities provide a basis for leveraging information from one act's documents when preparing documents for the other, thereby potentially reducing the time and resources required for environmental reviews. This exchange of information between NEPA and CEQA documents can lead to a more streamlined and efficient process in preparing environmental reviews, aiding project proponents and environmental agencies in navigating the complex regulatory landscape.

It is important to understand that if an EIS or Finding of No Significant Impact (FONSI) is prepared before an EIR or ND for a project that needs both CEQA and NEPA review, there will need to be supplemental CEQA work done because legally mandated discussions of mitigation or growth inducing impacts must be addressed before the EIS/FONSI can be used in place of the EIR/ND.

On the other hand, if the CEQA EIR or ND is prepared first, then the lead agency should consider a combined document. To do so, the lead agency must involve the federal agency in preparing the joint environmental document, as under federal law, a CEQA EIR will not be adequate unless the federal agency helped prepare the joint document. When a federal agency will not work with a state or local lead agency, the applicant will likely have to pay for a second document to be prepared to meet NEPA guidelines. As a

result, the lead agency should persist in seeking interagency cooperation with the federal agency in hopes that the federal agency can avoid duplication by utilizing analysis prepared for the CEQA document.

When local lead agencies identify that they should consult with the federal agency for a local project, they should do so as soon as possible. Cooperation between the state or local and federal agencies should reduce duplication by joining planning processes, environmental research and studies, public hearings, and environmental documents. Local agencies may also determine that they need to comment on a federal project in their jurisdiction and should do so with specificity and detail.

Regarding document circulation requirements, if notice and public review of the NEPA EIS or FONSI meets or exceeds state guidelines, the CEQA lead agency may use the federal document without recirculating it for review. The lead agency must just give notice that it will use the federal document and that it believes the federal document meets the CEQA guidelines.

Note that specific guidelines are involved with any bioenergy projects that plan to reuse a military base. When looking at whether a military reuse plan has a significant impact on the environment, it is based on the physical conditions of the base when the closure decision becomes final. Impacts that do not exceed those baseline physical conditions are not considered significant.

Biomass Projects in California Utilizing Federal Grants Are Subject to NEPA and CEQA

Projects that receive grant money from federal agencies will need to undergo federal environmental review. For example, if projects are part of the DOE clean energy demonstration grant program[31], the DOE investment tax credit program[32], the US Department of Agriculture (USDA) loan guarantee program[33], or USFS grants through the community energy program, [34]then NEPA is likely to apply to any activity that could be considered a project under NEPA. Some examples of these federally funded programs include the DOE's Office of Clean Energy Demonstrations (OCED), which was established in December 2021 to support the scaling of emerging technologies crucial for addressing climate challenges and achieving net-zero emissions by 2050. With funding of over $25 billion, OCED aims to deliver clean energy demonstration projects in collaboration with the private sector.

[31] https://bipartisanpolicy.org/download/?file=%2Fwp-content%2Fuploads%2F2022%2F08%2FEnergy-IRA-Brief_R04-9.26.22.pdf
[32] https://www.energy.gov/justice/low-income-communities-bonus-credit-program
[33] https://www.rd.usda.gov/programs-services/energy-programs/rural-energy-america-program-renewable-energy-systems-energy-efficiency-improvement-guaranteed-loans
[34] https://www.fs.usda.gov/science-technology/energy-forest-products/wood-innovation/grants

Another program run by the DOE in collaboration with the Treasury and the Internal Revenue Service (IRS), is the 48C Program, which was expanded under the Inflation Reduction Act by President Biden, providing $4 billion in tax credits to boost clean energy manufacturing and recycling, including $1.6 billion for projects in energy and coal communities. It supports the establishment or upgrade of facilities for advanced energy property production. The program offers up to a 30% investment tax credit for projects meeting specific standards.

The USDA Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance Program offers up to $250 million in loan guarantees for advanced biofuels, renewable chemicals, and biobased product projects. Projects can be located anywhere in the US or its territories, focusing on sustainable energy and product manufacturing to stimulate rural economic growth.

The USFS Wood Innovations and Community Wood Grants programs fund projects that promote forest health and stimulate local economies. The Wood Innovations Grant focuses on expanding traditional wood products, using wood in construction, and growing wood energy markets. The Community Wood Grant supports the installation of wood energy systems or the construction of innovative wood product facilities. Funding varies by project and state, with grants reaching up to $300,000 for individual projects to support a range of initiatives from biomass energy production to advanced wood manufacturing.

Funds from each of these federal programs trigger NEPA review. The level of review required is determined by the relevant federal Agency whenever funds are used for construction of projects. In some cases, funds used only for planning or pre-construction permitting may not trigger NEPA, so going over program nuances with the grant administrator is important.

CEQA/NEPA In Relation to Forest Health and Fuel Reduction Projects

Streamlining the environmental review process for Forest Health and Fuel Reduction projects is crucial. A well-coordinated interchange of documents between NEPA and CEQA processes can significantly contribute to this objective. Key documents such as an EIR or EIS provide a comprehensive analysis of the potential environmental impacts of a proposed project. Having access to previously completed EIRs or EISs can provide a foundational understanding of the environmental context and the potential impacts of forest health and fuel reduction projects, thereby accelerating the environmental review process. Environmental Assessments (EAs), which offer a more concise analysis compared to EIRs or EISs, are invaluable in determining whether a project will have significant environmental effects. Utilizing information from previous EAs can help in

understanding the baseline environmental conditions and the potential minor impacts of a project, facilitating a more efficient review process. Similarly, Initial Studies often prepared under CEQA are useful in determining the appropriate level of environmental documentation. These documents can provide valuable baseline data and preliminary analyses that can inform the NEPA process.

Mitigation Measures and Monitoring Plans are other vital documents that can be utilized across projects to ensure that effective and proven mitigation strategies are applied consistently. These documents are crucial in delineating the strategies that would mitigate potential adverse impacts, fostering a uniform understanding and approach towards mitigation across different projects. Technical studies and reports covering areas such as wildlife habitat, water quality, soil erosion, and cultural resources provide essential data and analyses. By utilizing information from these documents, duplication of effort can be avoided, and decisions can be based on the best available information, expediting the review process.

Moreover, documents containing public comments and responses can provide insights into community concerns, local knowledge, and issues that may need to be addressed in the environmental review process. Knowledge of this information not only fosters a more comprehensive understanding of local environmental and social conditions, but also enhances the inclusivity and transparency of the review process. Documents related to Categorical Exclusions or Exemptions; Decision Documents like the Record of Decision (ROD) under NEPA or findings made by a lead agency under CEQA; and permits and authorizations from other federal, state, or local agencies can also be utilized to streamline the review and permitting process, ensuring compliance with all applicable laws and regulations.

Fuel Reduction Projects on Federal Lands - Statutory Exemption

Public Resources Code Section 4799.05(d) provides an exemption from CEQA for certain wildfire risk reduction projects on federal lands if they have undergone review under NEPA. This exemption remains valid only if there have not been significant amendments to NEPA or other relevant federal laws at the time of certification. As of 2024, the Secretary of the CNRA has certified that there have been no substantial amendments to NEPA since the previous certification that affect the exemption.

Despite regulatory (as opposed to statutory) changes made by the White House Council on Environmental Quality in 2020 and litigation challenges from states (including California) as well as changes by the USFS, the State of California holds that no substantial changes in law have changed the status of exemption found in Section 4799.05. The CNRA Secretary found that some federal regulatory changes do not override statutory obligations that still make NEPA substantially similar to CEQA. Bolstering the CNRA Secretary’s position are the references to executive orders issued

in May of 2022 from President Biden that emphasize environmental protection and climate change.

Furthermore, some of the federal regulatory changes do not affect prescribed fire, thinning, or fuel reduction projects. Additionally, several changes in the CEQ regulations are procedurally similar to those in the CEQA Guidelines, making them consistent with California's environmental standards. Therefore, the CNRA Secretary has certified that NEPA and other federal laws affecting forest management in California have not been significantly amended, allowing the exemption in Section 4799.05 to remain operative. This certification may be revised or revoked if the legal status changes.

Tribal Lands and CEQA

There are at least 110 Native American tribes in California, each reflecting the state's rich indigenous heritage and each with their own legal status. Indian reservations are federally recognized territories for Native American tribes. These reservations are autonomous and house tribal governments and cultural practices. California's reservations are often smaller compared to those in other states, highlighting the diversity of its indigenous communities. Rancherias are another form of tribal land unique to California. Originally established for smaller indigenous groups, they were created in the 20th century and now function similarly to reservations, providing land and autonomy for their resident tribes.

Beyond the reservation and rancheria, California has other areas of cultural and historical significance to indigenous communities that are not federally recognized. These include traditional sites used for hunting, fishing, and ceremonies, which remain vital for cultural preservation and education. Urban tribal lands have also emerged in California, representing areas within cities where Native American communities maintain their cultural identity. These urban spaces, while not formally recognized as tribal territories, are important for the cultural and social life of urban indigenous populations. Federally recognized tribal land entities are not subject to the laws of California. However, they can voluntarily use the CEQA process or something like it to analyze the impact of their projects on the environment.

Projects happening on Tribal Lands: When Does CEQA Apply?

Federally recognized tribes possess tribal sovereignty, which means they have the authority to govern themselves and their lands, subject to federal laws enacted by Congress. As a result, CEQA and other state regulatory laws generally do not apply to projects undertaken by a tribe on its own lands. While state laws like CEQA generally do not apply directly to tribal lands, they can be relevant for projects by non-tribal entities that indirectly impact tribal lands, or when tribal entities are acting on non-

federally recognized lands. Projects on tribal lands by non-tribal entities involve a nuanced interplay of tribal sovereignty, federal laws, state regulations, and agreements between different stakeholders. The intricacies of jurisdiction and regulation often lead to the creation of a Memoranda of Understanding (MOUs) between tribes and non-tribal entities. These MOUs outline terms of inter-entity cooperation, especially in environmental and cultural resource management. Additionally, non-tribal entities may engage in joint ventures or partnerships with tribes for various projects, ensuring compliance with tribal laws and regulations. Examples of such projects include renewable energy developments like solar or wind farms, which offer clean energy and economic benefits. Other common projects are commercial developments, including casinos and resorts, often involving land leases and agreements between tribes and non-tribal entities.

While CEQA is Comprehensive in Its Scope, Its Application to Tribal Lands Introduces a Unique Procedure: The Tribal Environmental Impact Report

Tribal-State gaming compacts are agreements between Native American tribes and state governments for casino-style gaming on tribal lands in the U.S. These are based on the Indian Gaming Regulatory Act (IGRA) of 1988, which divides gaming into three classes, with Class III including casino games like slot machines and table games. These compacts, requiring state negotiation and U.S. Department of the Interior approval, set game types, regulatory oversight, and often revenue sharing. They balance tribal sovereignty with some state involvement in gaming operations.

Economically, tribal gaming operations are a vital source of revenue for many Native American communities, supporting various social services and community development projects, and providing significant employment opportunities. However, the negotiation of these compacts can present challenges, such as balancing tribal sovereignty with state and federal regulatory requirements and addressing disparities in negotiation power.

The tribal EIR procedure is designed to be analogous to the standard EIR procedure under CEQA, though technically the process is not subject to CEQA statutes and regulations. The primary objective of this procedure is to assess the potential environmental impacts of projects on tribal lands. However, there is a distinct difference when it comes to resolving disputes arising from these reports. Unlike the standard CEQA process where disputes might be addressed through various state and local legal avenues, the resolution of disagreements over tribal EIRs is more streamlined. Specifically, any disputes related to tribal EIRs are confined to arbitration. This arbitration process involves the tribe and one or more California public agencies, typically the local governments that are directly affected by the project. This arbitration-centric approach ensures that any conflicts are resolved in a manner that respects tribal

sovereignty while also adhering to the environmental standards of the kind set by CEQA. This approach to dispute resolution strikes a balance between the state's interest in environmental protection and the tribe's interest in self-governance and decision making related to its lands.

In essence, the Tribal EIR procedure exemplifies a collaborative approach to environmental assessment on tribal lands, ensuring that both tribal rights and environmental standards are upheld.

Tribal Projects that Require NEPA Compliance

The "Revitalizing Forest Health in the Yurok Community Forest and Salmon Sanctuary" project is an initiative spearheaded by the Humboldt County Resource Conservation District (RCD) in collaboration with the Yurok Tribe. Through the CAL FIRE Forest Health Grant Program, the RCD provided grant funding to the Tribe with the objective of treating approximately 1,300 acres of post-industrial timberland. The treatments encompassed timber management, fuels management, and post-harvest fuels management practices. This initiative was born out of the recognition of specific areas within the Yurok Tribe's Yurok Sustained Yield Lands Forest Management Plan that were identified as needing fuels reduction.

Geographically, the project was executed on Yurok lands situated in the Pecwan Creek Watershed. The project went through comprehensive review under the Pecwan Forest Health Project, Phase 1 Lands, Environmental Assessment. Furthermore, a NEPA FONSI was signed in April 2023. This project was able to use a statutory exemption for forest health projects, described earlier for fuel reduction projects on federal lands.

Most activities or project proposals that use, develop, or repurpose resources on American Indian and Alaska Native trust or restricted lands require compliance with NEPA. "Trust land" refers to land interests owned by a tribe or an individual Native American landowner, where the title is held in trust by the U.S. and there are legal restrictions on how the land can be sold or transferred. Similarly, "restricted land" is land owned by a tribe or an individual Native American landowner with legal restrictions on how it can be sold or transferred.

The specific activities and projects requiring NEPA compliance on these lands encompass a wide range of undertakings. Infrastructure development is a primary category, including the construction of roadways, right-of-way easements, drinking water or irrigation projects, power lines, and broadband Internet projects. Additionally, permit applications for activities such as livestock grazing, and energy and mineral development also fall under the purview of NEPA compliance. Realty transactions are another significant area where NEPA compliance is necessary. These transactions can include lease acquisitions, gift deeds, and fee-to-trust land acquisitions. Furthermore,

environmental restoration projects are also subject to NEPA review to ensure that all potential environmental impacts are thoroughly considered and mitigated.

A NEPA compliance review request can be initiated by various entities. This includes offices within the Bureau of Indian Affairs[35] (BIA); other federal, state, or local agencies; tribal governments, individual tribal members; private individuals; or corporations. Each of these stakeholders can request a review to ensure that their projects or activities comply with NEPA regulations and adequately address environmental concerns.

Protecting Tribal Cultural Resources Near Tribal Lands and in all Other Circumstances

Tribal Cultural Resources: CEQA takes steps to protect tribal cultural resources located on non-tribal lands. In 2014, AB 52 was added to CEQA. For projects requiring a ND, MND, or EIR, AB 52 requires lead agencies to consult with California Native American tribes that are traditionally and culturally affiliated with a project area. This consultation aims to identify potential impacts to tribal cultural resources and discuss ways to avoid or mitigate those impacts.

CEQA recognizes the importance of protecting tribal cultural resources located throughout California. AB 52 requires all projects to identify tribal cultural resources, through tribal consultation, which are significant and may be substantially adversely impacted during project implementation. Outside of federal tribal trust lands, tribal consultation applies to land in California, regardless of ownership or location. Bioenergy projects are not more likely to encounter tribal resource issues, except that, as with any project, there may be a higher chance of encountering them in rural settings. There is also a higher likelihood of significantly adversely impacting tribal resources in larger projects that require more infrastructure and development.

If during consultation a tribal cultural resource is found to be of cultural value to a tribe, then consultation includes assessing potentially significant adverse impacts on those resources. This occurs before findings are made, which allows for early discussion on ways to avoid or mitigate impacts. Consultation is required even when potential tribal resource impacts have not yet been identified.

For a tribal consultation to occur, a tribe must first request in writing to be notified of proposed projects that are in a geographic area in which the tribe is traditionally and culturally connected. If this request does not occur, the lead agency may consult with the tribe but is not required to do so.

[35] https://www.bia.gov/service/nepa-compliance

Specific timelines must be followed. A notice must go out to tribes that have made a request to be notified within 14 days after a project application is complete or an agency has decided to undertake a project. After receiving notice, the tribe then has 30 days to request, in writing, a consultation. The lead agency must then begin the consultation process within 30 days of receiving the tribe's request. However, in any case, the lead agencies must consult prior to the issuance of CEQA documents. There is no statutory limit on the length of the consultation. Confidential tribal information must be protected throughout the process.

During consultation, California Native American tribe cultural resources of value are explored and identified. A valued tribal cultural resource is listed as a "tribal cultural resource" found in Public Resources Code section 21074, subdivision (a)(1)(A). Whether such a resource is "valued" or "significant" is unstated. Presumably, all defined tribal cultural resources are considered valued and significant, but those two adjectives are not legal terms of art used in this context. Whether a resource is a significant cultural tribal resource is determined through obtaining and considering tribal expertise. Tribal cultural resources can be sites, features, places, landscapes, sacred places, or objects. Examples of sites include tribal routes, burial or village sites, locations with culturally significant plants or water sources, or gathering places tied to the identity of the tribe. Artifacts could include tools, prayer sticks, beads, paintings, carvings, and human and structural remains.

After determining the significance of a project's impact to an identified tribal cultural resource, the next step during tribal consultation is to determine if a project may substantially adversely impact those resources. If a significant adverse impact on a tribal cultural resource is present, the agency and tribe work during consultation to agree on appropriate ways to reduce the impact, with a preference towards avoidance. Examples include preservation, relocation, protecting dignity, character, traditional use, or confidentiality of the resource or permanent conservation easements. With tribal cultural resources, using substitute resources is not a favored mitigation method. Mitigation measures during construction may include exclusion zones, extra security, limiting vegetation removal, and using protective coverings.

If any mitigation measures are agreed upon, they are recommended for inclusion in the environmental document and in the mitigation monitoring program. If the parties are unable to agree, the lead agency must still work to reduce impacts to tribal cultural resources through any mitigation determined by the lead agency to be feasible. If impacts to a tribal resource impact are deemed not to be significant, tribal concerns may still, as a matter of good practice and interagency comity, be addressed in good faith. If an archaeological resource or other cultural resource is found not to qualify as a tribal cultural resource (a legal term of art), the lead agency should determine whether the

resource might qualify as either an ‘historical resource,” or a “unique archaeological resource,” which are two other recognized categories of cultural resources entitled to consideration under CEQA. Significant impacts to such resources are subject to the general CEQA requirement that feasible mitigation should be imposed. Such mitigation may be developed outside of the tribal consultation process.

Image courtesy of: San Jose State University School of Information

Part Five: Potential New CEQA Exemptions for Bioenergy or Wood Products

Introduction

CEQA practice (and perhaps the law itself) will need to evolve as the need to improve forest health conditions to reduce wildfire continues to become more pressing with climate change. To meet this reality, CEQA documents will have to compare the "business as usual" scenario of doing nothing with the science that shows the benefits of active management of our state's forests. Bioenergy and wood products businesses that source woody residuals from sustainable forestry activities are a key part of the solution. This section of the handbook examines approaches to modernizing CEQA in response to the evolving challenges facing the state's forests. As California grapples with pressing issues of forest health, escalating wildfire risks, and the need for effective forest waste management, CEQA must adapt to address these urgent concerns. This section will explore various strategies to update CEQA, ensuring it better reflects and responds to the current realities of forest ecosystems. This includes integrating modern scientific understanding and technologies into the CEQA process to ensure that environmental assessments and decisions are based on the most current data and methodologies. By doing so, CEQA can play a pivotal role in fostering sustainable forest management practices that mitigate wildfire risks and promote ecological resilience.

Analyzing the Language from the Joint Institute for Wood Products Innovation's November 2020 Recommendations to Expand Wood and Biomass Utilization in California regarding amendments to CEQA Guidelines.

In November of 2020, the Joint Institute for Wood Products Innovation and the California Board of Forestry approved the "Joint Institute Recommendations to Expand Wood and Biomass Utilization in California." The recommendations proposed several steps that state agencies could take to improve forest biomass utilization and markets in California. One of those actions stated:

"Action: OPR should adopt an amendment to Guidelines Section 15126.4(c)(3) that reflects and clarifies the holding in Golden Door Properties, LLC v. County of San Diego (2020) 50 Cal.App.5th 467 (Golden Door) and to ensure that forest health and fuel reduction projects that provide long-term GHG benefits over time are explicitly supported. The amendment (new text is underlined and italicized) should read:

> Off-site measures, including offsets, which are not otherwise required to mitigate a project's emissions*, which demonstrate quantifiable benefit, including but not limited to those that may initially be carbon positive, but over time provide carbon reduction benefit. Any offsets used should be consistent with the goals of AB 32,*

but do not necessarily need to be the same as compliance grade credits under the Cap-and-Trade program."

The first question to ask about this recommendation is whether OPR is the proper venue for the requested amendment adoption. While OPR is the entity that proposes revisions to the Guidelines for possible formal promulgation by the California Natural Resources Agency (CNRA), the intent of the Guidelines is to reflect existing statutory law rather than to create new law that goes beyond, or is inconsistent with, what is found in statute. [36] While the Legislature has delegated to OPR and CNRA the authority to periodically update the Guidelines (see Pub. Resources Code, § 21083.05), the resulting revisions must be consistent with existing statutes and case law. Although the Guidelines are regulations, and thus have the force of law behind them (where they use "mandatory" language), revisions to the Guidelines must be consistent with statutory limitations imposed on all rulemaking by the California Administrative Procedure Act. The Office of Administrative Law (OAL) reviews all proposed regulations in California against these limitations. OAL reviews all proposed new regulations against the following standards: Necessity; Authority; Clarity; Consistency; Referenced; and Nonduplication. (Gov. Code, §§ 11349, 11349.1.) As a practical matter, these standards limit the discretion of agencies such as OPR and CNRA to get creative in interpreting existing statutes and court cases. For example, "Necessity" requires showing "the need for a regulation to effectuate the purpose of the statute, court decision, or other provision of law that the regulation implements, interprets, or makes specific[.] (*Id*., § 11349, subd. (a).) And "Consistency" means "being in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or other provisions of law."

To determine if the recommendation to amend the Guidelines is appropriate, the recommendation should be broken down into two parts. The first concept, covered in the first sentence, relates to the quality of mitigation actions taken in the context of GHG reductions. Currently Section 15064.4 provides guidance to local agencies about how to analyze the impacts of GHG emissions, and there have been several cases that have covered the topic, as discussed earlier.

Those sources, however, are silent regarding whether or not actions that may include short-term carbon increases, but over time result in significant carbon reductions, qualify as legitimate examples of "[o]ff-site" GHG mitigation measures. Neither the Golden Door decision nor other published Court of Appeal or Supreme Court decisions addressed this specific issue.

In recent years it has been determined that wildfire significantly contributes to GHG emissions, and to deal with this threat, some vegetation from the landscape needs to be

[36] https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf

removed. This removal results in carbon sequestration loss in the short term; but, when biomass removal is done in an ecologically and environmentally sensitive way, it reaps benefits for the long term by reducing wildfire risk, and eventually the forest becomes a carbon sink.[37]

The Guidelines currently direct lead agencies, in determining the significance of GHG emissions, to establish a timeframe for the analysis that is appropriate for a project and to employ analysis that reasonably reflects evolving scientific knowledge and state regulatory scheme. (CEQA Guidelines, § 15064.4, subd. (b).). At least arguably, these directives already provide for a potential pathway to discuss the topic of vegetation removal even without the formal amendment proposed by the Joint Institute. Moreover, OPR has options for addressing the subject without the need for formal Guidelines amendments.

In addition to periodically formulating proposed Guidelines changes, OPR also periodically publishes "technical advisory" documents that, while lacking the legal force of duly enacted regulations, nevertheless provide persuasive guidance to CEQA practitioners and others. When preparing such documents, OPR is not constrained by the limiting standards that OAL applies to proposed Guidelines revisions. For example, in June 2008, nearly two years before promulgation of the first Guidelines sections dealing with GHG issues, OPR issued a technical advisory document entitled," CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review." It provided very helpful guidance to practitioners in the absence of law on the subject in the form of statutes and regulations.

Here, OPR could address the use of vegetation removal as a form of GHG mitigation through such a technical advisory. Such a document could explain how local agencies, in considering such mitigation as an option, should handle the consideration of long-term versus short-term carbon benefits. Because OPR's opinions carry much persuasive force, there would be real practical value in such a technical advisory.

It is currently unknown, however, whether OPR would be willing to prepare a technical advisory on this topic, which might be controversial and might be perceived by some as running contrary to, or beyond, existing legal principles, such as those developed in case law (e.g., the Golden Door case). Such uncertainty raises the question of whether a better, and in the long term a more effective, means of achieving the desired policy outcome would be to seek legislation authorizing vegetation removal as a viable type of CEQA GHG mitigation. Legislation is always the most potent means of changing or

[37] https://research.fs.usda.gov/nrs/products/rooted-research/enduring-world-forest-carbon-sink-key-findings-and-policy-implications

clarifying the law, but requires successful negotiation with key stakeholder groups, which is not always a straightforward process.

The second sentence in the Joint Institute proposal introduces generalized language to address the Golden Door case's legal ambiguities within the Guidelines. Whether OPR would feel comfortable recommending such language to CNRA for official promulgation would rely in part on how OPR interprets the Golden Door decision. Relevant to that question might be another Court of Appeal case published subsequent to both the Golden Door decision and the publication of the Joint Institute Recommendations (November 2020). In 2023, the court in *Tsakopoulos Investments, LLC v. County of Sacramento* (discussed earlier) upheld GHG thresholds based on local sector-specific GHG budgets and reduction targets. This case demonstrates that thresholds of this kind are legally defensible if supported by solid substantial evidence and rigorous analysis. Although the published portions of the case did not address the adequacy of any GHG mitigation issues, the decision at least arguably suggests that offsite GHG mitigation measures might similarly pass legal muster if they are similarly supported by substantial evidence and rigorous analysis.

Even more relevant to how narrowly or broadly to read Golden Door is the 2022 Scoping Plan adopted by CARB, which suggests that offsite mitigation credits, to satisfy CEQA, need not be equivalent to those used in the state's Cap and Trade program. Implicitly, CARB does not agree with a broad reading of Golden Door that would require such an equivalence to achieve CEQA compliance. CARB discusses these issues as follows:

> "The State recommends that lead agencies focus on applying the requirements specified in the CEQA Guidelines when designing GHG mitigation measures – whether local, off-site mitigation or offsets – rather than the requirements used for compliance offsets within California's Cap-and-Trade program. The concept of "not otherwise required" in the CEQA Guidelines – and its relation to the corresponding requirement of "additionality" in California's Cap-and-Trade program – has been a particularly challenging issue for lead agencies. Specifically, the State recommends that lead agencies focus specifically on providing GHG mitigation under CEQA that is "not otherwise required" by statute, regulation, an existing local program, or by existing, permitted land use projects. Lead agencies should use substantial evidence to document that a specific mitigation measure is "not otherwise required" and would not have occurred at that time but for the requirement to mitigate a project's GHG impacts. Figure 1 identifies examples of off-site GHG mitigation that would not have occurred but for the requirement to mitigate a project's GHG impacts and could therefore meet the criterion of "not otherwise required."

> It is important to note that the existence of state-level programs does not remove the need for local climate action. These programs generally do not regulate local matters and are intended to operate against the background of local actions as a shared portfolio. For instance, it would not be appropriate to rely upon the state's Cap-and-Trade Regulation as a reason not to provide appropriate GHG analysis and, if needed, mitigation, for local development projects. Furthermore, applying a local lens to GHG mitigation and allowing for local and community-led decision-making can help prioritize the mitigation measures that address community-identified needs and can also help fill gaps in the existing local approach to climate action."

Although CARB's opinion on these issues lacks the legal force of either statutory language, duly enacted regulations, or published court precedents, CARB's opinions are very persuasive given the agency's unquestioned expertise on the subject of how best to reduce GHG emissions. On that topic, the agency is a world leader. OPR, therefore, might find that it agrees with CARB's opinions regarding how lead agencies should best pursue compensatory GHG mitigation without getting unnecessarily entwined in the Cap-and-Trade program. The CARB recommendations within the Scoping Plan could provide a basis on which OPR could open a formal rulemaking to reflect such a view in the Guidelines and ultimately explicitly clarify that local agencies are not "de facto" required to use Cap and Trade quality offsets to satisfy CEQA. Conceivably, modified Guidelines language could allow mitigation for local development projects to use protocols such as the Avoided Fire Protocol,[38] developed by Climate Forward, in association with mitigation projects that promote wildfire reduction. OPR and CNRA, of course, would have to demonstrate to OAL that changes to the Guidelines are "necessary" and would be "consistent" with existing law.

Fuel Reduction Projects under CEQA

In 2024, a significant discussion occurred regarding whether or not fuel reduction projects should be governed by the Forest Practices Act or by CEQA. The Patterson Bill (AB 2639) expanded the definition of "timber operations" to include the maintenance of timberlands for fuels reduction through fuels reduction paid in part or in whole with public funds. This bill would have essentially moved the responsibility of doing CEQA work on fuel reduction projects from local government to the State of California, and specifically CAL FIRE.

The Author stated that "The wildfire crisis is claiming lives, engulfing communities, and destroying watersheds and forest ecologies. Land managers, scientists, and

[38] https://climateforward.org/wp-content/uploads/2023/03/Reduced-Emissions-from-Megafires-Forecast-Methodology-v1.0.pdf

conservationists have established that ecologically minded fuels reduction work and managed, or prescribed fire, are necessary to have sustainable forest lands. California has agreed with the federal government to collectively treat one million acres per year by 2025, but we are only halfway towards this goal, in part because of the lengthy time for environmental review under CEQA. This review routinely takes one to two years to complete for small projects being done by resource conservation districts, water districts, and other public land managers. Given that these projects are being done with public money, for public good, and with ecological objectives, an expedited process is appropriate."

It is understood that the administrative burden placed on CAL FIRE was a concern related to this Bill, which contributed to its demise during the 2024 session, but the general idea around whether an expedited process can be developed is an important part of solving for the wildfire crisis in California.

The 2024 Wood Utilization Committee CEQA Amendment Concept

In 2023 - 2024 there has been discussion within the California Wildfire and Forest Resilience Taskforce Wood Utilization Committee to consider the creation of a CEQA exemption for projects that utilize forest biomass waste located on properties zoned as industrial and outside zones of extreme air quality nonattainment. This addition to CEQA would likely need legislative approval because it specifically directs lead agencies to exempt projects based on new factors that are not explicitly or implicitly in place under existing law. Proponents of this addition point out that this change to CEQA could go a long way towards incentivizing critical infrastructure for wood waste disposal in areas where communities are already expecting those types of businesses to be located. Also, excluding areas in extreme nonattainment (areas designated by the EPA) will ensure the exemption is only used in areas that do not have significant air quality concerns.

It is common that exemptions for CEQA are added via legislative pathways, which allows for more context for the application of the new provision to be included within legislative analysis, testimony, and changes that will inevitably be made to the first proposed language, all of which can help lead agencies implement a new law after its enactment. Also, then OPR would be able to pass any new regulations needed to support the law.

Other Potential Amendments or Additions to Guidelines or Statutory Changes

Projects Developed on Brownfields

As mentioned in the discussion above, there is considerable interest in utilizing locations within communities that are zoned industrial or were previously used for industrial activities. Earlier in this document, there was a discussion around brownfields development. Currently there are no exemptions that can be used for facilities that are developed on “brownfields”, which are properties that were once used for industrial purposes but are now unused.

If CEQA is to be amended (or a regulation is added) to allow for CEQA streamlining for the reuse of such property, the operative language would likely need to include a caveat that the use of the streamlining tool is limited to projects that do not exacerbate any impacts that were associated with the previous use, and legal issues around the applicability of various baseline conditions would need to be conducted. Additionally, it should be noted that this would likely need to be done at the legislative level, rather than through regulation.

Energy Efficiency and the Associated CEQA Checklist

As mentioned in PRC Section 21100 (b)(3), CEQA specifically sets a goal to avoid “wasteful, inefficient, or unnecessary consumption of energy.” There is also a checklist associated with energy, Appendix F, which encourages lead agencies to consider taking actions to reduce peak energy use, employ alternative fuels and take into consideration the reduction of solid waste. This checklist can be used to help support the deployment of bioenergy projects.

Bioenergy projects can significantly reduce woody forest biomass that would otherwise be consumed in a fire or left to decay, and lead agencies can use these provisions to help clarify such projects’ benefits and account for their value, particularly when considering life cycle emissions. Changes to the Checklist could go into more specific detail about these benefits, which would only require a modification of the Checklist by OPR and CNRA, avoiding the need for legislative intervention.

Additionally, a new guidelines section could be drafted to implement PRC 21100(b)(3) that could specify use of bioenergy to avoid wasteful use of energy and resources. This could also arguably be handled at the regulatory level, as well.

APPENDIX