

2022 Climate Change Scoping Plan for Achieving Carbon Neutrality

Resolution 22-21

December 15, 2022

Agenda Item No.: 22-16-1

Whereas, sections 39600 and 39601 of the Health and Safety Code authorize the California Air Resources Board (CARB or Board) to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

Whereas, the Legislature enacted the California Global Warming Solutions Act of 2006 (AB 32, Nuñez, Chapter 488, Statutes of 2006; Health and Safety Code section 38500 et seq.), which declares global warming poses a serious threat to the economic well-being, public health, natural resources, and environment of California;

Whereas, AB 32 charges CARB with monitoring and regulating sources of emissions of greenhouse gases that cause global warming in order to reduce emissions of greenhouse gases (Health and Safety Code section 38510);

Whereas, AB 32 directed CARB to create a comprehensive multi-year program to reduce California's greenhouse gas (GHG) emissions to no greater than 1990 levels by 2020, and maintain and continue reductions in emissions of GHGs beyond 2020;

Whereas, Health and Safety Code section 38561(a) required CARB to prepare and approve a "scoping plan" for achieving the maximum technologically feasible and cost effective GHG emission reductions by 2020;

Whereas, Health and Safety Code section 38652(b) requires CARB, in adopting greenhouse gas regulations, to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, to design the regulations in a manner that is equitable and seeks to minimize costs and maximize the total benefits to California; ensure that activities taken to comply with the regulations do not disproportionately impact low-income communities; ensure that activities undertaken pursuant to the regulations complement efforts to achieve and maintain ambient air quality standards and to reduce toxic air contaminant emissions; consider the cost-effectiveness of the regulations; consider overall societal benefits; minimize administrative burden; and minimize leakage;

Whereas, CARB prepared and approved the first AB 32 climate change scoping plan (initial Scoping Plan) in 2008 and reapproved it in 2011;

Whereas, the initial Scoping Plan contains a mix of recommended strategies that combine direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to limit California's GHG emissions to no greater than the 2020 statewide GHG emission limit and initiate the transformations needed to achieve AB 32's long-range climate objectives;

Whereas, Health and Safety Code section 38561(h) requires CARB to update the State's scoping plan for achieving the maximum technologically feasible and cost effective reductions of GHG emissions at least once every five years;

Whereas, CARB prepared and approved the *First Update to the Climate Change Scoping Plan* (2014 Update);

Whereas, the 2014 Update recommended establishing a 2030 mid-term statewide emission reduction target and identified Short-Lived Climate Pollutants (SLCPs) as an important science-based aspect of a comprehensive approach to addressing climate change;

Whereas, in April 2015, Governor Edmund G. Brown, Jr. signed Executive Order B-30-15 that established a greenhouse gas emission reduction target of 40 percent below 1990 levels by 2030;

Whereas, Governor Brown's Executive Order B-30-15 ordered that CARB update the scoping plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent;

Whereas, the Legislature enacted the Clean Energy and Pollution Reduction Act of 2015 (SB 350, De León, Chapter 547, Statutes of 2015), requiring the State to establish GHG reduction planning targets and implement them through Integrated Resource Planning in the electricity sector as a whole and among individual utilities and other electricity providers (collectively known as load serving entities);

Whereas, in Resolution 18-26, the Board resolved that updates to the electricity sector planning target should be considered every five years, in coordination with Scoping Plan updates;

Whereas, SB 350 increased the Renewables Portfolio Standard (RPS) to 50 percent and doubled the energy savings required in electricity and natural gas end uses by 2030;

Whereas, the Legislature enacted Senate Bill 32 (SB 32, Pavley, Chapter 249, Statutes of 2016; Health and Safety Code section 38566), which affirms the importance of addressing climate change by codifying a GHG emissions reductions target of at least 40 percent below 1990 levels by 2030;

Whereas, the Legislature enacted Assembly Bill 197 (AB 197, E. Garcia, Chapter 250, Statutes of 2016), which declares that continuing to reduce greenhouse gas emissions

is critical for protecting all areas of the State, but especially for the State's most disadvantaged communities, as those communities are affected first, and most frequently, by adverse impacts of climate change, including increased frequency of extreme weather events such as drought, heat waves, and flooding;

Whereas, Health and Safety Code section 38562.5 (from AB 197) requires CARB, when adopting rules and regulations to achieve emissions reductions to protect the State's most affected and disadvantaged communities, to consider the social costs of the emissions of GHGs, and prioritize both emission reduction rules and regulations that result in direct emission reductions at large stationary sources of GHG emissions and direct emission reductions from mobile sources; and emission reduction rules and regulations that result in direct emission reductions from sources other than large stationary or mobile sources, while considering cost-effectiveness and minimizing leakage;

Whereas, Health and Safety Code section 38562.7 (from AB 197) directs CARB, in the development of each scoping plan, to identify for each emissions reduction measure:

- The range of projected GHG emissions reductions that result from the measure,
- The range of projected air pollution reductions that result from the measure, and
- The cost-effectiveness, including avoided social costs, of the measure;

Whereas, the Legislature enacted Senate Bill 1383 (SB 1383, Lara, Chapter 395, Statutes of 2016), which requires CARB to develop, adopt, and begin to implement a Short-Lived Climate Pollutant Strategy no later than January 1, 2018, and the Board adopted that Strategy in Resolution 17-9 in March 2017;

Whereas, the Legislature enacted Senate Bill 1386 (SB 1386, Wolk, Chapter 545, Statutes of 2016), which declares it the policy of the State that protection and management of natural and working lands is an important strategy in meeting the State's GHG reduction goals, and requires State agencies to consider protection and management of natural and working lands in establishing policies and grant criteria and in making expenditures;

Whereas, the Legislature enacted Assembly Bill 398 (AB 398, E. Garcia, Chapter 135, Statutes of 2017), which clarifies the use of market-based compliance mechanisms in ensuring that the statewide greenhouse gas emissions are reduced to at least 40 percent below the 1990 level by 2030 and provides direction on program design;

Whereas, AB 398 requires that CARB, no later than January 1, 2018, update the scoping plan to achieve greenhouse gas emission reductions equivalent to at least 40 percent below 1990 levels by 2030;

Whereas, the Legislature enacted Assembly Bill 617 (AB 617, C. Garcia, Chapter 136, Statutes of 2017), which requires CARB, by October 1, 2018, to prepare a statewide strategy to reduce emissions of toxic air contaminants and criteria pollutants in communities affected by a high cumulative exposure burden, and the Board approved the strategy in Resolution 18-33 in September 2018;

Whereas, CARB developed *California's 2017 Climate Change Scoping Plan (2017 Update)* and approved that 2017 Update in Resolution 17-46;

Whereas, the Legislature enacted Senate Bill 100 (SB 100, De León, Chapter 312, Statutes of 2018), which codifies an increase in the RPS to 60 percent by 2030 and establishes a policy of the State that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of all electricity procured to serve all State agencies by December 31, 2045;

Whereas, Executive Order B-55-18 set a target for statewide carbon neutrality by 2045;

Whereas, Executive Order N-79-20 establishes targets for the transportation sector, in support achievement of carbon neutrality by 2045, that 100 percent of in-state sales of new passenger cars and trucks be zero-emission by 2035, 100 percent of medium- and heavy-duty vehicles be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks, and 100 percent of off-road vehicles and equipment be zero-emission by 2035 where feasible;

Whereas, Executive Order N-82-20 sets a statewide goal to conserve a least 30 percent of California's land and coastal waters by 2030 and directs CARB to update the target for natural and working lands in support of carbon neutrality as part of the 2022 Scoping Plan Update;

Whereas, the Legislature enacted Senate Bill 27 (SB 27, Skinner, Chapter 237, Statutes of 2021), which requires CARB to establish carbon dioxide removal targets for 2030 and beyond as part of its scoping plan;

Whereas, the Legislature enacted Senate Bill 596 (SB 596, Becker, Chapter 246, Statutes of 2021), which establishes an interim target for the state's cement sector of 40 percent below the 2019 average GHG intensity of cement by December 31, 2035, and requires that CARB develop a comprehensive strategy for the state's cement sector by July 1, 2023, to achieve net-zero emissions of GHGs associated with cement used within the state no later than December 31, 2045;

Whereas, on July 22, 2022, Governor Gavin Newsom sent a letter to the CARB Chair that underscored the urgency to include ambition and action in the final Scoping Plan, and to include additional outcomes in the final Scoping Plan related to electricity generation, buildings, fuels, methane leaks, and carbon dioxide removal and capture;

Whereas, the Legislature enacted Assembly Bill 1279 (AB 1279, Muratsuchi, Chapter 337, Statutes of 2022), which establishes the policy of the State to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative GHG emissions thereafter; to ensure anthropogenic GHG emissions are reduced at least 85 percent below 1990 emission levels by 2045; and directs CARB to work with relevant state agencies to ensure that Scoping Plan updates identify and recommend measures to achieve carbon neutrality; and to identify and implement policies and

strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies;

Whereas, the Legislature enacted Senate Bill 905 (SB 905, Caballero, Chapter 359, Statutes of 2022), which requires that CARB create a Carbon Capture, Removal, Utilization, and Storage (CCUS) Program to evaluate, demonstrate, and regulate CCUS and carbon dioxide removal projects and technology;

Whereas, the Legislature enacted Senate Bill 1020 (SB 1020, Laird, Chapter 361, Statutes of 2022), which establishes interim targets for renewable and zero-carbon energy retail sales of electricity to California end-use customers of 90 percent in 2035 and 95 percent in 2040, and accelerates the requirement that 100 percent of electricity procured to serve all State agencies come from renewable and zero-carbon resources by 10 years to December 31, 2035;

Whereas, the Legislature enacted Senate Bill 1145 (SB 1145, Laird, Chapter 366, Statutes of 2022), which calls on CARB to create, and maintain on its internet website, a greenhouse gas emissions dashboard that provides updated publicly available information regarding how the state is progressing toward meeting its statewide climate change goals;

Whereas, the Legislature enacted Senate Bill 1137 (SB 1137, Gonzales, Chapter 365, Statutes of 2022), which requires oil and gas production facilities or wells within defined health protection zones to comply with specified health, safety, and environmental requirements including leak detection, and prohibits the development of new oil and gas wells or infrastructure in these defined zones;

Whereas, the Legislature enacted Assembly Bill 1757 (AB 1757, Garcia, Chapter 341, Statutes of 2022), which requires the California Natural Resources Agency, in collaboration with CARB, other state agencies, and an expert advisory committee, by January 1, 2024, to determine a range of targets for natural carbon sequestration and nature-based climate solutions that reduce GHG emissions in 2030, 2038, and 2045;

Whereas, Health and Safety Code section 38561.5(c) (from AB 1757) directs the California Natural Resources Agency and CARB to jointly establish an expert advisory committee that is composed of university researchers, technical assistance providers, practitioners and other experts in the field of climate change and natural and working lands science and management, and Indigenous and environmental justice representatives, to inform and review modeling and analyses for natural and working lands, to advise state agencies on implementation strategies and standardized accounting, and to provide recommendations on addressing barriers to efficient implementation of that section 38561.5;

Whereas, the Legislature enacted Senate Bill 1075 (SB 1075, Skinner, Chapter 363, Statutes of 2022), which requires that CARB prepare an evaluation by June 1, 2024, including an analysis of the life-cycle GHG emissions from various forms of hydrogen production, an analysis of air pollution and other environmental impacts, and policy

recommendations for use of hydrogen in California that promote the reduction of GHGs and short-lived climate pollutants;

Whereas, the Legislature enacted Senate Bill 1206 (SB 1206, Skinner, Chapter 884, Statutes of 2022), which mandates a stepped sales prohibition on newly produced high global warming potential (GWP) hydrofluorocarbons (HFCs) to transition California toward recycled and reclaimed HFCs and directs that CARB develop additional sector-based regulations to increase adoption of very low GWP alternatives;

Whereas, reducing California's GHG emissions to a scientifically recognized level necessary for climate stabilization will require California to keep building on the framework of the initial Scoping Plan, 2014 Update, and 2017 Update by continuing to pursue the maximum technologically feasible and cost-effective actions that will steadily drive down greenhouse gas emissions over the coming decades;

Whereas, the latest science finds that atmospheric concentrations of carbon dioxide have increased by 50 percent since the industrial revolution and continue to increase at a rate of two parts per million each year, and no later than 2040, the world will exceed 1.5 degrees Celsius warming unless there is drastic action;

Whereas, the latest science finds that atmospheric concentrations of carbon dioxide are dangerously close to reaching 1.5 degrees Celsius warming in the near term, and to avoid climate catastrophe and remain below 1.5 degrees Celsius with limited overshoot of that threshold, global net anthropogenic carbon dioxide emissions need to reach net-zero by 2050, underscoring the urgent need to accelerate GHG emission reductions;

Whereas, in June 2021, CARB organized an interagency virtual three-day public kickoff workshop series to initiate development of the update to the scoping plan to reflect the carbon neutrality target (2022 Scoping Plan Update) and discuss the public process and overall schedule;

Whereas, throughout 2021 and 2022, CARB collaborated with other State agencies and organized over a dozen public workshops, including several co-hosted with other State agencies, and engaged with Tribes, to discuss scenario inputs and assumptions, technical, public health, and economic analysis, and sector specific issues and recommendations;

Whereas, CARB reconvened the Environmental Justice Advisory Committee (EJ Advisory Committee), which met over 30 times between June 2021 and November 2022, and the EJ Advisory Committee has provided formal recommendations on developing the 2022 Scoping Plan Update;

Whereas, members of the EJ Advisory Committee hosted a statewide community engagement workshop and one in the San Joaquin Valley in 2022, and members continued to work with their communities to ground truth their recommendations to inform the development of the 2022 Scoping Plan Update;

Whereas, CARB organized three community listening sessions, hosted by the CARB Chair and Board Members, throughout the State (Bay Area, Central Valley, Southern California) and one virtual listening session in summer 2022 to seek community input on developing the 2022 Scoping Plan Update;

Whereas, CARB held two webinars on tribal land management modeling to help inform the 2022 Scoping Plan Update;

Whereas, CARB organized one virtual tribal listening session, hosted by the CARB Chair, Board Members, and Tribal Liaison in summer 2022 to seek tribal input on developing the 2022 Scoping Plan Update;

Whereas, CARB sent notifications to all tribes requesting notice seeking comment on the environmental documents developed for the 2022 Scoping Plan Update in accordance with the requirements of Assembly Bill 52 (Gatto, Statutes of 2014, Chapter 532);

Whereas, CARB engaged in an outreach campaign and mailed letters to all tribes in California asking for consultation on the 2022 Scoping Plan Update;

Whereas, CARB engaged in government-to-government consultation with eight tribes that requested consultation;

Whereas, in preparing the 2022 Scoping Plan Update, CARB staff collaborated with the Climate Action Team and solicited input and expertise from a range of state agencies to identify and describe the outcomes and actions across the economy and within economic sectors needed for California to achieve carbon neutrality no later than 2045;

Whereas, in preparing the 2022 Scoping Plan Update, CARB staff considered advice and input from the Environmental Justice Advisory Committee, experts in the field of climate change, public stakeholders, and regulated entities;

Whereas, on June 24, 2021, February 24, 2022, March 24, 2022, and June 23 and 24, 2022, CARB staff provided updates on the development of the 2022 Scoping Plan Update to the Board, and the Board provided feedback to CARB staff on development of the 2022 Scoping Plan Update;

Whereas, on May 10, 2022, after considering public comments received, CARB staff prepared, in consultation with State agencies and after considering advice and input from the Environmental Justice Advisory Committee, and circulated for public review the Draft 2022 Scoping Plan Update (Draft Scoping Plan);

Whereas, the Board held joint meetings with the EJ Advisory Committee members on March 10, 2022 and September 1, 2022 to discuss the 2022 Scoping Plan Update, the EJ Advisory Committee recommendations on development of the Scoping Plan, and options for addressing the recommendations;

Whereas, CARB staff coordinated extensively with agencies throughout California government, as well as consulting with stakeholders, academic experts on relevant

topics, representatives and expert analysts associated with affected industries, labor organizations, non-governmental organizations, representatives and expert analysts associated with affected communities, and many other members of the public;

Whereas, after considering public comments received and after considering advice and input from the Environmental Justice Advisory Committee, incorporating direction from Board Members and the Governor, and incorporating Legislative direction, staff released a proposed 2022 Scoping Plan for Achieving Carbon Neutrality (Final Plan) to the public on November 16, 2022;

Whereas, the Final Plan finds that planning on a longer time frame for the new carbon neutrality target means California must accelerate near-term ambition for 2030 in order to be on track to achieve the longer-term AB 1279 target;

Whereas, to assist with planning for climate mitigation and adaptation, the Final Plan includes a unique tool called a Climate Vulnerability Metric to assess community-level economic impacts of a warming climate;

Whereas, the Final Plan frames the outcomes and actions needed in the major economic sectors in the State related to deployment and investments in clean technologies and fuels, and for management of California's natural and working lands, to continue driving down emissions and ensure that the State stays on course to meet its long-term reduction objectives;

Whereas, implementation of the 2022 Scoping Plan Update, including through electricity sector planning processes, is expected to substantially increase the renewable and zero carbon electricity resources and electrical infrastructure available in order to ensure suppliers will meet increased future demand for those resources;

Whereas, the Final Plan finds that all viable tools and an all-of-government approach are needed to reduce emissions to achieve an accelerated 2030 target and AB 1279's long-term objective of reducing California's anthropogenic GHG emissions and achieving net-zero emissions;

Whereas, CARB's regulatory program that involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans has been certified by the Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA; California Code of Regulations, title 14, section 15251(d)), and CARB conducts its CEQA review according to this certified program (California Code of Regulations, title 17, sections 60000-60007);

Whereas, CARB prepared a draft environmental analysis under its certified regulatory program for the proposed Draft 2022 Scoping Plan Update, entitled *Draft Environmental Analysis for the Proposed Draft 2022 Scoping Plan for Achieving Carbon Neutrality* (Draft EA), and circulated it as Appendix B to the Draft 2022 Scoping Plan Update for 45 days from May 10, 2022 through June 24, 2022;

Whereas, on June 23 and continuing to June 24, 2022, the Board held a public hearing on the proposed Draft 2022 Scoping Plan Update and the Draft EA prepared for the proposal;

Whereas, after the end of the Draft EA public review period, CARB identified potential revisions to certain aspects of the Draft 2022 Scoping Plan Update that merited revisions to the project description, and after considering the circumstances of the particular revisions in light of Public Resources Code (PRC) Section 21092.1 and Title 14 California Code of Regulations (CCR) Section 15088.5, prepared a recirculated draft environmental analysis under its certified regulatory program for the proposed 2022 Scoping Plan Update, entitled *Recirculated Draft Environmental Analysis for the Draft 2022 Scoping Plan for Achieving Carbon Neutrality* (Recirculated Draft EA), and circulated it for 45 days from September 9, 2022 through October 24, 2022;

Whereas, the Recirculated Draft EA concluded that implementation of the proposed Draft 2022 Scoping Plan Update has the potential to result in: beneficial impacts to air quality (long-term operational-related) and GHG emissions; less than significant impacts to energy demand, mineral resources, population and housing, public services, and recreation (short-term construction-related); and potentially significant and unavoidable adverse impacts to aesthetics, agriculture and forest resources, air quality (short-term construction-related, long-term operational-related odors), biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, recreation (long-term operational-related), transportation and traffic, tribal cultural resources, utilities and service systems, and wildfire;

Whereas, staff reviewed written comments received on the Draft EA and Recirculated Draft EA and prepared written responses to those comments in a document entitled *Response to Comments on the Environmental Analysis Prepared for the 2022 Scoping Plan for Achieving Carbon Neutrality* (Response to EA Comments);

Whereas, on December 13, 2022, staff posted on the CARB webpage the Final EA, which includes minor revisions, and the Response to EA comments;

Whereas, prior to the duly noticed public hearing held on December 15, 2022, staff presented the Final EA and the Response to EA Comments, as released to the public on December 13, 2022, to the Board for consideration; and

Whereas, in consideration of the Final Plan, written comments, and public testimony, the Board finds that:

Implementation of the Final Plan will achieve carbon neutrality by 2045;

Implementation of the Final Plan will reduce GHG emissions from AB 32 GHG Inventory source sectors 48 percent below 1990 levels by 2030, surpassing the statutory minimum reduction target of 40 percent below 1990 levels required by SB 32;

Implementation of the Final Plan will reduce anthropogenic GHG emissions by at least 85 percent below 1990 levels by 2045;

Implementation of the Final Plan will reduce total fossil fuel demand by 86 percent in 2045 and liquid petroleum fuels by 94 percent, relative to 2022 demand, and will achieve Governor Newsom's requested 20 percent clean fuels target for the aviation sector;

Implementation of the Final Plan will reduce GHG emissions from oil and gas extraction by 89 percent and petroleum refining emissions by 85 percent (without CCS) and 94 percent (with CCS) in 2045 from 2022 emission levels, commensurate with the decrease in in-state fuel demand through 2045;

A clean, affordable, and reliable electric grid is critical in supporting decarbonization efforts across sectors, and implementation of the Final Plan will nearly double electricity demand by 2045 and require significant build-out of new renewable and zero-carbon resources, including solar and wind capacity four times that of existing amounts in 2045 and achieving Governor Newsom's goals of 20 gigawatts (GW) of offshore wind and no new fossil gas capacity for reliability;

Implementation of the Final Plan will reduce fossil gas demand from residential and commercial buildings by 91 percent by 2045 and will achieve Governor Newsom's goal of three million climate-ready and climate-friendly buildings by 2030, seven million by 2035, and six million heat pumps deployed by 2030;

The creation of new, expanded, or refined policies, programs, and regulations in every major economic sector in the State will be necessary to support the rapid production and deployment of clean technology and energy, as well as the increased pace and scale of actions on the State's natural and working lands;

California's local and regional governments, tribes, communities, academic institutions, and the private sector are critical partners in meeting the State's GHG emission reduction goals, and strong collaboration and alignment will be necessary to achieve the State's carbon neutrality target and improve its ability to adapt to potential climate change impacts;

Continuing to decrease emissions of short-lived climate pollutants is necessary to slow the near-term rate of global warming and achieve the GHG emission reductions identified in the Final Plan;

The Final Plan prioritizes outcomes and actions that will result in direct GHG reductions at the State's largest stationary sources and mobile sources in a manner consistent with AB 197;

Avoiding GHG emissions from and increasing carbon sequestration in natural and working lands is crucial in the State's long-term climate change strategy;

Achievement of net-zero GHG emissions necessitates use of carbon capture and sequestration (CCS) and carbon dioxide removal technologies (CDR), and given the need to accelerate the development of natural and engineered carbon removal in the State, the Final Plan incorporates Governor Newsom's goal for a 20 million metric ton of carbon dioxide equivalent (MMT CO_2e) carbon removal target in 2030 and 100 MMT CO_2e carbon removal target for 2045;

The Final Plan considers protection against emissions leakage; identifies cost-effective and exportable actions to inform regional, national, and international GHG reduction programs; supports federal climate programs; and identifies that successful implementation will depend on a mix of legislative action, regulatory program development, incentives, institutional support, workforce and business development, education and outreach, community engagement, and research and development and deployment;

The Final Plan's ambitious and aggressive approach to decarbonization in every economic sector prioritizes reductions in fossil-based combustion to offer co-benefits, including reductions in other air pollutants that impact community health that will benefit disadvantaged communities, reducing statewide NO x by over 70 percent by 2045;

The newly developed Climate Vulnerability Metric begins to close the completeness gap on the global social cost of carbon by estimating the cost of climate impacts using the latest science and economic data at the community level;

The authorities and considerations related to the supply and demand of petroleum fuels spans federal, state, and local agencies, and therefore a multi-agency discussion is needed to systematically evaluate and plan for the managed phasedown of oil and gas extraction and petroleum refining in California in an equitable way, considering declining in-state demand and exports of finished fuels; and

Implementation of the Final Plan must address environmental justice and advance equity to address the need for more community-based reductions from programs that target criteria and toxic pollutants to protect the health of residents in disproportionately burdened communities – with AB 617 being a critical part of the State's plan for addressing impacted communities.

Now, therefore, be it resolved that the Board hereby certifies that the Final EA, as released to the public on December 13, 2022, was completed in compliance with CARB's certified regulatory program to meet the requirements of CEQA, reflects the agency's independent judgment and analysis, and was presented to the Board whose members reviewed and considered the information therein before taking action to approve the 2022 Scoping Plan for Achieving Carbon Neutrality.

Be it further resolved that in consideration of the Final EA, including the responses to comments on the Draft EA and Recirculated Draft EA, and the entirety of the record, the Board adopts the Findings and Statement of Overriding Considerations set forth in Attachment A to this resolution.

Be it further resolved that the Board hereby directs the Executive Officer to transmit the Notice of Decision to the Secretary of the Natural Resources Agency for posting.

Be it further resolved that the Board hereby approves the 2022 Scoping Plan for Achieving Carbon Neutrality released to the public on November 16, 2022.

Be it further resolved that the Board hereby determines that the Final Plan provides the basis for establishing the revised planning target range for the electricity sector of 30-38 million metric tons of carbon dioxide equivalent (MMTCO_{2e}) in 2030 for use in Integrated Resource Plans pursuant to SB 350.

Be it further resolved that the Board hereby determines that expansion of biomass combustion for energy production should not be pursued and opportunities for non-combustion biomass solutions should be prioritized.

Be it further resolved that the Board adopts a carbon stock target for natural and working lands of no more than 4% carbon stock loss by 2045, from 2014 levels, and finds that management to conserve 30 percent of California's natural and working lands and coastal waters by 2030; treat at least 2.3 million acres statewide on an annual basis in forests, shrublands/chaparral, and grasslands; implement climate smart practices for annual and perennial crops on at least 78,000 acres annually, conserving at least 8,000 acres of croplands annually, and increase organic agriculture to 20% of cultivated acres annually by 2045; increase urban forestry investment by 200 percent above historic levels and utilize tree watering that is 30 percent less sensitive to drought; restore 60,000 acres of Delta wetlands; and reduce the rate of sparsely vegetated land conversion to more GHG intensive uses by 50 percent are collectively needed to achieve the carbon stock target by 2045.

Be it further resolved that the Board establishes the carbon dioxide removal targets called for by Health and Safety Code section 39740.2 (SB 27) and Governor Newsom's July 22, 2022 letter of 20 MMTCO_{2e} by 2030 and 100 MMTCO_{2e} by 2045 as identified in Final Scoping Plan, which incorporate CCUS and carbon dioxide removal from natural and working lands and other engineered forms needed to achieve carbon neutrality.

Be it further resolved that notwithstanding and consistent with Resolution 78-10, the Board hereby delegates the Executive Officer to act on behalf of CARB in the selection and appointment of committee members for the expert advisory committee directed to be established by Health and Safety Code section 38561.5(c) (from AB 1757).

Be it further resolved that the Board hereby directs the Executive Officer to incorporate the Climate Vulnerability Metric (CVM) developed in support of the Final Plan into its work implementing the Final Plan, as well as continue efforts to expand

the CVM to incorporate additional economic climate impacts to improve the identification of disproportionate economic impacts as community-level data becomes available.

Be it further resolved that the Board directs the Executive Officer to coordinate with state agencies to establish and make public metrics across all sectors of the economy to help provide transparency on the state's progress in deploying clean technology at the pace and scale needed to achieve carbon neutrality by 2045 and to meet the requirements of Health and Safety Code section 38560.7 (from SB 1145).

Be it further resolved that the Board directs the Executive Officer to coordinate with local government agencies to ensure alignment of local action to support the state's climate and air quality goals.

Be it further resolved that the Board recognizes the work of the Environmental Justice Advisory Committee in advising the Final Plan and ongoing role in implementing AB32.

Be it therefore resolved, the Board directs the Executive Officer to continue interagency coordination to support research on pesticides and their relationship to greenhouse gases and reducing pesticide use.

Be it further resolved that the Board directs the Executive Officer to work closely with state and local agencies to implement the EJ Advisory Committee recommendations that call for prioritization for residents in low-income communities and communities of color in this transition.

Be it further resolved that the Board directs the Executive Officer to share the EJ Advisory Committee's recommendations with the California Energy Commission, California Public Utilities Commission, and other agencies administering funds to support building decarbonization and to work closely with those agencies as they engage in public processes to further building decarbonization.

Be it further resolved that the Board hereby directs the Executive Officer to design and integrate robust enforcement mechanisms as individual Scoping Plan measures are drafted into regulations and plans.

I hereby certify that the above is a true and correct copy of Resolution 22-21 as adopted by the California Air Resources Board.



John Moore, Board Clerk

Resolution 22-21

December 15, 2022

Identification of Attachments to the Board Resolution

Attachment A: *Findings and Statement of Overriding Considerations*

ATTACHMENT A

FINDINGS and STATEMENT OF OVERRIDING CONSIDERATIONS

INTRODUCTION

The California Air Resources Board (CARB), as the lead agency for the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan), prepared a Draft Environmental Analysis (EA) in accordance with its certified regulatory program (Cal. Code Regs., tit. 17, §§ 60000 – 60008) to comply with the requirements of the California Environmental Quality Act (CEQA) (Pub. Resources Code, §21000, et seq.). The Draft EA, entitled *Draft Environmental Analysis prepared for the Proposed 2022 Scoping Plan for Achieving Carbon Neutrality*, and included as Appendix B to the 2022 Scoping Plan, provided an analysis of the potential environmental impacts associated with the Scoping Plan Scenario in the 2022 Scoping Plan.

Following circulation of the Draft EA for a 45-day public review and comment period from May 10, 2022, through June 24, 2022, CARB identified revisions to certain aspects of the proposal that merited revisions to the project description. CARB determined that recirculation of the Draft EA was warranted. The Recirculated Draft EA was released for a 45-day comment period from September 9, 2022 through October 24, 2022. Following recirculation CARB prepared the *Final Environmental Analysis prepared for the 2022 Scoping Plan for Achieving Carbon Neutrality* (Final EA) which includes minor revisions to the Recirculated Draft EA. While minor modifications have been made to the Final EA to ensure it reflects the proposed project as accurately as possible, these changes merely clarify, amplify, or make insignificant modifications to the otherwise-adequate Recirculated Draft EA. Therefore, there is no significant new information that would require the Final EA to be recirculated. The Final EA was posted on CARB's webpage on December 13, 2022.

This statement of findings and overriding considerations was prepared to comply with CEQA's requirement to address the environmental impacts identified in the Final EA. (Pub. Resources Code, §§ 21081, 21081.6, Cal. Code Regs, tit. 14, §§ 15091, 15093.) This Final EA provides a programmatic analysis of the potential for adverse environmental impacts associated with implementation of the Scoping Plan Scenario recommended in the 2022 Scoping Plan and describes feasible mitigation measures for identified significant impacts. The level of analysis in the Final EA reflects that the project is a State-level planning document and its approval does not directly lead to any adverse impacts on the environment. As described in Chapter 4 of the Final EA, implementation of the Scoping Plan Scenario may indirectly lead to adverse environmental impacts as a result of reasonably foreseeable compliance responses. Therefore, the Final EA discloses the potential significant adverse impacts and beneficial impacts of the reasonably foreseeable compliance responses for implementing the Scoping Plan Scenario based on currently available information, without being speculative. The Final EA impact discussion includes,

where relevant, construction-related effects, as well as ongoing operational effects, from the recommended measures from the AB 32 GHG Inventory Sectors and Natural and Working Lands Sectors, and influences of implementation of the Scoping Plan Scenario on GHG and air pollutant emissions. Because the specific location, extent, and design of potential new and/or modified facilities cannot be known at this time, the impact discussions reflect a conservative assessment to describe the type of effects that may occur. These impact discussions are followed by the types of mitigation measures that could typically be required to reduce potentially significant environmental impacts. It is expected that many of these identified potentially significant impacts can be feasibly avoided or mitigated to a less-than-significant level either when the specific measures are designed and evaluated (e.g., during the rulemaking process) or through any project-specific approval or entitlement process related to compliance responses, which typically requires a project-specific environmental review. Nonetheless, in the interest of informed decision making, the Final EA takes a conservative approach for CEQA compliance purposes. Namely, to avoid any risk of understating an impact at this early planning stage, the Final EA presents conclusions for post-mitigation significance of these indirect impacts as significant and unavoidable where there is the possibility that feasible mitigation either may not be sufficient or there is some risk it may not be implemented by third parties with the authority to approve actions undertaken as foreseeable compliance responses.

Collectively, across all categories, the Final EA concluded that the reasonably foreseeable compliance responses associated with implementation of the Scoping Plan Scenario recommended in the 2022 Scoping Plan could result in the following short-term and long-term impacts: beneficial impacts to air quality (long-term operational-related) and GHG emissions; less than significant impacts to energy demand, mineral resources, population and housing, public services, and recreation (short-term construction-related); and potentially significant and unavoidable adverse impacts to aesthetics, agriculture and forest resources, air quality (short-term construction-related, long-term operational-related odors), biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, recreation (long-term operational-related), transportation and traffic, tribal cultural resources, utilities and service systems, and wildfire. The potentially significant and unavoidable adverse impacts are disclosed for both short-term, construction-related activities and long-term operational activities, which explains why some resource areas are identified above as having both less-than-significant impacts and potentially significant impacts.

CARB's certified regulatory program requires that before adoption of an action for which significant adverse environmental impacts have been identified during the review process, CARB consider feasible mitigation measures and alternatives that could substantially reduce the impacts. (Cal. Code Regs, tit. 17, §60004.2.) CEQA places the burden on the approving agency to affirmatively show that it has considered feasible mitigation and alternatives that can lessen or avoid identified impacts through a statement of findings for each identified significant impact. (Pub. Resources Code, §21081.) CEQA Guidelines section 15091 provides direction on the content of the statement of findings. That section states that one or more of the following findings should be identified for each impact:

- Changes or alterations have been required in, or incorporated into, such projects which avoid or substantially lessen the significant environmental effect as identified in the final environmental impact report.
- Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency, or can and should be adopted by such other agency.
- Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the environmental impact report.

Under a conservative approach, the potential adverse impacts identified in this programmatic level EA are potential indirect impacts associated with the compliance responses reasonably foreseeable in response to implementing the Scoping Plan Scenario recommended in the 2022 Scoping Plan based on currently available information. The ability and authority to determine site- or project-specific impacts of projects carried out by third parties and the ability to require feasible mitigation lies with those agencies with authority to approve such actions, e.g., local permitting authorities in city or county governments and local air districts. CARB does not have the ability to determine with any specificity the project level impacts, nor the authority to require project level mitigation for these types of actions in approving the 2022 Scoping Plan, as discussed in the findings below.

An agency may approve a project with unavoidable (unmitigated) adverse environmental impacts. When doing so, CEQA requires the agency to make a statement in the record of its views on the ultimate balancing of the merits of approving the project despite the environmental impacts in a “statement of overriding considerations”. (Pub. Resources Code, §21081(b); Cal. Code Regs, tit. 14, §15093.) The following presents the CARB Board’s (Board) statement of findings for each significant adverse impact identified in the Final EA, accompanied by a brief explanation, and its statement of overriding considerations.

STATEMENT OF FINDINGS

The Board has independently reviewed and considered the entire record, including the information contained in the Final EA, public testimony, written comments received, and the written responses to environmental comments, all of which are hereby incorporated by reference. The Board makes the following written findings for each significant adverse impact identified, accompanied by a brief explanation of the rationale for each finding. These findings are supported by substantial evidence in the record. Please note that only the compliance responses leading to potentially significant and unavoidable impacts are included for each resource area below. For a complete discussion of the compliance responses relevant to each resource area, please see Chapter 4 of the Final EA.

Aesthetics

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant short-term construction-related impacts and long-term operational impacts on aesthetic resources. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses that short-term construction-related scenic and nighttime lighting effects resulting from the 2022 Scoping Plan would be potentially significant and unavoidable.

In addition, operational-related impacts could include operation of new facilities, operational changes at existing facilities, or natural and working land management activities. Long-term significant effects on aesthetics resources may relate to the increase in renewable energy (including offshore renewable wind actions) and decrease in oil and gas use actions; low carbon fuels actions; direct air capture and other CCS actions; improvements to oil and gas facilities actions; manure management actions; forest, shrubland, and grassland management actions; agricultural actions; organic waste diversion and composting actions; and afforestation, urban forestry expansion, and wetland restoration actions. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that long-term operational-related aesthetic effects associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

The Final EA includes Mitigation Measures 1.a, 1.b.1, 1.b.2a, 1.b.2b, and 1.b.3, which identify existing statutes and regulations and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation

Measures 1.a, 1.b.1, 1.b.2a, 1.b.2b, and 1.b.3 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 1.a, 1.b.1, 1.b.2a, 1.b.2b, and 1.b.3 should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the short-term and long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Agriculture and Forest Resources

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant short-term construction-related impacts and long-term operational impacts on agriculture and forest resources. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural

gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that short-term construction-related impacts on agriculture and forestry resources associated with the 2022 Scoping Plan would remain potentially significant and unavoidable.

Implementing the low carbon fuels actions, manure management actions, afforestation, urban forestry, avoided natural and working land use conversion and wetland restoration actions under the 2022 Scoping Plan would result in potentially significant long-term operational impacts on agriculture and forestry resources. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that long-term operational-related effects on agriculture and forestry resources associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

The EA includes Mitigation Measures 2.a and 2.b, which identify existing statutes and regulations and construction and operating permit requirements as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measures 2.a and 2.b are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 2.a and 2.b should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant

level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the short-term and long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Air Quality

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant short-term construction-related impacts on air quality resources and odor impacts. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects and associated pipelines and infrastructure. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that short-term construction-related air quality effects resulting from compliance responses associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

In addition, operational-related impacts could include operation of new facilities, operational changes at existing facilities, or natural and working land management activities. Long-term potentially significant effects on odors may relate to manure management actions; forest, shrubland, and grassland management actions; and organic waste diversion and composting actions. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that long-term operational-related air quality effects associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

The EA includes Mitigation Measures 3.a, 3.c.1, 3.c.2 and 3.c.3, which identify existing statutes and regulations and construction and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measures 3.a, 3.c.1, 3.c.2 and 3.c.3 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 3.a, 3.c.1, 3.c.2, and 3.c.3 should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the short-term and long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Biological Resources

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant short-term construction-related impacts and long-term operational impacts on biological resources. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects and associated pipelines and infrastructure. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-

electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that short-term construction-related impacts on biological resources associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

In addition, operational-related impacts could include operation of new facilities, operational changes at existing facilities, or natural and working land management activities. Long-term potentially-significant effects on biological resources may relate to the increase in renewable energy and decrease in oil and gas use actions (including offshore wind actions); low carbon fuels actions; expansion of electrical infrastructure actions; expanded use of zero-emission mobile source technology actions; mechanical carbon dioxide removal and CCS actions; manure management actions; afforestation, urban forestry expansion, and wetland restoration actions. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that the long-term operational-related impacts on biological resources associated with the 2022 Scoping Plan would remain potentially significant and unavoidable.

The EA includes Mitigation Measures 4.a, 4.b.1, 4.b.2a, and 4.b.2b, which identify existing statutes and regulations and construction and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measures 4.a, 4.b.1, 4.b.2a, and 4.b.2b are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 4.a, 4.b.1, 4.b.2a, and 4.b.2b should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the

environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the short-term and long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Cultural Resources

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant short-term construction-related impacts and long-term operational impacts on cultural resources. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects and associated pipelines and infrastructure. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. Collectively, the construction-related activities that could take place under the Scoping Plan scenario involve potentially significant impacts to cultural resources. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that short-term construction-related and long-term operational-related impacts on cultural

resources associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

The EA includes Mitigation Measure 5.a, which identifies existing statutes and regulations and construction and operating permit requirements, designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measure 5.a is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measure 5.a should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the short-term and long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Geology and Soils

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant short-term construction-related impacts and long-term operational impacts on geology and soil resources. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture

and other CCS projects and associated pipelines and infrastructure. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that short-term construction-related impacts on geology and soils associated with the 2022 Scoping Plan would remain potentially significant and unavoidable.

In addition, operational-related impacts could include operation of new facilities, operational changes at existing facilities, or natural and working land management activities. Long-term potentially significant effects on geology and soils may relate to the low carbon fuels actions; and forest, shrubland, and grassland management actions. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that long-term operational-related impacts on geology and soils associated with the 2022 Scoping Plan would remain potentially significant and unavoidable.

The EA includes Mitigation Measures 7.a, 7.b.1 and 7.b.2, which identify existing statutes and regulations and construction and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measures 7.a, 7.b.1 and 7.b.2 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 7.a, 7.b.1 and 7.b.2 should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the

environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the short-term and long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Hazards and Hazardous Materials

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant short-term construction-related impacts and long-term operational impacts on hazards and hazardous materials. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects and associated pipelines and infrastructure. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that short-term construction-related impacts on hazards and hazardous materials associated with the 2022 Scoping Plan would remain potentially significant and unavoidable.

In addition, operational-related impacts could include operation of new facilities, operational changes at existing facilities, or natural and working land management activities. Long-term significant impacts on hazards and hazardous materials may relate to the; mechanical carbon dioxide removal and CCS actions; forest, shrubland, and grassland management actions; organic waste diversion and composting actions; and offshore renewable wind actions. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that long-term operational-related impacts on hazards and hazardous materials associated with the 2022 Scoping Plan would remain potentially significant and unavoidable.

The EA includes Mitigation Measures 9.a, 9.b.1, 9.b.2, 9.b.3, and 9.b.4, which identify existing statutes and regulations and construction and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measures 9.a, 9.b.1, 9.b.2, 9.b.3, and 9.b.4 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 9.a, 9.b.1, 9.b.2, 9.b.3, and 9.b.4 should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the short-term and long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Hydrology and Water Quality

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant short-term construction-related impacts and long-term operational impacts on hydrology and water quality. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects and associated pipelines and infrastructure. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that short-term construction-related impacts on hydrology and water quality associated with the 2022 Scoping Plan would remain potentially significant and unavoidable.

In addition, operational-related impacts could include operation of new facilities, operational changes at existing facilities, or natural and working land management activities. Long-term potentially significant effects on hydrology and water quality may relate to the increase in renewable energy and decrease in oil and gas use actions; low carbon fuels actions; expanded use of zero-emission mobile source technology actions; mechanical carbon dioxide removal and CCS actions; forest, shrubland, and grassland management actions; and organic waste diversion and composting actions. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that long-term operational-related impacts on hydrology and water quality associated with the 2022 Scoping Plan would remain potentially significant and unavoidable.

The EA includes Mitigation Measures 10.a, 10.b.1, 10.b.2, and 10.b.3, which identify existing statutes and regulations and construction and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measures 10.a, 10.b.1, 10.b.2, and 10.b.3 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 10.a, 10.b.1, 10.b.2, and 10.b.3 should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the short-term and long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Land Use and Planning

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with the 2022 Scoping Plan could result in potentially significant long-term operational impacts on Land Use and Planning. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects and associated pipelines and infrastructure. Modifications to existing facilities could consist of decommissioning and consolidation of

refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that short-term construction-related to land use conversions associated with the 2022 Scoping Plan would remain potentially significant and unavoidable.

In addition, long-term operational-related impacts on land use and planning could result from operation of new facilities, operational changes at existing facilities, or natural and working land management activities. Long-term potentially significant effects on land use and planning may relate to the increase in renewable energy and decrease in oil and gas use actions; low carbon fuels actions; forest, shrubland, and grassland management actions; and afforestation, urban forestry expansion, avoided natural and working land conversion, and wetland restoration actions. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that long-term operational-related to land use conversions associated with the 2022 Scoping Plan would remain potentially significant and unavoidable.

The EA includes Mitigation Measures 11.a, 11.b.1 and 11.b.2, which identify existing statutes and regulations and construction and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measures 11.a, 11.b.1 and 11.b.2 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 11.a, 11.b.1 and 11.b.2, should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the

environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Noise

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant short-term construction-related impacts and long-term operational impacts on noise resources. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects and associated pipelines and infrastructure. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that the short-term construction-related effect regarding noise resulting from the construction of new facilities or reconstruction of existing facilities associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

In addition, operational-related impacts could include operation of new facilities, operational changes at existing facilities, or natural and working land management activities. Long-term potentially significant effects on noise and vibration may relate to the increase in renewable energy (including offshore wind) and decrease in oil and gas use actions; low carbon fuels actions; mechanical carbon dioxide removal and CCS actions; improvements to oil and gas facilities actions; reduced high-GWP compounds actions; manure management actions; forest, shrubland, and grassland management actions; agricultural actions; and organic waste diversion and composting actions. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that long-term operational-related noise effects associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

The EA includes Mitigation Measures 13.a, 13.b.1, 13.b.2, and 13.b.3, which identify existing statutes and regulations and construction and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measures 13.a, 13.b.1, 13.b.2, and 13.b.3 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 13.a, 13.b.1, 13.b.2, and 13.b.3 should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the short-term and long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Recreation

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant long-term operational impacts on recreation. Operational-related impacts could include operation of new facilities, operational changes at existing facilities, or natural and working land management activities.

Long-term potentially significant effects on recreation resources may relate to the increase in renewable energy (including offshore wind) and decrease in oil and gas use actions; mechanical carbon dioxide removal and CCS actions; and forest, shrubland, and grassland management actions. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that long-term operational-related effects on recreation associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

The EA includes Mitigation Measures 16.b.1 and 16.b.2, which identify existing statutes and regulations and construction and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measures 16.b.1 and 16.b.2 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 16.b.1 and 16.b.2 should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Transportation

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant short-term construction-related impacts and long-term operational impacts on transportation resources. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects and associated pipelines and infrastructure. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining.

In addition, operational-related impacts could include operation of new facilities, operational changes at existing facilities, or natural and working land management activities. Implementation of the 2022 Scoping Plan could require the operation of new infrastructure to distribute alternate fuels (such as electricity and hydrogen). Additionally, increased demand for lithium-ion storage batteries and fuel cells could result in an increase in lithium and platinum mining. Collectively, the activities contemplated in the 2022 Scoping Plan present the potential for generating new trips to facilitate construction and operation of new facilities, and to otherwise further the transition to a less carbon-intensive future, and these activities collectively present the potential for significant transportation impacts. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that short-term construction-related and long-term operational-related effects on transportation associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

The EA includes Mitigation Measures 17.a and 17.b, which identify existing statutes and regulations and construction and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board

finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measures 17.a and 17.b are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 17.a and 17.b should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the short-term and long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Tribal Cultural Resources

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant short-term construction-related impacts and long-term operational impacts on tribal cultural resources. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects and associated pipelines and infrastructure. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing

electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. Collectively, the construction-related activities that could take place under the Scoping Plan scenario involve potentially significant impacts to tribal cultural resources. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that short-term construction-related and long-term operational-related effects on tribal cultural resources associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

The EA includes Mitigation Measure 18.a, which identifies existing statutes and regulations and construction and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measure 18.a is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measure 18.a should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the short-term and long-term impacts to this resource associated with the proposed actions in the 2022

Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Utilities and Service Systems

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant long-term operational impacts on utilities and service systems. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects and associated pipelines and infrastructure. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. In addition, operational-related impacts could include operation of new facilities, operational changes at existing facilities, or natural and working land management activities.

Long-term potentially significant effects on utilities and service systems may relate to the low carbon fuels actions; mechanical carbon dioxide removal and CCS actions; manure management actions; and forest, shrubland, and grassland management actions; and offshore renewable wind actions. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, long-term operational-related effects on utilities and service systems associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

The EA includes Mitigation Measure 19.a, which identifies existing statutes and regulations and construction and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore,

the Board finds that the authority to implement Mitigation Measures 19.a is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measure 19.a should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Wildfire

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the 2022 Scoping Plan could result in potentially significant short-term construction-related impacts and long-term operational impacts on wildfire. Reasonably foreseeable compliance responses associated with the 2022 Scoping Plan could include construction of new facilities and modifications to existing facilities. New development may include electricity and hydrogen gas generation projects, new biofuel production facilities, electric equipment manufacturing facilities, pipelines, substations and extension of powerlines, shore power facilities, solar thermal steam production, composting facilities, biomass processing and bioenergy facilities, anaerobic digesters, vehicle charging/fueling stations, offshore wind energy generation facilities, and direct air capture and other CCS projects and associated pipelines and infrastructure. Modifications to existing facilities could consist of decommissioning and consolidation of refineries, vapor recovery systems, gas-to-electric conversion, upgrades to dairies, new chemical manufacturing facilities for cattle feed additives, integration of energy generation and storage facilities into existing development, rooftop solar photovoltaic (PV) system installation, modifications to existing electrical distribution and transmission systems, and modifications to existing natural gas distribution and transmission systems for leak repair and pipeline interconnection for renewable natural

gas (RNG). Construction projects would also include new bicycle/pedestrian lanes, high-occupancy vehicle (HOV) lanes, a commuter rail line, decommissioning of oil and gas facilities, decommissioning and consolidation of oil refineries, construction/restoration of wetlands, and operations related to forest thinning, harvesting, mastication, fuels reduction treatments, prescribed fire, reforestation, defensible space establishment, urban tree and vegetation establishment, and afforestation within croplands and riparian areas. An increase in mining and processing of metals and other minerals necessary for battery storage of electricity would also be reasonably expected, including surface/open pit, underground, and brine mining. In addition, operational-related impacts could include operation of new facilities, operational changes at existing facilities, or natural and working land management activities. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that short-term construction-related effects on wildfire associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

Long-term potentially significant impacts on wildfire could occur as a result of increase in renewable energy and decrease in oil and gas extraction, forest, shrubland, and grassland management actions. The Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that long-term operational-related effects on wildfire associated with the 2022 Scoping Plan would be potentially significant and unavoidable.

The EA includes Mitigation Measures 20.a and 20.b, which identify existing statutes and regulations and construction and operating permit requirements, as well as other recognized practices designed to reduce these potentially significant impacts. The Board finds that the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Therefore, the Board finds that the authority to implement Mitigation Measures 20.a and 20.b are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 20.a and 20.b should be adopted by those agencies. Public agencies with authority can and should implement the identified measures to the degree feasible. Because the authority and responsibility to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with the EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

Moreover, activities within CARB's direct control – such as the design and implementation of future regulations and incentive programs – will be designed in accordance with the environmental principles set out in the 2022 Scoping Plan and Final EA, along with controlling law, including AB 32, CEQA, and the APA. These commitments are intended to minimize, and where possible avoid impacts. However, the precise design of these programs is necessarily left for the future, and many of the data and research needs identified by the 2022 Scoping Plan have been addressed.

Consequently, at this stage without full details on the design of potential programs and associated required mitigation, while impacts could be reduced to a less-than-significant

level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the short-term and long-term impacts to this resource associated with the proposed actions in the 2022 Scoping Plan would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Cumulatively Considerable Impacts

The EA concluded the 2022 Scoping Plan could result in a cumulatively considerable contribution to significant cumulative impacts to aesthetics, agricultural and forest resources, short-term construction-related air quality and odor impacts, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use planning, noise, long-term operational-related recreation impacts, transportation and traffic, tribal cultural resources, utilities and service systems, and wildfire. While suggested mitigation is provided within the respective resource areas of the Final EA that could address the contribution of the 2022 Scoping Plan to each of these potentially cumulatively considerable impacts, the Board finds that because these adverse impacts are potential indirect impacts associated with the compliance responses of covered entities, and because CARB lacks general land use authority over these covered entities, the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with land use approval and permitting authority, such as city or county governments. Public agencies with authority can and should implement the identified measures to the degree feasible. Consequently, while cumulative impacts could be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the cumulatively considerable contribution of the 2022 Scoping Plan to existing significant cumulative impacts to aesthetics, agricultural and forest resources, short-term construction-related air quality and odor impacts, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use planning, noise, long-term operational-related recreation impacts, transportation and traffic, tribal cultural resources, utilities and service systems, and wildfire to be potentially significant and unavoidable.

Findings on Alternatives to the Project

In addition to the No-Project Alternative, the Final EA considered a reasonable range of potentially feasible alternatives that could potentially reduce or eliminate the significant adverse environmental impacts associated with the 2022 Scoping Plan, while accomplishing most of the basic project objectives.

The Board finds the alternatives analysis is sufficient to inform the Board and the public regarding the tradeoffs between the degree to which the alternatives could reduce environmental impacts and the corresponding degree to which the alternatives could achieve the project objectives. Further, the Board finds that none of the alternatives discussed in the Final EA is clearly environmentally superior, and the discussion of the environmental advantages and disadvantages of each alternative in comparison to the proposed scenario is sufficient to inform the Board of alternative options under CEQA.

Based upon a full evaluation of the alternatives, and the entirety of the record, the Board finds that adoption and implementation of the 2022 Scoping Plan is the most desirable, feasible, and appropriate action for achieving the objectives of the project, and the Board rejects the other alternatives because they either fail to meet most project objectives, or are infeasible based on consideration of the relevant factors identified in the Final EA and briefly described below:

No-Project Alternative –

The No-Project Alternative in the Final EA describes a reasonably foreseeable scenario if CARB did not approve the 2022 Scoping Plan. Under the No-Project Alternative, the 2022 Scoping Plan would not be adopted. Under the No-Project Alternative, those measures included in the initial Scoping Plan, the First Update to the Scoping Plan, and the 2017 Scoping Plan that are already being implemented, as well as those measures enacted under authority outside of AB 32, would continue to be implemented.

The No-Project Alternative does not assume that there would be no further action by CARB or other State agencies related to the reduction of GHG emissions. Some of the recommended measures in the 2022 Scoping Plan may occur as a result of requirements required by other statutes or because of commitments in existing plans (e.g., the Short-Lived Climate Pollutant Reduction Strategy, California Vegetation Treatment Program), requirements under development for other purposes, and subsequent regulatory actions by CARB or other agencies under separate statutory authority regardless of their inclusion in the 2022 Scoping Plan.

It is not clear that it would be legally feasible for CARB to implement the No-Project Alternative. In April 2015, Governor Brown issued Executive Order B-30-15 to establish a California GHG emission reduction target of 40 percent below 1990 levels by 2030. In doing so, the governor called on California to pursue a new and ambitious set of strategies, in line with the five climate change pillars from his inaugural address to reduce GHG emissions and prepare for the unavoidable impacts of climate change. To develop a clear plan of action to achieve the State's goals, the executive order called on CARB to update the AB 32 Climate Change Scoping Plan to incorporate the 2030 target. In summer 2016, the legislature affirmed the importance of addressing climate change through passage of SB 32 (Pavley, Chapter 249, Statutes of 2016), which codified into statute the 2030 GHG emission reduction target contained in Executive Order B-30-15 to achieve a 40-percent reduction in 1990 GHG emission levels by 2030. Executive Order B-55-18 also established the goal of reaching carbon neutrality by 2045, which builds on the target to require all utilities to source 100 percent of their electricity from renewables by 2045, established by the 100 Percent Clean Energy Act of 2018 (SB 100, De Leon, Statutes of 2018). Additionally, California's Short-Lived Climate Pollutant Reduction law, which took effect on January 1, 2022, sets targets for reducing the amount of organic waste disposed of in landfills by 75 percent (from a 2014 baseline level) by 2025 (SB 1383, Lara, Statutes of 2016). Furthermore, the 2022 Scoping Plan was developed to put the state on a trajectory to achieve carbon neutrality by 2045¹ through a substantial reduction in fossil fuel dependence, while at the

¹ This objective is consistent with AB 1279, Muratsuchi, 2021-2022 legislative session.

same time increasing deployment of efficient non-combustion technologies and distribution of clean energy. CARB would risk noncompliance with these legal mandates if it chose the No-Project Alternative.

The Board finds that implementing this alternative would not result in the maximum technologically feasible and cost-effective reductions in GHG emissions to achieve the 2030 target of 40 percent below 1990 levels, and to put the state on a trajectory to achieve carbon neutrality no later than 2045 and reduce GHG emissions by 85 percent reduction relative to 1990 levels by 2045 (Objectives 1 and 2). It would reduce petroleum use in cars and trucks, increase the amount of electricity derived from renewable sources, increase energy efficiency in existing buildings and make heating fuels cleaner, and reduce the release of methane and other short-lived climate pollutants; however, it is unknown if measures would be stringent enough to meet the goals associated with Objectives 3, 4, 5, and 6. This alternative would generally meet the remainder of objectives because it would pursue emission reductions that are real, permanent, quantifiable, verifiable, and enforceable (Objective 10), and it is consistent with other requirements set forth under the California Health and Safety Code (Objectives 8 and 10–15). To be consistent with AB 32, this alternative would minimize, to the extent feasible, leakage of emissions outside of the state (Objective 12). This alternative would not update the State’s Scoping Plan (Objective 21). For this reason, the Board rejects this alternative.

Alternative A: Nearly Complete Phaseout of All Combustion, Limited Reliance on Mechanical Carbon Dioxide Removal and CCS, and Restricted Applications for Biomass-Derived Fuels; Natural and Working Land Actions are unchanged from the 2022 Scoping Plan

Alternative A proposes to accelerate the 2030 target from 40 percent below 1990; aims to achieve carbon neutrality by 2045; nearly phases out all combustion, including fossil, biomass-derived, and hydrogen fuel combustion; require early retirement of vehicles, appliances, and industrial equipment to eliminate combustion, with aggressive deployment and adoption of non-combustion technologies; directly regulates dairies to achieve the SB 1383 methane target, with emphasis on maximizing deployment of alternative manure management strategies, aggressive adoption of enteric strategies by 2030, and increased rate of dairy herd size reduction compared to historic levels; include high likelihood of leakage for sectors that are difficult to decarbonize (e.g., cement, aviation); and requires carbon dioxide removal to compensate for non-combustion emissions (industrial process emissions) and short-lived climate pollutants or would not achieve carbon neutrality.

The Board finds that Alternative A meets many of the basic project objectives and even accelerates the existing target of meeting a 40-percent reduction in 1990 GHG emission levels by 2030. However, it has the highest direct costs due to early replacements and the highest rate of slowing economic growth in 2045 (Objective 11). Final EA Alternative A diverges from the SB 100 retail sales definition in covering total load (0-million metric tons electricity sector target) and restricts eligible resources, including combustion-based bioenergy, leading to less diversification of energy sources (Objective 15). Under this alternative, there would be no development of new digesters for diverted organic waste, which may result in herd size reduction and possible relocation of dairies outside California, resulting in emissions leakage. This alternative may also increase the potential for emissions

leakage for cases in which electrification is not technically feasible, and a facility cannot implement CCS projects, resulting in the need to relocate production outside of the state (Objective 12). For these reasons, the Board rejects this alternative.

Alternative B: Deployment of a Broad Portfolio of Existing and Emerging Fossil Fuel Alternatives, Slower Deployment and Adoption Rates than the Proposed Scenario, and Higher Reliance on Carbon Dioxide Removal; Natural and Working Land Actions are unchanged from the 2022 Scoping Plan

Alternative B relies on existing, as well as emerging, technologies and does not place any limits on feasible fuels and technologies. It anticipates a less aggressive adoption of clean fuels and technologies by consumers and slower rates of clean fuels and technology deployment. The key characteristics of this alternative are to: maintain the 2030 target of 40-percent emissions reductions from 1990 levels; aim to achieve carbon neutrality no later than 2045; not phase out all combustion, including fossil, biomass-derived, and hydrogen fuel combustion; replace combustion vehicles, appliances, and industrial equipment at end of life; allow for the capture and use of biogas from dairies to achieve the SB 1383 methane target; allow for the use of CCS for sectors that are difficult to electrify; require a larger amount of carbon dioxide removal to compensate for remaining fossil fuel emissions, noncombustion emissions (industrial process emissions) and short-lived climate pollutants; and include a slower rate of consumer adoption for clean technology and fuels.

The Board finds that Alternative B would meet many of the objectives of the 2022 Scoping Plan. It would maintain the 2030 target of 40-percent emissions reductions from 1990 levels and would achieve carbon neutrality by 2045. It delivers health and social cost benefits (Objectives 14 and 20), though to a lesser degree than both Final EA Alternative A and the Scoping Plan Scenario. Direct costs are higher compared to the Scoping Plan Scenario; also leading to slower economic and job growth (Objective 11). This alternative produces lesser reductions in fossil fuel combustion and GHG emissions without the use of mechanical carbon dioxide removal in 2045 compared to the Scoping Plan Scenario. It would not reduce GHG emissions at least 85 percent below 1990 levels by 2045 (Objectives 1 and 2). In addition, it would not meet zero-emission goals for light-duty trucks under Executive Order N-79-20 (Objective 5). For this reason, the Board rejects this alternative.

Alternative C: Land Management Activities representative of California’s Current Commitments and Plans; AB 32 GHG Inventory Sector activities are unchanged from the 2022 Scoping Plan.

Alternative C bases the modeled acreage on current State commitments, such as the One Million Acre Strategy, 30x30 Strategy, and other existing regional commitments and plans, which would result in comparatively less forest and wetlands management than identified in the Proposed Scenario. The key characteristics of this alternative are to: establish an increase of 1 million acres of forest, shrubland/chaparral, and grassland that receive fuel reduction treatments compared to business as usual (BAU); limit prescribed burning in chaparral; increase climate smart agricultural practices 7.5 times compared to BAU; double statewide urban forest investment compared to BAU; ensure compliance with the California Department of Forestry and Fire Protection defensible space requirements described in Public Resources Code Section 4291 on all parcels up to ownership boundaries; restore 18,000 acres total of Sacramento–San Joaquin Delta wetlands in line with existing regional plans by 2045; and establish a 75-percent reduction in land conversion of sparsely vegetated lands compared to BAU.

The Board finds that Alternative C meets many of the basic project objectives and includes increased levels of action on croplands, urban forests, and deserts. However, implementing Alternative C would not result in the maximum technologically feasible and cost-effective reductions in GHG emissions, because forest, shrubland, grassland, and wetland management are not implemented at sufficiently high levels to restore ecosystem resilience and substantially reduce wildfire emissions (Objective 11). Overall, Alternative C would not provide balance between economic benefits and cost with consideration of the effects to land use types and may not be feasible to implement (Objective 15). For this reason, the Board rejects this alternative.

STATEMENT OF OVERRIDING CONSIDERATIONS

CARB expects that many of the significant adverse impacts identified in the Final EA will be avoided or mitigated; however, since uncertainty exists as to the extent of mitigation that other agencies will require at the site- and project-specific level, the Board is conservatively considering the impacts to be significant and unavoidable. The Board finds that despite the potential for adverse environmental impacts associated with the 2022 Scoping Plan, other benefits of the proposed actions are determined to be overriding considerations that warrant approval of the 2022 Scoping Plan and outweigh and override its unavoidable significant impacts. Each benefit set forth below constitutes an overriding consideration warranting approval of the project, independent of the other benefits, despite each and every unavoidable impact. These benefits are set forth in greater detail in the 2022 Scoping Plan, and in its appendices, including the Final EA. These benefits include:

1. Reduction in total fossil fuel demand by 86 percent in 2045 and liquid petroleum fuels by 94 percent, relative to 2022 demand;
2. Reduction in greenhouse gas (GHG) emissions from oil and gas extraction by 89 percent and petroleum refining emissions by 85 percent (without CCS) and 94

percent (with CCS) in 2045 from 2022 emission levels, commensurate with the decrease in in-state demand fuel demand;

3. Reduction in GHG emissions from AB 32 GHG Inventory Sectors by 48 percent below 1990 levels by 2030, and setting the state on a course to achieve 85 percent below 1990 levels by 2045 through reductions in fossil fuel demand, decreased liquid petroleum fuels use and displacement with low carbon fuels and electricity, increased renewable and zero-carbon energy resources, actions on short-lived climate pollutants, reduced vehicle miles traveled, and deploying CCS and CDR;
4. Mitigating effects of climate change, including sea level rise and disrupted precipitation patterns, through achieving carbon neutrality by 2045;
5. Increasing the pace and scale of natural and working lands management actions to support GHG emission reductions in through enhanced carbon sequestration, diversification of carbon stocks, and protection of existing ecosystem carbon;
6. Air quality improvements from actions in AB 32 GHG Inventory Sectors resulting in fewer exceedances of PM2.5 and ozone ambient air quality standards, as well as reductions in wildfire PM2.5 emissions from increased natural and working lands management actions on forests, shrublands, and grasslands;
7. Promoting statewide health benefits from the actions in the AB 32 GHG Inventory Sectors and Natural and Working Lands Sectors, that result in over \$200 billion in health benefits by reducing premature mortality and improving other health endpoints in 2045;
8. Economic benefits from energy efficiency and reduced demand for fuels; and
9. Influencing the development of policies to reduce emissions in other jurisdictions.

LOCATION AND CUSTODIAN OF THE RECORD

The documents and other materials that constitute the record of proceedings on which these findings are based are located at 1001 I Street Sacramento, CA 95814. The custodian for these documents is the California Air Resources Board Legal Office, inquiries can be submitted to CaliforniaEnvironmentalQualityAct@arb.ca.gov.