

ATTACHMENT E

FINDINGS and STATEMENT OF OVERRIDING CONSIDERATIONS

Introduction

The California Air Resources Board (CARB), as the lead agency for the proposed Regulatory Amendments to the Low Carbon Fuel Standard (Proposed Amendments), prepared a Draft Environmental Analysis (EA) in accordance with its certified regulatory program (Cal. Code Regs., tit. 17, §§ 60000 – 60007) 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 Amendments to the Low Carbon Fuel Standard and the Alternative Diesel Fuels Regulation*, and included as Appendix D to the Staff Report (Initial Statement of Reasons), provided an analysis of the potential environmental impacts associated with the Proposed Amendments. Following circulation of the Draft EA for a 45-day public review and comment period from March 9, 2018, through April 23, 2018, CARB prepared the *Final Environmental Analysis prepared for the Proposed Amendments to the Low Carbon Fuel Standard and the Alternative Diesel Fuels Regulation* (Final EA) which includes minor revisions to the 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 Draft EA. Therefore, no significant new information requires the Final EA to be recirculated. The Final EA was posted on CARB's webpage on September 17, 2018. 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.)

The Final EA is based on the expected compliance responses of the regulated entities covered by the Proposed Amendments. Although the policy aspects and requirements of the Proposed Amendments do not directly change the physical environment, there are potential indirect physical changes to the environment that could result from reasonably foreseeable actions undertaken by entities in response to the Proposed Amendments and the market. These indirect impacts are the focus of the programmatic-level impacts analysis in the Draft EA.

The Final EA takes a conservative approach and concluded that the reasonably foreseeable compliance responses associated with the Proposed Amendments could potentially result in the following short-term and long-term beneficial and adverse impacts: beneficial impacts to energy demand and greenhouse gases; less-than-significant impacts to air quality (odor), energy demand, greenhouse gases, hazards and hazardous materials, mineral resources, population, employment, and housing, public services, and recreation; and potentially significant and unavoidable adverse impacts to aesthetics, agriculture and forest resources, air quality, biological resources, cultural resources, energy demand, geology and soils, hazards and hazardous materials, hydrology and water quality, land use planning, mineral resources, noise, transportation and traffic, and utilities and service systems. 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. The Final EA also identifies possible localized operational impacts to air quality from activities including feedstock transport to production facilities, production of biofuels, transport of finished fuels to blending facilities, and from CCS projects, associated with reasonably foreseeable compliance responses to the proposed LCFS regulation. While the Final EA finds these localized impacts unlikely, CARB cannot dismiss the potential for these impacts, and has conservatively identified these impacts as potentially significant and unavoidable.

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, §60006.) 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.

Because the potential adverse impacts identified in this programmatic level EA are potential indirect impacts associated with the compliance responses of covered entities, the authority to determine site- or project-specific mitigation is within the purview of jurisdictions with local permitting authority, such as city or county governments and local air districts. ARB does not have the ability to determine with any specificity the project level impacts, nor the authority to require project level mitigation in approving the proposed regulations, as discussed in the findings below.

CARB has separately also prepared an extensive disclosure document considering past criteria pollutant emissions associated with earlier forms of the LCFS. Although that document stands apart from the Final EA, it provides useful additional disclosures, and supports a distinct funding program to remediate conservatively-estimated air pollutant emissions that could be attributed to the LCFS.

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 Board’s statement of findings for each significant adverse impact identified in the EA, accompanied by a brief explanation, and its statement of overriding considerations.

As noted above, the agency action analyzed in the Final EA is CARB’s proposed adoption of the Proposed Amendments, which are consequently the “project” as defined in CEQA Guidelines section 15378. However, these findings – as does the Final EA itself – also use the word “project” in discussing the subsequent actions individual regulated entities may take in response to the regulations, for example, the construction and operation of new or expanded fuel facilities. In most cases, these future projects, while a reasonably foreseeable indirect consequence of the proposed regulations and analyzed on a programmatic level in the Final EA, will be subject to review by and approval by agencies other than CARB.

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, all of which are hereby incorporated by reference. The Board makes the following written findings for each potentially 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 Proposed Amendments could result in potentially significant short-term construction-related impacts and long-term operational impacts on aesthetic resources. The reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock; new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction and operation of new facilities to produce renewable diesel, gasoline, alternative jet fuel (AJF), and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects; construction and operation of additional hydrogen stations, compressed

natural gas/liquefied natural gas (CNG/LNG) stations and electric vehicle (EV) charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed Carbon Capture and Sequestration Protocol (CCS Protocol) include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The Final EA includes Mitigation Measures B.1.a and C.1.a, 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 B.1.a and C.1.a are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures B.1.a and C.1.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 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.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Amendments 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 Proposed Amendments could result in potentially significant impacts associated with new facilities and feedstock cultivation on agriculture and forest resources. The reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock; new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction and operation of new facilities to produce renewable diesel, gasoline, AJF, and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of

infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects; construction and operation of additional hydrogen stations, CNG/LNG stations and EV charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The EA includes Mitigation Measures B.2.a, B.2.b, C.2.a, and C.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 B.2.a, B.2.b, C.2.a, and C.2.b are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures B.2.a, B.2.b, C.2.a, and C.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 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.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Amendments 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 Proposed Amendments could result in potentially significant short-term construction-related and long-term operational-related impacts on air quality. The reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock;

new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction of new facilities to produce renewable diesel, gasoline, AJF, and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects; construction of additional hydrogen stations, CNG/LNG stations and EV charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The EA includes Mitigation Measures B.3.a, B.3.b, C.3.a, and C.3.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. In addition the EA's Mitigation Measures, CARB's separate remediation program for conservatively-estimated emissions associated with the LCFS is further reducing criteria air pollutant emissions in California. 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 B.3.a, B.3.b, C.3.a, and C.3.b is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures B.3.a, B.3.b, C.3.a, and C.3.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, the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Amendments 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 Proposed Amendments could result in potentially significant impacts on biological resources related to new facilities or infrastructure and land use changes. The reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock; new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction of new facilities to produce renewable diesel, gasoline, AJF, and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects; construction of additional hydrogen stations, CNG/LNG stations and EV charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The EA includes Mitigation Measures B.4.a, B.4.b, C.4.a, and C.4.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 B.4.a, B.4.b, C.4.a, and C.4.b is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures B.4.a, B.4.b, C.4.a, and C.4.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, the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Amendments 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 Proposed Amendments could result in potentially significant short-term construction-related impacts and long-term operational impacts on cultural resources. The reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock; new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction of new facilities to produce renewable diesel, gasoline, AJF, and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects; construction of additional hydrogen stations, CNG/LNG stations and EV charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The EA includes Mitigation Measures B.5.a and C.5.a, which identify 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 Measures B.5.a and C.5.a is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures B.5.a and C.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 Final EA does not attempt to address project-specific details of mitigation, the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Amendments would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Energy Demand

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the CCS Protocol could result in potentially significant long-term operational impacts on energy demand. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The EA includes Mitigation Measure C.6.b, 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 C.6.b is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measure C.6.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 Final EA does not attempt to address project-specific details of mitigation, the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the CCS Protocol 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, Seismicity and Soil Resources

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the Proposed Amendments could result in potentially significant short-term construction-related impacts and long-term operational impacts on geology and soil

resources. The reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock; new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction of new facilities to produce renewable diesel, gasoline, AJF, and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects; construction of additional hydrogen stations, CNG/LNG stations and EV charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The EA includes Mitigation Measures B.7.a, B.7.b, C.7.a, C.7.b, and C.7.c, 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 B.7.a, B.7.b, C.7.a, C.7.b, and C.7.c is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures B.7.a, B.7.b, C.7.a, C.7.b, and C.7.c 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, the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Amendments 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 Proposed Amendments could result in potentially significant short-term construction-related impacts on hazards and hazardous material resources. The reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock; new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction of new facilities to produce renewable diesel, gasoline, AJF, and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects; construction of additional hydrogen stations, CNG/LNG stations and EV charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The EA includes Mitigation Measures B.9.a, C.9.a, and C.9.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 B.9.a, C.9.a, and C.9.b is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures B.9.a, C.9.a, and C.9.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, the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Amendments 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 Proposed Amendments could result in potentially significant short-term construction-related impacts and long-term operational impacts on hydrology and water quality resources. The reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock; new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction of new facilities to produce renewable diesel, gasoline, AJF, and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects; construction of additional hydrogen stations, CNG/LNG stations and EV charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The EA includes Mitigation Measures B.10.a, B.10.b, C.10.a, C.10.b, and C.10.c, 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 B.10.a, B.10.b, C.10.a, C.10.b, and C.10.c is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures B.10.a, B.10.b, C.10.a, C.10.b, and C.10.C 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, the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Amendments 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 reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock; new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction of new facilities to produce renewable diesel, gasoline, AJF, and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects; construction of additional hydrogen stations, CNG/LNG stations and EV charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

Short-term construction-related effects on land use and planning associated with implementation of the Proposed Amendments may not be consistent with existing and planned land uses. The environmental consequences of land use changes are considered in their respective sections of the Final EA.

Construction and operation of new or modified processing facilities for feedstock and finished fuel production; facilities to produce renewable diesel, gasoline, AJF, and propane; anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; infrastructure to collect biogas and produce methane; stand-alone and bolt-on cellulosic processing units for renewable fuels production electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; solar and wind electricity generation projects; additional hydrogen stations, CNG/LNG stations and EV charging stations; modifications to existing crude production facilities to accommodate

solar and wind electricity, solar heat, and/or solar steam generation; modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions may require the conversion of non-industrial land uses to industrial land uses. Potential environmental effects associated with land use change on agriculture and forestry, biology, geology and soils, and hydrology and their related mitigation measures are discussed in further detail in their respective section of the Final EA.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Amendments would be potentially significant and unavoidable. This impact is overridden by the project's benefits as set forth in the statement of overriding considerations.

Mineral Resources

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the Proposed Amendments could result in potentially significant long-term operational impacts on mineral resources. The reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock; new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction of new facilities to produce renewable diesel, gasoline, AJF, and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects; construction of additional hydrogen stations, CNG/LNG stations and EV charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The EA includes Mitigation Measures B.12.b and C.12.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 B.12.b and C.12.b within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures B.12.b and C.12.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, the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Amendments 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 Proposed Amendments could result in potentially significant short-term construction-related impacts and long-term operational impacts on noise resources. The reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock; new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction of new facilities to produce renewable diesel, gasoline, AJF, and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects; construction of additional hydrogen stations, CNG/LNG stations and EV charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial

facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The EA includes Mitigation Measures B.13.a, B.13.b, C.13.a, and C.13.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 B.13.a, B.13.b, C.13.a, and C.13.b is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures B.13.a, B.13.b, C.13.a, and C.13.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, the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Amendments 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 and Traffic

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementation of the Proposed Amendments could result in potentially significant short-term construction-related impacts and long-term operational impacts on transportation and traffic resources. The reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock; new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction of new facilities to produce renewable diesel, gasoline, AJF, and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects; construction of additional hydrogen stations, CNG/LNG stations and EV charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of

renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The EA includes Mitigation Measures B.17.a, B.17.b, C.17.a, and C.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 B.17.a, B.17.b, C.17.a, and C.17.b is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures B.17.a, B.17.b, C.17.a, and C.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, the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, the Board takes a conservative approach in its post-mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Amendments 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 Proposed Amendments could result in potentially significant long-term operational impacts on utilities and service systems resources. The reasonably foreseeable compliance responses associated with the Proposed Amendments include: modifications to cultivation volume and transport of feedstock; changes to location and types of feedstock; new or modified processing facilities for feedstock and finished fuel production; increased transportation of finished alternative fuels to blending terminals or retail fuel sites; construction of new facilities to produce renewable diesel, gasoline, AJF, and propane; construction of new anaerobic facilities to digest manure from dairies, sewage from wastewater treatment plants, and organic waste diverted from landfills; construction of infrastructure to collect biogas and produce methane; construction of stand-alone and bolt-on cellulosic processing units for renewable fuels production; increase of tree cultivation at farms, collection of yard waste, or removal of forest litter and agricultural residues; construction of electrolysis units and substitution of renewable natural gas for fossil gas in production of hydrogen; construction of solar and wind electricity generation projects;

construction of additional hydrogen stations, CNG/LNG stations and EV charging stations; deployment and use of additional electric drivetrain, natural gas, and propane fueled vehicles; modifications to existing crude production facilities to accommodate solar and wind electricity, solar heat, and/or solar steam generation; electrification of equipment and installation of renewable electricity and battery storage systems at petroleum refineries and alternative fuel production facilities; land use changes and changes to fuel-associated shipment patterns. Reasonably foreseeable compliance responses associated with the proposed CCS Protocol include the modification of existing industrial facilities or construction of new industrial facilities to capture CO₂ emissions, and the construction of new infrastructure such as pipelines, wells, and other surface facilities to transport and sequester CO₂ emissions.

The EA includes Mitigation Measures B.18.a and C.18.a, 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 B.18.a and C.18.a is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures B.18.a and C.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, the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

Impacts may be reduced to a less-than-significant level by land use and/or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential programs and associated required mitigation. Consequently, 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 Proposed Amendments 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 takes a conservative approach and concluded the Proposed Amendments could result in a cumulatively considerable contribution to significant cumulative impacts to aesthetics, agricultural and forest resources, air quality impacts, biological resources, cultural resources, energy demand, geology, seismicity and soil resources, hazards and hazardous materials, hydrology and water quality, land use planning, mineral resources, noise, transportation and traffic, and utilities and service systems. While suggested mitigation is provided within the respective resource areas of the Final EA analyses that could address the contribution of the Proposed Amendments 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, and because CARB lacks general land use or permitting authority, 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 Proposed Amendments to existing significant cumulative impacts to aesthetics, agricultural and forest resources, air quality impacts, biological resources, cultural resources, energy demand, geology, seismicity and soil resources, hazards and hazardous materials, hydrology and water quality, land use planning, mineral resources, noise, transportation and traffic, and utilities and service systems to be potentially significant and unavoidable.

Findings on Alternatives to the Project

In addition to the No-Project Alternative, the EA considered a reasonable range of potentially feasible alternatives that could potentially reduce or eliminate the significant adverse environmental impacts associated with the proposed regulations, while accomplishing most of the 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 proposed LCFS and ADF regulations is the most desirable, feasible, and appropriate action for achieving the objectives of the project, and the Board rejects the other alternatives as either less desirable or infeasible based on consideration of the relevant factors identified in the EA and briefly described below:

Alternative 1: No Project Alternative

Alternative 1 in the EA describes a reasonably foreseeable scenario if CARB did not approve the Proposed Amendments. The LCFS would continue without strengthening the CI reduction targets beyond 2020, maintaining the 10 percent CI reduction below 2010 levels target beyond 2020. Also, the list of fuels subject to the regulation and the opt-in and/or exempt status of particular fuels would remain the same, which means that alternative jet fuel and propane would not be eligible to earn LCFS credits. Finally, the CCS Protocol, which allows for credit generation under the LCFS for CCS projects, would also not be included. Other CARB programs intended to reduce GHG emissions would continue in accordance with their statutory authorities and adopted regulation.

Implementation of Alternative 1 would avoid some of the potential environmental impacts described in Chapter 4 of the Final EA, specifically those associated with construction and

operation of facilities related to the implementation of specific compliance responses or projects to further reduce the CI value of fuels in California beyond current LCFS targets. If compliance responses associated with the Proposed Amendments would not occur, California's fuel portfolio would be less likely to change substantially such that average CI values of fuels are reduced beyond 10 percent. Thus, potentially significant impacts related to compliance responses that could result in changes in shipment patterns, land use changes, additional infrastructure, energy demand, and methods used to obtain CI credits could be avoided. However, without implementation of the Proposed Amendments, GHG reductions within the transportation sector would be substantially impeded after 2020, compared to reductions associated with the Proposed Amendments. The beneficial environmental impacts of reduced GHG emissions on climate change after 2020 and the air quality co-benefits associated with the LCFS program after 2020 would not be realized. The State's ability to contribute to the avoidance of the most environmentally damaging impacts of long-term climate change would be limited to benefits achieved in other programs.

The Board finds that the No-Project Alternative would fail to meet many of the project objectives described in Chapter 2 and reiterated above. The objective of the Proposed Amendments is to improve California's long-term ability to support the consumption of increasingly lower-CI fuels and to improve the program's overall effectiveness. Without strengthening the CI reduction targets through 2030, there would be no incentives to reduce CI values of fuels, diversify the State's fuel portfolio, or commercialize pathways for new alternative fuels. Thus, the basic project objectives would not be met. Without eliminating the fuel exemptions for aviation fuel and propane and incentives to further reduce the CI value of fuels in California, the feedstocks, fuels, and petroleum projects would be different than under the Proposed Amendments. This would result in having no additional incentives beyond what is available with the existing LCFS to reduce the CI values of fuels or diversify the State's fuel portfolio. This alternative may also result in stranded assets as credits that would have been generated from electricity and hydrogen under the Project increase post-2020 and displace alternative fuels and petroleum projects that were necessary to achieve the 2020 target. There would also be less incentive to develop second generation biofuels, which may be required for California to achieve deep emission reductions necessary to achieve mid- and long-term GHG targets. In addition, without the Proposed Amendments, alternative jet fuel and propane will not be eligible to earn LCFS credits, thereby hampering the transition of these fuels to lower carbon alternatives. Furthermore, adoption of the No Project Alternative does not create an environmentally advantageous outcome because although the potentially significant impacts related to the compliance responses of the proposed regulations as identified in the EA would not occur, the beneficial impacts related to GHG emissions and air quality would also not be realized. For this reason, the Board rejects this alternative.

Alternative 2: 25 percent Carbon Intensity Reduction Alternative

Alternative 2 describes an alternative with a 25 percent LCFS CI reduction target by 2030 as opposed to the 20 percent CI reduction in the Proposed Amendments. This alternative maintains the rest of the amendments proposed in Chapter 2 of the Final EA.

Compliance responses for this alternative are expected to be the same types as those discussed for the 20 percent LCFS CI reduction target identified by CARB staff as part of these Proposed Amendments. However, under this alternative, the compliance responses

would be expected to occur at a greater intensity because of the more aggressive reduction target of 25 percent by 2030. For example, there would be an expected greater increased production from biodiesel, renewable diesel, alternative jet fuel, propane, and cellulosic ethanol; greater increased innovative crude and refinery projects; greater number of CCS projects; and a greater number of dairy methane projects under this alternative compared to the Proposed Amendments.

The Board finds this alternative would meet the project objectives and result in increased GHG emission reduction compared to the Proposed Amendments because of the increased reduction target. However, the environmental impacts from construction and operation of alternative fuel industries, as described in Chapter 4, would also increase because of more intense reduction target. Therefore, adoption of this alternative does not create an environmentally advantageous outcome because exclusion of these provisions does not substantially reduce the potential adverse environmental impacts associated with the Proposed Amendments since the potentially significant impacts related to the compliance responses of the Proposed Amendments as identified in the Final EA would occur to a greater degree under Alternative 2. For these reasons, the Board rejects this alternative.

Alternative 3: Exempt Biodiesel from the Low Carbon Fuel Standard Alternative

Alternative 3 describes an alternative that would exempt biodiesel from the LCFS. Exempting biodiesel from the LCFS would mean that biodiesel would not be eligible to generate credits. This alternative still maintains the proposed 20 percent reduction in CI by 2030 from a 2010 baseline for both gasoline and gasoline substitutes, as well as diesel and diesel substitute fuels. It also maintains the rest of the Proposed Amendments described in Chapter 2 of the Final EA.

Under a conservative approach, the use of biodiesel in place of conventional diesel, in isolation, results in a potentially slight increase in NOx emissions and a large decrease in PM emissions. Biodiesel is currently one of the least expensive compliance options. Because of this, other, more expensive fuels and petroleum-based projects would be necessary to replace credits expected to be generated by biodiesel. Therefore, this alternative would raise costs associated with the LCFS program, and would therefore not as effectively meet the cost effectiveness goals in project objective 8. It would also reduce the diversity of the State's fuel portfolio, in conflict with project objective 4.

The Board finds this alternative would result in similar types of impacts as described above for the Proposed Amendments. Because of the nature of biodiesel, this alternative may result in decreased PM benefits and decreased health benefits and slightly increased NOx benefits compared to those under the Proposed Amendments. In addition, because development of biodiesel would not be incented, the number of new facilities and converted farmland to meet demand would be reduced; thus, reducing the magnitude of environmental impacts related to construction and operation of these new facilities. However, changes to land use for the purpose of creating production facilities for non-biodiesel alternative fuels will still impact the State similar to the Proposed Amendments. These changes would include additional impacts stemming from the short-term construction-related and long-term operational processes of the non-biodiesel new production facilities. The increased use of biodiesel associated with the Proposed Amendments relative to Alternative 3 is expected to result in increased PM benefits and increased health benefits due to tailpipe emissions, both statewide and locally. While the increased use of biodiesel relative to fossil diesel in isolation

would be expected to increase NO_x emissions, it is important to note that the overall effect of the Proposed Amendments is ultimately expected to result in less-than-significant/beneficial NO_x level at a statewide level due to overall tailpipe emissions benefits compared against fossil fuels, and due to NO_x-reducing additives for biodiesel; thus, this would ultimately not be a differing factor for this alternative as it would result in more of a benefit, but the Proposed Amendments would also still result in a beneficial impact statewide. Local NO_x impacts from LCFS-incented biodiesel use are eliminated in this alternative, but impacts from other potential local sources of LCFS-incented NO_x and PM, such as additional stationary source emissions from newly constructed non-biodiesel facilities for LCFS compliance, remain potentially significant and unavoidable.

Therefore, adoption of this alternative on balance does not create an environmentally advantageous outcome as it is likely to result in similar types of environmental impacts as the Proposed Amendments. For these reasons, the Board rejects this alternative.

Alternative 4: No Low Carbon Fuel Standard Incorporation of Carbon Capture and Sequestration Protocol Alternative

Alternative 4 would not incorporate the CCS Protocol into the LCFS. Thus, CCS projects would not be eligible to generate credits. This alternative maintains the proposed 20 percent reduction in CI by 2030 from a 2010 baseline for both gasoline and its substitutes and diesel and its substitutes, as well as the rest of the amendments described in Chapter 2 of the Final EA.

Capture (and compression) of carbon from exhaust streams that are low in CO₂ concentration is energy intensive. Depending on the source of energy used, carbon capture may result in additional criteria pollutant emissions at the capture site. If the capture facility is located in populated areas, this could potentially result in negative health effects.

Conversely, carbon capture from exhaust streams that are high in CO₂ concentration (e.g., ethanol facilities) is much less energy intensive and is a relatively low-cost GHG abatement method. Potential carbon capture projects at petroleum refineries, oil fields, and alternative fuel production facilities would not receive LCFS credit and, therefore, may not be built. This will necessitate additional credit generation from alternative fuels and other petroleum-based projects.

This alternative would reduce the potentially significant and unavoidable impacts due to construction-related and long-term operation of CCS facilities and infrastructure. However, the long-term operational greenhouse gas reduction benefits of this alternative could potentially be more beneficial on a case-by-case basis than the Proposed Amendments. This is because facilities with low CO₂ concentration exhaust streams, where CCS would be more energy intensive, would be less likely to incorporate CCS, while facilities with higher CO₂ concentration exhaust streams may still find benefit in incorporating the technology. Additionally, CO₂ injection into subsurface reservoirs and the subsequent sealing and closure of the reservoirs could result in the loss of access to a mineral resource of value to a region. This alternative would reduce such mineral impact.

The Board finds this alternative would likely result in potentially fewer criteria pollutant emissions at refineries and oil fields in California for CCS projects with low CO₂ concentration exhaust streams. The alternative would also likely result in fewer criteria air pollutant emissions, and other ground-disturbing-related impacts, from the construction and operation of pipelines, injection equipment, and capture equipment associated with CCS. However,

this alternative could result in higher cost alternatives (i.e., greater increase in alternative fuel production and implementation of other petroleum-based projects) to meet the LCFS targets, which would lead to higher credit prices. The emission impacts of the higher cost alternatives will depend on the types and locations of the alternative fuel production and petroleum-based projects as compared to CCS projects, and therefore, the net environmental effect of not incorporating the CCS protocol is unknown. Finally, without the use of CCS, it may be difficult to achieve mid- and long-term GHG emission reduction goals. Therefore, this alternative would not meet several of the project objectives. For these reasons, the Board rejects this alternative.

Alternative 5: Omit Alternative Jet Fuels from Generating Credits under the Low Carbon Fuel Standard Alternative

Alternative 5 describes an alternative that would omit alternative jet fuels (AJF) from the LCFS. Maintaining the exemption of AJF from the LCFS would mean that alternative jet fuel would not be eligible to generate credits. This alternative still maintains the proposed 20-percent reduction in CI by 2030 from a 2010 baseline for both gasoline and its substitutes and diesel and its substitutes, as well as the rest of the proposed amendments described in Chapter-2 of the Final EA.

Renewable diesel and, to some extent, biodiesel use the same low-carbon feedstocks as used for producing AJF. Moreover, renewable diesel and AJF are produced at the same facilities (i.e., hydrotreating and Fischer-Tropsch refineries). Therefore, if we assume a world that is low-CI feedstock limited, continuing to exempt AJF may mean that renewable diesel and biodiesel would have less competition with AJF for feedstock and production capacity resulting in greater consumption of the biomass-based diesel fuels in California and greater reductions in PM emissions from on- and off-road vehicles. Conversely, airlines have demonstrated a strong track record for supporting the production of AJF through direct investment in facilities and offtake agreements. Because these same facilities also produce renewable diesel, continuing the aviation fuel exemption may result in less airline industry investment and less production of both alternative jet fuel and renewable diesel. Not allowing alternative jet fuel to generate LCFS credits will continue to dis-incentivize the production and use of the fuel in California. Additionally, potential credits generated using AJF would instead need to be generated through increased use of other alternative fuels and petroleum projects.

The Board finds this alternative would likely result in less GHG emission reduction in the aviation industry, which is largely reliant on efficiency improvements and biofuels to achieve emission reductions, since electrification of aviation is not currently practical. Without the use of AJFs, it could be difficult to achieve long-term GHG emission reduction goals involving deep decarbonization of all sectors. Because AJFs also reduce PM and sulfur oxide (SO_x) emissions (including a slight or no decrease in NO_x) as compared to conventional jet fuel, this alternative would also result in greater criteria pollutant emissions at airports. The additional need for biofuels for AJF would potentially increase the impacts from construction-related and long-term operation of biofuel production facilities and land use changes for feedstock cultivation. While these impacts would potentially materialize due to the needs imposed by biofuel generation for on- and off-road vehicles, they would be magnified to an extent for the creation of AJF. These impacts include potentially significant and unavoidable impacts due to construction-related processes and long-term operational impacts. The increase in demand for new facilities and feedstock cultivation would change land uses and impact

biological, agricultural, and forestry resources and impact geology and soil, and hydrology and water quality.

Therefore, adoption of this alternative on balance does not create an environmentally advantageous outcome as it is likely to result in similar types of environmental impacts as the Proposed Amendments. For these reasons, 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, because 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 Proposed Amendments, other benefits of this regulatory action are determined to be overriding considerations that warrant approval of the proposed regulations and outweigh and override its unavoidable significant impacts. These benefits include:

1. Reduction in the CI of transportation fuels in the California market by at least 20 percent of its 2010 level by 2030 in-line with California's 2030 GHG reduction requirement enacted through Senate Bill (SB) 32 (Pavley, 2016), thereby benefitting the environment for current and future generations;
2. Reducing GHG emissions in the largest sector, transportation, which accounts for approximately 50 percent of the State's GHG emissions;
3. Greater diversification of the state's fuel portfolio in subsequent years;
4. Reduction in both the State's dependence on petroleum and the associated economic impacts of gasoline and diesel price spikes caused by volatile oil price changes;
5. Significant reduction in carcinogenic particulate matter emissions by replacing petroleum diesel fuel with biodiesel and renewable diesel, both of which yield less particulate matter when combusted in heavy-duty engines compared to petroleum diesel.
6. Stimulating greater innovation and development of cleaner, lower-carbon transportation fuels;
7. Providing additional, cost-effective LCFS compliance options, including clarification on the use of CCS and the introduction of crediting for alternative jet fuel;
8. Mitigating potential NOx emissions increases relative to conventional diesel due to biodiesel use attributed to the LCFS; and
9. Supporting California's ongoing efforts to address climate change and ambient air quality through 2030 and beyond and reducing motor-vehicle petroleum fuel use 45 percent by 2030 – as discussed in the 2017 Scoping Plan update, Short Lived Climate

Pollutant Strategy, and mobile source State Implementation Plan—thereby enhancing public health and the environment.