

Proposed

Findings and Statement of Overriding Considerations

INTRODUCTION

The California Air Resources Board (CARB), as the lead agency for the *Proposed In-Use Locomotive Regulation* (Proposed Regulation or Proposed Project), prepared a Draft Environmental Analysis (EA) under its certified regulatory program (Cal. Code Regs., tit. 17, §§ 60000–60008) to comply with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000, *et seq.*). The Draft EA, entitled *Draft Environmental Analysis prepared for the Proposed In-Use Locomotive Regulation*, included as Appendix D to the Staff Report (Initial Statement of Reasons) for the Proposed Regulation, analyzed the potential environmental impacts associated with the Proposed Regulation. Following circulation of the Draft EA for a public review and comment period from September 23, 2022, through November 7, 2022, CARB prepared the *Final Environmental Analysis prepared for Proposed In-Use Locomotive Regulation* (Final EA), which includes minor revisions to the Draft EA. While updates have been made to the EA to ensure it accurately reflects the Proposed Regulation, these changes merely clarify, amplify, or make insignificant modifications to the otherwise adequate Draft EA. These modifications would not result in any new reasonably foreseeable significant environmental impacts or substantially increase the severity of an identified environmental impact. The Draft EA's findings, overall significance conclusions, mitigation measures, and alternatives adequately address the environmental review for the proposed modifications. Therefore, there is no significant new information that would require the EA to be recirculated. The Final EA was posted on CARB's webpage on April 14, 2023.

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 Regulation. Although the policy aspects and requirements of the Proposed Regulation would not directly change the physical environment, potential indirect physical changes to the environment could result from reasonably foreseeable actions undertaken by entities in response to the Proposed Regulation. These indirect impacts are the focus of the programmatic-level impacts analysis in the Final EA.

Collectively, across all categories, the Final EA concluded that the reasonably foreseeable compliance responses associated with the Proposed Regulation could cause the following short-term and long-term impacts: beneficial impacts to air quality, GHG emissions and climate change; less than significant impacts to energy demand, energy resources, GHG emissions, land use and planning, population and housing, public services, recreation, and wildfire; and potentially significant adverse impacts to aesthetics, agriculture and forest resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, mineral resources, noise, transportation and traffic, tribal cultural resources, 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 is why some resource areas are identified above as having both beneficial or 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 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.) The CEQA Guidelines, in California Code of Regulations, title 14, at section 15091, provide direction on the content of the statement of findings. That section states that one or more of these 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.

The potential adverse impacts identified in this programmatic level EA are potential indirect impacts associated with the compliance responses that are reasonably foreseeable, based on available information, in response to the Proposed Regulation. The ability to determine site- or project-specific impacts of projects carried out by third parties to comply with the Proposed Regulation and the authority 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 potential impacts of projects undertaken in response to the Proposed Regulation, nor the authority to require mitigation for such projects, in approving the Proposed Regulation, 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 provides CARB Board's (Board) statement of findings for each significant adverse impact identified in the Final EA,

incorporated by reference herein, 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 in the Final EA, public testimony, written comments received, and the written responses to environmental comments, which are incorporated by reference. The Board makes these 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.

Aesthetics

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementing the Proposed Regulation could result in potentially significant short-term construction-related impacts and long-term operational impacts on aesthetic resources. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of Tier 4 or cleaner (“cleaner locomotives”) and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives.

The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or modification of existing locomotives. Increased use of lithium batteries could incrementally increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems. For a more detailed discussion of potential aesthetics impacts associated with the Proposed Regulation, please see the Final EA (as incorporated by reference).

The Final EA includes Mitigation Measures 1-1 and 1-2, which identify existing statutes and regulations and operating permit requirements and 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 1-1 and 1-2 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 1-1 and 1-2 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project-specific details of mitigation, there is inherent uncertainty in the 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 or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential projects 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 Regulation would be potentially significant and unavoidable. This potential impact is overridden by the project's benefits as explained in the statement of overriding considerations below.

Agriculture and Forestry Resources

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementing the Proposed Regulation could cause potentially significant short-term construction related impacts and long-term operational impacts on agriculture and forestry resources. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of cleaner and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives.

The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or modification of existing locomotives. Increased use of lithium batteries could incrementally increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require

transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems. For a more detailed discussion of potential agriculture and forestry resource impacts associated with the Proposed Regulation, please see the Final EA (as incorporated by reference).

The Final EA includes Mitigation Measure 2-1, which identifies existing statutes and regulations and construction and operating permit requirements and 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 2-1 is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measure 2-1 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project specific- details of mitigation, there is inherent uncertainty in the 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 or permitting agency conditions of approval at a later stage. But at this stage, the Board lacks full details on the design of potential projects and associated required mitigation. The Board takes a conservative approach in its post mitigation significance conclusion and finds the impacts to this resource associated with the Proposed Regulation would be potentially significant and unavoidable. This potential impact is overridden by the project's benefits as explained in the statement of overriding considerations below.

Air Quality

Finding and Explanation

The Final EA found that reasonably foreseeable actions associated with implementing the Proposed Regulation could cause potentially significant short-term construction-related impacts on air quality. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of cleaner and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing

facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives.

The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or modification of existing locomotives. Increased use of lithium batteries could incrementally increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems. For a more detailed discussion of potential air quality impacts associated with the Proposed Regulation, please see the Final EA (as incorporated by reference).

As described in greater detail in the Final EA, it would be expected that the primary sources of construction-related emissions would occur from soil disturbance and use of construction equipment. It is expected that during the construction phase for any new project, criteria air pollutants (e.g., oxides of nitrogen (NO_x), oxides of sulfur (SO_x), particulate matter (PM)), and toxic air contaminants (TACs) could be generated from many activities and emission sources, such as equipment use and worker commute trips.

The Final EA included Mitigation Measure 3-1, which identifies existing statutes and regulations and construction and operational permit requirements, and 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 3-1 is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measure 3-1 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project-specific details of mitigation, there is inherent uncertainty in the mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

At this stage, without full details on the design of potential projects and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use 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 Proposed Regulation would be potentially significant and unavoidable. This impact potential is overridden by the project's benefits as explained in the statement of overriding considerations.

Biological Resources

Finding and Explanation

The Final EA found that reasonably foreseeable actions associated with implementing the Proposed Regulation could cause potentially significant short-term construction-related impacts and long-term operational impacts on biological resources. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of cleaner and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives.

The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or modification of existing locomotives. Increased use of lithium batteries could incrementally increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems. For a more detailed discussion of potential biological resource impacts associated with the Proposed Regulation, please see the Final EA (as incorporated by reference).

The Final EA included Mitigation Measures 4-1 and 4-2, which identify existing statutes and regulations and construction and operational permit requirements, and 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 4-1 and 4-2 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 4-1 and 4-2 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project-specific details of mitigation, there is inherent uncertainty in the mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

At this stage, without full details on the design of potential projects and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use 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 Proposed Regulation would be potentially significant and unavoidable. This impact potential is overridden by the project's benefits as explained in the statement of overriding considerations.

Cultural Resources

Finding and Explanation

The Final EA found that reasonably foreseeable actions associated with implementing the Proposed Regulation could cause potentially significant short-term construction-related impacts and long-term operational impacts on cultural resources. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of cleaner and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives.

The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or modification of existing locomotives. Increased use of lithium batteries could incrementally increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure

or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems. It is foreseeable that known or undocumented cultural or paleontological resources could be unearthed or otherwise discovered during ground-disturbing and construction activities. For a more detailed discussion of potential cultural impacts associated with the Proposed Regulation, please see the Final EA (as incorporated by reference).

The Final EA included Mitigation Measure 5-1, which identifies existing statutes and regulations and construction and operational permit requirements, and 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 5-1 is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measure 5-1 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project-specific details of mitigation, there is inherent uncertainty in the mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

At this stage, without full details on the design of potential projects and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use 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 Proposed Regulation would be potentially significant and unavoidable. This potential impact is overridden by the project's benefits, as explained in the statement of overriding considerations.

Geology and Soils

Finding and Explanation

The Final EA found that reasonably foreseeable actions associated with implementing the Proposed Regulation could cause potentially significant short-term construction-related impacts and long-term operational impacts on geology and soil resources. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of cleaner and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives.

The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or

modification of existing locomotives. Increased use of lithium batteries could incrementally increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems. For a more detailed discussion of potential geology and soil impacts associated with the Proposed Regulation, please see the Final EA (as incorporated by reference).

The Final EA included Mitigation Measure 7-1, which identifies existing statutes and regulations and construction and operational permit requirements, and 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 7-1 is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measure 7-1 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project-specific details of mitigation, there is inherent uncertainty in mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

At this stage, without full details on the design of potential projects and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use 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 Proposed Regulation would be potentially significant and unavoidable. This potential impact is overridden by the project's benefits, as explained in the statement of overriding considerations.

Hazards and Hazardous Materials

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementing the Proposed Regulation could cause potentially short-term construction-related impacts and long-term operational impacts on hazards and hazardous material resources. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of cleaner and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives.

The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or modification of existing locomotives. Increased use of lithium batteries could incrementally increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems. For a more detailed discussion of potential hazards and hazardous materials impacts associated with the Proposed Regulation, please see the Final EA (as incorporated by reference).

The Final EA includes Mitigation Measures 9-1 and 9-2, which identify existing statutes and regulations and construction and operating permit requirements, and 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 9-1 and 9-2 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measure 9-1 and 9-2 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of

analysis associated with the Final EA does not address project specific details of mitigation, the mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

At this stage, without full details on the design of potential projects and associated required mitigation, while impacts could be reduced to a less than significant level by land use 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 Proposed Regulation would be potentially significant and unavoidable. This potential impact is overridden by the project's benefits, as explained in the statement of overriding considerations.

Hydrology and Water Quality

Finding and Explanation

The Final EA found reasonably foreseeable actions associated with implementing the Proposed Regulation could cause potentially significant short-term construction related impacts and long-term operational impacts on hydrology and water quality resources. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of cleaner and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives.

The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or modification of existing locomotives. Increased use of lithium batteries could incrementally increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems. For a more detailed discussion of potential hydrology and water quality impacts associated with the Proposed Regulation, please see the Final EA (as incorporated by reference).

The Final EA included Mitigation Measures 10-1 and 10-2, which identify existing statutes and regulations and construction and operational permit requirements, and 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 10-1 and 10-2 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 10-1 and 10-2 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project-specific details of mitigation, there is inherent uncertainty in the mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

At this stage, without full details on the design of potential projects and associated required mitigation, while impacts could be reduced to a less than significant level by land use 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 Proposed Regulation would be potentially significant and unavoidable. This potential impact is overridden by the Proposed Regulation's benefits, as explained in the statement of overriding considerations.

Mineral Resources

Finding and Explanation

The Final EA found that reasonably foreseeable actions associated with implementing the Proposed Regulation could cause potentially significant short-term construction-related impacts and long-term operational impacts on mineral resources. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of cleaner and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives. The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or modification of existing locomotives. Increased use of lithium batteries could incrementally increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of

existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems. For a more detailed discussion of potential geology and soil impacts associated with the Proposed Regulation, please see the Final EA (as incorporated by reference).

The Final EA included Mitigation Measure 12-1, which identifies existing statutes and regulations and construction and operational permit requirements, and 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 12-1 is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measure 12-1 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project-specific details of mitigation, there is inherent uncertainty in mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

At this stage, without full details on the design of potential projects and associated required mitigation, while impacts could be reduced to a less-than-significant level by land use 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 Proposed Regulation would be potentially significant and unavoidable. This potential impact is overridden by the project's benefits, as explained in the statement of overriding considerations.

Noise

Finding and Explanation

The Final EA found that reasonably foreseeable actions associated with implementing the Proposed Regulation could cause potentially significant short-term construction-related impacts and long-term operational impacts related to noise and vibration. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of cleaner and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives.

The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or modification of existing locomotives. Increased use of lithium batteries could incrementally increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems. As explained in further detail in the Final EA, implementation of reasonably foreseeable compliance responses could result in the generation of short-term construction noise in excess of applicable standards or that result in a substantial increase in ambient levels at nearby sensitive receptors, and exposure to excessive vibration levels. Operational-related activities associated with mining could produce substantial stationary sources of noise, and new sources of noise associated with implementation of Proposed Regulation could include operation of manufacturing plants. For a more detailed discussion of potential noise and vibration impacts associated with the Proposed Regulation, please see the Final EA (as incorporated by reference).

The Final EA included Mitigation Measures 13-1 and 13-2, which identify existing statutes and regulations and construction and operational permit requirements, and 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 13-1 and 13-2 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 13-1 and 13-2 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project-specific details of mitigation, there is inherent uncertainty in the mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

At this stage without full details on the design of potential projects and associated required mitigation, while impacts could be reduced to a less than significant level by land use 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 Proposed Regulation would be potentially significant and unavoidable. This potential impact is overridden by the Proposed Regulation's benefits, as explained in the statement of overriding considerations.

Transportation/Traffic

Finding and Explanation

The Final EA found that reasonably foreseeable actions associated with implementing the Proposed Regulation could cause potentially significant short-term construction-related impacts and long-term operational impacts on transportation resources. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of cleaner and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives.

The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or modification of existing locomotives. Increased use of lithium batteries could incrementally increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems. For a more detailed discussion of potential transportation/traffic impacts associated with the Proposed Regulation, please see the Final EA (as incorporated by reference).

Although detailed information about potential specific construction activities is not currently available, it would be anticipated to result in short-term construction traffic (primarily motorized) from worker commute and trips related to delivery of materials. Depending on the amount of trip generation and the location of new facilities, implementation could conflict with applicable programs, plans, ordinances, or policies (e.g., performance standards, congestion management); and/or result in hazardous design features and emergency access issues from road closures, detours, and obstruction of emergency vehicle movement, especially due to project-generated heavy-duty truck trips.

In addition, implementation of the Proposed Regulation 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. For a more detailed discussion of potential transportation and traffic impacts associated with the Proposed Regulation please see the Final EA (as incorporated by reference).

The Final EA included Mitigation Measures 17-1 and 17-2, which identify existing statutes and regulations and construction permit requirements, and 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 17-1 and 17-2 are within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measures 17-1 and 17-2 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project-specific details of mitigation, there is inherent uncertainty in the mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource.

At this stage, without full details on the design of potential projects and associated required mitigation, while impacts could be reduced to a less than significant level by land use 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 Proposed Regulation would be potentially significant and unavoidable. This potential impact is overridden by the Proposed Regulation's benefits as explained in the statement of overriding considerations.

Tribal Cultural Resources

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementing the Proposed Regulation could cause potentially significant short-term construction related and long-term operational related impacts on tribal cultural resources. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of cleaner and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives.

The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or modification of existing locomotives. Increased use of lithium batteries could incrementally

increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states, and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems. For a more detailed discussion of potential tribal cultural resource impacts associated with the Proposed Regulation please see the Final EA (as incorporated by reference).

The Final EA includes Mitigation Measure 18-1, which identifies existing statutes and regulations and construction and operating permit requirements, and 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 18-1 is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measure 18-1 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project-specific details of mitigation, the mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

At this stage, without full details on the design of potential projects and associated required mitigation, while impacts could be reduced to a less than significant level by land use 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 Proposed Regulation would be potentially significant and unavoidable. This potential impact is overridden by the Proposed Regulation's benefits, as explained in the statement of overriding considerations.

Utilities and Service Systems

Finding and Explanation

The Final EA found that the reasonably foreseeable actions associated with implementing the Proposed Regulation could cause potentially significant long-term operational related

impacts on utilities and service systems resources. The reasonably foreseeable compliance actions include the purchase, remanufacture, or repower of cleaner and ZE locomotives by locomotive operators in response to the spending account and in-use operational requirements of the Proposed Regulation, which may result in increased manufacturing at the facilities that manufacture these types of locomotives. This could result in the need to develop new manufacturing facilities and/or expand existing manufacturing facilities to accommodate the increased demand for cleaner and ZE locomotives.

The Proposed Regulation could also result in the incorporation of ZE technologies, such as lithium batteries and hydrogen fuel cells, into new locomotive production and/or modification of existing locomotives. Increased use of lithium batteries could incrementally increase lithium mining and exports from countries with raw mineral supplies, with some lithium demand being met domestically. The increase in the use of batteries could also require new facilities and the expansion of existing facilities for recycling and disposal. The increased demand for hydrogen fuel cells could require the development of new manufacturing facilities and/or expansion of existing manufacturing facilities, as well as the development of new hydrogen generation facilities. The use of hydrogen fuel may require transport of hydrogen to railyards and other areas where locomotives are operated, such as industrial facilities, as well as development of fueling infrastructure or modification of existing facilities and infrastructure. Increased demand for fuel cells could also result in an extremely small increase in platinum mining and exports from source countries or other states, and a related increase in recycling, refurbishment, or disposal of hydrogen fuel cells. The need for land-based electrical power could result in construction of new infrastructure or modification of existing infrastructure (e.g., substations, high-voltage cable lines, power meters, and circuit breaker main cabinets) to facilitate electric locomotive charging and wayside power systems.

Reasonably foreseeable compliance responses associated with the Proposed Regulation could result in new demand for water, wastewater, electricity, and gas services for new or modified facilities. Generally, facilities would be cited in areas with existing utility infrastructure—or areas where existing utility infrastructure is easily accessible. New or modified utility installation, connections, and expansion would be subject to the requirements of the applicable utility providers. At this time, the specific location and type of construction needed is not known and would be dependent upon a variety of market factors that are not within the control of CARB, including: economic costs, product demands, environmental constraints, and other market constraints. Thus, the specific impacts from construction on utility and service systems cannot be identified with any certainty, and individual compliance responses could potentially result in significant environmental impacts for which it is unknown whether mitigation would be available to reduce the impacts. For a more detailed discussion of potential utilities and service system impacts associated with the Proposed Regulation, please see the Final EA (as incorporated by reference).

The Final EA includes Mitigation Measure 19-1, which identifies existing statutes and regulations and construction and operating permit requirements, and 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 19-1 is within the responsibility and jurisdiction of other public agencies, and that the requirements and practices in Mitigation Measure 19-1 should be adopted by those agencies. Public agencies with the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project-specific details of mitigation, the mitigation that may ultimately be implemented to reduce potentially significant impacts to this resource is inherently uncertain.

At this stage, without full details on the design of potential projects and associated required mitigation, while impacts could be reduced to a less than significant level by land use 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 Proposed Regulation would be potentially significant and unavoidable. This potential impact is overridden by the Proposed Regulation's benefits, as explained in the statement of overriding considerations.

Cumulatively Considerable Impacts

The plan containing the appropriate summary of projections for considering cumulative impacts of the Proposed Regulation that were considered when analyzing cumulative impacts is the Community Air Protection Blueprint. The analysis of cumulative impacts for the Proposed Regulation included a summary of the cumulative impacts found for each resource area in this plan, and a conclusion regarding whether the Proposed Regulation could cause a cumulatively considerable contribution to an existing significant cumulative impact.

The Final EA concluded the Proposed Regulation could cause a cumulatively considerable contribution to significant cumulative impacts to aesthetics, agriculture and forestry resources, air quality (short-term construction-related), biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, transportation/traffic, tribal cultural resources, 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 Regulation 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, 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 the requisite 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 or permitting agencies for individual projects, and the programmatic level of analysis associated with the Final EA does not address project-specific details of mitigation, there is inherent uncertainty in the mitigation that may

ultimately be implemented to reduce potentially significant impacts to these resources. While cumulative impacts could be reduced to a less than significant level by land use 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 Regulation to existing significant cumulative impacts to aesthetics, agriculture and forestry resources, air quality (short-term construction-related), biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, transportation/traffic, tribal cultural resources, and utilities and service systems to be potentially significant and unavoidable.

Findings on Alternatives to the Project

Besides the No-Project Alternative, the Final EA considered a reasonable range of potentially feasible alternatives that could reduce or eliminate the significant adverse environmental impacts associated with the Proposed Regulation, while accomplishing most of the basic project objectives.

The Board finds the alternatives analysis will inform the Board and the public regarding the tradeoffs between how much the alternatives could reduce environmental impacts and the corresponding degree to which the alternatives could achieve the project objectives.

Based upon a full evaluation of the alternatives, and the entire record, the Board finds that adopting and implementing the Proposed Regulation 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 factors identified in the Final EA and briefly described below. Please see the Final EA for a more in-depth discussion and analysis regarding project alternatives.

Alternative 1: No Project Alternative

Alternative 1 in the EA describes a reasonably foreseeable scenario if CARB did not approve the Proposed Regulation. Under Alternative 1, the Proposed Regulation would not be implemented. There would be no requirement for locomotives operating in California to pay into a spending account for the emissions they contribute to California's air. Additionally, locomotives older than 23 years of age could continue to operate in California indefinitely. There would be no requirement for the transition of locomotive operation to ZE technologies. Locomotives could operate throughout the state without reporting operations to CARB. Locomotives would still be required to follow the federal 30-minute idling requirement.

The Board finds that while the No Project Alternative would result in no new environmental impacts because no compliance responses would occur, it would fail to meet the project objectives listed in Chapter 2 of the Final EA. There would be no reductions in PM, diesel PM, NO_x, GHG, and TACs, meaning there would be no public health benefits. Alternative 1 would fail to move the locomotive market toward ZE, and it would not help to meet State Implementation Plan (SIP) goals. Alternative 1 also would not reduce the state's dependence on petroleum for energy or support the use of diversified fuels. Alternative 1

would not reduce GHG emissions in support of Assembly Bill (AB) 32 and Senate Bill (SB) 32. Alternative 1 also would not result in improvements to ZE technologies, nor would it lead the transition of California's off-road sector to ZE technology. For these reasons, the Board rejects this alternative.

Alternative 2: All Tier 4 Locomotives by 2030

Under Alternative 2, starting in 2023, all locomotive operators would need to deposit funds into a spending account. All funds held in the spending account would be exclusively used for the purchase, lease, remanufacture, repower, or rental of Tier 4 locomotives. Starting in 2030, only locomotives with an original engine build date less than 23 years old would be allowed to operate in California unless they are Tier 4.

The Board finds that Alternative 2 would result in fewer environmental impacts compared to the Proposed Regulation because no compliance responses would result in the construction or operation of zero-emission (ZE) locomotives or infrastructure. However alternative 2 would not meet the most basic projects objectives to the same level as the Proposed Regulation. For example, Alternative 2 would reduce emissions until natural growth in freight would require technologies cleaner than Tier 4 locomotives to achieve sustained emission reductions and reduce PM and NO_x from locomotives operating in California. However, the reductions would be less than those realized with the Proposed Regulation. It would also be consistent with SIP goals, but to a lesser extent than the Proposed Regulation. Alternative 2 also would not reduce the state's dependence on petroleum for energy or support the use of diversified fuels. This alternative would not reduce GHG emissions in support of AB 32 and SB 32 since Tier 4 locomotives have no GHG emission benefits compared to other locomotive tiers. This alternative would not result in improvements to ZE technologies, nor would it lead the transition of California's off-road sector to ZE technology. Therefore, the primary goals of the Proposed Regulation would not be achieved using Alternative 2. For these reasons, the Board rejects this alternative.

Alternative 3: 35-Year Useful Life under the In-Use Operational Requirements

Under Alternative 3, starting in 2030, all locomotives with an original engine build date of less than 35 years old could operate in California (compared to the Proposed Regulation's 23-year useful life). After a locomotive has reached a life of 35 years, it would no longer be allowed to operate in California unless it has been repowered to the cleanest locomotive as required by the Proposed Regulation. All other requirements of the Proposed Regulation would remain the same for this alternative.

The types of impacts under Alternative 3 would be the same as under the Proposed Regulation, including potentially significant adverse impacts related to aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, mineral resources, noise, transportation, tribal cultural resources, and utilities and service systems. However, because many of the adverse environmental effects would be associated with manufacturing and new infrastructure, the degree of these impacts under Alternative 3 may occur later in time than they would under the Proposed Regulation.

The Board finds this Alternative would reduce emissions at a slower rate than the Proposed Regulation. It would reduce PM and NOx from locomotives operating in California. However, the reductions would be less than those realized with the Proposed Regulation. Also, it would be consistent with SIP goals, but to a lesser extent than the Proposed Regulation. Alternative 3 would reduce the state's dependence on petroleum for energy and support the use of diversified fuels by increasing the use of ZE locomotives, but at a slower rate than would the Proposed Regulation. Although to a lesser extent than the Proposed Regulation, Alternative 3 would reduce GHG emissions in support of AB 32 and SB 32. By allowing locomotives to be 35 years old before requiring them to be retired from California service, this alternative would result in slower adoption of ZE technologies, slower improvements to ZE technologies, and a slower transition of California's off-road sector to ZE technology. Alternative 3 would not avoid the impacts associated with the Proposed Regulation or achieve the same level of environmental benefit. Therefore, the primary goals of the Proposed Regulation would not be achieved using Alternative 3. For these reasons, the Board rejects this alternative.

Alternatives Considered but Rejected

The Final EA also includes an additional alternative that was considered but rejected from meeting the criteria for undergoing a full alternative analysis under CEQA. The CEQA Guidelines Section 15126.6(c) includes three factors that may be used to eliminate alternatives from detailed consideration in an EIR: "i. failure to meet most of the basic project objectives; ii. Infeasibility, or iii. Inability to avoid significant environmental impact." As this alternative did not meet these factors, detailed consideration was not provided in the Final EA. The alternative considered but rejected is: All Tier 3 Locomotives by 2030 (no Spending Account or no zero emission requirements). For a more detailed discussion of the alternative considered but rejected, please see the Final EA (as incorporated by reference).

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 certain impacts to be potentially significant and unavoidable. The Board finds that, despite the potential for adverse environmental impacts associated with the Proposed Regulation, benefits of the proposed actions are determined to be overriding considerations that warrant approval of the Proposed Regulation and outweigh 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 include:

1. Reducing statewide fine particulate matter (PM_{2.5}) and oxides of nitrogen (NO_x) emissions from diesel-powered locomotives, exposure to which is associated with premature mortality, hospital visits for cardiovascular and respiratory illnesses, and emergency room visits for asthma, especially in sensitive receptors, including children, the elderly, and people with chronic heart or lung disease;

2. Minimizing near-source exposure to diesel particulate matter produced by locomotives and reducing resulting cancer risk to individual residents and off-site workers near facilities where locomotives operate, including those located in and near disadvantaged and Assembly Bill 617 communities;
3. Supporting the attainment of the National Ambient Air Quality Standards (NAAQS) for Ozone and PM in all regions of California, as required by the Federal Clean Air Act. The attainment of the 80 parts per billion (ppb) 8-hour ozone standard, 2024 deadline for the 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) 24-hour PM_{2.5} standard, and 2025 deadline for the 12 $\mu\text{g}/\text{m}^3$ annual PM_{2.5} standard. There are also mid-term attainment years of 2031 and 2037 for the more recent 8-hour ozone standards of 75 ppb and 70 ppb, respectively;
4. Encouraging and supporting emerging zero-emission technology that will be needed to achieve CARB's SIP goals;
5. Providing benefits to zero emission locomotive manufacturers, as well as various businesses in the zero emission supply chain, including those involved in battery, fuel cell, other ZE rail technologies;
6. Increasing the amount of electricity supplied by utility providers and helping the State's investor-owned utilities meet the goals of Senate Bill 350, which requires the State's investor-owned utilities to develop programs to accelerate widespread transportation electrification, with goals to reduce dependence on petroleum, increase the uptake of zero-emission vehicles, help meet air quality standards, and reduce greenhouse gas emissions;
7. Increasing the demand for hydrogen supports California's transition to clean transportation, the U.S. Department of Energy "Energy Earthshots" goals, and the Biden Administration's energy goals.
8. Taking steps to ensure all Californians can live, work, and play in a healthful environment free from harmful exposure to air pollution, including protecting and preserving public health and well-being, and preventing irritation to the senses, interference with visibility, and damage to vegetation and property (Health & Safety Code 43000(b));
9. Achieving reductions in GHGs, thus supporting California's climate change goals;
10. Advancing research and development for cleaner locomotive technologies, which can be translated on a nationwide scale; and
11. Reducing noise pollution to communities living near locomotive operations as a result of zero emission operations lowering or even eliminating locomotive engine noise.

LOCATION AND CUSTODIAN OF THE RECORD

The documents and other materials that constitute the record of proceedings on which these findings are based are 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.