# State of California AIR RESOURCES BOARD

# PROPOSED AMENDMENTS TO THE CALIFORNIA CAP ON GREENHOUSE GAS EMISSIONS AND MARKET-BASED COMPLIANCE MECHANISMS

**Staff Report: Initial Statement of Reasons** 

Release Date: October 28, 2014



#### State of California

#### **AIR RESOURCES BOARD**

### CALIFORNIA CAP ON GREENHOUSE GAS EMISSIONS AND MARKET-BASED COMPLIANCE MECHANISMS

### PUBLIC HEARING TO CONSIDER PROPOSED AMENDMENTS TO THE CALIFORNIA CAP-AND-TRADE PROGRAM

DATE OF RELEASE: October 28, 2014 SCHEDULED FOR CONSIDERATION: December 18 and 19, 2014

Location:

California Air Resources Board
Byron Sher Auditorium
1001 I Street
Sacramento, California 95814

This report has been reviewed by the Staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.



#### **TABLE OF CONTENTS**

#### **EXECUTIVE SUMMARY**

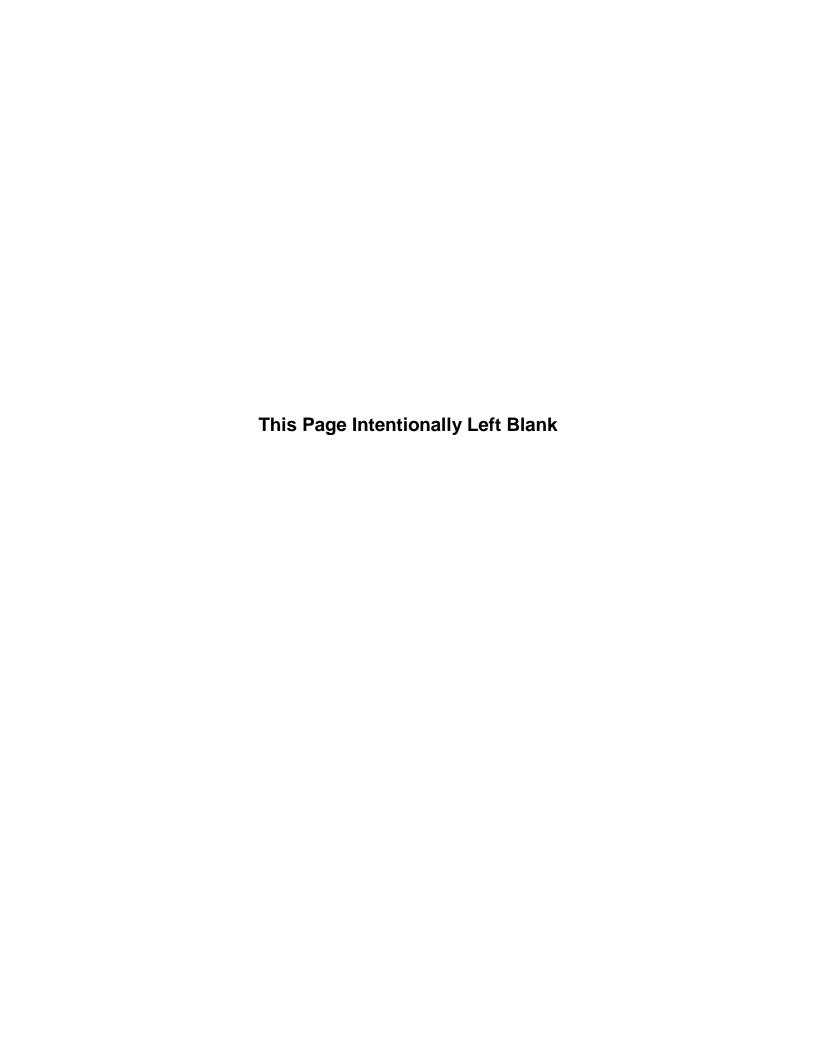
A.	Background	1
B.	Previous Amendments to the Cap-and-Trade Regulation	2
C.	Proposed Amendments to the Cap-and-Trade Regulation	3
I. B	ACKGROUND AND INTRODUCTION	4
A.	Description of the Public Problem	5
B.	Background	6
C.	Cap-and-Trade Regulation	7
D.	Western Climate Initiative and Linkage with Québec	7
E.	Public Process for Development of Amendments	8
II. SU	JMMARY OF PROPOSED ACTION1	0
A.	Offsets and Offset Program Implementation1	0
III.EN	NVIRONMENTAL Analysis1	1
A.	Introduction1	1
B.	Prior Environmental Analysis1	2
C.	Current Proposed Amendments1	6
IV.	Environmental Justice1	6
	CONOMIC IMPACTS ANALYSIS / ASSESSMENT OF THE PROPOSED EGULATION1	8
A.	ECONOMIC AND ALTERNATIVES ASSESSMENT1	8
B.	ALTERNATIVES ANALYSIS2	0
VI.	ALTERNATIVES ANALYSIS2	1
A.	Alternatives to the Proposed Amendments to the Cap-and-Trade Program 2	1
VII.	SUMMARY AND RATIONALE FOR PROPOSED REGULATION2	3
VIII.	REFERENCES3	6

#### **APPENDICES**

- A. Proposed Regulation Order
- B. Staff Report and Compliance Offset Protocol for Rice Cultivation Projects
- C. Staff Report and updated Compliance Offset Protocol for U.S. Forest Projects

#### Acknowledgments

This report was prepared with the assistance and support from many individuals within the Air Resources Board. In addition, Staff would like to acknowledge the assistance and cooperation that we have received from many individuals and organizations, too numerous to list, whose contributions throughout the development process have been invaluable.



#### **Executive Summary**

The California Global Warming Solutions Act of 2006, (AB 32, Nuñez, Chapter 488, Statutes of 2006) as codified at California Health and Safety Code sections 38500 *et seq.*, (AB 32) requires California to reduce greenhouse gas emissions (GHG) to 1990 levels by 2020 and to develop a comprehensive strategy to reduce dependence on fossil fuels, stimulate investment in clean and efficient technologies, and improve air quality and public health. AB 32 also requires the Air Resources Board (ARB or Board) to work with other states and nations to identify and facilitate the development of integrated and cost-effective regional, national, and international greenhouse gas reduction programs.

The Cap-and-Trade Program (Program) is a key element of California's GHG emission reduction strategy. It establishes a declining limit on 85 percent of statewide GHG emissions, and creates a powerful economic incentive for major investment in cleaner, more advanced technologies. The Cap-and-Trade Program also gives businesses the flexibility to choose the lowest-cost approach to reducing GHG emissions.

This report presents the Staff proposal to amend the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation (Cap-and-Trade Regulation or Regulation) to adopt a new offset protocol, update an existing offset protocol and to clarify the definition of intentional reversal as it applies to U.S. Forest projects, and updates to common practice values.

#### A. Background

California's Cap-and-Trade Regulation was adopted by ARB in October 2011. The Regulation took effect on January 1, 2012. The first auction of emission allowances occurred in November 2012, and the first compliance period began on January 1, 2013. On January 1, 2014, California and Québec formally linked their Cap-and-Trade Programs, allowing transfers of compliance instruments between the two jurisdictions.

The Program establishes a hard declining cap on approximately 85 percent of total statewide GHG emissions. ARB will issue allowances equal to the total amount of permissible emissions over a given compliance period. One allowance equals one metric ton of GHG emissions. As the cap declines over time, fewer allowances will be issued, ensuring that emission reductions occur.

Under the Program, companies do not have individual or facility-specific reduction requirements. Rather, all companies covered by the Regulation are required to surrender allowances in an amount equal to their total GHG emissions during each compliance period. Companies can also meet a portion of their compliance

requirements by surrendering offset credits, which are rigorously verified emission reductions that occur from projects outside the scope of the Cap-and-Trade Program.

The Program gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more will need to surrender more allowances or offset credits. Companies that can cut their emissions will need to surrender fewer allowances. As the cap declines, aggregate emissions must be reduced.

California's Cap-and-Trade Program is purposely designed to leverage the power of the market in pursuit of an environmental goal. It opens the door for major investment in emissions-reducing technologies, and sends a clear economic signal that these investments will be rewarded.

#### B. Previous Amendments to the Cap-and-Trade Regulation

In 2012, ARB proposed two sets of amendments to the Cap-and-Trade Regulation. The first set of amendments, related to program implementation, was approved by the Board in June 2012. These amendments took effect in September 2012. The second set of amendments, related to jurisdictional linkage with Québec, was approved by the Board in April 2013. These amendments took effect in October 2013 and specified a January 1, 2014 start date for the linked California and Québec Cap-and-Trade Programs.

In 2013, ARB proposed another set of amendments to the Cap-and-Trade Regulation. The amendments extended transition assistance for some covered entities, and provided a new methodology for refinery benchmarking and allocation. The market implementation part of the Cap-and-Trade Regulation was amended to refine the data collected from registered participants to support market oversight and to add an additional cost containment measure. These amendments also included a new Mine Methane Capture Compliance Offset Protocol, updates to offset implementation, a clarification on offset usage limits, refinement of resource shuffling provisions and changes to the surrender order of compliance instruments. The Board approved these amendments in April 2014 and they took effect on July 1, 2014.

In summer 2014, ARB proposed a set of amendments to make targeted modifications related to allocation, compliance obligations, corporate associations, update existing offset protocols and clarify provisions regarding implementation and oversight of the Regulation. The amendments approved for adoption by the Board in September of 2014 are proceeding pursuant to the provisions of the Administrative Procedure Act. The Board requested that the new common practice values and site indices included in the quantification methodologies update to the U.S. Forest protocol be removed from

the September rulemaking and included in the rulemaking package for Board consideration in December 2014. This delay was to provide additional time for review of quantification changes for stakeholders unfamiliar with the rulemaking process.

#### C. Proposed Amendments to the Cap-and-Trade Regulation

In response to continued Board direction and further discussions with stakeholders, staff began a public process in early 2013 to propose additional amendments for Board consideration. The section below provides a brief list of the regulatory amendments staff is proposing.

#### **Staff Proposal**

The staff proposal is to amend the California Cap-and-Trade Regulation to add a new offset protocol, modify an existing offset protocol and consider response to wildfires in the context of forest project reversals. Specifically, the proposed amendments would:

- Clarify the definition of Early Action Offset Project as it relates to reforestation offset projects;
- Specify a new offset protocol to address methane emissions from rice cultivation;
- Updated common practice values in the U.S. Forest Protocol;
- Update the U.S. Forest Protocol, including adding project eligibility for regions of Alaska; and
- Clarify how wildfire response is treated under the provisions of intentional reversal as applied to U.S. Forest projects.

Staff is proposing these additional amendments to the Regulation before the previous amendments become effective. The previous amendments noticed in July 2014 include proposed amendments to the Regulation and the addition of an updated Livestock Protocol, Ozone Depleting Substances Protocol, and U.S. Forest Projects Protocol. These earlier noticed protocol updates are only related to quantification methodologies. This noticed action includes the proposed clarification to the Early Action Offset Project definition, the proposed addition of the Rice Cultivation Protocol, the proposed addition of the updated U.S. Forest Projects Protocol that includes adding project eligibility for regions of Alaska, and updates to common practice values and clarifications in the Regulation to the definition of intentional reversal as it applies to U.S. Forest projects.

#### **Staff Recommendation**

Staff recommends the Board approve a resolution directing staff to:

• Make any modified regulatory language available for public comment;

- Evaluated all comments receive including comments on the Environmental Analysis and prepare written responses; and
- Return to the Board in 2015 for consideration of staff's written responses to comment raising significant environmental issues, the final Environmental Analysis and the final regulatory amendments and protocols proposed for adoption.

Climate change is a global problem that requires action by states, provinces, and nations. The proposed regulatory amendments offer technical updates to a previously approved offset protocol, add a new offset protocol, and enhance ARB's ability to implement the Regulation. In doing so, the amendments to the Program will enable the Program to run smoothly and reduce GHG emissions at a low cost, enabling California's economy to benefit from investment in clean energy technologies. If adopted by the Board in 2015, pursuant to the California Administrative Procedures Act, the amendments must be reviewed by the Office of Administrative Law and filed with the Secretary of State before going into effect.

#### I. BACKGROUND AND INTRODUCTION

This Staff Report presents ARB staff's rationale to amend the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms (Regulation) to respond to Board direction and new information, add one new and update an existing compliance offset protocol, and provide clarity for enhanced implementation.

This introduction describes the structure of the Staff Report and provides a discussion of the public problem that the proposed amendments address, background information on California's Climate Change Scoping Plan, similar background information regarding the Regulation, the objectives of the proposed amendments, and the public process used to develop the Cap-and-Trade Program.

This Staff Report, including the attached appendices, represents the Initial Statement of Reasons (ISOR) for Proposed Rulemaking required by the California Administrative Procedure Act (Government Code section 11340 et seq).

The Staff Report is divided into the following chapters:

Chapter I. Background and Introduction – Describes the public problem this
regulation seeks to address, provides background on California's Climate
Change Scoping Plan, the Western Climate Initiative, and the public process
used to develop the amendments.

- Chapter II. General Summary of the Proposed Amendments Discussion of the main amendments proposed in the Regulation.
- Chapter III. Environmental Analysis of the Proposed Amendments Describes whether the proposed amendments may result in adverse impacts to the environment, including potential impacts from project-specific activities.
- Chapter IV. Economic Impacts of the Proposed Amendments Describes the economic impacts of the amendments
- Chapter V. Analysis of Alternatives to the Proposed Amendments Describes alternative amendments that were considered and why the alternatives are less effective.
- Chapter VI. Summary and Rationale for the Proposed Amendments Summarizes the proposed changes to the Regulation and describes the rationale for each specific proposed amendment.
- Chapter VII. References Provides a list of references used for development of the Staff Report.
- Appendices include the proposed regulation amendments, the separate Staff Reports prepared for the Rice Cultivation Protocol, and the updated U.S. Forest Protocol.

#### A. Description of the Public Problem

Climate change is one of the most serious environmental threats facing the world today. Global warming is already impacting the Western United States, particularly California, in more severe ways than the rest of the country. The 2010 Climate Action Team (CAT) report (CAT 2010) concluded that climate change will affect virtually every sector of the State's economy and most of our ecosystems. Significant impacts will likely occur even under moderate scenarios of increasing global GHG emissions and associated climate change. Compared to the rest of the country, California is particularly vulnerable to significant resource and economic impacts from at least three effects of climate change. First, as sea level rises and coastal erosion and flooding increase, California (with its long coastline) will experience loss of, and damage to, coastal property, infrastructure, recreational beaches, wildlife habitat, and coastal water supplies. Second, California relies on its snowpack for water supply and storage, and this resource is predicted to decrease substantially this century. Third, California's urban, suburban, and rural areas are highly impacted by wildfires in ways most of the country does not face, and climate change will increase the incidence and severity of wildfires and resulting air quality and economic impacts.

North America as a whole is also experiencing the effects of climate change. Annual mean air temperature in North America has increased over the past forty years (Füssel

2009; Pederson et al. 2010). More frequent and intense extreme weather events have impacted ecosystems, increased coastal damage, and affected a considerable proportion of people (Christensen et al. 2007; Emanuel et al. 2008).

Extreme weather events have also had severe impacts on transportation systems, energy supplies, and other industries in North America. For example, major hurricanes in 2004 and 2005 in the United States affected oil and natural gas platforms and pipelines, creating billions of dollars in restoration costs for public utilities and transportation networks on the regional and national level (EEI 2005).

More cities are forecast to experience extreme heat waves, increasing sea levels, increased numbers of dangerous storm surges, water shortages, droughts, and increased flooding. In addition, severe heat waves, extreme weather events, and air pollution generated by climate change may cause social disruption and increase human losses and injuries, as well as vector-borne diseases.

It is important that California works to reduce GHG emissions to decrease the probability of these impacts.

#### B. Background

Eight years ago, the Legislature enacted the California Global Warming Solutions Act of 2006 (AB 32, Nuñez, Chapter 488, Statutes of 2006) to begin addressing the public problem of climate change by reducing GHG emissions in a cost-effective manner. AB 32 encouraged ARB to continue to be a global leader in climate change mitigation and to develop integrated and cost-effective regional, national, and international greenhouse gas reduction programs (AB 32, Nuñez, Chapter 488, Statutes of 2006). The amendments proposed in this Regulation further California's progress toward this goal by adding a new offset protocol, updating an existing offset protocol, updates to common practice values, and clarifying the definition of intentional reversal as it applies to U.S. Forest projects.

The California Climate Change Scoping Plan laid out a comprehensive program to reduce California's greenhouse gas emissions to 1990 levels by 2020, reduce California's dependence on fossil fuels, stimulate investment in clean and efficient technologies, and improve air quality and public health. The coordinated set of policies in the Scoping Plan employs strategies tailored to specific needs, including market-based compliance mechanisms, performance standards, technology requirements, and voluntary reductions. The Scoping Plan described a conceptual design for a cap-and-trade program that included eventual linkage to other cap-and-trade programs to form a larger regional trading program. ARB worked with other agencies to update the Scoping Plan (CARB 2014c) this year. This update provided a status report on

progress in meeting the 2020 goals and laid the groundwork for meeting California's long-term climate goals, including the need to extend the existing climate change mitigation programs, such as the Cap-and-Trade Program, to ensure California meets its mid-term and long-term climate goals.

#### C. Cap-and-Trade Regulation

In October 2011, the Board adopted the California Cap-and-Trade Regulation. The Cap-and-Trade Program is a key element of California's climate strategy. It creates an aggregate GHG emission limit on the sources responsible for approximately 85 percent of California's GHG emissions, establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy, and affords those regulated by the Program flexibility to seek out and implement the lowest-cost options to reduce emissions. The Cap-and-Trade Program was designed to work in concert with other measures, such as standards for cleaner vehicles, low-carbon fuels, renewable electricity, and energy efficiency. The Program also complements and supports California's existing efforts to reduce criteria and toxic air pollutants. California's Cap-and-Trade Regulation was developed concurrently with Western Climate Initiative (WCI) design documents that describe a template for a regional cap-and-trade program.

In 2012, ARB proposed two sets of amendments to the Cap-and-Trade Regulation. The Board approved the first set of amendments related to program implementation, in June 2012. The Board approved the second set of amendments related to jurisdictional linkage with Québec in April 2013.

In response to continued Board direction and further discussions with stakeholders, staff began a public process to propose additional amendments for Board consideration in the fall of 2013. That set of amendments was further refined before being presented to the Board for final approval in April 2014. The Board approved those amendments, which became effective on July 1, 2014.

In response to continued Board direction and further discussions with stakeholders, staff began a public process in spring 2013 to propose additional amendments for Board consideration. This Staff Report describes these additional amendments to the Regulation, provides staff's rationale for making these changes, and provides additional information on these changes if available.

#### D. Western Climate Initiative and Linkage with Québec

The WCI was initiated in February 2007 as a collaboration of independent jurisdictions working together to identify, evaluate, and implement policies to tackle climate change at a regional level, including the design and implementation of a market-based

mechanism, such as a regional cap-and-trade program. As previously discussed, the Board approved linkage of California's Cap-and-Trade Program with Québec's in April 2013. Prior to voting to link California's and Québec's programs, ARB made a request to the Governor to make findings required under Senate Bill 1018. The findings under Senate Bill 1018 are required to link California's Program with any other jurisdictional program. The Governor must find that the other jurisdiction's program is equivalent to or stricter than California's Program, linking will allow California to enforce AB 32 to the maximum extent feasible under the United States and California Constitutions against an entity located in a linked jurisdiction, the enforceability of the jurisdiction's program is equivalent to or stricter than that required under California's Program, and linkage would not impose liability on California. The Québec linkage amendments became effective October 1, 2013 with a linked California and Québec Cap-and-Trade Program effective on January 1, 2014. To ensure continued harmonization between the programs, ARB has consulted with Québec on the proposed amendments and will continue to coordinate with Québec to ensure the smooth functioning of the linked program, consistent with the requirements in SB 1018.

#### E. Public Process for Development of Amendments

ARB staff developed the proposed amendments through an extensive public process and in response to Board direction through Resolutions, further discussions with stakeholders, and staff analysis.

At the October 2011 Board hearing, the Board provided direction to ARB staff in the form of Board Resolution 11-32 to monitor and, if necessary, propose updates to existing offset protocols and to develop a process for considering new offset protocols. In response to these Board directives, staff began to identify and assess areas of the Regulation that might require amendments.

Starting in early 2013, staff began the public process with public workshops to develop and propose the Rice Cultivation Projects offset protocol that is included in these proposed amendments. Four public workshops were held from 2013 to 2014 to present a proposed new offset protocol and solicit public and stakeholder feedback. These are identified below:

- March 28, 2013: Public Workshop on Addition of New Offset Protocols to the California Greenhouse Gas Cap-and-Trade Program
- August 19, 2013: Cap-and-Trade Offset Protocol Workshop
- March 17, 2014: Public Workshop on Addition of New Offset Protocol to the California Greenhouse Gas Cap-and-Trade Program

 June 20, 2014: Public Workshop on Proposed Rice Cultivation Offset Protocol and Updates to Existing Offset Protocols

ARB made documents and presentations for these workshops available to help stakeholders prepare for the discussions. For each workshop, ARB also invited stakeholders to participate and provide comments on the development of proposed amendments. Staff announced all workshops and public meetings using the Cap-and-Trade (capandtrade) list serve. Workshop information and materials are posted on ARB's Cap-and-Trade Workshops and Meetings webpage:

http://www.arb.ca.gov/cc/capandtrade/meetings/meetings.htm and on ARB's Rice Protocol webpage at: http://www.arb.ca.gov/cc/capandtrade/protocols/riceprotocol.htm

As discussed in detail in Chapter II of this Staff Report, Summary of Proposed Action, the proposed amendments provide additional clarity in implementation, propose a new offset protocol, and modify an existing offset protocol.

ARB accepted public comments on the draft proposed protocols presented at the March 17, 2014 and June 20, 2014 workshops that are the basis for the proposed amendments discussed in this Staff Report. ARB received more than 65 written comments on the discussion draft protocols and met regularly with stakeholders to discuss concerns and recommendations. ARB also considered other comments provided to ARB outside of workshops.

#### II. SUMMARY OF PROPOSED ACTION

This chapter summarizes the proposed amendments to the Cap-and-Trade Regulation, including changes resulting from Board direction and stakeholder feedback to implement the Regulation, the proposed adoption of a new protocol and updating an existing protocol. These amendments relate to implementation of the offset program in the Regulation.

Staff proposes to adopt a new protocol for Rice Cultivation and update the U.S. Forest Protocol to allow project eligibility in regions of Alaska and update the common practice values.

The sections below provide additional summary information for all proposed amendments to the Regulation as well as an expanded discussion of staff's rationale for these changes.

#### A. Offsets and Offset Program Implementation

#### 1. Clarification to the Early Action Offset Project Definition

Staff proposes modifications to the definition of Early Action Offset Project as it applies to U.S. Forest reforestation offset projects to clarify that reforestation offset projects do not need to be issued early action offset credits to be considered an Early Action Offset Project. Reforestation offset projects are not always issued offset credits during the early years where changes in sequestered carbon are relatively small, which should not affect their ability to be recognized as an Early Action Offset Project.

#### 2. New Offset Protocol

Staff developed a new Compliance Offset Protocol for Rice Cultivation Projects, which can be found in Appendix B of the Staff Report along with a detailed description of the protocol, for use in the compliance offset program. This proposed protocol is incorporated by reference in the proposed regulation and is being considered for adoption by the Board as part of this rulemaking package. The formal Staff Report and environmental analysis supporting the adoption of this protocol is also included in Appendix B.

#### 3. Updates to Existing Protocol

Staff developed updates to the U.S. Forest Projects Protocol, which focus mainly on adding project eligibility to regions of Alaska, for use in the compliance offset program. The protocol as along with a detailed description of all updates can be found in Appendix C of the Staff Report. This updated protocol is incorporated by reference in

the proposed regulation and is being considered for adoption by the Board as part of this rulemaking package. The formal Staff Report and environmental analysis supporting the adoption of this protocol is also included in Appendix C.

#### 4. Clarification of Intentional Reversal Definition

Staff proposes modifications to the definition of intentional reversal as it applies to U.S. Forest projects to clarify that back burn fires intentionally set to protect forestlands from an advancing wildfire do not constitute an intentional reversal. Back burn fires must be set by, or at the request of, a local, state, or federal fire protection agency.

#### 5. Updates to Common Practice Values

Staff has evaluated and proposed amendments to update the CP values using the latest data from the U.S. Department of Agriculture Forest Service Forest Inventory and Analysis National Program.

#### III. ENVIRONMENTAL ANALYSIS

#### A. Introduction

The current proposed amendments to Cap-and-Trade Regulation include the addition of one new offset protocol and an update to one existing offset protocol.

ARB, as the lead agency for the proposed protocols, has prepared an environmental analysis (EA) for each proposed protocol in Chapter III of the respective Staff Reports prepared for each protocol in appendices B and C. ARB's regulatory program, which involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans for the protection and enhancement of the State's ambient air quality, has been certified by the California Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA) (14 CCR 15251(d)). Public agencies with certified regulatory programs are exempt from certain CEQA requirements, including but not limited to, preparing environmental impact reports, negative declarations, and initial studies (14 CCR 15252). ARB prepares a substitute environmental document (referred to as an "Environmental Analysis" or "EA") as part of the Staff Report to comply with CEQA to assess the potential for significant adverse and beneficial environmental impacts associated with the proposed action (17 CCR 60005 (a), (b)). The resource areas from the CEQA Guidelines Environmental Checklist (Appendix G) were used as a framework for assessing potentially significant impacts.

Consistent with ARB's commitment to public review and input on regulatory actions, the EAs are subject to a public review process through the posting of the Staff Report for a

45-day public review period. The Board will hold a hearing on the proposed amendments in December 2014. If modifications are requested, staff will address the changes and release those for one or more additional 15-day review and comment periods. At the conclusion of all public review periods, staff will compile all comments and written responses, including any comments on the EAs, into the Final Statement of Reasons (FSOR). If the amendments are adopted, a Notice of Decision will be posted on ARB's website and filed with the Office of the Secretary of the Natural Resources Agency and the State Clearinghouse for public inspection.

#### **B. Prior Environmental Analysis**

#### Cap-and- Trade Regulation (2010)

The Board adopted the Cap-and-Trade Regulation in October 2011. ARB prepared a programmatic EA for the Cap-and-Trade Regulation in a document entitled *Functional Equivalent Document prepared for the California Cap on GHG Emissions and Market-Based Compliance Mechanisms* (CARB 2010c), included as Attachment O to the Staff Report: Initial Statement of Reasons (ISOR) released for public review and comment in October 2010 (CARB 2010). The 2010 FED analysis was based on the expected compliance responses of the covered entities, identified as: (1) upgrade equipment; (2) decarbonization (fuel switching); (3) implement process changes; and (4) surrender compliance instruments. The 2010 FED also analyzed the potential indirect impacts associated with development of offset projects based on the four Compliance Offset Protocols: (1) ODS Projects; (2) Livestock Projects; (3) Urban Forest Projects; and (4) U.S. Forest Projects.

The 2010 FED concluded that covered entities' compliance with the Cap-and-Trade Regulation would result in beneficial impacts to air quality through reductions in emissions, including GHGs, criteria pollutants, and toxics, and beneficial impacts to energy demand. It concluded there would be less-than-significant or no impact to aesthetics, agricultural and forest resources, hazards, land use, noise, employment, population and housing, public services, recreation, transportation and traffic, and utilities/service systems. The 2010 FED concluded there could be potentially significant adverse impacts to biological resources, cultural resources, geology/soils and minerals, and hydrology/water quality, largely due to construction activities for facility-specific projects. Although the potential for adverse localized air quality impacts were found to be highly unlikely, the 2010 FED conservatively considered them potentially significant. The 2010 FED concluded that implementation of offset projects under the four Compliance Offset Protocols would also result in beneficial impacts to GHG emissions and no adverse impacts or less-than-significant impacts in all resource areas except for the following: implementation of projects under the Livestock Protocol have the potential

for significant adverse impacts to odors, and construction impacts to cultural resources, noise, and transportation/traffic; implementation of projects under the Urban Forest Protocol has the potential for significant adverse impacts to cultural resources; and implementation of projects under the U.S. Forest Protocol has the potential for significant adverse impacts to biological resources and land use. There were no impacts identified for ODS.

The 2010 FED identified mitigation that could reduce most of the identified impacts to a less-than-significant level. The 2010 FED relied on the agencies with local permitting authority to analyze site-or project-specific impacts because the programmatic 2010 FED could not determine with any specificity the location of projects or project-level impacts, and ARB does not have the authority to require project-level mitigation for specific projects carried out to comply with the Cap-and-Trade Regulation. Since the programmatic analysis of the 2010 FED could not determine project-specific details of impacts and mitigation, and there is an inherent uncertainty in the degree of mitigation ultimately implemented to reduce the potentially significant impacts, the 2010 FED took a conservative approach in its post-mitigation significance conclusion finding potentially significant impacts to these resource areas as significant and unavoidable.

The Board approved written responses to comments on the 2010 FED and adopted findings for the significant adverse impacts in Resolution 11-32 adopting the Cap-and-Trade Regulation. The written responses to environmental comments were also included in the Final Statement of Reasons (FSOR) prepared for the Regulation (CARB 2011a, CARB 2011b). The Board also adopted the *Adaptive Management Plan* (CARB 2011c) to address any unanticipated localized air quality impacts resulting from the Cap-and-Trade Regulation and any biological resource impacts resulting from implementation of projects under the Forest Protocol. These documents can be found on the Cap-and-Trade Program website,

http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm.

#### Amendments to the Cap-and-Trade Regulation (2012)

In 2012, ARB proposed two sets of amendments to the Cap-and-Trade Regulation. The first set of amendments, related to program implementation, was approved by the Board in June 2012. The second set of amendments, related to jurisdictional linkage with Quebec, was approved by the Board in April 2013. The EA for these amendments was included in Chapter IV of the Staff Report: Initial Statement of Reasons entitled *Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms to Allow for the Use of Compliance Instruments Issued by Linked Jurisdictions* (CARB 2012a).

The EA concluded the amendments to clarify the Cap-and-Trade Regulation to help ARB implement, oversee, and enforce the Regulation would not change what was already required or the methods of compliance by covered entities evaluated in the 2010 FED (i.e., upgrade equipment, decarbonize, implement process changes, and surrender compliance instruments), and therefore, the potential for environmental impacts fell within the scope and scale of those already analyzed. The analysis also considered the potential for indirect environmental impacts resulting from Californiacovered entities acquiring offset credits from projects in Québec because implementation of the linkage amendments could result in California entities acquiring credits from offset projects under Québec's Digesters (i.e., Livestock), ODS, and Landfill Gas Offset Protocols. The EA relied on the prior EA conducted for California's ODS and Livestock Offset Protocols and ARB's Landfills Regulation because Québec's protocols are substantially similar. Those prior EAs concluded that implementation of these types of offset projects would result in beneficial impacts to GHG emissions and no adverse impacts, or less-than-significant impacts, in all resource areas, except implementation of the Québec's Digesters protocol has the potential for significant adverse impacts to odors, cultural resources, noise, and transportation/traffic. The analysis referenced recognized mitigation measures for these impacts and determined that these impacts can be avoided or reduced to a less-than-significant level. However, since the authority to determine project-level impacts and require project-level mitigation lies with the permitting agency for individual projects, in this case Québec agencies, and there is inherent uncertainty in the degree of mitigation ultimately implemented, the analysis took a conservative approach in its post-mitigation significance conclusions finding that impacts to odors, cultural resources, and transportation/traffic in Québec may remain significant after mitigation.

The Board approved written responses to comments on the EA and adopted findings for the significant adverse impacts in Resolution 13-7 adopting the linkage amendments. The written response to comments for the first set of amendments are also included in the FSOR released in July 2012 (CARB 2012b) and for the linkage amendments in the FSOR released May 2013 (CARB 2013a). These documents can be found on the Capand-Trade Program website, http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm.

#### Amendments to the Cap-and-Trade Regulation (2013)

In 2013, ARB proposed one set of amendments to the Cap-and-Trade Regulation. This set of amendments, related to program implementation, was approved by the Board in April 2014. The EA for these amendments was included in Chapter III of the Staff Report: Initial Statement of Reasons entitled Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms (CARB 2013b). The EA concluded the amendments to clarify the Cap-and-Trade

Regulation to help ARB implement, oversee, and enforce the Regulation would not change what was already required or the methods of compliance by covered entities evaluated in the 2010 FED (i.e., upgrade equipment, decarbonize, implement process changes, and surrender compliance instruments), and therefore, the potential for environmental impacts fell within the scope and scale of the 2010 findings.

Staff also prepared an EA for the addition of the Mine Methane Capture (MMC) Protocol. The EA for the MMC Protocol found potentially significant and unavoidable biologic and cultural resource impacts due to construction activities for facility-specific projects. The EA identified mitigation that could reduce most of the identified impacts to a less-than-significant level. The EA relied on agencies with local permitting authority to analyze site-or project-specific impacts because the programmatic EA could not determine with any specificity the location of projects or project-level impacts, and ARB does not have the authority to require project-level mitigation for specific projects carried out under the MMC Protocol. Since the programmatic analysis of the EA could not determine project-specific details of impacts and mitigation, and there is an inherent uncertainty in the degree of mitigation ultimately implemented to reduce the potentially significant impacts, the EA took a conservative approach in its post-mitigation significance conclusion finding potentially significant impacts to these resource areas as significant and unavoidable.

The Board approved written responses to comments on the MMC Protocol EA and adopted findings for the significant adverse impacts in Resolution 14-4 adopting the amendments. The written responses to comments for this set of amendments are included in the FSOR released in May 2014 (CARB 2014b). These documents can be found on the Cap-and-Trade Program website,

http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm.

#### Amendments to the Cap-and-Trade Regulation (2014)

In July 2014, ARB proposed amendments to the Cap-and-Trade Regulation related to program implementation that were heard by the Board in September 2014. The EA for these amendments was included in Chapter III of the Staff Report: Initial Statement of Reasons entitled Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms (CARB 2014). The EA concluded the amendments to clarify the Cap-and-Trade Regulation to help ARB implement, oversee, and enforce the Regulation would not change what was already required or the methods of compliance by covered entities evaluated in the 2010 FED (i.e., upgrade equipment, decarbonize, implement process changes, and surrender compliance instruments). Therefore, the potential for environmental impacts fell within the scope and scale of those already analyzed and no additional findings for significant

impacts were required to be adopted by the Board for these amendments in the 2010 FED.

The written responses to comments for this set of amendments will be included in the FSOR to be released when the amendments are finalized.

#### **C.** Current Proposed Amendments

As described earlier in this Staff Report, the current set of proposed amendments include: (1) updates to an existing offset protocol to update common practice values; (2) the addition of a new offset protocol; and (3) clarification of the intentional reversal definition as it applies to U.S. Forest projects.

The EA specific to the proposed new Compliance Offset Protocol for Rice Cultivation (Rice Protocol) is included in the separate Staff Report prepared for that proposed protocol, included as Appendix B to this ISOR.

The EA specific to the proposed updated Compliance Offset Protocol for U.S. Forest Projects (Forest Protocol) is included in the separate Staff Report prepared for that proposed protocol, included as Appendix C to this ISOR.

The proposed amendments to the regulation include: implementation-related provisions to add the proposed new and updated offset protocols to the Regulation; and proposed clarifications to the definition of intentional reversal as it applies to U.S. Forest projects. These regulatory language amendments are covered by each of the EAs specific to the proposed protocols in each appendix.

#### IV. ENVIRONMENTAL JUSTICE

State law defines environmental justice as the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies. ARB is committed to making environmental justice an integral part of its activities. The Board approved its Environmental Justice Policies and Actions (Policies) on December 13, 2001, to establish a framework for incorporating environmental justice into ARB's programs consistent with the directives of State law (CARB 2001). These policies apply to all communities in California, but recognize that environmental justice issues have been raised more in the context of low-income and minority communities.

As part of the economic, emissions, and environmental assessment of the Cap-and-Trade Regulation, staff assessed the emission reduction opportunities available to California sources covered by the proposed amendments to this Regulation. This evaluation considered the potential for the incentives and flexibility inherent in the Capand-Trade Program to result in direct, indirect, and cumulative emission impacts, including localized impacts in communities that are already adversely affected by air pollution. Based on the available data and current laws and policies that control localized air pollution, and expected compliance responses to the Cap-and-Trade Regulation, ARB concluded that increases in localized air pollution (including toxic air contaminants and criteria air pollutants) attributable to the Cap-and-Trade Program are extremely unlikely. For more information see Chapter VII. Co-Pollutant Emissions Assessment of the 2010 ISOR and Appendix P: Co-Pollutant Emissions Assessment (CARB 2010; CARB 2010d).

For additional information on the environmental justice impacts associated with the Rice Cultivation and U.S. Forest Offset Protocols, please refer to Appendices B and C to this ISOR.

Nevertheless, as part of ARB's Adaptive Management Plan, at least once each compliance period, ARB will use information collected through the Mandatory Reporting Regulation, the Cap-and-Trade Regulation, the industrial efficiency audit, and other sources to evaluate how facilities are complying with the Cap-and-Trade Regulation (CARB 2011c). ARB will also solicit information from local air districts regarding permit modifications and new permit applications for covered sources. This information will be used to identify compliance activities that could lead to increased emissions and to determine whether further investigation of potential criteria pollutant and toxic emissions is warranted.

If unanticipated adverse localized emissions impacts in California can be attributed to the Cap-and-Trade Regulation (including the proposed amendments) during this periodic review, ARB will consider whether these impacts affect the achievement of the Program objectives. If so, ARB will promptly develop and implement appropriate responses. Potential responses ARB would consider include, but are not limited to, using allowance value from the Cap-and-Trade Program to mitigate localized emissions increases, providing incentives for energy efficiency and other emissions-reduction activities within the community, or restricting trading or prohibiting certain compliance responses in specifically identified communities. These potential future responses are not, however, warranted based on currently available information, and their imposition today would unnecessarily conflict with AB 32's other objectives.

### V. ECONOMIC IMPACTS ANALYSIS / ASSESSMENT OF THE PROPOSED REGULATION

#### A. ECONOMIC AND ALTERNATIVES ASSESSMENT

#### 1. Summary of Economic Impacts

The amendments proposed in this regulation clarify the existing Cap-and-Trade Regulation allowing ARB to implement, oversee, and enforce the Regulation.

The proposed amendments include implementation-related provisions to add the new Rice Protocol and updated U. S. Forestry Protocol to the Regulation. Since participation in the offset program is voluntary and these amendments are related to implementation, the proposed changes do not add cost to the covered entities in addition to what has been previously estimated for the existing Regulation. The additional Rice Cultivation Protocol and update to the U.S. Forest Projects Protocol to include regions of Alaska will help increase the supply of lower-cost compliance instruments available for compliance. The additional protocols will not require additional ARB resources to administer or enforce.

These changes do not add any additional costs over what was anticipated in the original Cap-and-Trade Regulation to regulated entities and will have the effect of reducing costs to some regulated entities in the early years of the Program.

#### 2. Legal Requirements

Section 11346.3 of the Government Code requires State agencies to assess the potential for adverse economic impacts on California business enterprises and individuals when proposing to adopt or amend any administrative regulation. The assessment must include consideration of the impact of the proposed regulation on California jobs; the expansion, elimination, or creation of businesses; and the ability of California businesses to compete with businesses in other states.

Also, State agencies are required to estimate the cost or savings to any State or local agency and school district in accordance with instructions adopted by the Department of Finance (DOF). The estimate shall include any non-discretionary cost or savings to local agencies and the cost or savings in federal funding to the State.

Finally, Health and Safety Code section 57005 requires ARB to perform an economic impact analysis of submitted alternatives to a proposed regulation before adopting any major regulation. A major regulation is defined as a regulation that will have a potential

cost to California business enterprises in an amount exceeding \$10 million in any single year.

#### 3. Costs to State Government and Local Agencies

The proposed regulatory action would not create costs or savings, as defined in Government Code sections 11346.5(a)(5) and 11346.5(a)(6), to State agencies or in federal funding to the State.

The proposed regulatory action would not create costs and would not impose a mandate on State and local agencies, or school districts. Because the regulatory requirements apply equally to all covered entities and unique requirements are not imposed on local agencies, the Executive Officer has determined that the proposed regulatory action imposes no costs on local agencies that are required to be reimbursed by the State pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code, and does not impose a mandate on local agencies or school districts that is required to be reimbursed pursuant to section 6 of Article XIII B of the California Constitution.

#### 4. Costs to Businesses and Private Individuals

In developing this regulatory proposal, ARB staff evaluated the potential economic impacts on representative private persons or businesses. The proposed regulation does not add any additional costs over what was assumed in the original Cap-and-Trade Regulation. There are no requirements placed on non-covered businesses or private individuals.

The Executive Officer has determined that representative private persons and businesses would not be affected by the proposed regulatory action. Pursuant to Government Code section 11346.5(a)(7)(C), the Executive Officer has made an initial determination that the proposed regulatory action would not have a significant statewide adverse economic impact directly affecting businesses, and little or no impact on the ability of California businesses to compete with businesses in other states.

The proposed regulation would not impose sufficient direct or indirect costs to eliminate businesses in California.

### 5. STATEMENT OF THE RESULTS OF THE ECONOMIC IMPACT ASSESSMENT PREPARED PURSUANT TO GOVERNMENT CODE SEC. 11346.3(b)

In accordance with Government Code section 11346.3, staff has determined that the proposed regulatory action would not eliminate existing businesses within the State of

California, and would not affect the creation of new businesses or the expansion of existing businesses currently doing business in California. The proposed regulatory action would not eliminate jobs within the State of California, and would not affect the creation of jobs within California.

In general, small businesses in regulated sectors would not be subject to the proposed regulation because their total GHG emissions are below the GHG reporting threshold, thereby exempting them from compliance obligations under the proposed regulation.

In accordance with Government Code sections 11346.3(c) and 11346.5(a)(11), staff found the reporting requirements of the proposed regulation which apply to businesses are necessary for the health, safety, and welfare of the people of the State of California.

#### **B. ALTERNATIVES ANALYSIS**

Staff is required to consider alternatives to the proposed amendments for the Cap-and-Trade Regulation. For discussion of the alternatives considered, please refer to Chapter VI of this ISOR, Alternatives Analysis.

#### **VI. ALTERNATIVES ANALYSIS**

This Chapter provides an analysis of the alternatives to the proposed amendments for the Cap-and-Trade Regulation that staff considered. The discussion below describes the alternatives to the proposed changes. For each of the alternatives, staff outlines the costs and benefits of the approach and explains why it chose to propose the Cap-and-Trade Regulation and incorporated design features.

### A. Alternatives to the Proposed Amendments to the Cap-and-Trade Program

Staff analyzed one alternative to the proposed amendments to the Cap-and-Trade Regulation:

Do not amend the Cap-and-Trade Regulation (No Project Alternative);

In evaluating this alternative approach to the proposed regulation, ARB staff found that none were as effective, or more effective, than the proposal in carrying out the goals of AB 32. Further, none of the options that would have enabled California to meet AB 32 goals were as cost-effective as the proposed Regulation and substantially address the public problem stated in the notice. Staff provides a discussion of alternative in the following section.

#### 1. No Amendments (No Project Alternative)

The No Project Alternative defines a scenario in which ARB would not amend the Regulation with the proposed changes. Staff has assessed this alternative for each category of changes, as provided below.

#### a) Offset Protocols and Offset Program Implementation

Under the No Project Alternative, proposed changes related to both offset program implementation and the addition of the new Rice Protocol and updated U.S. Forest Protocol would not be implemented. The changes made for offset program implementation are intended to help ARB to continue to successfully implement and oversee the offset program. The addition of the new Rice Cultivation Protocol and the updated U.S. Forest Projects Protocol are intended to increase the supply of offsets to the market, thereby assisting in cost containment. Without these additions, the likelihood that allowances prices may exceed the highest price tier of the Reserve is increased.

Under the No Project Alternative, staff would not make changes to the Program, which are necessary to achieve the goals of the Regulation. Staff has considered alternative means of achieving these goals and none were found to be as effective, or more effective, than the proposal in carrying out the goals of AB 32. No alternative considered by the agency would be more effective in carrying out the purpose for which the regulation is proposed, or would be as effective as and less burdensome to affected individuals and businesses than the proposed regulation.

#### VII.SUMMARY AND RATIONALE FOR PROPOSED REGULATION

The proposed amendments to the Cap-and-Trade Regulation are designed to help staff implement the Cap-and-Trade Program and increase market security. This section discusses the requirements and rationale for each provision of the proposed amendments to the Cap-and-Trade Regulation.

#### Section 95802. Definitions.

#### Summary of Section 95802(a)(115)

Existing section 95802(a)(115) was modified to clarify that U.S. Forest reforestation offset projects do not need to be issued early action offset credits to be considered an Early Action Offset Project.

#### Rationale for Section 95802(a)(115)

This change is necessary to recognize that reforestation offset projects often do not generate any credits during the first years of the project, which should not preclude them from being considered Early Action Offset Projects under the Regulation if the project was registered with and has met all Early Action Offset Program requirements prior to transitioning.

#### Summary of Section 95802(a)(190)

Existing section 95802(a)(190) was modified to clarify that a reversal caused by an intentional back burn set by, or at the request of, a local, state, or federal fire protection agency for the purpose of protecting forestlands from an advancing wildfire that began on another property through no negligence, gross negligence, or willful misconduct of the forest owner is not considered an intentional reversal but rather an unintentional reversal.

#### Rationale for Section 95802(a)(190)

This change is necessary to align the Regulation with best practices for combatting wildfires, protect threatened forestland, and remove the obligation associated with intentional reversals faced by forest owners who comply with back burning procedures established by fire protection agencies. This change would also remove the inconsistency for a offset project operator of trying to avoid the loss of credited carbon stocks under ARB's regulation and complying with another state agency's requirements to protect natural lands from further damage from a wildfire.

### Section 95973. Requirements for Offset Projects Using ARB Compliance Offset Protocols.

#### Summary of Section 95973(a)(2)(C)4.

Existing section 95973(a)(2)(C)4. was modified to include an updated U.S. Forest Projects Compliance Offset Protocol that staff proposes the Board adopt and to support the addition of a potential Compliance Offset Protocol to the Regulation.

#### Rationale for Section 95973(a)(2)(C)4.

This change is necessary to support the potential adoption of an updated Compliance Offset Protocol by the Board. ARB will insert the date of adoption if the Board approves the proposed protocol revisions. The Alaska update removes the exclusion for regions of Alaska. Alaska was intentionally excluded when the Board adopted the original U.S. Forest Protocol in October 2011 because of lack of Alaska data. This data now exists for some regions in Alaska and staff is proposing to add these regions as eligible project locations. More detail on these updates can be found in Appendix C of this Staff Report.

#### Summary of Section 95973(a)(2)(C)5.

Existing section 95973(a)(2)(C)5. was modified to support the addition of a potential Compliance Offset Protocol to the Regulation.

#### Rationale for Section 95973(a)(2)(C)5.

This change is non-substantive, since the "and" is needed to support the inclusion of an additional potential Compliance Offset Protocol in this section.

#### Summary of Section 95973(a)(2)(C)6.

New section 95973(a)(2)(C)6. was added to include the new Rice Cultivation Projects Compliance Offset Protocol that staff is proposing to be adopted by the Board.

#### Rationale for Section 95973(a)(2)(C)6.

This change is necessary to support the potential adoption of a new Compliance Offset Protocol by the Board, the "Compliance Offset Protocol Rice Cultivation Projects". ARB will insert the date of adoption if the Board approves the proposed protocol. The adoption would provide an additional cost containment opportunity as well as recognizing GHG reductions outside the cap.

#### Section 95975. Listing of Offset Projects Using ARB Compliance Offset Protocols.

#### Summary of Section 95975(e)(4)

Existing section 95975(e)(4) is modified to include the updated U.S. Forest Projects Compliance Offset Protocol that staff is proposing to be adopted by the Board and remove the existing version which Offset Project Operators and Authorized Project Designees will no longer be able to list under after the adoption of a new version. Modifications are also made to move the "and" in support the addition of a potential Compliance Offset Protocol to this list.

#### Rationale for Section 95975(e)(4)

This change was necessary to clarify that an Offset Project Operator or Authorized Project Designee must list under the most recent version of the protocol in the Regulation. ARB will insert the date of adoption if the Board approves the proposed protocol revisions.

#### Summary of Section 95975(e)(5)

Existing section 95975(e)(5) is modified to support the addition of a potential Compliance Offset Protocol to this list.

#### Rationale for Section 95975(e)(5)

This change is non-substantive, since the "and" is needed to support the inclusion of an additional potential Compliance Offset Protocol in this section.

#### Summary of Section 95975(e)(6)

New section 95975(e)(6) is added to include the new Rice Cultivation Projects Compliance Offset Protocol that staff is proposing the Board adopt.

#### Rationale for Section 95975(e)(6)

This change is necessary to support the potential adoption of a new Compliance Offset Protocol by the Board. ARB will insert the date of adoption if the Board approves the proposed protocol.

### Section 95976. Monitoring, Reporting, and Record Retention Requirements for Offset Projects.

#### Summary of Section 95976(c)(4)

Existing section 95976(c)(4) was modified to include the new U.S. Forest Projects Compliance Offset Protocol that staff is proposing to be adopted by the Board and to move the "and" in support the addition of a potential Compliance Offset Protocol to this list.

#### Rationale for Section 95976(c)(4)

This change was necessary to support the potential adoption of an updated Compliance Offset Protocol by the Board. The updated U.S. Forest Protocol will add Alaska as an eligible project location. ARB will insert the date of adoption if the Board approves the proposed protocol revisions. The Alaska update removes the exclusion for regions of Alaska. Alaska was intentionally excluded when the Board adopted the original U.S. Forest Protocol in October 2011 because of lack of Alaska data. This data now exists for some regions in Alaska and staff is proposing to add these regions as eligible project locations. More detail on these updates can be found in Appendix C of this Staff Report.

#### Summary of Section 95976(c)(5)

Existing section 95976(c)(5) was modified to support the addition of a potential Compliance Offset Protocol to this list.

#### Rationale for Section 95976(c)(5)

This change is non-substantive the "and" is needed to support the inclusion of an additional potential Compliance Offset Protocol in this section.

#### Summary of Section 95976(c)(6)

New section 95976(c)(6) was added to include the new Rice Cultivation Projects Compliance Offset Protocol that staff is proposing to be adopted by the Board.

#### Rationale for Section 95976(c)(6)

This change was necessary to support the potential adoption of a new Compliance Offset Protocol by the Board. ARB will insert the date of adoption if the Board approves the proposed protocol revisions.

#### Summary of Section 95976(d)(4)

Existing section 95976(d)(4) was modified to include the updated U.S. Forest Projects Compliance Offset Protocol that staff is proposing to be adopted by the Board and to

move the "and" in support the addition of a potential Compliance Offset Protocol to this list.

#### Rationale for Section 95976(d)(4)

This change was necessary to support the potential adoption of an updated Compliance Offset Protocol by the Board. The update will add regions of Alaska as eligible project locations.

#### Summary of Section 95976(d)(5)

Existing section 95976(d)(5) was modified to support the addition of a potential Compliance Offset Protocol to this list.

#### Rationale for Section 95976(d)(5)

This change is non-substantive, since the "and" is needed to support the inclusion of an additional potential Compliance Offset Protocol in this section.

#### Summary of Section 95976(d)(6)

New section 95976(d)(6) was added to include the new Rice Cultivation Projects Compliance Offset Protocol that staff is proposing to be adopted by the Board.

#### Rationale for Section 95976(d)(6)

This change was necessary to support the potential adoption of a new Compliance Offset Protocol by the Board.

#### Summary of Section 95976(d)(7)

Existing section 95976(d)(7) was renumbered to section 95976(d)(7).

#### Rationale for Section 95976(d)(7)

This change was required to accommodate a new numbering structure.

#### Summary of Section 95976(d)(8)

Existing section 95976(d)(8) was renumbered to section 95976(d)(8).

#### Rationale for Section 95976(d)(8)

This change was required to accommodate a new numbering structure.

#### Summary of Section 95976(d)(9)

Existing section 95976(d)(9) was renumbered to section 95976(d)(9).

#### Rationale for Section 95976(d)(9)

This change was required to accommodate a new numbering structure.

#### Section 95981. Issuance of ARB Offset Credits.

#### Summary of Section 95981(b)(1)

Existing section 95981(b)(1) was modified to change an internal reference.

#### Rationale for Section 95981(b)(1)

This change was necessary due to renumbering of the section cross-referenced by this section.

#### Section 95985. Invalidation of ARB Offset Credits

#### Summary of Section 95985(b)(1)(B)5.a.

Existing section 95985(b)(1)(B)5.a. was modified to reference the section the Compliance Offset Protocol is first identified.

#### Rationale for Section 95985(b)(1)(B)5.a.

This change was necessary to clarify that all versions of a protocol are subject to the invalidation provisions of the Regulation.

#### <u>Summary of Section 95985(b)(1)(B)5.b.</u>

Existing section 95985(b)(1)(B)5.b. was modified to reference the section the Compliance Offset Protocol is first identified.

#### Rationale for Section 95985(b)(1)(B)5.b.

This change was necessary to clarify that all versions of a protocol are subject to the invalidation provisions of the Regulation.

#### Summary of Section 95985(b)(1)(B)5.c.

Existing section 95985(b)(1)(B)5.c. was modified to reference the section the Compliance Offset Protocol is first identified.

#### Rationale for Section 95985(b)(1)(B)5.c.

This change was necessary to clarify that all versions of a protocol are subject to the invalidation provisions of the Regulation.

#### <u>Summary of Section 95985(b)(1)(B)5.d.</u>

Existing section 95985(b)(1)(B)5.d. was modified to reference the section the Compliance Offset Protocol is first identified.

#### Rationale for Section 95985(b)(1)(B)5.d.

This change was necessary to clarify that all versions of a protocol are subject to the invalidation provisions of the Regulation.

#### Summary of Section 95985(b)(1)(B)5.e.

Existing section 95985(b)(1)(B)5.e. was added to support the addition of the new Rice Cultivation Protocol and references the section the Compliance Offset Protocol is first identified.

#### Rationale for Section 95985(b)(1)(B)5.e.

This addition was necessary to ensure that the new Rice Cultivation Protocol is subject to the same invalidation requirements as all other offset protocols and assure all versions of a protocol are subject to the invalidation provisions of the Regulation.

## Subarticle 14: Recognition of Compliance Instruments from Other Programs Section 95990. Recognition of Early Action Offset Credits.

#### Summary of Section 95990(c)(1).

Existing section 95990(c)(1) is modified to extend the time period over which early action projects can occur for potential early action rice cultivation quantification methodologies that staff is proposing for Board adoption.

#### Rationale for Section 95990(c)(1).

This change is needed to because the effective date of the proposed regulatory amendments would be after December 31, 2014, and projects will not be able to receive early action offset credits for GHG emission reductions that occurred after December 31, 2014 but prior to the effective date of the proposed regulatory amendments unless the early action eligibility date is extended for rice projects.

#### Summary of Section 95990(c)(3)(B)

Existing section 95990(c)(3)(B) was modified to support the addition of later listing dates for potential early action offset quantification methodologies for rice.

#### Rationale for Section 95990(c)(3)(B)

This change is non-substantive the "and" is needed to support the inclusion of additional potential early action quantification methodologies for rice cultivation in this section.

#### Summary of Section 95990(c)(3)(C).

New section 95990(c)(3)(C) is added to include listing requirements for potential early action quantification methodologies for rice cultivation projects which staff is proposing for Board adoption.

#### Rationale for Section 95990(c)(3)(C).

This section is added to allow rice cultivation early action offset projects to have a later listing date than the other project types for early action, since the potential quantification methodologies will be added to the program after January 1, 2015.

#### Summary of Section 95990(c)(5)(F).

Existing section 95990(c)(5)(F) is modified to accommodate additional provisions in this section for new potential early action quantification methodologies for rice cultivation projects.

#### Rationale for Section 95990(c)(5)(F).

This change is non-substantive, removal of the "and" is needed to support the inclusion of additional potential early action quantification methodologies for rice cultivation in this section.

#### Summary of Section 95990(c)(5)(G).

Existing section 95990(c)(5)(G) is modified to accommodate additional provisions in this section for new potential early action quantification methodologies for rice cultivation projects.

#### Rationale for Section 95990(c)(5)(G).

This change is non-substantive the "and" is needed to support the inclusion of additional potential early action quantification methodologies for rice cultivation in this section.

#### Summary of Section 95990(c)(5)(H).

New section 95990(c)(5)(H) is added to include the American Carbon Registry Voluntary Emission Reductions in Rice Management Systems Parent Methodology, version 1.0 on the list of approved early action quantification methodologies. These methodologies have not yet been approved as staff is proposing them to the Board for adoption.

#### Rationale for Section 95990(c)(5)(H).

This change is needed to include the potential early action quantification methodologies for rice cultivation projects, which staff is proposing for Board adoption.

#### Summary of Section 95990(c)(5)(H)1.

New section 95990(c)(5)(H)1. is added to include the American Carbon Registry Voluntary Emission Reductions in Rice Management Systems – California Module, version 1.0, which works with the parent methodology in section 95990(c)(5)(H), on the list of approved early action quantification methodologies. These methodologies have not yet been approved as staff is proposing them to the Board for adoption.

#### Rationale for Section 95990(c)(5)(H)1.

This change is needed to include the potential early action quantification methodologies for rice cultivation projects, which staff is proposing for Board adoption.

#### Summary of Section 95990(c)(5)(H)2.

New section 95990(c)(5)(H)2. is added to include the American Carbon Registry Voluntary Emission Reductions in Rice Management Systems –Mid-South Module, which works with the parent methodology in section 95990(c)(5)(H), on the list of approved early action quantification methodologies. These methodologies have not yet been approved as staff is proposing them to the Board for adoption.

#### Rationale for Section 95990(c)(5)(H)2.

This change is needed to include the potential early action quantification methodologies for rice cultivation projects, which staff is proposing for Board adoption.

#### Summary of Section 95990(c)(5)(I).

New section 95990(c)(5)(H)1. is added to include the Climate Action Reserve Rice Cultivation Project Protocol, version 1.1 on the list of approved early action quantification methodologies. These methodologies have not yet been approved as staff is proposing them to the Board for adoption.

#### Rationale for Section 95990(c)(5)(I).

This change is needed to include the potential early action quantification methodologies for rice cultivation projects, which staff is proposing for Board adoption.

#### Summary of Section 95990(i)(1)(F)2.

Existing section 95990(i)(1)(F)2. is modified to accommodate additional provisions in this section for potential new early action quantification methodologies for rice cultivation projects.

#### Rationale for Section 95990(i)(1)(F)2.

This change is non-substantive, removal of the "and" is needed to support the inclusion of an additional potential early action offset protocol for rice cultivation in this section.

#### Summary of Section 95990(i)(1)(G).

Existing section 95990(i)(1)(G) is modified to accommodate additional provisions in this section for potential new early action quantification methodologies for rice cultivation projects.

#### Rationale for Section 95990(i)(1)(G).

This change is non-substantive the "and" is needed to support the inclusion of an additional potential early action offset protocol for rice cultivation in this section.

#### Summary of Section 95990(i)(1)(H).

New section 95990(i)(1)(H) is added to include requirements for how many ARB offset credits will be issued for early action offset credits generated under the American Carbon Registry Voluntary Emission Reductions in Rice Management Systems Parent Methodology, version 1.0 or Climate Action Reserve Rice Cultivation Project Protocol, version 1.1.

#### Rationale for Section 95990(i)(1)(H).

This change is needed to include requirements that specify how many early action offset credits will be issued for potential early action quantification methodologies for rice cultivation projects, which staff is proposing for Board adoption.

#### Summary of Section 95990(i)(1)(H)1.

New section 95990(i)(1)(H)1. is added to specify that one ARB offset credit will be issued for each early action offset credit if the early action reporting period does not

take credit for emission reductions from nitrous oxide (N<sub>2</sub>O), soil organic carbon (SOC), reduced fossil fuel consumption and activities ineligible under the Rice Cultivation Practices Compliance Offset Protocol.

#### Rationale for Section 95990(i)(1)(H)1.

This change is needed to include requirements that specify how many early action offset credits will be issued for potential early action quantification methodologies for rice cultivation projects, which staff is proposing for Board adoption. Staff is proposing not to allow crediting of reductions for N<sub>2</sub>O, SOC, fossil fuel emissions and project activities, which are not allowed under the COP. During the development of the Rice Cultivation Practices Compliance Offset Protocol, these sources were determined not to be consistent with Regulation and therefore excluded. ARB has not yet determined the additionality of N<sub>2</sub>O emission reductions or the 100-year permanence of SOC. Fossil fuel is a covered source under the Cap-and-Trade Program. As a matter of policy, ARB does not issue offset credits for reductions from sources that would be covered by the cap but are located outside the State. Since there is no final determination on any potential environmental impacts of bailing, that practice is currently excluded from early action eligibility.

#### Summary of Section 95990(i)(1)(H)2.

New section 95990(i)(1)(H)2. is added to specify that no ARB offset credits will be issued for early action reporting periods that take credit for emission reductions based on a common practice baseline.

#### Rationale for Section 95990(i)(1)(H)2.

This change is needed to include requirements that specify how many early action offset credits will be issued for potential early action quantification methodologies for rice cultivation projects, which staff is proposing for Board adoption. It is appropriate to not credit the reporting periods that take credit for emission reduction based on a common practice baseline because this indicates that a project was implementing emission reduction activities prior to project commencement; therefore, these activities would not be considered additional and would not be eligible for ARB offset credits.

#### Summary of Section 95990(i)(1)(I).

Existing section 95990(i)(1)(H) is renumbered to section 95990(i)(1)(I).

#### Rationale for Section 95990(i)(1)(I)

This change is needed because new section 95990(i)(1)(H) was added, which caused a renumbering of this section.

#### Summary of Section 95990(k)(1).

Existing section 95990(k)(1) is modified to require that a rice cultivation offset project must be listed under a COP by February 28, 2016, in order to eligible to transition from an early action offset project to a COP.

#### Rationale for Section 95990(k)(1).

This change is needed to clarify that an OPO or APD must list the offset project under the Rice Cultivation Practices Compliance Offset Protocol by February 28, 2016 in order to transition an early action offset project to a COP. This extension is necessary because the current date of February 28, 2015 for all the other COPs is before the effective dated of the proposed regulatory amendments adding the Rice Cultivation Practices Compliance Offset Protocol.

#### Summary of Section 95990(k)(1)(E).

Existing section 95990(k)(1)(E) is modified to accommodate additional provisions in this section for new potential early action quantification methodologies for rice cultivation projects.

#### Rationale for Section 95990(k)(1)(E).

This change is non-substantive, removal of the "and" is needed to support the inclusion of an additional potential early action offset protocol for rice cultivation in this section.

#### Summary of Section 95990(k)(1)(F).

Existing section 95990(i)(1)(F) is modified to accommodate additional provisions in this section for new potential early action quantification methodologies for mine methane capture projects.

#### Rationale for Section 95990(k)(1)(F).

This change is non-substantive the "and" is needed to support the inclusion of an additional potential early action offset protocol for rice cultivation in this section.

#### Summary of Section 95990(k)(1)(G).

New section 95990(k)(1)(G) is added to require that when an OPO or APD is transitioning an early action offset project using the potential early action rice cultivation quantification methodologies that staff is proposing to be adopted by the Board, they must use the proposed Compliance Offset Protocol Rice Cultivation Projects Protocol.

#### Rationale for Section 95990(k)(1)(G).

This section is needed to require OPOs and APDs of early action offset projects developed under the potential early action rice cultivation quantification methodology to use the staff-proposed ARB Compliance Offset Protocol for rice cultivation projects.

#### Summary of Section 95990(k)(3)(D).

New section 95990(k)(3)(D) is added to specify the dates by which an early action rice cultivation projects must list and verify any GHG emission reductions.

#### Rationale for Section 95990(k)(3)(D).

This section is necessary because the existing dates for listing and verification in the Regulation are before or would not allow enough time after the effective date of the proposed regulatory amendments for OPOs/APDs of rice cultivation early action projects to comply. These dates are necessary to clearly identify deadlines by which listing and verification must occur to allow for adequate time for transitioning all early action offset credits to ARB offset credits by the end of 2016.

#### Summary of Section 95990(k)(5).

Existing section 95990(k)(5) is modified to allow rice cultivation early action projects additional time to complete the regulatory verification required by the Regulation, request issuance of ARB offset credits and for ARB to complete is review of the project prior to transitioning their early action offset credits to ARB offset credits by the end of the 2016.

#### Rationale for Section 95990(k)(5).

This change is needed to because the proposed regulatory amendments extending the eligibility timeframe for early action rice cultivation projects necessitates additional time for verifying and transitioning the project to ARB beyond what is currently specified in the Regulation.

#### CITED REFERENCES

California Air Resources Board (2001) Policies and Actions for Environmental Justice <a href="http://www.arb.ca.gov/ch/programs/ej/ejpolicies.pdf">http://www.arb.ca.gov/ch/programs/ej/ejpolicies.pdf</a>

EEI (2005). After the Disaster: Utility Restoration Cost Recovery. Edison Electric Institute (EEI), Washington, District of Columbia, 27.

Christensen, J.H., Hewitson, B., Busuioc, A., Chen, A., Gao, X., Held, I., Jones, R., Kolli, R.K., Kwon, W.T., Laprise, R., Magaña Rueda, V., Mearns, L., Menendez, C.G., Räisänen, J., Rinke, A., Sarr, A., & Whetton, P. (2007). Regional climate projections. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Solomon, S., Qin, D., Manning, M., Chen, Z., Marquis, M., Averyt, K.B., Tignor, M. & Miller, H.L. Eds., Cambridge University Press, Cambridge and New York, 847-940.

Emanuel, K, Sundararajan, R., & Williams, J. (2008). Hurricanes and Global Warming—Results from Downscaling IPCC AR4 Simulations. *Bull Am Meteorol Soc*, 89(3):347–367.

Füssel, H.M. (2009). An updated assessment of the risks from climate change based on research published since the IPCC Fourth Assessment Report. *Climatic Change*, *97*, 469–482.

California Air Resources Board (2010): Rulemaking To Consider The Adoption Of A Proposed California Cap On Greenhouse Gas Emissions And Market-Based Compliance Mechanisms Regulation, Including Compliance Offset Protocols. <a href="http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm">http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm</a>

California Air Resources Board (2010b): Proposed Regulation to Implement the California Cap-and-Trade Program PART I Volume I Staff Report: Initial Statement of Reasons (ISOR). http://www.arb.ca.gov/regact/2010/capandtrade10/capisor.pdf

California Air Resources Board (2010c): Cap-and-Trade Regulation Initial Statement of Reasons (ISOR) Appendix O.

http://www.arb.ca.gov/regact/2010/capandtrade10/capv5appo.pdf

California Air Resources Board (2010d): Cap-and-Trade Regulation Initial Statement of Reasons (ISOR) Appendix P.

http://www.arb.ca.gov/regact/2010/capandtrade10/capv6appp.pdf

Climate Action Team (2010) Report to the Governor and Legislature, <a href="http://www.energy.ca.gov/2010publications/CAT-1000-2010-004/CAT-1000-2010-004.PDF">http://www.energy.ca.gov/2010publications/CAT-1000-2010-004/CAT-1000-2010-004.PDF</a>

Pederson, G.T., Graumlich, L.J., Fagre, D.B., Kipfer, T., & Muhlfeld, C.C. (2010). A century of climate and ecosystem change in Western Montana: what do temperature trends portend? *Climatic Change*, *98*, 133–154.

California Air Resources Board (2011a): California's Cap-and-Trade Program Final Statement of Reasons (FSOR).

http://www.arb.ca.gov/regact/2010/capandtrade10/fsor.pdf

California Air Resources Board (2011b): California's Cap-and-Trade Program Supplement to the Final Statement of Reasons (FSOR). http://www.arb.ca.gov/regact/2010/capandtrade10/suppfsor.pdf

California Air Resources Board (2011c) Adaptive Management Plan for the Cap-and-Trade Regulation.

http://www.arb.ca.gov/cc/capandtrade/adaptive\_management/plan.pdf

California Air Resources Board (2012a): Staff Report: Initial Statement of Reasons: Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms to Allow for the Use of Compliance Instruments Issued by Linked Jurisdictions.

http://www.arb.ca.gov/regact/2012/capandtrade12/isormainfinal.pdf

California Air Resources Board (2012b): Amendments to California's Cap-and-Trade Program Final Statement of Reasons (FSOR). http://www.arb.ca.gov/regact/2012/capandtrade12/linkfsor.pdf

California Air Resources Board (2013a). Amendments to California's Cap-and-Trade Program Addendum to the Final Statement of Reasons for Rulemaking. http://www.arb.ca.gov/regact/2012/capandtrade12/addendum.pdf

California Air Resources Board (2013b). Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Staff Report: Initial Statement of Reasons (ISOR).

http://www.arb.ca.gov/regact/2013/capandtrade13/capandtrade13isor.pdf

California Air Resources Board (2014). Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Staff Report: Initial Statement of Reasons (ISOR).

http://www.arb.ca.gov/regact/2014/capandtrade14/capandtrade14isor.pdf

California Air Resources Board (2014b): Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Final

Statement of Reasons (FSOR). <a href="http://www.arb.ca.gov/regact/2013/capandtrade13/ctfsor.pdf">http://www.arb.ca.gov/regact/2013/capandtrade13/ctfsor.pdf</a>

California Air Resources Board (2014c): First Update to the Climate Change Scoping Plan: Building on the Framework.

http://www.arb.ca.gov/cc/scopingplan/2013 update/first update climate change scoping plan.pdf