

State of California  
AIR RESOURCES BOARD

**Addendum to the Final Statement of Reasons for Rulemaking**

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

Public Hearing Date: December 18, 2014 and June 25, 2015

Agenda Items: 14-10-4 and 15-5-6

Addendum Prepared: October 12, 2015

**I. BACKGROUND**

On September 8, 2015, the Air Resources Board (ARB or Board) submitted the Final Statement of Reasons (FSOR) for the “2014 Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms to the Office of Administrative Law (OAL) for its review and approval. In the course of its review, OAL identified several minor and nonsubstantive clarification issues. Each of these issues is addressed in turn below.

**II. MINOR ADDITIONAL CORRECTIONS**

A. PROTOCOL CHANGES (Exempt from APA pursuant to Health & Safety Code § 38571)

During OAL’s review period, ARB requested additional changes to the Compliance Offset Protocol Rice Cultivation Projects (Rice Protocol) and to the Compliance Offset Protocol U.S. Forest Projects (Forest Protocol).

The changes to the Rice Protocol include:

1. Capitalized the “d” in “Early Drainage in Preparation for Harvest” in the Table of Contents and subchapter 2.2 for consistency;
2. Addition of “1,000 Monte Carlo Runs” after “Calculating Unadjusted Project GHG Emissions from” in the Table of Contents for consistency;
3. Corrected the “2,000 runs of the Monte Carlo simulation” to “1,000 runs of the Monte Carlo simulation” in chapter 5.2.3(e) for consistency with all the other 2,000s that were modified to 1,000s during 15-day modifications;
4. Corrected the reference for the fuel specific emission factors in equation 5.7 from “Appendix F” which does not exist to “Appendix C” which is the correct reference.

5. Added closing parentheses to both summations in equation 5.10 for mathematical correctness;
6. Capitalized the “c” and “f” in “Yield Conversion Factors” in the Table of Contents and Table B.2 for consistency;
7. Moved the footnote reference after the semi-colon in Appendix A(a)(6) for correctness;
8. Removed the phrase “The date(s) that water board(s) were pulled from the weirs of the flooding of the filed was stopped” from appendix A(d) because it was repetitive with appendix A(d)(1) and for consistency with other subsections in appendix A;
9. Capitalized words and removed of the period in “Step 1 – Selecting the Right Parameter Set for Variety Used” in appendix B for consistency;
10. Capitalized the “n” and “r” in “All Non-wild Rice” in table B.1 for consistency;
11. Reversed the order of appendix D(c) and (d) to reflect digging the ditch or hole before installing the level measuring gauge for clarity; and
12. Added the word “at” to appendix D(e)(2) between “imbedded” and “least” for correct grammar.

The changes to the Forest Protocol include:

1. Added hyphen between “third” and “party” in chapter 1.2(a)(24), chapter 1.2(a)(44) and table 3.1 for grammatical correctness;
2. Added “above-ground standing live tree” to the acronym description in chapter 1.2(c)(32) to more accurately describe what “WCS” is and for consistency with its use throughout the protocol;
3. Corrected the formatting in references to the fourth hierarchical in chapter 3.1(a)(4)(D). “(1)” and “(2)” were modified to “1.” and “2.” To conform with standard regulatory format;
4. Changed the “is” to “are” in chapter 3.1(b)(1)(C)2. for grammatical correctness;
5. Changed the “and” to “or” in chapter 3.1(b)(1)(D) to correctly reflect the requirement;
6. Added a comma after “chapter 5” in chapter 3.2(d) for grammatical correctness;
7. Removed commas after “issued” and “Regulation” and added commas after “and” and “table 3.2” in chapter 3.5.3(b)(2) for grammatical correctness;
8. Added a comma after “For a reforestation project” in chapter 3.6(a)(1) for grammatical correctness;
9. Capitalized words and reversed the order of “sinks” and “sources” in “List of the Greenhouse Gas Sources, Sinks, and Reservoirs for Reforestation Projects” in table 4.1 for consistency;
10. Capitalized words and reversed the order of “sinks” and “sources” in “List of the Greenhouse Gas Sources, Sinks, and Reservoirs for Improved Forest Management Projects” in table 4.2 for consistency;

11. Capitalized words and reversed the order of “sinks” and “sources” in “List of the Greenhouse Gas Sources, Sinks, and Reservoirs for Avoided Conversion Projects” in table 4.3 for consistency;
12. Added a vertical arrow connecting the “Was the cropland commercially viable?” to “N” in figure 5.1 for completeness;
13. Added a hyphen between “100” and “year” in chapter 5.1.2(a)(2) for grammatical correctness;
14. Added the word “the” between “At” and “time” in chapter 6(c) for grammatical correctness;
15. Added the word “of” between “estimate” and “the’ in chapter 7.1.5(a)(6) for grammatical correctness;
16. Removed “to for a” from chapter 7.1(e) for grammatical correctness;
17. Changed “Date of form completion” to “Date listing information is completed for submittal” in chapter 7.1.1(a)(5) to reflect that a form is not required;
18. In chapter 7.1.3(a)(5)(C), “weighted average above-ground standing live tree carbon stocks” was replaced with “WCS”, the acronym defined in chapter 1.2(c)(32), and “(WCS)” was removed which was not necessary because the acronym was previously defined. The reference to subchapter “5.2.1” was changed to “5.2.1(d)(3)” to be more precise. And the “a” was changed to an “or” for grammatical correctness;
19. The term “policy item” was replaced with “each element identified in (a)(3)” to more accurately describe what documentation must be included for chapter 7.1.4(a)(3)(A)-(D);
20. Added the word “of” between “estimate” and “the” in chapter 7.1.5(a)(6) for grammatical correctness;
21. Removed the references to subchapter 3.5.1 in chapters 7.2(b) and 8(j) because they did not add clarity to the requirements;
22. Changed “relocated” to “located” in chapter 8.1.1(a) for grammatical correctness;
23. Removed the commas after “plot” and “plots” in chapter 8.1.1(g) for grammatical correctness;
24. Removed the “a” before “new plots” in chapter 8.1.1(l)(2) for grammatical correctness;
25. Corrected the reference in chapter 8.1.1.1(d)(2) to equation 8.3;
26. Corrected the reference in chapter 8.1.1.2(d)(2) to equation 8.4;
27. Corrected the reference in chapter 8.1.1.2(d)(3) to equation 8.5;
28. Capitalized words in “Minimum Requirements for Field Measurements” in table A.1 for consistency;
29. Added a comma between “(but accepts measured height)’ and “height” in the third column of the third row of table A.1 for grammatical correctness;

30. Capitalized words in “Forest Carbon Inventory Confidence Deduction Based on Level of Confidence in the Estimate Derived from Field Sampling” in table A.4 for consistency;
31. Corrected the reference in table D.10 to “D.2-D.9”; and
32. Capitalized words in “Assessment Area Data File” in appendix F(g) for consistency.

## B. ADDITIONAL NONSUBSTANTIVE CORRECTIONS

OAL identified several additional, minor non-substantive changes in its review that ARB agrees add clarity and consistency to the regulations.

### **Section 95973(a)(2)(C)4. –**

A comma was added after “June 25, 2015” for grammatical correctness.

### **Section 95975(e)(4) –**

The date “November 14, 2015” was changed to “June 25, 2015” to reflect the adoption date of the most recent Forest Protocol.

### **Section 95985(b)(1) –**

The semi-colon after “met” was replaced with a colon for grammatical correctness.

### **Section 95985(b)(1)(B)5. –**

All instances of the fourth hierarchical were corrected to remove the parentheses and include a period to conform to standard regulatory format.

### **Section 95985(b)(1)(B)5.d. –**

The “and” was replaced with an “or” to correctly reflect the regulatory requirement.

### **Section 95990(c)(5)(G). –**

The “and” was replaced with an “or” to correctly reflect the regulatory requirement.

### **Section 95990(i)(1)(H)1. –**

The fourth hierarchical in “95973(a)(2)(C)(6)” was corrected to “95973(a)(2)(C)6.” to conform with standard regulatory format.

### **Section 95990(i)(1)(H)1.e. –**

The fourth hierarchical in “95973(a)(2)(C)(6)” was corrected to “95973(a)(2)(C)6.” to conform with standard regulatory format.

### III. MODIFICATIONS TO THE ORIGINAL SUMMARY AND RESPONSE TO COMMENTS AND FINAL STATEMENT OF REASONS

#### Chapter IV

##### Comment B-3.11 (EDF-1)

Comment was modified to incorporate the underline/strikeout included in the original comment to more accurately reflect the commenter's intentions.

**B-3.11. Comment:** Finally, we propose changes to Section 2.2(b).

(b) Early drainage in preparation for harvest activities must follow the requirements below:

(1) For early drainage in preparation for harvest activities in the California Rice Growing Region, there must not be standing water present within a 50-foot radius of the water the inlet check of a participating field 24 days after fifty-percent heading.

(2) While the participating field will be drained, the soil must still be saturated to ensure that the yield will not be impacted.

(3) Rice crop from each field must be sampled to determine fifty-percent heading using the following criteria:

(A) At least three rice crop samples must be taken;

(B) No sample shall be taken within a 50-foot radius of the water inlet or within the area impacted by cold water;

(C) All samples shall be equally spaced in the field;

(D) Each sample must cut all the tillers and main stems in at least a one square foot area with uniform grain maturity;

(E) Samples will be combined then separated into two categories:

1. Heading; and

2. Not heading;

(F) Greater than or equal to fifty-percent of the tillers and main stems must be heading; and

(G) If less than fifty-percent of tillers and main stems are heading, producers will be required to resample until there is at least fifty-percent heading. but greater than or equal to forty-percent of tillers and main stems are heading, resampling is not required. In this case there must be standing water present within a 50-foot radius of the water inlet of a field

~~26 days after the sampling date~~

(H) Standard procedure must be used for the collection of field samples. These procedures must be detailed enough so that any qualified agronomist would be able to accurately repeat the previous determination of fifty percent heading. (EDF-1)

**Response:** ARB staff agrees with the suggestions provided by the commenter and edited the requirements of subchapter 2.2(b)(G) during the 15-day modifications and added subchapter 2.2(b)(H).

**Comment B-3.12 (EDF-1)**

Comment was modified to incorporate the underline/strikeout included in the original comment to more accurately reflect the commenter's intentions.

**B-3.12. Comment:** For all of the Project Activities, we propose the following changes to Appendix A to decrease the redundancy in general field information requirements:

(a) General information for each participating field:

- (1) Field geographic coordinates, county, and state for each field, and parcel number;
- (2) Flooding and drainage dates (during the growing season and during postharvest period);
- (3) Begin and end date of harvesting on the participating field;
- (4) Post-harvesting residue management (e.g. burning, incorporation or baling) description and dates;
- (5) Amount of herbicides applied for the baseline period cultivation cycle and the project scenario cultivation cycle;
- (6) Fertilization types, amounts, rate and application methods and dates for each application, including dates of all fertilization events relative to planting date (both pre-flood and top-dressed after flooding);
- ~~(7) Harvest date;~~
- ~~(8) Mass of crop residue removed after harvest, the fraction of removed crop residue;~~
- (7) Estimate of crop residue remaining in the participating field, depending on the post-harvest residue management practice indicated above.
- ~~(9) For seeding preparation and enhancement, dates of flooding relative to the planting date;~~
- ~~(10) Dates of all fertilization events relative to planting date (both pre-flood and top dressed after flooding);~~
- ~~(11) Dates of all fertilizer applications;~~

- (12) ~~Rate, type of fertilizer and application method for each fertilizer application; and~~
  - (138) Moisture content for milled rice from the year with maximum observed rice yield; and
  - (149) Dates and depth of all tillage events for preparing the fields for planting and post-harvest residue management.
- (b) Additional information for dry seeding projects:
- (1) Planting preparation description and date;
  - (2) Planting date and method; and
  - (3) The date a field is fully flooded after dry seeding. ~~in preparation for seeding.~~
- (c) Additional information for early drainage in preparation for harvest projects:
- (1) The date that the ~~water board(s) were~~ pulled from the weirs or the flooding of the field was stopped; ~~and~~
  - (2) ~~Harvest date~~
- (d) Additional ~~information~~ for alternate wetting and drying:
- (1) The date that the ~~water board(s) were~~ pulled from the weirs or the flooding of the field was stopped; ~~and~~
  - (2) ~~Harvest date~~
  - (3) Soil moisture reading date, number of readings, and the results of the readings. (*EDF-1*)

**Response:** ARB staff agrees with the suggestions provided by the commenter and edited the information requirements during the 15-day modifications to protocol Appendix A.

**Comment B-16.15 (CAGG-1 and ETA-1)**

Response was modified (new language in italics) to address the commenters' recommendation to use sampling for site verifications for consolidated OPDRs.

**B-6.15. Multiple Comments:** Regarding cost-effective yet rigorous verification approaches, C-AGG applauds the inclusion in the staff report of the Rice Cultivation Protocol Pilot Verification Program, which will fund the verification of projects using two approaches for a 3 year period. This Pilot Verification Program will allow for a comparative assessment of the outcomes of these two approaches. C-AGG urges ARB to work in a transparent fashion with stakeholders and experts from the agricultural and carbon market sectors to design and document the Verification Pilot approach and requirements. This will ensure that a robust and agreed-upon Pilot Program, which includes participation of an adequate number of APDs and OPOs to show meaningful

outcomes, can be developed. It will also ensure that all stakeholders are clear and agreed on the approach and the means by which the comparative assessment will be conducted. Such a comparative analysis, if well designed, will be a valuable and worthwhile endeavor, and will provide for sound information on which to base the development of updates to the Rice Cultivation Protocol, as well as the development of additional agricultural protocols.

C-AGG would like to stress that the Pilot Program needs to engage enough of a sample to show meaningful results from which they can base future policies and decision making. While C-AGG does not have a specific recommendation for the number of farmers that need to be engaged or the number of projects that need to register to achieve this, as a multi-stakeholder collaborative, C-AGG will commit to participate in the design of the Pilot Program and the comparative assessment along with other experts to ensure an acceptable and defensible threshold is established up front.

C-AGG has discussed at great length, and has developed and shared white papers and summaries identifying a science-based verification approach that would utilize both randomized and risk-based sampling to allow for site visits on a scientifically identified sample of farms or fields within a collective project. Project verifiers already develop Sampling Plans in a transparent and documented approach; C-AGG's proposed approach is fully in keeping with this, and would rely on the rigor of science to reduce verification costs without sacrificing program integrity.

Combined with documentation requirements and monitoring techniques such as the use of remote sensing technologies, date- and time-stamped photographs, and other real-time and technological approaches that exist and or may be under development or even yet-to-be developed (see also next paragraph), these verification approaches can be scientifically and technically rigorous and meet the necessary reasonable level of assurance without being more costly than potential returns on project investment.

C-AGG applauds the incorporation in the latest draft of the protocol the provision allowing for “[o]ther information not identified [in the acceptable project documentation list to] be used to document project activities.” This provision confirms ARB's willingness to work with farmers and project developers, as needed, to implement the most cost-effective approaches for ensuring a practice has taken place. This provision also recognizes that a one size fits all approach can be cumbersome and can preclude innovative solutions from being brought to the table.

In the Protocol, ARB requires individual verification statements for every OPO within a consolidated OPDR submitted by a single APD. As discussed above, scientifically rigorous sampling based on risk-based and randomized selection of OPOs to be verified can achieve the necessary verification results. This requirement should be changed to



require audits of all OPO data, as collected, managed and stored by APDs, but only site visits as suggested above. If audits reveal errors or indicate problems that may be systemic, then a more in-depth verification could be required. (CAGG-1)

**Comment:** IETA supports cost-effective yet rigorous approaches to verification. We therefore support ARB's Staff Report's inclusion of the Rice Cultivation Protocol Pilot Verification Program, which will fund the verification of projects using two approaches for a 3-year period. This Pilot Program will allow for a comparative assessment of the outcomes of the two approaches. Such a comparative analysis, if well designed, will be a valuable and worthwhile initiative, as well as provide foundational information on which to base the development of updates to the Rice Protocol and the development of future additional agricultural protocols.

In the Rice Protocol, ARB requires individual verification statements for every OPO within a consolidated OPDR submitted by a single APD. We believe this requirement should be changed to require audits of all OPO data, as collected, managed and stored by APDs, but only site visits on a scientifically identified sample of farms or fields within a collective project.<sup>1</sup> If audits reveal errors or indicate problems that may be systemic, a more in-depth verification could be required. (IETA-1)

**Response:** ARB appreciates the Coalition on Agricultural Greenhouse Gases' (C-AGG) and the International Emissions Trading Association's (IETA) support for the pilot verification program, and is committed to working with C-AGG, IETA and other stakeholders to consider opportunities for streamlining verification, while still meeting the requirements of the Regulation to maintain the integrity of generated offsets and the requirements of AB 32.

As the commenters note, an offset verification statement is required for each individual project, consistent with the Regulation and Rice Protocol. Site visits are required to each project since each project is being independently verified even though a consolidated OPDR is being submitted.

*We recognize the significant potential benefits for the environment and offset supply of lowering barriers to participation. However, ARB staff will need to conduct further review to determine if risk-based sampling of farms or fields within a consolidated OPDR for site visits is compatible with the cap-and-trade program and specific offset provisions.*

### **Comment C-3.1 (CFA-1)**

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<sup>1</sup> See C-AGG's proposed approach recognizing that project verifiers already develop Sampling Plans in a transparent and documented manner - the proposed approach relies on the rigor of science to reduce verification costs without sacrificing program integrity.

The comment was modified to incorporate missing language to more accurately reflect the commenter's intentions.

**Comment:** Proposed Buffer Width and Buffer Retention Changes in Section 3.1(a)(4)(A and B)

All Landowners across the U.S., including industrial landowners in California, that practice even-age management would likely be precluded from registering their forest carbon using the ARB Compliance Offsets Protocol (U.S. Forest Projects) if the proposed changes are adopted by ARB.

The proposed change goes well beyond the California Forest Practices Act implementing regulations, which for even-age management call for a 300' buffer around harvest units that is to be retained from 3-5 years. The Protocol change proposes, for a 20 acre harvest unit, an 800' buffer to be retained until the plantation has 50 square feet of basal area; about 15-25 years of growth. This would drastically change any even-age managed forest's sustained yield plan and dramatically lower first and second decade harvest levels.

Experience, for even-aged managed forests, in determining carbon sequestration would likely show that adoption of this proposed buffer width and buffer retention change would LOWER sequestered carbon over a 100 year time horizon.

The Existing ARB Offsets U.S. Forest Protocol and Proposed Changes at Section 3.1(a)(4)(A and B) uses the Climate Action Reserve Forest Management Version 3.2 protocol for its foundation. Version 3.2 evolved over about a 5 year period using a diverse Stakeholder Work Group for its development.

The Work Group, in development of CAR Version 3.2, which, in part, led to Section 3.8.1 in the ARB U.S. Forest Protocol, provided assurances that the registrant was using sustainable forest practices:

**“Sustainable Harvesting Practices**

At the time commercial harvesting is either planned or initiated within the Project Area, the Offset Project Operator or Authorized Project Designee must demonstrate that the Forest Owner(s) employs and demonstrates sustainable long-term harvesting practices on all of its forest landholdings, including the Project Area” using one of three options.

Further, while the Work Group provided for the 3rd party certification of sustainability, it also provided a mechanism for the local forestry regulating authority to make a buffer change if environmentally necessary. Hence, the U.S. Forest Protocol is already

designed to adapt to changes determined environmentally necessary by the local forestry regulatory agencies (in California, the Board of Forestry and Fire Protection).

To our knowledge, the proposed changes to the U.S. Forest Protocol before the Board Dec. 18, 2014 were not developed under a diverse technical team. Further, CalFire and the Board of Forestry, who have the responsibility for forest practices in the State, had no knowledge nor, to our knowledge, were they even contacted regarding this proposal.

CFA do not see any reason that proposed changes to the U.S. Forest Protocol at Section 3.1(a)(4)(A and B) are warranted.

Further, the ARB U.S. Forest Protocol was only adopted three years ago (October 2011). It does not send a positive signal to potential registrants to see such a drastic change as is proposed in Section 3.1(a)(4)(A and B) in such a short time period.

CFA respectfully requests ARB reject the proposed change at Section 3.1(a)(4)(A and B) of the ARB U.S. Forest Protocol. (CFA-1)

#### **Comment C-3.1 (OCSEES-1 and FCC-1)**

The response was modified (new language in italics) to include responses to OCSEES's concerns about the best way to achieve sustainable forest management, and FCC's concerns about how to apply the Open Canopy Harvest Unit requirements.

**Response:** ARB staff agrees with the above commenters that the proposed modification to the retention requirements and the buffer area would have unintended consequences. The original Forest Protocol adopted by the Board in 2011 contained a 40-acre size limit on stands harvested using an even-aged management silvicultural prescription; this limit has remained unchanged. The proposed changes with regard to harvest intensity, basal area retention, buffer area, and adjacency limits were all intended to clarify what is allowable under even-aged management. The buffer area calculation was meant to be a simplification of the California Forest Practice Rules. ARB selected the California Forest Practice Rules as an appropriate standard because the existing even-aged management requirements in the Forest Protocol adopted by the Board in 2011 were based on the California Forest Practice Rules. One of the goals of the compliance offset program is to encourage the spread of California's high sustainability standards to other states. The compliance offset program is a voluntary program in which entities choose to participate. The implementation of the program requires equitable standards that can be applied equally across all states. The California Forest Practice Rules is the basis for these equitable standards regarding even-aged management.

*One commenter, Offsetters Climate Solutions and Era Ecosystem Service, indicates its opinion that the best way to achieve sustainability is to require the adoption and implementation of a sustainable forest management plan. As indicated by the commenter, this is one acceptable way to demonstrate sustainable harvesting under the protocol. Staff agrees that a sustainable forest management plan will help achieve environmental protection. However, the original Forest Protocol, adopted by the Board in 2011, placed additional requirements on even-aged management above and beyond what may be necessary for sustainable management. ARB staff determined that the even-aged management requirements in the 2011 protocol were appropriate to include in the proposed Forest Protocol.*

To the extent feasible, the protocol includes safeguards to help assure the environmental integrity of forest offset projects, which include: requirements for projects to demonstrate sustainable long-term harvesting practices; limits on the size and location of even-aged management practices; and requirements for natural forest management. All projects are required to use management practices that promote and maintain native forests comprised of multiple ages and mixed native species at multiple landscape scales. ARB staff agrees that a strict reading of the buffer requirement would create unreasonably large buffer areas and has made appropriate modifications to reduce the buffer size to be consistent with the California Forest Practice Rules buffer requirements. The 50 square foot basal area was taken directly from section 912.7 of the California Forest Practice Rules.

ARB staff did not intend to place additional requirements on adjacency and buffer limits, only to clarify the existing language to specify criteria for the project operator and verifier to meet. However, ARB staff acknowledges the buffer requirement was incorrect and that other modifications have caused confusion. As a result, staff has provided modifications to these sections that align with the California Forest Practice Rules. *These modifications include removal of references to Open Canopy Harvest Unit. So the comments proposing changes to Open Canopy Harvest Unit sections are no longer applicable.* These revisions were presented in the 15-day version of the Forest Protocol.

The commenters also discuss their concern that the proposed changes to the Forestry Protocol would result in reduced offset supply. While offset supply is an important factor, assuring that all ARB offsets represent real, permanent, quantifiable, verifiable, enforceable, and additional GHG emission reductions and GHG removal enhancements is also important. ARB staff has taken several steps to address offset supply concerns. In addition to the four originally approved protocols in 2011, ARB has added a Mine Methane Capture offset

Project Protocol, is proposing to add a Rice Cultivation Projects Protocol, and extend the geographic scope of the current Forestry Protocol to include Alaska. Staff will continue to evaluate and propose new offset protocols that would generate compliance offset credits that meet AB32 criteria. It is also important to note that there is no indication that all possible projects have been implemented under the existing protocols. Offset projects are responsive to the price of offsets. If there is a clear demand for offsets, which may be indicated by increasing prices for allowances, ARB staff expect project developers would respond by undertaking more projects with the expectation of higher returns on investment.

### **Comment C-3.3 (CAR-1)**

The response was modified (new language in italics) to include a response to CAR's concerns about clarifying the term "adjacent".

**Response:** ARB appreciates the commenter's support. ARB staff agrees that the protocol could benefit from additional clarification regarding even-aged management. ARB staff did not intend to further disperse even-aged rotations or increase rotation lengths. The intent was to provide verifiable standards which both the project operator and verifier can meet based on the even-aged management requirements in the California Forest Practice Rules. As a result, ARB staff has made significant changes to the even-aged management section. ARB staff worked with the Board of Forestry and Fire Protection to ensure consistency with the Forest Practice Rules, resulting in the 15-day changes that were incorporated in the protocol update.

*One of the main purposes of the revisions was to clarify ambiguity, like the word "adjacent." Language was added to the 15-day version of the protocol to clarify that even-aged managed plots must be separated by at least 300 feet in all directions. Therefore, anything less than 300 feet would be considered adjacent.*

### **Comment C-12.4**

The response was modified (new language in italics) to clarify why comments on issuance and invalidation are outside the scope of this rulemaking process.

**Response:** Projects that have baseline errors in excess of 5.00% would be required to correct the baseline whether it results in over- or under-crediting. However, the project would not be eligible to receive additional ARB offset credits if the baseline resulted in under-crediting of previous reporting periods. The Forest Protocol only contains the methods for quantifying GHG emission

reductions or enhanced sequestration. The Regulation contains the mechanisms for issuing and invalidating ARB offset credits. The Regulation does not have a mechanism for retroactive issuance of ARB offset credits. The only circumstances under which the Regulation allows changes in offset credits issued for a reporting period is through invalidation. *ARB staff did not propose any changes to the issuance requirements in section 95981 of the Regulation, except to correct an internal reference. ARB staff did not propose any changes to the invalidation requirements in section 95985 of the Regulation, except to add the new Rice Protocol and modify internal references, as part of this rulemaking. As, such, the requested changes to the issuance and invalidation sections of the Regulation are outside the scope of this rulemaking.*

#### **Comment D-1.1**

The response was modified (new language in italics) to clarify why comments on invalidation and regulatory conformance are outside the scope of this rulemaking process.

**Response:** *ARB staff did not propose any changes to the invalidation requirements in section 95985 of the Regulation, except to add the new Rice Protocol and modify internal references. ARB staff did not propose any changes to the regulatory conformance section 95973(b) of the regulation, as part of this rulemaking. As, such, the comments related to offset invalidation and regulatory compliance are outside the scope of this rulemaking process. However, ARB posted a guidance document in February 2015 entitled “California Air Resources Board Offset Credit Regulatory Conformance and Invalidation Guidance” to provide further clarity on regulatory conformance requirements and the scope of activities that are subject to review for each specific project type. ARB staff will continue to discuss these concerns with stakeholders that remain unsure of what constitutes regulatory conformance and which activities and violations may subject the project to the invalidation provisions of the Regulation.*

The document is available

here: [http://www.arb.ca.gov/cc/capandtrade/offsets/arboc\\_guide\\_regul\\_conform\\_invalidation.pdf](http://www.arb.ca.gov/cc/capandtrade/offsets/arboc_guide_regul_conform_invalidation.pdf)

If project developers or other interested parties have questions related to a specific project, they should contact ARB staff.

## **Comment D-1.2**

The response was modified (new language in italics) to clarify why comments on invalidation and regulatory conformance are outside the scope of this rulemaking process.

**Response:** *ARB staff did not propose any changes to the invalidation requirements in section 95985 of the Regulation, except to add the new Rice Protocol and modify internal references. ARB staff did not propose any changes to the regulatory conformance section 95973(b) of the regulation, as part of this rulemaking. As, such, the comments related to offset invalidation and regulatory compliance are outside the scope of this rulemaking process. However, ARB posted a guidance document in February 2015 entitled “California Air Resources Board Offset Credit Regulatory Conformance and Invalidation Guidance” to provide further clarity on regulatory conformance requirements and the scope of activities that are subject to review for each specific project type.*

The document is available on the Compliance Offset Program webpage: [http://www.arb.ca.gov/cc/capandtrade/offsets/arboc\\_guide\\_regul\\_conf\\_orm\\_invalidation.pdf](http://www.arb.ca.gov/cc/capandtrade/offsets/arboc_guide_regul_conf_orm_invalidation.pdf)

While offset supply is an important factor, assuring that all ARB offsets represent real, permanent, quantifiable, verifiable, enforceable, and additional GHG emission reductions and GHG removal enhancements is also important. ARB has also taken several steps to address offset supply concerns. In addition to the four originally approved protocols in 2011, ARB has added a MMC Protocol. This rulemaking proposes to add a Rice Protocol, and extend the geographic scope of the current Forestry Protocol to include Alaska. ARB staff will continue to evaluate and propose new offset protocols that will generate compliance offset credits that meet AB 32 criteria. It is also important to note that there is no indication that all possible projects have been implemented under the existing protocols. Offset projects are price responsive. If there is a clear demand for offsets, which may be indicated by increasing prices for allowances, project developers will respond by undertaking more projects with the expectation of higher returns on investment.

## **Chapter V**

### **Comment C-6.1 (CFA-3)**

The response was modified (new language in italics) to include a response to CFA's concern that improved forest management projects should not change the Common Practice value in an area.

**Response:** ARB staff disagrees that the new Common Practice values do not accurately reflect true stocking from common practice forest management. The data obtained from the FIA accurately reflects business-as-usual practice on forest land throughout the U.S. in recent years based on physical inventories of plots throughout the U.S., and therefore, reflects true common practice. *The determination of Common Practice should include existing improved forest management projects, because projects are a part of what is occurring in forests. Including existing improved forest management projects in the baseline evaluation for forest projects is a logical incorporation of the additionality requirements.*

Resolution 11-32 directs ARB staff to periodically review and update compliance offset protocols. The proposed Common Practice values represent the most recent carbon stock data from FIA. The data was collected using the most recent scientific methods and is more comprehensive than the data set used to establish the existing Common Practice values. This is the first time ARB staff is proposing to change the Common Practice values since the protocol was first considered by the Board in December 2010.

Commenters state the data set used to calculate the proposed Common Practice values is unrepresentative of long-term forest timber demands because it includes the period of time spanning the recession, when single home family starts dropped dramatically and there was a low demand for forest timber. The existing Common Practice values span the general timeframe of 2001 to 2006. This includes the years of 2004 and 2005, which were an unprecedented period of high single-family housing starts and forest timber demand.

Based on publically available documents from The Department of Agriculture, domestic timber demand is generally on the decline. The transition to electronic from paper media, increased imports of furniture, and decreased demand for paperboard products all represent long-term structural changes in the wood sector economy. Furthermore, a review of historical single-family home starts for 2007-2012, the same time period as covered by the proposed Common Practice values, shows that single-family home starts for this time period are similar to long-term average single-family home starts over longer time periods spanning back to 1960. The FIA updates its forest inventory on a rolling basis of 5, 7, or 10 years, so that the majority of recent data for the Common Practice values comes from the 2007-2012 timeframe. This suggests the proposed Common Practice values are more representative of long-term trends in timber demand and the current Common Practice values are representative of an anomalous period of high and unsustainable growth in the home construction sector.



The commenter's suggestion of averaging Common Practice values over 25-years is not technically possible. The Agricultural Research, Extension, and Education Reform Act of 1998 (Public Law 105–185), also known as the 1998 Farm Bill, prescribed conceptual changes in approaches to forest inventories conducted by the FIA. The enhanced data from FIA used to determine the Common Practice values does not go back 25 years, and changes in volume and biomass equations does not allow for comparison of data from other inventory cycles.

ARB staff participated in a webinar on October 14, 2014, where a representative from the FIA provided detailed information about the development of the Common Practice values, including the public location of all data used (<http://www.fia.fs.fed.us/tools-data/>), and explained how the data was used to calculate the Common Practice values provided to ARB by FIA. A copy of the presentation can be found on the ARB website at: <http://www.arb.ca.gov/cc/capandtrade/meetings/101414/acr.webinar.us.forestry.slides.pdf>. Additional details concerning ARB's process for the current proposed update is found in ARB's response to Comment C-3.1.

Stakeholders, including this commenter, have requested a predictable schedule for future Common Practice updates and additional data leading to the Common Practice updated values. ARB staff agrees with the need to provide a predictable schedule, and will determine a reasonable timeline for future Common Practice updates after consultations with the FIA and with stakeholders.

Blue Source comments that setting Common Practice values based on forest stocking levels at isolated points in time will lead to less than optimal forest carbon sequestration and reduced climate benefit. This environmental comment is addressed in Appendix A to this document.

#### **Comment C-8.5**

The response was modified (new language in italics) to clarify why comments on invalidation and regulatory conformance are outside the scope of this rulemaking process.

**Response:** *ARB staff did not propose any changes to the invalidation requirements in section 95985 of the Regulation, except to add the new Rice Protocol and modify internal references. ARB staff did not propose any changes to the regulatory conformance section 95973(b) of the regulation, as part of this rulemaking. As, such, the comments related to offset invalidation and regulatory compliance are outside the scope of this rulemaking process. However, ARB*

posted a guidance document in February 2015 entitled “California Air Resources Board Offset Credit Regulatory Conformance and Invalidation Guidance” to provide further clarity on regulatory conformance requirements and the scope of activities that are subject to review for each specific project type. ARB staff will continue to discuss these concerns with stakeholders that remain unsure of what constitutes regulatory conformance and which activities and violations may subject the project to the invalidation provisions of the Regulation.

The document is available

here: [http://www.arb.ca.gov/cc/capandtrade/offsets/arboc\\_guide\\_regul\\_conform\\_invalidation.pdf](http://www.arb.ca.gov/cc/capandtrade/offsets/arboc_guide_regul_conform_invalidation.pdf)

If project developers or other interested parties have questions related to a specific project, they should contact ARB staff.

#### **Comment C-8.6**

The response was modified (new language in italics) to clarify why comments on invalidation and regulatory conformance are outside the scope of this rulemaking process.

**Response:** *ARB staff did not propose any changes to the invalidation requirements in section 95985 of the Regulation, except to add the new Rice Protocol and modify internal references. ARB staff did not propose any changes to the regulatory conformance section 95973(b) of the regulation, as part of this rulemaking. As, such, the comments related to offset invalidation and regulatory compliance are outside the scope of this rulemaking process. However, ARB posted a guidance document in February 2015 entitled “California Air Resources Board Offset Credit Regulatory Conformance and Invalidation Guidance” to provide further clarity on regulatory conformance requirements and the scope of activities that are subject to review for each specific project type. ARB staff will continue to discuss these concerns with stakeholders that remain unsure of what constitutes regulatory conformance and which activities and violations may subject the project to the invalidation provisions of the Regulation.*

The document is available

here: [http://www.arb.ca.gov/cc/capandtrade/offsets/arboc\\_guide\\_regul\\_conform\\_invalidation.pdf](http://www.arb.ca.gov/cc/capandtrade/offsets/arboc_guide_regul_conform_invalidation.pdf)

If project developers or other interested parties have questions related to a specific project, they should contact ARB staff.

### **Comment C-8.25**

The response was modified (new language in italics) to clarify why comments on six month reporting period are outside the scope of this rulemaking process.

**Response:** ARB has allowed “boots on the ground,” or commencement of a carbon inventory, for the project commencement date because the language in both the early action offset protocols and the Forest Protocol adopted by the Board in 2011 did not explicitly limit project commencement to the three identified activities. As New Forest stated in their comment, it is difficult to adequately verify “boots on the ground” as project commencement; therefore, ARB staff intentionally limited the project commencement date to the three previously eligible, and easily verifiable activities, effectively removing “boots on the ground” from the protocol as an eligible project commencement date.

*ARB staff did not propose any changes to the definition of the reporting period in section 95802(a) as part of this rulemaking. As such, changes to the minimum six month reporting period is outside the scope of this rulemaking.*

### **Comment D-1.1**

The response was modified (new language in italics) to clarify why comments on invalidation and regulatory conformance are outside the scope of this rulemaking process.

**Response:** *ARB staff did not propose any changes to the invalidation requirements in section 95985 of the Regulation, except to add the new Rice Protocol and modify internal references. ARB staff did not propose any changes to the regulatory conformance section 95973(b) of the regulation, as part of this rulemaking. As, such, the comments related to offset invalidation and regulatory compliance are outside the scope of this rulemaking process. However, ARB posted a guidance document in February 2015 entitled “California Air Resources Board Offset Credit Regulatory Conformance and Invalidation Guidance” to provide further clarity on regulatory conformance requirements and the scope of activities that are subject to review for each specific project type. ARB staff will continue to discuss these concerns with stakeholders that remain unsure of what constitutes regulatory conformance and which activities and violations may subject the project to the invalidation provisions of the Regulation.*

The document is available

here: [http://www.arb.ca.gov/cc/capandtrade/offsets/arboc\\_guide\\_regul\\_conform\\_invalidation.pdf](http://www.arb.ca.gov/cc/capandtrade/offsets/arboc_guide_regul_conform_invalidation.pdf)

ARB has provided answers to Frequently Asked Questions on many areas of the offset program already and will continue to do so in the future. If project developers or other interested parties have questions related to a specific project, they should contact ARB staff.

#### **IV. INCORPORATED BY REFERENCE DOCUMENTS**

The following explains why certain documents identified as incorporated by reference documents in the 15-day notice and the final statement of reasons will not be filed with the Secretary of State:

Aside from the Compliance Offset Protocol for Rice Cultivation Projects (June 25, 2015) (Rice Protocol) and the Compliance Offset Protocol for United States Forest Projects (June 25, 2015) (Forest Protocol), the following five documents are listed in the 15-day notice and the final statement of reasons as incorporated by reference documents.

- Mill Efficiency Data (updated with values for Alaska), May 1, 2015.
- Assessment Area Data File (updated with values for Alaska), May 1, 2015.
- Supersection maps and GIS shapefile (updated to remove fields not relevant to the protocol that have not been used in any project quantification), May 1, 2015. Unfortunately the GIS mapping software does not allow the new version to be shown in underline strikeout so the fields are just removed.
- USDA Forest Inventory and Analysis Database Description and User Guide for Phase 2 (V6.0.1 ), Appendix D, April 2014.
- USDA Soil Quality Test Kit Guide (July 2001).

Normally, incorporated by reference documents would be filed with the Secretary of State along with the final regulation text. However, aside from the Assessment Area Data File (May 1, 2015), the remaining documents identified in this list will not be filed with the Secretary of State for the following reasons:

- Mill Efficiency Data (May 1, 2015). This document is contained in Appendix C. of the Forest Protocol, which contains quantification methodologies and is exempt from the Administrative Procedure Act (APA) pursuant to Health & Safety Code section 38571. Accordingly, the requirements of incorporation by reference are not required.
- Supersection maps and GIS shapefile. All references to supersection maps are contained in quantification methodology provisions in chapter 2 or appendix F of the Forest Protocol, making them exempt from the APA pursuant to Health & Safety Code section 38571. Accordingly, the requirements of incorporation by reference are not required for these maps. Regarding the GIS shapefile, it is referred to only once in the Forest Protocol (subchapter 7.1.1(a)(15)) and not in a manner characteristic of incorporation by reference, so it is not required to be filed with the Secretary of State.

- USDA Forest Inventory and Analysis Database Description and User Guide for Phase 2 (V6.0.1 ), Appendix D (April 2014). This document is not referred to in the Forest Protocol in a manner characteristic of incorporation by reference, so it is not required to be filed with the Secretary of State.
- USDA Soil Quality Test Kit Guide (July 2001). This document is included in a provision of the Rice Protocol (subchapter 3.1(a)(6)(D)3.) that is a quantification methodology provision, exempt from the APA pursuant to Health & Safety Code section 38571. Accordingly, the requirements of incorporation by reference are not required.