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**Subject: Comments on the Adaptive Management Strategy for the Proposed AB32 Cap-and-Trade Regulation Included Within the 15-Day Changes Draft**

Mr. Cliff and Ms. Sahota,

Please accept these comments on the development of an adaptive management strategy for the proposed cap-and-trade regulation pursuant to AB32, the Global Warming Solutions Act of 2006. While this aspect of the overall program is under development, it is inextricably linked to the overall cap-and-trade regulation and therefore relevant to the proposed 15-day changes document and public comment process.

In sum, the comments below seek to make the following point:

**CARB's current approach to adaptive management of the AB 32 cap-and-trade program needs more detail and commitment. The program should be focused on a range of environmental impacts, including climate, air and ecosystem impacts, and should be designed to mitigate observed impacts as well as proactively prevent future impacts that are likely to occur. Included below, we supply specific ideas for the adaptive management program, and we strongly recommend that the program be in place no later than when facilities begin taking action to meet cap-and-trade compliance obligations.**

Over the course of the last three-plus years, CARB has been developing a cap-and-trade program to limit greenhouse gas emissions. We urge the program as designed to achieve the required pollution reductions without causing unexpected or undesired impacts on the environment. We note that the current local, state and federal stationary source regulatory landscape is designed to prevent emissions increases from 1) facilities exceeding permitted emissions levels and 2) degrading existing air quality through new source construction. However, as CARB notes in cap-and-trade regulatory documents, even though historical examples and economic theory show that negative environmental impacts *caused* by the cap-and-trade program are highly unlikely, they cannot be ruled out with absolute certainty. As a response, CARB has proposed to adaptively manage the program by responding to observed changes in environmental quality associated with program implementation. Accordingly, we support development of a well thought out adaptive management strategy. Case law and regulatory examples of adaptive management are plentiful. We recommend CARB embrace this opportunity and create an adaptive management strategy that safeguards the program's environmental integrity and ensures adherence with the protections required by AB32.

**The current proposal for adaptive management needs more detail and commitment** - To date, CARB's provisions related to adaptive management have consisted of references, inferences and statements of actions yet to be taken. In our view, more clarity, definition and concrete action planning for adaptive management is needed. For example, while the AB 32 Scoping Plan, cap-and-trade documents and agency statements have referenced the need to evaluate and track 1) air quality conditions in environmental justice communities, 2) the compliance methods and permit modifications of regulated entities, and 3) the impacts from use of biomass, no trigger levels for administrative action or evaluation have been identified. These triggers are of critical importance both for determining how regulatory compliance options may be affected by the adaptive management strategy, and for demonstrating that concerted planning has occurred to protect the overall environmental health from unexpected impacts. Furthermore, defining triggers now will be important for determining what information must be gathered and evaluated routinely.

**Adaptive management should include a wide range of environmental impacts, such as ecosystem health** - Thus far, the approach to adaptive management outlined in CARB's rulemaking documents has been focused primarily on the potential for localized air quality impacts to be caused by the program. We strongly agree that local air quality impacts are critical, but we would urge CARB to expand their adaptive management focus to other environmental factors, such as the potential ecosystem impacts. For example, in an April 2011 letter, multiple environmental NGO's joined together to offer comments to CARB on how to adaptively manage biomass, particularly the potential impact of treating biomass combustion as carbon neutral. Since that letter, many have met with CARB staff and have received positive statements about the agency's direction and focus. Accordingly, we submit this comment to memorialize that recommendation for managing biomass combustion, and to ensure the commitment to ecosystem impact response planning is retained. As we have said in follow-up correspondences, we appreciate CARB's willingness to engage with this important issue and we look forward to continued work in this area.

**Adaptive management should include both responsive and proactive action planning** - Within the discussion documents related to adaptive management released thus far, CARB has identified a need to respond to observed environmental conditions caused by the cap-and-trade program. While this reactive action planning is essential, it is not the full picture of necessary adaptive management. Rather, based on the information available to the agency, we also recommend that CARB's adaptive management strategy can and should incorporate indicators of potential future changes to environmental quality caused by the program, thereby allowing the program to be both responsive as well as proactive in ensuring the environmental integrity (and statutory compliance) of the program.

**Recommendations for specific adaptive management provisions** - We believe an adaptive management strategy tied to the cap-and-trade regulation can satisfy many important regulatory aims and requirements, including compliance with CEQA, adherence to the principles of environmental justice, and assurance of stable market operations and credit supply. Therefore, as CARB moves forward with developing adaptive management, we recommend the following provisions be considered for incorporation:

- Identification of metrics that should be tracked that are necessary to understand whether deleterious impacts on public health are occurring, both in environmental justice communities and non-environmental justice communities.
- Identification of benchmark values (including identified impact levels<sup>1</sup> where appropriate) for each identified metric that can act as a trigger for action by the agency.
- Identification of information about trading activity that can be monitored to indicate if an increase of emissions is likely to occur. That is, indicators of market or permit activity (both at

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<sup>1</sup> For the purpose of this letter, the "identified impact level" is the value of an indicator or metric that, when reached, means an impact has been observed and some adaptive action will be taken by CARB or other agency with jurisdiction.

the macro-scale and at a localized neighborhood scale) that would lead the regulator to believe that emissions may be increasing in the near future (prior to those emissions actually increasing) both in environmental justice communities and non-environmental justice communities.

- Identification of steps that can be taken, established as a hierarchy of action, for preventative and responsive action planning for public health and air quality protection. Existing adaptive management strategies identified in the regulatory documents should be included in addition to new measures. Prioritizing strategies based on the degree of observed harm or impact level should be considered within this approach.
- Identification of indicators and impact trigger levels that are useful to determine whether forest biomass stocking changes or ecosystem health impacts are occurring due to the treatment of biomass as a carbon neutral fuel source (see NGO letter on biomass dated April 8, 2011).
- Identification of steps that can be taken, established as a hierarchy of action, for preventative and responsive action planning to respond to observed forest biomass stocking changes or negative ecosystem health impacts.

**The adaptive management strategy should be in place no later than when facilities begin taking action to meet compliance obligations under the program.** For an adaptive management strategy to be effective, it should enable an agency to respond to conditions when and if they arise, and with as much forethought and deliberation as practicable. Accordingly, in putting together the strategy, the agency should have already performed scenario assessment and identified steps of action based on likely scenario outcomes. When applied to the California cap-and-trade rule, having an adaptive management strategy in place when needed means that it should be in place when covered facilities begin taking actions to meet compliance obligations (buying and trading permits, making reductions, etc.) under the program.

Our research has shown that examples of adaptive management strategies exist in the literature, and certain important principles can be followed (used as guideposts) as CARB moves forward with the cap-and-trade program. Similarly, examples of adaptive management plans adopted by the Environmental Protection Agency and the Department of the Interior demonstrate that, when implemented effectively, a well designed adaptive management strategy may allow agencies to address uncertainty and even survive judicial scrutiny of their chosen regulatory approach. See J.B. Ruhl and Robert L. Fischman, Adaptive Management in the Courts, 95 MINN. L. REV. 424 (2010).<sup>2</sup>

Based on our research and the timeline for action available to CARB to write and adopt an adaptive management strategy, we think there is still a significant opportunity to make the cap-and-trade program stronger with robust adaptive management and we look forward to working with CARB in this process.

Thank you for your time and consideration,

Sincerely,

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Environmental Defense Fund

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Natural Resources Defense Council

Paul Mason  
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Jim Metropulos  
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<sup>2</sup> See also J.B. Ruhl, Regulation by Adaptive Management—Is It Possible, 27 MINN. J.L. SCI. & TECH. (2006).