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October 19, 2011

California Air Resources Board
James Goldstene, Executive Officer
1001 I Street, Sacramento, California

Submitted via weblink at:
http://www.arb.ca.gov/lispub/comm/bcsubform.php?listname=capandtrade11&comm_period=N

Re: Response to Comments on the Functional Equivalent Document Prepared for the California Cap on GHG Emissions and Market-Based Compliance Mechanisms

Dear Mr. Goldstene and the California Air Resources Board:

On behalf of our more than 300,000 members and activists, the Center for Biological Diversity submits these comments on the Response to Comments on the Functional Equivalent Document Prepared for the California Cap on GHG Emissions and Market-Based Compliance Mechanisms ("staff response"). We commend the staff of the California Air Resources Board ("ARB") for their thoughtful work on this rule and their commitment to implementing California's landmark effort to reduce statewide greenhouse gas ("GHG") pollution. These comments focus on the sections of the staff response listed as CBD 1, CBD 4, and CBD 5, particularly the issues of the Compliance Offset Protocol U.S. Forest Projects ("forest protocol"), the exemption from compliance obligations for forest biomass combustion, and the Proposed Adaptive Management Plan for the Cap-and-Trade Regulation, published October 10, 2011 ("adaptive management plan").

The Center for Biological Diversity submitted extensive comments on the proposed Cap-and-Trade regulation and functional equivalency document ("FED") on December 15, 2010, on the first set of proposed modifications in August 11, 2011, and on the second set of proposed modifications on September 27, 2011. Those comments remain relevant and are hereby incorporated by reference in their entirety. We ask that all of our previous comments on the Cap-and-Trade regulation and FED, and all exhibits to those comments, be included in the administrative record of proceedings in this matter.

1. The range of alternatives analyzed must include alternatives that would mitigate the identified impacts to forests.

As the staff response repeatedly notes, the FED discloses the risk that the forest protocol may significantly affect biological resources. See staff response at 15 and 19. The staff response also acknowledges the need for the analysis to include alternatives that mitigate the impacts identified in the FED. "At the programmatic level, the fundamental purpose of the alternatives analysis is to determine if other broad program approaches, such as direct regulation or adoption

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of a carbon fee, might achieve the project objectives and lessen or avoid the potential adverse environmental impacts attributed to the proposed project." Staff response at 13.

However, the same section of the staff response argues the opposite, stating that the analysis need not include alternatives that would mitigate the identified impacts to forests. "The alternatives do not focus on a single sector (such as food processing) or a single action (such as facility relocation), because this would be too narrowly defined to achieve the AB 32 GHG reduction goal." Staff response at 13. This comparison is unhelpful and misleading. The FED does not identify potentially significant impacts for food processing or facility relocation that could be avoided by feasible alternatives. The FED does identify potentially significant impacts to forests associated with adoption of the forest protocol. Moreover, unlike the food processing sector or facility relocation, the forest protocol is a freestanding element of the cap and trade program that has been circulated, and may be adopted, by ARB separately from other aspects of the regulation. Accordingly, the FED should have identified feasible alternatives, not just to the adoption of the cap and trade program as a whole, but within the forest protocol that could feasibly avoid significant impacts. Our comment letters on the forest protocol submitted throughout this process suggested a number of steps ARB could have taken in this regard. ARB's decision not to consider these alternatives is erroneous.

2. The proposed adaptive management plan is not an adaptive management plan.

As explained in the staff response, the "staff's proposed adaptive management plan describes ARB's commitment to a specific process, including an analysis of available data, triggers for further analyses to determine whether there are localized air quality impacts or adverse forestry impacts, and if impacts are identified, the process for devising specific mitigation measures." Staff response at 18. However, the proposed adaptive management plan (October 10, 2011) includes no policy "triggers" or indicators of forest impacts, only a plan to hire a contractor to develop them in the future. "The ARB contractor will develop Tier 1, Tier 2, and Tier 3 indicators and analyses." Adaptive management plan at 26. Without specific indicators and analyses, this document does not constitute an adaptive management plan so much as a plan to develop an adaptive management plan.

ARB has a responsibility under CEQA to provide feasible mitigation for the regulation's significant impacts. ARB has conservatively concluded that the Forest Protocol may have significant and unavoidable impacts on the environment. CEQA thus requires ARB to identify and incorporate all feasible mitigation measures to minimize these impacts, and to make specific findings regarding the infeasibility of other measures that could reduce those impacts to a less-than-significant level. *See* Pub. Res. Code §§ 21002, 21002.1(b), 21081; CEQA Guidelines § 15091. An EIR may propose a plan to implement mitigation following project approval—for example, an adaptive management plan—provided that the plan includes both performance standards and a clear commitment to mitigation. *See* CEQA Guidelines § 15126.4(a)(1)(B); *Sacramento Old City Assn. v. City Council of Sacramento* (1991) 229 Cal.App.3d 1011. However, a plan that does not set out any clear "criteria or alternatives to be considered," but rather "does no more than require a report be prepared and followed," is "inadequate" under

CEQA. *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 794. The adaptive management plan here, like the plan found "inadequate" in *Endangered Habitats League*, lacks specific performance criteria and clear mitigation commitments.

3. The FED misunderstands the concern that the Forest Protocol will incentivize conversion of native forests to even-age plantations.

The staff response misunderstands and mischaracterizes the concern that the forest protocol will incentivize conversion of native forests to plantations. "Furthermore, modeling forest growth, mortality, and harvesting over time indicate that it would be unlikely for a forest project to remain eligible (i.e., demonstrate a continued net reduction in carbon sequestration), if conversion to a single-species, single-aged plantation occurred (FED, page 304)." Staff response at 20. To be clear, it is not our primary concern that registered forest projects could be converted to plantations (although that would undoubtedly be an adverse impact to biological resources). Given the relatively slow rate of tree growth in the first decade following clearcutting and replanting, and the "10-year look-back" period in the forest protocol, it is unlikely that it would be profitable to register regenerating plantations as forest projects until at least 10 years after harvest and replanting. Rather, our concern is that large timber operations would be incentivized to convert native forests (with diverse structures and multiple species) to even-age plantations with the expectation of registering them as projects 10 years or more after replanting. Also, the protocol incentivizes such operations to concentrate and increase intensive harvesting in watersheds with forest projects (but outside the project boundaries) because such activities suppress the assessment area baseline against which the forest project is compared.

4. The adaptive management plan fails to address the potential impacts to forests resulting from the exemption of forest biomass combustion from compliance obligation.

In response to our comments that the exemption of forest biomass combustion from compliance obligation would have adverse impacts on forest resources, the staff response points to the economic analysis that purportedly found no indication that the exemption from compliance obligation would increase the combustion of biomass feedstocks. "The Updated Economic Evaluation of California's Climate Change Scoping Plan, which includes a cap-and-trade program, used the ENERGY 2020 model to assess the potential changes in energy use, both type and volume, brought on by the proposed Cap-and-Trade Regulation. The model did not indicate that the use of biomass would increase in response to the proposed Cap-and-Trade Regulation, and accordingly such an increase was not identified as an impact in the FED." Staff response at 22.

The cited model may not have indicated that the proposed regulation would incentivize biomass use, but the model was not necessarily designed to explore whether this impact would occur. Put another way, the model does not demonstrate that this impact will not occur. The FED simply failed to explore the possibility that the cap-and-trade regulation will incentivize additional biomass development.

Also, the staff response states that any increase in the combustion of biomass feedstocks is due to the RPS and LCFS, not the compliance exemption in the cap-and-trade rule. "Increased use of biomass for energy generation created by other state policies and initiatives, such as the Renewable Portfolio Standard, is discussed in the FED (see pages 351-352)." Staff response at 22. Once again, however, nothing in the cited portion of the FED indicates that the cap-and-trade regulation will not cause any increase in demand for forest biomass or otherwise incentivize biomass development. Nor does this portion of the FED clearly demonstrate that any increase in biomass utilization or development would be attributable only to the LCFS or RPS. By focusing solely on project footprints and agricultural conversions, moreover, this section further fails to consider the extraction of forest biomass fuels to meet increased demand.

As stated in our prior comments, the proposed regulation creates specific incentives for biomass by exempting emissions from compliance obligations and by creating opportunities for biomass facilities to obtain free allowances if they "opt in" to the system. These incentives, in the context of the RPS program, may lead to increased biomass development at the expense of less carbon-intensive technologies. The result of these incentives thus could be an overall increase in greenhouse gas and other air pollutant emissions, in addition to impacts on forests and associated biological resources. The FED did not analyze these potential impacts.

5. ARB has failed to demonstrate that Environmental Performance Standards are legally infeasible.

In response to our comments that environmental performance standards would help protect forests from adverse or unintended impacts from the forest protocol, the staff response states that such standards are legally infeasible. "With regard to consideration of Environmental Performance Standards, the commenter recommends their use for the Forest Offset Protocol and expresses concern regarding ARB's conclusion that they would be infeasible as applied to the Cap-and-Trade Regulation. The FED explains on page 370 why the use of Environmental Performance Standards is not feasible. The reasons are both practical (i.e., inability to cover the spectrum of potential sites and circumstances for Forest Offset projects) and legal (i.e., the potential for California-defined environmental standards to be inconsistent with the laws and regulations of other jurisdictions). Further, in California, defining Environmental Performance Standards is not necessary because criteria are established by existing environmental protection laws and regulations." Staff response at 25.

However, ARB has failed to demonstrate that Environmental Performance Standards are legally infeasible. Ideally, Environmental Performance Standards would exceed the minimum requirements of California and other jurisdictions. Offset projects are voluntary; if ARB chose to do so, it could dictate standards that exceed current regulatory requirements, which would in fact be entirely consistent with AB 32's requirement of maximizing environmental co-benefits. The establishment of Environmental Performance Standards thus would not "conflict" with various jurisdictions' laws regulating forestry; rather, such an approach would simply hold participants in a voluntary market to a single, high standard that both bolsters offset project quality and helps to maximize environmental co-benefits in accordance with AB 32. Embracing

minimum regulatory standards, in contrast, whether those of California or other states, does neither.

Furthermore, the fact that many of the potential data sources identified in the adaptive management plan with respect to forest impacts are not available for lands outside of California will significantly limit the ability of an adaptive management plan to detect adverse forest impacts. The potential options for addressing forest impacts in jurisdictions outside of California may similarly be limited.

6. The forest protocol fails to accurately account for GHG emissions associated with the soil carbon pool and lying dead wood.

In previous comments we have raised the issue that the forest protocol fails to accurately account for GHG emissions associated with the soil carbon pool and lying dead wood. See CBD comment letter to ARB, August 11, 2011, at 6. Subsequent modifications to the forest protocol have not addressed these inaccuracies. The result is that offset credits from some forest projects could substantially underestimate the GHG emissions, leading to a substantial overestimation of GHG benefit. In some cases, these fundamental accounting errors in the forest protocol could lead to the generation of significant amounts of offset credits from forest projects that in reality are net emitters of GHG.

A coalition of conservation organizations submitted a proposal to address these accounting errors prior to the adoption of the forest protocol in December 2010. See comment letter December 13, 2010. Also, at the time of the hearing, the Climate Action Reserve ("CAR") issued a number of white papers that identified the accounting errors in the forest protocol. We have previously submitted to ARB those white papers and our comments to the Climate Action Reserve.

The CAR white paper on soil carbon found that "[h]igh disturbance site preparation activities, such as plowing, deep ripping, etc., will have significant negative effects on soil carbon, with potential losses as high as 30%, and should be avoided." CAR paper at 2. Considering that "[s]oil carbon accounts for 50-75% of all forest carbon in temperate and boreal regions, so small changes in soil carbon can have significant influence on total ecosystem carbon storage," the GHG emissions of harvesting activities can be substantial. CAR paper at 2. The CAR paper found that the carbon losses associated with the GHG emissions associated with harvesting can persist for decades. "Available research shows that soil carbon lost during harvest activities is recovered in some systems within 50 years, but the interval is longer for more northern, less productive systems, and can be more than 100 years in some cases." CAR paper at 3.

The CAR paper on lying dead wood found that "LDW is an important pool of carbon throughout the U.S." and "[o]n average, LDW makes up from 1.7% to 4.6% of total forest carbon, though in individual stands the percentage can be higher." CAR paper at 3. Obviously the loss of 4.6% of the total forest carbon could drastically alter the carbon impacts of a forest project, easily outweighing the estimated tree growth a project is reports in a given year. However, the removal of materials that would affect this carbon pool, and the associated GHG

emissions, are not reported under the forest protocol. Furthermore, the CAR paper points out that the ecosystem and wildlife habitat value of lying dead wood is also critically important. "Though carbon storage in LDW is important, the other values that LDW provides, such as wildlife habitat, erosion protection, water storage, and nutrient cycling, may be even more important. While other forest structures (e.g., live trees) could sequester additional carbon in the absence of LDW, there are no replacements for these other values." CAR paper at 3. However, the forest protocol does not require reporting of these impacts, and does not include environmental standards to protect them.

7. The removal of the requirement that the transport of woody biomass materials not lead to the transport of insects or tree diseases may result in the spread of insects and tree diseases.

"The commenter indicates that the removal of Section 95852.2(a)(4)(C) would invite transport of infected and infested materials, thereby possibly resulting in a new environmental impact. ARB disagrees. The California Department of Forestry has oversight of the harvesting of wood and wood wastes, and is required to identify species known to harbor insect or disease nests and approve transportation." Staff response at 29. However, all of the citations ARB offers in defense of this statement state only that there are various sections of the PRC that grant the California Department of Forestry authority to limit the transport of infested materials, should they decide to. That is obviously very different from having a mandate and the capacity to do so. Thus, our comments stand that the elimination of section 95852.2(a)(4)(c) invites the transport of infested and infected woody materials. The staff response simply proposes to assign to the California Department of Forestry the blame for any spread of disease or infestation that results from this policy.

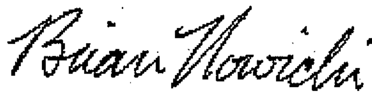
Also, the Staff Response dismisses the concern of spreading infestation as being limited by economic limitations. "Notwithstanding the protection of regulatory restrictions on the potential transport of invested plant or woody materials, the economics of biomass power plants would preclude transport of materials far from the plant or woody fuel source...Prior environmental investigations have found that within 50 miles, the transport of biomass fuel can still be viable and beyond that distance, the transport begins to be economically infeasible. Therefore, if any material were to carry an infestation, the environmental effect would be minimized by the economic limitations of the cost of fuel transport." Staff response at 30. However, the economic scenario referred to in this section exists only prior to the implementation of the compliance exemption for biomass combustion. The added economic incentive provided by the exemption of woody biomass combustion from compliance obligation could result in substantially expanding the distance at which it will be economical to transport woody feedstock.

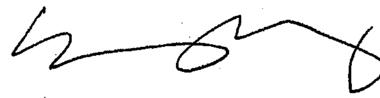
Furthermore, the staff response appears to misunderstand the dynamics of both the operation of biomass plants and the spread of forest insects and disease. "Once at the plant, the fuel would be combusted and the risk of spreading an infestation would be eliminated." Staff response at 30. To be clear, forest biomass feedstock is not offloaded from the transport trucks directly into a generator. Instead, feedstock is often stored for days or weeks in piles at the facility, potentially allowing for the dispersal of insects to the surrounding forest. In fact, even the transportation of these woody materials is an opportunity for the dispersal of insects and disease, in the form of wood and bark falling from the load in transit.

Thank you for your consideration of these comments.

The Center for Biological Diversity commends the staff of the California Air Resources Board for their thoughtful work on this rule and their commitment to implementing California's landmark effort to reduce statewide greenhouse gas pollution. We look forward to working with you to address these issues and to improve the integrity of the Cap-and-Trade program. Please contact us if you have any questions. Thank you for your consideration of these comments.

Sincerely,





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