December 15, 2022

Ms. Liane Randolph
Chair, California Air Resources Board
1001 I Street
Sacramento, CA 95814

Submitted electronically

Dear Chair Randolph,

We appreciate the opportunity to provide feedback on California's US Forest Carbon Projects Compliance Offset Protocol (hereafter, *Forest Protocol*). Environmental Defense Fund (EDF) supports CARB's instinct to continuously evaluate and seek opportunities for continuous improvement in its implementation of California's ambitious climate agenda.

EDF has long and deep experience in promoting policies to mitigate the urgent threats associated with climate change. We were original co-sponsors of AB32 and have been deeply involved in advocating aggressive implementation of the state's goals since 2006. One of us (Eric Holst), was a member of the Climate Action Reserve (CAR) stakeholder group that met in the 2008/09 timeframe to draft the revised forest offset protocol that served as the starting point for the protocol eventually adopted by CARB in 2011. EDF continues to advocate for aggressive climate action at the state, federal and global level. We have a particular interest in ensuring a strong role for natural climate solutions especially in the forest sector.

It is in with this context that we offer the following comments on the US Forest Projects Compliance Offset Protocol:

Equity and Justice Concerns

Carbon markets have been an important source of income for tribes, exemplified as around half of the total number of forest carbon offsets issued by the California Air Resources Board were awarded to Alaska Native corporations and tribes from the contiguous United States. This revenue has been used to support improved forest management and land purchase. However, participation in carbon markets requires some forfeiture of land sovereignty, which is a potential barrier for ensuring just and equitable tribal participation. While the waiver of sovereign immunity is in place to ensure that participants in the carbon market will carry out the terms of offset project over a set period, this requirement is a barrier to participation for some tribes. EDF therefore recommends that CARB continue to explore opportunities for access by tribes to its various incentive programs. In addition, the establishment, management, and crediting of

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forest carbon projects should account for equitable land access and cultural relationships of local communities with the land.

EDF is currently authoring a report addressing the critical Environmental Justice (EJ) implications surrounding carbon crediting. This report will address several concerns, such as the reality that while offsets may mitigate net greenhouse gas emissions that impact warming at a global scale, they do not mitigate the localized co-pollutants associated with emissions which impact the air, water, health, and quality of life of local communities. Therefore, facilities buying offsets to meet compliance may cause negative health consequences compared to on-site emission reductions. Furthermore, polluting facilities are disproportionately concentrated in low-income communities and communities of color, and the use of off-site solutions in lieu of on-site interventions can perpetuate, and potentially exacerbate, inequities in overburdened communities. EDF therefore recommends that CARB explore options for ensuring that that those regulated entities that elect to purchase offsets concurrently take steps to mitigate for co-pollutants.

Role of Forests in meeting California's climate goals

California deserves credit for making a commitment to natural climate solutions early on in the implementation of AB32 including its investment in the Forest Protocol. In recent years, the State has confronted a historically challenging wildfire crisis highlighting the vulnerability of forest carbon stocks across most of our forests and woodlands. The early focus on the Forest Protocol helped establish rigor around quantifying the value of actions in the forest sector to secure forest carbon stocks. In recent years, CARB and its agency partners have begun to focus more attention on increasing climate benefits in the forest sector through other policy mechanisms including especially efforts to avoid catastrophic wildfire through the California Climate Investments initiative. Continued focus by CARB on the largest sources of flux in the forest sector is essential to ensure that California meets its ambitious climate goals.

Feedback on the implementation of the protocol

Considerable focus has been directed at the implementation of the baseline approach used by the Forest Protocol, both by program participants and outside analysts. Because EDF participated in the CAR Forest Protocol stakeholder group, we know that the group worked hard to make improvements to previous approaches by establishing one of the first standardized baseline methods, one that relied on dispassionate data sources to establish a common practice standard to prevent unrealistic counterfactuals from being used to overestimate additionality. At that time, this approach was novel and somewhat controversial among project proponents who felt that it would diminish crediting opportunities. California's leadership in using the common practice approach is laudable and has influenced the development of other systems currently in use in voluntary markets.

But as with any novel approach, it is useful to evaluate the experience of implementation and to assess whether new methods or data could be applied to further improve accuracy and efficacy. More specifically, in response to recent criticism, it should be examined whether current methods of calculating common practice account for all relevant ecological and geographical variability in carbon storage to ensure that all credited carbon truly represents additional carbon storage greater than a reasonable counterfactual. Our EDF colleague Nina Randazzo, along with coauthors Doria Gordon and Steve Hamburg, will soon publish a paper examining the common practice calculation methodology in the Forest Protocol. Dr. Randazzo has developed new methods of using existing data sources to evaluate standard carbon stocking patterns in

the landscape grounded in ecological attributes and gradients. That paper has been accepted for publication and will be published online soon in *Ecological Applications*. We would be happy to make that manuscript available to you and we will let you know when it is published. This paper, along with a recent critique by Badgely et al (2021), validate the wisdom of using a common practice approach to baseline establishment. Each paper also offers methods that should be considered as part of CARB's efforts to continuously improve common practice calculation methods and to ensure avoidance of adverse selection and potential over-crediting.

We would also like to flag that our EDF colleague Amy Hughes has prepared a report evaluating all existing Improved Forest Management (IFM) crediting protocols covering US projects. That report is under review now and will be released in 2023. Among our recommendations in that forthcoming report is for crediting agencies to begin serious consideration of adopting larger-scale (sometimes called jurisdictional) crediting strategies such as those being used today in tropical forest settings. Schwartzman et al (2021) articulated some of the benefits of using larger scale crediting approaches which could mitigate against challenges commonly associated with project-level accounting related to additionality, leakage, and permanence. A scaled crediting approach better ensures additionality by addressing adverse site selection (gaming) as they account for all emissions within the region, better accounts for leakage as scaled approaches account for all shifts in emissions inside the region, and better ensures permanence through pooling across time and space which reduces risk that reversals will impact net benefits of the program. This large regional approach may also allow greater participation from family forestland owners and others who find the costs associated with participation in the current Forest Protocol an insurmountable barrier. We also believe that regional approaches will require new production systems and infrastructure development that are more likely to result in durable system changes which could, in turn, amplify natural climate solutions across large landscapes. EDF is committed to piloting this approach in California over the coming years using voluntary markets to demonstrate proof of concept.

Thank you for your ongoing commitment to climate leadership and piloting science-based and innovative strategies to reduce emissions, support communities, and preserve California's natural resources. We look forward to ongoing partnership with CARB and would welcome the opportunity to discuss our research with your staff.

Sincerely,

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References:

Badgley, G., Freeman, J., Hamman, J. J., Haya, B., Trugman, A. T., Anderegg, W. R. L., & Cullenward, D. (2022). Systematic over-crediting in California's forest carbon offsets program. *Global Change Biology*, *28*(4), 1433–1445. https://doi.org/10.1111/gcb.15943

Randazzo N., Gordon D., Hamburg S.. (2022) Improved assessment of baseline and additionality for forest carbon crediting. *Ecological Applications*.

Schwartzman, S., Lubowski R., Pacala S., Keohane N., Kerr S., Oppenheimer M., Hamburg S. (2021). Environmental integrity of emissions reductions depends on scale and systemic changes, not sector of origin. *Environmental Research Letters*. 16. 10.1088/1748-9326/ac18e8.