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Ken Pimlott  
CalFire Director  
Chair, Forest Climate Action Team  
1416 9<sup>th</sup> St.  
PO Box 944246  
Sacramento CA 95814

*Submitted electronically to [fcac.fire@fire.ca.gov](mailto:fcac.fire@fire.ca.gov)*

**Re: Comments on draft Forest Carbon Plan**

Esteemed Director Pimlott:

On behalf of Friends of the Earth – United States (FOE-US) this letter is provided as comment on the *Draft Forest Carbon Plan* (Draft Plan).

Our organization participated in the March 23, 2016 Public Meeting/Workshop that took place in Sacramento on the *Draft Forest Carbon Plan Concept Paper* (Concept Paper), and we also subsequently provided written comments on the Concept Paper. We have taken pains to review the Draft Plan closely, and we will comment unequivocally that the Draft Plan is inadequate and deficient in its scientific and legal foundations. We communicated many of these concerns when participating in the Feb 16, 2017 Public Meeting and Workshop on the Draft Plan, also in Sacramento.

We are compelled to communicate in written form that it is of great concern that the numerous inadequacies that we identified in the Concept Paper and pointed out explicitly in our comment letter regarding the Concept Paper were not addressed in any substantive manner in the Draft Plan. This letter will not be exhaustive in examining the absence in the Draft Plan of key conceptual and scientific recommendations that we made in comment on the Concept Paper, but there are a few crucial recommendations that we made in comment on the Concept Paper that merit revisiting once again in providing recommendations for strengthening the Draft Plan.

***The Absence of Consideration of the Concept of Permanence Is a Fatal Flaw***

Our comments on the Concept Paper made the specific recommendation that “the concept of *permanence* needs to be revisited.” To our complete astonishment, the Draft Plan makes no mention of the concept of *permanence* whatsoever. This is a fatal flaw to the Draft Plan in terms of the plan having any relevance in terms of climate change mitigation. The question of *permanence* is an indispensable consideration for evaluation of the climate benefits of land-based ecosystem carbon sequestration.

Carbon sequestration “plans” that are devoid of a design feature to address the question of *permanence* are essentially meaningless when it comes to climate change mitigation and reducing concentrations of greenhouse gases in the atmosphere. Policies aimed at climate change mitigation must reflect an understanding of the lasting impact of greenhouse gas emissions, and thus the parallel importance of *permanence* in carbon sequestration and storage to prevent emissions of carbon back into the atmosphere. The Draft Plan fully fails to discuss, address or recognize the fundamental relevance of this consideration. In fact, the word *permanence* does not even appear once in the Draft Plan. We recommend, once again, that the concept of *permanence* be revisited in order that the rewrite of the Draft Plan contain even a remote resemblance to a viable and scientifically defensible climate change mitigation strategy for the state’s forests.

It is also worth mentioning that any type of carbon sequestration plan must also address certain design considerations beyond permanence to be scientifically defensible. Other indispensable design concepts around which a viable plan should be constructed are *heterogeneity*, *uncertainty*, and *additionality*. Until these fundamental scientific questions regarding the effectiveness of carbon sequestration in forests as a climate mitigation policy tool are raised and addressed the Plan will remain, in technical terms, dead on arrival.

### ***Fire and Uncertainty in Forest Carbon Strategies***

An example of how the Draft Plan could be improved by integrating key carbon sequestration plan design principles would be to describe fire as an indispensable ecological element of nutrient cycling that naturally contributes high levels of *uncertainty* to carbon sequestration and storage. The evolutionary role of fire in California’s forests is a classic example of the way in which instant *uncertainty* arises from the biological process of carbon sequestration and carbon cycles that include naturally occurring emissions. Fire evolved forests are particularly uncertain, characterized by cyclical and even volatile carbon cycles that required millennia to stabilize maximum carbon stocks – cycles which have been disrupted and interrupted to extreme levels due to management choices made since European cultures began to dominate human economic activity in California’s wildlands. This question of *uncertainty* needs to be recognized and embraced in order that the design of the plan will reflect best practices and provide any possibility of being effective in assisting in avoiding the worst impacts of human caused climate change.

### ***Celebrating Environmental Justice in California’s Fire Evolved Forests: Prioritize Traditional Ecological Knowledge***

Our organization is compelled in this letter to point out the absence of explicit reference to *Traditional Ecological Knowledge* and the apparent lack of success in bringing California’s native peoples into the design and development of the Draft Plan. There is no valid excuse for explaining why it is that the Forest Climate Action Team failed to ensure that tribal representatives were present and involved with the Public Workshop on the Draft Plan. There is an imperative to address the role of fire as a management tool in a holistic manner – who better to lead the way for the state than those people who used fire as a management tool for millennia, contributing to the steady state and biomass rich forests that were present here in California before their near complete liquidation? Any future iteration of the Draft Plan must include California’s tribes and emphasize *Traditional Ecological Knowledge* in order that these efforts are not only effective in addressing the threats of climate change but that they also respect the

most basic principles of Environmental Justice. It is also of grave concern that no reference was made whatsoever to the Environmental Justice Advisory Committee Community Meeting hosted by the Air Resources Board at the Karuk Tribal Offices in Orleans, Humboldt County, on Nov 4, 2016, at which *Traditional Ecological Knowledge* and climate change mitigation in California's fire evolved forests were discussed at length.

### ***Addressing Deforestation and Forest Degradation in California Is an Imperative***

Referring to the Draft Plan as concrete evidence, our organization recognizes that the relevant California natural resource management and regulatory agencies have spoken of the critical importance of forests in understanding, mitigating and responding to climate change. We support that position and are in favor of forest conservation in principle. As we have said before we strongly support establishing measurable and aggressive goals in reducing emissions from deforestation and forest degradation in the forests of California. This will most likely require a suite of policies that will reduce and eliminate the permitting of destructive forest management activities such as short-rotations, clearcutting and high-intensity variable retention, as well as promoting more holistic approaches to addressing the economic motors of forest destruction in California's globally important forests.

To that end we believe that there exists an imperative that a frank and science-based assessment of the legacy and current climate impacts of silviculture applications (i.e. industrial forestry and timber harvest) in California is provided as soon as possible. This includes addressing the legacy impacts of such practices in creating a landscape that is evolved to fire disturbance but exhibits volatile fire disturbance behaviors related to past deforestation and mono-culture plantation management. We are steadfast in our support for the state taking a key role in forging a just and equitable transition to a low emissions economic development path in rural California. Having accurate data that informs a robust science-based evaluation of the climate impacts of forest management practices is crucial to California providing the international global climate leadership that state is so eager to promote. We do believe that the modeling exercise underway at the National Lawrence Berkeley Lab (NLBL) is a very valuable process that merits support. Maintaining the independent nature of this modeling process is very important, and we insist that the Forest Climate Action Team continue to support the NLBL in furthering the modeling effort.

To that extent our organization attended both the Nov 7 workshop on "Natural and Working Lands" and the Dec 14 workshop regarding the carbon sequestration modeling project. Along with our support for the NLBL in continuing with this modeling exercise we have some concerns that there exists an absence of context when past deforestation is not adequately taken into consideration in modelling and policy development. This absence of context obfuscates the damage that has been done and continues to be done to California's forest carbon stocks from industrial timber harvest. This absence of context, a certain species of "landscape amnesia," permeates the Draft Plan, to its great detriment as a potential road map for stewarding California's forests as a climate change mitigation tool. What is clear from a substantial body of evidence is that the loss of biomass from California's wildland ecosystems has been and remains severe. Much of this contemporary and historic loss is due to deforestation and forest degradation resulting from human economic activities, such as timber harvest, mining, and cattle grazing. These activities have exacerbated the impacts on the ground in certain instances of naturally occurring disturbance regimes. Reducing the direct and indirect climate damage from

these industrial activities must be made a priority in a climate change mitigation plan for California's forests. Deforestation and forest degradation in the world's most important forests is not a phenomenon that occurs in an idealized and romantic land far far away, it is a serious historic and current problem in California and it needs to be addressed in an urgent manner for the state to establish effective climate change mitigation policy.

### ***Conclusion***

It is our conclusion that the Draft Plan is inadequate in meeting both the scientific fundamentals and legal requirements of a viable plan. Many of our technical and legal concerns are outlined and described in detail in the letter that we signed with other environmental and climate justice organizations and that was submitted as comment on the Draft Plan. We take this opportunity to reiterate our commitment to the substance contained in that letter.

As well, we take this opportunity to express the specific concerns that we have articulated above. It is exceptionally problematic that many key questions about California's forests and climate change are not asked. For instance, it is important now to transparently explore whether California's forests have started to pass or have already passed a key climate change tipping point in which our forests have become a source as opposed to a sink for greenhouse gases.

Another question to explore is the impact that our continued reliance on fossil fuels is having on our forests. Without question, it is the mobilization of fossilized geocarbon that is the primary driver of global climate change. Our forests are being subject to the stresses of climate change that is occurring due to our addiction to fossil fuels. It would be prudent at this juncture to explore what impact the burning of fossil fuels is having on our forests, and how effective would it be for our forests if California would respond to the scientific mandate to Keep Fossil Fuels In The Ground and dramatically reduce our emissions from all sources as soon as possible.

In closing, there exist worldwide concerns about weak institutions that are beholden to economic interests that through their extractive exploitation of forests and other key natural resources are severely undermining forest carbon based climate change mitigation strategies. The Draft Plan does little to alleviate concerns that California is immune from these dynamics of weak institutions that are beholden primarily to dominant economic interests instead of prioritizing people and the planet.

We insist that the Plan be thoroughly and complete revised in order that it be grounded in the best contemporary science and addresses long festering social injustices in rural California.

Respectfully,



Gary Graham Hughes  
Senior California Advocacy Campaigner  
[ghughes@foe.org](mailto:ghughes@foe.org)  
510-900-8807