

Prepared Statement of

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Chairman Grijalva, Ranking Member Bishop, and distinguished members of the Subcommittee; thank you for the opportunity to appear today to offer testimony regarding the role of federal lands in combating climate change in California. My name is Anthony Brunello and I serve as the Deputy Secretary for Climate Change and Energy for the California Natural Resources Agency (CNRA).

Federal lands account for approximately 43% of California’s total land ownership and are explicitly linked to California’s ambitious climate change and energy goals. For example, of the 32 million acres of forestland in California, the U.S. Forest Service (USFS) manages over 13 million acres that emit and sequester vast amounts of greenhouse gases (GHG) annually. Unlike most of the U.S., California forests are estimated to be net carbon sinks throughout the entire year, making California forestland a primary contributor to the large estimated net carbon sink of U.S. forests. The U.S. Bureau of Land Management (BLM) oversees vast landscapes with enormous solar, wind, and geothermal energy potential holding the key to powering millions of homes in California with renewable energy. And the U.S. National Park Service (NPS) manages habitat for many wildlife and aquatic species that could become extinct due to increasing temperatures, shifting precipitation and rising sea levels.

How the federal government will require its agencies and projects to account for, mitigate, sequester, and monitor GHGs, and how to adapt to future climate impacts, should be carefully weighed with their economic, environmental, health and safety considerations, while complimenting existing state climate policy state efforts. I hope my testimony provides insight into California’s climate policy context as the Subcommittee develops new climate policies for federal lands.

California Climate Policies Related to Public Lands

California has a detailed and aggressive portfolio of regulations and incentives to reduce the state's GHG emissions, increase its resilience to anticipated climate impacts, and to promote the sustainable development and utilization of renewable energy resources to meet state energy and climate goals. California's central climate policy is the Global Warming Solutions Act (or Assembly Bill 32, AB32) signed by Governor Schwarzenegger in 2006 to reduce state GHG emissions by roughly 28% below 1990 levels by 2020, and by 80% by 2050. This is a mandatory economy-wide target providing broad authority to our state air regulating body, the California Air Resources Board (CARB), to use regulatory and market-based mechanisms, such as a cap and trade system to reach this target.

In December of 2008 CARB adopted the AB32 work plan (referred to as "the Scoping Plan") to reduce an estimated 172 million metric tons of CO₂ equivalent (MMTCO₂E) by 2020, which includes measures related to public lands. Although AB32 is a state law, USFS and BLM were directly engaged with state efforts led by CNRA to meet forestry and renewable energy goals, in particular. For the forestry sector, the Scoping Plan sets a target for the entire state to sequester 5 tons or greater across *all lands including federal lands*.

Senate Bill 97 (SB97) was passed by the California State Legislature in 2007 requiring the state to provide technical guidance within the California Environmental Quality Act (CEQA) for how individual projects should assess GHG activities from their project activities. The guidelines will be complete by the end of 2009, but current plans require all projects to: provide an analysis of the potential effects of GHGs on the environment; provide a calculation of GHG emissions from direct and indirect sources; determine the significance of potential impacts assessed and supported by substantial evidence; avoid duplicative and costly analysis where it is possible to tier from state or regional efforts; adopt feasible mitigation where there are significant impacts; and allow Statements of Overriding Consideration.

Regarding renewable energy, Governor Schwarzenegger signed Executive Order (EO) S-14-08 in November 2008 requiring California utilities to get 33 percent of their electricity load from renewable energy sources by 2020. This order sets a renewable portfolio standard that leads the nation. A key constraint in reaching this goal is efficiently permitting renewable projects on public lands. The EO requires state agencies to develop a new streamlined review and approval process for renewable energy sites and to cooperate, through an MOU with BLM and the U.S. Fish and Wildlife Service (FWS), to create a streamlined process that will make it easier for wind, solar and geothermal sites to be built in California.

Regarding climate impacts in California, Governor Schwarzenegger signed EO S-13-08 also in November 2008 to enhance the state's management of climate impacts from sea level rise, increased temperatures, shifting precipitation and extreme weather events. The EO initiated California's first statewide climate change adaptation strategy with multiple Agencies and Departments to be complete by June 2009, requested the National Academy of Sciences to assess sea level rise impacts specific to California, and ordered state agencies to plan for sea level rise in designated coastal and floodplain areas for new projects. Given the serious long-term threat of sea level rise and other climate impacts to California's water supply and coastal resources, an adaptation plan is the first step in reducing assets at risk from climate change (largely from wildfire and flooding) that could significantly alter our state's economy, population and natural resources.

RECOMMENDATIONS

There are several opportunities for the Subcommittee to continue to provide climate and energy policy leadership for federal lands. California's recommendations below are based on four general goals including: (1) maintain and increase carbon stocks on public lands (in particular in reducing catastrophic wildfire); (2) increase public land resilience to future climate impacts; (3) ensure federal land management agencies have the financing, policies, and authority to quickly and effectively process renewable energy applications in sustainable locations; (4) and consider state actions to assess GHGs in Environmental Impact Assessments, such as in the California's Environmental Quality Act (CEQA), inform similar efforts for the National Environmental Quality Act (NEPA).

I. Maintain and increase carbon stocks on public lands

California's forests are under threat from development, wildfire, insects, pests, disease and climate change. Wildfire, in particular, is a major driver of forest carbon loss in California, and for the nation. Over 3 million acres of USFS land in California suffered wildfire damage between 2000 and 2008, with over 300 thousand acres completely deforested. Climate scientists are predicting that the situation will only worsen as temperatures rise.

California has been working closely with USFS Region 5 over the last 3 years to improve carbon accounting in state and federal forest lands, to develop joint forestry GHG emission reduction and forest adaptation projects and plans, and to develop markets for biomass residue from forest thinning (fuel hazard reduction and forest health) and timber harvesting. But, these efforts have been marginally funded and need additional support. We recommend the following specific activities to ensure we are increasing carbon stocks on public lands.

1. *Reforest areas that have been devastated by wildfire* - As mentioned, over 300,000 acres have been completely destroyed and deforested from fire over the last decade. Restoring and reforesting these lands could require over 30,000 acres per year that could eventually sequester 2-5 tons per acre per year. For the 300,000 acres of planting there is a potential of sequestering 2-8 MMTCO₂E every year. Replanting has the additional benefit of reducing mudslides and promoting habitat restoration.
2. *Fund the refinement and expansion of the USFS Forest Inventory Assessment (FIA)* – The FIA is essential in developing, tracking, and monitoring any national climate change policy efforts regarding land-use GHG emissions and sequestration. The refinement and expansion of plots in California are essential to demonstrating the contribution of forests to GHG reduction and to ensuring that California forests meet our state climate goals. FIA data will also, assumedly, be used to set state and national baselines for any carbon compliance effort including forests as a carbon offset.
3. *Expand forest fuels treatment on public lands using sustainable harvesting” practices and utilize extracted woody biomass to supplant carbon-based fuels* – A key “no regret” climate policy on federal lands is to support expanded fuels treatment that can reduce GHG emissions, reduce fire hazards, and improve public health. Current estimates indicate that less than 100,000 acres of USFS land are receiving fuels treatment annually, which could easily be doubled pending environmental review and, most importantly, funding under the Forest Land Use Management Plans. Estimates of biomass residue available through fuels treatment could be in the range of 500,000 to 1,300,000 tons that could be used for the production of liquid fuels, electricity, or thermal energy.
4. *Support research that tracks, monitors, and models GHG emissions from catastrophic wildfire, and research that shows project-level GHG benefits from fire mitigation and adaptation efforts.* The USFS has a strong research program that already has accomplished a great deal of important research about the relationship between forests and climate change. Supporting research that provides a foundation for tracking catastrophic wildfire GHG emissions and actions to reduce these fires will help the policy discussions move from arguing the science, to actually supporting projects to reduce these risks. One key component will be to finish life cycle biomass utilization analysis (this has been started, but needs further support). Completion of this research with additional efforts, will better establish the relationship of the utilization of biomass from fuel hazard reduction treatments as a feed stock source for the production of bioenergy (liquid fuels, heat, and electricity).

5. *Work with states to define how biomass extracted from private and federal lands could qualify as a renewable fuel under national renewable energy programs* – Currently, the Federal Energy Policy Act of 2005 excludes the use of biomass produced from federal lands. Due to the size of the federal ownership in California this excludes approximately half of the biomass that could be used to meet the state’s Renewable Portfolio Standard for increasing the amount of renewable energy. Governor Schwarzenegger has stated that 20% of renewable energy goals and 20% of renewable fuels should be produced using biomass feed stocks. It will be extremely difficult for California to meet these objectives if federal law prohibits use of biomass from federal lands. We welcome the opportunity to work with the Subcommittee on this topic.

II. Consider state actions to assess GHGs in Environmental Impact Assessments, such as in the California’s Environmental Quality Act (CEQA), to inform similar efforts for the National Environmental Quality Act (NEPA)

In California, SB 97 (as summarized above) requires the state to develop guidelines for CEQA concerning GHGs that reinforce CEQA’s *traditional framework for analysis*. SB 97 is one piece of a larger state approach to regulate and control the destabilization of atmospheric conditions via analysis and mitigation such as AB 32. However, unlike the holistic and retroactive approach of statutes such as AB 32, SB 97 only addresses project-specific impacts via the development and permitting processes throughout California, and only applies to projects falling within the discretion of “lead agencies”. Further, CEQA, unlike other regulatory processes, only addresses specific impacts from projects through litigation.

NEPA is the federal counterpart to CEQA, but is in no way governed or otherwise controlled by CEQA or its analytical approach. Like CEQA, when federal actors engage in activities that could impact the environment, they are required to analyze the potential impact of those activities. NEPA regulators may choose to look to the CEQA guidelines as an example of how to prepare for this analysis in NEPA documents. Since NEPA and CEQA environmental review are often done together, use of CEQA’s approach to GHGs could prevent inconsistent results analytically. Below are two specific recommendations including:

1. *As currently written, draft CEQA guidelines show a number of project recommendations that could be a helpful starting point for NEPA regulators* - These Guidelines include: an analysis of the potential effects of GHGs on the environment; a calculation of GHG emissions from direct and indirect sources; determination of the significance of potential impacts assessed and supported by substantial evidence; avoid duplicative and costly analysis where it is possible to tier from state or regional efforts; adopt feasible mitigation where there are significant impacts; and Statements of Overriding Consideration will be allowed. The amended Guidelines will not proscribe

thresholds of significance, require a hierarchy or menu for mitigation, or mandate compliance with statewide plans for greenhouse gas mitigation.

2. Consider use of general principles now being used under CEQA Guidelines:

- Lead agencies will maintain traditional discretion to establish thresholds and adopt mitigation measures;
- The GHG guidelines will not assume climate change is the impact, but rather allow lead agencies to develop science that fully describes potentially significant outcomes as a result of GHG emissions;
- Focus on tiering from regional and statewide plans for the reduction of GHGs that will assist local lead agencies in efficiently engaging in their obligations;
- Prevent conflation with other, related statutes;
- Consider all interested stakeholder views are considered to ensure impartiality and fairness

III. Reduce climate change risks to public lands in California

California is *already* experiencing climate change impacts. For example, it is scientifically documented that sea levels have increased by 7 inches in San Francisco Bay over the last century, increasing coastal erosion and pressure on levees for California's water supply in the Sacramento-San Joaquin Delta. The state has also seen increased average temperatures, more extreme hot days, fewer cold nights, a lengthening of the growing season, shifts in the water cycle with less winter precipitation falling as snow, and both snowmelt and rainwater running off sooner in the year.¹ The greatest link with federal lands, besides water, is the risk facing California forests and public lands as warmer and drier conditions lead to longer and more intense wildfires. In the next three decades the trend of these characteristically intense wildfires are projected to significantly increase.

EO S-13-08 provides direction for California's state agencies to develop multi-sector, multi-agency climate adaptation strategies by June 2009 based on climate change science funded by the California Energy Commission. Seven separate working groups were established (forestry, public health, infrastructure, oceans, agriculture, water, biodiversity and habitat) and have been coordinating adaptation strategies to reduce our risk to climate impacts.

Early state implementation efforts have shown several key areas where federal lands and federal management agency assistance will be instrumental to reducing California's climate risks. These include:

1. *Establish a federal climate policy adaptation team made up of all federal agencies to translate known science into actionable climate adaptation strategies* - For climate adaptation strategies on public lands to be

implemented, they will require policy changes that go beyond any single agency. A working policy team should coordinate and develop strategies based on collective science in cooperation with states. California's existing climate adaptation coordinating structure and policy guidance would and should fit directly with federal agency needs.

2. *Support the National Oceanic Administrative Agency's (NOAA) concept to develop a National Climate Service to coordinate climate research, and provide support to states to develop climate vulnerability studies* – Climate change science and adaptive responses to climate change are being developed in every other state *separately* at all levels of tribal, public, and private sector organizations. Most of this work should be coordinated within one central federal entity. These diverse decision-makers require better access to relevant and usable scientific information, and assistance in how to use it appropriately and effectively. Thus, it is not enough to just do more research; what is required is improved linkage and collaboration between the sciences and the decision-makers who can use scientific findings. The proposed NCS by NOAA could and should be this vehicle, but a final NCS should be developed in partnership with the states and provide support to their state climate adaptation strategy efforts.
3. *Fund more climate change research, especially related to economic impacts, to improve regional and state-level information on climate change and resulting impacts, and toward assessing climate mitigation and adaptation project effectiveness* - One of the most critical challenges that agencies and stakeholders face in managing climate change risks is the lack of scientific understanding. In some instances, it is a matter of gathering and making available the data and information that have already been collected. In other instances, it is a lack of continuous data that would be needed to detect change and determine environmental trends and causes. Identifying the costs and benefits of implementing specific adaptation strategies as well as of more general, over-arching strategies, such as a research program dedicated to adaptation, is a common need across sectors.
4. *Establish a system of Sustainable Habitat Reserves across federal lands in partnership with state and local partners* – To protect fish and wildlife across California from increasing threats to their habitat, the federal government should work toward establishing a set of habitat reserves for vulnerable species.

III. Ensure BLM and USFS have the financing, policies, and authority to quickly and effectively process renewable energy applications.

EO S-14-08 advances California's renewable energy goal of serving 33% of our demand by renewable energy resources. In particular, the EO directs state agencies to create comprehensive plans to prioritize regional renewable projects across all California lands based on an area's renewable resource potential and the level of protection for plant and animal habitat.

To implement and track the progress of the EO, the California Energy Commission (CEC) and the Department of Fish and Game (DFG) signed a Memorandum of Understanding formalizing a Renewable Energy Action Team (REAT). The REAT has started the Desert Renewable Energy Conservation Plan in the Mojave and Colorado Desert regions and identify other preferred areas that will benefit from a streamlined permitting and environmental review process. This will dramatically reduce the time and uncertainty normally associated with building new renewable projects.

1. *Support the California REAT process to ensure BLM and FWS are able to support state and federal renewable energy goals*
2. *Ensure full support for recently created BLM Renewable Energy Coordination offices that will expedite the permitting of wind, solar, biomass, and geothermal projects, along with needed electrical transmission facilities.* The action was taken to achieve the Congressional goal in Section 211 of the Energy Policy Act of 2005, which calls for the development of 10,000 megawatts of non-hydropower renewable energy projects on public lands by 2015.
3. *Ensure the USFS finalizes its renewable energy policy assessment in the near future and work with California to update individual forest plans to incorporate these policies when complete.* The Forest Service owns and manages nearly one-quarter of all the land in California. However, unlike the BLM, USFS does not have a consistent, statewide policy with regards to the development of renewable energy. Currently, individual National Forests typically determine the treatment of renewable energy on Forest Service lands inconsistently. As one might imagine, this leads to inconsistencies between Forests, even within the same Region.

CONCLUSION

Thank you Chairman Grijalva and members of the Subcommittee for the opportunity to appear today to offer testimony about how the nation can combat climate change on public lands. California is pleased to serve as a resource to the Subcommittee for future planning efforts.

ⁱ Moser, Susanne C., Guido Franco, Sarah Pitiglio, Wendy Chou, and Dan Cayan (2008). *The Future is Now: An Update on Climate Change Science, Impacts, and Response Options for California*, California Climate Change Center and California Energy Commission, PIER Energy-Related Environmental Research Program, Sacramento, CA, report in review.