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Dear ARB members:

We appreciate the opportunity to comment on the information presented at the November 7, 2016 **Public Workshop on the 2030 Target Scoping Plan Update: GHG Policy Scenarios, Natural & Working Lands, and Public Health Analysis**. ARB's focus on inclusion of natural and working lands in the state's emissions portfolio and as part of emissions reduction and carbon sequestration solutions is critical. We are therefore highly supportive of ARB's work to establish baseline emission numbers and to quantify emissions reductions and carbon sequestration from conservation and management of these lands.

We want to emphasize the importance of coastal wetlands and ocean habitats in this calculus. The ocean is often underrepresented in climate change discussions, but it has an important dual role: the ocean mitigates climate change and provides valuable ecosystem services for human communities. The physical ocean takes up a large amount of anthropogenically released carbon. In addition, the living ocean and coastal habitats are extremely important in the overall carbon cycle. While ocean biota and coastal and ocean habitats comprise a relatively small overall stock of carbon (globally), they are a critical engine of the cycle that pulls this CO2 into the deep sea.

Some of these habitats – especially mangroves, seagrasses, salt marshes, and soft bottom estuaries, often referred to as blue carbon -- sequester almost two orders of magnitude more carbon per unit area per year than terrestrial vegetation. Indeed, Dr. Peter Macreadie has stated: "If we just lost 1 per cent of the oceans' blue carbon ecosystems it would be equivalent to releasing 460 million tons of carbon annually, which is about the equivalent of about 97 million cars. It's about the equivalent of Australia's annual greenhouse gas emissions."

For California in particular, eelgrass protection and restoration is extremely important to carbon sequestration in the state. We are pleased that ARB includes a focus on protecting and restoring new wetlands and eelgrass habitats by 2030, but we would encourage an even greater commitment in these areas.

In addition, we encourage the ARB to recognize the importance of ocean habitat and biota as a whole system to the carbon cycle and to carbon sequestration. Ocean biota is an important, but still under-quantified, part of the carbon cycle. Heinze et al. in a 2015 publication stated "In a world with a lifeless ocean, the atmospheric CO_2 concentration would have been about twice as high as the pre-industrial one. A sudden hypothetical stop of marine life would increase the atmospheric CO_2 concentration by 200-300ppm." In short, without a living ocean, climate change would be nearly twice as bad.

Reductions in ocean biota – especially top predators - and the resulting trophic cascades can influence the trajectory of climate change by altering carbon flows and potentially increasing respiration (which adds CO2 to the atmosphere). In conjunction with direct human impacts, climate change threatens to alter food webs, which in turn threatens ocean functionality. This creates a feedback loop that exacerbates the effects of climate change, decreases the ocean's function as a carbon sink, and diminishes the ocean's ability to provide important ecosystem services to humans.

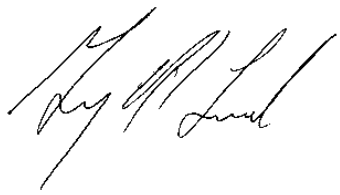
We recommend that in addition to an emphasis on protection and restoration of blue carbon habitats, the ARB collaborate with the Ocean Protection Council to develop an 'Ocean Carbon Strategies' Workgroup. At present, there is no formal structure anywhere in the world to bring together the science, government, public policy and private sector interests needed to devise options for combatting climate change with a focus on oceans, rigorously vet those ideas with scientific merit, and develop policies and strategies to test the resultant ideas at relevant scales (Greg Rau, personal communication, November 13, 2012).

Using AB 32 revenue, the Ocean Protection Council could initiate and support such a workgroup to achieve these goals. This is consistent with OPC's charge to implement the California Ocean Protection Act (COPA) and ARB's charge to reduce emissions and enhance carbon sequestration. Indeed, California (through the OPC) has already been at the forefront of convening new science on climate change with an ocean focus, through the West Coast Ocean Acidification and Hypoxia panel. A new Ocean Carbon Strategies Workgroup could build off of this ground-breaking, climate-related work done by the Panel to provide similarly forward-looking, practicable solutions for climate change mitigation.

Ocean Conservancy hopes ARB considers broadening its scope beyond coastal habitats to include recognizing the ways that a healthy, functional ocean system is consistent with ARB's climate mitigation goals.

Thank you again for presenting information on the Scoping Plan Update and for providing us the opportunity to comment.

Sincerely,



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