PORT of SAN DIEGO

Attachment A

VIA EMAIL

June 15, 2018

Shelby Livingston
California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: Joint Agency workshop on the California Natural and Working Lands Climate Change Implementation Plan Concept Paper

Dear Ms. Livingston,

The Port of San Diego (Port) appreciates the opportunity to provide comments in response to the Joint Agency workshop on the California 2030 Natural and Working Lands Climate Change Implementation Plan Concept Paper. The Port is entrusted with protecting the Public Trust resources of San Diego Bay, which include navigation, water-dependent commerce, recreation, fishing, and environmental stewardship. As stewards of the San Diego Bay tidelands, the Port recognizes that natural and working lands are an important component in climate change mitigation, resiliency, and adaptation.

The Port is supportive of the State's ambitious effort to reduce greenhouse gas (GHG) emissions and increase the carbon sequestration potential on natural and working lands. The Port adopted a Climate Action Plan (CAP) in 2013. The CAP was one of the first port CAPs in the United States to establish goals to reduce GHG emissions and to adapt to the impacts of climate change and sea level rise. Over the past two decades, the Port has restored coastal wetland and eelgrass habitats around the San Diego Bay to support fish, migratory birds, and other wildlife and enhance the ecosystem services, such as improved water quality and sequestering carbon, these environments provide. The vision of the Natural and Working Lands Implementation Plan (Implementation Plan) to protect and enhance lands using intervention-based sequestration goals to reduce GHG emissions align with the Port's mission and strategic goal to protect and improve the environmental conditions of the San Diego Bay tidelands.

The Port respectfully submits the following comments on the California Natural and Working Lands Climate Change Implementation Plan Concept Paper:

Recommendation to Prioritize Coastal Wetland Habitat Creation and Restoration in the Proposed Management Activities

The Port suggests the Implementation Plan include habitat creation and restoration of coastal wetland ecosystems as a priority management activity for carbon sequestration. Coastal wetlands are ideal for offsetting significant amounts of carbon dioxide (CO_2), by trapping carbon in vegetation and soils for hundreds to thousands of years. Studies quantifying carbon sequestration of wetland soils estimate carbon accumulation averages among the highest rates for all ecosystems and more than ten times the sequestration potential of forests.[1,2] Historically, conversion and degradation of coastal wetlands due to development and other human impacts has led to the release, rather than capture, of CO_2, further contributing to climate change impacts from GHGs.

Recent management efforts to preserve and restore California's wetlands have sequestered substantial carbon, which the concept paper acknowledges in its baseline and business-as-usual scenarios of the California Natural and Working Lands Carbon and Greenhouse Gas Model (CALAND). The Port has collaborated with multiple State and local agencies on the restoration of 280 acres of wetlands in south San Diego Bay and is planning future restoration of an additional 200+ acres. The Port has also removed over 350 tons of marine debris and derelict vessels, restored eelgrass habitat, and partnered with the U.S. Navy on an Integrated Natural Resources Management Plan to make effective decisions about the management, conservation, restoration, and development of San Diego Bay. Furthermore, the Port is incorporating wetland and shallow submerged lands creation in specific areas of the Port's tidelands to accommodate sea level rise through the Port's Master Plan Update and Sea Level Rise Vulnerability Assessment.

However, restoration and enhancement of California's remaining coastal wetlands will not sufficiently replace the CO_2 released over the past two centuries by the development of wetlands. Therefore, coastal wetland habitat creation is a necessary tool to support the carbon sequestration goal on natural and working lands. The Port recommends prioritizing wetland habitat creation in the Implementation Plan and in the acreage targets for the business-as-usual and ambitious alternative scenarios for CALAND.

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[1] Patrick Jr. WH, DeLaune RD. 1990. Subsidence, accretion, and sea level rise in South San Francisco Bay marshes. Limnology and Oceanography 35:1389-1395.

[2] Mcleod E, Chmura G, Bouillon S, Salm R, Björk M, Duarte CM, Lovelock CE, Schlesinger WH, Silliman BR. 2011. A blueprint for blue carbon: toward an improved understanding of the role of vegetated coastal habitats in sequestering CO2. Frontiers in Ecology and the Environment 9(10):552-560.

Recommendation to Include Marine Seaweeds in Addition to Eelgrass in the Proposed Management Activities

The Port suggests the "all lands" approach for carbon sequestration and GHG reduction on natural and working lands include seaweeds, such as macroalgal kelps, as ecosystems for habitat creation, conservation, restoration, enhancement, and management activities within its definition of subtidal habitats. California's coastal and subtidal habitats support some of the largest and fastest growing kelp forests in the world, which rapidly store carbon and use minimal resources. Kelps and other seaweeds provide a suite of benefits for reducing GHGs and protecting against climate change impacts including use in biofuel production, as an additive to livestock feed to reduce methane emissions, buffering against ocean acidification, and dampening shoreline-damaging waves from climate change-driven storm surge and sea level rise. In addition, seaweed aquaculture is a growing industry in California that has the potential to mitigate climate change impacts while providing food for people and a range of manufacturing products with few resources and no pollution.

Compared to wetlands and forests, seaweeds lack the long-term carbon storage potential of a carbon sink; however, the ecosystem services and co-benefits that seaweeds provide warrant their inclusion within subtidal natural and working lands. In addition, the minimal resources required for restoration and enhancement of kelp forests and the low investment required to establish seaweed aquaculture, present seaweed habitats and aquaculture as a particularly sound strategy to contribute to climate change mitigation, while protecting shorelines and marine ecosystems from some of the effects of climate change.

Recommendation to Include Mitigation and Blue Carbon Banking in Conservation, Restoration, and Management Activities

The Port would like to see the Implementation Plan include mitigation and blue carbon banking and incentives in its natural and working lands strategy. In 2008, the Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (USACE) modified construction project mitigation rules to set mitigation banking as the preferred alternative for impacts to wetlands and other natural resources. Mitigation may be fulfilled by implementing mitigation projects at suitable locations, or by purchasing wetland mitigation credits from mitigation banks established by third parties. There are currently few coastal wetland mitigation banks in California. Under-utilized and degraded natural and working lands are ideal for habitat creation and restoration, but the high cost associated with restoration can hinder conservation efforts.

Creation of a mitigation bank and the sale of mitigation credits create a financial incentive, along with ecological and social benefits, for third parties to invest in restoration. Because mitigation ratios favor mitigation acreage over development acreage, the result is a net gain in functional habitat over development.

Similar to a mitigation bank, the creation and restoration of natural lands for the sale of carbon credits to offset GHG emissions can lead to multiple benefits, including carbon sequestration, habitat restoration, and other ecosystem services. A blue carbon bank can sell credits of carbon sequestered within wetland soils and vegetation. Wetlands are particularly suited for blue carbon banking because of their substantial and long-term carbon storage potential. Therefore, the Port recommends including mitigation and blue carbon banking as an additional strategy within the scope of the Implementation Plan and inclusion in the acreage targets for the business-as-usual and ambitious alternative scenarios for CALAND.

Despite the revenue generated through the sale of credits for both mitigation and blue carbon banks and the co-benefits associated with restoration, the high cost of restoration and competing land uses can discourage conservation. Wetland creation and restoration projects traditionally focus on habitat creation, not carbon sequestration, though wetlands achieve both tasks. Incentives and/or additional funding could benefit agencies considering wetland projects, especially in response to sea level rise, to consider carbon sequestration. The Port recommends incorporating incentives into the Implementation Plan to elevate restoration via mitigation and blue carbon banking as options for natural and working lands.

Recommendation to Expand the Scope of Urban Greening to Include Coastal Wetlands

The Implementation Plan concept paper mentions urban greening and urban forests but does not specifically include coastal wetlands. Coastal wetlands increasingly support urban greening activities, such as bike paths and pedestrian trails, and are considered for funding under the California Natural Resources Agency's Urban Greening Grant Program. To maintain consistency across state agencies and departments, the Port recommends including coastal wetlands in the proposed management activities for urban greening.

Thank you for the opportunity to comment in response to the Joint Agency workshop on the California 2030 Natural and Working Lands Climate Change Implementation Plan Concept Paper.

If you have any questions please do not hesitate to contact Eileen Maher at (619) 686-6254 or emaher@portofsandiego.org, or myself at (619) 686-6473 or jgiffen@portofsandiego.org if you have any questions or need any further information.

Sincerely,

Jason Giffen
Assistant Vice President
Planning & Green Port

Cc: Eileen Maher, Port of San Diego
Heather Kramp, Port of San Diego