December 16, 2016

Rajinder Sahota
Branch Chief, Climate Change Program Evaluation
California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: Comments from The Nature Conservancy on December 2, 2016 Discussion Draft: 2016 Target Scoping Plan update

Dear Ms. Sahota and CARB staff:

The Nature Conservancy appreciates the opportunity to comment on the latest discussion draft of the 2016 Target Scoping Plan Update (hereafter Draft Plan Update) dated December 2, 2016. The Conservancy has submitted comments on previous Draft Plan Updates, and we have attached the previous one for reference. In general, we strongly support the State's effort to identify a portfolio of measures across sectors, including the natural and working land sector, to meet California's long and short-term greenhouse gas (GHG) reduction goals.

As noted in the Draft Plan Update, the conservation and management of our natural and working lands are critical not only for climate solutions, but a host of other public values. In addition to the values explicitly mentioned on page 24, our natural and working lands are important for recreation, tourism, and the overall health of our communities. Given our particular expertise in the area of climate change and natural resources, our comments focus primarily on this area.

The Conservancy supports CARB staff's preferred scenario to continue the use of the cap and trade program to help meet the state's long-term climate mitigation goals

The Conservancy supports the cap and trade program as part of the suite of measures the state implements to meet 2030 and 2050 GHG reduction goals. To date, the cap and trade program has acted as an effective mechanism to reduce overall GHG emissions at a relatively low cost.

Given the significant uncertainty of federal action on climate change, it is critically important for California to maintain its climate programs and progress so that it can continue to demonstrate how governments can reduce absolute levels of emissions while growing its economy. This is not only important in the United States, but internationally as well, as California's programs (including cap and trade) serve as role models for others to follow. California's cap and trade program also provides a direct means for California to leverage emission reductions globally as the program can be linked with other jurisdictions, like Quebec, to help reduce global emissions. Similarly, the opportunity for California to link with tropical forest jurisdictions should be supported, so that California's program can leverage GHG reductions from avoided deforestation and forest degradation, a significant source of global GHG emissions.

The Scoping Plan should ultimately include quantitative GHG reduction goals for natural and working lands

To effectively achieve GHG reductions in the natural and working lands sector, it will be important for the Scoping Plan to include quantitative GHG reduction goals that are developed through the establishment of a baseline scenario and alternative scenarios that reflect interventions to reduce emissions and sequester additional carbon. Quantitative goals for the land sector are achievable and have been established in a number of other countries to meet international climate mitigation obligations. They are needed to create accountability and drive policy development and action on the ground. Ideally, the analysis being conducted by Lawrence Berkeley National Laboratory and other institutions can provide the basis for establishing such quantitative climate goals, which could be a range (i.e., minimum and stretch goal) and also support the suite of benefits that natural and working lands provide.

The Conservancy supports integration of sectors, including natural and working lands, and resilience to optimize climate and public benefits

The Conservancy commends staff for recognizing the interrelationship of sectors and the opportunity it presents to optimize GHG reductions and other public benefits. We agree that the natural and working lands sector overlaps with energy, water and transportation. Sustainable Communities Strategies (SCS's) provide a policy platform to advance greater integration among transportation, housing and natural and working lands. We strongly recommend that the Scoping Plan include specific ideas for how SCS's could integrate these sectors more effectively. For example, SCS grants from the state could include funding to integrate natural and working lands as part of SCS strategies or county climate action plans that are also consistent with SCS's. Also, grant criteria could include greater incentives or

requirements that plans include integration among these sectors and implementation that advances benefits in these sectors collectively.

Other programs, like Regional Conservation Investment Strategies (RCIS's) and Natural Community Conservation Plans (NCCP's), can also provide the basis for integrating natural and working land climate strategies with infrastructure development. In the case of RCIS's (recently established through AB 2807), the state can invest in landscape level conservation that includes the highest resource conservation priorities in the context of climate change, drive smart growth of infrastructure, and continue to incorporate the latest conservation and climate science moving forward.

Similarly, the state could optimize habitat and climate outcomes as localities across the state continue to develop NCCP's. These plans provide an opportunity to advance regional conservation strategies that also help mitigate climate change through land conservation. Additional conservation funds could be invested where appropriate to ensure the maintenance and expansion of intact natural landscapes that reduce emissions, and maintain ecosystem integrity and resilience.

Ensure the metrics for reducing emissions from land conversion include reduced conversion vs. reduced rates of conversion

The Conservancy strongly supports reduced conversion of natural and working lands to more intensive uses as a mechanism to reduce emissions form the landscape and maintain the ongoing carbon sequestration services of these ecosystems. The discussion on page 62 discusses reducing the rates of land conversion as a metric for reducing emissions. While this may be beneficial, a reduction in rates alone does not mitigate emissions. It only slows the rate of emissions. Therefore, we recommend that the document make clear that the ultimate metric for avoiding emissions associated with land conversion is "reduced conversion."

Use parallel terms for activities in Table 11-2 and clarify expectations for using rates vs. absolute measures

Similar to the recommendation in the previous paragraph, we recommend a review of Table 11-2 for consistency in terms and outcomes. The metrics appear to be a mix of rates versus absolute measures. We recommend using metrics that will produce an absolute measure of total reductions, whether they are avoided emissions or carbon sequestered. This will aid in monitoring and reporting progress to the public and legislature.

Define accounting expectations and boundaries for innovative biomass utilization

The Conservancy supports innovative uses of biomass to help reduce GHG emissions. Because biomass utilization overlaps with other sectors, such as energy and transportation, we recommend that the document explain the accounting boundaries and what sector these activities may fall under to reduce confusion and avoid double counting.

Include further refinement of activities in statewide GHG reduction scenarios

We commend staff for undertaking the significant task of developing baselines and reduction scenarios for natural and working lands. This is a critical and fundamental step for effectively including this sector as part of the state's overall climate strategy. We participated in the recent December 14th workshop that provided an overview of the analysis being conducted by Lawrence Berkeley National Laboratory and will provide more detailed comments on the analysis by the January 15th deadline. Without full information about the model and assumptions that are behind the scenarios that are included in the Draft Plan Update, it is challenging to provide constructive input at this time.

One initial observation, based on the scenario on page 65 of the draft, is that the forest management scenario needs to reflect a number of different activities, as regional differences around the state will likely show different opportunities. For example, along the north coast, there may be greater opportunities for managing for greater carbon sequestration over time (without the declines portrayed in figure II-2) compared to the Sierra, where there may be a greater need for fuel treatments (and therefore a decline in carbon before any gains). We also recommend that the graphs ultimately break out the anticipated "business as usual" baselines for the different regions and show alternative scenarios distinct from the baseline. This approach (vs. just showing the net difference), will provide more transparency in the approaches to all the scenarios.

We commend the California Air Resources Board and other agency staff for their hard work on this Scoping Plan Draft and appreciate your consideration of our comments. If you have any questions, please contact Michelle Passero at MPassero@tnc.org.

Attachment A

The Nature Conservancy
Protecting nature. Preserving life.™

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April 6, 2016

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Re: Comments in response to the Draft Healthy Landscapes 2030: Climate Vision and Goals for Natural and Working Lands

Dear Ms. Sahota:

The Nature Conservancy appreciates the opportunity to submit comments on the draft vision, Healthy Landscapes 2030: California's Climate Change Vision and Goals for Natural and Working Lands (hereafter "Draft Vision"). The Conservancy strongly supports the Governor's Executive Order B-30-15, establishing interim greenhouse gas reduction goals for 2030 so the State can meet its longer term goals established for 2050. Moreover, we support the inclusion of natural and working lands as one of the six pillars of the State's long-term climate strategy. The State will not be able to meet its long term goals without the inclusion of this sector.

Overall, the ideas presented in the Draft Vision lay a strong foundation for the kinds of actions that the state should undertake to continue reducing greenhouse gas emissions beyond 2020. We provide specific comments on these recommendations in the following pages. In addition to these specific comments, we also offer some overarching recommendations that are fundamental to advance natural and working lands as a key strategy to meet long-term climate goals.

Overarching Recommendations:

The state should establish greenhouse gas reduction goals for natural and working lands that are informed and supported by a quantitative, standardized greenhouse gas accounting framework and a clear definition of a greenhouse gas reduction

To understand the scope of greenhouse gas reduction potential from California's natural and working lands and monitor progress over time, the state should establish goals for this sector that are informed by a standardized and quantitative greenhouse gas (GHG) accounting framework that also defines a greenhouse gas reduction. While a host of other considerations, such as climate resilience, habitat, water quality, biodiversity, and jobs, should be applied as additional filters to statewide GHG goals for natural and working lands, this fundamental building block should be established so the reduction potential is well understood by the state and the public and can be monitored and considered alongside the many other objectives for our natural resources.

Such a framework is also needed in California to advance a common understanding of what constitutes a GHG reduction in the natural and working lands sector, thereby reducing different and often conflicting assumptions about what constitutes a greenhouse gas reduction (vs. a carbon/GHG inventory or a carbon pool). It will also help minimize uncertainty about which sector to attribute a reduction (e.g., whether a reduction should be counted in the energy sector, transportation sector or natural and working lands sector). Furthermore, this type of framework can create better synergy and bridge accounting gaps across different landscape scales, from the activity (or project scale) to the regional and statewide scales. For precedent, the state should refer to "jurisdictional accounting" approaches being developed and implemented in tropical forest jurisdictions to meet international greenhouse gas reductions pledges.[1]

Attributes of establishing GHG reduction goals and supporting accounting framework should include the following:

1) A statewide carbon inventory:

   A landscape carbon inventory is essential for establishing a GHG baseline (or reference scenario) for natural and working lands and monitoring emissions and reductions from land-based activities that either increase or decrease carbon over time. The California

[1] "Guidelines for REDD+ Reference Levels: Principles and Recommendations" Prepared for the Government of Norway, by Arild Anglesen, Doug Boucher, Sandra Brown, Valerie Merckx, Charlotte Streck, and Daniel Zarin. Available at www.REDD-OAR.org. *See also,* http://scienceforconservation.org/downloads/climate_action_through_conservation

Air Resources Board's recent carbon inventory analysis and any recent updates could serve as the basis of this inventory.[2]

2) A statewide GHG baseline scenario:

Similar to the reference scenarios (or GHG baseline scenarios) that the state is developing for other sectors, GHG baseline scenario(s) should be developed for natural and working lands. Without a GHG baseline for the landscape, it will be very challenging for the state to estimate and monitor GHG reductions over time. Baseline scenarios are projections into the future of "business as usual" or what is likely to happen in the absence of human interventions to minimize emissions and sequester carbon. Other jurisdictions have developed GHG baselines for the landscape by using historical carbon inventory data over different points in time to establish trends for net changes in landscape carbon, which can inform how a GHG baseline can be forecasted into the future. Establishing a trend or reference scenario for the baseline (versus just one inventory year) is also important to be able capture net sequestration over time and the relative permanence of carbon sequestered in the landscape.

3) Develop statewide GHG reduction scenarios that are spatial:

Once a carbon inventory and GHG baseline are established for natural and working lands, it is possible to develop estimates of GHG reduction potential based on alternative scenarios (relative to the baseline) across regions in the state. This type of analysis should be spatial, where opportunities for interventions (or activities) to sequester more carbon or minimize emissions across regions of the state can be identified. Anticipated climate change impacts can also be included in the scenarios. This carbon data can be aggregated and compared to the GHG baseline to develop ranges of GHG reduction potential that can be achieved through a variety of activities and incentives. They could be used to inform the 2030 Scoping Plan target. This type of assessment should be considered alongside other statewide plans, such as the State Water Action Plan and Safeguarding California, to provide the opportunity to optimize multiple benefits and make strategic investments.

4) Develop a monitoring, reporting and verification system that bridges different landscape scales (i.e., landowner to region and state):

[2] *See* http://www.arb.ca.gov/cc/inventory/pubs/battles%20final%20report%2030jan14.pdf

Building from the statewide baseline and scenarios mentioned above, a statewide monitoring, reporting and verification framework should also be established to track progress in the natural and working lands sector. The statewide carbon inventory, as it is updated over time, can be used as the basis to track changes in carbon across the landscape and monitored against the GHG baseline and reduction scenarios mentioned earlier. A complementary monitoring and reporting framework can also be developed for the interventions or activities that are implemented at the smaller scale to reduce emissions/sequester carbon through programs or policies. This complementary framework can act as a bridge between monitoring at the project/activity scale and the monitoring at the statewide and regional scales.

Express a priority for climate resilience by incorporating specific recommendations for it in all goals

We appreciate and strongly support the acknowledgment that resilience should be incorporated in the state's goals and strategies to reduce greenhouse gas emissions in the natural and working lands sector. As stated in EO B-30-15 and the Environmental Goals and Policy Report, the state's planning and investments should *prioritize* actions that "build climate preparedness and reduce greenhouse gas emissions" (EO B 30 15), "especially in the natural resource sector" (EGPR, page 26).

Within the goals, resilience is explicitly mentioned in goal #2 (enhance carbon resilience through management and restoration). We strongly recommend the inclusion of resilience in all of the goals with examples of how resilience may be included alongside the activities to reduce GHG emissions. Resilience applies to more than just the stored carbon. For example, in goal #1 (Land Protection and Land Use), the suggestion to protect natural and working lands would provide resilience for species habitat and migratory corridors.

In goal #2, in addition to the overarching goal of building a resilient carbon bank, climate resilience could be recognized throughout each of the recommended sub-goals. The restoration of wetlands can protect against sea level rise and flooding. Riparian restoration can protect water quality and habitat for fish. Healthy soils with more carbon can retain more moisture and be more resilient to drought. Goal #3 seems to emphasize the need to integrate strategies across sectors. Such an effort could be designed to not only optimize and create more synergies for GHG reductions, but it can create more synergies to build resilience and should be explicitly be incorporated in the design. Likewise, in goal #4, urban forestry and green infrastructure in general can reduce emissions and enhance resilience. A more explicit acknowledgment of how this can and should be done would provide helpful additional direction.

Provide flexibility to adjust goals once analysis of greenhouse gas reduction potential for natural and working lands is completed

Overall, the draft vision provides good recommendations for activities that will likely reduce greenhouse gas emissions (i.e., sequester carbon and minimize emissions) across natural and working lands while enhancing other important public and environmental benefits. The document suggests that additional analysis on statewide GHG reduction potential will be conducted. This analysis could highlight additional or different opportunities for achieving reductions and other public benefits than what is currently identified. Consequently, it would be helpful for the Draft Vision to acknowledge this and identify a process for adjusting the document to reflect this new information. The "Related Activities" section could be the section where this kind of language could be inserted.

Include a guiding principle that aligns climate actions for natural and working lands with benefits to disadvantaged and low income communities

The guiding principles enumerated in the Draft Vision are constructive and will help guide meaningful climate outcomes with respect to natural and working lands. In parallel policies, the Administration and Legislature have sought to ensure that communities that are most vulnerable to climate change, such as disadvantaged and low income communities, are protected. With this in mind, we recommend that the guiding principles include an additional principle to align greenhouse gas reduction strategies (and climate strategies overall) with existing and evolving goals to protect and assist communities that are most vulnerable to climate change.

Clarify the intended greenhouse gas reduction benefit of each of the goals

The goals identified in the Draft Vision contain a number of strong recommendations that will likely produce GHG reductions. The goals would be clearer, from a greenhouse gas reduction perspective, if each of the objectives explicitly stated the anticipated GHG reduction benefit (in addition to other important public benefits). For instance, the Land Protection and Land Use Goal, which we strongly support, would benefit from an explicit statement that the increased protection of natural and working lands will avoid GHG emissions and foster ongoing and additional carbon sequestration. The objective in goal #2 more clearly identifies the GHG reduction benefits – increase carbon storage (or carbon sequestration) and minimize emissions. The GHG reduction objective for goal #3 is less clear and would benefit from additional language that explains the intended GHG reduction benefit (optimizing GHG emission reductions by integrating GHG strategies across sectors?).

Provide more detail on the kinds of tools and policies that could be employed to achieve GHG reductions across natural and working lands

Overall, there are many good ideas expressed in the Draft Vision for how the state might incorporate natural and working lands into the State's reduction goals. The Vision would be even stronger if it provided more detail on the kinds of tools, mechanisms and policies that could be implemented to help achieve the stated goals and objectives (similar to the detail of the Forest Carbon Plan). Each of the categorical goals could include a section of specific measures that could be considered to achieve the identified goals and strategies.

Specific Recommendations:

Goal Category #1: Land Protection and Land Use

- The Conservancy supports this goal as a means to reduce biological carbon emissions and other indirect emissions (e.g., transportation and energy) associated with land conversion to other uses.
- We support the recommendation to promote the development of regional plans, climate action plans, and greenprints as a means to reduce GHG emissions and sequester carbon and recommend that the draft vision provide specific recommendations to advance this goal. Recommendations should include the provision of funds to develop/augment such plans to include natural and working lands and criteria and points in state grant processes that strongly encourage the development and implementation of such plans. The Draft Vision document should also encourage these plans as a mechanism to optimize and integrate GHG reduction efforts and benefits across sectors (which dovetails with Goals 3 and 4).

Goal Category #2: Enhance: Management and Restoration

- The conservancy supports the general objective for this goal and suggests that the recommendation to develop common accounting be moved to an overarching goal that applies to all the goals and strategies since such a framework is needed for all activities.
- The forest goals would benefit from a more explicit explanation of the intended GHG reduction goals for this resource. For example, in certain regions of the state, forests may be managed for decreased risk of catastrophic fire, while other areas may be restored or reforested to sequester more carbon. Forest management planning can be an important part of supporting this overall GHG goal. The Conservancy will provide more explicit recommendations for forest-based GHG reduction goals in response to the Forest Carbon Action Plan.

Goal Category #3: Innovate

- As stated earlier, this goal and objective would benefit from more explicit language regarding the GHG reduction that would be achieved through this objective. It appears that the objective is integration of natural and working land strategies with other sectors to reduce emissions and promote sustainable management. As currently written, it is a little unclear.
- If the objective is to encourage strategies that integrate natural and working lands with other sectors, this section should also include the recommendation for the state to support the development of plans that help integrate such strategies.

Goal Category #4: Urban Forestry and Green Infrastructure

- The conservancy supports this goal and objective. Urban forestry and green infrastructure are important strategies for reducing GHG emissions, enhancing resilience and achieving many other public benefits.
- For the same reasons that green infrastructure is important in highly urban areas, green infrastructure is also important in both exurban and more rural areas. We, therefore, recommend that the Draft Vision include the goal to conserve or restore green infrastructure across different communities, from urban to rural.
- Green infrastructure could be encouraged with better upfront planning. Therefore, we recommend that the Draft Vision include the recommendation for funding and incentives to include green infrastructure in multi-sector plans to reduce GHG emissions.

We appreciate your consideration and are happy to provide input in this important process. Our natural and working lands are a critical part of the climate solution and California's leadership provides a strong platform to demonstrate how this can be implemented to provide multiple benefits. If you have any questions, please contact Michelle Passero at mpassero@tnc.org.