



YSS

YOSEMITE STANISLAUS SOLUTIONS

April 9, 2017

RE: Comments on the Draft Scoping Plan

These comments on the Draft Scoping Plan are submitted by the Yosemite Stanislaus Solutions (YSS) collaborative. Located in Tuolumne County, California, YSS is a collaborative group of diverse interests, ranging from timber companies to environmental organizations to local government representatives, working together to assist public and private land managers in achieving healthy forests and watersheds. There are 23 member organizations and six public agency liaison members actively engaged in our process. For additional information concerning the collaborative see:

<http://yosemitestanislaussolutions.com/about-yss/>

First, we express our gratitude for all who have contributed to this foundational document to inform and guide decision-makers in responding to our urgent forest health crisis. Our comments focus on three key aspects of what we believe are critical to clearly and effectively convey to the public, the Air Resources Board, and our elected leaders, particularly the Governor and our Legislative Leaders. Together, they share the authority and responsibility to take action now, while it can make a difference for Californians living today and in the future.

Recommendations for Action

YSS recommends the following action items be added to the Scoping Plan and the Forest Carbon Plan. The rationale for these recommendations is described at the end of the recommendations section.

* It is time to act on the long-recognized need to increase the scale and scope of forest health treatments. The Forest Carbon Plan's specific recommendations are to increase forest restoration treatments to 500,000 acres per year on non-federal land, 500,000 acres per year on Forest Service land, and 9,000 to 15,000 acres

American Forest Resource Council

American Motorcyclist Association, District 36

Blue Mountain Minerals

California Forestry Association

Central Sierra Audubon Society

Central Sierra Environmental Resource Center

CT Bioenergy Consulting

Friends of Berkeley Tuolumne Camp

Jim Dambacher Construction

Groveland Trail Heads

Merced Dirt Riders, 4x4 in Motion

Mule Deer Foundation

Sierra Pacific Industries

Stanislaus Bike Trail

Tuolumne County

*Tuolumne County Alliance for
Resources and the Environment*

Tuolumne County Farm Bureau

Tuolumne County Resource Conservation District

Tuolumne County Sportsmen, Inc.

Tuolumne Group of the Sierra Club

Tuolumne Me-Wuk Tribal Council

Tuolumne River Trust

Yosemite Deer Herd Advisory Council

Liaison Members

*Bureau of Land Management
CA Fish & Wildlife*

*National Park Service, Yosemite National Park
Sierra Nevada Conservancy
South West Interface Team
United States Forest Service*

per year on BLM land. If those clear targets are going to be achieved in the near future, assertive action must be undertaken now.

- * The State should provide funding for two landscape scale forest restoration projects (5,000 or more acres) beginning in FY 2017-2018 in each of the six eco-regions identified in the Forest Carbon Plan. Priority should be given to projects developed by broad consensus community collaboratives which are planned in sufficient detail to be implemented and completed within two years of funding. Priority should also be given to multi-year projects implementing a long-term restoration program. Finally, priority should be given to projects that include funding matches from state and federal sources. Funding sources should include Greenhouse Gas Reduction Fund monies. Out of the implemented pilot projects, those that show the most promise of achieving AB 32 goals should be replicated on a larger scale. YSS has already developed such a plan and is ready to move forward with implementation in partnership with the Stanislaus National Forest.
- * The State should allocate \$150 million per year to Sierra Nevada forest health and resiliency beginning in the 2017-18 budget, including the 20% of the GHG funds now being legislatively considered for investing in Natural and Working Landscapes.
- * CAL FIRE and Regional State Conservancies, such as the Sierra Nevada Conservancy and the Tahoe Conservancy, should be tasked with coordinating with federal agencies to undertake large scale restoration planning that utilizes state-of-the art environmental assessment technology.
- * Establish within CAL FIRE a “Beneficial Fire Unit” that would have dedicated staff at appropriate regional levels. They should be tasked with developing and implementing a coordinated and cooperative Beneficial Fire Plan of Action with appropriate entities including local counties, Air Districts, and the USFS. This would identify priority areas for applying prescribed fires and managed wildland fires within their region; and to develop a schedule for conducting prescribed fires and managing wildfires for ecological restoration purposes as feasible.
- * Neither Congress, nor the State Legislature, major water purveyors, nor other current beneficiaries of Sierra water, air, energy or recreational benefits are making adequate investments in forest watershed restoration and resiliency treatments despite the wide range of sustained and substantial benefits that depend upon well-stocked, fire-resistant, forest watersheds. To the greatest extent feasible, the full range of beneficiaries should contribute to restoring Sierra ecological health – which not only is so vital to AB 32 goals, but is also so vital to water quality and water supplies for downstream users. Through such an appropriate cost-share approach, the significant investment costs can be fairly shared and minimized for all.

Why is YSS making these recommendations?

1. We recognize the magnitude of the crisis and its relevance to California’s environmental and economic health, particularly the commitment to reducing greenhouse gas.

The primary purpose of the report is to inform and guide the Governor and Legislature in being able to assure the needed investments are made to achieve the State’s laudable and ambitious GHG reduction goals. As California continues its global leadership role in reducing GHG

emissions, the stark reality is California's GHG reduction targets will not be achievable if we fail to address the major contributors to the growing trend of mega-disturbances, notably uncontrollable wildfires and bark beetle epidemics. Per most research, these types of events will likely worsen in coming decades due to increased temperatures during periods of future droughts (Millar and Stephenson 2015).

The capacity for the Sierra Nevada forests to sequester carbon is rapidly declining. The rapid growth in the size and severity of wildfires is already offsetting the GHG reductions being achieved through our investments in reducing emissions in other sectors. For example, the 2013 Rim Fire is estimated to have emitted 12.06 million metric tons of CO₂e (Garcia et al. 2017), which was more than 3 times the year-on-year GHG reductions achieved in all other sectors statewide in 2013 (CARB 2016). Additionally, the USFS and the Sierra Nevada Conservancy estimate dead and decomposing vegetation from the Rim Fire will emit four times as much GHG in the coming decades (Joint testimony of USFS and SNC before CARB, August 2015). An additional concern is despite broad agreement on reforesting lands burned, lack of funding and staff have made reforestation very difficult, except on private industrial timberland. This is a common challenge as wildfire acres and fire suppression costs have increased.

Other citations regarding the magnitude of this crisis include:

* The Chairman of the Tuolumne County Bark Beetle Task Force succinctly described the current situation in the Central and Southern Sierra: "We are experiencing an unprecedented ecosystem-wide change event."

* The title of the Sierra Nevada Conservancy's latest publication: "The State of the Sierra Nevada Forest: From Bad to Worse - The Solutions Remain the Same, but the Need for Action is More Urgent."

* California has the largest population (11.3 million) living in the wildland-urban interface (WUI) of any state. This is the area where development is adjacent and interspersed with wildlands, including forests and grasslands, and where homes and lives are more at risk from wildfire (Kenward et al., 2016).

* Over the last five years, California has seen an average of 94,000 more acres annually burn in large wildfires on U.S. Forest Service land than was typical in the 1970s. Of greater significance is the increased percentage of high severity area burned, and the fact the wildfire season is now an average of 75 days longer in the Sierra Nevada than it was in the 1970s (Kenward et al. 2016, Westerling 2016).

2. There is simply no time to waste in undertaking a comprehensive Sierra Ecological Restoration Program in the Sierra Nevada's forest lands.

The reality of the pervasive, continuing decline of Sierra Nevada forest health has been well documented for over ten years. Science-based, economically efficient treatments have been proposed for almost ten years. The common refrain is the urgent need to increase the scale and pace of forest health treatments. Both the state and federal governments have failed to do so. As we have been vividly reminded in the recent near catastrophic Oroville dam fiasco, failure to act

expeditiously when potentially catastrophic risk emerges will both greatly increase the probability for such a catastrophe and greatly magnify the cost of finally taking needed action to eliminate the risk. California's and the federal government's continued failure to move beyond talk to meaningful action has already increased the probability of further catastrophic mega-fires and insect mortalities, as evidenced by the current one that has killed over 110 million trees in the past three years (Sierra Nevada Conservancy's "The State of the Sierra Nevada's Forest").

We believe these facts should compel ARB to give equal attention to the need for action as well as to the details of quantification of GHG reductions. We are dealing with an overwhelming diverse and complex natural system. It is not subject to a more traditional engineering analysis typically applied to stationary source regulation. For this reason, we urge the ARB not to insist on mathematical precision at the expense of getting long overdue fuel reduction projects underway. The statutory requirement is that expenditures further the purposes of AB32 and reduce GHG emissions. Reduction of fuel loading and reasonably assured increases in future sequestration meet these requirements. The statutes do not require a calculation of precisely how much.

The Forest Offset Protocol has thus far been used to show reductions in long-term emissions and increased sequestration on private forest lands primarily as a result of lengthening harvest schedules and committing the land to forestry use. It does not include a calculation of significantly reduced fire related emissions. In fact, it assumes that there will be no such emissions on the area covered by the offset. A fire is regarded as a "reversal" which eliminates the value of the offset.

As noted in the ARB's Scoping Plan Update, thinning may temporarily reduce carbon stocks in order to reduce fire risk, but ultimately will increase forest biomass and carbon storage. This may or may not occur during a 10-year period as may be required under the Forest Protocol. Clearly, the Forest Protocol was not designed to apply to fuel reduction projects on national forest lands.

Most importantly, the statutory requirement for GGRF investments to serve the purposes of AB32 does not require quantification to the same extent as for an offset that will be used to satisfy the requirement for purchase of allowances under Cap and Trade. For offsets the standard is "real, permanent, quantifiable, verifiable, and enforceable". This standard of proof is not being applied to any other category of GGRF investments. It should not be applied to fuel reduction investments. As noted in the Funding Guidelines (p. 15-16) the applicable statutes merely require that expenditures from the GGRF "facilitate" or "contribute" to reductions. Ecological thinning and forest restoration projects clearly accomplish this purpose.

Other relevant citations include:

** There are an estimated 20 million acres of forestland in California, with high wildfire threat that may benefit from fuels reduction treatment, which would serve to both reduce the risk of wildfire (and the resulting carbon loss and black carbon and GHG emissions) and improve ecosystem health. For example, it is estimated less than 20 percent of the forests in the Sierra Nevada region receive needed fuel treatments, leaving remaining forests in a degraded state with higher risk to losses from severe wildfires (Draft California Forest Carbon Plan, FCAT 2017).*

** Overgrown forests are more susceptible to insect attack and drought because there are too many trees competing for limited water and nutrients. Reducing competition by doing more restoration, such as ecologically-sound thinning, and using prescribed or managed fire, can help*

protect our still-green forests from future drought, insects, and disease (North 2012, Hood et al. 2015, Fettig and Hilszczański 2015, Boisramé, et al. 2016, Coppoletta et al. 2016).

** Today's crisis reflects a continuing historic drought in a warming climate that has amplified the cumulative consequences of 150 years of post-European settlement activities and management policies including: aggressive fire suppression, widespread harvesting of old growth fire resilient trees, the legacy of past mining, and insufficient forest management treatments. The unintended consequences of these activities are particularly evident in diminished forest health and resiliency, and increasing numbers of threatened and endangered wildlife species.*

State, federal, and university scientists agree a significantly greater pace and scale of forest health treatments are urgently needed to protect and improve the remaining green forest areas on state, federal, and private lands, with the overarching goal of moving forests to a more resilient condition (North et al. 2009, North 2012, North et al. 2012, SNC 2014, Coppoletta et al. 2016).

3. The magnitude and urgency of our forest health crisis requires a commensurate Plan of Action that needs to be implemented now.

While the magnitude and complexity of the challenge is daunting, there is more than enough scientific research and empirical evidence to support immediately undertaking needed action. Certainly, it is time to genuinely have adaptive management as a cornerstone principle of this effort. We know we have more to learn, but we will best learn it by applying what we now know and adapting as we learn more.

While YSS supports continued development of models that may prove beneficial in the future, the lack of current reliable models is not a reason to further delay applying what we already know. In fact, applying what we know and learning from our actions will substantially contribute to development of more accurate models in the future.

While many worthwhile state and federal programs exist that address parts of the current crisis, they were neither designed nor are they adequate to undertake the needed magnitude of action in a timely way. YSS's experience has been that utilizing these assistance and funding programs requires much more time and effort than a program designed for today's crisis should entail. As part of a cohesive and comprehensive state-federal partnership, the existing funding and assistance could much more contribute to the needed work at the needed scale than the current fragmented approach.

Fortunately, the dedication and cooperation of diverse interests has demonstrated that federal, state and local partnerships for ecological restoration in the Sierra Nevada can be a feasible goal. The Sierra Nevada Conservancy, in partnership with the U.S. Forest Service, multiple state agencies, and with the support of diverse resource producers and environmental groups, has established the Watershed Improvement Program (WIP). This provides a roadmap for needed restoration that is broadly supported, economically efficient, and could be funded from a variety of state, federal and private sources, including Proposition One and AB 32 funds. The WIP is premised on a collaborative approach that recognizes the natural variability of the Sierra precludes a "one-size-fits-all" solution.

By reference, we incorporate and endorse the findings and Recommendations for Comprehensive Sierra Nevada Ecological Restoration of the Forest Health and Resilience Working Group of the Governor's Tree Mortality Task Force, which has now been published as an official document of the Tree Mortality Task Force, April 5, 2017.

http://www.fire.ca.gov/treetaskforce/downloads/TMTFMaterials/TMTF_Comprehensive_Sierra_Ecological_Restoration_FINAL_4-5-17.pdf

State and federal partnerships for ecosystem restoration already exist for the Florida Everglades and the Chesapeake Bay Region, and it is time for such a partnership for California's Sierra Nevada. We recommend immediate support for robust implementation of the Watershed Improvement Program to begin restoration of California's most environmentally and economically important natural resource.

While future refinements may be beneficial, YSS has already endorsed the Watershed Improvement Program, as have many other entities who collaboratively participated in its creation. We urge your endorsement of it as the way to immediately initiate an increase in the scope and scale of forest health restoration.

The Governor and the Legislative Leadership cannot be expected to provide leadership on this critical factor in achieving the state's desired GHG emission reduction unless they are clearly informed of the magnitude of the crisis, as well as the urgency to initiate action while we can still make a difference.

In closing, we thank you for the extensive work evident behind this draft. As we hope we have conveyed, our major concerns are less with the substance of information than the lack of emphasis in communicating the urgency of the forest health crisis, the increasing risk it poses to California's environmental and economic health, and the imperative to immediately launch a comprehensive Sierra Ecological Restoration Program if we are to achieve AB 32 GHG reduction goals.

Respectfully,

A handwritten signature in blue ink that reads "Chris Trott". The signature is fluid and cursive, with a long horizontal stroke at the end.

Chris Trott
Chair, Yosemite Stanislaus Solutions

Appendix Attached

Appendix

Below are excerpts from the draft Forest Carbon Report we recommend as particularly salient and important to communicate in a more concise manner to the ARB, the Governor, the Legislative Leadership, the media and the public.

p. 13: Recommends a regional implementation approach to achieve the Plan's goal.

p.14 "...high severity fire made up a low percentage of many historic fires, allowing for a mosaic of forest seral stages within small areas that provided complex habitat structure with nesting and foraging habitat for a broad range of species. The large pine trees that dotted the landscape held enormous amounts of carbon, with a single 300-plus-year-old sugar pine containing more carbon than one hundred 30-year-old white firs. As a result, historic forests, despite their openness and heterogeneity, contained over 25% more than current suppressed forests. The carbon in these forests was predominantly stored in stable, large living trees that were resilient to disturbance. As a result, very little carbon was emitted post-disturbance and the large trees rapidly sequestered that carbon, creating a stable forest carbon landscape.

Modeling suggests that as a result of the fire deficit, annually treating at least three percent of the landscape results in an immediate 40 percent improvement in resilience to large landscape disturbances, allowing the landscape to peak in resilience over 20 years of annual treatments. This approach would get California forests closer to the landscape management completed by Native Americans in prehistory, preparing California forests for future disturbance.

Fire severity has been increasing as well, which is out of the historical norm. Surveyors in the 1800s wrote that large tree death from fire was an uncommon occurrence, and by the 1980s, approximately 20% of footprints were severely burned. By the early 2000, the percent of high severity in fires over 500 acres in size increased to almost 30%, and the Rim Fire of 2013 and King Fire of 2014 were almost 40% and 50% high severity, respectively. High severity burn patches were historically small, commonly under 10 acres in size, which allowed living trees on the edges to quickly reseed the burned area, and it created diverse habitat in a small area. In contrast to this healthy functionality, the King Fire had a single high-severity burn patch of over 30,000 acres in size and the Rim Fire had a high-severity burn patch over 50,000 acres.

The recent drought and warmer temperatures have intensified the mortality. ...While the drought is obviously a clear driver in the insect induced mortality, it is important to recognize the already existing lack of resiliency that characterizes many forests as a significant contributing factor. North et al. (2009) found higher than expected large tree mortality in untreated stands, "possibly due to collateral bark beetle attacks when high densities of small-diameter stems surround large trees of the same species." Field reports suggest that treated stands are experiencing significantly lower mortality rates.

Current climate models are not in concert on how precipitation amounts may change into the future in California, but there is consensus that temperatures will be warmer, more precipitation will fall as rain rather than snow, and that extended droughts are likely to be more common. ...The researchers found that treated forests were better able to sustain their carbon sequestration rates under significantly hotter and drier conditions than the untreated stands.

The outcome of continuing down the path of status quo, both with regards to global emissions and to forest management, will be a significant increase in wildfire smoke in California and the

subsequent human health impacts that result from more smoke in the air at the worst times (i.e., late summer when air quality problems are already significant...and an increase in GHG commensurate with that smoke. As fire occurrence, size, and intensity increase under climate change if the status quo is maintained, smoke from fires even in remote areas will impact populated regions with greater frequency and duration, imperiling the health of a greater percentage of the population.

2.4 Black Carbon as a Short-Lived Climate Pollutant

Climate science unequivocally underscores the need to immediately reduce emissions of short-lived climate pollutants (SLCPs), which include black carbon, methane, and fluorinated gases. They are powerful climate forcers: SLCPs are estimated to be responsible for about 40 percent of current net climate forcing. Action to reduce these pollutants today will provide immediate benefits ...The largest source of black carbon emissions in California is wildfire: An average wildfire season contributes two-thirds of current black carbon emissions in the state.

The management targets support the substantial restoration effort required to meet the goals for carbon sequestration and overall forest and watershed health. These targets are beyond “business-as-usual” levels of action, thus meeting them will require a significant increase in investments, policy and institutional support, and collaborative partnerships. Achieving these targets also will require measuring progress according to longer time scales, as the management activities described will likely reduce carbon stocks in the near term. Monitoring achievement of management targets will allow the State to determine if goals and strategies are adequate to meet the longer-term goal of maintaining healthy and resilient forests that are a net carbon sink. Adaptive management will be necessary throughout the duration of the plan’s implementation and beyond.

California cannot meet the climate change goals of either this Draft Forest Carbon Plan or the broader Natural and Working Lands strategy without increasing the levels and resilience of forest carbon sequestration and storage in its wildland forests. ... There are an estimated 20 million acres of forestland in California with high wildfire threat that may benefit from fuels reduction treatment, which would serve to both reduce the risk of wildfire (and the resulting carbon loss and black carbon and GHG emissions) and improved ecosystem health. For example, it is estimated that less than 20 percent of forests in the Sierra Nevada region receive needed fuel treatments, leaving remaining forests in a degraded.

Conclusions Page 123

- Reducing carbon losses from forests is essential to meeting the state’s GHG reduction targets.
- Current rates of fuel reduction, thinning of overly dense forests, and use of prescribed and managed fire are far below levels needed to restore forest health, prevent extreme fires, and meet the state’s GHG reduction targets.
- The state must work closely with Federal and private landowners to manage for forest health and resiliency efficiently and at scale.