



# YSS

## YOSEMITE STANISLAUS SOLUTIONS

Date: April 5, 2016

Hon. Mary Nichols  
Chair, Air Resources Board  
1001 I Street  
Sacramento, CA 95814

RE: Comments on Healthy Landscapes 2030: California's Climate Change Vision and Goals for Natural and Working Lands

Dear Chairwoman Nichols:

These comments are submitted by the Yosemite Stanislaus Solutions (YSS) collaborative group. We appreciate the extensive effort by the ARB staff in compiling this draft and believe it represents an important step forward in recognizing the essential role that healthy landscapes must serve in order to achieve California's laudable and challenging GHG reduction goals.

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 27 member organizations and five public agency liaison actively engaged in our process. (For additional information concerning the collaborative see <http://yosemitestanislausolutions.com/about-yss/>).

YSS is committed to restoring and preserving healthy forestlands in California as an essential element of achieving California's greenhouse gas reduction goals.

Before providing specific comments on the current draft, we wish to convey several overarching factors we believe still need to be more fully acknowledged in order for appropriate goals and approaches to natural and working lands to be established as part of the overall AB 32 Program.

The stark reality is California's laudable GHG reduction targets cannot be achieved if we fail to address the growing trend of mega-fires that began before the current drought, and according to recent science, will likely worsen in coming decades due to future droughts being hotter.

Additionally, as was highlighted in the public comments of Ms. Lucy Blake, President of the Northern Sierra Partnership, at a Joint USFS-Sierra Nevada Conservancy Public Forum on March 3, 2016, the current accounting by ARB of GHG emissions in California is incomplete and therefore inaccurate because of the continued failure to factor in wildfire emissions. Resources Agency Secretary Laird has publicly noted that the Rim Fire alone emitted the equivalent of the annual emission of 2.3 million cars. Perhaps more relevant is the Rim Fire GHG emissions replaced almost three years of AB 32 program reductions achieved from all other sectors. In fact, the Rim Fire emitted five times more GHG than from the much more publicized Porter Ranch natural gas leak, the largest ever in U.S. history.

## Specific Comments

- **Draft Goals p.3:** “The 2030 Target Scoping Plan Update will refine these initial goals and implementation mechanisms, and subsequent efforts will build robust frameworks for quantifying and incorporating rapidly progressing science in this area. ...draft goals expressed as reducing the rate of land converted to development or acres under management... As quantification work progresses, the goals and targets will be converted to more specific estimates.”

We strongly endorse this progressive approach to refining initial goals and implementation mechanisms. As a prominent scientist in a recent major NYTimes article on the role of forest in combatting climate change highlighted, living, biological systems are among the most complex challenges for science to understand or model. In fact, he clearly stated their scientific and technical challenge far exceeds that of landing humans on Mars. Consequently, we need the humility to neither make binding decisions based on our current level of knowledge nor limit our flexibility to incorporate new scientific understandings or technologies as they emerge.

- **Forest Draft Goals, Page 6:** It is unclear what “brought under plans” means. Does that mean actual treatment? Does the state goal for “nonfederal lands” imply no GGRF funding for forest treatment work on National Forests and other public lands? Again, the stark reality is the State cannot achieve its AB 32 goals unless landscape level forest restoration also occurs on national forest lands as these lands comprise over 50% of California’s forest lands and are most at risk for future megafires that can overwhelm GHG reduction efforts in other sectors. The State needs to partner, including financially, in restoring these lands to forest health and fire resiliency to meet its objectives.

Implementing landscape-level forest treatments would significantly reduce the prospect of larger, more severe wildfires, and over time increase the amount of carbon stored by these forests. YSS supports a robust program of ecological thinning based on the principles applied at the Experimental Forest in Tuolumne County. This differs significantly from traditional thinning practices. Its goal is not simply to achieve better spacing of usually homogenous trees. Rather, the key guiding principle is to restore on-the-ground conditions as close as feasible to greater ecological health and fire resiliency as historically existed before the 100-year policy of total fire suppression and before past management practices changed the very character of the forest.

This innovative and nuanced approach will reduce wildfire risk, increase long term carbon sequestration, and produce substantial co-benefits to wildlife, watersheds, and air quality. This approach is labor intensive and will also benefit disadvantaged communities by increased opportunities for sustained employment and small business development.

Additionally, we urge that the Watershed Improvement Program jointly established by the Sierra Nevada Conservancy and Region 5 of the USFS be added to the existing natural resource management plans that are expected to increase stored carbon resiliency and reduce GHG emissions.

## **Discussion Topics and Questions for Public Input**

### **Quantitative Targets for the 2030 Scoping Plan Update**

- What is the appropriate scale for targets – e.g., statewide, regional, subregional?

The appropriate geographic scale depends on the target; thus what is likely best for forests would be different than what is best for rangelands. Nonetheless, given the considerable geographic diversity of California, it would be good to have regional quantifying activities and progress that could be easily

rolled up to a statewide accounting, as needed. This would certainly be relevant for forests, given how diverse forests are in different parts of the state. There are some well agreed upon delineations of eco-regions that should be considered.

- What is the appropriate timescale, and what principles will be applied in choosing timeframes over which outcomes are assessed?

Again, the appropriate timescale depends on the target. There are stark differences for what is meaningful; for example, annual farm crops vs. redwood forest with at least 80 year rotations. The primary basis for choosing a timeframe could be average harvest rotation. This could be divided into three or four categories; such as an annual reporting timeframe, once in five years, and once in ten years to capture periodic outputs from long-rotational products such as timberlands or natural lands such as wetlands.

- For forests, the metrics should be acres of ecological thinning and prescribed burning. Agencies could report annually on progress.
- Scale for targets should not be simply the acreage of individual projects since these projects benefit fire resiliency and thereby the carbon sequestration potential of adjacent lands.
- Timescale for forests should, long-term, be recognized as stated in the draft FCAT report – short-term declines in carbon storage resulting from ecological thinning and prescribed fire are more than offset by reduced future fire emissions and increased sequestration in bigger older trees. (We are not currently able to recommend a specific timeframe and what principles to apply.)

What implementation mechanisms already exist to advance the draft goals included in this document, and where are new implementation mechanisms needed? What sort of implementation mechanisms – policy, regulation, incentive-based programs, tax credits, etc. – should be employed to advance natural and working lands goals

For forests, the FIA program will undoubtedly be a source of important data for tracking forest conditions. FIA is a national, standardized program that provides a variety of forest stand measurements across a systematic grid of plots. FIA data will offer quantification of forests that can be extrapolated to any locality using statistical tools. As mentioned in the concept paper for the Forest Carbon Plan, LiDAR data also offers strong promise for much more precise characterization of forest structure over time, particularly as costs go down. LiDAR offers potential for quantifying above-ground carbon pools over large areas and across diverse areas. More work is likely needed to increase the reliability and accuracy of measurement of below-ground carbon pools, particularly in different ecosystem types such as wetlands.

#### Engaging Local Communities through Innovation:

We applaud your recognition that engaging local communities in making needed changes, particularly when achieving doing so involves innovation. As time has repeatedly demonstrated, having a scientifically-based plan is not sufficient to assuring its implementation. Without sufficient public understanding and support, many otherwise promising plans have literally gathered dust on a shelf and are soon forgotten. Not only does this waste an opportunity to make needed, timely changes, it often reinforces public skepticism about the capacity of government to get things done, especially in a manner respectful of local needs and concerns.

One USFS District Ranger well-articulated the value of broad-based, locally supported programs as “providing the social license to do the work.” As a collaborative that has now invested almost six years in building a strong foundation of understanding and support for a scientifically-sound plan to restore the health and fire resilience of the almost 1 million acre Stanislaus National Forest, we stand ready to partner with the State and federal government in implementing this landscape-level approach. We urge you to give priority support of forest restoration projects developed and supported by regional, multi-interest collaboratives such as YSS. We are confident this will expedite implementing plans that can make a difference.

#### Land Use Valuation and Co-Benefits:

We strongly urge you to consider the cost savings resulting from ecological thinning and prescribed fire which reduce megafire firefighting and community losses. While specific tools are not currently available to do so with high confidence, development of such empirical data and modeling tools should be a high priority.

This challenge is quite similar to when ARB made the commitment to address California's vehicular emission control needs. Reliable modeling and emission control technologies did not yet exist. Yet by ARB making a commitment to public health needs, and taking a leap of faith that science could catch up with what common sense clearly recognized was needed, ARB created the incentives that led to a leap in technology and scientific understandings that have made ARB the World-Class leader on auto emission controls. Your foresight and leadership are now equally needed in making breakthroughs in reversing the current trend of our forests becoming mass emitters of GHG. Additionally, ecological thinning and prescribed fire are complementary to other environmental objectives, which should to the extent feasible, be economically valued in your decisions.

#### **Supplemental Comments**

We provide these additional comments in our Appendix. These were part of our submittal on Draft Funding Guidelines for Agencies that Administer California Climate Investments. We believe they are equally relevant to issues raised in the Healthy Landscapes 2030: California's Climate Change Vision and Goals for Natural and Working Lands.

Thank you for your consideration of our comments. Please contact John Amodio, -YSS AB 32 Working Group Coordinator, [(916) 764-7575] should you have any questions concerning these comments.

Sincerely,



Chris Trott, Chair  
Yosemite Stanislaus Solutions

Cc: Wade Crowfoot, Senior Advisor, Governor Brown  
Cliff Rechtschaffen, Senior Advisor, Governor Brown  
John Laird, Secretary, California Natural Resources Agency  
Ken Pimlott, Director, CAL FIRE  
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Russ Henly, Assistant Secretary, California Natural Resources Agency  
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## Appendix

CAL FIRE funding guidelines already include fuel reduction projects such as we propose. For example, the CAL FIRE Fuel Reduction Grants webpage states: “[v]egetation treatment forestry prescriptions will focus on treating understory trees and brush with a goal of reducing fire hazards, improving tree growth, stabilizing carbon in retained trees, and increasing forest resilience”.

The Air Resource Board’s 2014 Scoping plan echoes these facts:

- “... [B]etter forest management reduces the incidence of catastrophic wildfire, which reduces emissions of GHGs and also increases the carbon sequestration capacity of the forests. p.12
- Wildfires are a highly intermittent but significant source—almost 50 percent of the total black carbon emissions. – p.18
- Healthy forests and lands returning to forest are an important source of carbon sequestration. The UC Berkeley research is showing, however, that loss of forests and other natural lands through fire, natural ecosystem succession and conversion of forests and woodlands to other uses represent significant CO2 release, potentially significantly greater than previously estimated and may outpace carbon sequestration, possibly by substantial amounts. p.71
- Timing is critical for actions in this sector. Activities to enhance carbon storage on natural and working lands, such as reforestation or restoration, will require time to fully realize carbon benefits. For example, planting trees today will maximize their sequestration capacity in 20 to 50 years. p.71
- Some actions to reduce emissions and enhance carbon storage in the long-term may result in temporary, short-term reductions in carbon sequestration. For instance, actions taken to address forest health concerns or to reduce wildfire risks may result in temporary reductions in carbon stock, but they are necessary to maintain healthy forests that are more efficient at GHG sequestration and more resilient to future climate conditions. It’s important to manage our forests to maximize net climate benefits, increasing sequestration while reducing losses due to fire or other processes, while also considering the broader range of environmental services that forests and other natural lands provide. p. 72 (emphasis added).
- Funding is critical to address the needs in this sector, yet it is far below historic levels and in some cases does not exist. Outcomes of actions on natural and working lands often occur on a decadal scale. Action within the next ten years is critical so long-term benefits can be fully realized in the 2050-timeframe. Funding sources must be identified, particularly where funds from existing sources can be leveraged effectively. p.74

Achieving AB 32 reduction goals without addressing forest health can ultimately impose more onerous burdens on other sectors. As noted by Secretary Laird at the Governor’s Symposium on Natural and Working Lands on August 5, 2015, **the Rim Fire emitted 11.7 million metric tons of GHGs, the equivalent of the annual emission of 2.3 million cars, while the King Fire emitted another estimated 4 million metric tons of GHG.** These emissions significantly impact the effectiveness of other programs under AB 32 to reach California’s GHG reduction goals.

We are concerned that the Draft Funding Guidelines could unintentionally raise unnecessary obstacles for needed fuel reduction and forest restoration projects. In particular, we ask that the following concerns be addressed.

**1. Give equal attention to the need for action as well as to the details of quantification of GHG reductions.**

YSS recognizes there are multiple laws that ARB and funding agencies must follow. However, we are concerned the Funding Guidelines may add so many layers of requirements in an effort to document the process is well vetted that action may inadvertently be delayed in order to over-prepare for audits. The fundamental purpose of the GGRF program may be diluted or lost in a miasma of application, outreach and reporting requirements.

As Secretary Laird stated at the Governor's Symposium on Natural and Working Lands, it is known that fuel reductions reduce wildfires, even though the exact GHG reduction associated with reduced wildfire air emissions and increased sequestration may not yet be able to be quantified. It is known that reduction is real. Less fuel means fewer and less intense fires. The ARB's Scoping Plan Update already makes this fundamental point.

Researchers are hard at work to better quantify the linkage and the Forest Carbon Action Plan will provide additional information in late 2016 or 2017. Yet, what will always remain, is an assessment of probability. We are all 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 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 an impossible calculation of precisely how much.

**2. Do not confuse review of Greenhouse Gas Reduction Fund ("GGRF") projects with the granting of offsets.**

Fuel reduction and forest restoration projects appear to be one of the only, if not the only, category of GGRF funded projects that could possibly also qualify for offsets if carried out on private lands. There may be a temptation to apply the full suite of requirements from the ARB's Compliance Forest Offset Protocol (perhaps under an Expenditure Record approved by the ARB) to an assessment of GHG reductions from fuel reduction projects. This would be incorrect and will also unnecessarily delay needed fuel reduction projects.

First, offsets may not be created on National Forests under the ARB Forest Offset Protocol. So, no one is seeking to sell reductions that occur as a result of ecological thinning and forest restoration on National Forest lands.

Second, 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 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 quoted above, 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 ten-year period as may be required under the Forest Protocol. Clearly, the Forest Protocol is not designed to apply to fuel reduction projects on National Forests.

Third, and 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 expenditures from the GGRF “facilitate” or “contribute” to reductions. Ecological thinning and forest restoration projects clearly accomplish this purpose.

**3. Revise the ARB’s requirements as to disadvantaged communities to include rural forested communities that currently do not necessarily qualify. Assure that applications do not require submission of detailed information concerning effects on, and benefits to, disadvantaged communities if they do not claim such direct effects benefits under existing identification criteria. Add fuel reduction and biomass utilization projects to Table 2.A-6, Volume 2, page 2A-13.**

As has been pointed out in recent testimony at the ARB workshop on the Funding Guidelines on August 3rd by representatives of the Rural County Representatives of California, and on August 5th by the Jonathan Kusel of the Sierra Institute for Community and the Environment, the CalEnviroScreen tool currently employed by ARB to identify disadvantaged communities largely excludes low income rural communities. Numerous communities in the region adjacent to the Stanislaus National Forest and other regions of the Sierra Nevada Forests are disadvantaged, yet rate low on the CalEnviroScreen analysis. YSS recommends either the screening tool be revised to better address rural community conditions or a separate screen be developed for rural areas. The present system is skewed to overweight urban-related factors as demonstrated by the map of disadvantaged areas published by ARB. We also note fuel reduction projects may provide employment opportunities for persons in Central Valley disadvantaged communities.

If no changes are made in the coming funding cycle to the identification of disadvantaged communities, the Funding Guidelines should more clearly state that application and reporting requirements relating to disadvantaged communities only apply to funding solicitations and applications that claim a benefit to such communities. Particularly with the additional requirements added by the July Supplement, funding solicitations and applications that can benefit disadvantaged communities will be significantly more onerous to prepare and implement. These requirements should clearly be required only where applicable.

Requirements concerning benefiting disadvantaged communities, as supplemented by SB 535, are a valuable addition to the programs developed under AB32. However, we respectfully note, while there are many other valuable social, economic, and educational programs aimed at disadvantaged communities, there really is only one in California directed at reducing GHG concentrations in the atmosphere. To be effective, the primary goal of AB32 remains to reduce emissions and increase sequestration of GHGs. Failure to achieve that goal will disadvantage all communities, particularly the most disadvantaged of our communities.

A final technical point is, to the extent disadvantaged communities could be benefited by employment opportunities, fuel reduction projects should qualify. However, the criteria for Land Preservation or Restoration in Volume 2, Appendix 2.A, Table 2.A-6, p. 2A.-13, does not include fuel reduction projects that are already eligible under CAL FIRE funding guidelines. Therefore, these projects should be added to the table heading.

**Recommendation: Additional Language for the Funding Guidelines**

To address the concerns we have set forth above, YSS recommends the following language be added to the Funding Guidelines:

Page 17, Volume 1 of Draft Funding Guidelines, prior to section heading “Initial Process” add the following:

*Statutory requirements for Climate Investment projects utilizing GGRF funds are to further the purposes of AB32 and facilitate or contribute to reductions. There are many practical limitations to quantification of emissions because of the diverse and complex activities which may affect emissions. Reduction calculations also require reasonable predictions of future human and natural system behaviors and events. Therefore, quantification of reductions is necessarily subject to a rule of reason such that at the time of funding projects there is a clear reduction associated with the project and a reasonable quantification, based upon currently available data, of GHG reductions. Reductions related to Climate Investment projects are not subject to the requirements of approved ARB Offset protocols provided that no offsets are sought from forecasted reductions.*

Page 5, Volume 2 of Draft Funding Guidelines add the following additional paragraph:

*Concerns have been raised that CalEnviroScreen may not adequately identify disadvantaged rural communities. Such communities may also meet elements of the SB535 criteria, such as areas with concentrations of people that are of low income, high unemployment, low levels of homeownership, high rent burden, sensitive populations, or low levels of educational attainment. ARB will further evaluate means of either adding additional criteria to CalEnviroScreen or develop other means to more fully consider the status and needs of rural communities.*

Page 11 Volume 2 before heading number 2, “Requirements for agencies having investments that may be located within or provide benefits to disadvantaged communities (see Appendix 2.A):”

*If a funding agency or an applicant for funding does not assert that the project significantly benefits disadvantaged communities under the currently applicable criteria, then no further information concerning benefits to disadvantaged communities need be provided.*

Criteria for Land Preservation or Restoration in Volume 2, Appendix 2.A, Table 2.A-6, p. 2A.-13. Revise the first section of the Table as follows:

**Table 2.A-6 Land Preservation or Restoration**

*Projects will achieve net GHG reductions through sequestration or by protecting natural lands from GHG-intensive development (e.g., agricultural land conservation easements, wetland restoration, forest conservation easements) or by reducing forest fuels and increasing biomass utilization*