### Comment 1 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: michael Last Name: kersten

Email Address: kerstencastle@att.net

Affiliation:

Subject: important concepts missing from plan

Comment:

I applaud the state for recognizing the serious state our lands are in and taking steps to heal the situation.

What has become glaringly apparent are some missing components of healthy ecosystems that nature has shown us.

 The inclusion of herds of animals on the land and their vitally important impact on the health of the soils and entire

system.

2. Biodiversity. It has been shown that both trees, shrubs, pasture and crops in between, all grow better and are more healthy than any grown alone. Silvoforest, agroforest and related concepts are getting there but do not compare with multistory, multi species plant communities. Annual crops between rows of multistory agro producing plant groups will also benefit from the improved fertility in the soil. There are many working with these important realizations. Included are two that are helping make tremendous land fertility and economic restoration.

It would be a benefit to the state to include their concepts in training and implementation of these concepts. michael kersten ph 916-761-4016

Attachment: www.arb.ca.gov/lists/com-attach/1-nat-workinglands-ws-USIBZgN0Um5WIgR9.zip

Original File Name: SavoryandRestorationag-Portfolio-2017.zip

Date and Time Comment Was Submitted: 2018-05-18 09:00:11

### Comment 2 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Dan Last Name: Silver

Email Address: dsilverla@me.com Affiliation: Endangered Habitats League

Subject: California Natural and Working Lands Climate Change Implementation Plan Concept Paper.

Comment:

#### Gentlepersons:

Endangered Habitats League (EHL) support this component of California's GHG reduction program and urges an ambitious effort that goes far behind baseline trends. We particularly stress the importance of natural lands protection, which has the important co-benefit of climate adaption, for example in the preservation environmental gradients and movement corridors.

However, while we agree that avoided conversion is a key factor in many part of the state, such as Southern California, there should be greater emphasis on the role of natural lands in sequestering carbon per se. Sequestration in soil is the major form of sequestration in scrub systems.

The concept paper refers to "rangelands" rather than listing the more specific habitat types. Please clarify that rangelands include coastal sage scrub, chaparral, and oak woodland. This is very important.

We support setting acreage targets.

There is much emphasis on restoration. While EHL supports this goal, restoration is also expensive. It will be important to look at the cost effectiveness of preservation/avoided conversion in this context.

Thank you for your consideration.

#### Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2018-05-22 14:55:53

### Comment 3 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Andrew Last Name: Whyte

Email Address: a.whyte@landlifecompany.com

Affiliation: Land Life

Subject: Land Life // Planting Trees Without Irrigation

Comment:

Hello,

Thank you for this paper, and plan. Land Life is excited to be a part of this conversation and effort in fighting climate change.

We work with many of the stakeholders in this plan (RCDs, Caltrans, etc), and I've attached an intro brochure for those unfamiliar with our work. We use our biodegradable Cocoon to plant trees at scale in degraded soils and in areas looking to conserve water, and our survival rates average above 70%.

Thank you again for your time and great work. I'm available to help however I can.

Cheers, Andrew

Attachment: www.arb.ca.gov/lists/com-attach/3-nat-workinglands-ws-BTdTZQAwUDtWDwZq.pdf

Original File Name: 2018 Land Life Company Introduction.pdf

Date and Time Comment Was Submitted: 2018-05-26 03:30:30

### Comment 4 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Christine Last Name: Mai

Email Address: cmai@fs.fed.us Affiliation: USFS Hydrologist

Subject: Key water related restoration opportunities unaddressed

Comment:

Two particular areas of concern to me as a water specialist for a land management agency are ground water recharge and protection and accessibility of aquatic habitats.

If we are concerned about ecosystem resilience beyond humans it would be good to acknowledge that extensive aquatic habitats have been isolated due to historic road infrastructure that does not allow passage into habitats that could be used for refugia as stream waters get progressively warmer. The aging undersized infrastructure also leads to water quality impacts such as aggradation above road crossing pipes and cutting below. Investing in restoring road crossings would help to restore a hydrologic regime that is less flashy and that promote healthy stream systems.

The other key area to protect are the numerous springs throughout California that are still generously contributing to surface water quantity. These areas are providing key habitat for numerous sensitive species as well which are important to overall ecosystem health.

Spring data for the state of California is in a state of dismay. Investments in the National Hydrologic Data (NHD) set has excluded updates that are much needed to protect these springs. Old USGS maps and the NHD have significant variation in spring numbers and locations. Why? They are small and easily forgotten unless you are Nestle trying to develop and export the waters. Inventorying, understanding and protecting these resources is key to better understanding and protecting ground water resources.

Fuel and biomass reduction as well as wildfires will play a key role in restoring many springs however it is important to protect these key areas as part of the climate change plan.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2018-05-31 13:06:10

# Comment 5 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Abby Last Name: Halperin

Email Address: ahalperin@pacificforest.org

Affiliation: Pacific Forest Trust

Subject: Pacific Forest Trust Comments on the NWL Implementation Plan Concept Paper

Comment:

Please find comments from Pacific Forest Trust on the NWL Implementation Plan Concept Paper Attached.

Attachment: www.arb.ca.gov/lists/com-attach/5-nat-workinglands-ws-VDpQIV0wV1tQP1Q5.pdf

Original File Name: NWL Implementation Plan Concept Paper Pacific Forest Trust Comments.pdf

Date and Time Comment Was Submitted: 2018-06-04 14:43:30

### Comment 6 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Takumi Last Name: Soyama

Email Address: soyamatakumi25918@gmail.com

Affiliation: Energy Institution Inc.

Subject: The great invention of the century to let the world change completely

Comment:

The great invention of the century to let the world change completely by a climate change and air pollution ,plane noise problems was scooped all the others with in the information site of Japan . It is in this century first "Soyama Turbine" which makes exhaust gas drained from an internal combustion engine a factory, the thermal power station absorption offset ,silence ,having no bad smell .It absorbs it together , and this turbine can do thermal energy ,pressure energy exhaust gas for turn torque by attaching it to each exhaust oral region mentioned above and is a turbine of the surprise to let I make a climate change air pollution and the plane noise silence having no bad smell not reduction and dispence with U.N.Framework Convention on Climate Change ,and the world change completely . I hope that the world is adopted as soon as possible heartily .i make a wish!

Attachment: www.arb.ca.gov/lists/com-attach/6-nat-workinglands-ws-VGRXIQN2UHoDZgVk.jpeg

Original File Name: OPtYcarW.jpeg

Date and Time Comment Was Submitted: 2018-06-07 17:31:26

## Comment 7 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Bill Last Name: Tippets

Email Address: billtippets@gmail.com

Affiliation: Southwest Wetlands Interpretive Assoc.

Subject: Natural and Working Lands Concept Paper

Comment:

Please include the attached letter from the Southwest Wetlands Interpretive Association into the administrative record for this project.

SWIA supports the concepts in the paper and makes several recommendations to clarify and improve the approaches.

Bill Tippets, Board Member

Attachment: www.arb.ca.gov/lists/com-attach/7-nat-workinglands-ws-VjcBdVc0Aw8FbQdw.pdf

Original File Name: ARB NWL Concept Paper\_SWIA commens\_June2018.pdf

Date and Time Comment Was Submitted: 2018-06-08 16:26:45

## Comment 8 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Willam Last Name: Stewart

Email Address: billstewart@berkeley.edu Affiliation: University of California Berkeley

Subject: Use CALAND for natural lands but AB1504 reports for forests

Comment:

Please find the attached comments on how to use the best data sources for cropland and forestland, while directing CALAND to address the poorly studied wetlands, riparian areas, sea grass, and other natural lands.

Attachment: www.arb.ca.gov/lists/com-attach/8-nat-workinglands-ws-Wi8GcwFlBAgEYQdm.pdf

Original File Name: use CALAND for lands other than cropland and forestland.pdf

Date and Time Comment Was Submitted: 2018-06-12 17:17:34

## Comment 9 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Heather Last Name: Kramp

Email Address: hkramp@portofsandiego.org

Affiliation: Port of San Diego

Subject: Port of San Diego comment letter on the NWL Implementation Plan Concept Paper

Comment:

To Whom It May Concern;

Please find comments from the Port of San Diego (Port) on the CA Natural and Working Lands Implementation Plan Concept Paper in the attached letter.

Thank you,

Heather Kramp Assistant Planner Planning & Green Port Port of San Diego

Attachment: www.arb.ca.gov/lists/com-attach/9-nat-workinglands-ws-VydUPQBzUXYGXwlm.pdf

Original File Name: Port of San Diego - NWL comment letter.pdf

Date and Time Comment Was Submitted: 2018-06-13 15:17:32

# Comment 10 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: William Last Name: Stewart

Email Address: billstewart@berkeley.edu Affiliation: University of California Berkeley

Subject: Serious technical and bad calibration problems with CALAND on forest lands

Comment:

Please see the attached comments

Attachment: www.arb.ca.gov/lists/com-attach/10-nat-workinglands-ws-UCRSMQNhWGNQOANq.pdf

Original File Name: Technical limitations and problems of applying CALAND to forest lands.pdf

Date and Time Comment Was Submitted: 2018-06-13 16:48:10

# Comment 11 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Noelle Last Name: Cremers

Email Address: ncremers@cfbf.com

Affiliation: California Farm Bureau Federation

Subject: Natural and Working Lands Climate Change Implementation Plan Concept Paper

Comment:

Please see the attached comments.

Thanks, Noelle

Attachment: www.arb.ca.gov/lists/com-attach/11-nat-workinglands-ws-AmwHdlc6VlpRNAZp.pdf

Original File Name: NWL Concept Paper Cmts 6-13-18.pdf

Date and Time Comment Was Submitted: 2018-06-13 21:47:08

# Comment 12 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Ella Last Name: Wise

Email Address: ella@climateplanca.org

Affiliation:

Subject: Comments re: 2030 Natural and Working Lands Implementation Plan Concept Paper

Comment:

Please see the attached.

Thank you

Attachment: www.arb.ca.gov/lists/com-attach/12-nat-workinglands-ws-VTsBcFU4UV1SN1U6.pdf

Original File Name: NWL Concept Paper Comment Letter\_6.14.2018.pdf

Date and Time Comment Was Submitted: 2018-06-14 14:58:46

## Comment 13 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: JULIA Last Name: RICHARDS

Email Address: jrichards@sdrc.ca.gov Affiliation: San Diego River Conservancy

Subject: comments from San Diego River Conservacy

Comment:

Please see attached comment letter for California Natural and Working Lands Climate Change Implementation Plan Concept Paper.

I can be reached at 619.645.3188 if there are any questions. Thank you.

Julia

Attachment: www.arb.ca.gov/lists/com-attach/13-nat-workinglands-ws-B3RTMVwvAzMFXAV3.pdf

Original File Name: SDRC response letter to NWL concept paper June 14, 2018.pdf

Date and Time Comment Was Submitted: 2018-06-14 15:08:39

## Comment 14 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Tom Last Name: Martin

Email Address: advocacy@forestfoundation.org

Affiliation: American Forest Foundation

Subject: California Natural and Working Lands Climate Change Implementation Plan Concept Paper

Comment:

See attached.

Attachment: www.arb.ca.gov/lists/com-attach/14-nat-workinglands-ws-BnZSJgZoBCIEZlU5.docx

Original File Name: Proudly representing the nation.docx

Date and Time Comment Was Submitted: 2018-06-14 15:10:51

## Comment 15 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: JULIA Last Name: RICHARDS

Email Address: jrichards@sdrc.ca.gov Affiliation: San Diego River Conservancy

Subject: comments from San Diego River Conservacy

Comment:

Please use this update letter. The one I sent earlier today still had comments included.

Let me know if you have questions. Thanks!

Julia 619.645.3188 office

Attachment: www.arb.ca.gov/lists/com-attach/15-nat-workinglands-ws-AXIGZABzV2cHXgV3.pdf

Original File Name: SDRC response letter to NWL concept paper June 14, 2018 revised.pdf

Date and Time Comment Was Submitted: 2018-06-14 15:23:36

# Comment 16 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Daniel Last Name: Barad

Email Address: daniel.barad@sierraclub.org

Affiliation: Sierra Club California

Subject: Natural and Working Lands Concept Paper Comments

Comment:

Please see attached letter.

Attachment: www.arb.ca.gov/lists/com-attach/16-nat-workinglands-ws-BmhcLVU4AAwGY1c4.pdf

Original File Name: NWL Concept Paper Comments.pdf

Date and Time Comment Was Submitted: 2018-06-14 15:55:19

# Comment 17 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Joseph Last Name: Edmiston

Email Address: edmiston@smmc.ca.gov

Affiliation: Santa Monica Mountains Conservancy

Subject: Staff comments on draft NWL policy paper

Comment:

Please see the attached file prepared by Melissa Smith after consultation with CNRA.

Attachment: www.arb.ca.gov/lists/com-attach/17-nat-workinglands-ws-AHMFblQ4WGgLUlQ6.docx

Original File Name: SMMC NWL staff comments.docx

Date and Time Comment Was Submitted: 2018-06-14 21:34:14

## Comment 18 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Claire Last Name: Broome

Email Address: cvbroome@gmail.com

Affiliation:

Subject: Comments on natural and working lands implementation plan concept paper

Comment:

See attached.

Attachment: www.arb.ca.gov/lists/com-attach/18-nat-workinglands-ws-VzVXIwBuUW0HbFUw.docx

Original File Name: Broome Nat Working land plan comments.docx

Date and Time Comment Was Submitted: 2018-06-15 08:24:15

# Comment 19 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Nick Last Name: Cammarota

Email Address: ncammarota@cbia.org

Affiliation: California Building Industry Association

Subject: CBIA Comment Letter

Comment:

Please see the attached comment letter on behalf of the California Building Industry Association. Thank you.

Attachment: www.arb.ca.gov/lists/com-attach/19-nat-workinglands-ws-UzBSNgZuVmQFXARn.pdf

Original File Name: CBIA Comment Letter - Natural & Working Lands Climate Change Implementation Plan.pdf

Date and Time Comment Was Submitted: 2018-06-15 12:16:57

## Comment 20 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Chuck Last Name: Mills

Email Address: cmills@californiareleaf.org

Affiliation: California ReLeaf

Subject: Comments from CA ReLeaf on NWL Implementation PLan Concept Paper

Comment:

Please find attached comments from California ReLeaf regarding the Concept Paper for the Natural and Working Land Implementation Plan. Thank you for thee opportunity to comment.

Attachment: www.arb.ca.gov/lists/com-attach/20-nat-workinglands-ws-WjRSIwdqVVlVMFQ7.pdf

Original File Name: NWL Concept Paper comments CA ReLeaf.pdf

Date and Time Comment Was Submitted: 2018-06-15 12:29:34

## Comment 21 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Sheryl Last Name: Landrum

Email Address: sheryl.landrum@rcdsandiego.org Affiliation: RCD of Greater San Diego County

Subject: California 2030 NWL Climate Change Implementation Plan - Concept Paper

Comment:

Please see attached comment letter from the Resource Conservation District of Greater San Diego County for California 2030 Natural and Working Lands Climate Change Implementation Plan - Concept Paper

Please contact me at 619-562-0096 if you have any questions or by email at sheryl.landrum@rcdsandiego.org. Thank you.

Sheryl Landrum

Attachment: www.arb.ca.gov/lists/com-attach/21-nat-workinglands-ws-WylTNlE0BTFQJQlt.pdf

Original File Name: RCDGSDC\_Letter\_2018.pdf

Date and Time Comment Was Submitted: 2018-06-15 12:44:36

### Comment 22 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: John Last Name: Hopkins

Email Address: ieh@cal.net

Affiliation: California HCP Coalition

Subject: comment on Conceot Paper for N&W Lands Implementation Plan Comment:

#### Comment 1

p 2 Overview - land types scope
The first sentence states the land type scope of this plan "
forests, farmland, ranchland, grasslands, wetlands and urban land".
 A similar listing of land types occurs in the first paragraph of
the Introduction on page 4, the first sentence of Plan Scope on
page 5

This scope misses out many natural lands in southern California and the deserts that are very important for carbon sequestration. Examples are coastal sage scrub, chaparral, oak woodlands and a wide range of desert scrub types. They are not covered by "ranchland" because no ranching occurs. In many cases they are threatened by development that would release much sequestered carbon and eliminate future carbon sequestration programs, or by degradation that reduces carbon sequestration benefits. There are various state programs and state-funded projects to secure conservation and restoration of key areas (such as Natural Communities Conservation Plans and the Wildlife Conservation Board's climate change adaptation program) for which these southern Californian and desert lands are very important.

#### Comment 2

p 7 Paragraph 1. Natural and Working Lands GHG flux To the extent that solid scientific data is available, this should encompass the full suite of land types as per comment 1 , not the constrained list stated repeatedly in this document. It will help to indicate scientific uncertainties, as well as future modeling and data needs.

#### Comment 3

p7 Paragraph 2. Setting path for deeper (GHG) reductions by 2050. We strongly support setting this deeper, longer term path in this implementation plan, irrespective of the results of the NWL inventory A zero or negative

#### Comment 4

General comment on modeling, goal setting, implementation plan components

Essential to address the broader array of land types, as per comment 1.

#### Comment 5

Ecological restoration - table on page 12. We note that the table only addresses mountain meadow and oak woodland restoration but that text near top of the page suggests the final Implementation Plan will include additional ;and types. Important that it do so.

#### Comment 6

Rangeland compost application, page 14.

It is necessary that this important management practice be used

selectively. There may be areas important for conservation of biodiversity, imperiled species and ecological functions where compost application would be deleterious. Additional scientific research on this issue needed

#### Comment 7

Riparian restoration, page 14 Land types are broader than grasslands and cultivated lands, and suite of species much more than oaks, depending on the location

#### Comment 8

Note from conversation at May 18 Sacramento workshop
We are very appreciative of Ashley Conrad-Saydeh's comment
understanding the importance of Natural Community Conservation
Plans and Habitat Conservation Plans and that full funding these
plans is an important GHG reduction activity.
Also we note Ashley Conrad-Saydeh's additional comments that
activities in the Implementation Plan are limited by available
modeling and that items which are state-funded but not in the model
are important for meeting the state's climate goals. We strongly
support this statement and trust that the final Implementation Plan
will include additional modeling needs.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2018-06-15 14:27:25

## Comment 23 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Pelayo Last Name: Alvarez

Email Address: palvarez@carboncycle.org

Affiliation: Carbon Cycle Institute

Subject: comments to NWL Climate Change Implementation Plan Concept Paper

Comment:

Dear Sir/Madam,

Please find attached comments to the California Natural and Working Lands Climate Change Implementation Plan Concept Paper provided by the Carbon Cycle Institute.

Thank you

Attachment: www.arb.ca.gov/lists/com-attach/23-nat-workinglands-ws-AG4Hdl0wWVVQNVQ7.pdf

Original File Name: NWL Comments-final.pdf

Date and Time Comment Was Submitted: 2018-06-15 14:41:22

## Comment 24 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Analise Last Name: Rivero

Email Address: arivero@defenders.org Affiliation: Defenders of Wildlife

Subject: Comments on the NWL Climate Change Implementation Plan Concept Paper

Comment:

Please find attached a zip file with two PDF's. One cover letter with brief comments and a second 24-page PDF with additional detail and previously submitted comment letters for your consideration. Thank you very much for the opportunity to comment.

Attachment: www.arb.ca.gov/lists/com-attach/24-nat-workinglands-ws-Wz9RMgdgAjRXPwVh.zip

Original File Name: Defenders Comments.zip

Date and Time Comment Was Submitted: 2018-06-15 15:38:14

## Comment 25 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Julia Last Name: Chase

Email Address: Julia.Chase@sdcounty.ca.gov

Affiliation: County of San Diego

Subject: National Working Lands Climate Change Implementation Plan

Comment:

Attached please find the County of San Diego's comments.

Attachment: www.arb.ca.gov/lists/com-attach/25-nat-workinglands-ws-UmBQZlBgVD9VflRk.pdf

Original File Name: 2018-06-15 NWL\_County of San Diego.pdf

Date and Time Comment Was Submitted: 2018-06-15 16:05:06

# Comment 26 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Shaye Last Name: Wolf

Email Address: swolf@biologicaldiversity.org Affiliation: Center for Biological Diversity

Subject: NWL Concept Paper comments

Comment:

Please see attached comments on the NWL Implementation Plan Concept Paper submitted on behalf of the Center for Biological Diversity.

Attachment: www.arb.ca.gov/lists/com-attach/26-nat-workinglands-ws-UWBXaQZYAGNSYglW.pdf

Original File Name: 18 06 15 NWL Concept Paper Comments CBD combined.pdf

Date and Time Comment Was Submitted: 2018-06-15 16:38:16

## Comment 27 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Kathleen Last Name: Ave

Email Address: kathleen.ave@smud.org

Affiliation: SMUD

Subject: Comments on Concept Paper

Comment:

File attached

Attachment: www.arb.ca.gov/lists/com-attach/29-nat-workinglands-ws-B3QBagN3VGMFXFQ3.pdf

Original File Name: SMUD Comments Nat Working Lands Concept Paper June 2018.pdf

Date and Time Comment Was Submitted: 2018-06-15 17:04:02

### Comment 28 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Paul Last Name: Kirk

Email Address: pkirk@landconservation.org Affiliation: Northern CA Regional Land Trust

Subject: Comments on Natural and Working Land Implementation Concept Paper

Comment:

Dear Shelby Livingston,

Thank you for this opportunity to comment on the Natural Working Land (NWL) Implementation Plan Concept Paper.

The Northern California Regional Land Trust (NCRLT) services the tri-county region of Butte, Glenn, and Tehama from the western slopes of the southern Cascade Range and northern Sierra Nevada Range to the eastern slopes of the Coast Range. NCRLT holds conservation easements on over 24,000 acres in the region and the majority of the acreage is rangelands and oak woodlands. NCRLT staff prepared the following comments addressing the development and implementation of the NWL Plan.

Oak woodland restoration acreage potential in Tehama County alone is at least an order of magnitude higher than the Sierra/Cascade acreage target (Ambitious = 750 acres) that was presented at the joint-agency meeting in Auburn.

Soil conservation practices of mulching and composting within oak woodlands could have unintended effects of creating soil conditions that increase favor increased pressure of non-natives in native plant habitat (e.g., thin soils on volcanic substrates). Restoration of perennial grasses could be considered as an alternative method of increasing carbon sequestration in some rangeland habitats.

The tri-county region has a large network of ephemeral, intermittent, and non-anadromous perennial streams that extend from the valley floor to the coniferous forest. These waterways have potential for restoration perennial herbaceous and woody species through active management techniques (e.g., exclusionary fencing) that could result in carbon sequestration orders of magnitude higher than current state of the art models for project riparian restoration potential, which tends to focus on a limited aggressive restoration approach and specific larger water features (e.g., major arterials and/or anadromous streams).

Implementation of the plan should adequately address the financial support that conservation partners (i.e., nonprofits and special districts) is critical for on-the-ground regional roll out, implementation, and maintenance of plans goals and objectives. Similarly the plan should address the integral role of land managers/landowners and financial support for their participation in implementing and supporting the plan.

Sincerely,

Paul Kirk Executive Director Northern California Regional Land Trust Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2018-06-15 17:17:25

# Comment 29 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Jeanne Last Name: Merrill

Email Address: jmerrill@calclimateag.org

Affiliation: CA Climate & Agriculture Network (CalCAN

Subject: Agricultural/Climate Change Researcher Comments

Comment:

Attached is a comment letter from several researchers in the field of agriculture and climate change.

Attachment: www.arb.ca.gov/lists/com-attach/31-nat-workinglands-ws-Uz1WJ1c6WVUKfAll.pdf

Original File Name: NWL Plan - Final - 6-15-18.pdf

Date and Time Comment Was Submitted: 2018-06-15 17:58:21

## Comment 30 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Marty Last Name: Walters

Email Address: marty.walters@mac.com

Affiliation:

Subject: Comment on concept paper for CA Natural and Working Lands Climate Change Implementation Pl Comment:

Thank you for your work on the California 2030 Natural and Working Lands Climate Change Implementation Plan Concept Paper. I am submitting comments as a private citizen of Quincy, Plumas County, California. Please see attached file.

Attachment: www.arb.ca.gov/lists/com-attach/33-nat-workinglands-ws-BWZQOQdrWGZWNVI8.docx

Original File Name: Comments CaCIP 20180615.docx

Date and Time Comment Was Submitted: 2018-06-15 18:26:41

### Comment 31 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Scott Last Name: Morgan

Email Address: Scott.Morgan@opr.ca.gov

Affiliation: Governor's Office of Planning & Research

Subject: Recommended Conservation, Restoration and Management Activity - Biochar

Comment:

First and foremost, I would like to thank all of the fine folks at ARB that have done such a wonderful job with the Natural and Working Lands Climate Change Implementation Plan Concept Paper. With that being said, I would like to encourage you all to consider including in the future the GHG emission reduction potential of biochar, which is a carbon-rich material produced from the thermo-chemical conversion of biomass during gasification or pyrolysis processes (i.e. bioenergy generation). Biochar is currently a regulated soil amendment under CDFA's Food and Agriculture Code (section 14513.5).

Considering the need for developing new market opportunities for biomass removed through tree mortality and agricultural residue waste diversion programs, I am writing to express my support for the consideration of biochar production and utilization as an accepted management practice to promote greater GHG emission reductions on natural and working lands across California. The scientific literature supports the conclusion that charring biomass results in changes in material properties of biochars that confer greater persistence to mineralization than any other form of organic matter that is commonly applied to soil (Lehmann et al. 2015). Additionally, the results of a meta-analysis show that the addition of biochar decreased N2O emissions from soils by an average of 54 percent (Cayuela et al., 2014). In 2015, soil management was responsible for 5.86 MMT CO2e or 17 percent of agricultural emissions, of which N2O accounted for 96.75 percent of all soil emissions in California. For more information on the GHG emission reduction potential of biochar, see attached paper.

I look forward to discussing this topic further at your earliest convenience.

Scott Morgan

Attachment: www.arb.ca.gov/lists/com-attach/34-nat-workinglands-ws-VzUBbgNtUGAHaQZn.pdf

Original File Name: Biochar as a tool to reduce the agricultural GHG burden - knowns, unknowns, and future research needs (Kammann et al., 2017).pdf

Date and Time Comment Was Submitted: 2018-06-15 18:46:39

### Comment 32 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Raymond Last Name: Baltar

Email Address: rbaltar@sonic.net

Affiliation: California Biochar Association

Subject: Biochar production and use in land restoration activities should be a Best Practice

Comment:

The production and use of biochar, a form of recalcitrant carbon with a number of important benefits for agricultural production and land restoration activities, should absolutely be viewed as an integral part of any natural and working lands climate change implementation plan.

The production and use of biochar can help address the following challenges facing California:

Millions of tons of surplus agricultural biomass generated in the State each year, not to mention over 125 million dead or dying trees in the Sierras caused by the changing climate, or the millions of tons of forest slash produced during fuels reduction work around the state, could be turned into a valuable soil amendment to help reduce water use by farmers in the Central Valley or to help restore degraded landscapes.

A huge side benefit of storing biochar in soils is the carbon sequestration value of the practice. A significant amount of research is ongoing around the world to quantify which types of biochars will persist for the longest time in soils, but existing research indicates the time scale for most biochars are in the century or millennia time frames.

Some forms of production can produce a renewable form of energy that can contribute baseload power to the grid that could replace fossil fuel plants, and in fact much of the biochar produced and sold in California currently comes from Co-Gen plants that have been adapted to produce a high-carbon by-product. We should be modernizing or building more efficient biomass energy plants, not simply closing down older plants.

The value of biochar production and use for enhancing forestry restoration activities specifically has been championed by Oregon-based, US Forest Service Biomass Manager James Archuleta and others. Even the NRCS has warmed up to biochar use and now includes biochar production from forest slash as an acceptable Conservation Activity as part of their Conservation Stewardship Program.

We strongly suggest that ANY California Natural and Working Lands Climate Change Implementation Plan include biochar production and use as part of its recommendations.

Raymond Baltar Director California Biochar Association

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Original File Name:

Date and Time Comment Was Submitted: 2018-06-15 22:22:03

# Comment 33 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Amber Last Name: Bassett

Email Address: amber@regenerativefootprint.org

Affiliation:

Subject: Comment for CA Natural and Working Lands Climate Change Implementation Plan

Comment:

See attached.

Attachment: www.arb.ca.gov/lists/com-attach/36-nat-workinglands-ws-AHRcNQAvBDMDalIx.docx

Original File Name: To.docx

Date and Time Comment Was Submitted: 2018-06-18 13:36:42

## Comment 34 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Kitty Last Name: Merrill

Email Address: kitty\_merrill@hotmail.com

Affiliation:

Subject: Climate Change Mitigation Demands More

Comment:

See attached

Attachment: www.arb.ca.gov/lists/com-attach/37-nat-workinglands-ws-VWZTYF1sUXQDYAVr.docx

Original File Name: 350VenturaCommentsCA2030Plan.docx

Date and Time Comment Was Submitted: 2018-06-18 13:36:42

## Comment 35 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Michelle Last Name: Passero

Email Address: mpassero@TNC.ORG

Affiliation:

Subject: TNC comments on the NWL Implementation Plan Concept Paper

Comment:

See attached.

Attachment: www.arb.ca.gov/lists/com-attach/38-nat-workinglands-ws-VCBXP1c1BAgLbgNs.pdf

Original File Name: TNC Comments NWL ConceptPaper.pdf

Date and Time Comment Was Submitted: 2018-06-19 08:18:38

## Comment 36 for Natural and Working Lands Joint Agency Workshop (nat-workinglandsws) - 1st Workshop.

First Name: Shannon Last Name: Harroun

Email Address: SHarroun@placer.ca.gov

Affiliation: PCAPCD

Subject: PCAPCD Comments--CA Natural and Working Lands Climate Change Plan

Comment:

See attached.

Attachment: www.arb.ca.gov/lists/com-attach/39-nat-workinglands-ws-BnYAZVAwAyAHYlA0.pdf

Original File Name: PCAPCD Comments Natural and Working Lands Climate Change Plan.pdf

Date and Time Comment Was Submitted: 2018-06-20 09:35:35

There are no comments posted to Natural and Working Lands Joint Agency Workshop (nat-workinglands-ws) that were presented during the Workshop at this time.						