PC 3/23/17
#6

Charlene Tim <charlene.tim@edcgov.us>

2 pages

# Request for extension of review time- Final EIR, Bio Policy Update, PC hearing scheduled 3/23/17

**vandyke.5@sbcglobal.net** <vandyke.5@sbcglobal.net> Wed, Mar 15, 2017 at 7:16 AM
To: Gary Miller <gary.miller@edcgov.us>, James Williams <jww3100@gmail.com>, Jeff Hansen <jeff.hansen@edcgov.us>, Brian Shinault <brian.shinault@edcgov.us>, Char Tim <charlene.tim@edcgov.us>, jeff.haberman@edcgov.us
Cc: Anne Novotny <anne.novotny@edcgov.us>, Tim White <tjwhitejd@gmail.com>

Dear Commissioners-

Please extend the review time & reschedule the PC hearing to April 13, 2017, for the Final EIR of the Biological Resource Policy Update (currently scheduled for 3/23/17), as requested by EDH-APAC chair Tim White.

This would help immensely in getting feedback from the many individuals and groups who have followed this project closely and really care about the impact of development on our County's resources, me included.

Thank you so much for your consideration of this.

Ellen Van Dyke, Rescue

https://eldorado.legistar.com/LegislationDetail.aspx?ID=2980897&GUID=775EE771-4BD3-4EB2-A578-1C530FA4A137&Options=ID|&Search=12-1203

PC 3/23/17 #6

Charlene Tim <charlene.tim@edcgov.us>

# Fwd: Scheduled Planning Commission Hearing on March 23, 2017 with Respect to the FINAL Biological Resources Policy Update and Oak Resources Management Plan EIR SCH# 2015072031.

**Anne Novotny** <anne.novotny@edcgov.us> Tue, Mar 14, 2017 at 7:35 AM
To: Char Tim <charlene.tim@edcgov.us>

---------- Forwarded message ----------
From: **Timothy White** <tjwhite510@aol.com>
Date: Mon, Mar 13, 2017 at 4:06 PM
Subject: Scheduled Planning Commission Hearing on March 23, 2017 with Respect to the FINAL Biological Resources Policy Update and Oak Resources Management Plan EIR SCH# 2015072031.
To: anne.novotny@edcgov.us, jeff.haberman@edcgov.us, gary.miller@edcgov.us, jeff.hansen@edcgov.us, james.williams@edcgov.us
Cc: bosone@edcgov.us, bostwp@edcgov.us, bosthree@edcgov.us, bosfour@edcgov.us, bosfive@edcgov.us

Dear Ms. Novotny and Planning Commissioners:

I would like to request that the scheduled hearing date of March 23, 2017 for the above referenced matter be delayed and rescheduled until the Planning Commission's next regularly scheduled meeting date of April 13, 2017.
I believe that the additional time requested is not excessive and would allow the many individuals and groups who made both written and/or oral comments on the draft EIR sufficient time to do a thoughtful and thorough review of the final EIR.
I recognize that this Policy Update has been in the works for several years and that Long Range Planning Division Staff want to move this along to the Planning Commission and to the Board of Supervisors as expeditiously as possible, but for the reasons set forth in the paragraph above I believe the requested delay and rescheduling is not unwarranted and should be granted.
Thank you for your consideration.

Sincerely.

Timothy J. White.

PC 3/23/17
#6

**Charlene Tim <charlene.tim@edcgov.us>**
18 pages

# Fwd: Biological Policy Update Comments

**Anne Novotny** <anne.novotny@edcgov.us> Wed, Mar 15, 2017 at 7:54 AM
To: Char Tim <charlene.tim@edcgov.us>

---------- Forwarded message ----------
From: **Ron Cowan** <QuercusGrp@sbcglobal.net>
Date: Wed, Mar 15, 2017 at 8:54 AM
Subject: Biological Policy Update Comments
To: anne.novotny@edcgov.us

Please see attached Biological Policy Update Comments.

**5 attachments**

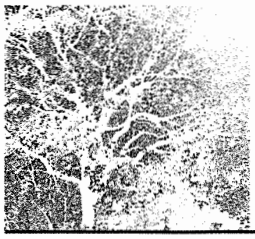
**Biological_Policy_Update_Comments_with_4_Appendices.pdf**
361K

**Attachment_A.pdf**
559K

**Attachment_B.pdf**
78K

**Attachment_C.pdf**
53K

**Attachment_D.pdf**
275K



Quercus Group

Forest & Greenhouse Gas Consultants
a division of Horizon Forest Products
P.O. Box 5325 / Richmond, CA 94805
510/965-2274 / QuercusGrp@sbcglobal.net

March 15, 2017

Community Development Agency
Long Range Planning Division
2850 Fairlane Court
Placerville, CA 95667
anne.novotny@edcgov.us

Re: Biological Policy Update Project EIR

Planning Commissioners:

The Quercus Group appreciates the opportunity to comment on the Biological Policy Update Project EIR. Review of the EIR finds that the project fails to comprehensively analyze or feasibly mitigate anthropogenic and biogenic direct/indirect greenhouse gas (GHG) emissions pursuant to CEQA requirements. Specifically, the failure to fully account for the foreseeable carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), black carbon and hydrofluorocarbon emission effects due to biomass disposal decomposition, combustion and transportation, and the soil $CO_2$ emissions associated with ground disturbing activities. These EIR omissions represent a failure to proceed in the manner prescribed by CEQA.

**Governor Brown**
"We must also reduce the relentless release of methane, black carbon and other potent pollutants across industries. And we must manage farm and rangelands, forests and wetlands so they can store carbon." January 2015 inaugural address regarding the state's greenhouse gas reduction goals for the next 15 years.

**Natural Lands[1] Conversion Emissions**
The 2008 California Air Resources Board (ARB) AB 32 Scoping Plan recognized the significant contribution that natural lands carbon sequestration will make in meeting the state's GHG emission reduction goals: "This plan also acknowledges the important role of terrestrial sequestration in our forests, rangelands, wetlands, and other land resources." When these natural lands are impacted due to land use change potentially five GHGs are directly or indirectly released into the atmosphere.

CEQA § 15364.5 states that "Greenhouse gas" or "greenhouse gases" includes but is not limited to: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. In 2016 Senate Bill 1383[2] designated methane, black carbon and hydrofluorocarbon short-lived climate pollutants. Neither the 2009 CEQA GHG amendments nor the enabling legislation Senate Bill 97 mention the term "carbon sequestration." CEQA's focus is "*the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions*." Further, the EIR must explain how the GHG mitigation proposals result in less than significant GHG emissions consistent with state 2020, 2030 and 2050 GHG reduction targets.

[1] "Natural lands" as defined by Public Resources Code Section 9001.5 (2016).

[2] See Gov. Brown's SB 1383 signing comments at https://www.gov.ca.gov/news.php?id=19549.

Upon the disposal of impacted vegetation, the decomposition of biomass does in all cases result in $CO_2$ and $CH_4$ biogenic emissions[3] and the combustion of biomass does in all cases result in $CO_2$, $CH_4$, $N_2O$ and black carbon biogenic emissions[4] (Attachment A). CEQA does not differentiate between anthropogenic and biogenic GHG emissions. The following 2009 Natural Resources Agency response to the California Wastewater Climate Change Group proves the point:

Response 95-1: "Regarding the comment that the Guidelines should distinguish between anthropogenic and biogenic carbon dioxide emissions, the Natural Resources Agency notes that SB 97 did not distinguish between the sources of greenhouse gas emissions. Thus, it would not be appropriate for the Natural Resources Agency to treat the different categories of emissions differently absent a legislative intent that the Guidelines do so. Neither AB 32 nor the Air Resources Board's Scoping Plan distinguishes between biogenic and anthropogenic sources of greenhouse gas emissions. On the contrary, the Scoping Plan identifies methane from, among other sources, organic wastes decomposing in landfills as a source of emissions that should be controlled. (Scoping Plan, at pp. 62-63)."

**Comment 1**: Soil organic carbon (SOC) is a measure of the carbon contained within soil organic matter and does not include roots which are measured as biomass carbon. Typically, the SOC stocking profile extends to a depth of one and a half meters. According to the latest scientific literature ground disturbing activities generally release 25-30 percent of the SOC stored (stocks) into the atmosphere as $CO_2$ emissions. This project would result in ground disturbing activities on approximately 12,700 acres. The USDA Forest Service COLE model used by the EIR poorly models forest soil organic carbon, particularly oak woodland SOC stocks. Consequently, the project significantly underestimates natural lands SOC stocking and $CO_2$ emissions. For large scale soil carbon analysis purposes the USDA Gridded Soil Survey Geographic[5] database is the superior methodology.

**EIR**: "Given the existing regulations that seek to reduce particulate matter emissions from mobile sources and from residential wood burning, the high proportion of organic carbon released in residential wood burning, and the fact that the proposed project would not lead to increased rates of residential wood burning in the County ... Therefore, it is not necessary for the EIR to estimate the total black carbon emissions associated with the proposed project" (at 3-99).

"The text on page 8-2 has been modified to reflect the current global warming potentials for methane and nitrous oxide. However, as discussed in detail in Response to Comment 1-2 above in this section (Section 3.3, Organizations), **the emissions estimates for the proposed project are assumed to all be $CO_2$.** Because the global warming potential of $CO_2$ has not changed, the revised global warming potential standards do not affect the Draft EIR's conclusions" (at 3-101, emphasis added).

---

[3] Decomposition: "Anaerobic digestion, chemical process in which organic matter is broken down by microorganisms in the absence of oxygen, which results in the generation of carbon dioxide ($CO_2$) and methane ($CH_4$) .... Sugars, starches, and cellulose produce approximately equal amounts of methane and carbon dioxide." Encyclopædia Britannica (2013). http://www.britannica.com/EBchecked/topic/22310/anaerobic-digestion.

[4] Combustion: "... the combustion of biomass does in all cases result in net additions of $CH_4$ and $N_2O$ to the atmosphere, and therefore emissions of these two greenhouse gases as a result of biomass combustion should be accounted for in emission inventories under Scope 1" (at p. 11). World Resources Institute/World Business Council for Sustainable Development (2005).

[5] USDA Natural Resources Conservation Service. 2016. Gridded Soil Survey Geographic (gSSURGO) Database. Version 2.2. USDA-NRCS Soil Science Division. https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=NRCS142P2_053628.

**Comment 2**: The EIR's "assumed" $CO_2$ only perspective defies science, fact and existing state regulations. The project continues to use the wrong GHG global warming potential (GWP) values, not that it matters since the EIR still refuses to account for $CH_4$, $N_2O$, black carbon and hydrofluorocarbon emissions. See Attachment B for a detailed regulatory and GWP discussion. The claim that "organic carbon" releases would offset black carbon emission effects is speculative and unsupported by any substantial evidence. Moreover, the state is aggressively seeking to significantly *reduce* black carbon emissions, not maintain the status quo. The 2016 ARB Short-Lived Carbon Pollutants (SLCP) Strategy states that, "Residential wood combustion is forecast to be the largest individual anthropogenic source of black carbon in 2030 .... and its share of the State's black carbon inventory is increasing, as emissions from diesel engines fall" (at 47, 123). The EIR also mistakenly assumes that the entire impacted oak tree would be turned into firewood, when in fact removing over 4,800 acres of oak woodlands would result in a massive amount of tree slash debris decomposition or combustion emissions that the project fails to account for. Notably, combustion nitrous oxide emissions aren't related to sequestered carbon but to biomass nitrogen content.

EIR Natural Lands Conversion Mitigation

**Comment 3**: Project mitigation is based on the preservation ("avoided conversion") of existing natural lands. Simply preserving existing natural lands does not mitigate terrestrial conversion GHG biogenic emissions. For example, existing trees aren't suddenly going to begin growing faster and sequester more carbon to reduce impacted biomass/soil GHG biogenic emission effects over time. Nor does California have 100 years for preserved mitigation forest growth to equal pre-conversion carbon stocking levels or to mitigate the forest conversion non-$CO_2$ biogenic emissions.

The unsuitability of preserving existing forest land for GHG biogenic emissions mitigation purposes is evidenced by the two state models, the California Emissions Estimator Model (CalEEMod) and Forest Project Protocol, which don't allow GHG offset reduction credits for CEQA's version of avoided conversion. This is because both models recognize that existing forest carbon sequestration does not mitigate removed forest carbon dioxide emissions over time, let alone non-$CO_2$ biogenic emissions. For example, the CalEEMod allows forest carbon sequestration offset credits only for the "planting of new trees" and "There is no reduction in GHG emissions associated with preservation of land" (CalEEMod Appendix A, p. 50). That means any preserved land, anywhere.

The appropriate means to feasibly and proportionally mitigate forest land conversion GHG biogenic emissions is by planting/maintaining the requisite number of native woodland trees in El Dorado County to reduce forest conversion emissions 80 percent by 2050. For oak woodland mitigation purposes it's important to keep in mind that on average an oak tree gains significant tree volume in its first 20 years but sequesters very little carbon during this period. After 20 years the oak begins to sequester appreciable carbon and continues storing carbon throughout its life. So a mitigation oak tree planted today won't begin paying off regarding carbon sequestration mitigation until 2037.

The EIR provides no science or fact to support how its potential land preservation mitigation measures are going to actually feasibly mitigate the project's dual impacts of lost forest land carbon sequestration capacity and significant biomass disposal/soil disturbance GHG biogenic emissions.

- Please provide the following natural lands conversion mitigation information:

1. Demonstrate mathematically that the preservation of existing natural lands would mitigate the direct/indirect $CO_2$, $CH_4$, $N_2O$, black carbon and hydrofluorocarbon emissions associated with impacts to similar natural lands.

Forest Land Conversion Emissions

**EIR**: "Agricultural activities are exempted from the mitigation requirements in the ORMP and implementing ordinance for three primary reasons. First, agricultural activities are exempted because requiring oak woodlands mitigation on agricultural lands would directly conflict with General Plan goals, objectives, and policies supporting long-term conservation and use of existing and potential agricultural lands and limiting the intrusion of incompatible uses into agricultural lands (General Plan Goal 8.1, El Dorado County 2004, Agriculture and Forestry Element, p. 170)" (at 2-17).

**Comment 4**: Conspicuously, the cited General Plan goal predates the Global Warming Solutions Act of 2006. In fact agricultural activities have no California Environmental Quality Act exemption regarding forest land conversion GHG biogenic emissions analysis and mitigation. See the 2009 Natural Resources Agency CEQA responses to the California Farm Bureau Federation regarding forest land conversion in Attachments C and D.

**Comment 5**: To accurately and fully account for forest land conversion GHG biogenic emissions the total biomass weight[6] of the impacted overstory/understory vegetation must be known, the means of biomass disposal identified and the soil organic carbon emissions calculated.

- Please provide the following forest land conversion information:

1. What is the estimated total biomass weight of the impacted overstory and understory vegetation by 2020, 2030 and 2050?

2. What are the estimated biomass decomposition $CO_2$ and $CH_4$ emissions by 2020, 2030 and 2050?

3. What are the estimated biomass combustion $CO_2$, $CH_4$, $N_2O$ and black carbon emissions by 2020, 2030 and 2050?

4. Due to the transport of disposed biomass off-site, what are the estimated $CO_2$, $CH_4$, $N_2O$, black carbon and hydrofluorocarbon emissions by 2020, 2030 and 2050?[7]

5. Explain how the proposed mitigation is consistent with SB 1383 2030 reduction requirements regarding methane, black carbon, hydrofluorocarbon emissions and landfill organic waste disposal.

6. By soil series, what are the estimated SOC $CO_2$ biogenic emissions associated with ground disturbing activities by 2020, 2030 and 2050?

---

[6] EPA/USDA FS, 2015. Forest Biomass Components: https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=86.

[7] SB 1383 requires: (1) a 50 percent statewide reduction in black carbon emissions and a 40 percent reduction in methane/hydrofluorocarbon emissions from 2013 levels by 2030; (2) a 50 percent reduction in the level of the statewide disposal of organic waste in landfills from the 2014 level by 2020 and a 75 percent reduction from the 2014 level by 2025. The 2016 ARB SLCP Strategy lists on-road brake/tire (2%), on-road gasoline (2%) and on-road diesel (18%) as transportation sources of black carbon emissions. http://www.arb.ca.gov/cc/shortlived/meetings/04112016/appendixa.pdf.

Other Natural Lands Emissions

**Comment 6**: Other natural lands vegetation types within the project area include California annual grassland, mixed chaparral and riparian woodland. California annual grassland carbon stocks average ±75 MT carbon per acre in the project area.[8]

- Please provide the following non-forest land vegetation type and soil series conversion information:

1. By vegetation type, what is the total biomass weight of the impacted vegetation by 2020, 2030 and 2050?

2. By vegetation type, what are the estimated biomass decomposition $CO_2$ and $CH_4$ biogenic emissions by 2020, 2030 and 2050?

3. By vegetation type, what are the estimated biomass combustion $CO_2$, $CH_4$, $N_2O$ and black carbon biogenic emissions by 2020, 2030 and 2050?

4. Due to the transport of disposed biomass off-site, what are the estimated $CO_2$, $CH_4$, $N_2O$, black carbon and hydrofluorocarbon emissions by 2020, 2030 and 2050?

5. Explain how the proposed mitigation is consistent with SB 1383 2030 reduction requirements regarding methane, black carbon, hydrofluorocarbon emissions and landfill organic waste disposal.

6. By soil series, what are the estimated SOC $CO_2$ biogenic emissions associated with ground disturbing activities by 2020, 2030 and 2050?

Wetland Emissions

**Comment 7**: El Dorado County wetlands are major carbon sinks. Western US freshwater inland wetland carbon stocks in the project region average 87(±25) MT carbon per acre.[9] Impacted wetlands carbon sequestration rates can take decades or longer to replicate through replacement mitigation. In general, Ambrose et al. (2007) found that the primary state and federal wetland protection programs have been generating more wetlands of lower quality than the wetlands they allowed to be destroyed. CEQA GHG biogenic emissions analysis applies to *all* California wetlands, not just those wetlands designated waters of the United States.

- Please provide the following wetlands conversion information:

1. By wetland type, what are the estimated vegetation $CO_2$ and $CH_4$ biogenic emissions associated with impacts to all project area wetlands by 2020, 2030 and 2050?

2. By wetland type, what are the estimated soil $CO_2$ biogenic emissions associated with impacts to all project area wetlands by 2020, 2030 and 2050?

3. By wetland type, what are the estimated carbon sequestration rates (i.e. metric tonnes carbon per acre per year) for the replacement mitigation? Please provide regional data to support the findings.

---

[8] Silver, W. L. et al. 2010. *Soil Carbon Pools in California's Annual Grassland Ecosystems*. University of California-Davis.

[9] Nahlik and Fennessy. 2016. *Carbon Storage in US Wetlands*. Nature Communications, Vol. 7, pp 1-9.

**Summary**

The Biological Policy Update Project EIR perpetuates the myth that forest land and other natural lands conversion GHG emissions are simply an issue of carbon transformed to carbon dioxide. This fallacy belies the fact that potentially four other GHGs are involved, including the super pollutants methane and black carbon. The constant among court decisions regarding GHG analysis is that project emissions must be fully rendered in a CEQA document. This EIR appears designed to obfuscate and minimize project GHG biogenic emissions, rather than a bona fide attempt to comply with CEQA's focus of ascertaining the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions.

Substantial evidence has been presented that project GHG biogenic emissions will result in potentially significant environmental effects that have not been sufficiently analyzed or feasibly mitigated. The project has not made "a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project" (CEQA Guidelines § 15064.4(a)). Therefore the EIR is deficient as an informational document, in that it fails to apprise decision-makers/public of the full range and intensity of the adverse GHG emission effects on the environment that may reasonably be expected if the project is approved.

Sincerely,

Ron Cowan

Ron Cowan, Principal
Quercus Group

attachments (4)

**References**

**Vegetation**

Chojnacky, D. C. et al. 2014. *Updated generalized biomass equations for North American tree species*. Forestry Journal, 87, 129-151.

Gonzalez, P. et al. 2010. *Forest carbon densities and uncertainties from Lidar, QuickBird, and field measurements in California*. Center for Forestry, University of California, Berkeley, CA.

Smith, J. E. et al. 2003. *Forest Volume-to-Biomass Models and Estimates of Mass for Live and Standing Dead Trees of U.S. Forests*. General Technical Report NE-298. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station. 57 p.

Van Deusen, P. and Heath, L. S. 2016. *Carbon Online Estimator (COLE) web applications suite*. NCASI and USDA Forest Service, Northern Research Station. COLE database last updated 1/21/2016.

Woodall, C. W. et al. 2011. *Methods and equations for estimating aboveground volume, biomass, and carbon for trees in the U.S. forest inventory*. Gen. Tech. Rep. NRS -88. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 30 p.

**Soil**

Baldock J. A. and Skjemstad J. O. 1999. *Soil Organic Carbon/Soil Organic Matter, in Soil Analysis: an Interpretation Manual*, Eds. Peverill, KI, Sparrow, LA and Reuter, DJ, CSIRO Publishing.

Davidson, E. A. and Ackerman, I. L. 1993. *Changes in soil carbon inventories following cultivation of previously untilled soils*. Biogeochemistry. September 1993, Volume 20, Issue 3, pp 161-193.

USDA Natural Resources Conservation Service. 2016. *Gridded Soil Survey Geographic* (gSSURGO) Database. Version 2.2. USDA-NRCS Soil Science Division.

Silver, W. L. et al. 2010. *Soil Carbon Pools in California's Annual Grassland Ecosystems*. University of California-Davis, 1210 PES, Mail Stop 1, One Shields Ave, Davis, CA 95616.

Zhi, J. et al. 2014. *Estimating Soil Organic Carbon Stocks and Spatial Patterns with Statistical and GIS-Based Methods*. PLoS ONE 9(5): e97757. doi:10.1371/journal.pone.0097757.

**Wetlands**

Ambrose, R.F. et al. 2007. *An Evaluation of Compensatory Mitigation Projects Permitted Under Clean Water Act Section 401 by the California State Water Resources Control Board, 1991-2002*. Prepared for California State Water Resources Control Board. 158 pp.

Dahl, T. E. 2011. *Status and Trends of Wetlands in the Conterminous United States 2004 to 2009*. US Department of the Interior; Fish and Wildlife Service.

Nahlik, A. M. and Fennessy, M. S. *Carbon storage in US wetlands*. 2016. Nat. Commun. 7, 13835 doi: 10.1038/ncomms13835.

Schlesinger, W. H. 1997. *Biogeochemistry: An analysis of global change*. San Diego, Calif: Academic Press.

U.S. Environmental Protection Agency. 2016. *National Wetland Condition Assessment: A Collaborative Survey of the Nation's Wetlands*. EPA Publication 843.

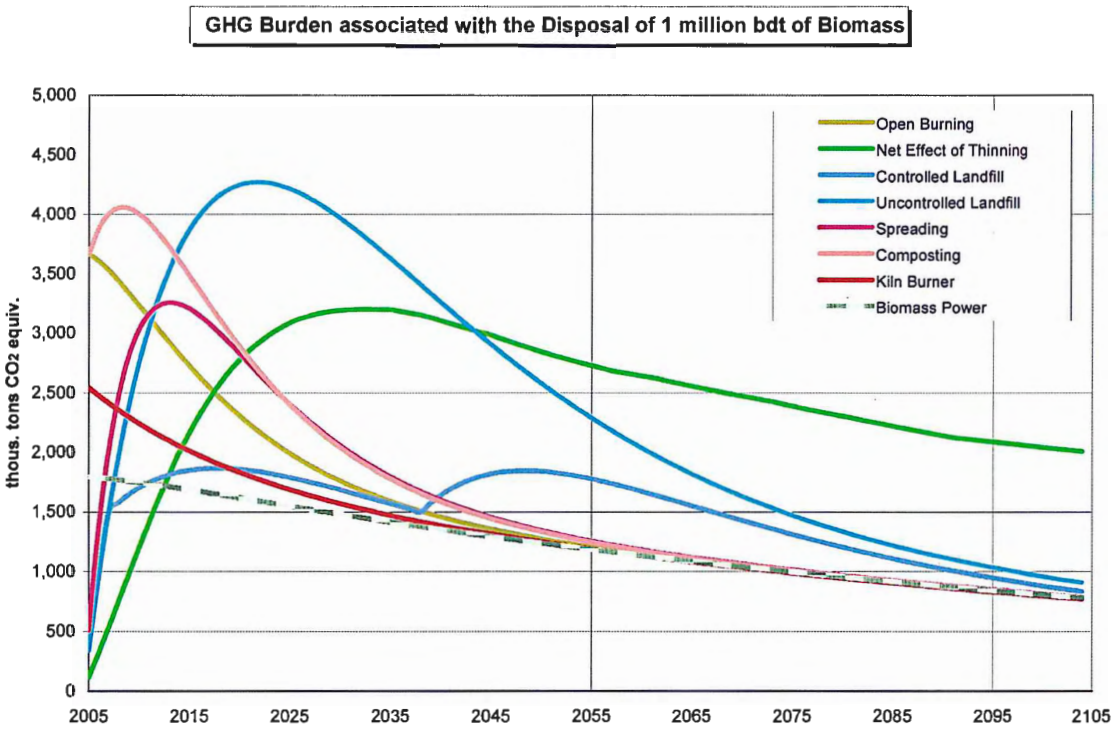
**Attachment A**

**Biomass Disposal Greenhouse Gas Emissions**

The following chart illustrates the relative GHG indirect biogenic emission effects from common methods of vegetation (biomass) disposal.[1] **The biomass combustion GHG emission values do not include black carbon emissions.**

Uncontrolled landfill disposal produces the greatest biomass GHG biogenic emissions followed by composting, open burning, mulching, forest thinning, kiln burner, controlled landfill and biomass power. The chart demonstrates that peak GHG emissions vary substantially depending on the means of biomass disposal, with the higher peaks reflecting increased amounts of methane and/or nitrous oxide emissions.

Terminology: Net effect of thinning emissions apply to forest thinning emissions and spreading emissions are equivalent to mulching emissions.




Graphic: Gregory Morris, PhD. *Bioenergy and Greenhouse Gases*. Published by Pacific Institute (2008).

[1] One bone dry ton (bdt) is a volume of wood chips (or other bulk material) that would weigh one ton (2000 pounds, or 0.9072 metric tons) if all the moisture content was removed.

**Attachment B**

**Regulatory Framework**

**Executive Order S-3-05**
Signed by Governor Schwarzenegger on June 1, 2005. Executive Order S-3-05 established a California GHG reduction target of 80 percent below the 1990 level by 2050.

**Assembly Bill 32**
AB 32 defines carbon dioxide equivalent ($CO_2e$) to mean, "... the amount of carbon dioxide by weight that would produce the same global warming impact as a given weight of another greenhouse gas, based on the best available science, including from the Intergovernmental Panel on Climate Change [IPCC]."

"The IPCC released its Fifth Assessment Report (AR5) in 2013, including scientific research and conclusions regarding current GHG global warming potential (GWP) values for determining $CO_2e$. The IPCC recommends using the AR5 GWP values, as they reflect the best information on global warming potentials. The Air District is using the GWP values from AR5, which include a GWP for methane (including all feedback effects) of 34. We recommend that ARB also use GWPs from AR5 in the Strategy." Consistent with the AB 32 carbon dioxide equivalent definition, the Bay Area Air Quality Management District applies the GWP values from AR5.

**Senate Bill 97**
Signed by Governor Schwarzenegger on August 24, 2007. This statute required that the Office of Planning and Research prepare CEQA guidelines for evaluating the effects of GHG emissions and for mitigating such effects. The Natural Resources Agency adopted these guidelines on December 31, 2009.

**Senate Bill 32**
Signed by Governor Brown on September 8, 2016. This statute requires that statewide greenhouse gas emissions be reduced to 40% below the 1990 level by 2030.

**Senate Bill 1383**
Signed by Governor Brown on September 19, 2016. This statute requires: (1) a 50 percent statewide reduction in black carbon emissions and a 40 percent reduction in methane/hydrofluorocarbon emissions from 2013 levels by 2030; (2) a 50 percent reduction in the level of the statewide disposal of organic waste in landfills from the 2014 level by 2020 and a 75 percent reduction from the 2014 level by 2025.

**Senate Bill 1386**
Signed by Governor Brown on September 23, 2016. This statute states that the protection and management of natural lands, as defined, is an important strategy in meeting the state's GHG reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural lands.

**California Air Resources Board**
"California is committed to reducing emissions of $CO_2$, which is the most abundant greenhouse gas and drives long-term climate change. However, short-lived climate pollutants [methane, black carbon, etc.] have been shown to account for 30-40 percent of global warming experienced to date. Immediate and significant reduction of both $CO_2$ and short-lived climate pollutants is needed to stabilize global warming and avoid catastrophic climate change" (Reducing Short-Lived Climate Pollutants in California, 2014).

**Methane**

"Methane is emitted from a wide range of fugitive sources and biological processes, and is the second largest source of GHG emissions globally. Methane emissions are growing globally as a result of human activities related to agriculture, waste handling and treatment, and oil and gas production. Agriculture represents the largest methane source in California, accounting for nearly 60 percent of methane emissions (Figure 6). Landfills are the next largest source of methane, accounting for a fifth of statewide methane emissions. Pipeline leaks, oil and gas extraction, wastewater, and other industrial and miscellaneous sources make up the remainder of emissions" (Short-Lived Climate Pollutants Strategy, p. 58).

**Black Carbon**

"Black carbon (BC, also referred to as black soot, black carbon aerosols, black carbon particles) refers to a solid particle emitted during incomplete combustion. All particle emissions from a combustion source are broadly referred to as particulate matter (PM) and usually delineated by sizes less than 10 micrometers (PM10) or less than 2.5 micrometers (PM2.5). Black carbon is the solid fraction of PM2.5 that strongly absorbs light and converts that energy to heat. When emitted into the atmosphere and deposited on ice or snow, black carbon causes global temperature change, melting of snow and ice, and changes in precipitation patterns. Roughly half of atmospheric BC comes from fossil fuel combustion, and the other half from biomass and biofuel burning. While BC is short-lived in the atmosphere (1-4 weeks), it is linked to strong regional climate effects and a large share (~30%) of recently observed warming in the Arctic."
http://www.unep.org/transport/gfei/autotool/understandingtheproblem/Black%20Carbon.pdf.

**Stanford Engineering**

"Biomass burning also includes the combustion of agricultural and lumber waste for energy production. Such power generation often is promoted as a 'sustainable' alternative to burning fossil fuels. And that's partly true as far as it goes. It is sustainable, in the sense that the fuel can be grown, processed and converted to energy on a cyclic basis. But the thermal and pollution effects of its combustion - in any form - can't be discounted, [Mark] Jacobson said.

"The bottom line is that biomass burning is neither clean nor climate-neutral," he said. "If you're serious about addressing global warming, you have to deal with biomass burning as well."

https://engineering.stanford.edu/news/stanford-engineers-study-shows-effects-biomass-burning-climate-health. Jacobson, M. Z. 2014. *Effects of biomass burning on climate, accounting for heat and moisture fluxes, black and brown carbon, and cloud absorption effects.*

**UC Irvine Engineering**

"Generation of electricity from biomass is unique among the potential technologies for meeting RPS [renewable portfolio standards] goals in that it is associated with the generation of substantial amounts of GHGs and pollutants at generation sites during operation. This feature elucidates the importance in assessing GHG and air quality impacts from biopower." Sospedra, M. and Dabdub, D. 2015. *Assessment of the Emissions and Energy Impacts of Biomass and Biogas Use in California.*

CALIFORNIA FARM BUREAU FEDERATION
NATURAL RESOURCES AND ENVIRONMENTAL DIVISION
2300 RIVER PLAZA DRIVE, SACRAMENTO, CA 95833-3293 · PHONE (916) 561-5655 · FAX (916) 561-5691


November 10, 2009

*Via Email*
*CEQA.Rulemaking@resources.ca.gov*

Christopher Calfee, Special Counsel
Attn: CEQA Guidelines
California Natural Resources Agency
1017 L Street, #2223
Sacramento, CA 95814

***Re: Comments on the Proposed CEQA Guideline Amendments for Greenhouse Gas Emissions***

Dear Mr. Calfee:

The California Farm Bureau Federation ("Farm Bureau") is a non-governmental, non-profit, voluntary membership California corporation whose purpose is to protect and promote agricultural interests throughout the state of California and to find solutions to the problems of the farm, the farm home and the rural community. Farm Bureau is California's largest farm organization, comprised of 53 county Farm Bureaus currently representing approximately 85,000 members in 56 counties. Farm Bureau strives to protect and improve the ability of farmers and ranchers engaged in production agriculture to provide a reliable supply of food and fiber through responsible stewardship of California's resources.

Wine Institute is the public policy advocacy association of California wineries. Wine Institute brings together the resources of 1,000 wineries and affiliated businesses to support legislative and regulatory advocacy, international market development, media

relations, scientific research, and education programs that benefit the entire California wine industry.

Both organizations are committed to sound public policy at all levels of government and jointly submit these comments to on the Proposed Amendments to the California Environmental Quality Act ("CEQA") Guidelines for Greenhouse Gas Emissions ("GHG").[1] Although guidance on the analysis and mitigation of the potential effects of GHG emissions under CEQA are needed, Farm Bureau and Wine Institute have concerns over the proposed amendments. As previously requested, prior to any final rulemaking decisions, Farm Bureau and Wine Institute urge the Natural Resources Agency to reevaluate and revise Section II of the Environmental Checklist Form ("Appendix G").[2]

By placing the forest land conversion amendments into Section II of Appendix G, the original purpose of Section II (originally "Agriculture Resources") has been distorted from protecting Agriculture resources to specifically targeting the establishment of such resources for extensive and unnecessary analysis above and beyond what is already legally required. We find that the newly proposed Section VII ("Greenhouse Gas Emissions") already adequately addresses any significant impact a project may have on greenhouse gas emissions. Therefore, we recommend removing all proposed changes to Section II.

As currently proposed, the revisions and additions to Section II of the Appendix G lose sight of the intent and purpose of the Legislature's directive in Public Resources Code section 21083.05 (enacted as part of SB 97). The Legislature directed the Office of Planning and Research and the Natural Resources Agency to develop "guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption." (Pub. Resources Code, § 21093.05(a).) The proposed amendments to Section II do not further the directive or intent of SB 97, and rather, unfairly attack and burden all types of agriculture, both crop lands and forest lands.

Given that none of the proposed changes in Section II are mandated by SB 97 and are highly onerous to the State's agricultural industry, an industry that not only provides necessary food and fiber but also protects the environment, we urge the Natural Resources Agency to carefully examine the impacts that the proposed language will have

[1] Farm Bureau and Wine Institute's comments relate to all proposed changes to Section II of the Environmental Checklist Form ("Appendix G"), including the October 2009 text revisions adding timberland zoned as Timberland Production.

[2] Farm Bureau incorporates by reference previous concerns raised in comment letters submitted in February 2009 and August 2009 on the proposed CEQA Guidelines amendments.

on the entire agricultural industry prior to any final rulemaking decisions. In addition, we urge the Resources Agency to stick to the directive and intent of SB 97, thereby returning to the prior language of the Checklist as it relates to Agricultural Resources or embracing the concept that the loss of forest land or conversion of forest land *is only significant* when it results in a *non-agricultural use*. We look forward to working with you further on future revisions to the CEQA Guidelines.

Sincerely,

CALIFORNIA FARM BUREAU FEDERATION

Kari Fisher

**Kari E. Fisher**
Associate Counsel

WINE INSTITUTE

Tim Schmelzer

**Tim Schmelzer**
Legislative and Regulatory Representative

KEF\pkh

Letter 97

Kari Fisher
Associate Counsel
California Farm Bureau Federation

Tim Schmelzer
Legislative and Regulatory Representative
Wine Institute

November 10, 2009

**Comment 97-1**

Comment is introductory in nature and expresses the organizations' concerns on the guidance for analysis and mitigation for GHG emissions in the proposed amendments. The Natural Resources Agency should reevaluate and revise Appendix G, Section II: Agriculture prior to adopting the proposed amendments.

**Response 97-1**

The comments object generally to the inclusion of forestry resources among the questions in Appendix G related to agricultural resources. The Initial Statement of Reasons explained the necessity of the added questions:

> The proposed amendments would add several questions addressing forest resources in the section on Agricultural Resources. Forestry questions are appropriately addressed in the Appendix G checklist for several reasons. First, forests and forest resources are directly linked to both GHG emissions and efforts to reduce those emissions. For example, conversion of forests to non-forest uses may result in direct emissions of GHG emissions. (L. Wayburn et al., A Programmatic Approach to the Forest Sector in AB32, Pacific Forest Trust (May 2008); see also California Energy Commission Baseline GHG Emissions for Forest, Range, and Agricultural Lands in California (March, 2004) at p. 19.) Such conversion would also remove existing carbon stock (i.e., carbon stored in vegetation), as well as a significant carbon sink (i.e., rather than emitting GHGs, forests remove GHGs from the atmosphere). (Scoping Plan, Appendix C, at p. C-168.) Thus, such conversions are an indication of potential GHG emissions. Changes in forest land or timberland zoning may also ultimately lead to conversions, which could result in GHG emissions, aesthetic impacts, impacts to biological resources and water quality impacts, among others. Thus, these additions are reasonably necessary to ensure that lead agencies consider the full range of potential impacts in their initial studies. In the same

> way that an EIR must address conversion of prime agricultural land or wetlands as part of a project (addressing the whole of the action requires analyzing land clearance in advance of project development), so should it analyze forest removal. [¶] During OPR's public involvement process, some commenters suggested that conversion of forest or timber lands to agricultural uses should not be addressed in the Initial Study checklist. (Letter from California Farm Bureau Federation to OPR, February 2, 2009; Letter from County of Napa, Conservation, Development and Planning Department, to OPR, January 26, 2009.) As explained above, the purpose of the Proposed Amendments is to implement the Legislative directive to develop Guidelines on the analysis and mitigation of GHG emissions. Although some agricultural uses also provide carbon sequestration values, most agricultural uses do not provide as much sequestration as forest resources. (Climate Action Team, Carbon Sequestration (2009), Chapter 3.3.8 at p. 3.21; California Energy Commission, Baseline GHG Emissions for Forest, Range, and Agricultural Lands in California (2004), at p. 2.) Therefore, such a project could result in a net increase in GHG emissions, among other potential impacts. Thus, such potential impacts are appropriately addressed in the Initial Study checklist.

(Initial Statement of Reasons, at pp. 63-64.) Specific objections to the questions related to forestry are addressed below.

**Comment 97-2**

Amendments to Appendix G, Section II: Agriculture, adding forest resources, distort the section from its original intent of protecting agriculture resources and will subject projects to extensive and unnecessary analysis beyond what is already legally required. Amendments to Section VII: Greenhouse Gas Emissions will adequately address any significant impact a project may have on greenhouse gas emissions.

**Response 97-2**

The comment's assertion that the addition of questions related to forestry "specifically target[s] the establishment of [agricultural] resources for extensive and unnecessary analysis above and beyond what is already legally required," is incorrect in several respects. First, the addition of questions related to forestry does not target the establishment of agricultural operations. The only mention in the Initial Statement of Reasons of agricultural operations in relation to those questions was in response to comments that the Office of Planning and Research received indicating that only conversions of forests to non-agricultural purposes should be analyzed. Moreover, the text of the questions themselves demonstrate that the concern is *any* conversion of forests, not just conversions to other agricultural operations.

Second, analysis of impacts to forestry resources is already required. For example, the Legislature has declared that "forest resources and timberlands of the state are among the most valuable of the natural resources of the state" and that such resources "furnish high-quality timber, recreational opportunities,

and aesthetic enjoyment while providing watershed protection and maintaining fisheries and wildlife." (Public Resources Code, § 4512(a)-(b).) Because CEQA defines "environment" to include "land, air, water, minerals, flora, fauna, noise, [and] objects of historic or aesthetic significance" (Public Resources Code, section 21060.5), and because forest resources have been declared to be "the most valuable of the natural resources of the state," projects affecting such resources would have to be analyzed, whether or not specific questions relating to forestry resources were included in Appendix G. (*Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1109 ("in preparing an EIR, the agency must consider and resolve every fair argument that can be made about the possible significant environmental effects of a project, irrespective of whether an established threshold of significance has been met with respect to any given effect").) If effect, by suggesting that the Appendix G questions be limited to conversions to "non-agricultural uses," the comment asks the Natural Resources Agency to adopt changes that are inconsistent with CEQA, which it cannot do.

The comment's suggestion that the questions related to greenhouse gas emissions are sufficient to address impacts related to greenhouse gas emissions does not justify deletion of the questions related to forestry resources. As explained in the Initial Statement of Reasons, not only do forest conversions result in greenhouse gas emissions, but may also "remove existing carbon stock (i.e., carbon stored in vegetation), as well as a significant carbon sink (i.e., rather than emitting GHGs, forests remove GHGs from the atmosphere)." Further, conversions may lead to "aesthetic impacts, impacts to biological resources and water quality impacts, among others." The questions related to greenhouse gas emissions would not address such impacts. Thus, the addition of forestry questions to Appendix G is appropriate both pursuant to SB97 and the Natural Resources Agency's general authority to update the CEQA Guidelines pursuant to Public Resources Code section 21083(f). The Natural Resources Agency, therefore, rejects the suggestion to removal all forestry questions from Appendix G.

**Comment 97-3**

The amendment adding forest resources to Appendix G: Section II loses sight of the intent and purpose of the Legislature's directive in SB 97. The amendments do not further the directive or intent of SB 97 and unfairly attack and burden all types of agriculture, both crop lands and forest lands.

**Response 97-3**

SB97 called for guidance on the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions. (Public Resources Code, § 21083.05.) As explained in the Initial Statement of Reasons, forest conversions may result in direct greenhouse gas emissions. Further, such conversions remove existing forest stock and the potential for further carbon sequestration. (Initial Statement of Reasons, at p. 63.) Sequestration is recognized as a key mitigation strategy in the Air Resources Board's Scoping Plan. (Scoping Plan, Appendix C, at p. C-168.) Thus, the Natural Resources Agency disagrees with the comment, and finds that questions in Appendix G related to forestry are reasonably necessary to effectuate the purpose of SB97. Notably, such questions are also supported by the Natural Resources

Agency's more general authority to update the CEQA Guidelines every two years. (Public Resources Code, § 21083(f).)

The Natural Resources Agency also disagrees that the questions related to forestry "unfairly attack and burden all types of agriculture." Nothing in the text of the proposed amendments or the Initial Statement of Reasons demonstrate any effort to attack, or otherwise disadvantage, any agricultural use. Questions related to forestry impacts are addressed to any forest conversions, not just those resulting from agricultural operations. Further, the questions do not unfairly burden agriculture. To the extent an agricultural use requires a discretionary approval, analysis of any potentially significant impacts to forestry resources would already be required, as explained in Response 97-2, above.

**Comment 97-4**

The amendments adding forest resources to Appendix G: Section II go beyond the scope of mandate by SB 97 and will adversely affect California's agricultural industry. The only alternative is to recognize the loss of forest land or conversion of forest is only significant when it results in a non-agricultural use.

**Response 97-4**

The Natural Resources Agency finds that the addition of questions related to forest impacts are reasonably necessary to carry out the directive both in SB97 and the general obligation to update the CEQA Guidelines, as described in both the Initial Statement of Reasons and Responses 97-2 and 97-3, above.

Though the comment states "the proposed changes in Section II [of Appendix G] ... are highly onerous to the State's agricultural industry," the comment provides no evidence to support that claim. On the contrary, as explained in Responses 97-2 and 97-3, above, CEQA already requires analysis of forestry impacts, regardless of whether Appendix G specifically suggests such analysis.

The Natural Resources Agency declines to revise the forestry-related Appendix G questions as suggested. As explained in Response 97-2, above, exempting agricultural projects from the requirement to analyze impacts to forest resources is inconsistent with CEQA.