

APPENDIX H

Criteria for Project Evaluation and Approval Criteria

Projects will be ~~evaluated based on their ability to demonstrate compliance with~~ measured against the following General Project Scoping Criteria and Project Application Criteria:

General Project Scoping Criteria:

- ~~The applicant meets the items listed in the “APPLICANT ELIGIBILITY AND CONDITIONS”.~~
- ~~The project demonstrates a potential to increase carbon sequestration, decrease atmospheric carbon levels, and reduce the potential for large wildland fires.~~
- ~~The applicant is a smaller nonindustrial timberland owner with 5,000 acres or less of timberland in California.~~
- The applicant shows a high potential for completing the project, has a well defined plan and demonstrates a reasonable likelihood of success, which may be based, in part, on past performance, including completing similar projects.
- The applicant demonstrates specific, advance planning for long-term forest management ~~and sustainability in that affords~~ carbon sequestration following the conclusion of the grant period and the reporting thereof.
- The project clearly shows how the budget funds will be spent and costs are reasonable in proportion to the proposed deliverables.
- The total amount requested is appropriate for the scope of the project.

Project Application Criteria:

Note: ~~P~~ Project Application Criteria will be applicable to both Project Concept Proposals and Project Applications

- Project Applications are accurate, complete and detail long-term forest and land management goals and objectives.
- Initial Project Concept Proposal ~~identifies a methodology for~~ sets forth an analysis of timberland conditions and capabilities relative to carbon sequestration and fire resilience.
- Project Concept Proposal/Project Applications were submitted according to application due dates.
- The Project aApplication contains timelines to implement the project and ways to measure success.
- The Project Aapplication clearly defines how the project will be accomplished and includes measurable outcomes (e.g. forest management objectives s are defined, growth and inventory is described, monitoring management activities are clear and achievable, etc.)
- Project Applications/Project Concept Proposal describes how the ~~following will be achieved~~ Project will provide for the following:

- Increased direct carbon sequestration through increased growth and inventory and long-term uneven-aged management of the timberlands.
- Improved forest resistance to wildland fire, demonstrated through ~~a reduction of forest fuels~~ fuel reduction treatments, construction of shaded fuel breaks, improved forest health etc.
- Maintenance of large old trees across the watershed.
- Optimized timber growth potential of the timberland consistent with maintaining carbon additionality over the baseline.
- Demonstrated GHG reduction achieved by the long-term management of the timberland utilizing measurable metrics to be analyzed in the PTEIR.

Competing Project Applications will be selected based on degree of conformance with the above criteria. In addition, preference shall be given to the following:

1. A carbon benefit incorporating the following concepts is shown:
 - Real (can be measured to a high degree of accuracy and is based on an activity that has occurred, not one that is projected to occur in the future).
 - Additional (occurs outside of any regulatory requirement and would not have occurred but for the incentive provided by a GHG market).
 - Verifiable (can be (and has been) independently verified).
 - Enforceable (ownership is undisputed and enforcement mechanisms exist to ensure all program rules are followed) and
 - Permanent (is removed from the atmosphere for a minimum of 100 years).
2. Robust metrics for evaluating the greenhouse gas reductions to be achieved by the long-term management of the timberlands pursuant to the PTEIR is provided.
3. A robust reporting scheme, including form and content, for detailing greenhouse gas reductions is provided.
4. A consortium of landowners not currently engaged in management.
5. There is high stakeholder buy-in.
6. Projects are in areas of high or extreme risk, with regard to fire hazard severity zones, especially those that represent a disproportionate risk to the watershed or an accumulated carbon stock.
7. Projects, which in addition to achieving the GHG reduction objectives, have a documented assessment of need for providing wildfire protection of human infrastructure and the means to satisfy that need are attainable, especially those located near the WUI.
8. Proposed fuel reduction treatments are well targeted.
9. There exists in the Project Area high accumulated carbon stocks.
10. The Project Area has the potential for high carbon sequestration.
11. Project Applications clearly explain and demonstrate how planned long-term forest management through uneven aged management including the retention of large old trees across watersheds will improve carbon sequestration on timberlands.
12. Management activities, such as the following, which are consistent with increasing carbon

sequestration are provided.

- Optimize rotation age from a carbon life cycle perspective.
- Lengthen harvest intervals.
- Reduce the amount of material removed.
- Increase growth by thinning, diseased, and suppressed trees.
- Manage competing brush and short-lived forest species.
- Plant additional trees where the existing stocks are not fully utilizing the biological potential of the site.
- Maintain stocks at a high level and/or
- Extend the riparian zone.

13. Eligible landowner(s) are willing to extend the deed restriction requiring that timberlands not be developed for uses incompatible with the PTEIR for a period greater than 20 years.

14. That co-benefits will be achieved is demonstrated. Increased carbon sequestration co-benefits may include enhanced wildlife habitat, increased biodiversity, reduced soil erosion, improved water quality, enhanced aesthetics and reduced energy usage. Fuel reduction co-benefits may include the promotion of public safety and reduction of the potential loss of life and property, reduced suppression costs, reduced forest pests, invasive weed control, avoided emissions through the decrease in wildfire severity and acres burned, airshed improvements in non-attainment air basins and offsetting the use of fossil fuels if harvested material is fed to a biomass plant.

- ~~Priority shall be given to projects which in addition to achieving the GHG emissions objectives, have a documented assessment of need for providing wildfire protection of human infrastructure and watershed values, and provide other co-benefits (reduced forest pests, airshed improvements in non-attainment air basins, invasive weed control, improvement to wildlife habitat etc.)~~

~~Competing Project Applications will be selected based on degree of compliance with the above criteria.~~

Metrics and Analysis:

~~PTEIRs must clearly explain and demonstrate how planned long-term forest management will improve the carbon sequestration potential of timberlands. This can be expressed through uneven-aged management focused at the retention of large trees across watersheds.~~

One tool to assist applicants in assessing carbon sequestration and GHG emissions resulting from timber harvesting activities is the Greenhouse Gas (GHG) Calculator Spreadsheet. The GHG Calculator Spreadsheet and accompanying GHG Emissions Calculator User Guide can be found on the CAL FIRE website at:

http://calfire.ca.gov/resource_mgt/resource_mgt_forestpractice_pubsmemos_memos.php

Another recently developed carbon calculator is Berkeley's Carbon Calculator.

A suitable methodology to calculate and quantify the GHG emission benefits carbon benefit is described in the California Air Resources Board's "Compliance Offset Protocol UA Forest Projects Protocol". All projects should include a crediting period (e.g. 40 years) and project life (e.g. 100 years). All treatments and growth projections will use commonly accepted methods that represent standards and practice in the forestry profession. GHG reductions will be estimated as the difference between a no project alternative and the proposed project, at the end of the project crediting period.

Comment [TB1]: Get more information from Matthew.

Another methodology to calculate a carbon benefit is by means of the following example: A landowner may have 250 metric tonnes of CO2 equivalent standing, so the following approach would suggest a 62 metric tonnes of CO2 equivalent benefit. Then I would provide a potential harvest schedule and reinventory 2 to 3 years after every harvest and keep a running tally, and not drop below the 188 metric tonnes of CO2 equivalent MBL.

1. Define project area, take out non forestland.
2. Identify the supersection within which the project area is located. <http://www.arb.ca.gov/cc/capandtrade/protocols/usforest/usforest-aadf.htm>
<http://www.arb.ca.gov/cc/capandtrade/protocols/usforestprojects.htm>
3. Identify the assessment area. Within each Supersection, Assessment Areas were defined based on key drivers that influence forest carbon stocks. These drivers include common forest vegetation, common jurisdictional and regulatory influences, and common economic influences.
4. Go to the table and get the common practice (CP) value.
5. Determine your initial carbon stocks (on a per acre basis from your inventory, it can be general, perhaps an inventory from several years ago.)
6. How does it compare to CP? If initial stocks are above CP, MBL=CP. If initial stocks are below CP, use equation 6.6 to determine minimum baseline (MBL)

Supersection	Assessment Area	Associated Species	Site Class	Per Acre			Common Practice - Above Ground Carbon Mean (Metric Tonnes CO2-equivalent)	Species Diversity Index	Fire Risk Rating	Rotation Length	Value of Harvest
				Board Feet	Basal Area (Square Feet per Acre)						
Northern California Coast	Coast Redwood/Douglas-fir Mixed Conifer	Bishop pine, California laurel, Douglas fir, western hemlock, giant chinquapin, knobcone pine, Pacific madrone, red alder, redwood, Sitka spruce, tanoak, white fir	High	27,742	201	188	60%	4%			
			Low	16,266	176	165	60%	4%	Long	High	
	Northern California Coast Mixed Oak Woodland	Bigleaf maple, blue oak, California black oak, California live oak, cottonwood, willow, pinyon, juniper, western oak	All	3,065	95	108	65%	4%	Long	Very Low	
Southern Cascades	Southern Cascade High Elevation Conifer	Footstall pine, bristlecone pine, lodgepole pine, pinyon, juniper, red fir, subalpine fir, western juniper, western white pine, white fir	All	9,516	90	72	65%	4%	Long	Low	
	Southern Cascade Mixed Conifer	Aspen, California laurel, California mixed conifer, Douglas fir, spruce, mountain hemlock, giant chinquapin, grand fir, incense cedar, knobcone pine, mountain hemlock, Pacific madrone, ponderosa pine, Port Orford cedar, red alder, sugar pine, tanoak, western red cedar	Low	9,514	110	86	65%	4%			
			High	15,526	134	128	65%	4%	Long	Low	
	Southern Cascade Mixed Oak Woodland	Bigleaf maple, blue oak, California black oak, cercocarpus (mountain brush), cottonwood, willow, gray pine, Oregon ash, Oregon white oak, western oak	Low	2,248	65	49	65%	4%			
High			5,204	94	80	65%	4%	Long	very low		

MORE TO COME ON QUANTIFICATION METHODS

Other:

There are 4 PTEIRs that have been approved. Go to http://www.fire.ca.gov/resource_mgt/resource_mgt_EPRP_PTEIR.php

PTEIR	Preparer	Year	Acreage	Cost	Notes
Meadow Vista	Doug Ferrier for the Placer Co. RCD	1999	7,000	\$30,000 to \$40,000	It was tiered to the Meadow Vista Community Plan, the EIR for which was done years earlier and a guess regarding its cost was between \$150,000 and \$1,000,000.
Hearst Forests	Jones and Stokes Associates	1998	60,801	unknown	
Weaverville	BBW	2004	4,275	unknown	
Mattole Forest Futures Project	BBW	2011	156,484	~\$1,000,000 (RG)	
MRC		2012	~200,000	unknown	

Resources:

Excerpts of SB 862, Committee on Budget and Fiscal Review. Greenhouse gases: emissions reduction http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB862&search_keywords

Notes: 4598.5 references 3712, 3716 and 3718, which reference Division 25.5 (commencing with Section 38500), which is the Air pollution: greenhouse gases: California Global Warming Solutions Act of 2006.

Guidance in the Preparation and Review of Program Timberland Environmental Impact Reports, finalized in November 04, 2009 http://bofdata.fire.ca.gov/board_business/board_memorandums_and_guidance_documents/board_memorandums_and_guidance_documents/final_pteir_guidance_updated_072914_by_tb.pdf

The 2010 Forest and Range Assessment: Final Document. Chapter 3.7: Climate Change: Threats and Opportunities http://frap.fire.ca.gov/data/assessment2010/pdfs/3.7climate_change.pdf

Compliance Offset Protocol US Forest Projects, Air Resources Board, October 20, 2011. <http://www.arb.ca.gov/cc/capandtrade/protocols/usforestprojects.htm>

AB 1532, John A. Pérez. California Global Warming Solutions Act of 2006: Greenhouse Gas Reduction Fund. http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201120120AB1532&search_keywords=39712

Part of statute that supports fuel reduction treatments: HSC 39712. http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201120120AB1532&search_keywords=39712

Appendix C of the original A 32 Scoping Plan. Beginning page C-165. http://www.arb.ca.gov/cc/scopingplan/document/appendices_volume1.pdf

Greenhouse gas and air pollutant emissions of alternatives for woody biomass residues (Olympic Region Clean Air Agency, 2010) <http://data.orcaa.org/reports/all-reports-entries/woody-biomass-emissions-study/> See Table 5 for comparison of GHG, CO₂ and PM_{2.5} emissions from various disposal techniques.

Placer County Biomass Waste for Energy Greenhouse Gas Offset Credit Project <http://www.placer.ca.gov/departments/air/greenhousegasoffsetproject>

California Fire Hazard Severity Zone Map Update Project http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps.php

