To: Gary Gero, CCAR
From: Peter Miller, NRDC
Subject: Comments on Dec. 2008 Draft Revised Forest Project Protocol
Date: January 18, 2009

Overview

This section provides an overview of my key comments and suggestions. In the following section I offer detailed comments and questions organized by the section of the Draft to which they apply.

First, given the scope of the changes from the existing forest project protocol, it would be very helpful to have a separate document which summarizes the changes in the Draft. For each proposed change, the overview document should provide a brief description and an explanation of the intent or justification of the change.

Second, I found the Draft hard to follow and felt that the text didn't flow easily. In particular, it was unclear why some material was in the body of the protocol and some was in the appendices. While substantive improvements should the priority of the review process, the draft would also benefit from a thorough edit for clarity and organization.

Third, the Draft introduces a large number of quantitative adjustments to the measured carbon pools in the forest. In many cases, the quantitative adjustments are themselves determined by score or ranking which requires evaluation of multiple additional quantitative factors. For example, the risk of conversion analysis (p.20) results in a quantitive adjustment to measured reductions based on a half dozen quanititive factors (and one qualitative factor).

In general, every quantitative factor should be based on reliable data and a credible analysis that links the specific factor and proposed quantitative values to real world outcomes. Taking the risk of conversion analyis as an example again, there should be a data-based analysis demonstrating that a forest stand that scored 14 points on the risk of conversion matrix is at least approximately 50% more likely to be converted than a stand that scored 12 points (i.e. a 40% discount vs. a 60% discount). Quantitative factors that are merely guesstimates or are based on short-term political consensus rather than data and analysis are extremely problematic and should be revised or eliminated.

Fourth, the issues raised by the proposed FIA baseline approach go far beyond the cursory discussion in the Draft. In order to dopt this approach there needs to be an analytical basis that demonstrates how the FIA survey, which was developed to track national forestland trends, can be used to provide baselines for specific forest projects. In particular, the protocols need to show how FIA data can be used to define a representative baseline for a forest project given the particular forest type and site characteristics (e.g. elevation, aspect, slope, etc.). Assuming that a representative baseline can be defined, the protocols also need to provide a clear

and unambiguous algorithm by which the baseline will be determined for each project to preclude the possibility of selecting a baseline that maximizes reductions. In other words, both "applicable mean" and "assessment area" need to have a complete operational definition that minimzes uncertainty and the potential for gaming.

Fifth, the proposed approach to defining a baseline for public lands fails to provide adequate guidance. The proposal to define baselines based on "common forest management practice" fails to recognize the dramatic changes, reversals and conflict that have characterized federal forest policy for decades. For example, using this guidance, what would be the appropriate baseline to use for a national forest where the USFS proposed a set of policies and regulations but those policies and regulations were rejected by a federal court? What if the decision is being appealed? What if the Obama administration adopts a different policy? Similarly, what are the appropriate budget and plans to use for a state forest for which the available funding has dropped precipitously from previous years? Rather than adopt abstract guidelines the protocols need to provide functional guidance that accounts for real world circumstances.

Detailed comments and concerns:

1. (Sec. 2.1.1) It is unclear what is encompassed by allowing lands to qualify that have been subject to a "significant disturbance." This is not a clearly defined term and could encompass a wide range of events. How will "intentional or grossly negligent" be determined? Why is a 20% loss of carbon stocks proposed as the threshold? The ability to qualify as a reforestation project immediately following a disturbance appears to allow projects to qualify that would have been reforested anyway.
2. (Sec. 2.1.2) The definition of "improved forest management" appears to be essentially the same as for natural forest management. Why is "natural forest management" defined here? Where is the "improved" part defined?
3. (Sec. 3.1) The proposed definition of additionality is confusing. The definition should be consistent with the general CCAR definition.
4. (Sec. 3.2) The possibility of initiating a new project following termination of an existing project is troublesome. Is this intended to address the loss of carbon stocks from fire? Any other circumstances? This option needs to be much more clearly delineated or dropped. The possibility of gaming credits through baseline swapping needs to be clearly excluded.
5. (Sec 3.3)
    a. What does it mean to say that "the agreement must be recorded?" Recorded by whom?
    b. The mention of baseline analysis requirements is out of place.
    c. The protocols can not simply exempt public lands from any type of agreement. Instead, the protocols need to discuss in detail how public lands will participate. At a minimum, there will clearly need to be some sort of recorded decision to participate. Since public lands can be transferred to private parties and may not always be managed in ways that are open and transparent, both these contingencies should be addressed.
6. (Sec. 3.5.1)
    a. California is the only state with a reference for determining native forests that is listed in App. D. If no other states have references, then for 49 states, the Registry will have to rely on State Botanists. Are there State Botanists in every state? Is the determination of what constitutes a "native forest" something they already do or are qualified to do? How will we achieve consistency across states? Isn't there some other way to determine what "native forest" is? If not, is there some other requirement that could achieve the same goal?
7. (Table 3.1)
    a. The text of this section appears to require the exclusive use of native species, but Table 3.1 includes evaluation indicators for the fraction of native species. Are non-natives allowed or not?
    b. For the first indicator, what is "project guidance?" How are the native species percents calculated? In terms of biomass? Populations? Cover?

c. For the second indicator, how are the factors of 25% and 75% calculated?
d. For the third indicator: The entry for each box is identical. How is the score for this indicator determined? The text needs to provide guidance on what "ecologically appropriate" means and how it will be determined. By requiring the verifier to verify habitat elements over the entire project, this indicator appears to require a comprehensive survey of the project every verification cycle.
e. The "sensitive areas on forests" indicators are far too open-ended. The mere existence of "internal policies" doesn't demonstrate anything. The fourth sensitive area forest indicator is an automatic 2 points, since state and federal endangered and threatened species are protected through regulations with oversight everywhere in the U.S.
f. The summary appears to allow a 100% monoculture plantation to qualify if the single species grown is a native.
g. Since each project starts with 2 points for the state and federal endangered and threatened species indicator, only 3 addititional points are needed to qualify. Three points could be achieved if internal policies exist and their implementation can be verified, even if the policies are trivial or terrible. Overall, the proposed threshold is far too easy to meet.

8. (Sec. 3.5.2) It is unclear why this section is in the proposed protocol or what it would accomplish if anything. It appears to say that the live tree pool can only decrease if the wood is harvested as part of a silvicultural treatment or if there was a natural disturbance. What's excluded? There are numerous unclear and undefined terms and apparently arbitrary exclusions (e.g. why only ownerships of less than 1000 acres?)
9. Table 5.1
    a. This table provides far too much latitude as to which carbon pools need to be included. The ability to exclude any or all pools other than the live tree pool on the basis of an undefined projection is totally inadequate.
    b. Why are maintenance activities and transportation of wood products excluded pools? Why aren't wood product manufacturing emissions listed?
10. (Sec 6) What is a "removal enhancement?"
11. (Sec. 6.1.1)
    a. Why is there a different eligibility requirement for reforestation projects provided here (compare to Sec. 2.1.1)? Do they both apply? How does this requirement work for projects that are eligible due to a disturbance that removes only 20% of carbon stocks?
    b. Harvest of carbon stocks either for timber or fuel can not be considered as part of a natural disturbance. Any carbon stocks that are harvested should be included in the baseline.

c. Does the final paragraph in this section really require the project proponent to convert standing dead material to wood products unless economically infeasible? Why?

12. (Sec. 6.1.2) This section is extremely confused. The overall organization and requirements are unclear. Many significant terms are introduced without being defined. How is commercial viability determined? How is "historically dominant economic activity" determined? What is leakage risk? How is Table 6.1 completed and how are the results used?
13. (Sec. 6.2.1.1)
    a. How is economic feasibility defined and determined? Physical feasibility?
    b. The FIA survey is designed to track forest trends at a national level rather than to provide baselines for individual stands. How does this proposal address the potential lack of statistical confidence from using FIA data to represent specific stands, particularly in heterogenous regions and/or where ownership is highly concentrated? A recent study (Nicholas Institute 2008) has shown that it is possible to obtain widely disparate results possible by adjusting the FIA sample used to determine the mean. More generally, how will the protocols ensure that the sample of FIA plots used to determine the mean for each project is accurate and unbiased?
    c. Is the applicable mean fixed for each project over time based on the value at project initiation? Why?
    d. Why must "additional constraints … be applied to foster conservative estimates?" Instead of conservative estimates, shouldn't the objective be to foster accurate estimates?
    e. Why are the additional constraints imposed only on "standing live carbon" stocks? Why aren't there constraints on the other carbon pools?
    f. For the third requirement in this section, why is option b) set at 80% of the highest inventory levels? Why not 100%
14. (Sec. 6.2.1.2)
    a. The draft states that the baseline for public lands must be a projection based on historical trends? But the historical trends for our public forests over the past few decades have been dominated by dramatic and frequent shifts and reversals in statutes, policies, plans and activity-based funding. At a minimum, any attempt to project a 100-year baseline would be fairly arbitrary. Given this uncertainty, how can the protocol that an accurate and unbiased baseline is developed for each project?
    b. Given that the relevant factors will almost certainly have materially changed over the preceding decade, why should the goal be the most conservative baseline? What does conservative mean in this context?
15. (Sec. 6.2.2)
    a. This section includes an apparently unconnected set of provisions, including a requirement to account for process emissions, a leakage

risk assessment requirement, and a statement about natural disturbances.

b. The leakage risk assement process is confused, complicated and unsubstantiated. It needs to be simplified. An detailed discussion and explantation is needed. Quantitative requirements need to be justified and substantiated.

16. (Sec. 6.3.1.2)
    a. The criteria used in the risk of conversion analysis need to be defined in a way that is unambiguous and relatively straightforward to determine. For example, the criteria on proximity to local provisions needs to specify how the proximity will be determined (e.g. 30 minutes at what speed? Starting from where?) and what exactly qualifies "provisions" (e.g. a gas station with warm sodas? Starbucks?)
    b. The current draft provides no substantive support for the proposed criteria and conversion rank values. Are these criteria and values based on a quantitative (or even qualitative) data-based analysis or are they simplyh based on the working group's judgement? There needs to be adequate support for the proposed criteria and conversion rank values.
    c. The conversion uncertainty only allows a project to achieve the lowest discount if it is judged highly likely to be converted in every category. Even for those projects that achieve this rank there is a discount of 40%. This appears arbitrarily restrictive and inconsistent with the site-specific threat of conversion approach which allows 100% credit. The maximum discount of 60% for a modest change in ranking from the minimum level appears equally arbitrary.
    d. Overall, the risk of conversion approach appears arbitrary and completely without substantive support. It needs to be much better justified, substantially revised, and/or deleted.

17. (Sec. 6.3.2)
    a. It is unclear what is the requirement expressed in the first paragraph in this section. Are project proponents required to account for emissions from the equipment that would have been used if the development hadn't been avoided?
    b. The land use conversion table raises many questions. Why is it appropriate to use recent trends to forescast future leakage? Shouldn't the appropriate factor be the fraction of total land converted that is forestland rather than the fraction of total forest that is converted? Why is the rate cited for Alameda county as an example different than the rate in the table? What factors are going to be used for the rest of the country?
    c. Why is a decrease of 5% of forest acres for an entity used as the threshold to determine whether within-entity leakage is occurring? Given the large size of the holdings of some forest landowners, this seems like an extremely high hurdle. Also, how will this threshold be applied? Over what time period will the 5% be measured? Will the

decrease be applied retroactively? What is meant by "converted acres that exceed this figure must be multiplied by the project's average carbon stocks?"

18. (Sec. 7.2.1) The proposal that buffered reductions will be pooled among all forest projects raises significant issues. First, it is unclear why risk should be pooled for forest projects rather than borne individually by project proponents. Second, if risk is pooled then there needs to be clear mechanisms for drawing down and replacing buffer pool credits. For example, if there is a project reversal and buffer pool credits from other projects are used to compensate, then are those other projects required to make up the deficit in future years? Over what period? How is the deficit allocated among projects? Are newly registered projects required to contribute to previous deficits?
19. (Sec. 8.1) The proposal to allow developers to terminate a project in response to a significant disturbance needs to be much more throughly considered. Why is this proposal focused only on standing live carbon stocks? What about other stocks? How will the lost reductions be made up? Given all the other proposed mechanisms to account for and compensate for the possibilty of reversal, why is this exemption needed? Doesn't it provide developers an incentive to ignore the risk of natural disturbances?
20. (Sec. 8.2)
    a. Field data should be collected more frequently than once every 12 years.
    b. Confidentiality should not be addressed piecemeal.
    c. Are there any requirements imposed on allowable forest growth models?
    d. Why does the "disturbances" bullet point use the verb "should" when every other bullet uses words like "needs" or "must?"
21. (Sec. 9.3) The proposed disclosure requirement that "forest entities must disclose all forest activities that may impact their C stocks" could easily be interpreted pretty broadly.
22. The glossary needs to be reviewed to ensure that the definitions are consistent with terms that are relevant to other sectors and project types (e.g. additionality, de minimus, optional reporting, etc.)
23. (Sec. A.2)
    a. How do you know if the excluded pools are less than 5% over 100 years if you don't measure them?
    b. Requiring a project to measure a previously excluded pool is of limited use since the earlier measurements won't be available for comparison.
24. (Sec. A.3)
    a. Verifiers should not be given the authority to grant approval for use of different allometric equations. All allometric equations should be reviewed and approved by the Registry.
    b. 12 years is too long without any field sampling, particularly for improved forest management projects.

c. The proposed exception to the proposed twelve year plot life is very hard to understand. In any case, twelve years is already too long.
d. (Step 2) The Protocols should not open the door to accepting biomass equations that a project claims are more accurate. Instead projects should be required to use equations that have been reviewed and approved by the Registry.

25. (Sec. A.4) It isn't clear how the confidence deduction works. How can the confidence interval be calculated in a year in which there is no new field data? What is used in those years? Is the confidence deduction kept constant between sampling periods? This would be perverse, since the actual confidence in reported results would be decreasing. Since a sampling plan can only project, rather than ensure, a particular confidence interval, what happens when a project's confidence interval is in the unacceptable range? Are the confidence interval requirements applied to total carbon stocks or to estimated reductions?
26. (Sec. A.5) Comments on wood products section to be submitted separately.
27. (Sec. B.1)
    a. The Reserve should review and approve all models.
    b. Are there any models approved for any other state? How many models meet or are close to meeting the proposed requirements for other states?
28. (Appendix C)
    a. What does it mean for "project proponents and verifiers … to recommend mitigations" for the risk calculations?
    b. What is meant by the statement that "the adjustments to these risk elements needs to be severe." What adjustments? To what risk elements?
29. (Sec. C.1) The criteria in the financial risk analysis are vague, the process is unclear, and the quantitative risk adjustments seem large and arbitrary. The analysis is biased towards improved management projects.
30. (Sec. C.2) The criteria in the management risk analysis are vague, the process is unclear, and the quantitative risk adjustments seem large and arbitrary.
31. (Sec. C.2.2) Isn't this section duplicative with Section 6.3.1.2? Why are there different conversion rankings based on the same critieria as the earlier section? How is the "likely conversion strategy" identified?
32. (Sec. C.2.3) How can the timber value over a century be estimated with any accuracy? Given that all the projects affected by these protocols are participating in the Climate Reserve, how could they possibly occur in a manner where climate issues are not directly assessed?
33. (Sec. C.3) The entire discussion of social risk needs far more specificity and rigor. Minor deductions of 0.5% to 1% appear arbitrary and unnecessary.
34. (Sec. C.3.1) It is unclear why the adoption of a carbon policy by a local government should result in a reduction in credited benefits.
35. (Sec. C.3.2) It is totally unclear to me what the risk is that is addressed in this section. Why are we setting a standard for "smaller local registries?"

36. (Sec. C.3.3) It is totally unclear to me what the risk is that is addressed in this section. What do other registry's accounting standards have to do with our protocol?
37. (Sec. C.3.4) This risk is inadequately defined and/or justified.
38. (Sec. C.3.5) This risk is arbitrary and unjustified. Implementation of a forest project should lead to an increase in the demand for businesses and workers that can meet the project's needs.
39. (Sec. C.3.6) This risk is arbitrary and unjustified. Implementation of a forest project does not provide an exemption from local, state, or federal protections. There should be no basis for significant environmental harm from a forest project.
40. (Sec. C.4) This section appears to duplicate the goal of the buffer pool. The entire discussion of risk of reversal needs to be consolidated and coordinated. The statements that "reforestation is the fastest way to return a damaged site to net sequestration" and "removal and off-site storage can lessen the total amount of obigated ton reductions reversed over time" are both unsubstiated and inappropriate.