



Climate Action Reserve

Subject: Comments on Version 4.0 Draft Forest Project Protocol

Thank you for the opportunity to comment. This revision has many significant improvements and creative thinking to address issues that have occurred in past projects. My comments are listed below by section number.

3.9.1 Changing the definition of harvesting to actual harvesting rather than planning is a significant improvement. For example, a new parcel of forestland may be purchased that has an existing harvesting permit, but the new landowner may not intend to act on the plan. This change will fix this situation.

3.9.2 The table under 2. Forest Structure has criteria that appear too general for all the forest ecotypes found in the United States. We suggest that it is sufficient to follow local BMPs, laws and regulations.

4.1 What is the purpose of this section? Why does the project area need to be representative of the Forest Owner's general forest management? Certification systems and management plans often stratify an ownership into intensive and extensive management, including identified high value conservation areas. Carbon projects should be able to be fit to these land uses within ownerships. This section will have the unintended effect of creating economic incentives for the splitting of properties and subsequent fragmentation of habitat on the landscape.

4.3 The addition of the ability to remove a portion of the project area is useful. The ability to add, up to a percentage (say 20%) of the original project area, area to a project would be beneficial to landowners, the program and the landscape. To encourage a simple process, this would be for IFM and reforestation projects only, and would only allow growth credits.

6.2.6 This appears to be an improvement in the consideration of secondary effects, which considers the cumulative actual harvest by the project. The inclusion of all species appears appropriate to the purpose. Many IFM projects use the carbon market to increase stocking and move closer the culmination of mean annual increment (CMAI), which produces the maximum wood products in the long-run. Unfortunately, secondary effects are applied during this period when carbon credits are claimed and then no credits once the improved inventory level is reached. Would there be a feasible way to recognize this by creating a secondary effects pool whereby the "lost" credits could be recouped by later project harvesting?

6.2.1 Step 4. It is helpful to specify the discount rate and NPV value; these do appear appropriate. Providing the tool will be helpful to project developers.

New Forests, Inc.

275 Battery Street, Suite 510, San Francisco, CA 94111, USA
+1 415 321 3300 | newforests-us.com

6.2.1 Step 5. We do not quite follow the steps and objectives of this section, possibly because our experience is primarily with the compliance protocol that does not include this section. An example might be useful along with a statement of purpose.

6.2.1. We agree with the simplification of eliminating WCS and LMU, as it does not serve a purpose for carbon accounting and, as mentioned above, can create a perverse incentive for subdivision and landscape fragmentation.

6.2.4.3. We suggest that the project proponent be allowed to design a plan for updating disturbance (harvest or natural) that coincides with onsite verifications. This would be most cost effective as that is often when inventories are refreshed.

7.3.1 We appreciate the additional detail to reporting unavoidable reversals.

8.1 The requirement for KMLs and the creation of a public map of projects is useful for the monitoring of the system and research on carbon project effects.

8.3.2 We suggest that if a project has not generated credits in 5 years or more, that the onsite verification be aligned with the minimum plot age of 12 years. To ensure the integrity of project carbon stocks a desk verification that includes review of publicly available remote sensing imagery (NAIP for example) should be required every 6 years. This will reduce long-term costs while ensuring program credibility.

9.3.5.1 Thank you for the suggested improvements to sequential sampling. It appears that a tree-level diameter and height test are added to the plot-level CO₂ test to improve efficiency. We are not sure how this increases efficiency as it adds work for the verifiers and tests attributes that are already subsumed in the CO₂ test.

9.3.5.2 A standard inventory methodology should be useful to smaller projects and consulting foresters that do occasional carbon projects.

9.3.5.3 Thank you for clarification on the handling of ingrowth and tree expansion factors.

9.3.5.4 The statistical method of sequential sampling does not include the concept of plots passing in a row to pass, this was a criteria added to a previous version of the protocol to theoretically increase rigor. The changes suggested do improve the application of sequential sampling from previous versions of the protocol. If rigor of the test is at issue it may be more appropriate to increase the percent of deviation allowed and remove entirely the non-statistical passing plots in a row criteria. This could be tested against collected data from past projects.

Quantification Guidance

2.1 The use of a default standard inventory methodology linked to quantification tools should aid in program participation.

2.11 The current method of calculating the standard error on the inventory is appropriate for the initial reporting period for IFM projects where the ICS is above CP. This approach is not always



statistically appropriate where the credits are based on stock changes or growth from permanent plots. Equation 9.2 of Shiver and Borders (1996) shows that the standard deviation of the change estimate from permanent plots is a function of the sum of the two errors at each point in time minus the covariance of the two measurements. Once this error is calculated, it should be used to calculate the reduction. However, it is inappropriate to apply the reduction to the total inventory stocks as it applies to the change only.

This has major implications for reducing project costs once credits are no longer being generated and the project is in monitoring mode. There may be a desire to reduce the number of plots and therefore cost. However, under the current methodology this may create an intentional reversal where none has occurred. This happens because the increased error on the inventory may reduce the carbon stocks used in equation 6.1 of the protocol. This is purely an artifact of the equation that does not necessarily reflect actual conditions, but occurs because the error is calculated on the wrong parameter.

Please note that this proposed change is consistent with how the error estimate of growth in FIA plots is calculated.

Please note that this change also applies to temporary plots but the equation is different.

2.2.2 Please see comment above for section 6.2.4.3 of the protocol.

Sincerely,

Timothy Robards, PhD, RPF, CF

Associate Director, U.S. Investments & Operations

