ENVIRONMENTAL SYNERGY INC.
Carbon based forestry projects

May 11, 2009

Climate Action Reserve
523 W. Sixth Street, Suite 428
Los Angeles, CA 90014

VIA E-MAIL: policy@climateactionreserve.org

Re: Comments to Revised Final Version of the Updated Forest Project Protocol

Dear Climate Action Reserve team:

The purpose of this letter is to provide comments to the Climate Action Reserve's revised final version of the Updated Forest Project Protocol.

Our comments are based on more than 10 years of experience in developing forest carbon projects in the U.S.A. Our company, Environmental Synergy, Inc., has worked with conservation partners, land management agencies, and corporate funding partners to develop forest carbon projects that now cover more than 80,000 acres of land. In collaboration with recognized experts in the field of forest carbon, we have developed and implemented rigorous, science-based methods to measure and monitor changes in forest carbon stocks associated with these projects. We hope that our experience and comments provide a valuable "implementation" perspective regarding the provisions of the revised final version of the Updated Forest Project Protocol.

We appreciate the opportunity to provide the Reserve with these comments, and are available at your convenience to answer any questions.

Sincerely,

Carol W. Jordan

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President

P.O. Box 52306 / Atlanta, Georgia 30355 / Tel: (770) 447-4638 / Fax: (770) 447-4639
www.environmental-synergy.com

Comments from Environmental Synergy Inc. (ESI) re: Final Draft Version of the Updated Forest Project Protocol

Section	ESI Comment
6.1.2 - Reforestation Projects - Secondary Effects - Quantifying Net Changes at Other Affected Sources	The Leakage Risk Assessment chart uses the Murray et al. study as the source for assessing leakage on cropland that is commercially viable. We note that previous respondents have requested further guidance and analysis of actual carbon emissions resulting from conversion to cropland, including the types of land and associated carbon stocks. We also note that the Reserve, in its responses, has indicated that the final FPP will include modifications to leakage estimates resulting from consultation with Dr. Murray. We would like to express our agreement with those who support the need for empirical data on land conversion and the carbon density of such land in order to better estimate the leakage effects from activity shifting.
6.4 - Quantifying Total Net GHG Reductions	The text and equations for calculating total net GHG emissions still make reference to the need to subtract confidence deductions from the estimates of actual carbon stocks to account for sampling error. We suggest that the text and equations be revised to delete any references to confidence deductions for sampling error, since this is now included in the determination of the buffer pool contribution for each project, and would otherwise result in a double deduction for sampling error.
7.2.2 - Compensating for Reversals	We suggest further clarification of the sources and the circumstances for compensating for reversals. Specifically, it should be made clear whether Project Developers are always responsible for purchasing credits to compensate for reversals if the project's unsold credits and buffer account are not sufficient; or whether this obligation applies only in the event of gross negligence. We consider that the latter scenario is more consistent with the concept of "insurance" and a buffer pool. Also, we recommend further description of the Reserve's process for monitoring and taking actions to ensure the adequacy of the Reserve's overall buffer pool. An understanding of this process will help to build market confidence in this mechanism for ensuring the permanence of emission reductions that are credited by the Reserve.
9.1 Forest Carbon Inventory	The FPP requires that all forest carbon inventory reports that reference biological emissions are submitted with the oversight of a

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	professional forester. While one could interpret that oversight is not required for reports referencing only biological removals, we consider the underlying issue in both cases is the reliability of the forest carbon inventory that has been prepared. A professional forester is defined by the FPP as someone who is "credentialed in jurisdictions that have professional forester licensing laws and regulations". In jurisdictions where there are no professional licensing laws, a professional forester is someone who holds Certified Forester credentials from the Society of American Foresters (SAF). Per the SAF, only 15 states currently have professional forester licensing laws or regulations. It is our experience that there are many biometricians and forest scientists capable of preparing forest carbon inventory reports who are not eligible to become an SAF Certified Forester. For example, most are not eligible because they do not meet certain requirements related to management experience. While management experience is critical to becoming a qualified forest manager, it is not essential for the forest carbon inventory work outlined in the protocol. It should also be noted that not all those foresters meeting the professional forester definition are qualified to oversee the preparation of forest carbon inventories. We recommend deleting the requirement for professional forester oversight when submitting forest carbon inventories. We believe this provision will result in unnecessary costs and will limit the number of technical providers, creating bottlenecks in preparing forest carbon inventory reports. The existing provisions of the FPP, which prescribe the statistical rigor and process for developing forest carbon inventories, and require independent verification by a qualified, third party, are more than sufficient to provide confidence to the market.
A.3. Onsite Forest Inventories	Section A.3. of the FPP specifies that forest inventories must use plot data that have been sampled within the last 12 years. Exceptions to the 12 year rule are allowed if it can be demonstrated that the process for updating the inventory, addressing forest growth and harvest, adequately estimates the current inventory with a 90% confidence. In this context, the FPP includes the formulae for the t statistic and the standard error for stock estimates. It will be equally important for the protocol to provide guidance on quantifying uncertainty around *change* in stock estimates. Permanent plots are likely to be employed by many projects for their greater capacity for change detection. The

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	formula for the standard error estimate for re-measured permanent plots (per statistics developed for Continuous Forest Inventory) is[1]: $s_d = \sqrt{\frac{s_{t1}^2 + s_{t2}^2 - 2 * Covar(t1, t2)}{n}}$ where s_d is the standard error of the difference, s_{t1}^2 is the variance at time t1, s_{t2}^2 is the variance at time t2, Covar(t1,t2) is the covariance between the t1 and t2 measurements, and n is the sample size.
C.5. Accuracy of Carbon Stock Estimates	We recommend that the risk contribution for sampling error greater than 5% of the mean should be equal to the amount of sampling error over 5.1%, rounded to the nearest 1/10th percentage (including for sampling error greater than 20% of the mean estimate). While mean estimates with higher sampling errors result in lower precision, the range of uncertainty related to the mean estimate can still be quantified and incorporated into the risk contribution. Our experience on the ground, shared by others, has shown that the mean estimates of some stands, especially young stands, have high variation (coefficient of variations from 70-90%) and non-normal distributions. In these cases, impractical sample sizes approaching 900 plots[2], may be required to achieve the lowest precision requirement currently allowed by the FPP (20% of the mean estimate). Adjusting the risk contribution for *all* precision levels over 5% would allow projects to assess the cost/benefit of achieving higher precision levels during early years, while still providing incentives to achieve higher levels over the life of the project.
C.6. Summary of Risk Analysis	The table in section C.6. contains a summary of the contributions to the buffer pool for the various risk types specified by the FPP. To be consistent with the guidance in C.4., the table should be revised to reference the use of default values (not worksheets) as the Source for risk related to disease/insect outbreak and other catastrophic events.

[1] Scott, C. T. 1998. Sampling methods for estimating change in forest resources. Ecological Applications 8:228–233; Pancel, L., ed. 1993. Tropical forestry handbook. Berlin, Germany, Springer-Verlag. 1 738 pp. (Two volumes)

[2] Hohl, A., Niccolai, A. and C. Oliver. Unpublished. Applying the Forest Decision Support Tools to bottomland hardwood forests in the Lower Mississippi Alluvial Delta. Yale School of Forestry and Environmental Studies, New Haven, Connecticut, USA., Table 6.1, page 74

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Forest Verification Protocol (FVP)	The draft FPP makes references to the FVP and the plan to publish revisions within 90 days of the adoption of the FPP. We note that the current Reserve Program Manual calls for initial verification of all projects must occur within 30 months of listing with the Reserve (section 2.4.2). We also note that the FVP specifies that verification shall involve reviewing the project's forest carbon inventory. For reforestation projects, it may not be practical or cost-effective to undertake a forest carbon inventory for at least 10 years, due to the slow growth of trees (and small amount of biomass) in the initial years after planting. We therefore suggest, for purposes of annual reporting and for verification, that reforestation projects are allowed to use data from the initial planting as inputs to those models approved in Appendix B for purposes of estimating forest carbon stocks prior to the initial forest carbon inventory.