URBAN FOREST CARBON REGISTRY

Tree Planting Protocol

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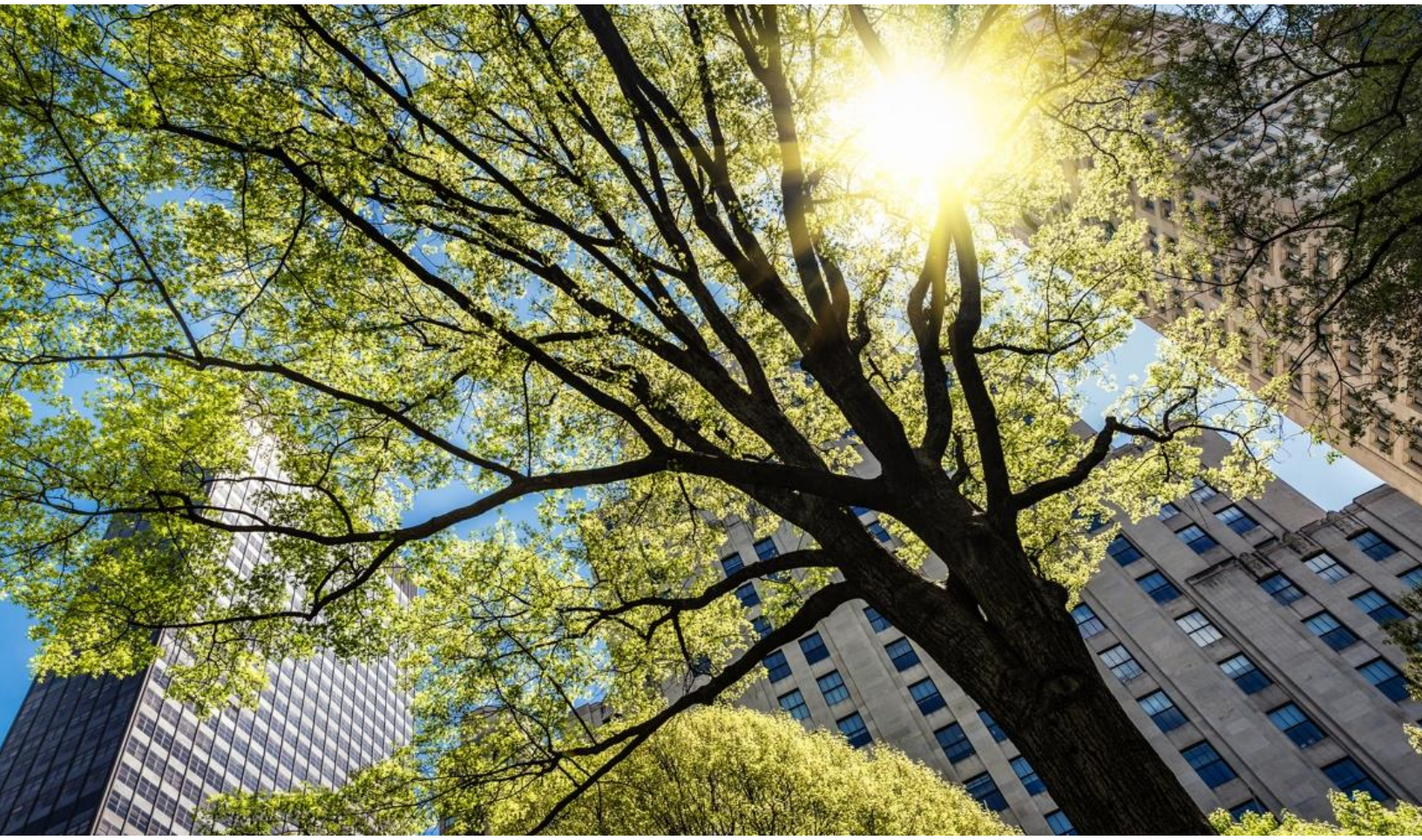

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Abbreviations and Acronyms

C	Carbon
CO2	Carbon dioxide

DBH	Diameter at Breast Height
GHG	Greenhouse gas
ISO	International Organization for Standardization
PIA	Project Implementation Agreement
PO	Project Operator
Registry	Urban Forest Carbon Registry

Introduction

This Urban Forest Carbon Protocol sets forth the requirements for Tree Planting projects in urban areas in the U.S. to quantify carbon dioxide sequestration from woody biomass. That woody biomass is referred to herein by the broader term "urban forest."

This protocol provides eligibility rules, methods for quantifying biomass and CO2 storage, and reporting, monitoring, issuance of credits, reversal, and verification requirements. We have been guided in our drafting by one of the foundational documents for carbon protocols, the WRI/WBCSD GHG Protocol for Project Accounting, which describes GHG project accounting principles.

Our goal is in this protocol is to provide for accounting of net GHG reductions is a consistent, transparent, and accurate manner, consistent with the principles and policies set forth in the WRI GHG Protocol for Project Accounting document. This process will form the basis for GHG reductions that are real, additional, permanent, verifiable, and enforceable, which can then result in the issuance by the Urban Forest Carbon Registry of carbon offset credits, called Community Carbon Credits™ or Community CarbonGreen Credits™.

Urban forests in the U.S. are estimated to store over 643 million tonnes of CO2. [1] The co-benefits of urban forests include air quality improvements, energy savings from reduction of the urban heat island effect, slope stability, bird and wildlife habitat, sound and visual buffering, public health improvements, safety, livability,

[1] Nowak, David J., et al. "Carbon storage and sequestration by trees in urban and community areas of the United States." *Environmental Pollution* 178 (2013): 229-236, 231.

social cohesiveness, economic improvements, and more.[2] Urban trees clearly influence air temperatures and energy and affect local climate, carbon cycles, and climate change.[3]

Moreover, almost 80% of the population worldwide lives in urban areas, and urbanization is a significant demographic trend of the 21st century. The array of benefits delivered by urban trees directly links to human health and life in cities and towns.

Documents and Standards for Protocol Development

No single authoritative body regulates carbon protocols or determines final standards. The Stockholm Environment Institute's Carbon Offset Research and Education resource lists the various institutions and programs that have set out formulations of basic principles that every carbon offset protocol should contain.[4]

CORE lists twenty-five different programs or institutions that have either developed standards for protocols or issued standards and rules for their own programs. These institutions range from international bodies such as the Kyoto Protocol, the World Resources Institute, and the International Organization for Standardization, to U.S. carbon programs such as the Regional Greenhouse Gas Initiative and Midwest Greenhouse Gas Reduction Accord, to registries such as the American Carbon Registry, the Climate Action Reserve, and the Verified Carbon Standard.

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[2] See Alliance for Community Trees, Benefits of Urban Forests: a Research List at http://www.actrees.org/files/Research/benefits_of_trees.pdf

[3] Nowak, 229

[4] See CORE at http://www.co2offsetresearch.org/policy/ComparisonTableAdditionality.html

The standards issued by these bodies vary, and the specific rules formulated to give content to these different standards vary even more. For example, the Clean Development Mechanism under the UN Framework stemming from the Kyoto Protocol lists 115 different approved baseline and monitoring methodologies for large scale offset projects.

To complicate matters, the environmental and carbon community have tolerated a de facto different standard between compliance protocols and voluntary protocols. Compliance protocols exist in cap and trade jurisdictions like California. Because these compliance protocols establish the rules for credits that will offset actual regulated GHG emissions from monitored sources, greater rigor is expected than in voluntary protocols, where purchasers are buying credits voluntarily to reduce their carbon footprint, not to offset regulated emissions.

There is, nonetheless, a general consensus that all carbon offset protocols must contain the following:

- Accounting Rules: offsets must be "real, additional, and permanent." These rules cover eligibility requirements and usually include baselines for additionality, quantification methodologies, and permanence standards.
- Monitoring, Reporting, Verification Rules: monitoring, reporting, and verification rules ensure that credits are real and verifiable.

Certification, enforceability, and tracking of credits and reversals are performed by specific programs or registries, guided by language in the protocol where relevant.

Over the last fifteen years, several documents setting forth standard and principles for protocols have emerged as consensus leaders for programs attempting to

develop their own offset protocols for specific project types. We will follow and refer most often to:

- World Resources Institute/WBCSD GHG Protocol for Project Accounting ("WRI GHG Protocol");
- Clean Development Mechanism, Kyoto Protocol, now part of the UN Framework Convention on Climate Change ("CDM").

Recognition of Distinct Urban Forest Issues in Protocol Development

The task for the Urban Forest Drafting Group was to take the principles and standards set forth in these foundational documents and adapt them to urban forestry. Urban forestry and its potential carbon projects are different than virtually all other types of carbon projects:

- Urban forests are essentially public goods, producing benefits far beyond the specific piece of land upon which individual trees are planted.
- New tree planting in urban areas is almost universally done by non-profit entities, cities or towns, quasi-governmental bodies like utilities, and private property owners.
- Except for a relatively small number of wood utilization projects, urban trees are not merchantable, are not harvested, and generate no revenue or profit.
- With the exception of very recent plantings begun in California using funds from its Greenhouse Gas Reduction Fund, no one currently plants urban trees with carbon as a decisive reason for doing the planting.

- Because urban tree planting and maintenance are expensive relative to carbon revenues, urban forestry has not attracted established for-profit carbon developers.

- Because urban forest projects will take place in urban areas, they will be highly visible to the public and easily visited by carbon buyers. This contrasts with most carbon projects that are designed to generate tradeable credits purchased in volume by distant and "blind" buyers.

During the drafting process, we remained mindful at all times that the above unique factors of urban forestry distill down to three central attributes:

- Urban trees deliver a broad array of documented environmental benefits,

- Urban trees are essentially a public good delivering their array of environmental benefits to the people and communities living in cities and towns – almost 80% of the population, and

- There are little to no harvests, revenues, or profits for those who preserve and grow the urban forest.

These three key attributes lead to the conclusion that urban forest projects are highly desirable, bringing multiple benefits to 80% of the population in a public good that is unlikely to be gamed or exploited.

Our task then was to draft urban forest protocols that encouraged participation in urban forest projects through highly-credible protocols that addressed not just catch-phrase principles of carbon protocols, but the policies underlying those principles. Where the needs of urban forest practicality required a variance from

accepted principles of carbon protocols, we developed solutions to those variances to maintain a high level of stringency.

1. Eligibility Requirements

1.1 Project Operators

A Project requires at least one Project Operator ("PO"), an individual or an entity, who undertakes a Project, registers it with the Urban Forest Carbon Registry (the "Registry"), and is ultimately responsible for all aspects of the project and its reporting.

1.2 Project Implementation Agreement

A Project Operator must sign a Project Implementation Agreement (PIA) with the Registry setting forth the Project Operator's obligation to comply with this Protocol.

1.3 Project Location

Projects must be located within at least one of the following:

A. The Urban Area boundary ("Urban Area"), defined by the most recent publication of the United States Census Bureau (https://www.census.gov/geo/maps-data/maps/2010ua.html);

B. The boundary of any incorporated city or town created under the law of its state;

C. The boundary of any unincorporated city, town, or unincorporated urban area created or designated under the law of its state;

D. A zone or area designated by any governmental entity as a watershed or for source water protection, provided the designated zone or area overlaps some portion of A, B, or C above;

E. A transportation, power transmission, or utility right of way, provided the right of way begins, ends, or passes through some portion of A, B, C, or D above.

1.4 Ownership and Eligibility to Receive Potential Credits

The Project Operator must demonstrate ownership of potential credits and eligibility to receive potential credits by meeting at least one of the following:

A. Own the land, the trees, and potential credits upon which the Project trees are located; or

B. Own an easement or equivalent property interest for a public right of way within which Project trees are located, own the Project trees and credits within that easement, and accept ownership of those Project trees by assuming responsibility for maintenance and liability for them; or

C. Have a written and signed agreement from the landowner granting ownership to the Project Operator for the Project Duration of any credits for carbon storage or other benefits delivered by Project trees on that landowner's land.

2. Additionality

The Registry ensures additionality through the following three requirements – 1) a 100% buffer pool of forest carbon to back up all urban carbon (Section 2.1), 2) a performance standard baseline developed in adherence with the WRI GHG Protocol for Project Accounting for Project Accounting (Section 2.2), and 3) a Legal Requirements Test that declares trees planted due to an enacted law or ordinance not eligible (Section 2.3).

2.1 Buffer Pool of Additional Forest CO_2

The Registry is establishing a 40-year buffer (reserve) pool of additional forest carbon to collateralize or insure **all** of the urban carbon stored in Planting Project trees. Credits earned by urban forest planting projects and issued by the Registry thus consist of two stocks of CO2, one in the urban forest planting projects, and a second and equal stock in a block of additional forest CO2 for 40 years.

2.2 Performance Standard Baseline per WRI GHG Protocol

Additionality is often applied only on a project-specific basis, with the specific project or specific project developer being required to show that it reduced emissions (or removed them from the atmosphere) beyond its business-as-usual practices.

In the urban forest context, this produces immediate anomalies:

- Entities with a commitment to or even recent practice of tree planting and who begin carbon projects would get far fewer carbon credits than entities with no historical commitment to urban trees. To use the language of baselines, the baseline of entities that plant trees would be the trees they

have annually planted, while the baseline of entities that plant no trees would be zero.

  - The City of Los Angeles has launched its Million Tree LA initiative (now CityPlants). These voluntarily planted trees would generate no carbon credits for LA, whereas a city like Bakersfield, which plants few to no trees, would get carbon credits for every tree it planted.

  - The same result obtains for an entity like the Sacramento Municipal Utility District, which voluntarily plants over 15,000 trees per year.

- If additionality is applied inflexibly on a project-specific basis, then entities that plant trees now would have the perverse incentive to stop their planting, even temporarily, to bring their own business-as-usual baseline to zero.

- Governments with progressive tree ordinances or land use regulations that seek to increase canopy cover, would get fewer carbon credits because trees planted per their regulations would be part of their baseline and thus not eligible for crediting. Inflexible application of this "legal requirements" test leads to the perverse incentive for cities to leave their trees unregulated and unprotected.

Performance Standard Methodology

But there is a second additionality methodology set out in the WRI GHG Protocol guidelines – the Performance Standard methodology. This Performance Standard essentially allows the project developer, or in our case, the developers of the protocol, to create a performance standard baseline using the data from similar activities over geographic and temporal ranges justified by the developer.

We understand that a common perception is that projects must meet a project specific test. Project-specific additionality is easy to grasp conceptually. The CAR urban forest protocol essentially uses project-specific requirements/methods.

But the WRI GHG Protocol clearly states that either a project-specific test or a performance standard baseline is acceptable.[5] One key reason for this is that regional or national data can give a more accurate picture of existing activity than a narrow focus on one project or organization.

Narrowing the lens of additionality to one project or one tree-planting entity can give excellent data on that project or entity, which data can also be compared to other projects or entities (common practice). But plucking one project or entity out of its context ignores all other data surrounding that project or entity. And that regional picture may be more accurate than one project or entity.

By analogy: one pixel on a screen may be dark. If all you look at is the dark pixel, you see darkness. But the rest of screen may consist of white pixels and be white. Similarly, one active tree-planting organization does not mean its trees are additional on a regional basis. If the region is losing trees, the baseline is negative regardless of what one active project or entity is doing.

Here is the methodology in the WRI GHG Protocol to determine a Performance Standard baseline, together with the application of each factor to urban forestry:

Table 2.1 Performance Standard Factors

WRI Perf. Standard Factor	**As Applied to Urban Forestry**

[5] WRI GHG Protocol, Chapter 2.14 at 16 and Chapter 3.2 at 19.

Describe the project activity	Increase in urban trees
Identify the types of candidates	Cities and towns, quasi-governmental entities like utilities, watersheds, and educational institutions, and private property owners
Set the geographic scope (a national scope is explicitly approved as the starting point)	Could use national data for urban forestry, or regional data
Set the temporal scope (start with 5-7 years and justify longer or shorter)	Use 4-7 years for urban forestry
Identify a list of multiple baseline candidates	Many urban areas, which would be blended mathematically to produce a performance standard baseline

The Performance Standard methodology approves of the use of data from many different baseline candidates. In the case of urban forestry, those baseline candidates are other urban areas.[6]

As stated above, the project activity defined is obtaining an increase in urban trees. The best data to show the increase in urban trees via urban forest project activities is national or regional data on tree canopy in urban areas. National or regional data will give a more comprehensive picture of the relevant activity (increase in urban trees) than data from one city, in the same way that a satellite photo of a city shows a more accurate picture of tree canopy in a city than an aerial photo of one neighborhood. Tree canopy data measures the tree cover in urban areas, so it

[6] See Nowak, et al. *"Tree and Impervious Cover Change in U.S. Cities,"* Urban Forestry and Urban Greening, 11 (2012) 21-30).

includes multiple baseline candidates such as city governments and private property owners. Tree canopy data, over time, would show the increase or decrease in tree cover.

Data on Tree Canopy Change over Time in Urban Areas

Our quantitative team determined that there were data on urban tree canopy cover with a temporal range of four to six years available from four geographic regions. The data are set forth below:

Table 2.2 Changes in Urban Tree Canopy (UTC) by Region (from Nowak and Greenfield, 2012)

City	Abs Change UTC (%)	Relative Change UTC (%)	Ann. Rate (ha UTC/yr)	Ann. Rate (m2 UTC/cap/yr)	Data Years
EAST					
Baltimore, MD	-1.9	-6.3	-100	-1.5	(2001–2005)
Boston, MA	-0.9	-3.2	-20	-0.3	(2003–2008)
New York, NY	-1.2	-5.5	-180	-0.2	(2004–2009)
Pittsburgh, PA	-0.3	-0.8	-10	-0.3	(2004–2008)
Syracuse, NY	1.0	4.0	10	0.7	(2003–2009)
Mean changes	-0.7	-2.4	-60.0	-0.3	
Std Error	0.5	1.9	35.4	0.3	
SOUTH					
Atlanta, GA	-1.8	-3.4	-150	-3.1	(2005–2009)
Houston, TX	-3.0	-9.8	− 890	-4.3	(2004–2009)
Miami, FL	-1.7	-7.1	-30	-0.8	(2003–2009)
Nashville, TN	-1.2	-2.4	-300	-5.3	(2003–2008)
New Orleans, LA	-9.6	-29.2	− 1120	-24.6	(2005-2009)
Mean changes	-3.5	-10.4	-160.0	-7.6	
Std Error	1.6	4.9	60.5	4.3	
MIDWEST					
Chicago, IL	-0.5	-2.7	-70	-0.2	(2005–2009)
Detroit, MI	-0.7	-3.0	-60	-0.7	(2005–2009)
Kansas City, MO	-1.2	-4.2	-160	-3.5	(2003–2009)
Minneapolis, MN	-1.1	-3.1	-30	-0.8	(2003–2008)
Mean changes	-0.9	-3.3	-80.0	-1.3	
Std Error	0.2	0.3	28.0	0.7	
WEST					
Albuquerque, NM	-2.7	-6.6	-420	-8.3	(2006–2009)
Denver, CO	-0.3	-3.1	-30	-0.5	(2005–2009)
Los Angeles, CA	-0.9	-4.2	-270	-0.7	(2005–2009)

Portland, OR	-0.6	-1.9	-50	-0.9	(2005–2009)
Spokane, WA	-0.6	-2.5	-20	-1.0	(2002–2007)
Tacoma, WA	-1.4	-5.8	-50	-2.6	(2001–2005)
Mean changes	-1.1	-4.0	-140.0	-2.3	
Std Error	0.4	0.8	67.8	1.2	

Absolute change is based on city land area
Relative percent change is based on percentage of UTC
Average annual change in UTC in hectares per year
Average annual change in UTC in hectares per capita per year

These data show that urban tree canopy is experiencing negative growth in all four regions. In other words, the urban tree canopy is shrinking. Even though there may be individual tree planting activates that increase the number of urban trees within small geographic locations, the urban tree canopy is declining in all cities but one in this data set, and is declining in every region.

The regional baselines from this data provide baselines for all projects within those regions. The Drafting Group did not use negative baselines for the Tree Planting Protocol, but determined to use baselines of zero.

Our deployment of the Performance Standard baseline methodology for an Urban Forest Protocol is supported by conclusions that make sense and are anchored in the real world:

- With the data showing that tree loss exceeds gains from planting, new plantings are justified as additional to that decreasing canopy baseline. In fact, the negative baseline would justify as additional any trees that are protected from removal.

- Because almost no trees are planted now with carbon as a decisive factor, urban tree planting done to sequester and store carbon is additional;

- Because virtually all new urban tree planting is conducted by governmental entities or non-profits, or by private property developers complying with governmental regulations (which would not be eligible for carbon credits under our protocol), and because any carbon revenues will defray only a portion of the costs of tree planting, there is little danger of unjust enrichment to developers of UF carbon projects.

Last, The WRI GHG Protocol guidelines recognize explicitly that the principles underlying carbon protocols need to be adapted to different types of projects. The WRI Protocol Guidelines further approve of balancing the stringency of requirements with the need to encourage participation in desirable carbon projects:

Setting the stringency of additionality rules involves a balancing act. Additionality criteria that are too lenient and grant recognition for "non-additional" GHG reductions will undermine the GHG program's effectiveness. On the other hand, making the criteria for additionality too stringent could unnecessarily limit the number of recognized GHG reductions, in some cases excluding project activities that are truly additional and highly desirable. In practice, no approach to additionality can completely avoid these kinds of errors. Generally, reducing one type of error will result in an increase of the other. Ultimately, there is no technically correct level of stringency for additionality rules. GHG programs may decide based on their policy objectives that it is better to avoid one type of error than the other.[7]

2.3 Legal Requirements Test: Legally Required Trees Not Eligible

Trees planted due to an enacted ordinance or law are not eligible.

[7] WRI GHG Protocol, Chapter 3.1 at 19.

In summary, the three elements developed above to address additionality – the 100% buffer or insurance pool of forest carbon, the performance standard baseline, and the legal requirements test - reflect both the principles and the explicit language of the WRI GHG Protocol for Project Accounting for Project Accounting and give security on additionality.

3. Project Duration

Projects must submit Project Reports (at intervals of their choice) to the Registry for 25 years from commencement ("Project Duration"). Projects may earn credits after the 25-year Project Duration as provided in Section 8.

The Registry is establishing a 40-year buffer (reserve) pool of additional forest carbon to collateralize or insure **all** of the urban carbon stored in Planting Project trees. Credits earned by urban forest planting projects and issued by the Registry thus consist of two stocks of CO2, one in the urban forest planting projects, and a second and equal stock in a 40-year block of additional forest CO2.

This 100 percent buffer pool thus fully collateralizes all urban CO2 and allows a 25-year Project Duration Commitment necessary for most urban forest projects. Even if every urban forest planting project abandoned its work after 25 years, the forest CO2 provides a 40-year permanence guarantee.

4. Project Documentation, Reporting, and Record-keeping

Documentation, reporting, and record-keeping requirements are contained in Appendix A. All projects must quantify carbon stored and submit a Project Report at the end of the 25-year Project Duration. Projects may seeks credits earlier under Section 6.

5. Project Commencement

A Project commences when the Project Operator submits an application, provided the Registry approves that application within six months of submittal.

6. Issuance of Credits for Tree Planting Projects

The Registry will issue Community CarbonGreen Credits™, representing a metric tonne of carbon, bundled with the quantified co-benefits of storm water sun-off reduction, energy savings (cooling), and air quality.

The Registry will issue credits to projects that comply with the requirements of this protocol, as follows:

6.1 Progress Credits

A Project Operator can choose to quantify carbon stored at any time after Year 5 of a tree-planting project and to request verification and issuance of credits by the Registry.

After an issuance of Progress Credits, the credit amount issued shall be the change in carbon stored from the prior issuance of credits.

6.2 Forward Credits

The Registry is establishing a 40-year buffer (reserve) pool of additional forest carbon to collateralize or insure **all** of the urban carbon stored in Planting Project trees. Credits earned by urban forest planting projects and issued by the Registry thus consist of two stocks of CO2, one in the urban forest planting projects, and a second and equal stock in a 40-year block of additional forest CO2. This second stock of carbon allows the Registry to issue Forward Credits as follows, because the forest carbon stock fully guarantees the performance of all urban Forward Credits.

If a Project Operator chooses not to request Progress Credits, the Registry will issue forward credits on the following tiered schedule:

A. After planting of project trees: 10% of projected total carbon stored by Year 26;

B. After Year 3: 40% of projected total carbon stored by Year 26;

C. After year 5: 30% of projected total carbon stored by Year 26;

D. At the end of the 25-year Project Duration and after quantification and verification of carbon stored: "true-up" credits equaling the difference between credits already issued (which were based on projected carbon stored) and credits earned based on quantified and verified carbon stored;

E. 5% of total credits earned will be retained by the Registry at the last issuance of credits to a Project for use in a Registry-wide a Reversal Pool;

Projects can continue after Year 25, and earn credits, as provided in Section 8.

7. Reversals in Tree Planting Projects

All Project Operators must sign a Project Implementation Agreement with the Registry. This Agreement may obligate Project Operators in certain defined circumstances to do the following, among other things: 1) agree to a hold-back or retainage of credits until the expiration of the 25-year Project Duration, upon which the retained credits would be released, or 2) return to the Registry for cancellation credits that have been issued for project trees that are lost and/or 2) forgo future

credits in the same amount as those that should have been returned, and/or 3) contribute to a Reversal Pool of credits.

7.1 Reversals in Projects Receiving Progress Credits

A. Tree planting projects that seek Progress Credits shall not quantify carbon stored or request issuance of credits in the first five years of a tree-planting project, when most mortality occurs.

B. A reversal in a project receiving Progress Credits is any decline in carbon stored between the following two points in time:

   i. receipt by the project of credits for stored carbon and

   ii. final quantification of carbon stored at the end of the project's 25-year Project Duration.

C. If a project shows a decline in carbon stored in subsection 7.1B above, it must return credits equal to the amount of the decline ("Unearned Progress Credits") and forgo issuance of current and future credits until the Unearned Progress Credits are made up.

D. If a Project Operator fails to compensate for Unearned Progress Credits as above, that Operator may be barred from urban forest carbon projects for a specified time period at the discretion of the Registry.

7.2 Reversals in Projects Receiving Forward Credits

A. At the final quantification and true-up of credits at the end of the 25-year Project Duration, the Registry will retain 5% of total credits earned.

B. If a project has received more forward credits than it has earned based on the final quantification and true-up ("Unearned Forward Credits"), it must return credits equal to the amount of those Unearned Forward Credits received and/or forgo issuance of current and future credits until the Unearned Forward Credits are made up.

C. If a Project Operator fails to compensate for a reversal, that Operator may be barred from urban forest projects for a specified time period at the discretion of the Urban Forest Carbon Registry.

8. Continuation of Tree Planting Projects after 25-Year Project Duration

After the minimum 25-year Project Duration, projects may continue their activities, submit Project Reports under Appendix A, and seek issuance of credits under Section 6. Projects must comply with all applicable requirements of this Protocol.

If a project chooses to continue into a Second Project Duration, it can:

A. seek Progress Credits as provided in subsection 6.1, but without the five-year waiting period in that subsection, or

B. seek Forward Credits as provided in subsection 6.2 for its Second Project Duration by re-setting its 25-year Project Duration. During this Second Project Duration, it need not request issuance of credits on the tiered schedule in that subsection, but may request Forward Credits at any time equal to 80% of projected

total carbon stored. The remaining 20% of credits shall be accounted for as provided in subsections 6.2 D and E.

9. Quantification of Carbon and Co-Benefits for Credits

The Registry will issue Community CarbonGreen Credits™ to a Project upon request by a Project Operator and verification of compliance with this Protocol. Project Operators must follow the Quantification methods set forth in Appendix B.

Appendix B sets out two methods for quantification, one for single trees and one for tree canopy. Each method requires certain steps, data samples from the Project Operator, data from look-up tables that are or will be provided, and calculations.

Appendix B also provides methods for calculating co-benefits, such as storm water run-off reduction, energy savings, and air quality. And Appendix B sets out a method for projecting carbon storage for Tree Planting projects seeking Forward Credits.

10. Verification

The Registry will issue credits only after a Project Operator submits a Project Report and undergoes verification by the Registry. Credits issued prior to completion of the 25-year project period will be subject to the Reversal Requirements set forth in Section 7.

The Registry will verify compliance with this Protocol per ISO 14064-3 as set forth below and in App. C. Appendix C sets out verification methods and standards. Here is a summary.

- Verification will be conducted by a verification official at the Registry, with review by a peer reviewer.

- App. C sets out standards for verification for both the Single Tree Method and the Tree Canopy Method, and for the issuance of Forward Credits. App. C also contains requirements for geocoded photographs, data, or similar landmarking that provides verification of the Project Operator's data on quantification.

- For the Single Tree Method, the Project Operator will provide geocoded photographs with species and DBH (diameter at breast height) for a sample of project trees. The Registry verification official will then confirm that the photographed species and DBH match the data submitted as "recorded in the field" and are consistent with data from the original Project Plan.

- For the Tree Canopy Method, the Project operator will submit to the Registry the i-Tree Canopy file that they developed, including locations used to calculate canopy area. The Registry verification official will use a subsample of these points to independently estimate canopy area for the same project area.

- For projects requesting forward credits on the tiered release in Section 2.3.B, the Project Operator will send to the Registry geocoded photographs of a sampling of project trees.

- Project Operators may use data from management or maintenance activities regularly conducted if the data was collected within 12 months of the project's request for credits.