



# Chicago Region Carbon Program Informational Packets

The Chicago Region Carbon Program (CRCP) offers three Informational Packets so you can learn more about participating in the program. You have opened the second of the three informational packets.

You can move through these Packets at your own speed and request a consultation at any time by contacting Zach Wirtz at the Chicago Region Trees Initiative at [zwirtz@mortonarb.org](mailto:zwirtz@mortonarb.org).

## Informational Packet 1 – Introduction to Carbon Credits

Includes: a general program overview, frequently asked questions, and a self-screening checklist

## Informational Packet 2 – Detailed Information on Carbon Credits

Includes: a 1-page work flow diagram of a carbon project, a protocol summary based on project type, detailed frequently asked questions, fees, staff time estimates, and a pro forma income statement for a sample project

If you are interested in joining the regional program and starting your own project, please schedule a consultation at this point with Zach.

## Informational Packet 3 – Starting Your Project

Includes: all of the information and documents you need to start your project

For more information or to request additional packets, please contact Zach Wirtz at Chicago Region Trees Initiative at [zwirtz@mortonarb.org](mailto:zwirtz@mortonarb.org).



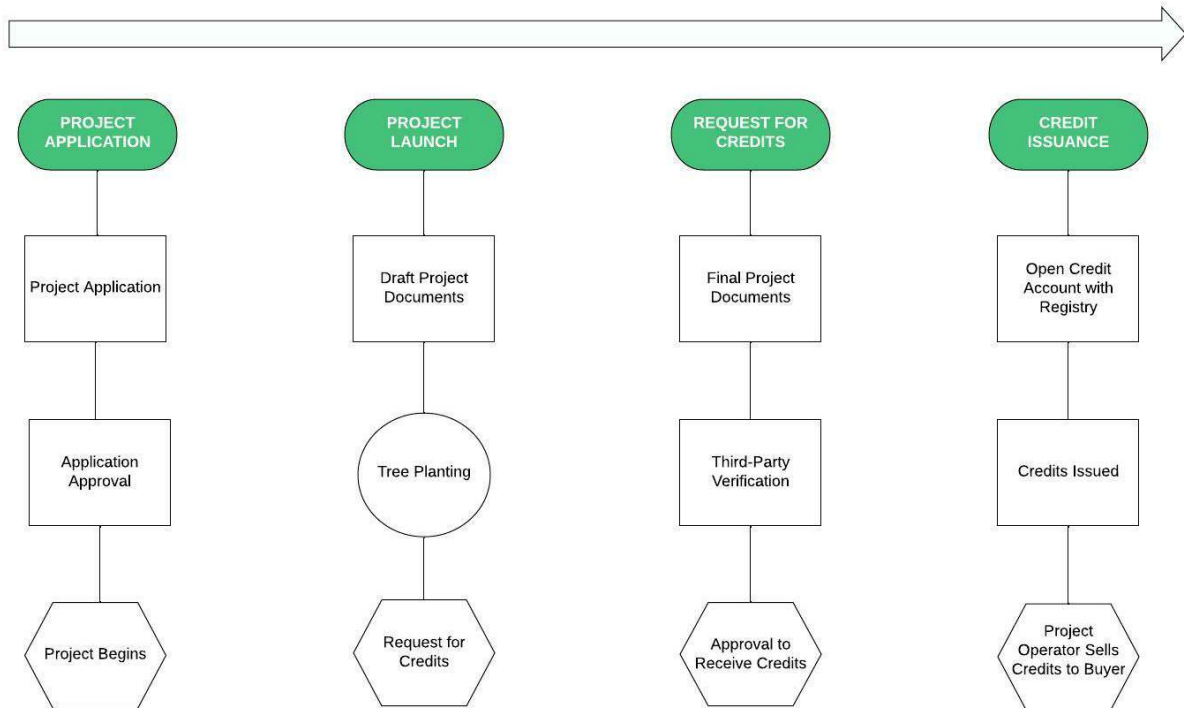
# Informational Packet 2: Introduction to Carbon Credits - Planting

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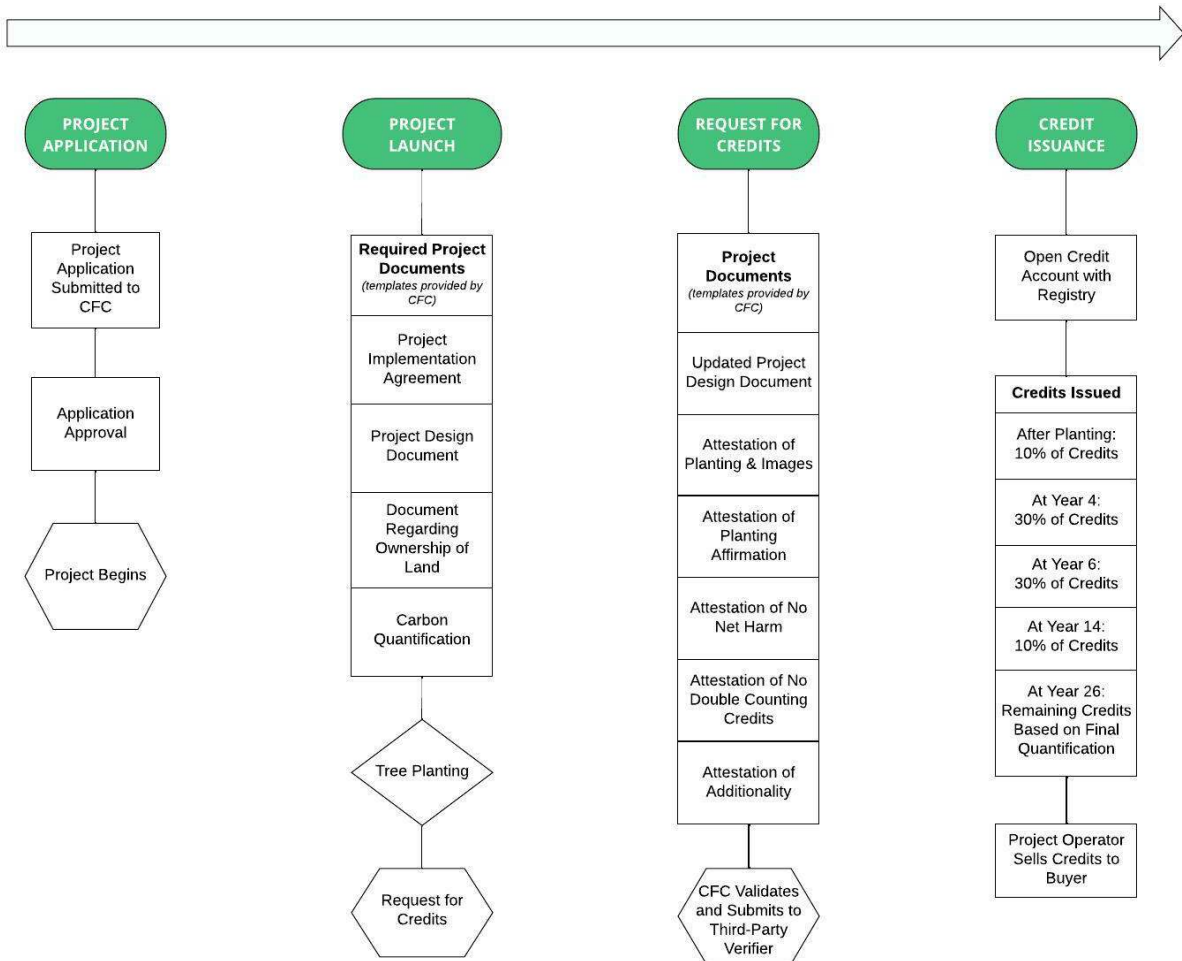
## Simple Planting Project Process Workflow



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## Detailed Planting Project Process Workflow



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## Afforestation/Reforestation Protocol Summary – Version 11

### ✓ **Identify Project Operator (Section 1.1)**

A Project requires one Project Operator, which can be an entity organized and licensed under the laws of its jurisdiction or a governmental body. This is the entity who takes legal responsibility for the project and its reporting throughout the Project Duration.

### ✓ **Commit to 26-year project duration and sign Project Implementation Agreement (Section 1.3, 2.2)**

This is a 26-year agreement between the Project Operator and City Forest Credits (the "Registry") for an urban forest carbon project. Registry will provide the agreement template.

### ✓ **Documentation (Section 3)**

Templates for all documentation for carbon crediting supplied by the Registry including application, proof of ownership or right to receive credits, project design document, attestations, social impact report, carbon and co-benefit quantification, and more.

### ✓ **Project location (Section 1.4)**

Project must be located in or along the boundary of one of the following:

- o "Urban Area" per Census Bureau maps;
- o The boundary of any incorporated city or town created under the law of its state;
- o The boundary of any unincorporated city, town, or unincorporated urban area created or designated under the law of its state;
- o The boundary of any regional metropolitan planning agency or council established by legislative action or public charter. Examples include the Metropolitan Area Planning Council in Boston, the Chicago Municipal Planning Agency, the Capital Area Council of Governments (CAPCOG) in the Austin area, and the Southeastern Michigan Council of Governments (SEMCOG)
- o The boundary of land owned, designated, and used by a municipal or quasi-municipal entity for source water or watershed protection. Examples include



Seattle City Light South Fork Tolt River Municipal Watershed (8,399 acres owned and managed by the City and closed to public access);

- o A transportation, power transmission, or utility right of way, provided the right of way begins, ends, or passes through some portion of above criteria.

✓ **Ownership or eligibility to receive credits (Section 1.7)**

The Project Operator meets one of following:

- o Own the land, trees, and potential credits upon which Project trees are located
- o Own an easement or equivalent property interest for a public right of way which Project trees are located, own the Project trees and credits within the easement, and accepts ownership of Project trees by assuming responsibility for maintenance and liability for them
- o Have a written agreement from the landowner, granting ownership to the Project Operator of any potential credits delivered by project trees on that landowner's land

✓ **Defining the Project Area (Section 1.5)**

Project Operators may include more than one planting site in a project. The initial planting of trees for all properties in a project must occur within a 36-month period or less.

Project Operators may include multiple properties under one project. The final Project Design Document and request of credits shall be submitted after the last tree is planted in a project with multiple properties; i.e., all trees must be planted before a Project Operator submits its Project Design Document to request credits.

✓ **Planting designs and quantification for credits (Section 1.2, 10)**

All Projects must use one of three different methods for quantifying CO<sub>2</sub>. The quantification method used depends on the planting design. The Registry has developed spreadsheets and methods for Project Operators. The quantification methods include:

- Single Tree Quantification Method: trees planted in a dispersed or scattered design that are planted at least 10 feet apart (i.e. street trees). This method requires tracking of individual trees and tree survival for sampling and quantification.



- Clustered Quantification Method: trees planted at least 10 feet apart but are relatively contiguous and designed to create canopy over an area (i.e. park-like settings). This method requires tracking change in canopy, not individual tree survival.
- Area Reforestation Quantification Method: tree planting areas greater than 5 acres and where many trees are planted closer than 10 feet. Higher tree mortality is expected and the goals are to create canopy and a forest ecosystem. Project Operators have several quantification models to choose from, all of which produce a carbon index on a per-acre basis.

Protocol Appendix A contains more detail on these planting designs and quantification methods. In all cases, the estimated amount of CO<sub>2</sub> stored 26-years after planting is calculated.

✓ **Additionality (Section 4)**

Project Operators must demonstrate compliance with the following additionality requirements:

- A Legal Requirements Test that declares city trees planted due to an enacted law or ordinance not eligible (Section 1.8);
- Either 1) a project-specific baseline or 2) the current version of the Registry's performance standard baseline developed in adherence with the WRI GHG Protocol (CFC Standard);
- Sign and comply with a Project Implementation Agreement with the Registry that requires a 26-year Project Duration.

Project Operators must also sign an Attestation of Additionality stating that its 26year Project Duration commitment is additional to and longer than any commitment it makes to non-carbon project tree plantings.

✓ **Attestations of No Net Harm and No Double Counting (Section 5)**

Project Operators must sign attestations that no project shall cause net harm and no project shall seek credits on trees, properties, or projects that have already received credits.

✓ **Social Impacts (Section 11)**

Project Operators will describe how the Project impacts contribute towards achievement of the global UN Sustainable Development Goals (SDGs). The Registry will supply a template to evaluate how the Project aligns with the SDGs.



✓ **Validation and verification by third-party verifiers (Sections 12 & Appendix B)**

The Registry will conduct validation and will retain a qualified and approved independent Validation and Verification Body for verification of all projects.

✓ **Issuance of Ex Ante Carbon Forward Removal Credits to Project Operator (Section 6)**

The forecasted amount of CO<sub>2</sub> stored during the project duration is the value from which the Registry issues ex ante Carbon Forward Removal Credits™. To ensure performance of the credits, the Registry issues credits at five times during the 26-year Project Duration:

- 10% of projected credits after planting
- 30% of projected credits at Year 4
- 30% of projected credits at year 6
- 10% of projected credits at Year 14
- Remaining credits issued based on quantification of CO<sub>2</sub>e at year 26

✓ **Credits for Reversal Pool Account (Section 6.3)**

The Registry will issue 95% of Project credits earned and requested and will hold 5% in the Registry's Reversal Pool Account.

✓ **Understand Reversals (Section 8)**

If the Project Area loses credited carbon stock, the Project Operator must return or compensate for those credits if the tree loss is due to intentional acts or gross negligence of Project Operator. If tree loss is due to fire, pests, or other acts of god (i.e., not due to the Project Operator's intentional acts or gross negligence), the Registry covers the reversed credits from its Reversal Pool Account of credits held back from all projects.

✓ **Commit to monitoring and reporting (Section 7)**

Project Operators must submit an annual monitoring report to the Registry every year for the Project Duration. The reports must be in writing, and the Project Operator must attest to the accuracy of the reports.





✓ **Tree sampling, measurement, and imaging requirements (Appendix A)**

To ensure performance of the credits, Project Operators must commit to the following based on the appropriate quantification method. Appendix A provides details.

- Year 4 - sampling and mortality check or imaging and calculating canopy
- Year 6 - sampling and mortality check or imaging and calculating canopy
- Year 14 - measuring sampled trees or imaging and calculating canopy
- Year 26 - "true-up" credits after measuring sampled trees or imaging and calculating canopy



## Project Information, Documents, and Timeline

### Project Information

Here is a list of the project information you will need to compile:

- Project Area(s) map
- Regional map showing Project Areas
- Geospatial information for each tree planted (shapefile, KML, KMZ, etc)
- Proof of ownership of land, or if LPI is not the landowner, an Agreement to Transfer Credits from the landowner
- Planting design and quantification method:
  - Single Tree – for trees planted at least 10 feet apart, for street trees, dispersed, or linear-type design
    - If so, need GPS or inventory of trees planted
  - Clustered – for trees planted at least 10 feet apart but relatively contiguous or near each other to create canopy, i.e. park-like settings
    - If so, need to show imaging of trees
  - Area Reforestation – for trees planted closer than 10 feet apart, in an area greater than 5 acres with to create canopy and a forest ecosystem
    - If so, need to show imaging of trees
- Tree species
- Numbers of trees planted
- Quantification info – will depend on the planting design above (CFC will provide more detail)
- Documents showing trees planted – invoices from nurseries, photos of plantings, signed statements from planting partners (CRTI will provide more detail)
- Maintenance information
- Documents as described below

### Project Documents and Timeline

#### **CFC will provide all templates**

Local Project Implementer (LPI) submits the following documents to CRTI. Note that all documents will need to be signed. The Project Implementation Agreement, Agreement to Transfer Credits (needed only if the LPI is NOT the landowner), and Registry Ledger Account Terms of Use are the main agreements that will need legal review.



<b>Document Name</b>	<b>Purpose</b>
Project Application	This is a short summary of the project location, description, initial eligibility requirements, project impacts, and planting design and quantification method
Project Implementation Agreement	This is the 26-year agreement between the LPI and City Forest Credits (the “Registry”) for an urban forest carbon project. Requires document showing that LPI is an entity organized and licensed under the laws of its jurisdiction, or a government body.
1) Attestation of Land Ownership or 2) Agreement to Transfer Credits	LPI uses one of the two templates to show proof of ownership or proof from landowner to receive potential credits
Project Design Document and supporting attachments, including maps	This document includes maps, planting design, proof of eligibility, and estimates of carbon and co-benefit quantification
Quantification Tool and Tree Data, per appropriate method	Attach to Project Design Document
Attestation of Planting	This is an attestation that Project trees were planted, including the dates (month and year) of first and last trees planted in the Project. Attach supporting documentary evidence including invoices for trees and event photos.
Attestation of Planting Affirmation	This is an attestation signed by a participating organization or entity that witnessed the tree planting, documents that the planting event(s) occurred
Attestation of Additionality	This is an attestation that the 26-year Project Duration commitment is additional to and longer than any commitment the LPI makes to non-carbon project tree plantings
Attestation of No Double Counting & No Net Harm	This is an attestation that no project shall seek credits on trees, properties, or projects that have already received credits and no project shall cause net harm
Social Impacts	This is a form that LPIs use to evaluate how the Project aligns with the UN Sustainable Development Goals



## Frequently Asked Questions (FAQ)

### General Questions

**Is City Forest Credits (CFC) a qualified nonprofit organization, and how long has it been around?**

CFC is a non-profit, 501(c)(3) organization. It was founded in 2015.

**How is CFC funded?**

CFC has received generous philanthropy funding from several national and family foundations to fund our initial operations. For carbon projects we charge a nominal application fee and per credit fee.

**Is there a regulatory body that approves or certifies carbon registries?**

CFC operates in the voluntary carbon market, which does not have a regulatory body. Voluntary demand for carbon offsets is driven by companies and individuals that take responsibility for offsetting their own emissions. Voluntary markets co-exist with compliance offset markets driven by mandated caps on greenhouse gas emissions, which operate at a significantly larger scale.

**Where does CFC work?**

We work in cities and towns across the United States. See the [carbon project registry](#) for current project information.

**How were the carbon protocols developed?**

The protocols define the set of rules that tree planting or preservation projects must follow in order to earn third-party verified carbon credits. In 2015, an experienced protocol drafting group was formed with volunteers that included top scientists and stakeholders from diverse subject fields. Volunteers included climate program managers from cities, tree organizations, watershed professionals, private arborists, utilities, and land trusts. See our [carbon protocol page](#) for a full list.

**What is a Carbon+ Credit?**

A carbon credit represents one metric ton of carbon dioxide (CO<sub>2</sub>). Companies, cities, or organizations that want to reduce their carbon footprint can purchase carbon credits to offset emissions that they cannot reduce.

A Carbon+ Credit is a premium credit because it represents trees planted or protected where people live, work, and play. Each Carbon+ Credit includes quantified co-benefits in resource units and avoided costs for rainfall interception, air quality improvements, and energy savings.



### What types of carbon projects are eligible?

CFC registers two types of projects - tree planting and forest preservation within metropolitan areas. The Chicago Wilderness Area Boundary is included as within a metropolitan planning boundary.

Preservation projects protect forested stands from development and deforestation in order to allow it to continue sequestering carbon. These projects last from 40 to 100 years. See the preservation protocol summary sheet for details.

Afforestation/reforestation projects involve planting trees to sequester carbon. These projects last 26 years and can include single tree plantings along streets; clustered plantings in an open, park-like setting; or area reforestation in which saplings are planted relatively contiguous in high densities to generate a forested stand. See the Afforestation/Reforestation protocol summary sheet for details.

### How much revenue can a carbon project generate?

The size, type, and location of a carbon project determines the amount of verified Carbon+ Credits that can be generated and sold.

### How do I start a carbon project?

See below for more FAQs on this topic. See also other documents in this Info Packet #2. You can also schedule a consultation with Zach Wirtz of CRTI at [zwirtz@mortonarb.org](mailto:zwirtz@mortonarb.org).

Non-profit organizations or local government agencies can lead a carbon project. For planting, we recommend you plant 500 trees or more per year. For preservation we recommend you protect 10 acres or more per year. See our [protocol summaries and how to documents](#) for more information about eligibility and requirements.

### Does CFC sell carbon credits?

CFC does not sell Carbon+ Credits. We issue and maintain the credit database. We can direct you to the local entity responsible for leading a Carbon+ Project with available credits for sale, or can connect you to a national carbon developer or broker.

### How much does a carbon credit cost?

Carbon+ Credits are premium credits. Local urban forest and land trust entities have sold credits under the CFC program for \$22 to \$34/credit.



## CFC Fee and Local Project Time Estimates

Below are estimated costs to comply with the carbon Tree Planting Protocol if the Local Project Implementer (LPI) is using the Single Tree Quantification Method (and planting fewer than 5,000 trees), the Cluster Quantification Method, or the Area Reforestation Method. City Forest Credits is the “Registry.”

### Registry Fees

- Application: \$1,500.00
- LPI Registry Ledger Account: \$1,000.00
- Validation and Verification: \$10,250 over 26-year project, due in the amounts and times below:
  - Initial verification, \$750.00
  - At Year 4, \$750.00
  - At Year 6, \$750.00
  - At Year 14, \$2,000.00
  - At Year 26, \$6,000.00
- Credit Issuance Fees: Greater of \$4 per credit or 10% of the sales price of credits, due when sold

### LPI Staff Time

- In first year, estimated 40-60 hours through project documentation and receipt of first credits
- Legal time, as needed
- Over 26-year project duration, 130 hours

### *Assumptions and Details*

The Registry has developed protocols and carbon quantification so that LPI staff that is moderately familiar with urban forestry can implement projects without hiring outside consultants. Estimates do not include the costs of planting or maintaining trees. A LPI may choose to use carbon revenues to fund maintenance or stewardship. Project management time for LPI staff is included in each task.

- 5 hours to learn basics of urban forest carbon protocol requirements
- 10 hours to complete Application, Project Design Document, Ownership, and Attestations
- 10 hours to quantify CO<sub>2</sub> storage at outset of project and document planting of trees
- 15 hours to engage with potential carbon credit buyers
- 10 hours to process receipt of credits in Registry Ledger Account and transfer to buyer
- Legal time to review documentation and contracts, including Project Implementation Agreement with Registry and credit sale agreements
- Over 26-year project duration:
  - 80 hours to visit and document sample of trees in years 4, 6, 14, and 26
  - 50 hours to submit monitoring reports (2 hours per year)



## Sample Pro Forma Income Statement – 1,000 Tree Planting Project

### Chicago Region Carbon Program Planting Project - 1,000 Trees

Summary of Revenue and Expenses							
	Launch	After Planting	At Year 4	At Year 6	At Year 14	At Year 26	Total
<b>Revenue</b>							
After Planting (10% of Credits)		9,294.58					\$ 9,294.58
At Year 4 (30% of Credits)			32,804.80				\$ 32,804.80
At Year 6 (30% of Credits)				45,106.60			\$ 45,106.60
At Year 14 (10% of Credits)					15,035.35		\$ 15,035.35
Remaining Credits at Year 26 (20% of Credits)						41,005.50	\$ 41,005.50
<b>Project Gross Revenue</b>	<b>\$ -</b>	<b>\$ 9,294.58</b>	<b>\$ 32,804.80</b>	<b>\$ 45,106.60</b>	<b>\$ 15,035.35</b>	<b>\$ 41,005.50</b>	<b>\$ 143,246.83</b>
<b>Expenses</b>							
CFC Application Fee		1,500.00					\$ 1,500.00
CFC Credit Issuance Fee		1,093.48	3,280.48	4,510.66	1,503.54	4,100.55	\$ 14,488.71
Validation and Verification Fee		750.00	750.00	750.00	2,000.00	6,000.00	\$ 10,250.00
CFC Registry Ledger Account Fee		1,000.00					\$ 1,000.00
LPI Staff Time							\$ -
LPI Supplies							\$ -
LPI Travel							\$ -
LPI Other Expense							\$ -
<b>Total Expenses</b>	<b>\$ -</b>	<b>\$ 4,343.48</b>	<b>\$ 4,030.48</b>	<b>\$ 5,260.66</b>	<b>\$ 3,503.54</b>	<b>\$ 10,100.55</b>	<b>\$ 27,238.71</b>
<b>Net Income (or loss)</b>	<b>\$ -</b>	<b>\$ 4,951.10</b>	<b>\$ 28,774.32</b>	<b>\$ 39,845.94</b>	<b>\$ 11,531.82</b>	<b>\$ 30,904.95</b>	<b>\$ 116,008.13</b>

<b>Total Credits Attributed to the Project, tCO2e:</b>	3597.00
<b>Mortality Deduction (20%):</b>	719.40
<b>Registry Reversal Pool Account (5%), tCO2e:</b>	143.88
<b>Total Credits Issued to the Project, tCO2e:</b>	2733.72
<b>Credit Schedule</b>	
After Planting (10% of Credits)	273.37
At Year 4 (30% of Credits)	820.12
At Year 6 (30% of Credits)	820.12
At Year 14 (10% of Credits)	273.37
Remaining Credits at Year 26 (20% of Credits)	546.74
<b>Credit Sub-total</b>	<b>2733.72</b>
<b>Price Per Credit After Planting:</b>	\$ 34.00
<b>Price Per Credit At Year 4:</b>	\$ 40.00
<b>Price Per Credit At Year 6:</b>	\$ 55.00
<b>Price Per Credit At Year 14:</b>	\$ 55.00
<b>Price Per Credit At Year 26:</b>	\$ 75.00