



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.

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.



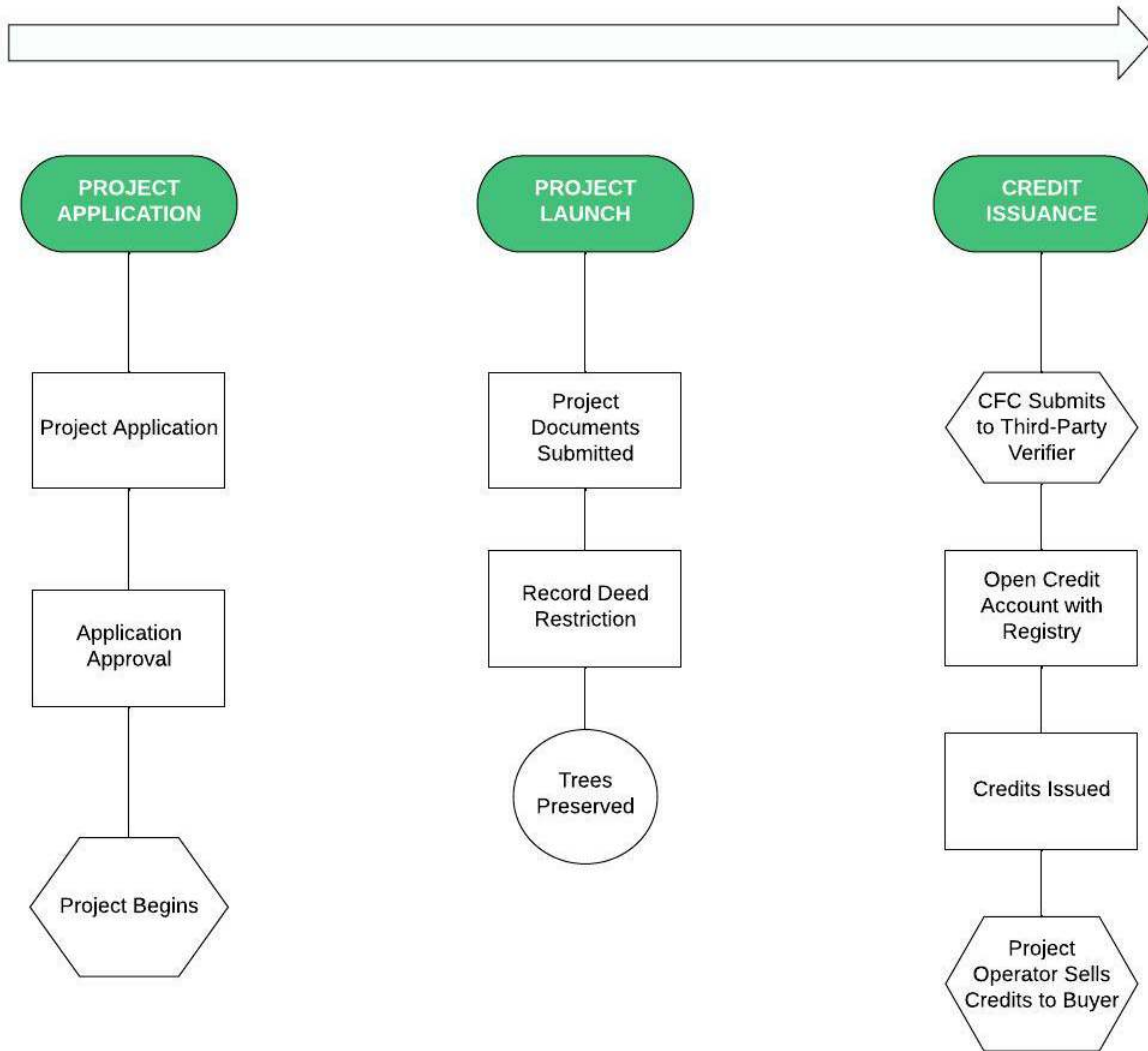
Informational Packet 2: Introduction to Carbon Credits - Preservation

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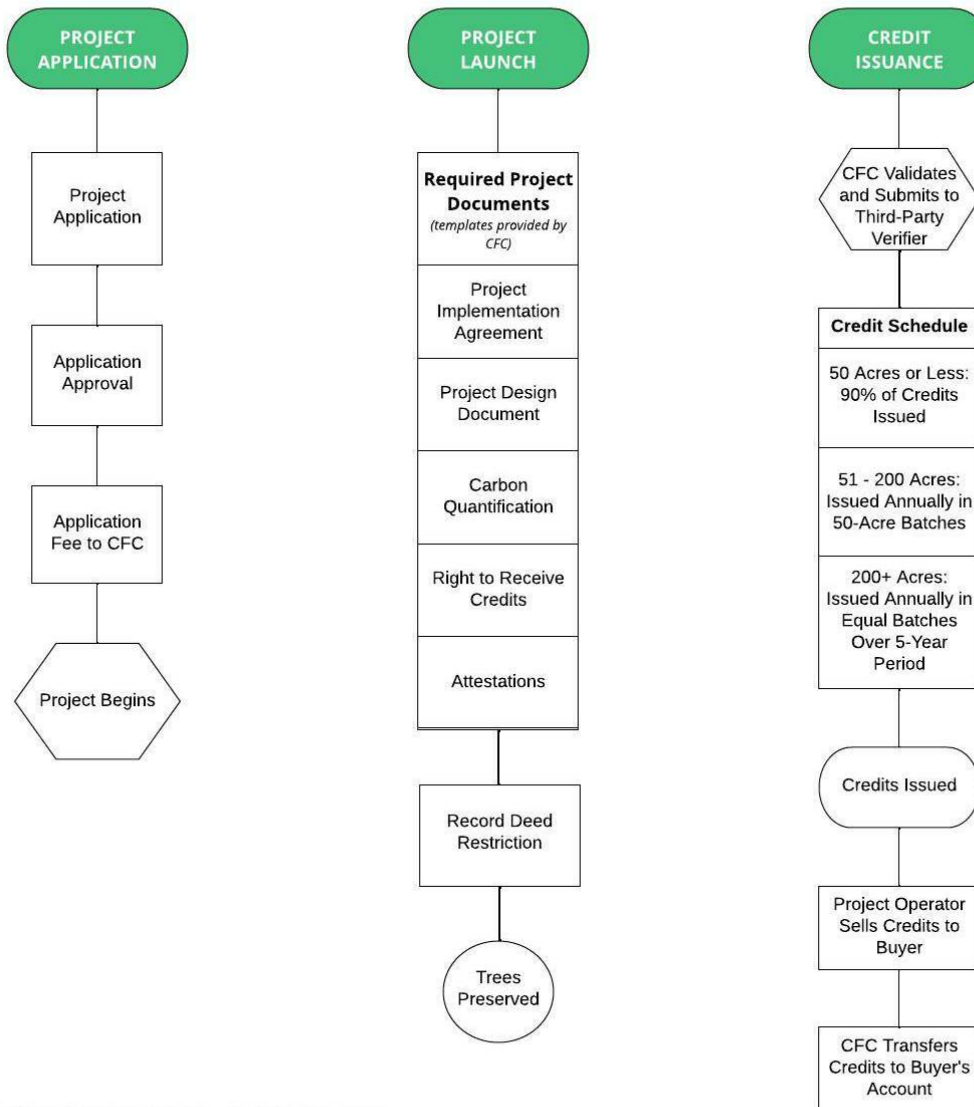


Simple Preservation Project Process Workflow





Detailed Preservation Project Process Workflow





Preservation Protocol Summary – Version 12.40

✓ **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 40-year or 100-year project duration and sign Project Implementation Agreement (Section 1.2, 2.2)**

This is a 40-year or 100-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, forest composition report, social impact report, carbon and co-benefit quantification, and more.

✓ **Project location (Section 1.3)**

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

- “Urban Area” per Census Bureau maps;
- The boundary of any incorporated city or town created under the law of its state;
- The boundary of any unincorporated city, town, or unincorporated urban area created or designated under the law of its state;
- 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)
- 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);

- 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 1.5)**

The Project Operator meets one of following:

- Own the land and potential credits upon which project trees are located
- Own an easement or equivalent property interest for a public right of way which project trees are located and accepts ownership of project trees by assuming responsibility for maintenance and liability for them
- 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

✓ **Demonstrate preservation of trees for 40 or 100 years (Section 4)**

The Project Operator must show that the trees in the Project Area are preserved from removal by a recorded easement, covenant, or deed with a term of at least 40 years or 100 years. This action is referred to as the "Preservation Commitment."

This Preservation Commitment must be recorded no later than six months after Registry approval of the Project Application.

✓ **Demonstrate threat of loss (Section 4):**

The Project Operator must show that prior to the Preservation Commitment:

- Project trees were not preserved from removal through a Recorded Encumbrance or other prohibitions on their removal,
- The Project Area was:
 - In a land use designation that allowed for at least one non-forest use. Non-forest uses include industrial, commercial, transportation, residential, agricultural, or resource other than forest, as well as nonforest park, recreation, or open space uses; and
 - Is not in an overlay zone that prohibits all development. Examples include critical areas, wetlands, or steep slopes.
- Project Area met one of the three following:
 - Surrounded on at least 30% of its perimeter by non-forest, developed or improved uses, or



- Sold, conveyed, or had assessed value within three years of preservation for greater than \$8,000 average price per acre for the bare land, or
- Would have a fair market value after conversion to a developed or improved use greater than the fair market value prior to preservation

✓ **Quantification for credits (Section 11)**

The Project Operator must follow the quantification methods outlined in the Protocol and use the CFC Quantification Calculator. These steps are designed to be completed by anyone moderately familiar with forestry. The Registry will provide templates that identify data needed with some of calculations based on formulae.

1. Stored carbon stock present in Project Area (Section 11.1)
Estimate the biomass stock present and adjust for uncertainty to calculate the "Accounting Stock". This can be done using the US Forest Service General Technical Report NE-343 tables, on-site inventory of some live trees with i-Tree methods and tools, or an on-site forest inventory
2. Areas expected to remain in trees after potential development (Section 11.2)
Calculate the fraction of the Accounting Stock that likely would be emitted as a result of development, to calculate "Avoided Biomass Emissions"
3. Soil carbon (Section 11.3)
Calculate "Avoided Soil Carbon Emissions" caused by conversion of soils to impervious surfaces in the Project Area
4. Deduction for displaced development (leakage) (Section 11.4)
Apply the deductions in Section 11.4 and Appendix B to Biomass and Soil Carbon calculations to adjust for development and emissions that would be displaced by the preservation of the Project Area.
5. Co-Benefits (Section 10.6)
The Project Operator must calculate co-benefits separately from CO₂(e). The Registry will supply the Co-Benefit Quantification Calculator based on the project climate zone. The tool will provide values for rainfall interception, reductions of air compounds, and energy savings.

The Project Operator may elect to also account for ongoing growth of trees within the Project Area after the Initial Crediting Period (Section 11.6)



✓ **Social Impacts (Section 12)**

The Project Operator must 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.

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

The Project Operator must sign an attestation that the project does cause net harm and will not seek credits on trees, properties, or projects that have already received credits. The Project Operator must check the location of the Project Area against the Registry-provided geospatial database.

✓ **Attestation of Additionality (Section 6)**

The Project Operator must sign an attestation that:

- o Prior to the start of the project, the trees in the project area are not protected via easement or recorded encumbrance or in a protected zoning status that preserves the trees
- o The zoning in the project area must currently allow for a non-forest use
- o The trees in the project area face a threat or risk of removal or conversion out of forest
- o The Project Operator records in the public land records an easement, covenant, or deed restriction specifically protecting the trees for the project duration of 40 years or 100 years

✓ **Validation and verification by third-party verifiers (Sections 13 and Appendix D)**

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

✓ **Issuance of Credits to Project Operator (Section 7.2)**

After validation and verification, the Registry issues credits to the Project Operator based on the Project Area size:

- o 50 acres or less: all credits are issued after validation and verification
- o Greater than 50 but less than 200 acres: credits are issued in the equivalent of 50 acres per year
- o Greater than 200 acres: credits are issued in equal amounts over five years

✓ **Credits for Reversal Pool Account (Section 7.3)**

The Registry will issue 90% of Project credits earned and requested and will hold 10% in the Registry's Reversal Pool Account.



✓ **Understand Reversals (Section 9)**

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 8)**

The Project Operator must submit a report every three years for the project duration. The reports must be accompanied by some form of telemetry or imaging that captures tree canopy, such as Google Earth, aerial imagery, or LiDAR. The reports must estimate any loss of stored carbon stock or soil disturbance in the Project Area.



Project Information, Documents, and Timeline

Project Information

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

- Project Area map
- Regional or city map
- Property deed or record of ownership, if not the landowner, provide an Agreement to Transfer Credits
- Recorded documents showing tree protections (CFC can supply legal language)
- Project Area total acreage (forested, developable stands)
- Zoning. Provide details on what can be developed per zoning; ex. minimum lot size or dwelling units per acre
- Quantification information
 - If you use a physical inventory of carbon, then you supply that data
 - If you use the GTR look-up tables, then you will need:
 - Main forest type. Options include
 - elm-ash-cottonwood
 - maple-beech-birch
 - oak-hickory
 - oak-pine
 - Percentage deciduous versus coniferous species
 - Age of the tree stands via aerial photos, historical documents, or sampling
 - Density of the forest (iTree Canopy report will be needed for crediting, but for initial estimate can share if it is full canopy, partial canopy, patchy or sparse canopy)

Project Documents and Timeline

CFC will provide all templates

Local Project Implementer (LPI) 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 LPI is NOT the landowner), recorded tree protections, and Registry Ledger Account Terms of Use are the main agreements that will need legal review.



Document Name	Purpose
Project Application	This is a short summary of the project location, description, initial eligibility requirements, and project impacts
Project Implementation Agreement	This is the 40- or 100-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) Land Ownership or 2) Agreement to Transfer Credits	LPI provide deed or written agreement from landowner to receive potential credits. Attach to PDD.
Project Design Document (PDD) and supporting attachments	This document includes maps, proof of eligibility, carbon and co-benefit quantification, and supporting documentation
Maps	Project Area maps with geospatial location. Attach to PDD.
Preservation Commitment	Easement, covenant, or other deed restriction recorded on property that protects trees from removal for minimum of 40 years
Demonstrate Threat of Loss	Land use designation that allows for at least one non-forest use, no overlay zones that prohibit all development, and how the project meets one of three criteria. Documentation may include maps, zoning or land use code, etc. Attach to PDD.
Forest Data	Based on methodology used under Section 10.1. Documentation may include tree data, historical images (age), iTree Canopy report, or other materials. Attach to PDD.
Quantification Tool, per appropriate method	Attach to PDD
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. Attach to PDD.
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 (CO₂). 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.

Planting 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 planting 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.

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 City Forest Credits Preservation Protocol to receive and sell carbon credits. City Forest Credits is the "Registry."

Registry Fees

- Application: \$3,000
- Validation and Verification: \$3,000
- One-time fee to open Project Operator Registry Account: \$1,000
- Credit sales: \$4/credit or 10% of the gross amount received by the Project Operator upon each sale of credits, whichever is greater. Due when credits are sold

Local Project Implementer Staff Time

- In first year, 45 to 60 hours through project documentation and receipt of first credits
- Legal time, as needed
- Over 40-year project duration, 145+ hours, plus legal time

Assumptions and Details

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

- 5 hours to learn basics of urban forest carbon protocol requirements
- 20 hours to complete documents including Application, Project Design Document, and confirm easement or legal language regarding preservation of trees and credit ownership
- 10 - 20 hours to quantify CO₂ storage at outset of project
- 5 - 10 hours to engage with carbon credit buyers
- 5 hours to process receipt of credits in CFC database and transfer to buyers
- Legal time to review documentation and contracts, including Project Implementation Agreement with CFC and credit sale agreements
- Over 40- year project duration:
 - 20 hours to capture additional CO₂ stored due to growth during the project
 - 65 hours to complete status reports every 3 years (5 hours every 3 years)



Sample Pro Forma Income Statement – 50 Acre Preservation Project

CFC Preservation Project - 50 Acres

Summary of Revenue and Expenses								
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 20	Year 40	Total
Revenue								
Year 1	260,100.00							\$ 260,100.00
Year 2		-						\$ -
Year 3			-					\$ -
Year 4				-				\$ -
Year 5					-			\$ -
Year 20						283,500.00		\$ 283,500.00
Year 40							283,500.00	\$ 283,500.00
Project Gross Revenue	\$ 260,100.00	\$ -	\$ -	\$ -	\$ -	\$ 283,500.00	\$ 283,500.00	\$ 827,100.00
Expenses								
CFC Application Fee	1,500.00							\$ 1,500.00
CFC Insurance Fee	26,010.00	-	-	-	-	28,350.00	28,350.00	\$ 82,710.00
Validation and Verification Fee	3,000.00							\$ 3,000.00
CFC Registry Ledger Account Fee	1,000.00							\$ 1,000.00
LPI Staff Time								\$ -
LPI Supplies								\$ -
LPI Travel								\$ -
LPI Other Expense								\$ -
Total Expenses	\$ 31,510.00	\$ -	\$ -	\$ -	\$ -	\$ 28,350.00	\$ 28,350.00	\$ 88,210.00
Net Income (or loss)	\$ 228,590.00	\$ -	\$ -	\$ -	\$ -	\$ 255,150.00	\$ 255,150.00	\$ 738,890.00

Total Credits Attributed to the Project, tCO2e:	8,500	
Registry Reversal Pool Account (10%), tCO2e:	850	
Total Credits Issued to the Project, tCO2e:	7,650	
Total Additional Growth Credits (Year 20):	3,780	
Total Additional Growth Credits (Year 40):	3,780	
Year	Credits Issued This Year	Cumulative Credits Issued
Year 1	7,650	7,650
Year 2	-	7,650
Year 3	-	7,650
Year 4	-	7,650
Year 5	-	7,650
Year 20	3,780	11,430
Year 40	3,780	15,210
Price Per Credit Year 1:	\$ 34.00	
Price Per Credit Year 2:	\$ 40.00	
Price Per Credit Year 3:	\$ 55.00	
Price Per Credit Year 4:	\$ 55.00	
Price Per Credit Year 5:	\$ 55.00	
Price Per Credit Year 20:	\$ 75.00	
Price Per Credit Year 40:	\$ 75.00	
Total Acres:	50.00	