

King County Forest Carbon Project

Location

Washington

Project Type

Aggregated project

Protocol

Improved Forest Management

Landowners

Municipal, private, land trusts

Factors Contributing to Project Success

1. The county had funding to design a protocol specific to their needs.
2. County staff had the capacity to act as Project Proponent, which reduced some costs.
3. The county established a track record of success with the first round of registering and selling credits to facilitate program expansion with other types of landowners.
4. The county secured a direct buyer at project onset, helping to quickly recoup costs and also build credibility for future interested landowners.
5. Legal counsel developed a clear Landowner Participation Agreement to facilitate future third-party enrollment.

In 2015, King County created an innovative [Forest Carbon Program](#) as part of its broader Land Conservation Initiative to protect 65,000 acres of forest from development.

To conserve urban forests in the Seattle area, King County partnered with [City Forest Credits](#) (CFC), a nonprofit carbon market registry specialized in urban forestry. Under CFC's [100-year Tree Preservation protocol](#), they preserved 15 acres of urban forest from development. County staff completed all aspects of project development without the help of a project developer, including carbon stock quantification, baseline calculations and credit registration. As part of CFC's protocol requirements for offset permanence, King County placed a conservation easement on the land to protect the trees in perpetuity.

To sell the urban forest carbon credits, the county did very little marketing since there is a strong corporate sustainability culture in the region. After securing a local business as a direct buyer, they sold credits for \$22/mT CO2e and reduced 3025 mT CO2e.

For the rural component of their forest carbon project, King County worked with [RainCloud Forests](#), a small carbon project developer and consultant, and [Verra](#). Together, they developed a 100-year Improved Forest Management protocol for an aggregated project involving municipal and third-party landowners. The county chose to work with Verra on the voluntary market because the compliance market does not enroll grouped projects. As a government entity, King County also prioritized a [protocol](#) that used a longer crediting period to enhance project permanence and utilized conservative estimates to calculate carbon stock baselines. The project considered two baselines: avoidance of emissions due to commercial logging and avoided carbon losses from residential development.

Though they worked with a technical consultant to design the project management protocol, King County serves as Project Proponent and administers the project. The first enrollment of forest land in 2019 included 880 acres of county-owned land. King County secured Microsoft as a direct buyer, ensuring that offsets were local. Credits sold for \$15/ton, and the project is expected to annually reduce 9,195 mT CO2e. Revenue from the credit sales will support monitoring and verification costs through the project lifetime (100 years), in addition to other county conservation initiatives.

Due to the legal challenges and risks associated with multi-owner forest carbon projects, no third party-owned land was enrolled in the first round. To ease landowner concerns, the county worked with legal counsel to develop a comprehensive Landowner Participation Agreement that outlines responsibilities and liabilities of each participating party. The county is optimistic that this document, as well as a free and straightforward application, will facilitate land trust and private landowner enrollment for the next round.

After working through initial challenges, King County is well-positioned to expand its program. Though the program and protocol are designed for one particular county, this public-private partnership serves as an innovative example for municipal forest carbon projects in Massachusetts.

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Cold Hollow Carbon Improved Forest Management Project

Location

Vermont

Project Type

Aggregated project

Protocol

Improved Forest Management

Landowners

Private

Factors Contributing to Project Success

1. Grant funding from TNC Accelerator Grant, High Meadows Fund, and the Vermont Housing Board helped initiate project development.
2. VLT had internal project management capacity, including an experienced in-house team to navigate the title clearing process for interested landowners.
3. Spatial Informatics Group (SIG) provided technical support to translate carbon stocking requirements into individual landowner forest management guidelines.
4. TNC assisted with marketing the carbon credits for VLT and helped secure Amazon as a direct buyer.
5. With support from legal counsel specialized in carbon markets, VLT developed a Landowner Participation Agreement to facilitate enrollment between multiple private landowners.

The [Cold Hollow Carbon](#) project in Vermont is an aggregated carbon project involving multiple private landowners organized by Vermont Land Trust. In 2019, after several years of development, 10 private landowners jointly enrolled 7500 acres of forest land on the voluntary carbon market. Each landowner agreed to manage their land according to the [American Carbon Registry's Improved Forest Management protocol](#) for 40 years. Many landowners continue to manage for other goals as well, including recreation, sustainable timber harvesting, and sugaring. Some properties are co-enrolled in Vermont's Use Value Appraisal (UVA) program, Forest Legacy Program, and Forever Wild easements—co-enrollment in these programs is generally permitted as long as harvesting is not restricted. However, landowners are not required to obtain a conservation easement as a condition of enrollment.

The project was developed with funding from the Vermont Housing and Conservation Board, High Meadows Fund, and The Nature Conservancy. Uniquely, the [Vermont Land Trust](#) (VLT) formed a separate LLC ("Vermont Forest Carbon") and functions as the Project Developer. In this role, Vermont Forest Carbon administers the project, coordinates landowner enrollment, and facilitates communication between the carbon registry, consultants, and landowners.

VLT contracted [Spatial Informatics Group](#) (SIG) as a technical consultant to conduct the required carbon modeling and quantification for project development, and to assist with other aspects of project management (inventory design, project documentation, and registry communication). VLT also partnered with TNC to market the credits, and secured legal counsel to develop a Landowner Participation Agreement that outlines the responsibilities of each participating landowner and themselves as Project Developer.

Landowners are expected to receive \$25 - \$47 per acre from the initial credit sale. Revenue from the carbon sales will be shared among the ten participants based on acreage, stocking levels, and completed or planned harvests. A small percentage of revenue will be allocated to VLT as the project proponent for their work to administer the project.

VLT aims to expand the Cold Hollow to Canada project. Future enrollment would likely be organized as a separate aggregated project through ACR, and could potentially involve other types of landowners.

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Tri-Cities Improved Forest Management Project

Location

Massachusetts

Project Type

Aggregated project

Protocol

Improved Forest Management

Landowners

Municipal

Factors Contributing to Project Success

1. Strong leadership and willingness to cooperate on behalf of all towns
2. Similar interest in type of carbon project protocol (improved forest management)
3. Open communication between municipal officials and committees and boards that manage participating parcels of land
4. All three municipalities employed the same forester, which streamlined the process for forest inventory and project planning
5. Towns navigated a successful pathway through the legal considerations around indemnification clauses, paving the way for other municipal carbon projects
6. Early EEA grant and funding from West Springfield helped initiate project development

Initiated in 2014, the Tri-City Improved Forest Management project is the first municipal aggregation carbon project in the US. The cities of Holyoke, Westfield, and West Springfield, in western Massachusetts, collaborated to register about 13,500 acres of forestland for carbon crediting in the American Carbon Registry (ACR). The project is assessed to offset about 242,000 tons of carbon and to generate over \$2 million in revenue in the next 10 years.

Per the requirements of the ACR for Improved Forest Management projects, the cities have committed to managing the credited properties to maintain carbon stocking above a modeled baseline. Some sustainable, commercial timber harvesting is anticipated on the Holyoke and West Springfield properties, which are certified by Forest Stewardship Council according to project documents. The cities have continued to maintain recreational trails and interpretation signs on the properties; protection of recreational opportunities was a significant factor in project development. The properties include reservoirs and streams that contribute to the cities' water supply. The surrounding forests protect these water sources, an ecosystem function that the project will support for its 40-year duration.

Considering the project development process, West Springfield former mayor Edward Sullivan began to explore the possibilities for a carbon project in 2014. In 2015, local leaders worked with a group of state senators and representatives to secure a \$100,000 grant from the Executive Office of Energy and Environmental Affairs (EEOEA) to cover the costs of hiring the project developer, Bluesource. Project leaders emphasized that the partnership between state and local government to coordinate funding was a significant factor in the project's success.

Moreover, aggregating land between municipalities provided the advantages of dividing the cost burden of project development between the individual participants and facilitating the recruitment of a larger contingent of state legislators as supporters. These benefits of economies of scale are important drivers for aggregation projects in general. Finally, the cities all historically worked with the same forester, who provided a unique advantage in terms of project facilitation between communities.

With Bluesource serving as the project developer, the parties began to work through the quantification and verification requirements of listing a project on the ACR. In spring of 2017, the parties conducted a carbon inventory on the property to inform offset projection models. These projections were verified by an independent firm, SCS Global Services, which verified carbon stocks on the properties in the fall of 2018.

Before the project could be finalized, a legal problem arose concerning indemnification requirements for participation in the ACR. It is usually illegal for Massachusetts governments to indemnify private entities, which brought into question the ability of the municipalities to fulfill obligations under the terms of use for the ACR market. The issue was ultimately resolved and, in doing so, project leaders established a path forward for future municipal projects in Massachusetts within the ACR. One of the project leaders emphasized the importance of a solid understanding of legal requirements, on the part of project leaders and consultants, in facilitating project development.

Tri-Cities Improved Forest Management Project

continued

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Having resolved the indemnification question, the project leaders completed the initial reporting and monitoring documents in early June of 2019 and the ACR issued carbon credits for sale shortly thereafter. Project leaders announced the sale of carbon credits at a press conference at the Bear Hole reservoir in West Springfield.

After five years of work, the Tri-City project is poised to deliver significant economic and environmental benefits for the residents of Westfield, Holyoke, and West Springfield. Offset sales will generate about \$100,000 per year for Westfield and Holyoke and \$30,000 per year for West Springfield over 10 years. The funds are expected to facilitate additional climate change mitigation and environmental conservation projects in the future. Thanks to the EEOEA earmark, the cities incurred minimal upfront costs. At the press conference announcement for the project's completion, state Representative John Velis highlighted the collaboration between the state and cities, saying, "This is government at work. This is everybody working together on different levels." The project was recognized by the National Conference of Mayors Climate Protection Awards for its innovative and collaborative approach. Given these successes, the Tri-City project offers a promising model for other municipalities interested in coming together to pursue aggregation projects.

(Connor Rockett, New England Forestry Foundation)

