



## Become an Evergreen Carbon Capture Field Partner

### ABOUT EVERGREEN CARBON CAPTURE

Motivated by our mission to conserve and restore the lands in our region, Forterra's Evergreen Carbon Capture program (ECC) helps companies, organizations and individuals do their part to improve the long-term resiliency of our region. We assist participants to calculate their annual carbon footprint, and then work with local stewardship organizations and landowners to plant the corresponding number of native trees needed to balance the participant's carbon impact. ECC provides a tangible way for companies and individuals to demonstrate their commitment to sustainability, support local stewardship efforts, and provide support to the people and organizations that manage and restore our natural resources.

### FIELD PARTNERS

Field Partners are the stewardship organizations and land owners that conduct forest and natural area restoration in our region. Forterra provides Field Partners with conifer trees for their restoration efforts. In addition, Field Partners receive recognition in the ECC annual report, website and social media venues, and are featured on the program's online GIS map that highlights the location of ECC's planting projects. Field Partners that have a community-based stewardship component to their program have the opportunity to engage participating companies in volunteer events at their planting site.

We accept applications to become a Field Partner from nonprofit organizations that conduct tree plantings on private or public land, volunteer stewards such as those involved in King County Parks and the Green City Partnerships, as well as directly from city, county, and state land managers. If the Field Partner is not the landowner, they must have permission from the landowner to conduct tree planting and other restoration activities on the site.

The number of trees provided by ECC is driven by the carbon to be mitigated by participating companies, which means the number of trees available will vary from year to year. ECC assigns companies and individuals to specific planting sites to establish their connection with the Field Partner and on-the-ground stewardship efforts. Field Partners with a community stewardship program are encouraged to host a company work party or invite employees to plant the trees at the site.

Field Partners are also required to care for and maintain their ECC tree planting site using restoration best management practices, including proper site preparation, mulching, and ongoing maintenance through invasive plant control. For three years following initial tree installation, Field Partners must monitor and report survivorship of ECC trees to Forterra. Monitoring protocols can be provided by Forterra upon request in order to help facilitate annual tree-survivorship monitoring.

### TREE REPLACEMENT

At the end of the three year monitoring period, if tree survivorship falls below 50% of the initial tree installation, ECC will provide replacement trees for the Field Partner to meet the 50% survivorship rate. Field Partners can also provide their own replacement trees on the site as needed to meet program or restoration goals before the three year monitoring period ends.



If a Field Partner working on private land loses access to that site and/or the land owner no longer agrees to participate in the Evergreen Carbon Capture program, Evergreen Carbon Capture requests that the Field Partner replace the trees lost and establish a new planting site.

## FIELD PARTNERS AGREE TO:

1. Manage the planting site for ecological health and refrain from removing trees unless there is a health or safety issue.
2. Follow restoration best management practices to ensure tree establishment.
3. Allow Forterra to map tree planting locations and conduct a qualitative baseline site assessment.
4. Clearly delineate planting site or flag trees for ease in mapping and monitoring.
5. Monitor and report tree survivorship for three years after tree installation.
6. Allow Forterra to publish the tree planting site on the program's online Tree Map.
7. Sign a "Field Partner Agreement" agreeing to numbers 1 through 6.

## REQUEST FOR TREES (RFT) AND SITE CRITERIA

To receive conifer trees through ECC, the RFT application must be submitted along with an up-to-date stewardship or restoration site plan. There is a minimum order of 100 trees. Criteria for site selection determines that the planting site must:

- Be protected in perpetuity
- Have a vegetation or restoration management plan
- Be enrolled in active management, restoration, and monitoring
- Have less than a 40% slope

## PLANTING RATES AND CARBON SEQUESTRATION

ECC utilizes The Center for Urban Forest Research Tree Carbon Calculator (CUFR) (<http://www.fs.usda.gov/ccrc/tools/cufr-tree-carbon-calculator-ctcc>) to determine the number of trees to plant per ton of carbon to be mitigated. The CUFR Tree Carbon Calculator is currently the only approved tool by the Climate Action Reserve's Urban Forest Project Protocol for quantifying carbon dioxide sequestration from tree planting projects. Climate Action Reserve is a leading international and domestic authority on developing standardized greenhouse gas reduction project protocols.

The CUFR Calculator estimates that Douglas-fir, which is the only Pacific Northwest conifer tree available on the carbon calculator at this time, sequesters 13.9 tons of carbon by its 100<sup>th</sup> birthday. We will continue to actively seek best available science to make these estimates as accurate as possible.

Although one Douglas-fir is expected to sequester almost 14 tons of carbon in the first 100 years, Evergreen Carbon Capture plants one tree for every 5 tons of carbon to be sequestered. This accounts for an estimated survival rate of 50% plus a 30% contingency rate to account for variations among planting sites and sequestration rate variations between native conifer species. We conservatively estimated the 50% tree seedling survival rate based on our experience planting and monitoring trees through Forterra's local land restoration and stewardship programs, as well as reviews of journals, abstracts, and reports on tree seedling survival rates in the Pacific Northwest. We will work with our Partners to monitor survival of the trees planted



through this program to continue to strengthen the accuracy of these values. Four of the reports reviewed include:

1. Grossnickle, S.C. and Y.A. El-Kassaby (2015). Bareroot versus container stock types: a performance comparison. *New Forests*.
2. Cockle, A. and G. Ettl (2010) Survival and Growth of Western redcedar and Douglas-fir planted in a variable retention harvest unit in the Western Cascades, Washington. USDA Forest Service General Technical Report PNW-GTR-828.
3. Rietveld, W. J. (1989). Transplanting stress in bare root conifer seedlings: its development and progression to establishment. *Northern Journal of Applied Forestry*.
4. Livingston, N. J. And T. A. Black. (1987). Water stress and survival of three species of conifer seedlings planted on a high elevation south facing clear-cut. *Canadian Journal of Forest Research*.

## TREE CALCULATIONS AND PLANTING CONSIDERATIONS

### Tree Spacing

Forterra requests that Field Partners plant trees 15 feet on center, or making sure there is 15 feet between planted trees. This recommendation is modeled on the standard set by California Air Resources Board's mandatory cap and trade program, which can be considered an industry leading standard in carbon sequestration programming. A rudimentary guide to calculating the number of trees needed for 15 feet on center spacing is: *Planting area ÷ 225 square feet = number of plants needed*. (Example: 22,500 ft.<sup>2</sup> area would suit 100 trees at the optimum density of 15 feet.) For a denser planting plan, we recommend planting the trees 10 feet on center.

### Complete Ecosystem

Forterra encourages use of sustainable forest management practices or a "complete ecosystem" approach to restoration. The first recommendation is that the project consist of an assessed 95% native species, based on a per-acre estimate. The second recommendation is to promote species diversity in the native plant communities of our eco-region. Therefore no single tree species should occur as more than 65% of the total tree prevalence at a project site.

### Plant Stock and Timeline

Forterra provides bare root trees between January and early March. Forterra asks that all participants strive to plant conifer trees in the season they are received and to follow best practices for tree planting in the Pacific Northwest. For example, the best planting time in the Puget Sound region runs between November and early March. We highly encourage field partners to plant their trees within one week of delivery and to properly store the bare roots until planting. If you choose to "pot-up" your bare root trees, we ask that you plant them by the end of the calendar year in which they are received. This helps ensure adequate tracking and monitoring of the plant stock. Forterra will provide additional information on proper tree care and planting upon delivery.



# Field Partner - Request for Trees

Application Deadline: October 2, 2017 / Submit to: evergreencarbon@forterra.org

## APPLICANT INFORMATION

|               |  |
|---------------|--|
| Organization: |  |
| Contact name: |  |
| Title*:       |  |
| Address:      |  |
| Phone number: |  |
| Email:        |  |

- Landowner
  Restoration Contractor
  Volunteer steward

*\*Please note if you are a volunteer or staff member. If a volunteer steward or restoration contractor, you must have permission from landowner or organization to participate in the program and conduct restoration on the site.*

## TREE REQUEST

Tree species available for the 2017 program include: Douglas-fir, grand fir, western redcedar, and western hemlock. Indicate the number and species of conifer trees you would like in the table below.

Must request a minimum of 100 trees per site\*\*:

| SPECIES          | QUANTITY |
|------------------|----------|
| Douglas-fir      |          |
| Western redcedar |          |
| Western hemlock  |          |
| Grand fir        |          |

### \*\* QUANTITY

*The number of trees Evergreen Carbon Capture has available for its Field Partners differs from year to year based on the amount of carbon mitigation needed for program participants. We are not able to accept all applications and in some cases may only be able to provide a percentage of your request.*



## THE PROPERTY

1. Do you have permission from the land owner to plant these trees? Please provide landowner information (name, phone number, and email) if different from applicant information and/or explain partnership agreement with landowner.
2. Will the trees be planted in a protected space where they will be able to grow undisturbed for more than 100 years? Please explain.
3. How large is the area you will be planting? Is the area large enough to provide adequate space between plantings? At 100 years of age, adult conifer trees may need as much as 1,375 sq. feet per tree. We recommend planting trees at 15 foot centers.
4. Is there a planting or restoration plan for this area? Please include with your application or include webpage link if published online. Provide a brief description of the project.
5. What are the current conditions of the area you will be planting? Site conditions can include: site exposure, soil type, percentage of native species, percentage of invasive plant species, and current restoration activities on site.

## TREE CARE AND INSTALLATION

To ensure tree survival and establishment, ECC requests that Field Partners plant the trees as close to the delivery date as possible. Ideally this would happen within one week of delivery. Tree delivery will occur between January and March 2018. Note that trees must be utilized for the program specified in the application and not distributed to another program or planting site.

1. Where and how will you care for the trees until they are planted?
2. Is there an established stewardship plan for this planting site? Who is responsible for planting, long-term care and monitoring of the trees? Please be specific.



3. Who will be responsible for tracking tree survival and reporting the status of the trees to ECC for at least once per year for three years after planting? (Monitoring forms can be provided)

## COMMUNICATIONS & ENGAGEMENT

Forterra engages its ECC participants in three ways:

- The ECC Tree Map
- The ECC Annual Report
- Forterra website and social media outlets
- Planting event coordination between Field Partners and Companies as needed

Answer the following questions to assist us in communicating about your program with participating companies.

1. How would you like to be acknowledged in ECC communications? Please provide website link and digital copy of your logo to include on the ECC Tree Map.

2. Would you be willing to host an ECC company at your restoration planting event?

Note: Employee events are driven by company interest. If a company expresses interest in planting, a Forterra staff member will contact you to assist in connecting with a participating company.

Yes / No

If yes, how many people can you host?

3. Can we promote your participation in the Evergreen Carbon Capture program through Forterra's social media venues by sharing pictures or links to your organization? Yes / No

Submit application by October 2, 2017 to [evergreencarbon@forterra.org](mailto:evergreencarbon@forterra.org) or mail to:

Forterra  
Evergreen Carbon Capture Program  
901 5<sup>th</sup> Avenue, Suite 2200  
Seattle, WA 98164

Contact Nicole Marcotte with questions at (206) 905-6924 or [evergreencarbon@forterra.org](mailto:evergreencarbon@forterra.org)



# Field Partner Agreement

*As an Evergreen Carbon Capture Field Partner, we agree to:*

- Care for and maintain the ECC tree planting site using restoration best management practices. This includes proper site preparation, mulching, and ongoing maintenance including invasive plant control.
- Install bare root plants within one week of tree delivery and use proper storage techniques to ensure seedling health. If seedlings cannot be installed in that timeframe, we agree to pot-up and care for plants until trees can be planted.
- Plant trees in the same calendar year they are received. If the trees cannot be planted by March, we agree to pot up trees and plant in the fall following best practices for tree installation in the region.
- Meet a Forterra staff member on site and allow them to map tree planting locations and conduct a qualitative baseline site assessment.
- Track tree survivorship on an annual basis for three years and report this information back to Forterra.
- Allow Forterra to publish the tree planting site on the program’s online GIS map and promote our participation with participating companies through our promotion of the ECC program.

*Forterra agrees to:*

- Provide bare root conifer trees from a reputable forestry company or wholesale native plant nursery between January and March 2018.
- Provide Evergreen Carbon Capture Field partners with consultation as needed for proper tree installation and restoration practices.
- Conduct a baseline site inventory to assess site conditions and map the location of tree planting sites.
- Develop a professional quality online GIS map of all Evergreen Carbon Capture tree planting sites. This will include information to promote the participating Companies and Field Partners.
- Facilitate the scheduling of volunteer tree planting event in cooperation with interested Company and Field Partner.
- Send an annual email to Field Partners to request tree survivorship information.
- Provide one-time replacement trees at the end of the three year monitoring period to ensure the planting site achieves 50% survivorship.

\_\_\_\_\_  
Field Partner Signature

\_\_\_\_\_  
Forterra Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date