*People are a vital part of the Chesapeake Bay ecosystem. Actions we take today can revive the Bay's health tomorrow and into the future.*

## Plant and Care for a Tree

Trees provide many benefits to our everyday lives and are critical to the health of the Chesapeake Bay ecosystem. Trees help clean the air we breathe, filter the water we drink, help curb climate change, and provide homes for thousands of species of plants and animals.[1,2]

**What You Can Do to Help**

Three things you can do to show your care for the critical role of trees in our environment include:



1. Plant a tree.
2. Participate and/or promote tree planting in your community.
3. Adopt a tree to provide care in its early years after it is planted.
4. Donate to an organization that plants trees on your behalf.

When people care for a tree or plant trees in their communities, it improves their relationship with nature, and this is associated with promoting even more pro-environmental behaviors.[3]

*Figure 1 https://www.treeclicks.com/plant-a-tree*

*Here are some of the positive environmental benefits of trees that your actions can promote.*

**1. Helps to clean the air and improve health.**

Trees help clean the air we breathe. If every American family planted one tree, the amount of carbon dioxide in the atmosphere would be reduced by one billion pounds annually. This is equal to almost 5% of the amount that human activity pumps into the atmosphere each year.[4] Many studies have found that polluted air contributes to breathing problems, asthma, heart and lung disease, and even premature death.[5] However, through their leaves and bark, trees absorb harmful pollutants and release clean oxygen for us to breathe. In urban environments, trees absorb pollutant gases like nitrogen oxides, ozone, and



*Figure 2 https://www.heraldmailmedia.com/news/tri_state/ pennsylvania/transource-plants-trees-commits-money-to-chesapeake-bay-watershed-quality/article_ea7c84d9-411d-5c1e-a166-ba5926f58733.html*

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[1] https://onetreeplanted.org/pages/why-trees

[2] https://www.nature.org/en-us/get-involved/how-to-help/plant-a-billion/

[3] https://journals.sagepub.com/doi/abs/10.1177/0013916517751009

[4] http://urbanforestrynetwork.org/benefits/air%20quality.htm

[5] https://www.epa.gov/air-quality-management-process/managing-air-quality-human-health-environmental-and-economic#what

carbon monoxide, and sweep up particles like dust and smoke. Lastly, not only are trees nice to look at, but shade provided by tree coverage helps protect our skin from the ever-increasing harshness of the sun.[6]

**2. Improves mental health.**

Did you know that hospital patients with rooms overlooking trees recover faster than patients without a treescape view?[7] Research suggests that being around trees is good for our mental health and social well-being. Trees help reduce stress and anxiety and allow us to reconnect with nature. In addition, researchers have also found that trees around schools can also have a positive effect on test scores.[8]

**3. Curbs climate change.**

The Chesapeake Bay is one of the most vulnerable regions in the nation when it comes to the impact of climate change; however, trees can help to protect the Bay.[9] For example, trees help to reduce energy needs of buildings. Just three trees, placed around a house, can save up to 30% of energy use.[10] Trees also help to cool the planet by absorbing and storing harmful greenhouse gases like carbon dioxide and releasing oxygen back into the atmosphere. Planting and caring for trees helps ensure they will grow to maturity – and a mature tree can absorb an average of 48 pounds of carbon dioxide per year.[11] In addition, tree cover can lower surface and air temperatures by up to 46° F in cities, which helps to reduce the effects of heat islands, urbanized areas that experience higher temperatures than outlying areas.[12]

**4. Prevents flooding and erosion.**

Trees play a key role in capturing rainwater and reducing the risk of natural disasters like floods and landslides. Their intricate root systems act like filters, removing pollutants and slowing the water's absorption into the soil. According to the US Forest Service, "a healthy 100-foot-tall tree can take in 11,000 gallons of water from the soil and release it into the air again as oxygen and water vapor, in a single growing season."[13] This process prevents harmful erosion and reduces the risk of flooding.[14] This is an important benefit for the Chesapeake Bay region, as large groups of trees capture rainfall, trap polluted runoff, and stabilize soils that might otherwise wash into waterways.[15]

**5.Creates habitats for animals and birds.**

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[6] https://onetreeplanted.org/pages/why-trees
[7] https://www.scientificamerican.com/article/nature-that-nurtures/
[8] https://www.aau.edu/research-scholarship/featured-research-topics/does-school-performance-grow-trees#:~:text=Previous%20studies%20have%20documented%20a,relationship%20in%20high%2Dpoverty%20schools.&text=Schoolyard%20tree%20cover%20predicted%20academic,trees%2C%20the%20better%20the%20performance.
[9] https://www.chesapeakebay.net/news/blog/how_choosing_the_right_tree_can_help_adapt_to_climate_change
[10] https://www.arborday.org/trees/climatechange/fightHome.cfm
[11] https://onetreeplanted.org/pages/why-trees
[12] https://onetreeplanted.org/pages/why-treess
[13] https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5269813.pdf
[14] https://onetreeplanted.org/pages/why-trees
[15] https://www.chesapeakebay.net/issues/forests

Different types of trees provide food, shelter, nesting sites and safe migration paths for animals and birds. During times of extreme heat or precipitation, animals seek shade and shelter under the trees while still remaining close to their food source. According to Doug Tallamy, naturalist, professor and author, we can "help our communities to transform places into natural plant ecosystems."[16]

**Websites for More Information**

- One Tree Planted – Why Trees

- Arbor Day Foundation – 10 Free Trees, Tree City USA, and Three Great Loves Tree Planting Campaign

- Chesapeake Bay Foundation – 17 Native Trees for Your Yard

## Behavior Change Campaign Examples

It is common to find it intimidating to plant more trees or commit to caring for a tree. Barriers include:

- **Access to space.** Limited or no access to land to plant trees.

- **Time.** Finding the time to care for a tree or plant more trees.

- **Lack of resources.** Knowing which trees to plant, where to plant them, having the funds to buy the trees to plant, being able to create a plan for and obtain volunteer commitment for ongoing care, finding people able to do the planting, having knowledge of and access to local organizations that support tree planting are common resource barriers.

- **Values, beliefs and motivation.** Believing this single action matters and has an impact on protecting the environment is motivating.

Around the country, communities and organizations have developed social marketing campaigns to motivate and inspire people to plant trees. Listed below are examples of some innovative campaigns.

❖ Watershed Stewards Academy – Replant Anne Arundel



Replant Anne Arundel is a local initiative aimed at planting thousands of trees in Maryland and engaging hundreds of county residents in their planting and care. To ensure trees are properly planted and maintained, trained Tree Troopers in each county are engaged in the initiative.

❖ Labor Day Foundation - Three Great Loves Tree Planting Campaign

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[16] http://www.pollinatorconservationassociation.org/the-doug-tallamy-page.html

Arbor Day Foundation worked with faith-based organizations to implement the Three Great Loves Tree Planting Campaign. One example of the project was the partnership between the United Church of Christ with Interfaith Power and Light during Faith Climate Action Week in 2020. In addition to planting trees in their communities, churches and individuals can make a difference in other parts of the world.

Three tree-planting options listed below are from Global Ministries, a shared ministry of the United Church of Christ and the Christian Church (Disciples of Christ). These efforts include distributing information via congregations' newsletters and websites (**Social Diffusion**) and encouraging members to take the following actions:

- Express your Love of Creation by participating in the Three Great Loves Tree Planting Campaign. Trees are one of God's most precious gifts. Celebrate Earth Day by making it possible for more of these wonderful gifts to grow.
- Have a Tree Planted On Your Behalf: For $1 a tree, the Arbor Day Foundation will plant numerous trees on your behalf in a national park. Fires, diseases and insects have taken their toll on natural settings. Your donation will help to rebuild these areas. (**Convenience**)



- Partner with an organization to plant trees or plant your own. Report how many trees you plant in this manner to our partners at Interfaith Power and Light. (**Commitment**)

❖ Washington, DC – Casey Trees

Founded in 2002, Casey Trees' strategy includes planting an average of 14,000 trees a year, training volunteer stewards of all ages, providing continuing-education courses, and creating interactive online tools.

- The Tree Benefit Calculator estimates the environmental value of an existing tree anywhere in the U.S, helping the user understand the beneficial impact of planting or preserving a tree. (**Incentive**)
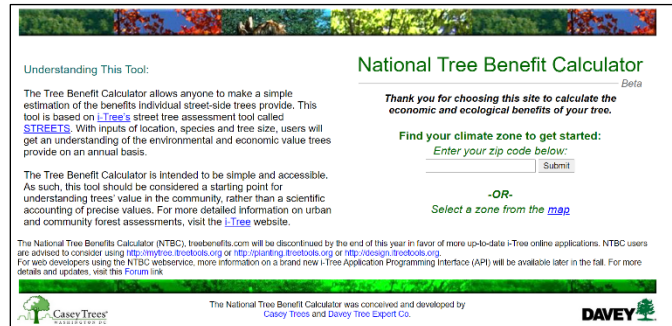


❖ Congregation – Newsletter Messaging

Our Lady of Lourdes – St. Anne in Rochester, NY has a Green Corner in their newsletter to communicate information and tips regarding behaviors to protect the environment. (**Social Norm**)
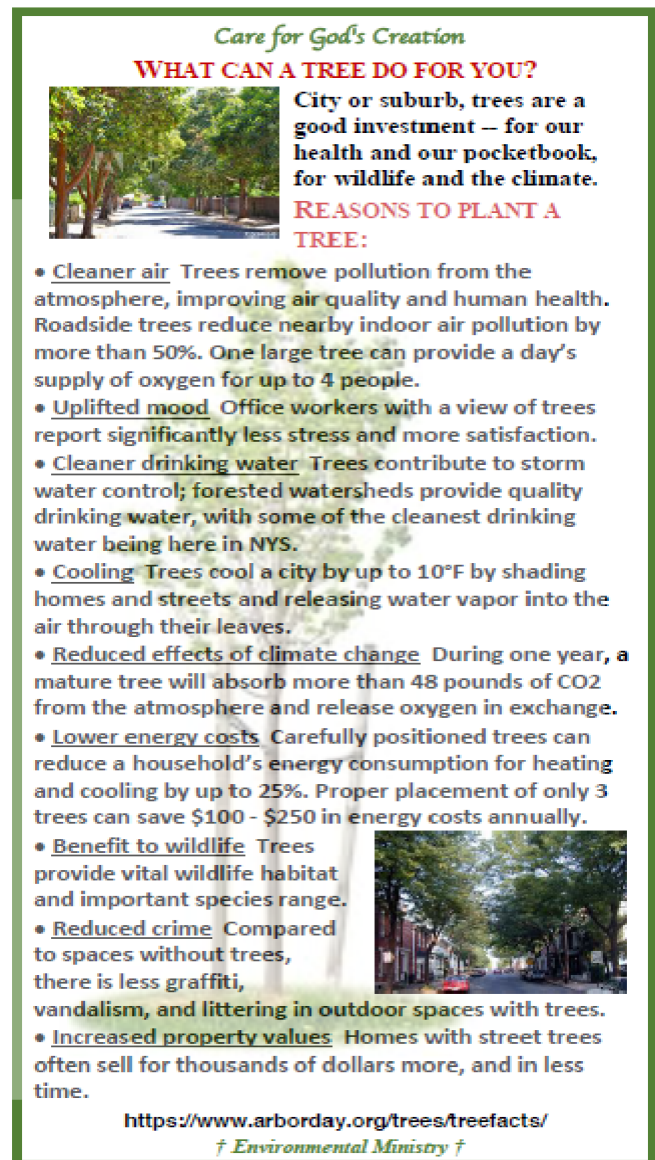
❖ City of Fort Lauderdale – Save a Tree, Plant a Tree

Fort Lauderdale initiated Save a Tree, Plant a Tree, an innovative program that merged environmental protection and municipal resource savings. The city provided free trees to Fort Lauderdale customers who switched to paper-free e-billing. Because the city sent out 54,000 utility bills each month, they noted that used 108 reams of paper, at the expense of 78 trees per year. They marketed the program with the messaging "Get a Tree by Going Paper-Free!" (**Incentive**)

❖ City of Cambridge – Adopt-A-Tree

Cambridge, MA is one of many municipalities that asks residents to support street trees to help maintain their healthy, vibrant urban forest. This Adopt-A-Tree program lets residents search for a street tree near an address (their home, business, school, etc.) and commit to keeping it healthy by watering it and tending to the tree well. The website's FAQs provide maintenance tips about watering, weeding, and mulching. (**social norm)**
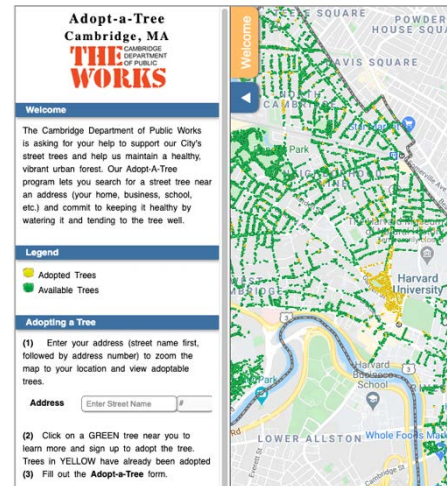
**Example Messages**

These messages to preserve and plant more trees could be used in congregational outreach campaigns.

1. **Plant a tree and breathe easier.** Trees help to make the air healthier for us to breathe. Programs such as the Backyard Buffers Program, will provide free trees and guidance on how to plant and maintain your tree. (convenience – time, resources)

2. **Preserve our community. Plant a tree.** Help promote our community's quality of life by expanding and protecting our shade cover. Trees, along with green space and parks, promote physical activity and reduce stress. (stewardship)

3. **Celebrate a holiday, a significant occasion, or recognize someone special by donating to plant trees.** If you can't plant a tree in your yard, there are other ways to pledge your support and

participate in tree planting. Tree-mendous Maryland has a tree planting donation that you can even do as a gift or in honor or memory of someone. (stewardship, commitment)

4. **Care for a Street Tree.** Help newly planted street trees become established and thrive. Caring for a tree during its establishment period (2-3 years) increases the likelihood of its survival. (stewardship)

The above messages could be used in various outreach strategies with your congregation, such as the following:

1. **Promote a day of tree planting and preservation in your community.** The Watershed Stewards Academy started a community-based tree planting program in 2020. Anne Arundel County communities of all types, including neighborhoods, congregations, schools and others, are invited to apply. Or contact the community-based Replant Anne Arundel program, which plants larger stock trees. Another option is to contact Tree-mendous Maryland, a popular program of the Maryland Forest Service aimed at helping citizens restore tree cover on public land and community open space in Maryland.

2. **Fundraise and donate to an organization that plants trees.** Express your love of creation by participating in the Three Great Loves Tree Planting Campaign. Managed by the Arbor Day Foundation, funds raised help to replant areas affected by wildfires or other natural disasters. Consider this strategy to help your congregation celebrate Earth Day

3. **Encourage congregants to adopt-a-tree in their neighborhood.** Work with your local department of public works to support municipal street trees and help maintain a healthy, vibrant urban forest. Some communities have adopt-a-tree programs but even if yours does not, low-cost tree watering bags are available at retail stores and provide a way for congregants to take local action to adopt-a-tree.

4. **Plan your own ParkRx day.** ParkRx (park prescriptions) is an organization that provides resources and activity ideas to promote use of parks, trails, and open space as a means to improve individual and community health. Activity ideas include organize a guided group walk in the park, coordinate a stewardship project, such as trash pickup, clearing trails, or beautifying the park.[17]

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[17] https://www.parkrx.org/parkrx/community