

# Greening the Gateway Cities Program

## Fact Sheet 2016



The Massachusetts Greening the Gateway Cities Program (GGCP) is an environmental and energy efficiency program designed to reduce household heating and cooling energy use by increasing tree canopy cover in urban residential areas in the state's [Gateway Cities](#). GGCP is a partnership between the Executive Office of Energy and Environmental Affairs (EEA), the Department of Conservation and Recreation (DCR) Urban and Community Forestry Program, the Department of Energy Resources (DOER), and the Department of Housing and Community Development (DHCD), along with Gateway Cities and local grassroots organizations. The program plants trees ranging from 6ft to 10ft tall, with a goal of covering 5-10% of the target neighborhoods in new tree canopy cover. Trees are planted by DCR Bureau of Forestry, Urban and Community Forestry crews hired from local communities.

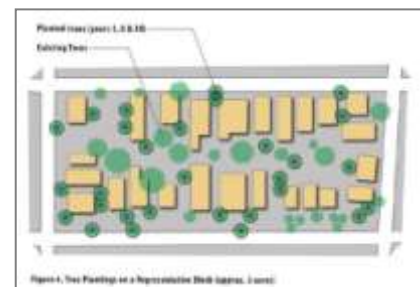
GGCP is based on current research that includes on-the-ground tree and energy measurements in Worcester and other northern climate cities. These studies show that tree canopy brings the greatest benefits when established over an entire neighborhood area, by lowering wind speeds, reducing summertime air temperature, and providing direct shading. It is estimated that every 1% increase in tree canopy above a minimum 10% canopy cover brings a 1.9% reduction in energy needs for cooling and up to a 1.1% reduction in energy for heating. All households in a neighborhood benefit, not just the ones with trees directly adjacent.

This program targets the parts of Gateway Cities that have lower tree canopy, older housing stock, higher wind speeds, and a larger renter population. In addition, plantings are concentrated in [Environmental Justice](#) neighborhoods, to benefit those most in need. Within planted areas, temperature, energy use, and other information is tracked to document the energy savings new trees provide residents over time. Pilot cities in which this monitoring is taking place include Chelsea, Fall River, and Holyoke.

### Neighborhood Level Canopy Cover is Important

Concentrating tree plantings in target areas maximizes energy savings. Trees near a home directly shade structures, significantly lowering surface temperatures, while trees up to 1,500 feet away from a home still provide a benefit. Program goals are to plant 10 trees per acre, which will reduce the Urban Heat Island effect, and decrease summer air temperatures in city neighborhoods through shading and increased transpiration. Additionally, in the winter months, mature tree trunks and branches help to randomize wind patterns and decrease heat loss by air infiltration in poorly insulated homes.

In high-density urban neighborhoods, planting an average of 5-10 trees per acre (roughly one-third of a block) will provide benefits to 15 – 25 households, depending on building density. Most trees are planted in yards where they grow quickly with the care provided by residents. Planting this number of trees will increase canopy by an estimated 1% in eight years and 10% in 30 years. Return on investment is realized in 15 years, after which additional energy savings are realized for the life of the trees.



### Benefits Beyond Energy Savings

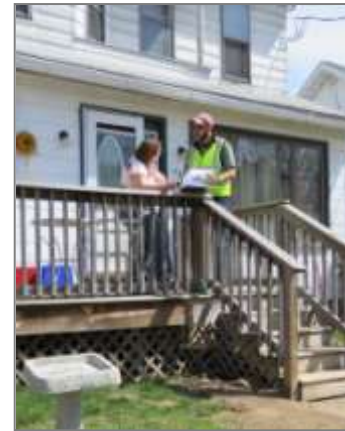
Large-scale urban plantings provide **local employment and economic activity**.

Tree planting is the only energy efficiency program where almost all of the investments stay in the local economy through the hiring of local planting crews and growing of trees at local nurseries. In addition, healthy urban forest ecosystems improve the quality of the water we drink, the air we breathe, the stability of our neighborhoods, and our sense of community and individual pride.



### **How Do I Get Involved?**

To see if you currently live in one of our active Gateway City planting zones, contact your local GGCP office. If eligible, a DCR forester will come to your property and help determine the best location and species of tree for energy efficiency. Trees are provided free of charge, and DCR crews will plant the trees for you. To receive a tree, you must agree to a two-year watering commitment, to ensure the tree's survival.



### **Planting Seasons**

Trees are typically planted from April – June in the spring season and September – November in the fall season. Foresters conduct site visits year-round. Call your local GGCP office to schedule an appointment. Leave your name, address (including city), and telephone number, and a forester will respond to schedule a visit.

### **Contact Your Local GGCP Office**

The Greening the Gateway Cities Program is currently planting in the following locations:

#### NORTH Region Office

**Leominster**  
617-626-1514

#### EAST Region Office

**Chelsea & Revere**  
617-626-1459

#### SOUTH Region Office

**Fall River**  
617-997-1795

#### WEST Region Office

**Chicopee & Holyoke**  
617-626-1473

#### **Pittsfield**

617-626-1515

### **Additional Information**

The GGCP is funded by EEA and by DOER's Alternative Compliance Payment program. GGCP is administered by the DCR Bureau of Forestry. Please contact DCR's Urban and Community Forestry Program with any questions or comments concerning the Greening the Gateway Cities Program at 617-626-1250.