

GREEN SPACE: THE EVER-IMPORTANT ROLE

A public service of the **Churchill Area Environmental Council (CAEC): 2020**
2300 William Penn Highway, Pittsburgh PA 15235

Background:

In urban and suburban areas, the importance of green space to health and the quality of life may or may not be obvious. The communities that the CAEC serves are generally considered suburban areas with public green space available to residents in varying degrees. This advisory has been prepared to describe the overall importance of green space throughout our communities including both public lands preserved as green space, e.g. parks and greenways, and private green spaces including what an individual can do to enhance green space at a residence through natural and “green” methods.

Public Green Spaces:

Public open space is any open piece of land that is undeveloped (has no buildings or other built structures) and is accessible to the public. Open space includes many types of public properties including green space, which is land that is partly or completely covered with grass, trees, shrubs, or other vegetation. Green spaces include parks, community gardens, and cemeteries.

Open space provides recreational areas for residents and helps to enhance the beauty and environmental quality of neighborhoods. But with this broad range of recreational sites comes an equally broad range of environmental issues. Just as in any other land use, the way parks are managed can have good or bad environmental impacts, from pesticide runoff, siltation from overused hiking and jogging trails, and the potential for destruction of habitat.

Parks and green infrastructure can be co-designed for co-benefits. Parks can serve their primary goals to offer recreation and aesthetic amenities, while also containing spaces that mitigate stormwater or improve air quality. Green infrastructure can achieve essential utility functions in the community, but may also be designed to create the environments that provide nearby nature experiences and support health.

Park spaces in our municipalities include:

- Chalfant – Servicemen’s Memorial Park
- Churchill – Bullock-Pens Park
- Forest Hills – Forest Hills Park; Koch Park
- Wilkins Township – Lions Park; Linhart Park; Eastmont Park

A new potential green space for the area is the 148-acre Churchill Valley Country Club which closed in 2013. The Allegheny Land Trust (ALT) has an exclusive right to purchase the property and raised over \$127,000 in late 2019 and early 2020 towards that goal. While more than 100% of the community campaign has been successfully raised, so far 30% of the necessary funds have been raised to close on the property. A contract extension has been secured until March 31, 2021 to raise the gap and permanently protect this community green space. This purchase would provide a large natural area situated in Churchill and Penn Hills with a huge potential to enhance the public green space of the area.

For more information go to: alleghenylandtrust.org/churchill-valley/

As a potentially important environmental enhancement, public open spaces typically allow space for green infrastructure which can include bioswales, rain gardens and other water harvesting features. If a collection of these small nature spaces can be installed within a community, then a systems outlook is

important. Rather than focusing only on the design of individual parcels or features, a broader planning approach has the potential to integrate a series of small spaces into a coherent network. This green infrastructure can have a noticeable positive impact on stormwater runoff issues affecting all area suburban communities. The benefits can help regional waterways become cleaner and healthier, further improving the natural health and beauty of the area and enhance regional recreation options.

Residential green spaces

Residents can create and maintain personal green spaces on their own properties. In addition to lawns, this often includes flower gardens, vegetable gardens, and trees.

Conventional lawns use a large amount of water, and there is growing concern about the toxicity of pesticides, herbicides, and fertilizers. You can find lawn care companies in Pittsburgh that are eco-friendly and use natural or organic methods and materials.

To make your lawn more environmentally friendly some suggestions would be:

- Use electric or battery-powered yard tools, including your mower
- Leave your grass clippings where they fall as an excellent natural fertilizer
- Consider using a ground cover: low-growing, spreading plants that require little water and maintenance

For more daring suggestions for alternatives to conventional grass, these articles may be useful:

- <https://www.gardendesign.com/eco-friendly/lawn-alternatives.html>
- <https://gilmour.com/grass-alternatives-backyard-lawn>
- Phipps Conservatory's Top 10 Sustainable Plants of 2020 (<https://www.phipps.conservatory.org/blog/detail/top-10-sustainable-plants-of-2020>), selected for their non-invasive habits, as well as for their resistance to disease and insects. Once established, these plants require minimal watering and fertilization.

To establish and maintain gardens and trees, it is helpful to understand the use and importance of mulch.

Mulch

Mulch is anything used to cover exposed soil. Its purpose can be to retain moisture in the soil, to suppress weeds, to keep the soil cool, or as a decorative touch. Mulch is used in flower and vegetable gardens and around landscape trees.

Organic mulch includes chopped leaves, grass clippings, compost, bark, chips, straw, sawdust, pine needles, paper

- **Advantage:** as it decomposes it can enrich the soil. [Note: the dryer and woodier the mulch is, the more slowly it will decompose and will give fewer nutrients to the soil.]
- **Bark** – best around trees, shrubs, and in garden beds where you won't be doing a lot of digging. Lasts longer than other organic mulch.
- **Compost** – can use as mulch or use close around plants to insulate and give a boost of nutrients
- **Grass clippings** – best for remote areas of a garden to suppress weeds. Decompose quickly and can get slimy and smelly; use carefully. Can mix into leaf mulch (see below)
- **Newspaper** – layers are good for moisture retention, suppressing weeds, and controlling soil temperature. Good for smothering existing grass to start a new garden bed. Layer 4-8 sheets and moisten to hold them in place.

- Shredded leaves – “nature’s favorite”; entices earthworms and enriches soil. Be sure to chop or shred before using; one method is to let them dry and then use a lawn mower to chop into little pieces. Spread a layer in spring before plants spread out to make it less noticeable. Spread over the vegetable garden in the fall to begin decomposing over the winter. [Note: Do not use the leaves of black walnut trees and eucalyptus trees as they contain a natural herbicide.] More information: www.gardeners.com (keyword leaf mulch, advice tab)
- Straw and hay – good for vegetable gardens. Decomposes slowly, so it lasts the whole season. Easy to rake up or work into the soil.

Inorganic mulch includes stone, gravel, rubber, plastic, landscape fabric

- Advantage: holds moisture and blocks weeds well; does not need to be replaced as often
- Plastic and landscape fabric are good for plantings that don’t require fertilization or frequent weeding, such as foundation plantings and other trees and shrubs. Plastic gets hot in the summer and may kill more than weed seeds, e.g. plant roots; cut holes to allow sufficient water to pass through. Because it is porous, landscape fabric should not be a problem unless it gets blocked.
- Gravel and stone are good for areas that require good drainage or for beds that have plants that like more heat, such as herb gardens and rain gardens. Hard to remove, so choose carefully.
- Rubber – controversial. Pros: Made from recycled tires, doesn’t attract termites or carpenter ants, won’t wash away, long lasting. Cons: more expensive, concern about chemicals leaching into soil from radial tire wires that get mixed in and from the rubber itself, requires weeding be done by hand.
- Colored vs natural wood mulch – colored mulch is usually made from recycled wood, which is dry and more easily absorbs color dyes than natural wood. That wood may be contaminated with various chemicals. The dye itself is not considered toxic, but it may fade over time. For more information see ag.umass.edu/landscape/fact-sheets/colored-bark-mulch

Mulching for weed control

To combat weeds: weed first, put down a thick enough layer of mulch to discourage new weeds. 2”-3” deep in shade, 4”-6” deep in sun.

If you know weed seeds and/or perennial roots are present, put in new plants, water, cover with newspaper, then other mulch.

Mulching around trees

As with other plants, mulch can keep down weeds that may compete for water. Mulch can also keep the water from evaporating, keep the roots cooler, and help prevent erosion. It helps improve soil structure and fertility.

Guidelines:

- Trees do best with a **2-3 inch** layer of mulch around the base.
- For the area immediately surrounding the trunk, (the first few inches for a young tree, or up to 12 inches for a mature tree) thin it to just cover the soil.
- Avoid letting mulch build up around the trunk to form a “volcano” effect.
- The diameter of the mulch should be to the drip line (outermost edges) of the branches.
- The best time to mulch is the middle of the spring, when it’s warm enough for root growth to begin.

- Applying new mulch over old each year can result in having too deep a mulch layer. If you want to put down new mulch, you may need to remove some or all of the old first.

Use bark, wood chips (aged), or shredded leaves. Shredded leaves will break down and release nutrients faster, which is especially helpful to young trees, but you will need to replace it sooner.

Trees for residential properties

(suggestions from Tree Pittsburgh, Matthew Erb, Director of Urban Forestry)

These 10 yard trees should do well and have little pest/disease problems. All species listed are native to the eastern us. The benefits of each are listed.

- Serviceberry - flowers, edible fruit, attracts birds
- Carolina Silverbell - small flowering tree
- Pawpaw - edible fruit (need 2 to produce)
- Eastern Red Cedar - medium sized evergreen, habit and food for birds
- Sweetbay Magnolia - flowering tree
- Black Gum - shade tree, bright fall color, stormwater
- Hop-hornbeam - medium sized tree
- Swamp White Oak - large shade tree, great for wildlife, stormwater
- Eastern White Pine - large evergreen, great for wildlife, stormwater
- Tulip tree - large shade tree, stormwater

Plants for Pollination

Wildflowers, shrubs, and even large trees can supply bees with important sources of pollen and nectar.

When selecting plants to add to your landscape, consider the following characteristics:

- Time of flowering: Select plants that flower at different times of the season to support a diverse community of wild bees.
- Shape and color of flowers: Disk-shaped flowers with accessible nectar and pollen attract a diversity of bees, while tubular flowers are pollinated by long-tongued and small bees. Bees are generally attracted to blue, violet, yellow, and white flowers.
- Plant growth requirements: Perennial plants will grow best in regions where they are well adapted.
- Native plants that are highly attractive to bees: Talus slope penstemon, Wild bergamot, Common boneset, Wrinkleleaf goldenrod, New England aster

References:

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