



Grow Zone

Battle Bend Greenbelt

Program Overview

The Grow Zones program began in 2012 with 12 pilot areas to help restore the riparian zones, which is the land adjacent to creeks. This program was made possible by an agreement between the Parks and Recreation Department (PAR) and the Watershed Protection Department (WPD).

When riparian areas have healthy vegetation and healthy soils, they function as a buffer between the water and the land environments. Riparian areas allow water to infiltrate deeper into the soil when it rains, and prevent soil erosion; they also provide shade for organisms living in the water and food and habitat for wildlife along the creek. Riparian zones are critical in maintaining and improving water quantity and quality. When the vegetation is removed by mowing and intense foot traffic, for example, soils become compacted and cannot absorb water efficiently: water runoff washes the soil away and makes the water muddy, the creek receives no shade and water evaporates faster during hot weather. All the basic goods and services provided by these riparian areas are threatened. The **goal** of Grow Zones is to help restore the riparian areas and the benefits they provide for us and other critters. In general, no intense active maintenance such as mowing takes place in Grow Zones and the vegetation is allowed to grow back. Sometimes, a little more help is needed in the form of soil amendments, seeding of native grasses and wildflowers, planting of tree seedlings and control of exotic invasive species. Since 2012, nine more creeks have been added to the program and many more requests are being considered!

What should I expect to see in a Grow Zone?

As the plant community recovers, some areas may have taller, much less manicured vegetation. It can take between five and 10 years to develop a diverse vegetation community, so patience is important! In sites that have little shade, grasses and other non-woody plants are the first to establish. Some areas will be covered with ragweed and/or grasses and wildflowers in the first years until trees and other woody plants start to grow and outcompete them. As the trees and shrubs start providing more shade, shade-tolerant grasses and wildflowers will start growing. Over time, trees will mature. A diverse plant community, typical of a healthy riparian forest, will be established. Grow Zones that started out with very severe soil damage and almost no plant community will take more time than others to return to a healthy riparian zone. However much time it takes, Grow Zones start improving soil and vegetation conditions quickly after mowing stops! Over time, the riparian zone will provide more benefits as its plant community and soils improve.

Who will track progress and/or success?

- Watershed Protection Department personnel will monitor the Grow Zones annually and implement adaptive riparian restoration practices as needed.
- Volunteer participation is encouraged through the Keep Austin Beautiful, Adopt-A-Creek Program.

Is it working?

- Early research results suggest that establishing Grow Zones adjacent to creeks will significantly reduce soil compaction, soil pH, and vegetation gaps and significantly increase soil moisture, vegetation structure, and shade.

Battle Bend Greenbelt

Battle Bend Greenbelt Grow Zone

Williamson Creek flows adjacent to the Battle Bend Greenbelt before emptying into Onion Creek and later the Lower Colorado River. This urban creek has reduced riparian vegetation, elevated stream bank erosion, and impaired water quality. This Grow Zone protects more than 1,200 ft. (373 m) of the creek and eliminates mowing more than 2.5 acres of land.

Historically, this section of the Williamson Creek had been mowed continuously. Some of the challenges to restore this riparian forest include soil erosion, compacted soils and the presence of exotic grasses (Johnsongrass), and a declining tree canopy after the severe drought in 2011.

Some volunteer workdays had been organized in 2013 to seed with native wildflowers and grasses and plant tree seedlings with participation from the Adopt-a-creek group. Workdays for 2013 and 2014 may include additional seeding with native grasses and wildflowers and continued efforts to remove invasive grasses.



Before Grow Zone (February 2013)



Grow Zone (May 2013)



Upcoming Management and Research in Battle Bend Greenbelt Grow Zone

- Fall/Winter (2013) – seeding, weed management.
- Spring (2014) – Riparian Functional Assessment (research study by WPD).

Who Do I Contact if I Have Questions?

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