

Proposal for Roots for Resilience: Native Plant Restoration at Seven Lakes High School

The land behind the sports fields at Seven Lakes High School is significantly disturbed due to past construction, soil compaction, and poor drainage. These conditions have led to severe water runoff, loss of vegetation, and reduced soil fertility. The area currently supports minimal plant life and provides little ecological value to the SLHS campus. In response, the Roots & Shoots Club proposes Roots for Resilience, a student-led restoration initiative designed to transform this degraded space into a thriving native vegetation corridor that supports stormwater absorption, pollinator health, and environmental education.

Purpose

1. **Ecological Restoration:** Revitalize the disturbed land by establishing a native vegetation corridor that restores soil health, increases permeability, and enhances biodiversity.
2. **Education and Research:** Engage students in data collection on soil porosity, infiltration, and plant growth to study the long-term benefits of native restoration.
3. **Community Engagement:** Foster environmental awareness among students and staff through hands-on restoration events, workshops, and campus signage.

Expert Collaboration and Support

Roots for Resilience is supported by:

- Doreen Gallevo, President of the Native Plant Society of Texas – Houston Chapter, advising on native species selection and project design.
- Josh Kelly, Vice President of the Native Plant Society of Texas – Houston Chapter, providing guidance on ecological restoration methods and outreach.
- Mary Carol Edwards, Owner of Green Star Wetland Plant Farm and former Texas A&M AgriLife Program Specialist, assisting with plant sourcing and wetland integration.
- Stephen Benigno, Conservation Director at the Houston Arboretum & Nature Center, advising on soil health analysis and biodiversity monitoring

Funding and Resources

The project has received a \$500 Roots & Shoots Mini Grant and a \$250 Seed Grant from The Pollination Project Foundation. These grants will fund the purchase of native vegetation, soil amendments such as compost and biochar, and educational signage to inform the community about the project's goals and ecological importance.

Implementation

The native vegetation corridor will be created directly behind the SLHS sports fields in an area identified as heavily compacted and poorly draining. Native Texas grasses and wildflowers including Little Bluestem (*Schizachyrium scoparium*), Sideoats Grama (*Bouteloua curtipendula*), Gulf Muhly (*Muhlenbergia capillaris*), and Black-eyed Susan (*Rudbeckia hirta*) will be planted to increase water infiltration and support pollinators. Soil amendments such as biochar and compost will be incorporated to improve soil structure and fertility. Students from the Roots & Shoots Club will participate in planting, maintenance, and ongoing data collection under expert and teacher supervision of Mrs. Headley and Mr. Colmenares.

Expected Impact

Roots for Resilience will transform a severely disturbed piece of land into a living model of ecological restoration. The project will reduce runoff, improve stormwater absorption, and enhance biodiversity while serving as an outdoor classroom for environmental science. By combining research, leadership, and community engagement, it will empower students to turn scientific knowledge into meaningful action and inspire sustainable land management across the Katy ISD community.

For any questions, please contact:

- Stephanie Headley, Roots & Shoots Coordinator:
- Carlton C. Colmenares, WCC Sponsor:



Image Landsat Copernicus

1985

471 ft

29°42'16.67" N 95°48'20.72" W elev 123 ft eye alt 2146 ft

Google Earth