

Project Goal

Our goal is to reduce localized flooding, improve stormwater filtration, and support biodiversity by planting native vegetation in the swale next to Seven Lakes High School in Katy, Texas. This area is often affected by heavy rain, and we aim to transform it into a low-maintenance, resilient mini-habitat that supports pollinators, filters runoff, and improves soil health.

Proposed Native Plants

Selected for water tolerance, native status, erosion control, and pollinator benefit.

Native Grasses (*for erosion control and root structure*):

- Gulf Muhly (*Muhlenbergia capillaris*) – Known for its airy pink plumes, drought-tolerant.
- Little Bluestem (*Schizachyrium scoparium*) – Tall, drought-resistant grass with seasonal color.
- Eastern Gamagrass (*Tripsacum dactyloides*) – Moisture-tolerant, deep roots, excellent for stormwater absorption.

Wildflowers (*for pollinator support and visual appeal*):

- Purple Coneflower (*Echinacea purpurea*) – Long bloom season, supports native bees and butterflies.
- Black-eyed Susan (*Rudbeckia hirta*) – Bright yellow blooms, tough and adaptable.
- Texas Bluebonnet (*Lupinus texensis*) – Iconic Texas flower, nitrogen fixer.
- Indian Blanket (*Gaillardia pulchella*) – Colorful, tolerant of poor soils.

Low Shrubs / Groundcovers (*optional for edge zones*):

- Mealy Blue Sage (*Salvia farinacea*) – Hardy perennial, blooms attract hummingbirds.
- Frogfruit (*Phyla nodiflora*) – Native groundcover, good for erosion control.
- Texas Lantana (*Lantana urticoides*) – Heat-tolerant shrub, attracts butterflies.

- Center of swale (wettest zone): Deep-rooted grasses like Eastern Gamagrass and Gulf Muhly to anchor the soil and absorb excess water.
- Middle slope: Combination of Little Bluestem and wildflowers for seasonal diversity and erosion control.
- Outer/upper edges: Wildflowers, Frogfruit, and smaller shrubs to create a buffer, attract pollinators, and provide visual structure.

Additional Features

- Compost or mulch will be added to improve compacted soil and retain moisture.
- Educational signs will identify plants and explain their environmental role.
- A simple rain gauge or soil sensor may be added to track water absorption.