

Evaluation of Pipeline Restoration Techniques in the Eagle Ford Shale

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The Eagle Ford Shale (EFS) is a huge economic boost to South Texas, however along with this boost there are a number of downfalls. One of these downfalls is the number of pipelines required to move oil and gas products to market, and the impact installation of these lines has on native habitat for wildlife, livestock forage, and soil stabilization. Most landowners impacted by new pipeline right of ways would like to return these areas back to native habitat as quickly as possible by requiring pipeline companies to reseed desirable native grasses and forbs. In order to determine the most effective restoration planting methods to reach this goal, we compared 3 common seeding techniques (drill-, broadcast, and hydro seeding) using a diverse mix of locally adapted native seed on 3 ecological sites along a Live Oak County EFS pipeline right of way from 2012-2014.

- All three seeding techniques were equally effective at establishing a diverse stand of native grasses and forbs on each ecological site along the right of way. Each planting technique achieved plant densities ≥ 0.5 seeded plant per ft² by 6 months after planting.
- Species composition was different on each ecological site, despite the same seed mix being planted - demonstrating the need for diverse mixes when doing pipeline seedings to account for soil variation.
- In this project, restoration of an EFS pipeline right of way was extremely successful and rapidly achieved using 3 planting techniques and locally adapted native seed sources.

Cooperative funding provided by donors to South Texas Natives, Texas A&M AgriLife Extension, USDA NRCS, Dobie Ranch and the Live Oak County Soil and Water Conservation District