

SMALLER PRAIRIE RESTORATION

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You may have heard the statistics about the history and loss of native prairie. Historically, Texas was estimated to have about 20 million acres of native prairie before colonization. These prairies are a vital part of the state's ecosystem, supporting a diverse array of plant and animal species, and have long sustained those who have lived there. Over time, however, much of this prairie land has been converted for agricultural, urban, and industrial development, leaving less than 1% remaining.

While the existence of protected ranch land covering thousands of acres is a cause for celebration, we are in a race to stay ahead of fragmentation caused by development and issues like divided inheritance. With the decline of large, connected acreage, what impact can these critical habitats have, even if it's just a few acres or a pocket prairie at a time? Additionally, what specific challenges do these restoration efforts face?

WHAT ARE THE CHARACTERISTICS OF A QUALITY NATIVE PRAIRIE OR A SUCCESSFUL RESTORATION?

While your specific goals will likely drive your personal success, several features are characteristic of a native prairie. A good native prairie is a highly diverse, resilient, and functioning ecosystem characterized by a variety of native plants, healthy soil, and abundant wildlife, largely free of invasive species. When you learn to recognize these attributes from a typical field or a pasture of "improved" grasses, the difference is evident even from the road at roughly the speed limit. However, let's begin by examining the differences in plants, soil, and wildlife more closely.

Plant Life

Diversity: A healthy prairie has a wide variety of native plant species, including grasses, wildflowers (forbs), and sometimes shrubs and trees. There can be more than 100 plant species in a small area. To really appreciate these, we suggest walking "at the speed of botany."

Variety of root depths: You have likely seen the depictions of prairie plants' root systems extending many feet below the ground's surface. These fibrous networks make the prairie drought-resistant, improve water infiltration, and build healthy soil, often described as having a texture similar to that of chocolate cake.

Year-round benefits: A thriving prairie serves a continuous supply of flowers, offering a steady food source for pollinators and birds.

Soil Health

Rich organic matter: Healthy prairie soils are rich with organic matter from decomposing plant roots and other material. This material supports a diverse community of microorganisms and facilitates the cycling of nutrients.

Excellent water retention: The deep, fibrous root systems and organic-rich soil act like a sponge, promoting water infiltration, reducing runoff and erosion, and helping the ecosystem absorb floodwaters. Companies like EOG Resources have worked with Texas by Nature and others to restore native habitats. They have measured a 56% increase in soil infiltration and 63% less surface runoff at the native restored sites.

Carbon sequestration: Prairies are highly effective at storing atmospheric carbon in their deep soils, making them a more reliable carbon sink than forests that are vulnerable to fire and insects. The Texas by Nature restoration project has also demonstrated a 50% higher carbon sequestration rate at the non-native and native restored sites.

Wildlife Indicators

Biodiversity: The dense native plant communities of a healthy prairie provide essential food and shelter for a variety of wildlife. Native sites have shown 116% more species than non-native sites.

Pollinator populations: The presence of a diverse array of pollinators is a strong indicator of a healthy prairie.

Grassland birds: Ground-nesting birds such as meadowlarks demonstrate that the prairie provides suitable habitat.

ARE THERE ADVANTAGES OF RESTORING SMALLER ACREAGE?

Restoring smaller areas of land offers distinct advantages. The most obvious benefit is cost savings. With fewer chemicals, seeds, equipment, and less labor required, it becomes more feasible for landowners to handle much of the work themselves with limited resources.

Smaller areas allow for a more targeted restoration plan. With fewer variations in elevation, soil types, and historical uses, it becomes easier to identify concerns, develop a focused strategy, and implement specific techniques.

Additionally, working within a smaller area enables close monitoring of invasive species and the tracking of native biodiversity. This improved accessibility allows for quicker and more effective responses to issues, such as spot spraying invasive or non-native plants. Enhanced monitoring also provides opportunities to identify and celebrate successes, like thriving populations of pollinators and ground-nesting birds.

WHAT IS THE CATCH?

Owning a smaller piece of land can present challenges that larger properties might not face, such as "edge effects," limited resources, and the lack of economies of scale. With fewer acres, you will likely experience more "challenges per acre."

If you have a smaller property, the restoration efforts you undertake will be significantly influenced by the surrounding environment. Unless your neighbors are also committed to prairie restoration, you may border various situations that hinder your goals. For example, your neighbor might have an invasion of Johnson grass, which can spread seeds to your side of the fence with every gust of wind.

Additionally, a landowner growing crops may inadvertently spray chemicals that drift onto your property. If your property is surrounded by Bermuda grass in a park or a highway, these factors can impact a larger portion of your prairie compared to a much larger restoration site.

Smaller areas may also support fewer species and less biodiversity, particularly for larger wildlife that require expansive habitats. Even if you possess diverse resources, having them spread over less land means you may attract fewer animals. For instance, it is unlikely you will see wild turkeys or quail on a five-acre property.

Finally, while you may incur lower overall expenses, your costs per acre will be higher. Hiring professionals to broadly apply herbicides or to expertly plant with a seed drill can help you use your resources more effectively. However, the trip charge remains the same regardless of the size of your property. Even if you decide to do the work yourself, purchasing or renting the necessary equipment can be expensive if you do not already own it.

CAN QUALITY CHARACTERISTICS BE ACHIEVED ON SMALLER ACREAGE?

Native prairies do a lot! Can those benefits be realized on smaller parcels of land? The answer is a resounding YES! Every effort counts and is crucial in reconnecting fragmented landscapes. Wildlife and pollinators require a diversity of native habitats, as well as continuous habitats. Unfortunately, the prairie landscape has been fragmented, and it is our responsibility to piece it back together. As these patches become smaller, we face the increasing challenges.

Even small sites can yield significant ecological value through thoughtful and prioritized planning. By using high-quality native plant mixes that are specific to your soil and locally adapted, you can enhance the establishment of a resilient and diverse prairie. Small prairies can connect with other natural areas, improving the ecological quality of the overall landscape. Restoring smaller prairies not only benefits pollinators and various bird

species, but it also creates essential links between larger restoration efforts and remnant habitats.

A well-managed small prairie can showcase a variety of important features, including rich native plant communities, support for pollinators, erosion control, and recreation. These small prairies can serve as excellent examples of conservation practices, aligning closely with specific ecological goals.

FIND YOUR COMMUNITY TO BUILD CONNECTIVITY

The Fayette Prairie Chapter of the Native Prairies Association of Texas recently hosted a symposium titled "Five Tools of Prairie Restoration." This event focused on training and discussions about utilizing the five tools described by Aldo Leopold. Steve Nelle, the author of "Lessons of Leopold," emphasized the importance of a land ethic and respect for the land that is essential when committing to prairie restoration, regardless of the size of the project. Will Newman concluded the symposium by proposing a sixth tool—community—highlighting the incredible power of collaboration. Our collective commitment will help us meet the challenges of rebuilding native prairie habitats.

One of our chapter members and land stewards beautifully summarized this sentiment: "The most valuable information is the motivation from the presentations and meeting like-minded people that just encourages us to keep on going when it gets tough!" The value of education and community, such as what we offer at the Fayette Prairie Chapter, cannot be overstated. Although restoration efforts can be challenging, our chapter provides invaluable education for land stewards eager to learn about the restoration process, timing considerations, and how to identify personal goals. We invite you to join NPAT and the Fayette Prairie Chapter, as well as subscribe to our newsletter, where you will find support for your restoration and stewardship aspirations.

GUIDANCE AND COST-SHARING RESOURCES SPECIFICALLY FOR YOU

No matter the size of your land, you can significantly contribute to restoring tallgrass prairie. The Fayette Prairie Chapter's Smaller Acreage Restoration Program (SARP) provides crucial resources to assist members in their prairie restoration efforts. With financial aid, technical expertise, educational opportunities, and access to equipment and chapter resources, we are dedicated to promoting effective restoration and sustainable prairie maintenance. In partnership with the Texas Parks and Wildlife Department (TPWD), SARP develops customized restoration plans tailored to each steward and their land.

Our focus is on prairies that are under 25 acres—the typical minimum size for many other cost-sharing programs. We help cover initial costs for materials such as herbicides, and native grass and forb seeds that are specifically chosen for our ecoregion, as well as

contractor support. Our restoration plans also offer guidance, access to necessary equipment, and organized workdays to aid in completing the restoration process. As more people move to rural areas and seek to care for their land, SARP plays an essential role in addressing the fragmentation of the Fayette Prairie and the surrounding Post Oak Savanna.

Small prairie restorations by Texas landowners contribute significantly to regional conservation efforts, supporting biodiversity, ecosystem health, and climate resilience—making a meaningful impact.

Every small change can make a big difference!

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Learn more about SARP and consider if your project may qualify: <https://texasprairie.org/sarp/>

Contact us for sponsorship opportunities to support this important work: fayette@texasprairie.org