BACKGROUND

POLLINATOR POPULATIONS DECLINING

Three-fourths of the world’s flowering plants and about 35 percent of the world’s food crops depend on animal pollinators to reproduce. It is estimated that one out of every three bites of food we eat exists because of animal pollinators like bees, butterflies and moths, birds, bats, beetles and other insects. In order for humans to survive, we need healthy populations of pollinators.

In recent years some pollinators have seen drastic reductions in populations. Losses in one species negatively impact the overall diversity of pollinators and their ability to sustain our planet. The monarch butterfly is one of these pollinators. This iconic species has seen an ≈85% decrease in population over the last 3 decades resulting in the International Union for Conservation of Nature (IUCN) listing the species in 2022 as a threatened species, as well as being listed as a candidate species by the US Fish and Wildlife Service.

One of the primary factors for these decreases in population are losses in breeding, migratory, and overwintering habitat due to loss of grasslands to agriculture, drought, and urban development (https://www.fws.gov/initiative/pollinators/monarchs). Without adequate habitat and scattered food sources (nectaring resources) throughout the migratory pathway, populations will continue to decline.

SOLUTION

INDUSTRY LEADERSHIP IN HABITAT RESTORATION

Texas, geographically, sits in a critical portion of the migratory path of monarchs and other pollinators. As they migrate south across the United States in the fall, pollinators funnel through Texas on their way to Mexico. In the spring, Texas is home for reproduction as they make their way north. Texas is extremely important to the recovery of this and other species and reversing the species decline will require an “all hands on deck” approach. Industry partners including transportation and energy have the opportunity to play a major role in pollinator recovery by partnering with private landowners and conservationists.
Texas contains ~171 million acres of land. Approximately 8% of that is utilized as transportation and energy rights-of-way (ROW). These 14.4 million acres bisect privately owned rangelands and are scattered throughout the state. Industry partners can greatly impact imperiled species across the state by partnering with landowners when restoring their ROW with native pollinator-specific plants, creating a connective patchwork of habitat across the state. This will not only benefit the monarch and other pollinators, but provide food plots for other wildlife as well.

Through partnership with landowners, industry also has the opportunity to educate and advocate for native habitat creation beyond the ROW. Collaborative conservation can additionally serve as a driver for improved relationships with surface landowners.

**SOLUTION EXAMPLE**

**POLLINATOR HABITAT RESTORATION IN THE EAGLE FORD SHALE**

EOG Resources, Inc. (EOG) has worked in partnership with their landowners in the Eagle Ford Shale to restore native grassland and nectar-producing forbs on downsized pad sites and pipeline ROWs. Through collaboration with the seed industry, they developed 3 regional seed mixes and worked with their seeding contractors to implement native planting as an option for landowners. Their land agents worked to identify landowners and communicate the importance of native habitat on the landscape. Since the project inception, EOG has planted over 175 acres of habitat and has partnered with over a dozen large landowners. They have been the catalyst for these landowners partnering with conservation agencies to conduct additional restoration beyond the right-of-way. This habitat not only benefits pollinators and grassland birds, but also socially and economically important game species such as bobwhite quail and white-tailed deer.

**SOLUTION ELEMENTS**

**PROTOCOLS, PARTNERSHIPS & EDUCATION**

When implementing the practice of native habitat restoration on ROW, industry must develop protocols and make them part of their standard operating procedures. For long term success, these must be supported throughout the organizational structure and understood at each level of decision making. Protocols to be considered vary among companies, but some industry-wide perspectives should be considered:

- **SEED CONTRACTORS** Seek out & partner with restoration & seeding contractors that have the appropriate equipment & experience for planting native seed & know the benefit of native rangelands.

- **NATIVE SEED MIXES** Work with seed companies to create region-specific seed mixes by soil type for your area. Seed companies provide expertise & guidance for seed selection varieties specific to your needs. This helps drive down cost & streamlines the process for seeding contractors.

- **EDUCATE LAND AGENTS** Educate & develop land agents & team members from operations so there is an understanding of the process & importance of native habitat & enable them to communicate the importance to the landowners they work with.
Proactively identify landowners who are interested in wildlife management and willing to adopt grazing practices that facilitate native habitat restoration. Industry moves quickly and sites must be identified well in advance to ensure they align with operation’s planning schedule.

**SOLUTION ELEMENTS**

**PROTOCOLS, PARTNERSHIPS & EDUCATION**

**IDENTIFY LANDOWNERS**

Establishing native pollinator habitat as a standard operating procedure takes time to implement and streamline. Demonstrating success early and minimizing hurdles throughout the process will create buy-in and make implementation more efficient.

Develop and utilize a handout and readily available materials to engage in dialogue with landowners, conservationists, contractors, and employees. Materials should include grant or split funding opportunities through agencies such as Natural Resources Conservation Service (NRCS) and Texas Parks and Wildlife Department (TPWD) (or relevant state/local agencies). This provides the opportunity for landowners to increase impact on land outside the ROW.

Utilize funding sources available for pollinator restoration. Agencies, such as National Fish and Wildlife Foundation (NFWF), have grant funding available for pollinator habitat restoration. Partnering with a non-profit to develop a target-specific project opens up funding opportunities.

Work with industry partners to evolve contractor standards. Finding contractors with appropriate equipment throughout your area of operations can be difficult. Advocate for an industry wide standard for all contractors that incentivizes native habitat seeding. An example would be the Sustainable Forestry Initiative implemented by the North American forest products industry.

Utilize ecosystem service evaluation to understand the full benefit of the project and offset additional costs. Native seeding requires additional costs. This additional cost can be offset by quantifying the benefits not only to wildlife, but biodiversity, water, and carbon, and incorporate these benefits into sustainability reporting or as a metric within ESG goals.

Set a realistic timeline and benefit goal. Recognizing the challenges associated with changing well-established standards and procedures, set a realistic timeline for implementing these new practices. Native habitat restoration takes time and is heavily influenced by factors beyond our control e.g. persistent drought, invasive species, etc. Manage expectations by articulating upfront the long term benefits of native habitat.