

# Protecting Ecosystems through Regional Wildlife Habitat Restoration

## Initiative Summary Statement:

Develop and implement policies to coordinate protecting diverse ecosystems through regional wildlife habitat restoration in the County with prioritization given to restoring wildlife habitat damaged by Hurricane Ian.

## Initiative Description:

**Objective:** Identify and coordinate policies and regulations across jurisdictions to restore and protect the wildlife habitats and ecosystems native to Southwest Florida. Protecting the places where wildlife live is crucial to healthy water quality and strengthens the landscapes' ability to defend itself against regional vulnerabilities like wildfires, erosion, and inundation. The County's unique and biodiverse habitats host species that are endemic to Southwest Florida, such as the Florida Panther, Florida Black Bear, Gopher Tortoise, West Indian Manatee, Smalltooth Sawfish. Biodiverse, healthy ecosystems are the first barrier of defense to human's health and property during natural extreme events and must be restored and protected for a more resilient community.

**Need:** Functional natural resources provide valuable economic, health, and ecological benefits commonly referred to and often quantified as ecosystem services. A variety of challenges have posed both historical and potential threats to wildlife. Wildlife habitats in the County were impacted by the destruction of Hurricane Ian, and the remaining man-made storm debris continues to impede the recovery of a wide array of species in the ecological community. In addition to damages from Hurricane Ian, algae blooms and bacteria, and sea level rise risk negative impacts on local wildlife habitats. Recent algae blooms have significantly compounded issues throughout the County's water sources, and researchers have confirmed that these algae blooms have killed a variety of fish and birds. The continued presence of storm debris is impeding progress and further exposing underlying problems with wildlife protection. While the environment is resilient to human impacts if properly planned and managed, higher density and intensity developments can be incompatible with natural areas and lead to degradation. Higher density and intensity developments may be incompatible with natural areas. Transition from natural landscape to developed areas can increase the impervious areas, which drastically reduces the potential for water runoffs to percolate through soil for natural filtration and recycling. The pollutants loaded into those runoffs from developed areas can then make their way to nearby waterbodies and degrade water quality. Policies should be developed to incentivize

maintaining pervious areas and natural areas, such as amending Land Development Codes to cap the ratio Pervious/impervious of planned development. Jurisdictions may also propose more alternatives for natural land preservation in lieu of built-up stormwater treatment areas both for new development and retrofit development projects. To reduce impacts from development, Lee County has examples of incentives to reduce density and intensity in areas such as the Density Reduction/ Groundwater Resource area for the purposes of water recharge and resources protection. To protect wetland and upland habitats, there are incentives in the Land Development Code to reduce development within Lee County. Due to the complicated nature of growth management, jurisdictions must work in coordination to protect habitats that cross regional boundaries to protect wildlife and the sustainability of ecosystem services the region depends upon.

Protecting habitats through land management is not enough to fully address the challenges of this region. Estuarine species are at risk of temperature change and ocean acidification, but they are not directly protected by land acquisition. Implementation of this Initiative requires an approach to ecosystems that includes both terrestrial and estuary species to mitigate all threats in a holistic way. Temperature differences in ecosystems like Six Mile Cypress and Estero Bay demonstrate the connection of changes to the terrestrial and estuarine ecosystems.

**Regional Approach:** A regional approach to restoration includes coordination of policies, incentives, and regulations across jurisdictional boundaries to protect the interconnected habitats of the County. Policies can be developed to incentivize maintaining pervious areas and natural areas. Land acquisition through the Conservation 20/20 Program is one method to preserve environmentally sensitive land that contributes to this regional approach. However, the protection of natural resources and regional ecosystems requires additional coordination of restoration efforts. Lee County has examples of incentives to reduce density and intensity in areas such as the Density Reduction/ Groundwater Resource area for the purposes of water recharge and resources protection. To protect wetland and upland habitats, there are incentives in the Land Development Code to reduce development within the County. Due to the complicated nature of growth management, jurisdictions must work in coordination to protect habitats that cross regional boundaries to protect wildlife and the sustainability of ecosystem services the region depends upon.

Local, native species depend on interconnected ecosystems and know no jurisdictional boundaries. Therefore, regional collaborations and agreements between state, local governments and private landowners must be developed to protect those ecosystems and associated wildlife from impeding threats such as pollution and development.

To bolster the biodiverse ecosystems, which are a significant contributor to the local economy, it is essential to enact policy changes with regional consideration of impacts. For example, regional watersheds such as the Corkscrew Regional Ecosystem Watershed (CREW) span thousands of acres. Some of this land is managed by state partners but has direct effects on the natural resources of Lee County, the Village of Estero, and the City of Bonita Springs. Without conservation efforts, some of these habitats could be lost and the health of the fish and wildlife will be diminished.

**Impact:** The recovery and resilience of the region depends on the protection and restoration of natural resources to sustain the ecosystem services and benefits for generations to come. Due to the negative impacts and damage to the natural habitats from Hurricane Ian, it is vital to restore the environment to protect the native species and strengthen the ecosystems. Post-storm recovery provides the region an opportunity to identify and coordinate policies to protect the natural habitats of the County. The existing Conservation 20/20 Program can further conserve environmentally sensitive lands and in turn protect wildlife habitats. Benefits of cohesive ecosystem of upland, flow ways, wetlands that are located inland include protection against inland flooding. Threatened and endangered species will also benefit from conservation tools that will assist them in surviving on their own in the wild. The region benefits from coordinating and enacting regulations that will protect and restore habitats from degradation.

While healthy habitats are crucial to natural resources, they also make significant contributions to the regional economy from agriculture and fishing all the way through to tourism.

#### **Key Considerations:**

- Consider establishing a regional working group or committee with a specific focus on habitat restoration across jurisdictional boundaries.
- Update existing and develop new wildlife regulations to restore the diverse ecosystems in the County.
- Remove debris from wildlife habitats to protect the ecosystems and continue to support productive environments.
- Work with community outreach programs to educate the public on healthy habits. For example, the City of Fort Myers is planning to initiate an ecosystem class at Riverside to teach kids the importance of water and understand their responsibility to reduce impact.
- Consider the utilization of sand dunes as buffers for restoration across jurisdictions. Sand dunes are considered a low impact nature-based solution. Implementation requires community education as dune restoration needs often lie on private properties.

## Co-Sponsoring Branches:

Natural Resources, Economic Recovery, and Planning & Capacity.

## Stakeholders:

- Florida Department of Environmental Protection
- South Florida Water Management District
- County departmental experts on natural resources, parks, and recreation.
- Municipal departmental experts on natural resources, parks, and recreation.
- University Partnerships

## Potential Funding Sources:

- United States Fish and Wildlife Service
- United States Department of the Interior
- The Land and Water Conservation Fund Coalition
- The Nature Conservancy
- Conservation Nation
- Philanthropic Funding
- Florida's State Wildlife Grants Program
- Florida Fish and Wildlife Conservation Commission

## Resources:

- [Conservation 20/20](#)
- [The Lee Plan](#)
- [City Comprehensive Plans](#)