Project Name: Invasive Species Removal and Restoration of Habitat on Collier County Conservation Lands and Adjacent Private Properties

Project Sponsor: Southwest Florida Cooperative Invasive Species Management Area (SWFL CISMA)

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Project location (see attached map):

“The state of Florida has one of the most severe exotic species problems in the country; many taxa in Florida are as much as one quarter nonnative, and millions of acres of land and water are dominated by nonindigenous species.” (1997 Strangers in Paradise, Simberloff, Schmitz and Brown.)

What we know:

Only a fraction of introduced species become invasive, but of those that do become invasive - over 50% of those species have been introduced for horticultural purposes. When combined with plants brought in for agriculture, we find that a large percentage of species that have gone on to be invasives were brought in intentionally, in fact 90% purposeful in FL; 60% purposeful plant introduction in CA. (That percentage varies by plant growth form and by region. For example, 82% of invasive woody species in the U.S. were introduced as ornamentals (Reichard and Hamilton 1997). In Florida, 65-80% of all invasive plant species were introduced for this reason (Gordon and Thomas 1997)).

Invasive species are the second greatest threat to imperiled species – after habitat loss. Invasive non-native plant species have harmful impacts on native species, agricultural productivity, infrastructure, and human health (Wilcove et al.1998, Pimentel et al. 2005). Impacts of only a subset of these species are estimated to cost the U.S. approximately $135 billion annually through direct damage, treatment costs, and losses to productivity (Pimentel et al. 2005).

More than 50% of Florida’s 520+ listed plant species are threatened by invasive plants. Impacts of invasive plants in natural areas includes increased competition or hybridization with native plants; changes in hydrology, fire ecology, light levels and overall community structure; and decrease habitat quality of wildlife and domestic animals.

Invasive species know no boundaries, they cross natural and disturbed sites, public or private. Public land managers have realized that they need to look beyond their own property boundaries to a more regional scale if they want to be successful in invasive species control. In recent years, however, the need for interagency cooperation has taken on new importance as budgets decrease.
and managed acres increase. In response, invasive species partnerships have been forming across the Sunshine State to better pool the resources, expertise, and efforts of their collective agencies.

Cooperative Invasive Species Management Areas (CISMAs) are an example of one of these collaborations which coordinate resources and partners in a more strategic and landscape level approach to invasive species issues. CISMAs are an effective way to formalize partnerships among public and private entities working toward a common goal of increased awareness and effective prevention and control of invasive species. CISMAs are a mechanism for long-lasting cooperation and community awareness and involvement. Specific goals of CISMAs include an increased effectiveness and decreased cost by working together, pooling resources and tools to develop a unified approach, bridging the gap between public and private landowners, and encouraging development and implementation of new and innovative approaches. CISMAs specifically address concerns including prevention, education/awareness, early detection and rapid response to new threats or locations. They help with monitoring of existing invasive species, development of integrated pest management plans and determining success of management.

The Southwest Florida CISMA (SWFL CISMA) works together to provide coordinated assistance and expertise on invasive species management, prevention, and education to both public and private landowners on a landscape level throughout Charlotte, Collier, Hendry and Lee counties. This allows us to expand our efforts across the landscape, rather than just political or property boundaries. By combining knowledge and experience, we are able to develop, adopt and utilize Best Management Practices which allow us to reduce risks and improve the results of control efforts. Also, by improving information sharing and communications we combine our resources with a broader focus area to provide a more effective early detection and rapid response network.

The SWFL CISMA uses the partnership (public and private partners) to secure, share and coordinate funding, thereby reducing individual costs in a time when resources are limited. To that end, this project is comprised of several elements that represent the major goals and objectives of the SWFL CISMA partners in Collier County. In order to accomplish these goals, there are two components to this project; first, there will be several invasive plant treatment sites that span both private and public lands (3,601 acre area); and second, SWFL CISMA members will attend outreach and training events across the county to increase awareness of the invasive exotics problems in southwest Florida.

“Working across fencelines” will help foster the public-private relationship which is so important to controlling the spread of invasive plants across the landscape. Specifically, Florida Exotic Pest Plant Council (FLEPPC) Category 1 or 2 listed plants will be the primary target species, however, Early Detection, Rapid Response (EDRR) plant species will be an important part of our overall management efforts. Management will include initial treatments, as well as, maintenance and follow-up treatments and strategies to prevent the re-establishment of targeted invasive species on the planned project sites.

The most efficient management strategies include the following elements. The first element entails devoting resources to immediately addressing small, new infestations. Continuing ongoing initial eradication activities on large and small parcels is also an important element. Dedicating resources
to re-treatments (initial treatments generally only achieve partial control) is a critical element of the long term successful eradication of exotic species. Finally, management strategies will include employing decontamination procedures at each step of the process to minimize the potential for spread.

We are united by a common mission and vision, increase visibility of the problem and consequently build community awareness. Public awareness and engagement is perhaps the most critical element of a long term successful plan to manage and control exotic species. The SWFL CISMA currently conducts outreach at events in Collier County. We realize that this is one of the most important duties that we perform for our community, and want to expand our efforts. Without educating the public about the invasive species we manage, we fight a losing battle.

The SWFL CISMA will attend at least 2 county events annually to provide “hands on” identification of target species, written information about specific plants and where they can get help, and engaging children in the importance of our native ecosystems and how invasive plants negatively impact the health of these systems. We will also provide at least 1 training annually that provides identification of these plants, demonstrations on the best treatment techniques to remove the plants most effectively, and what native plants are available for restoring treated areas. Through private lands programs that CISMA partners work with, like USFWS Partners for Fish and Wildlife Program, FFWCC Landowner Assistance Program and the Florida Forest Service, we will engage with landowners that border our public lands to implement a holistic approach to invasive species management.

**Specific Projects:**

When choosing the treatment project listed below, we focused on right of ways (ROWs) along roads and canals that border conservation lands and link between lands. Each section of the project area borders at least one conservation area, and expands on current invasive species treatments on these sites.

**Landscape Level Invasive Species Management Project**

*Location:*

Section 1: Along the I75 corridor between CR 951 and SR 29;
Section 2: SR 29 between Immokalee and US 41;
Section 3: US 41 between CR 951 and SR 29;
Section 4: CR 951 between I75 and Immokalee Rd.;
Section 5: Immokalee Rd between CR 951 and the town of Immokalee, including road to the Rivers Rd. Project, Corkscrew Swamp, and Pepper Ranch;
Section 6: Golden Gate Canal (#?), which includes numerous private landholdings and the Nancy Payton Preserve
Section 7: SR 92 between US 41 and bridge, including the road that leads to McIlvane Marsh.
Description and purpose:

Generally, invasive plants and animals in the region are a priority for public land managers and a small, motivated group of consultants, contractors, and landowners. Cooperation to tackle these threats to the ecosystems of southwest Florida has a good track record among many of the public landowners and a small number of private landowners, but does not have a regional emphasis that these invaders require. Reaching out to the private landowners is critical to achieving long-term success, because without their involvement in eradicating invasive plants from their own properties, there will be a constant seed source available to re-infest nearby public lands. These coordinated efforts serve to protect our valuable conservation areas, public lands and private lands from the continuing colonization of invasive species across the landscape.

This project will focus treatment along corridors that link current conservation lands, thereby producing a more effective and efficient way to implement long term management of invasive species across the County landscape. The SWFL CISMA and our cooperators will use current comprehensive plans to determine treatment schedules. We will implement currently recommended treatment techniques from the University of Florida and our partners to remove Brazilian pepper, Australian pine, cogongrass, Old World climbing fern, air potato and other FLEPPC Category I invasive plants along the sections described above. Each project section will be monitored bi-annually to ensure that treatments are effective and there are no EDRR species appearing. After initial treatment is complete, we will provide at least 2 follow up treatments to ensure a 95% success rate.

During the project period, the SWFL CISMA and our cooperators will be attending County events to provide education and outreach to the general public about the threat of invasive species and the benefit of planting native species. We will provide training and workshops to landscapers and Home Owner Associations on how to develop and implement a comprehensive invasive species management plan, which not only teaches removal of invasive species, but which native or non-invasive exotic plants are best to use to benefit the hydrology and soils in a specific area.

Total Cost: $1,152,230 which encompasses approximately 3,601 acres around 14,576,100m² of ROW as outlined in the above sections.

Matching Funding provided by cooperators as outlined in the table below.
Budget Narrative

Funds will be used to contract with local vegetation control companies, as well as purchasing appropriate herbicide, equipment and outreach materials for workshops, trainings, CISMA workdays and County events.

Multiple forms of in-kind goods and services are being provided in support of these projects, including the ongoing invasive treatments on the adjacent conservation lands. Most importantly, these projects will bring together partners who will dedicates their time, expertise, and equipment to collaborate and tackle a common problem. Partners involved include USFWS, Florida Forestry Service, Florida State Parks, Conservation Collier, Florida Fish and Wildlife Conservation Commission, Audubon Florida, and other SW FL CISMA partners.

Total Project Cost: __ $ 1,152,230 __

Total Cooperator Contributions: __ $ 1,365,000 __

Cooperator Table:

Conservation lands in Collier County spend approximately $1,365,000 annually controlling invasive species on 5,325 acres.

<table>
<thead>
<tr>
<th>Cooperator</th>
<th>Acres Treated</th>
<th>Treatment Costs</th>
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<tbody>
<tr>
<td>Florida Forestry Service: Picayune Strand SF</td>
<td>250</td>
<td>$40,000</td>
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<tr>
<td>Conservation Collier: 16 properties</td>
<td>1,675</td>
<td>$240,000</td>
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<tr>
<td>State Parks (FL Dept. of Environmental Protection): Collier-Seminole SP and Fakahatchee Strand Preserve SP</td>
<td>100</td>
<td>$100,000</td>
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<tr>
<td>Audubon Florida: Corkscrew Swamp</td>
<td>1,300</td>
<td>$325,000</td>
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Suggested implementation timeline:
Conduct initial treatment and retreatments on each section over 5 years, as outlined below

**Year One:** Treat Sections 4 & 6, attend the Florida Panther Festival and Earth Day, and conduct 1 Landscapers training

**Year Two:** Treat Sections 3 & 7, attend two outreach events, retreat Sections 4 & 6, and conduct one HOA training

**Year Three:** Treat Section 5, attend two outreach events, retreat Sections 3 & 7, and conduct one training

**Year Four:** Treat Section 1, attend two outreach events, retreat Section 5, and conduct one training

**Year Five:** Treat Section 2, attend two outreach events, retreat Section 1, and conduct one training
RESTORE Act: Collier County Project Proposal
Invasive Species Management Across Boundaries