



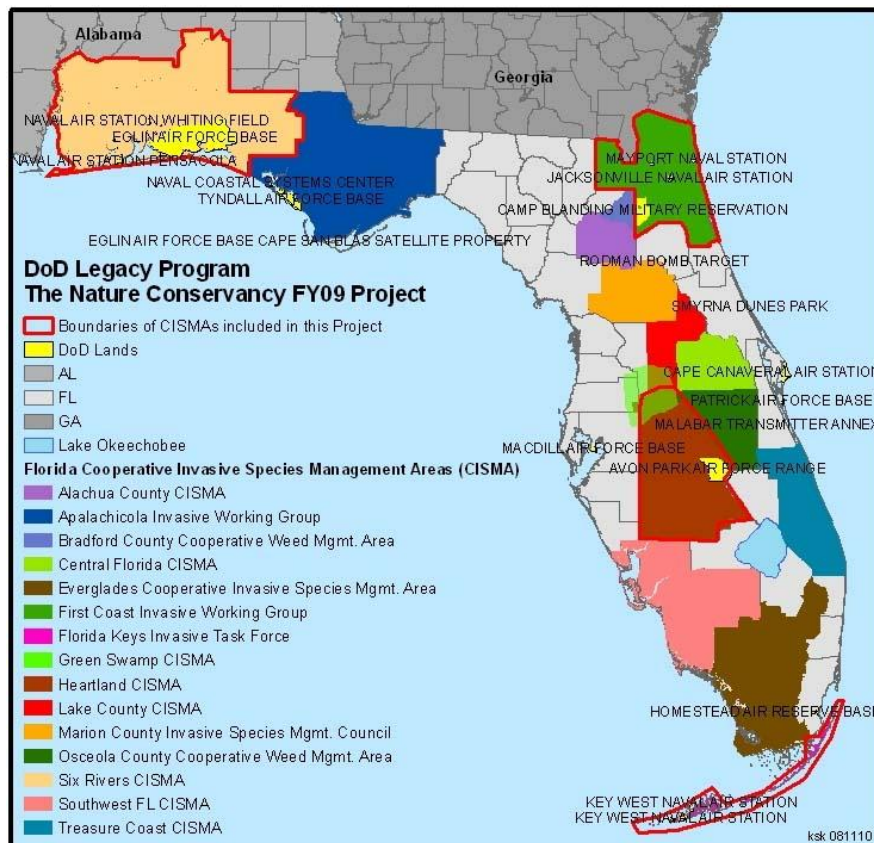
Department of Defense Legacy Resource Management Program

09-437

Creating Cooperative Invasive Species Management Areas (CISMAs) to Effectively Reduce Re-infestation on Four (4) Military Bases and Surrounding Lands in Florida

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Abstract

Eglin Air Force Base (AFB) and The Nature Conservancy (TNC) are cooperating in Florida on successful cross-boundary invasive species partnerships with generous support from the Legacy Resource Management Program (Legacy), as well as many supporting military installations, public agencies, and private landowners.

During Phase I of the project, TNC worked with four Department of Defense (DoD) installations and three Service Branches to create, strengthen, and sustain four Cooperative Invasive Species Management Areas (CISMAs) in Florida. This was done through the development of strategic plans to prioritize efforts and through conducting on-the-ground control projects to demonstrate effectiveness in approach. The work in Phase I leveraged tools developed by the Florida Invasive Species Partnership (FISP) and existing relationships through the TNC statewide Invasive Species Program. These existing strong conservation relationships include military installations, TNC and cooperators statewide as well as in the four focal areas, thereby extending the efficiency and effectiveness of invasive species management.

Background

Eglin AFB and TNC have cooperated in Florida for over a decade on successful cross-boundary partnerships with support from the DoD Legacy Program, as well as many supporting military installations, public agencies, and private landowners. These partnerships, such as the Gulf Coastal Plain Ecosystem Partnership (GCPEP) have proven to be instrumental in recovery and protection efforts assisting with prevention of future listing on DoD and other partner lands. In addition, countless restoration projects and land protection efforts have resulted directly from GCPEP.

With Eglin AFB as the lead installation, Phase I of this project was proposed in order to expand on the successful partnership between Eglin AFB and TNC in the Gulf Coast, as well as three other strong TNC partnerships with DoD bases in Florida including Camp Blanding Army National Guard (ANG), Avon Park Air Force Range (AFR) and Naval Air Station (NAS) Key West.

Invasive non-native species have been identified by all of the DoD installations as both ecological and economic threats to the natural communities and native species that they manage. Effective actions for addressing the threat of invasive species must occur at many levels within agencies and on the ground. Preventing the occurrence of new introductions is the most effective and efficient approach. Once an invasive species begins to establish in a location, early detection and rapid response efforts must occur to preclude development of large infestations. Achieving success with this approach requires communication and cooperation across boundaries and fencelines, as well as creating effective regional partnerships. This partnership approach is the foundation of the development of Cooperative Invasive Species Management Areas (CISMAs). CISMAs can effectively

work on both private and public lands, buffering DoD installations from the invasive species threats beyond their boundaries.

For Phase I of this project, the goal was to create strong CISMAs that would serve to buffer DoD and other conservation lands, as well as include these CISMAs under the statewide umbrella of the Florida Invasive Species Partnership (FISP) in order to tie them into a network of CISMAs and provide additional resources and continuity in approach.

Phase I of this project, funded for July 2009 through June 2010, proposed to:

- 1) Create two new CISMAs supporting Eglin AFB and Avon Park AFR;
- 2) Strengthen two existing CISMAs supporting Camp Blanding ANG and NAS Key West;
- 3) Work collaboratively with DoD and other regional partners to create five-year Strategic Plans detailing invasive species priorities and actions for each of the four CISMAs; and
- 4) Complete two on-the-ground invasive species control projects prioritized by Eglin AFB and NAS Key West.

Project Summary and Results

Overall, this project was very successful and a rewarding endeavor both for The Nature Conservancy and for the Department of Defense bases involved. During the project period, two new new CISMAs were created, with representative steering committees, supporting both Eglin AFB and Avon Park AFR. Two existing CISMAs supporting Key West NAS and Camp Blanding ANG were also strengthened. The four CISMAs are, respectively, Six Rivers Cisma, Heartland Cisma, Keys Invasive Species Task Force and First Coast Invasive Species Working Group. All four CISMAs completed five-year strategic plans and participated in the statewide Cisma network facilitated by FISP. Separate sections are included below for each of the four CISMAs included in this project as well as how these efforts were combined into the statewide network.

Statewide Coordination Summary and Results

Coordinating the CISMAs - Summary

Through the facilitation of TNC statewide staff, the four CISMAs involved in this project were able to work together on projects despite their geographic distance. During Phase I of this project, TNC staff leads for each of the four CISMAs met twice, once to develop a draft strategic plan template and again to participate in a statewide Cisma workshop. Through online meetings and conference calls staff leads were able to share individual progress and provide advice to each other on specific topics. Information on this project was also presented, via a University of Georgia partner (FISP member), at the “Strategic Management of Invasive Species in the Southeastern United States” workshop held in December 2009 in Chapel Hill, North Carolina. Additionally, TNC staff presented a project poster at the Sustaining Military Readiness Conference held in August 2009 in Phoenix, Arizona.

Coordinating the CISMAs - Results

Coordination of the four CISMAs was an integral part of this Project. Through TNC's role as co-chair and founding member of FISP, the value of combining two newly forming CISMAs with two existing CISMAs was recognized. One of the major goals of FISP is to provide resources to CISMAs and to reduce ineffectiveness. This goal is accomplished by hosting monthly conference calls/online meetings for all CISMAs to participate and by posting documents, links and other resources on the FISP websites. Rather than each CISMA having to "re-invent the wheel," the endeavor is to provide resources that can be easily adapted to each CISMA's needs as well as facilitate networking and communication between CISMAs to gain from each other's successes and challenges.

In the course of this project, seven conference calls were hosted with the four CISMAs. Conversations ranged from strategic plans to workday, from early detection rapid response efforts to keeping CISMA partners engaged. These calls were only for the four CISMAs involved in this project. In addition to these calls, TNC hosted ten monthly calls/online meetings for attendance by all CISMAs. These calls serve three purposes: 1) for CISMA leads to provide updates on their efforts and seek advice from peers, 2) for people interested in forming new CISMAs to listen in and gather resources, and 3) to get experts to present on invasive species topics. The last purpose, expert presentation, is of great value because it can bring these topics to CISMAs via the webinar service without anyone incurring travel expenses. Expert presentation topics ranged from Biological Controls and Laurel Wilt Disease to Getting the Most out of your Website and a Don't Release your Pet Campaign. To see the archive of these presentations, go to <http://www.floridainvasives.org/cismacalls.html>.

In August 2009, an in-person meeting for the four CISMA leads was convened. With internal funds, additional TNC staff was able to be included. These staff represented six additional CISMAs not involved in this DoD Legacy Program project (Treasure Coast CISMA, Apalachicola Invasive Working Group, Central Florida CISMA, Everglades CISMA, Green Swamp CISMA and CISMA of Lake County). The goal of this meeting was to get project staff to provide updates on each of the regions and CISMAs, and to jointly develop a strategic plan template that could be taken back to each of the CISMAs for review and revision. This meeting was very productive. Having the collective experience of ten CISMAs present provided the ability to work together to develop broad CISMA goals and then break out in groups to develop strategies and actions to insert under the goals. The entire group came back together to present additions and by the end of the second day, a draft strategic plan was completed to take back to the four CISMAs.

Also in August of 2009, TNC statewide staff attended the Sustaining Military Readiness Conference in Phoenix, Arizona. A poster on Phase I of this project was presented. In December of 2009, TNC staff was invited to participate in the Strategic Management of Invasive Species in the Southeastern United States Workshop held in Chapel Hill, North Carolina. This Workshop was offered by Invasive Plant Control, Inc. through funding from the DoD Legacy Program. The leaders of this workshop

looked to Florida to provide real life examples and successes of how CISMAs were working to improve efficiency and effectiveness of invasive species management. TNC staff was not able to attend, but were able to provide a presentation, including a slide on this DoD Legacy Program funded project, that was given by our University of Georgia FISP member.

In April 2010, the four CISMA leads met in-person for a second time to participate in the annual CISMA workshop facilitated by FISP and held at the Florida Exotic Pest Plant Council Symposium. The purpose of this workshop is to pull together CISMA leads and members from all of over the state and to discuss successes, challenges and new ideas. In all, 12 CISMAs participated. This meeting, along with the monthly CISMA calls, has strengthened the four CISMAs in this project by allowing them to network across the State.



Figure 1 - Annual CISMA Workshop Participants

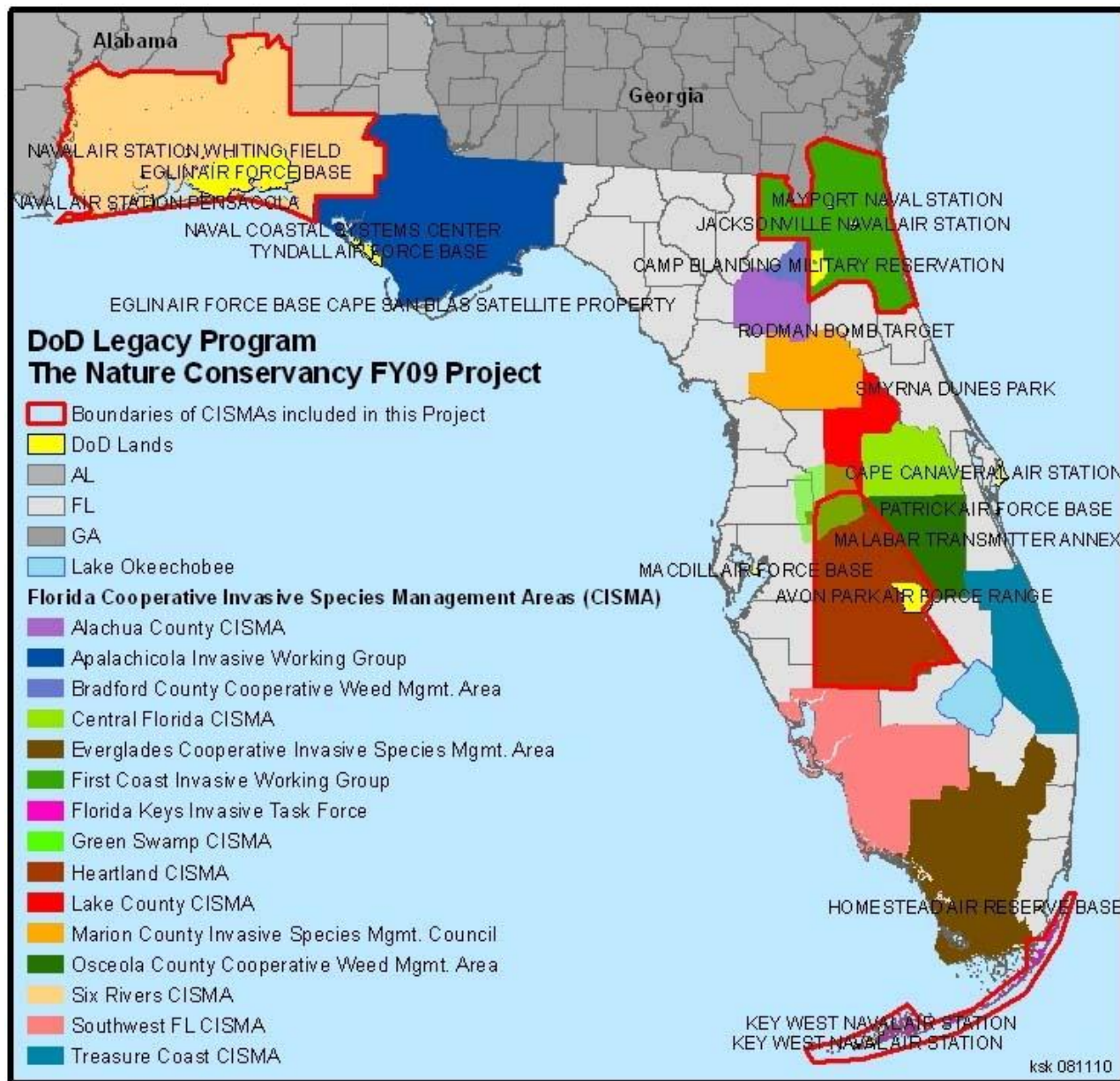


Figure 2 - Statewide Map showing DoD Legacy Program Project Areas

Florida Invasive Species Partnership Website Address: <http://www.floridainvasives.org/>

Included under separate cover:

- CISMA five-year strategic plan template (draft)
- PowerPoint slide presented at Strategic Management of Invasive Species in the Southeastern United States Workshop
- Poster presented at Sustaining Military Readiness Conference

Six Rivers CISMA/Eglin AFB – Summary and Results

Creating the CISMA - Summary

The Six Rivers Cooperative Invasive Species Management Area (CISMA) was founded with an inaugural meeting on October 14th, 2009. Over the next seven months, two additional meetings were held, a steering committee and six subcommittees were designated, and a five-year strategic plan was put in place. The boundaries, initially only 6 Florida counties, were expanded to nine counties including three counties in Alabama. Fifty representatives from twenty-five public and private agencies attended CISMA meetings.

Inaugural Participating agencies in Six Rivers CISMA:

- Federal: Eglin Air Force Base, Hurlburt Field (Air Force), Navy, National Park Service, United States Forest Service and USDA-NRCS Crestview
- State: Florida Department of Environmental Protection, Florida Division of Transportation, Florida Fish and Wildlife Conservation Commission, Florida Division of Forestry
- Regional/Local: Escambia County, Okaloosa County, Walton County, North West Florida Water Management District, and 3-Rivers RC&D
- Other (Universities, NGOs and for-profits): Bay Area Resource Council, Blackwater River Foundation, Chelco, Inc., Choctawhatchee Basin Alliance, Progressive Solutions, LLC, The Longleaf Alliance, The Nature Conservancy, University of Florida, University of West Florida, and Florida Natural Areas Inventory

Creating the CISMA - Results

During the inaugural meeting, attendees were presented with a description of CISMAs by TNC statewide staff, representing FISP. Participants were also reassured that there were many resources available through this statewide partnership and that they would benefit from the experience of other already-formed and forming CISMAs. The participants then discussed the benefits that would come with establishing a local CISMA. The benefits identified included:

- ✓ Increased outreach / public relations (website, media)
- ✓ Increased training (EddMaps, CEU opportunities)
- ✓ Strategic efforts across landscape (5 yr. plan)
- ✓ Increased communication between members (website, threats, EDRR, spatial data, treatment methods, not re-inventing the wheel)
- ✓ Increased funding leverage (joint proposals, in-kind match)
- ✓ Increased personnel for control (volunteers, Americorp, workdays, staff sharing i.e. TNC & USFS)

The participants then voted to establish a CISMA including six Florida counties (Escambia, Holmes, Okaloosa, Santa Rosa, Walton, and Washington).

The second meeting was held February 23rd, 2010. The goals of this meeting were to initiate the development of a five-year strategic plan and begin the process of establishing of a steering committee and subcommittees. A template strategic plan was presented to the participants. After review, the participants decided to establish subcommittees for each of the template's goals, with the exception of the first goal (sustaining the CISMA) which would be addressed by a steering committee. Each subcommittee would review the objectives and strategies pertaining to their particular goal, and report their recommendations for inclusion in a strategic plan during the next meeting. It was further recommended that each subcommittee designate a representative to participate in the steering committee.

In addition to the subcommittees based on the goals within the plan, attendees voted to establish a Funding Subcommittee, charged with pursuing financial support for the CISMA. Attendees also revisited the decision concerning the boundaries of the CISMA. It was decided to increase the CISMA boundaries from six Florida counties to a total of nine counties, including Baldwin, Covington, and Escambia counties in Alabama.

The third meeting was held May 11th, 2010. Representatives of each subcommittee presented recommendations for items to be included in the five-year strategic plan. All attendees discussed the recommendations, came to consensus, and adopted a five-year strategic plan. Six representatives of subcommittees then volunteered to serve on a steering committee, and the Steering Committee was established.

Six Rivers CISMA Website Address: <http://www.floridainvasives.org/northwest/>

Included under separate cover:

- Six Rivers CISMA Five-Year Strategic Plan

Control Project Summary and Monitoring Results

The Ecosystem Support Team (EST) monitored and re-treated priority invasive species occurrences on high-quality natural areas on Eglin AFB. These areas had been previously managed but were re-infested, primarily from invasive species populations on private property adjacent to the project areas. By monitoring and re-treating invasive species occurrences, the EST contributed to the continual early detection and rapid response necessary to defend against the threat of invasive species re-infestation in valuable endangered species habitat. An added benefit of working with the EST is their knowledge of the sensitive endangered species habitat present on Eglin AFB. The EST can be trusted to treat infestations without harming species of special concern.

The East Bay Flatwoods Project Area is 2950 acres located between the East River and the southern boundary of Eglin AFB in the southwestern quadrant of the base. These flatwoods are listed as critical habitat for the reticulated flatwood salamander, and harbor a variety of other rare and

threatened species, including the red-cockaded woodpecker, Florida bog frog, and Florida black bear. The project area was surveyed for invasive species by the Florida Natural Areas Inventory (FNAI) in 2001, and invasive species occurrences have been periodically treated since that time. A gyrotrack fuel break was created along the southern property line in 2007 to mitigate the threat of wildfire to private property, which provided access for invasive species treatment along the fence line. Under this Legacy agreement, the EST surveyed and re-treated all known occurrences of invasive plant species in the East Bay Flatwoods Project Area. An estimated 73 acres of infested area were treated. The vast majority of infestations were Chinese tallow (*Sapium sebiferum*), with occasional occurrences of Japanese climbing fern (*Lygodium japonicum*), Chinese privet (*Ligustrum sinense*), and mimosa (*Albizia julibrissin*). Special consideration had to be taken to ensure herbicide did not negatively impact reticulated flatwood salamander habitat, including extensive hand pulling of tallow seedlings.

The Okaloosa Island Project Area is located between Navarre Beach and Destin Pass. Several threatened or endangered species are found on the island, including perforated reindeer lichen, beach mouse and several species of sea turtle. The western section of the project area is a restricted beach with no public access, totaling 3,419 acres. The eastern section includes areas of public access, and totals 911 acres. These sites were surveyed for invasive species by FNAI in 2002 and 2006. Under this agreement, the EST provided the first treatments since the 2006 survey. All known infestation sites were visited and an estimated 44 acres were re-treated. The majority of infestations were Chinese tallow (*Sapium sebiferum*), with occasional occurrences of mimosa (*Albizia julibrissin*) and lantana (*Lantana camara*). Extra care had to be taken around perforated reindeer lichen to ensure it was not stepped on or exposed to herbicide drift.

In addition to the primary project areas, the EST spent one day treating a 2 acre Chinese tallow infestation near reticulated flatwood salamander ponds in the Mary Esther spray field, and one day treating a Japanese climbing fern infestation in the Brier Creek area (under 1 acre).

Control Project Summary and Monitoring Results

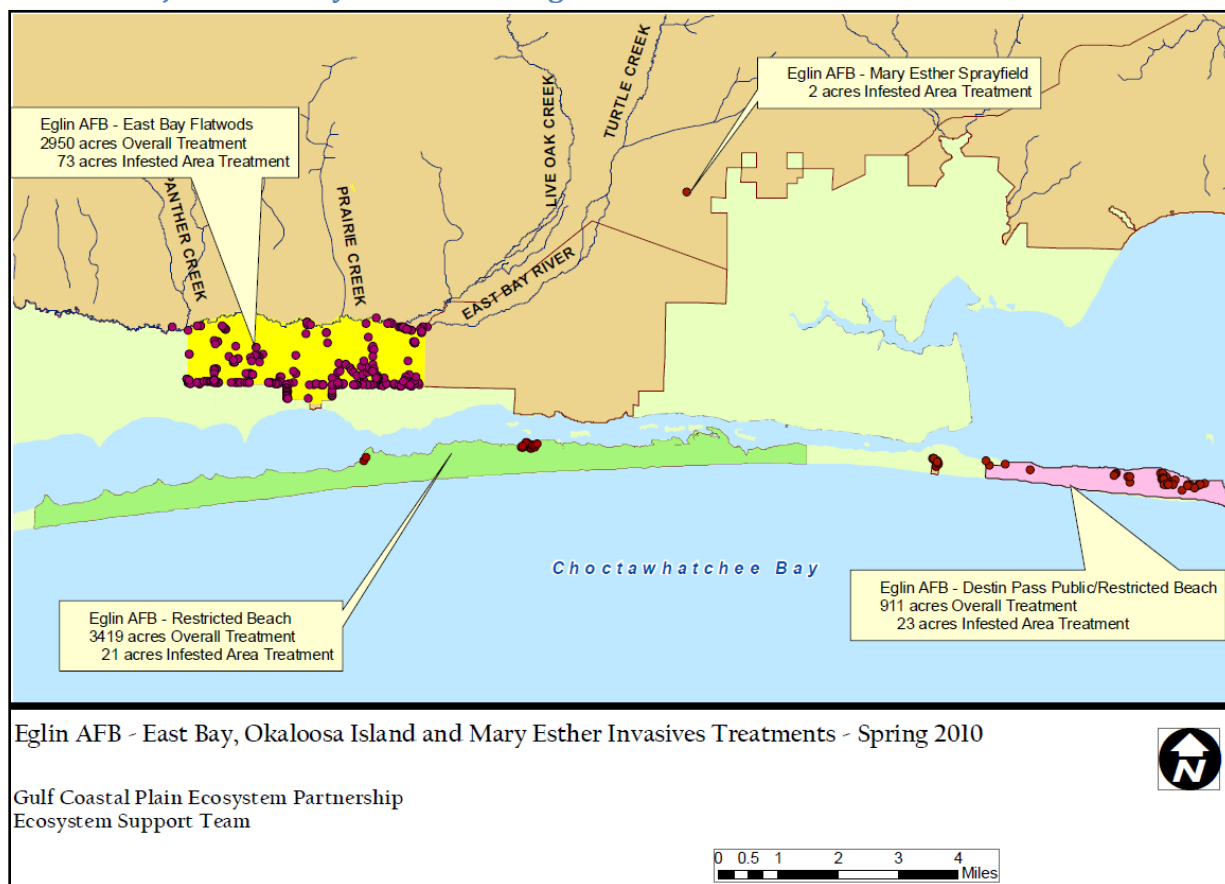


Figure 3 - Eglin AFB Project Areas

East Bay Flatwoods Project Area:

- Approximately 73 acres of infested area were treated. The majority of infestations were Chinese tallow (*Sapium sebiferum*), with occasional occurrences of Japanese climbing fern (*Lygodium japonicum*), Chinese privet (*Ligustrum sinense*), and mimosa (*Albizia julibrissin*).

East Bay Flatwoods Treatment Photos:



Figure 4 - East Bay Flatwoods tallow treatment (1)



Figure 5 - East Bay Flatwoods tallow treatment (2)



Figure 6 - East Bay Flatwoods tallow treatment (3)



Figure 7 - East Bay Flatwoods tallow seedling removed



Figure 8 - East Bay Flatwoods project area example (fenceline adjacent to private lands)

East Bay Flatwoods After Photos:



Figure 9 - East Bay Flatwoods treated tallow (1)



Figure 10 - East Bay Flatwoods treated tallow (2)



Figure 11 - East Bay Flatwoods treated tallow (3)

Okaloosa Island Project Area:

- 44 acres were re-treated. The majority of infestations were Chinese tallow (*Sapium sebiferum*), with occasional occurrences of mimosa (*Albizia julibrissin*) and lantana (*Lantana camara*).

Okaloosa Island Treatment Photos:



Figure 12 - Okaloosa Island tallow treatment



Figure 13 - Okaloosa Island tallow seedling removed

Okaloosa Island After Photos:



Figure 14 - Okaloosa Island treated lantana



Figure 15 - Okaloosa Island treated tallow (1)



Figure 16 - Okaloosa Island treated tallow (2)



Figure 17 - Okaloosa Island treated tallow (3)



Figure 18 - Okaloosa Island treated lantana

Heartland CISMA/Avon Park AFR – Summary and Results

Creating the CISMA – Summary

The Heartland CISMA was founded with an inaugural meeting on May 13, 2009. Nineteen representatives from nine public and private agencies attended the inaugural CISMA meeting. In the course of the next year, a steering committee was designated and a five-year strategic plan was put in place. In addition, with the assistance of Avon Park AFR, the members of the Heartland CISMA were able to conduct an aerial survey of one of the highest priority invasive plants.

Inaugural Participating agencies in Heartland CISMA:

- Federal: Avon Park Air Force Range and US Fish and Wildlife Service
- State: Florida Division of Forestry, Florida Department of Environmental Protection/Division of Recreation and Parks, and Florida Fish and Wildlife Conservation Commission
- Regional/Local: Polk County
- Other (Universities, NGOs and for-profits): The Nature Conservancy, Archbold Biological Station, and BASF

Creating the CISMA - Results

TNC called a meeting of members of the Lake Wales Ridge Ecosystem Working Group as well as other interested parties in order to discuss the formation of a CISMA. The idea of forming a CISMA had been talked about for a long time but had not moved beyond the initial discussion stage. TNC informed parties that thanks to the DoD Legacy Program, staff would be available to champion the formation of this new CISMA. TNC statewide staff was also present, representing FISP, and gave a presentation on FISP and CISMAs. This meeting reassured participants that there were many resources available through this statewide partnership to benefit them from the experience of existing CISMAs.

All participants unanimously agreed to the formation of a new CISMA and that the TNC representative would be the initial Chair of the CISMA. The name, Heartland CISMA, was selected, as well as geographic boundaries. The Heartland CISMA encompasses Polk, Highlands, Hardee and DeSoto counties. Since there was only one representative present from Hardee and none from DeSoto, the group talked about who to invite from those counties as well as additional people from Polk and Highlands. Those present composed a list of additional people to invite to become involved in this CISMA. It was decided that the next steps would be to engage those additional partners, form a steering committee and develop goals and a strategic plan.

At the Lake Wales Ridge Ecosystem Working Group meeting on September 29, 2009 and in individual phone conversations, the Heartland CISMA chair garnered support for modifying the template for a strategic plan for the Heartland CISMA and also for development of priority species

lists of invasives for control and early detection/rapid response. At the December 18, 2009 meeting of the Heartland CISMA, the strategic plan and priority species lists were addressed with all members volunteered to be on ad hoc committees that would address each effort. The strategic plan committee met February 23, 2010 to develop a draft plan. The priority species committee met February 24, 2010 to develop draft lists for control and early detection/rapid response species. Drafts were shared with all members via email and at the April 27, 2010 Heartland CISMA meeting, where everyone voted to accept the drafts as working documents.

At the December 18, 2009 meeting of the Heartland CISMA, all agreed it was a priority to continue the biennial aerial survey of the CISMA area to identify invasive Old World climbing fern locations, especially in vulnerable areas that are difficult to access on foot, to facilitate quick treatment on a landscape scale. At a meeting on January 7, 2010, the Commander at the Avon Park AFR agreed to pilot a small fixed-wing aircraft for the early February survey. Members of the CISMA signed up as potential flight surveyors, the chair developed a schedule and a proposed flight path with feedback from members, and surveys were undertaken the week of February 1st. Poor weather reduced the number of flight days, with surveys conducted of a subset of all proposed properties on February 3, 4, and 5, 2010. Mapped data were compiled and shared with members via email and at the April 27, 2010 Heartland CISMA meeting, facilitating follow-up treatment of identified infestations.

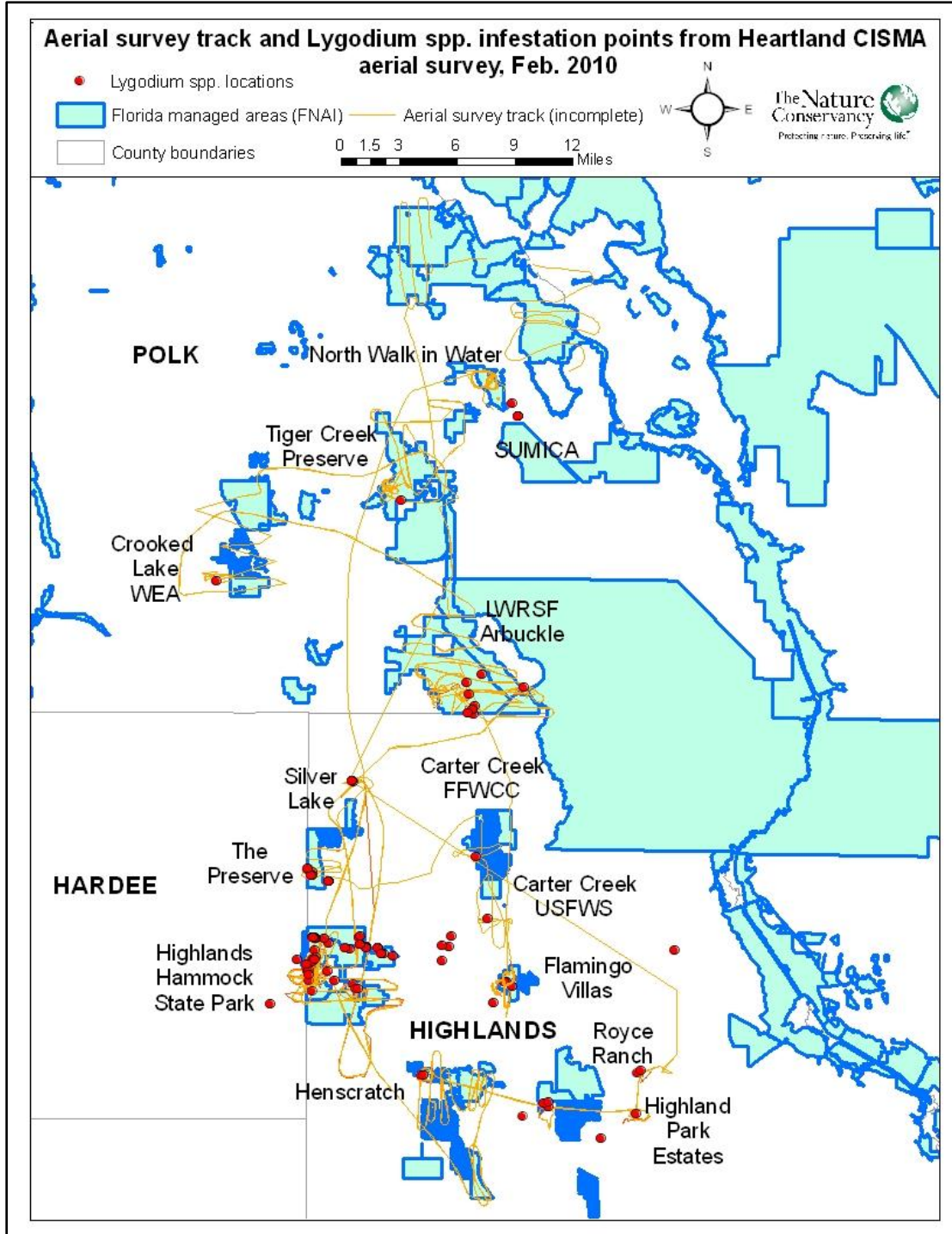


Figure 19 - Heartland CISMA aerial survey map

Heartland CISMA Website Address: <http://www.floridainvasives.org/Heartland/>

Included under separate cover:

- Heartland CISMA Five-Year Strategic Plan

Keys Invasive Species Task Force/NAS Key West – Summary and Results

Creating the CISMA – Summary

The Florida Keys Invasive Species Task Force (ISTF) was organized in early 1996 to address the proliferation of invasive exotic plants in the Florida Keys. Invasive animals were added to the group’s mission in 2005. The Task Force is composed of biologists, planners and natural resource managers from local, state and federal agencies, non-profits and public utilities, as well as concerned citizens.

By working through this DoD Legacy project, this task force completed their five-year strategic plan. The plan gave them a launching off point to move into creating a 2010 annual workplan. Also during this year, the Keys ISTF formally created a steering committee initially including staff from the following agencies: TNC, Monroe County, Florida Parks and Recreations, USFWS, FFWCC and the Navy. DoD staff from NAS Key West sits on the steering committee, as well as actively attends task force meetings and helps staff task force outreach events. Lastly, they completed the revision of the “Florida Keys Invasive Exotics Task Force List of Invasive Plants of the Florida Keys – 2010-2012”, which was a requirement for their strategic plan/workplan.

Creating the CISMA – Results

During the fall and winter meetings of this CISMA, members decided that the three-year timeline in their existing plan was too compressed for all the goals that had been set. TNC staff introduced the idea of expanding the timeline to five years and to base the revised version on the draft template that had been developed for this DoD project. The members reviewed this template and liked the fact that many of their ideas had been accepted into the template and felt that the “CISMA strengthening” parts of the template were very smart components to add to the plan. The members agreed that expanding the timeline would result in a better job for completing strategic tasks, especially given individual workloads. Lastly, based on recommendations in the strategic plan template, it was decided during the December 2009 meeting to formally create a steering committee.

During the February 2010 meeting, members met to finalize the five-year strategic plan as well as designate members for their steering committee. During this meeting it was decided to begin monthly meetings as opposed to bi-monthly as previously arranged. It was agreed that odd number months would be partner workdays on Early Detection/Rapid Response project and that even months would be business meetings. Lastly, members set 2010 Goals by going through the five-year plan and picking projects to work on this year. During the April 2010 meeting the final 2010 work plan was created out of the five-year strategic plan.

Lastly, the Keys ISTF has been assisting the Florida Fish and Wildlife Conservation Commission Invasive Plant Management Section (FWC-IPMS) (formerly Bureau of Invasive Plant Management, BISPM) for over 10 years with the prioritization, approval and coordination of FWC-IPMS funded projects on public conservation lands. One of the projects approved by the task force in May 2009

was for 31 acres of invasive plant removal work on NAS Key West conservation lands. This work has an estimated value of \$120,000 and was completed June 2010 (see map below for FWC-IPMS project areas on Navy lands). This was an added benefit to this DoD Legacy Program project as the control workday conducted for this project was on beach property immediately adjacent to NAS Key West conservation lands and was also prioritized and coordinated through the Keys ISTF.

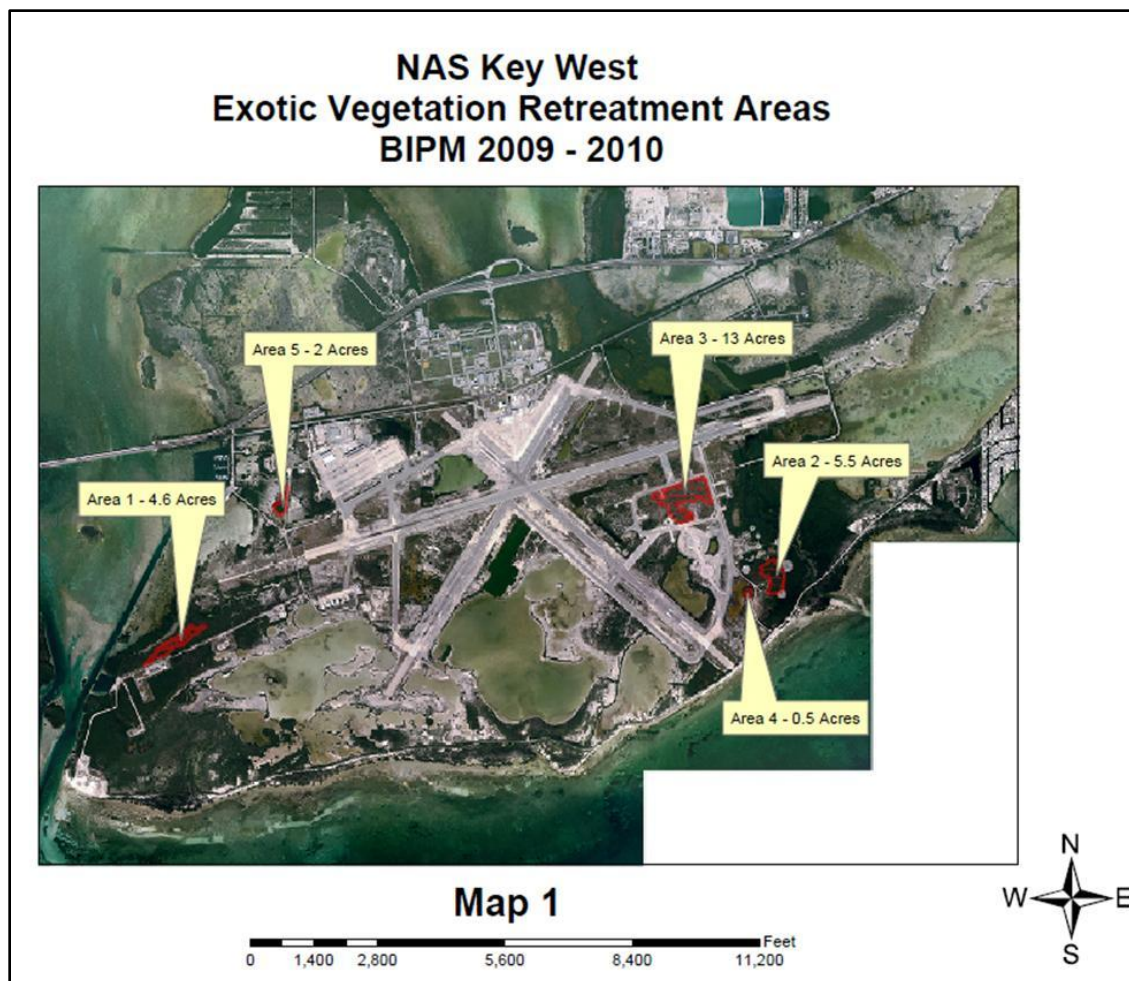


Figure 20 - Keys ISTF Prioritized Project for FWC Invasive Plant Management Section - NAS Key West

Keys ISTF Website Address: <http://www.floridainvasives.org/Keys/>

Included under separate cover:

- Florida Keys ISTF Five-Year Strategic Plan
- Florida Keys ISTF Annual Work Plan
- Florida Keys ISTF List of Invasive Plants of the Florida Keys - 2010-2012

Control Project Summary and Monitoring Results

The Nature Conservancy coordinated a Keys ISTF workday on June 12, 2010. This project was designed to remove priority invasive plants from a public beach area that is directly adjacent to NAS

Key West conservation lands. By removing these plants, a nearby seed source was removed thereby reducing re-infestation from this source onto NAS Key West.

Nearly one mile of beach was treated in the Florida Keys on Boca Chica Beach removing infestations of latherleaf (*Colubrina asiatica*) and beach naupaka (*Scaevola taccada*). Both of these priority invasive plants easily outcompete native beach plants and distribute their floating seeds to germinate on backcountry beaches. Mostly known only to locals, this beach hosts a natural coastline that is used as a nesting area for sea turtles as well as a stronghold for the endangered lower keys marsh rabbit. Native sea oats and sea grape were planted in the areas of thickest invasives removal to give the beach a head start towards recovering.

Six partner organizations assisted with this invasive plant removal project as well as five volunteers from the general public. Partner organizations were represented by seven staff and included the Navy, Florida Park Service, Monroe County, the Institute for Regional Conservation, the National Marine Sanctuary and The Nature Conservancy.

Much of the plant material was hand pulled (mostly *Scaevola*). Plants that were too large for manual removal were cut with brush cutters and/or loppers and sprayed immediately with Garlon 3a (triclopyr herbicide) on the cut stumps. All cut vegetative material was brought to the roadside and chipped. Mulched material was left on-site.

Control Project Summary and Monitoring Results

Boca Chica Beach Project Area

- Approximately one linear mile of infested area was treated (outlined below in red). The majority of infestations were latherleaf (*Colubrina asiatica*) and beach naupaka (*Scaevola taccada*).

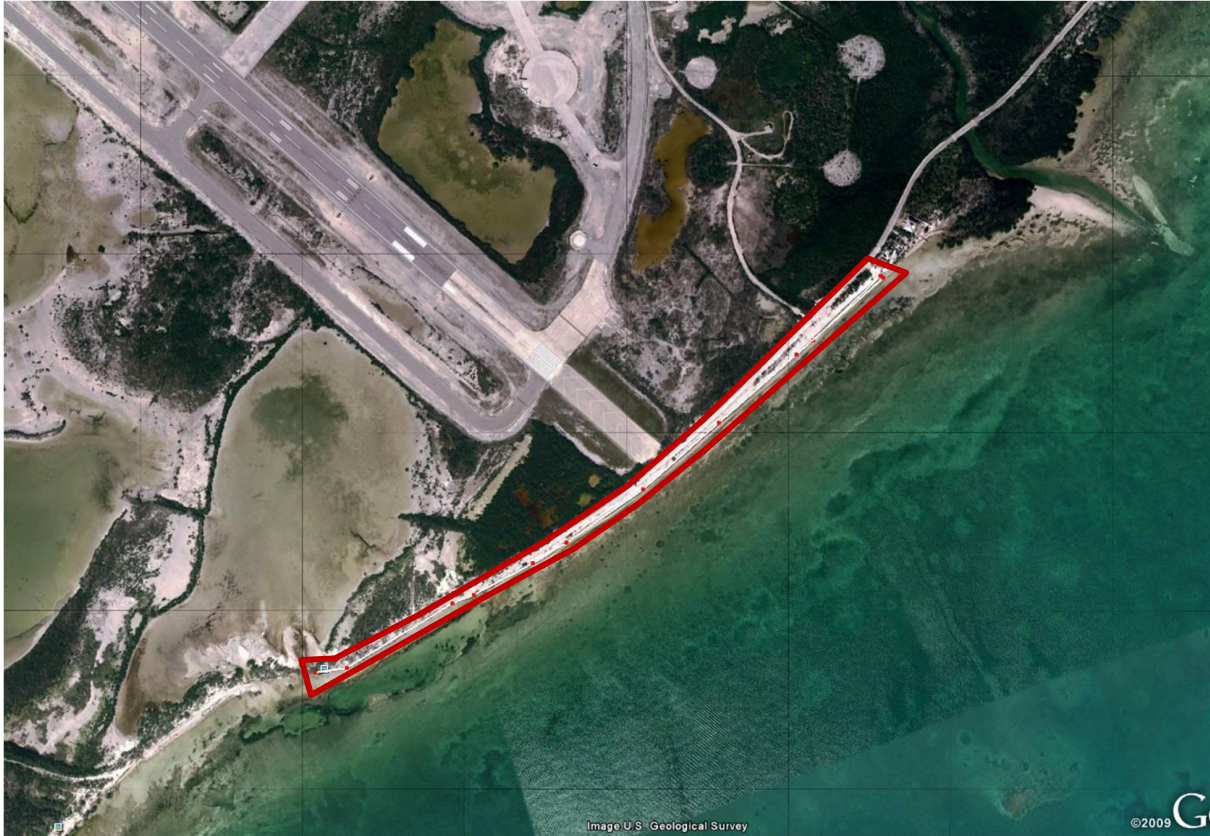


Figure 21 - Boca Chica Beach Project Area

Boca Chica Beach Treatment Photos:



Figure 22 - Boca Chica Beach volunteers hand remove Scaevola



Figure 23 - Boca Chica Beach cleared vegetation on road prior to chipping



Figure 24 - Boca Chica Beach Colubrina prior to treatment (Site C)



Figure 25 - Boca Chica Beach Colubrina prior to treatment (Site D)



Figure 26 - Boca Chica Beach Colubrina during treatment (Site D)

Boca Chica Beach After Photos:



Figure 27 - Boca Chica Beach roadway between beach and NAS Key West after treatment



Figure 28 - Boca Chica Beach Site C after treatment



Figure 29 - Boca Chica Beach Site D after treatment

First Coast Invasive Working Group/Camp Blanding ANG – Summary and Results

Creating the CISMA – Summary

The First Coast Invasive Working Group's (FCIWG) got established in December 2006 to work across federal, state, local, and private lands for invasive species management. The formation was the result of a TNC presentation given in late 2006 that highlighted the threat that invasive species posed to northeast Florida's biodiversity. More than twenty regional land and water resource managers present agreed that the threat warranted forming a CISMA and the managers have continued on as members during the three year tenure of this CISMA.

During this project, TNC worked with the members of the FCIWG to complete a 5 year strategic plan as well as form a steering committee representative of the federal, state, local and private members engaged in the CISMA. In addition, the FCIWG compiled an invasive plant manual for use by all members. The manual includes identification and control information for 29 species comprised of the Top 10 early detection/rapid response species from last year's FCIWG invasive plant survey, as well as 19 others listed as the highest priority species for the CISMA by the Florida Natural Areas Inventory.

Creating the CISMA - Results

In July 2009, the FCIWG formed a Steering Committee. The inaugural steering committee is composed of The Nature Conservancy, Army Corps of Engineers, the National Park Service, the U.S. Fish and Wildlife Service, Florida Division of Forestry, Florida Fish & Wildlife Conservation Commission, Florida State Parks, Florida Department of Transportation, St. Johns River Water Management District, and University of Florida Sea Grant.

TNC presented the draft strategic plan template to the steering committee in September 2009. This was the first CISMA to review the strategic plan and was instrumental in providing initial revisions and comments to the overall template. The other three CISMAs involved in the project benefitted from this initial review. The Steering Committee spent a considerable amount of time drafting, editing, and reviewing the plan to ensure it was comprehensive yet manageable and met over a span of four meetings between fall 2009 and winter 2010.

Much debate centered around including priority action items, with the caveat that every item should have a lead partner or subcommittee that could feasibly tackle the items, as well as, on the inevitable debate between the CISMA's "priority species" overriding individual land managers vegetation management plans or goals. In addition, a lot of time was spent agreeing on time frame (e.g. when the work should begin and end). It was obvious to the members of the steering committee that although they wanted to ensure the goals were manageable, a considerable amount of new resources would be necessary to be successful. Ultimately it was agreed to not delete items simply because of lack of current resources, but to go through and create a version of

the plan that was broken down by FCIWG subcommittee, and timeframes. This will allow the FCIWG steering committee to use the plan as a template for its annual plan, and begin tracking measurable achievements. The steering committee completed the strategic plan in January 2010. Two versions of the plan were developed, one is the full plan and the other is reorganized to reflect subcommittee responsibilities and timelines. To date, the plan has been vetted by the FCIWG Subcommittee Chairs and will go to the full FCIWG group for adoption in summer 2010.

Overall, the development of the five-year strategic plan has been a huge success. It allowed for the leaders of the group to customize a plan that fits their needs and will ensure they are successful in individually meeting their own goals as they relate to invasive species. Finding the balance between a long range strategic plan that addresses the threats for the region, yet is instrumental for individual land managers was time consuming but will prove to yield measurable results after its implementation.

Lastly, TNC was able to provide an intern to complete a FCIWG Invasive Plant Manual. This manual incorporated results from a FCIWG survey of members as well as data provided by FNAI. It is formatted to provide identification, impact and control information for each of the 29 plant species included. Prioritization of invasive plants and providing training materials on identification and control is called for in the FCIWG 5 year strategic plan.

First Coast ISWG Website Address: <http://www.floridainvasives.org/FirstCoast/>

Included under separate cover:

- First Coast ISWG Five-Year Strategic Plan

Conclusions

Overall the project was a huge success. Two new CISMAs were created and these CISMAs plus two existing CISMAs were strengthened through statewide collaboration and networking. All four CISMAs completed five-year strategic plans, utilizing a strategic plan template that was developed for this project. The template allowed for the leaders to work with their CISMA partners to customize a plan that fits their needs and ensured they were successful in individually meeting their own local priorities as they relate to invasive species. Two on-the ground control projects were completed, benefitting both Eglin AFB and NAS Key West. All four CISMAs participated in a statewide workshop held by FISP at the Florida Exotic Pest Plant Council (FLEPPC) Symposium. The profile of this project was increased regionally and nationally through presentations at the Strategic Management of Invasive Species in the Southeastern United States Workshop and the DoD Sustaining Military Readiness conference.