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

Six Rivers CISMA/Eglin AFB
Document created for this Project

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Creating the Six Rivers CISMA – Summary

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. 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.

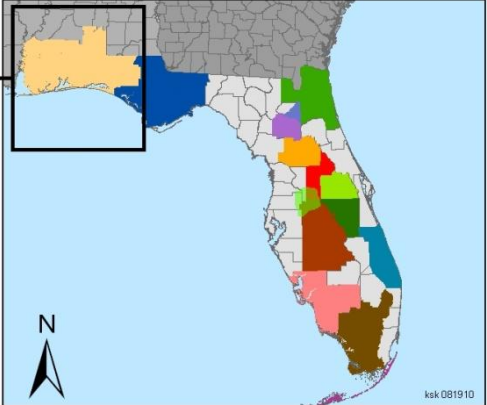Inaugural Participating agencies in Six Rivers CISMA:
- <u>Federal:</u> Eglin Air Force Base, Hurlburt Field (Air Force), Navy, National Park Service, United States Forest Service and USDA-NRCS Crestview
- <u>State:</u> Florida Department of Environmental Protection, Florida Division of Transportation, Florida Fish and Wildlife Conservation Commission, Florida Division of Forestry
- <u>Regional/Local:</u> Escambia County, Okaloosa County, Walton County, North West Florida Water Management District, and 3-Rivers RC&D
- <u>Other (Universities, NGOs and for-profits):</u> 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

Introduction to the Six Rivers CISMA Strategic Plan

This Strategic Plan, which is a deliverable of Phase I of this DoD Legacy Program project, along with its goals and objectives was designed to guide the interactions of all agencies and landowners within the CISMA boundaries. None of the strategies included are specific to any one agency or particular piece of property. Specific actions involving specific properties or agencies/organizations will appear in the details of the annual workplan.

Phase II of this project, which has been awarded, is designed to keep the process moving forward and continue building the structure of the CISMA. During this phase, the CISMA will create an annual report (year 2010) in order to document accomplishments and discuss efforts. The CISMA will also create an annual workplan for the next calendar year (year 2011) based on the strategic plan. The annual workplan will be more detailed about specific actions to be accomplished, specifying locations and partners as well as a timeline for completion.

Six Rivers Cooperative Invasive Species Management Area (CISMA)

Alabama

NAVAL AIR STATION WHITING FIELD
SANTA ROSA OUTLYING LANDING FIELD
SITE 8A OUTLYING LANDING FIELD EGLIN AIR FORCE BASE
PATTERSON NATURAL AREA
AIR FORCE SPECIAL OPERATIONS COMMAND, HURLBURT FIELD
NAVAL AIR STATION PENSACOLA

NAVAL COASTAL SYSTEMS CENTER

TYNDALL AIR FORCE BASE

Legend

Six Rivers CISMA
DoD Lands
Lake Okeechobee
Florida Cooperative Invasive Species Management Areas
Alachua County CISMA
Apalachicola Invasive Working Group
Bradford County Cooperative Weed Mgmt. Area
Central Florida CISMA
Everglades Cooperative Invasive Species Mgmt. Area
First Coast Invasive Working Group
Florida Keys Invasive Task Force
Green Swamp CISMA
Heartland CISMA
Lake County CISMA
Marion County Invasive Species Mgmt. Council
Osceola County Cooperative Weed Mgmt. Area
Six Rivers CISMA
Southwest FL CISMA
Treasure Coast CISMA

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Miles

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Six Rivers
Cooperative Invasive Species Management Area
Five-Year Strategic Plan

May 11th, 2010

Introduction

Six Rivers Cooperative Invasive Species Management Area (CISMA) is a partnership of public and private agencies and landowners from across nine Florida and Alabama counties. Alabama counties include Baldwin, Convington and Escambia. Florida counties include Escambia, Holmes, Okaloosa, Santa Rosa, Walton, and Washington. This CISMA includes Eglin Air Force Base, FL.

Six Rivers CISMA Mission Statement:

Implement a comprehensive, cooperative approach across boundaries to address the threats of invasive species to the lands and waters within the boundaries of Six Rivers CISMA.

Approach:

The most cost-effective way to address invasive species is to prevent them from reaching the CISMA in the first place. If, despite prevention efforts, invasive species reach the CISMA, early detection programs can help locate and eradicate those invasive species before they become widely established. If invasive species elude early detection and establish and spread in the CISMA or are part of a previous invasion, control and management programs to monitor and minimize their negative impacts to the economy and environment will be necessary, but these efforts can be very costly. The sooner we act the more effective and less costly our efforts will be (adapted from the Indiana Invasive Species Task Force 2008).

How to use this plan:

This plan is a working document and will be reviewed and, if necessary, revised annually. Every year, Six Rivers CISMA will create a short document that includes what was accomplished, what was not accomplished, what should be carried forward, what should be added, what should be dropped, and why.

Six Rivers CISMA will utilize steering committees, standing sub-committees and ad hoc sub-committees. The steering committee will represent the partners in the CISMA. Standing sub-committees will address a specific issue and continue as long as needed. Ad hoc sub-committees are a great tool to get a defined project completed in a defined time. For example, we may organize an ad hoc sub-committee to rank plants for prioritized control efforts. This group would complete the project, report back to the steering committee, and then disband. This is an efficient and productive technique to divide up the tasks and get engagement from partners that may not have time for a steering or standing sub-committee. It also provides documents and products to all partners with ownership to the CISMA.

How to read this document:

1. Tasks written in *italics* are the suggested minimums.

2. <u>Underlined dates and numbers</u> are suggestions of timelines and frequency for the tasks and should be modified as necessary.

Acronyms

ASLA = American Society of Landscape Architects
BMP = best management practices
CISMA = cooperative invasive species management area
CWMA = cooperative weed management area
FDACS = Florida Department of Agricultural and Consumer Services
FDOT = Florida Department of Transportation
EDDMapS = Early Detection and Distribution Mapping System (http://www.eddmaps.org/)
EDRR = early detection and rapid response
FISP = Florida Invasive Species Partnership (http://www.floridainvasives.org/)
FDOF = Florida Department of Forestry
FFWCC = Florida Fish and Wildlife Conservation Commission
FFWCC IPMS = Florida Fish and Wildlife Conservation Commission Invasive Plant Management Section
FLEPPC = Florida Exotic Pest Plant Council
FNAI = Florida Natural Areas Inventory
FNGLA = Florida Nursery, Growers & Landscape Associations (http://www.fngla.org/)
FNPS = Florida Native Plant Society (http://www.fnps.org/)
IFAS = Institute of Food and Agricultural Sciences
MOU = memorandum of understanding
NIWAW = National Invasive Weeds Awareness Week
ROW = right of way
SOP = standard operating procedures
USDA ARS = United States Department of Agriculture, Agricultural Research Service
USGS NAS = United States Geological Services Non-indigenous aquatic species (http://nas.er.usgs.gov/)
VCC = voluntary code of conduct (http://www.centerforplantconservation.org/invasives/codesN.html)
WEEDDAR = Weed Data and Reporting (database program)
WIMS = Weed Information Management System
WRA = weed risk assessment (i.e. the predictive tool) (http://plants.ifas.ufl.edu/assessment/)

Goal 1: Create, strengthen and sustain Six Rivers CISMA.

Objective: Form and sustain a strong partnership through CISMA.

1. Develop basic organizational structure for CISMA.

   a) <u>In 2010</u> use CWMA cookbooks and current CISMA examples to help form and sustain CISMA.
   b) <u>In 2010</u> coordinate a meeting with enthusiastic regional partners to form a new CISMA.
   c) <u>In 2010</u> establish geographic boundaries, a steering committee and a chair.
   d) <u>In 2011</u> and as needed, create standing subcommittees and ad hoc committees to assist with project specific CISMA efforts.

2. Sustain and strengthen CISMA
   a) <u>Starting in 2010</u>, schedule CISMA meetings at least twice per year.
   b) <u>Starting in 2010, annually</u> recruit new, and maintain current membership in the CISMA.
   c) <u>Starting in 2011, and every 2 years (or as needed)</u> review steering committee and subcommittees and revise as appropriate.
   d) <u>Starting in 2011, annually</u> develop workplan with CISMA partners.
   e) <u>Starting in 2011,</u> create short annual report.
   f) <u>During 2014</u> update strategic plan.
   g) <u>By 2012</u> seek liaison to CISMA from <u>two</u> private industries.
   h) <u>By 2014</u> hire a part time staff person to coordinate CISMA activities.

3. <u>Submit cooperative funding proposals.</u>
   a) <u>Starting in 2011, annually</u> encourage public land conservation managers to submit FFWCC IPMS cost reimbursement program applications.
   b) <u>In 2011</u> identify lead partner or organization to serve as the recipient and administrator for grants.
   c) <u>Starting in 2012, annually</u> submit CISMA grants; consider utilizing less common approaches like landowner incentive programs, staff time as in-kind matches, and shared field staff.
   d) <u>By 2012</u> develop a list of funding programs with due dates for control, EDRR, education and other projects.

4. <u>Generate legal documents to strengthen CISMA.</u>
   a) <u>In 2011</u> sign a MOU or other document allowing public agency staff to work on other agency/NGO/private lands (if required to allow agencies to work on partner lands).
   b) <u>In 2011</u> create or use existing liability releases (e.g. TNC or DOF) for partners to work on private lands.
   c) <u>By 2014</u> write or find and modify and existing CISMA partner MOU, or other document, or use future FISP CISMA MOU, to facilitate partner agency participation and support of CISMA goals and objectives.

Goal 2: Prevention

Objective: Develop and/or implement techniques and practices to prevent establishment and spread of new invasions near the CISMA boundaries.

1. Plants

   a) Develop and/or find and use an existing alert system to identify new terrestrial and aquatic non-native plant invasions near, or at the boundaries of, CISMA lands and waters.
      i. <u>Starting in 2010, quarterly</u> review EDDMapS database and/or other alert system databases for new terrestrial invasive plants adjacent to CISMA.
         1. If new plant species is found adjacent to CISMA, include in EDRR prioritization.
      ii. <u>Starting in 2010, quarterly</u> review EDDMapS and/or USGS NAS for new aquatic invasive plants adjacent to CISMA waters.
         1. If new plant species is found adjacent to CISMA, include in EDRR prioritization.

   b) Reduce potential pathways of introduction for terrestrial and aquatic (marine and freshwater), invasive non-native plant species into the CISMA.
      i. Develop and/or find and use existing guidelines for vehicle, boats, equipment, personal protective equipment and personnel disinfection program/protocol(s) to address the unintentional movement of terrestrial and aquatic invasive plants.
         1. <u>In 2011</u> use FFWCC IPMS or other decontamination standards.
         2. <u>In 2011</u> implement vehicle, boat, equipment and personnel disinfection program/protocol(s) for use by CISMA partners (researchers, fire crews, public works, FDOT, FDOF, and others).
         3. <u>In 2012</u> encourage use of decontamination guidelines by all contractors (e.g. invasive plant management contractors, wildlife services contractors, etc…).
         4. <u>In 2013 </u>encourage use of decontamination guidelines by landscapers, lawn companies and other outdoor service contractors.
      ii. <u>In 2012</u> all CISMA partners will actively push for purchase of only weed-free mulch, pine-straw, hay, sod, etc...(i.e. create the demand)
      iii. <u>In 2013</u> CISMA partners will develop and/or use existing preventative guidelines for conducting ground disturbing activities (e.g. timber harvest/transport, prescribed fire, fire suppression, off-road vehicle use, or contracted activities on partner lands).

   d) Incorporate IFAS WRA into CISMA invasive plant ranking and planning process.
      i. <u>Starting in 2010, annually</u> review results of WRA for plant species to be watched.
         1. If new plant species is listed as invasive, include in EDRR prioritization.
      ii. <u>Starting in 2012</u>, if a new non-native plant is found in the CISMA or surrounding geography, request IFAS run this incipient species through the WRA.
      iii. <u>In 2013</u> engage local botanical gardens or similar to use the WRA or other predictive tool to assess the invasive threat of new and existing accession plants.
         1. If new/existing accession is listed as invasive, stop planting and remove from botanical garden and include in EDRR prioritization (if it has escaped).
      iv. <u>By 2014</u> explore the feasibility of banning the highest threat new invasive plant species through state ordinances.

2. Animals

   a) Develop and/or find and use existing alert type system to identify new animal invasions near, or at the boundaries of, CISMA lands.
      i. Starting in 2010, quarterly review EDDMapS database and other sources of new species alerts (e.g. USGS NAS database, shell collecting groups, bird boards, etc.) for new invasive animals adjacent to CISMA.
         1. If new animal species is found adjacent to CISMA, include in EDRR prioritization.

   b) Reduce potential pathways of introduction for invasive animal species into the CISMA.
      i. In 2011 assist and participate in FFWCC Pet Amnesty Days.
      ii. In 2013 work with partners to identify pathways and modes of transport for invasive animals to move into the CISMA.
      iii. In 2013 develop and/or find and use decontamination guidelines to restrict movement of invasive animals.
      iv. By 2014 explore avenues of reducing pathways for potentially new highest threat new invasive animal species through state/local ordinances (e.g. bans, caging requirements, gender restrictions, etc.).

3. Pest and Pathogens
   a) Reduce potential pathways of introduction for invasive pest/pathogens species into the CISMA.
      i. Develop and/or find and use standards for boats, vehicle, equipment, personal protective equipment and personnel disinfection program/protocol to address the unintentional movement of invasive pest/pathogens (**Note: This will likely already be addressed in plant objective above**).
         1. In 2013 implement a vehicle, equipment and personnel disinfection program/protocol for use by CISMA partners (researchers, fire crews, public works, FDOT, FDOF, and others).
         2. In 2013 encourage use of decontamination guidelines by all contractors (e.g. invasive plant management contractors, wildlife services contractors, etc…).
         3. In 2014 encourage use of decontamination guidelines by landscapers, lawn companies and other outdoor service contractors.
      ii. In 2012 all CISMA will actively push for purchase of only pest/pathogen-free mulch, pine-straw, hay, sod, firewood, etc…

   b) Develop and/or find and use an existing alert type system to identify new invasions near CISMA lands and waters.
      i. Starting in 2010, quarterly review EDDMapS database for new invasives adjacent to CISMA.
         1. If new pest or pathogen is found adjacent to CISMA, include in EDRR prioritization.

Goal 3: Early Detection and Rapid Response (EDRR)

Objective: Develop and implement techniques and practices to promote early detection and rapid response of newly established invasive species within the CISMA boundaries.

1. Plants
   a) Use existing alert type systems and partner communications to identify new plant invasions within CISMA lands and waters.
       i. <u>Starting in 2010, annually</u> have CISMA partners discuss new species that they have observed.
       ii. <u>Starting in 2010, quarterly</u> review EDDMapS database and/or other alert system databases for new terrestrial invasive plants within and adjacent to CISMA.
           1. If new species is found in CISMA, include in EDRR prioritization.
       iii. <u>Starting in 2010, quarterly</u> review EDDMapS and/or USGS NAS for new aquatic invasive plants within CISMA waters.
           1. If new species is found in CISMA, include in EDRR prioritization.
       iv. <u>By 2013</u> develop early detection guidelines for partners to insert in contract language for contractors and researchers requiring them to alert land managers when they observe unknown species or EDRR species.
       v. <u>In 2010, identify local and regional experts to aid in identification of unknown species.</u>

   b) Prioritize EDRR plant species on CISMA lands and/or waters.
       i. <u>In 2011</u> create a list of possible EDRR species from best available information from CISMA partners, adjacent CISMAs, CISMA prevention alert system, FLEPPC, FISP, FNAI, IFAS and EDDMapS.
       ii. <u>In 2011</u> reduce list to <u>top 20</u> EDRR species.
       iii. <u>In 2012</u> use a ranking system (USGS, others) to prioritize <u>top 20</u> EDRR species.
       iv. <u>Starting in 2013, annually or as needed</u>, reassess EDRR list.

   c) Eradicate highest ranking EDRR plant species on CISMA lands and/or waters.
       i. <u>Starting in 2013, annually</u> conduct cooperative workdays to eradicate high priority EDRR and prevention species (newly in or adjacent to CISMA).
       ii. <u>In 2014</u> hire contractors to eradicate high EDRR species.
       iii. <u>In 2014</u> create a Rapid Response Team(s) and if necessary, response protocol, to eradicate high priority EDRR species.

2. Animals
   a) Use existing alert type systems and partner communications to identify new animal invasions within CISMA lands and waters.
       i. <u>Starting in 2011, annually</u> have CISMA partners discuss new species that they have observed.
       ii. <u>Starting in 2011, quarterly</u> review EDDMapS database and/or other alert system databases for new terrestrial invasive animals within and adjacent to CISMA.
           1. If new species is found in CISMA, include in EDRR prioritization.
       iii. <u>Starting in 2011, quarterly</u> review EDDMapS and/or databases for new aquatic invasive animals within CISMA waters.
           1. If new species is found in CISMA, include in EDRR prioritization.
       iv. <u>By 2013</u> develop early detection guidelines for partners to insert in contract language for contractors and researchers requiring them to alert land managers when they observe unknown or EDRR species.

b) Prioritize EDRR animal species on CISMA lands and/or waters.
   i. <u>In 2013</u> create a list of possible EDRR species from best available information from CISMA partners, adjacent CISMAs, CISMA prevention alert system, FISP, FNAI, IFAS and EDDMapS.
   ii. <u>In 2013</u> reduce list to <u>top 2</u> EDRR species.
   iii. <u>In 2014</u> using a ranking system on <u>top 2</u> EDRR species.
   iv. <u>Starting in 2014, annually or as needed,</u> reassess EDRR list.

c) Eradicate highest ranking EDRR animal species on CISMA lands and/or waters.
   i. <u>In 2014</u> create a Rapid Response Team(s) and if necessary, response protocol, to eradicate high priority EDRR species using staff, contractors, hunters, and others.

3. Pest/pathogens
   a) Same as Goal 4: Control; 3. Pest/pathogens

Goal 4: Control (Prioritized Management)

Objective: Develop and implement techniques and practices to control known infestations of priority invasive species and maintain them at the lowest feasible level in the CISMA boundaries.

1. Plants
    a) Prioritize known CISMA invasive plants using a ranking system that considers the impact of imperiled conservation targets and if necessary, other criteria like economics.
        i. In 2010 develop a list of known invasive plants within CISMA boundaries.
        ii. In 2011 prioritize species on list using a ranking system (USGS, other) and best available information from CISMA partners, FLEPPC, FISP, FNAI, IFAS and EDDMapS.
        iii. Starting in 2012, annually assess and update prioritized list of invasive plants and control techniques.

    b) Manage the priority control plants to reduce infestations to maintenance level control.
        i. Starting in 2012, emphasize priority control species by focusing CISMA partner efforts on these at all opportunities.
        ii. Increase the size of invasive managed areas on public and private conservation lands.
            1. Starting in 2011, annually increase public conservation lands treated and maintained with FFWCC IPMS and other funds.
            2. Starting in 2012, annually increase private conservation lands treated and maintained.
        iii. Starting in 2011, coordinate a cooperative workdays as needed focusing on priority control species.
        iv. Starting in 2013, determine invasive free buffer areas within CISMA boundaries and annually increase the size of invasive free buffer areas around conservation lands.
        v. Starting in 2013, annually increase treatment of prioritized, invasive plants on public non-conservation lands (e.g. ROWs, spoil mounds, recreational parks).
        vi. Starting in 2014, annually increase net acreage treated on prioritized private lands.
        vii. Beginning in 2013, annually coordinate an update meeting or produce a standardized report of CISMA invasive treatments.
        viii. By 2014 assist partners to complete transition to all digital reporting of treatment efforts for updates or standardized report (e.g. WEEDDAR, WIMS, etc).

2. Animals
    a) Prioritize known CISMA invasive animals using a ranking system that considers the impact of imperiled conservation targets and if necessary, other criteria like economics.
        i. In 2012 develop a list of known invasive animals on CISMA lands (e.g. feral hogs, iguanas, Cuban tree frogs).
        ii. In 2013 prioritize species on list using a ranking system and best available information from CISMA partners, FFWCC, FNAI, EDDMapS and others.
        iii. Starting in 2014, annually assess and update prioritized list of invasive animals and control techniques.

    b) Manage the priority control animals in order to reduce damage and/or population size.
        i. Starting in 2013, emphasize the priority control species by focusing CISMA partner efforts on these at all opportunities.
        ii. Increase the size of invasive managed areas on public and private conservation lands.
            1. Starting in 2013, annually increase public conservation lands treated and maintained.
            2. Starting in 2013, annually increase private conservation lands treated and maintained.
        iii. Starting in 2014, annually increase prioritized, invasive treated public non-conservation lands.

   iv. <u>Starting in 2014, annually</u> increase the size of invasive free buffer areas around conservation lands (this includes private lands).

3. Pest/Pathogens
 a) Prioritize, communicate and coordinate management activities designed to protect native species (plants and animals) and/or economically important species that are being impacted by invasive pest/pathogens.
  i. Research and prioritize known and potential invasive pest /pathogen species.
  ii. Investigate tested and potential control methods and apply as feasible and reasonable.
   1. Biological
   2. Chemical
   3. Mechanical
   4. Determine if this is a critical and effective action for land managers and not a waste of time and resources.
  iii. Research and apply methods other than invasive control to protect native populations (e.g. Collect seeds, treat with chemicals).

Goal 5: Monitoring, Mapping and Applied Research

Objective: Promote locating and documenting occurrences, and supporting applied research, of prevention, EDRR and control species to inform CISMA decisions.

1. Coordinate monitoring and mapping of invasive plants, animals, pests/pathogens (terrestrial, freshwater and marine.)
    a) <u>Beginning in 2010</u>, quarterly record invasive species from field observations and mapping projects into CISMA EDDMapS and/or FNAI's invasive databases.
        i. Encourage CISMA partners to use EDDMapS for EDRR species and single occurrence entry.
        ii. Encourage CISMA partners to use FNAI for large census/polygon and distribution data.
    b) Create a verification standing committee to oversee CISMA record entries into EDDMapS.
        i. In 2010, annually recruit and assign plant verifiers.
        ii. In 2012, annually recruit and assign animal verifiers.
    c) <u>By 2013</u> use EDDMapS database, FNAI's invasive maps, and information from land managers and private landowners to create CISMA prioritized invasive management maps of top ranked EDRR and control species.
    d) <u>Starting in 2013, annually</u> conduct partner workdays to survey targeted locations for new invasions focusing on high priority EDRR and prevention species (newly in or adjacent to CISMA).
    e) <u>Starting in 2013, annually</u> use monitoring results to inform management and to assist in prioritization of targeted lands and waters.
    f) <u>By 2014</u> assist in information gathering to document the impact of high priority control species (this helps with prioritizing control, listing on regulated lists (state/local), getting assessments completed by IFAS).

2. Encourage research on invasive plants, animals, pests/pathogens (terrestrial, freshwater and marine).
    a) In 2011 inform USDA ARS, IFAS/University of Florida, and/or others of CISMA lands and managers that are willing to participate in biocontrol trials.
    b) By 2012 submit a list of questions about invasive species biology, impacts, and/or management to university and college biology departments, FLEPPC, FISP, chemical company representatives, or other research entities.

Goal 6: Outreach, Training and Strategic Collaboration

Objective: Provide outreach and training to support prevention, EDRR and control efforts in the CISMA boundaries.

1. Implement outreach, training and strategic collaboration efforts within <u>CISMA partners/membership</u> to increase CISMA community knowledge as well as statewide profile.
    a) Implement outreach and training efforts to CISMA partners and land managers
        i. <u>In 2010</u> work with FISP to develop CISMA website.
        ii. <u>Quarterly, or as needed,</u> update CISMA website (hosted by FISP).
            1. Participate in statewide CISMA <u>monthly</u> calls and FLEPPC <u>annual</u> CISMA meeting (coordinated by FISP).
        iii. By 2010 continually maintain and improve CISMA knowledge by communicating with experts.
        iv. Develop a CISMA invasive species training module to address species identified by other CISMA committees in the following categories:
            1. Plants: <u>Starting in 2010,</u> <u>annually</u> conduct identification and treatment trainings with IFAS Extension Agent.
            2. Aquatics: <u>Starting in 2012</u>, coordinate with Florida Sea Grant for one regional invasive identification and BMPs workshop.
            3. Animals: <u>Starting in 2014</u>, develop a control training workshop.
        v. <u>By 2011</u> create or find existing educational materials to increase knowledge and distribute to CISMA partners.
    b) Implement outreach, training and strategic collaboration efforts to support CISMA prevention and EDRR efforts.
        i. <u>By 2011</u> coordinate with the EDRR committee to hold <u>annual</u> trainings to use EDDMapS database for CISMA partners.
        ii. <u>By 2011</u> create a communication network contact list to establish alert system for surrounding areas outside CISMA boundary.
        iii. <u>By 2013</u> develop stronger working and communication relationship with surrounding areas and surrounding CISMAs; share EDDMapS training and encourage tracking.

2. Implement outreach efforts <u>with academic/education infrastructure</u> in CISMA communities.
    a) <u>In 2011</u> develop a list of environmental education centers, master gardeners, master naturalists, environmental organizations and local garden clubs to be utilized as volunteers and information distributors.
    b) <u>By 2011</u> develop list of schools, scout groups, community festivals, environmental festivals and others who could help with education about prevention, EDRR and control, and develop strategic relationships with environmental organizations.
    c) <u>By 2011</u> create or find existing educational materials to increase knowledge and distribute to volunteer partners.

3. Increase outreach and training efforts to <u>private industries, public agencies, and policy makers</u> (railroads, utilities, ranges, nurseries, botanical gardens, pet stores, animal rehabilitation centers, landscapers, architects, foresters, county animal control, FDOT, ROW agencies and elected officials).
    a) <u>By 2011</u> coordinate press releases or public awareness activities.
    b) <u>By 2012</u> creating a communication network contact list for target audience.
    c) <u>By 2012</u> identify and contribute to public information venues (newsletters, newspapers, websites, public exhibits) in order to disseminate knowledge and materials.
    d) <u>By 2013</u> identify and develop educational materials to address issues identified by CISMA partners.
    e) <u>By 2013</u> deliver <u>annual</u> trainings addressing identified issues to the target audience.

f) <u>By 2014</u> begin working with public agencies to develop environmentally friendly landscape ordinances.

4. Implement outreach and training efforts to <u>citizens and private landowners</u>.
   a) <u>By 2011</u> identify specific private landowners for education.
   b) <u>By 2012</u> identify a CISMA subcommittee to develop working relationships with landowners or associations.
   c) <u>By 2012</u> implement a training effort involving the <u>top 5</u> high priority EDRR and control species to these specific private landowners and citizens.
   d) <u>By 2013</u> create an information network between CISMA partners (EDRR and Prevention) and target audience to update new locations.
   e) <u>By 2012</u> develop landowner 'outreach' packets to send priority landowners (include species information, control measures, training courses, etc.).