



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

Heartland CISMA/Avon Park AFR
Documents created for this Project

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Creating the Heartland 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 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:

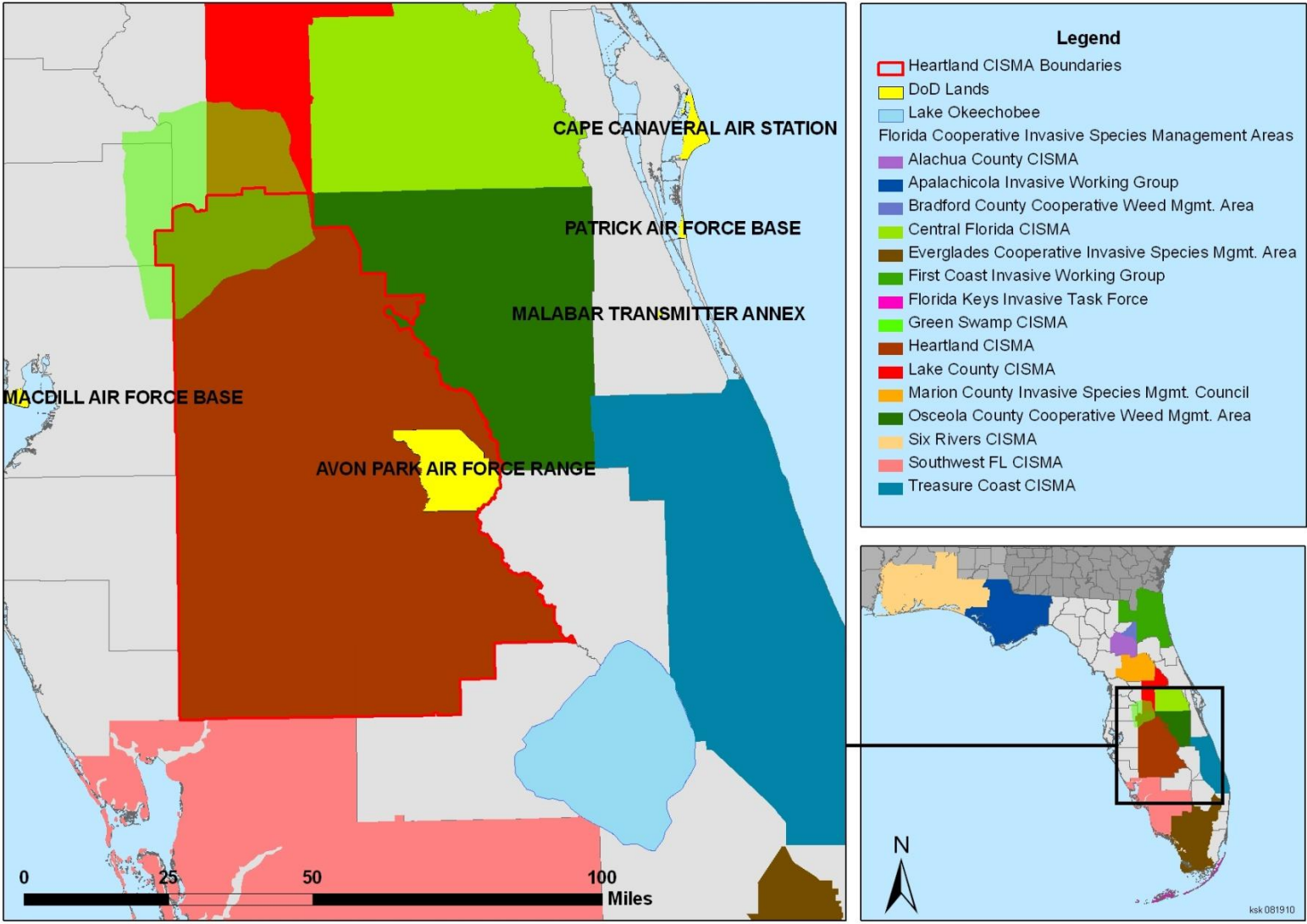
- Federal: Avon Park Air Force Range and US Fish and Wildlife Service
- State: Florida Division of Forestry, Florida Department of Environmental Protection/Division of Recreation and Parks, and Florida Fish and Wildlife Conservation Commission
- Regional/Local: Polk County
- Other (Universities, NGOs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

Introduction to the Heartland CISMA Strategic Plan

This Strategic Plan, which is a deliverable of Phase I of this 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.

Heartland Cooperative Invasive Species Management Area (CISMA)



Heartland Cooperative Invasive Species Management Five Year Strategic Plan

MISSION STATEMENT

Implement a comprehensive, cooperative network for land managers to address the growing threat of invasive non-native species in the west central portion of Florida, working across political and ownership boundaries to address these threats to the lands and waters within the boundaries of the Cooperative Invasive Species Management Area (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).

ACRONYMS

APAFR = Avon Park Air Force Range (Avon Park Air Ground Training Complex)
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 Division 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.fn gla.org/>)
FNPS = Florida Native Plant Society (<http://www.fnps.org/>)
HCISMA = Heartland Cooperative Invasive Species Management Area
HCNRD = Highlands County Natural Resources Department
HSWCD = Highlands Soil and Water Conservation District
IFAS = Institute of Food and Agricultural Sciences
MOU = memorandum of understanding
NIWAW = National Invasive Weeds Awareness Week
PCELP = Polk County Environmental Lands Program
ROW = right of way
SOP = standard operating procedures
TNC = The Nature Conservancy
USDA ARS = United States Department of Agriculture, Agricultural Research Service
USDA NRCS = United States Department of Agriculture, Natural Resources Conservation 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 the Heartland CISMA (HCISMA).

Objective: Form and sustain a strong partnership through CISMA.

1. Develop basic organizational structure for HCISMA.
 - a) In 2009 coordinate a meeting with enthusiastic regional partners to establish a new CISMA: the Heartland CISMA (Complete!)
 - b) In 2009 establish geographic boundaries, a steering committee and a chair (Complete!)
 - i. Boundaries are: Polk, Highlands, DeSoto, Hardee Counties
 - ii. Steering Committee: loosely based on partners who come to central meetings
 - iii. Chair: Cheryl Millett for 2010.
 - c) In 2010, use CWMA cookbooks and current CISMA examples to help establish and sustain the HCISMA.
 - d) In 2010, and as needed, create standing subcommittees and ad hoc committees to assist with project specific CISMA efforts.
2. Sustain and strengthen HCISMA
 - a) Starting in 2010, schedule general partnership HCISMA meetings at least twice per year.
 - b) Starting in 2010, schedule at least one workday on partner property annually.
 - c) Starting in 2010, actively recruit new, and maintain current, membership in the CISMA and annually evaluate progress. (For example, seek liaison to HCISMA from *x* private industries.)
 - d) Starting in 2010, and every 2 years (or as needed) review steering committee and subcommittees and revise as appropriate.
 - e) Starting in 2010, annually develop a work plan with HCISMA partners.
 - f) Starting in 2011, create short annual report.
 - g) During 2014 [*the year before this 5-yr plan expires*] update strategic plan.
 - h) By 2014 hire a part time staff person to coordinate HCISMA activities.
3. Submit cooperative funding proposals.
 - a) Starting in 2011, annually encourage public land conservation managers to submit FFWCC IPMS cost reimbursement program applications.
 - b) In 2011, identify lead partner or organization to serve as the recipient and administrator for grants.
 - c) By 2012, develop a list of funding programs with due dates for control, EDRR, education and other projects.
 - d) By 2013, annually submit HCISMA proposals for grants (this can include using landowner incentive programs, staff time as in-kind matches, shared field staff, etc.)
4. Generate legal documents to strengthen CISMA.
 - a) In 2010, draft an 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) In 2010, create or use existing liability releases (e.g., TNC or DOF) for partners to work on private lands.
 - c) In 2011, HCISMA MOU completed and signed.
 - d) In 2015, evaluate existing CISMA partner MOUs (or future FISP CISMA MOU), or other documents and liability releases, to facilitate partner agency participation and support of HCISMA goals and objectives.

Goal 2: Prevention

Objective: Develop and/or implement techniques and practices, such as coordinate with adjacent CISMAs, to prevent establishment and spread of new invasions near the CISMA boundaries.

1. Plants

- a) Starting in 2010, set up an alert system for the HCISMA to be notified of any new terrestrial and aquatic non-native plant invasions discovered near, or at the boundaries of, HCISMA lands and waters.
- b) Starting in 2010, at least prior to each general partnership HCISMA meeting, review current WRA results, the EDDMapS database, USGS NAS, and/or other alert system databases for new terrestrial or aquatic invasive plants adjacent to HCISMA, and verify that HCISMA partners are alerted.
- c) Reduce potential pathways of introduction for terrestrial and aquatic (marine and freshwater), invasive non-native plant species into the HCISMA.
 - i. Have guidelines for decontamination and equipment movement:
 1. In 2010, partners will share and review existing guidelines for vehicle, boats, equipment, personal protective equipment and personnel disinfection programs or protocols to address the unintentional movement of terrestrial and aquatic invasive plants (may use FFWCC IPMS, APAFR, or other decontamination standards).
 2. In 2011, choose or develop, and implement, the decontamination standards for the HCISMA for use by partners (researchers, fire crews, public works, FDOT, FDOF, and others).
 3. In 2012, encourage use of HCISMA decontamination guidelines by all contractors (e.g., invasive plant management contractors, wildlife services contractors, etc.).
 4. In 2013, encourage use of HCISMA decontamination guidelines by landscapers, lawn companies and other outdoor service contractors.
 - ii. In 2012, all CISMA partners will actively push for purchase of only certified weed-free pine-straw, hay, sod, dirt fill, etc. (i.e., create the demand).
 - iii. In 2013 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 WRA into HCISMA invasive plant ranking and planning process.
 - i. Starting in 2012, if a new non-native plant is found in the HCISMA or surrounding geography, submit this incipient species through the WRA.
 - ii. By 2013, engage local botanical gardens or similar (such as mine lands restoration efforts) to use the WRA or other predictive tool to assess the invasive threat of new and existing accession plants, and if new/existing accession is listed as invasive, stop planting and remove from botanical garden and include in EDRR prioritization (if it has escaped).
 - iii. By 2014 explore the feasibility of banning the highest threat new invasive plant species through state and local ordinances. (Note – as of March 2002, per FDACS CHAPTER 581 (4), local ordinances cannot prohibit plants that are not already listed by FDACS as a noxious weed or invasive plant).

2. Animals

- a) Starting in 2011, develop or find alert systems for the HCISMA to use to identify new animal invasions near, or at the boundaries of the HCISMA. Potential resources include EDDMapS database and other sources of new species alerts (e.g., USGS NAS database, shell collecting groups, bird boards, etc.)
- b) Reduce potential pathways of introduction for invasive animal species into the CISMA. In 2011, assist and participate in FFWCC Pet Amnesty Days, which are coordinated events that allow people to turn in unwanted non-native animals (pets) that they no longer want or can no longer care for. Some of these species may be regulated, but no questions are asked on amnesty days.
 - ii.
 - iii. In 2013, work with partners to identify pathways and modes of transport for invasive animals to get into the HCISMA.
 - iv. In 2013 develop or find decontamination guidelines to restrict movement of invasive animals.
 - v. By 2014, explore avenues of reducing pathways for potentially new highest threat new invasive animal species through state or local ordinances (e.g., bans, caging requirements, gender restrictions, etc.).

3. Pest and Pathogens

- a) Starting in 2010, set up an alert system for the HCISMA to be notified of any new pests or pathogens approaching or adjacent to the HCISMA.
- b) Starting in 2011, determine timing and process for systematic review of potential new pests or pathogens.
- b) Reduce potential pathways of introduction for invasive pest/pathogens species into the HCISMA.
 - i. In 2010, include potential for pests and pathogens movement during review of standards for boats, vehicle, equipment, personal protective equipment and personnel disinfection program/protocol to address the unintentional movement of invasive pest/pathogens
 - ii. In 2012, HCISMA partners will actively push for purchase of only pest/pathogen-free mulch, pine-straw, hay, sod, firewood, fill dirt, and so forth.

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 alert systems and partner communications established for the Prevention goal to identify new plant invasions within the HCISMA lands and waters.
 - i. Starting in 2010, during each HCISMA meeting, CISMA partners discuss new species that they have observed, share information from EDDMapS database or other alert system databases for new terrestrial and aquatic invasive plants within HCISMA; if new species is found in CISMA, include in EDRR prioritization (see 1.b, below).
 - ii. By 2013, 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 plant species on CISMA lands and/or waters.
 - i. In 2010, 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. In 2010, use a ranking system (e.g., USGS) to prioritize top 20 EDRR species.
 - iii. Starting in 2011, annually or as needed, reassess EDRR list.
- c) Eradicate highest ranking EDRR plant species on HCISMA lands and/or waters.
 - i. Starting in 2012, annually conduct cooperative workdays to eradicate high priority EDRR and prevention species (newly in or adjacent to HCISMA).
 - ii. By 2014, create a Rapid Response Team(s) and if necessary, response protocol, to eradicate high priority EDRR species.
 - iii. In 2014, hire contractors to eradicate high EDRR species, if needed.

2. Animals

- a) Use HCISMA's alert systems and partner communications to identify new animal invasions within HCISMA lands and waters.
 - i. Starting in 2010, during each HCISMA meeting, partners discuss new species that they have observed, share information from EDDMapS database or other alert system databases for new terrestrial and aquatic invasive plants within HCISMA; if new species is found in CISMA, include in EDRR prioritization (see 2.b, below).
 - ii. By 2013, 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 HCISMA lands and/or waters.
 - i. In 2012, 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. In 2014 using a ranking system on top 2 EDRR species.
 - iii. Starting in 2014, annually or as needed, reassess EDRR list.
- c) In 2014, create a Rapid Response Team and response protocol to eradicate high priority EDRR animal species on HCISMA lands and waters, using staff, contractors, hunters, and others.

3. Pest/pathogens: same as Goal 4: Control; 3. Pest/pathogens (i.e., this needs to be studied more.)

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 HCISMA 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, such as economics.
 - i. In 2010, develop a list of known invasive plants within HCISMA boundaries.
 - ii. In 2010, 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 top priority control plants to reduce infestations to maintenance level control.
 - i. Starting in 2012, emphasize top 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, annually coordinate a cooperative workday focusing on priority control species.
 - iv. Starting in 2013, determine invasive-free buffer areas within HCISMA 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.
- c) Cease sale, planting or other modes of spread of species we are controlling (illegal and legal).
 - i. By 2012, submit petitions to FDACS for listing of high priority EDRR and control invasive plants as noxious weeds.
 - ii. By 2013, identify and engage sellers to voluntarily stop selling known invaders.
 - iii. By 2014, identify and engage appropriate local regulatory and enforcement agencies for local ordinances, comprehensive plans, and landscape rules.

2. Animals

- a) Prioritize known HCISMA invasive animals using a ranking system that considers the impact of imperiled conservation targets and if necessary, other criteria, such as economics.
 - i. In 2012, develop a list of known invasive animals on CISMA lands (e.g. feral hogs, iguanas, Cuban tree frogs, feral cats).
 - 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 top 2 priority control animals in order to reduce damage and/or population size.
 - i. Starting in 2013, emphasize the top 2 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. Starting in 2014, annually increase the size of invasive-free buffer areas around conservation lands (this includes private lands).
- c) Starting in 2014, address the cessation of sales, importations or other modes of spread, by annually submitting requests to FFWCC to include updated prioritized control species to restrictive lists (e.g., Reptiles of Concern List, conditional species, prohibitive species, etc.).

3. Pest/Pathogens

- a) By 2013, 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. And possibly establish timelines for:
 - 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 HCISMA decisions.

1. Coordinate monitoring and mapping of invasive plants, animals, pests/pathogens (terrestrial, freshwater and marine.)
 - a) Beginning in 2010, issue quarterly reminders to partners to record invasive species from field observations and mapping projects into CISMA EDDMapS 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.
 - a) 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.
 - b) Starting in 2010, annually conduct partner workdays to survey targeted locations for new invasions focusing on the HCISMA's high priority species (newly in or adjacent to CISMA). This may include aerial and ground surveys on public and private lands.
 - c) By 2013, use EDDMapS database, FNAI's invasive maps, and information from land managers and private landowners to create HCISMA prioritized invasive management maps of top ranked EDRR and control species.
 - d) Starting in 2013, annually use monitoring results to inform management and to assist in prioritization of targeted lands and waters across the HCISMA, including private lands.
 - e) Beginning in 2013, annually coordinate an update meeting or produce a standardized report of HCISMA invasive treatments; share this with adjacent counties and CISMAs.
 - f) By 2014, assist partners to complete transition to all digital reporting of treatment efforts for updates or standardized report (e.g. WEEDDAR, WIMS, etc).
 - g) By 2014, 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 about which HCISMA lands and managers 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; review the progress of these questions and answers at least biennially.

Goal 6: Outreach, Training and Strategic Collaboration

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

1. Implement outreach efforts within HCISMA partnership to increase **HCISMA and community knowledge** about the Cisma, as well as its statewide profile.
 - a) In 2009, work with FISP to develop HCISMA website (completed).
 - b) In 2010, quarterly or as needed, maintain and improve HCISMA website (hosted by FISP); keep calendar updated with events, such as Ona Pasture Weed Day, and with HCISMA species lists.
 - c) In 2011, encourage all HCISMA partners to place “Do Not Move Firewood” poster at all public conservation lands and high-use recreational areas, using the HCISMA logo and contact information on the poster.
 - d) In 2011, evaluate and define other ways to “market” HCISMA to its community (e.g., presentations about HCISMA at organizational meetings/workshops, such as Ona Pasture Weed Day).
2. Implement training efforts to **HCISMA partners and land managers**, inviting experts to present (and provide CEUs?).
 - a) Plants: Starting in 2011, annually conduct identification and treatment trainings with IFAS Extension Agent (one herbicide certification/use, one invasive identification and treatment, one invasive grass identification, and one invasives to be watched).
 - b) Aquatic plants and animals: Starting in 2011, coordinate with Florida Sea Grant for one regional invasive identification and BMPs workshop.
 - c) Animals: Starting in 2014, develop a control training workshop.
3. Implement outreach, training and strategic collaboration efforts to support HCISMA **prevention and EDRR** efforts.
 - a) By 2010, hold annual trainings for EDRR; this can include trainings to use EDDMapS database for Cisma partners and targeted audiences.
 - b) By 2011, create a communication network contact list to establish alert system for areas surrounding the HCISMA boundary.
 - c) By 2013, develop stronger working and communication relationship with surrounding areas and surrounding Cismas; share EDDMapS training and encourage tracking.
4. In 2011, identify an HCISMA lead or subcommittee to begin implementing outreach and training efforts with **academic/education infrastructure** in the HCISMA communities. Activities could include:
 - a) Develop a list of environmental education centers and distribute educational materials about prevention and control.
 - b) Work with Cooperative Extension Master Gardener Program and local garden clubs to promote the removal of invasive plants and use of native plants.
 - c) Work with Florida Sea Grant and other coastal partners to implement Hitchhiker Program in HCISMA and distribute outreach materials to large local marinas and at large fishing tournaments.
 - d) 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 key environmental orgs to further push.
 - e) Choose a short list of priority education volunteer programs for HCISMA to implement that simultaneously build up invasive volunteer programs and raise awareness (e.g., student work days, invasive survey recruitment and training programs, Pepper Busters creation, etc.)
5. By 2012, as a Cisma, or using a designated subcommittee, develop strategies and a work plan to increase outreach efforts to **private industries and atypical public agencies** (railroads, utilities, ranges, nurseries,

botanical gardens, pet stores, animal rehabilitation centers, landscapers, architects, foresters, county animal control, FDOT, and other ROW agencies). Activities could include:

- a) Create a communication network contact list for private industries.
 - b) Create a communication network contact list for atypical public agencies.
 - c) Work with retailers to reduce the sale of invasive animals; support and implement the “Don’t Release Unwanted Pets” poster and card statewide efforts.
 - d) Develop or find existing landscape architect certification course that promotes CISMA goals.
 - e) Create a voluntary code of conduct pledge that will be endorsed and signed by one relevant industry or agency to curb the use and distribution of invasive plant species.
 - f) Work with retailers to reduce the sale of invasive plants (e.g., GreenThumb Program).
 - g) Ask your local prominent botanical garden or ASLA Chapter to take a lead role in educating the public and the nursery industry about preventing the introduction and spread of invasive species (garden to help provide information about invasiveness, and not to recommend plants that the Garden is removing from the collections based on the issue of invasiveness).
 - h) Encourage interpretive signage at visible botanical gardens explaining threat of invasives and alternatives to their use in the landscape (could include demonstration garden)
 - i) Utilize strategic communication vehicles for BMPs and AlterNatives messages, such as Extension Service newsletter, FL ASLA and FNGLA Chapter electronic updates, large growers’ newsletters, local environmental groups’ newsletters, etc.
 - j) Publicize signees of voluntary code of conducts lists (e.g., post on website, news articles).
6. By 2012, identify a CISMA lead or subcommittee to develop a work plan to build working relationships with **private landowners or associations**. Some suggestions include:
- a) Identify specific private landowners for education.
 - b) Develop landowner “outreach” packets to send priority landowners (include species information, training courses, etc.).
 - c) Implement a training effort about the top 5 high priority EDRR and control species to these specific private landowners and landowner associations.
 - d) Develop, or acquire existing materials, about native, or non-invasive plants, as an alternative to invasives for erosion control, wildlife forage, landscaping, etc.
 - e) Begin annual conservation champion award to landowner.
 - f) Schedule regular contact with the media, using press/photo releases and radio to highlight private lands initiative and available resources.
 - g) Create or use existing materials for a fact sheet or poster to increase knowledge of funding opportunities, current laws and distribute to individuals with goal of enrolling landowners in funding programs (this is on FISP website).
 - h) Develop voluntary agreement for landowners that support HCISMA EDRR, control and prevention efforts (for plants this is on VCC).
7. Increase outreach and awareness efforts to **policy makers**.
- a) Coordinate press releases or public awareness activities.
 - i. Starting in 2011, annually publicize and get proclamations regarding mapping reports or other projects.
 - ii. Starting in 2011, annually each NISAW week (usually in January or February), share Annual Weed/Animal Reports with elected officials
 - b) Starting in 2013, annually visit with newly elected local government officials to support funding, EDRR, prevention and other HCISMA goals.
 - c) By 2014, begin working with county Planning & Zoning Departments to encourage environmentally friendly landscape ordinances.

Heartland Cooperative Invasive Species Management Area

Strategic Plan: A Timeline

Updated 6/8/2010

Goal Category	Description
2009 (Complete!)	
CISMA	✓ Coordinate a meeting with enthusiastic regional partners to establish a new CISMA: the Heartland CISMA.
CISMA	✓ Establish geographic boundaries, a steering committee and a chair: <ol style="list-style-type: none">Boundaries are: Polk, Highlands, DeSoto, Hardee CountiesSteering Committee: loosely based on partners who come to central meetingsChair: Cheryl Millett for 2010.
CISMA	✓ Work with FISP to develop HCISMA website.
2010...	
CISMA	▶ Start creating standing subcommittees and <i>ad hoc</i> committees to assist with project-specific CISMA efforts.
CISMA	▶ Schedule general partnership HCISMA meetings at least twice per year.
CISMA	▶ Schedule at least one annual workday on partner property.
CISMA	▶ Actively recruit new, and maintain current, membership in the CISMA and annually evaluate progress. (For example, seek liaison to HCISMA from <i>x</i> private industries.)
CISMA	▶ Develop an annual work plan with HCISMA partners.
CISMA	▶ Draft an 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).
CISMA	▶ Create or use existing liability releases (e.g., TNC or DOF) for partners to work on private lands.
Prevent	▶ Partners begin gathering, sharing and reviewing existing guidelines for vehicle, boats, equipment, personal protective equipment and personnel disinfection programs or protocols to address the unintentional movement of terrestrial and aquatic invasive plants. (may use FFWCC IPMS, APAFR, or other decontamination standards). <p>Include potential for pests and pathogens movement during review of standards for boats, vehicle, equipment, personal protective equipment and personnel disinfection program/protocol to address the unintentional movement of invasive pest/pathogens.</p>
ED/RR	▶ Create a list of probable EDRR plant species from best available information from CISMA partners, adjacent CISMAs, CISMA prevention alert system, FLEPPC, FISP, FNAI, IFAS and EDDMapS. [ED/RR species = eradication in CISMA boundaries still possible.]
ED/RR	▶ Rank and prioritize top plant EDRR species.

- Prevent, ED/RR ▶ **Set up alert systems** for the HCISMA to be notified of any infestations of EDRR species, and of any NEW:
 -Terrestrial and aquatic non-native **plant** invasions discovered near, or at the boundaries of, HCISMA lands and waters.
 -**Pests or pathogens** approaching or adjacent to the HCISMA.
- Prevent, ED/RR ▶ Subcommittee or individual, before each general partnership HCISMA meeting, **reviews** current WRA results, the EDDMapS database, USGS NAS, and/or other alert system databases **for new terrestrial or aquatic invasive plants adjacent to HCISMA**, and verify that HCISMA partners are alerted.
 An then, during each HCISMA meeting, Cisma partners **discuss new species** that they have observed, share information from EDDMapS database or other alert system databases for new terrestrial and aquatic invasive plants within HCISMA; if new species is found in Cisma, include in EDRR prioritization
- Control ▶ **List and prioritize invasive plants currently under control management** within HCISMA boundaries, using a ranking system that considers the impact of imperiled conservation targets and if necessary, other criteria, such as economics. (Suggested resources: FLEPPC, FISP, FNAI, IFAS and EDDMapS.
- Control ▶ Encourage all HCISMA partners to **place “Do Not Move Firewood” poster** at all public conservation lands and high-use recreational areas, using the HCISMA logo and contact information on the poster.
- Data ▶ **Issue quarterly reminders to partners** to record invasive species from field observations and mapping projects into Cisma EDDMapS or FNAI’s invasive databases. (Encourage Cisma partners to use EDDMapS for EDRR species and single occurrence entry, and to use FNAI for large census/polygon and distribution data.)
- Data ▶ Annually **recruit and assign plant verifiers**, to oversee Cisma record entries into EDDMapS.
- Data ▶ Annually **conduct partner survey workdays**, targeting locations for new invasions focusing on the HCISMA’s high priority species (newly in or adjacent to Cisma). This may include aerial and ground surveys on public and private lands.
- Data ▶ Biannual **aerial survey completed**.
- Outreach ▶ Quarterly or as needed, **maintain and improve HCISMA website** (hosted by FISP); keep calendar updated with events, such as Ona Pasture Weed Day, and updated with HCISMA species lists.
- Outreach ▶ Hold **first annual trainings for EDRR**; this can include trainings to use EDDMapS database for Cisma partners and targeted audiences.

2011...

- Cisma ▶ Create and **publish short annual report** for 2010. (Publish on website?)
- Cisma ▶ **Review steering committee and subcommittees** and revise as appropriate.
- Cisma ▶ **Create this year's annual work plan**, scheduling at least:
 – 2 general HCISMA mtgs,
 – at least 1 workday,
 – Trainings per strategic plan.
 – Select new chair.

- CISMA ► Encourage public land conservation managers to **submit FFWCC IPMS applications** for cost reimbursement program.
- CISMA ► **Identify lead partner or organization to serve as the recipient and administrator for grants.**
- CISMA ► **HCISMA MOU completed and signed.**
- Prevent ► Choose or develop, and **implement, the decontamination standards for the HCISMA for use by partners** (researchers, fire crews, public works, FDOT, FDOF, and others).
- Prevent ► **Set up alert systems for animals** to use to identify new animal invasions near, or at the boundaries of the HCISMA. Potential resources include EDDMapS database and other sources of new species alerts (e.g., USGS NAS database, shell collecting groups, bird boards, etc.)
- Prevent ► **Assist and participate in FFWCC Pet Amnesty Days.**
- Prevent ► Determine timing and process for systematic **review of potential new pests or pathogens.**
- ED/RR ► **Reassess EDRR list.**
- ED/RR ► Annually **increase public conservation lands treated and maintained** with FFWCC IPMS and other funds.
- Control ► **Annually coordinate a cooperative workday focusing on priority control species.**
- Control ► **HCISMA lands and managers willing to participate in biocontrol trials inform USDA ARS, IFAS/University of Florida, and/or others** about which
- Outreach ► Evaluate and define other ways to **“market” the HCISMA to its community** (e.g., give presentations about HCISMA at organizational meetings/workshops, such as Ona Pasture Weed Day).
- Data ► Develop **aerial survey plan** for CISMA (plan defined in odd-numbered years, survey carried out 1st month of even-numbered years); assign chairperson for this activity.
- Outreach ► **Aquatic plants and animals: coordinate with Florida Sea Grant for one regional invasive identification and BMPs workshop.**
- Outreach ► Identify an HCISMA lead or subcommittee to **implement outreach and training efforts with academic/education infrastructure** in the HCISMA communities. Activities could include:
 - Develop a list of environmental education centers and distribute educational materials about prevention and control.
 - Work with Cooperative Extension Master Gardener Program and local garden clubs to promote the removal of invasive plants and use of native plants.
 - Work with Florida Sea Grant and other coastal partners to implement Hitchhiker Program in HCISMA and distribute outreach materials to large local marinas and at large fishing tournaments.
 - 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 key environmental orgs to further push.
 - Choose a short list of priority education volunteer programs for HCISMA to implement that simultaneously build up invasive volunteer programs and raise awareness (e.g., student work days, invasive survey recruitment and training programs, Pepper Busters creation, etc.)

- Outreach ► **Publicize mapping reports or other projects**, through coordinated press releases or public awareness activities. (Annual activity)
- Outreach ► Each **NISAW** week (usually in January or February), share Annual Weed/Animal Reports with elected officials. (Annual activity)
- Outreach ► Hold **annual trainings for EDRR**; this can include trainings to use EDDMapS database for CISMA partners and targeted audiences.

2012...

- CISMA ► Create and **publish short annual report** for 2011.
- CISMA ► Create this year's **annual work plan**, scheduling 2 general HCISMA mtgs, at least 1 workday, trainings per strat plan...
- CISMA ► **Develop a list of funding programs with due dates** for control, EDRR, education and other projects.
- Prevent ► Encourage **use of HCISMA decontamination guidelines by all contractors** (e.g., invasive plant management contractors, wildlife services contractors, etc.).
- Prevent ► If a new non-native plant is found in the HCISMA or surrounding geography, **submit this incipient species through the WRA.**
- Prevent ► **HCISMA partners start actively pushing for purchase of only pest/pathogen-free mulch, pine-straw, hay, sod, firewood, fill dirt, and so forth.**
- ED/RR ► **Reassess EDRR list.**
- ED/RR ► Conduct annual **cooperative workdays to eradicate high priority EDRR** and prevention species (newly in or adjacent to HCISMA).
- Control ► **Annually assess and update prioritized list of invasive plants and control techniques.**
- Control ► Add to emphasis of top priority control species by focusing CISMA partner efforts on these at all opportunities; and increase the size of invasive managed areas on public and private conservation lands.
- Control ► **Submit petitions to FDACS for listing of high priority EDRR and control invasive plants as noxious weeds, requesting cease of sales, planting, etc.**
- Control ► **Develop a list of known invasive animals on CISMA lands** (e.g. feral hogs, iguanas, Cuban tree frogs, feral cats).
- Data ► **Recruit and assign animal verifiers**, to oversee CISMA record entries into EDDMapS. (Annual activity)
- Data ► **Direct research: 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; review the progress of these questions and answers at least biennially.
- Data ► **Biannual aerial survey completed.**

- Outreach ► As a CISMA, or using a designated subcommittee, **develop strategies and a work plan to increase outreach efforts to private industries and atypical public agencies** (railroads, utilities, ranges, nurseries, botanical gardens, pet stores, animal rehabilitation centers, landscapers, architects, foresters, county animal control, FDOT, and other ROW agencies). Activities could include:
- a) Create a communication network contact list for private industries.
 - b) Create a communication network contact list for atypical public agencies.
 - c) Work with retailers to reduce the sale of invasive animals; support and implement the “Don’t Release Unwanted Pets” poster and card statewide efforts.
 - d) Develop or find existing landscape architect certification course that promotes CISMA goals.
 - e) Create a voluntary code of conduct pledge that will be endorsed and signed by one relevant industry or agency to curb the use and distribution of invasive plant species.
 - f) Work with retailers to reduce the sale of invasive plants (e.g., GreenThumb Program).
 - g) Ask your local prominent botanical garden or ASLA Chapter to take a lead role in educating the public and the nursery industry about preventing the introduction and spread of invasive species (garden to help provide information about invasiveness, and not to recommend plants that the Garden is removing from the collections based on the issue of invasiveness).
 - h) Encourage interpretive signage at visible botanical gardens explaining threat of invasives and alternatives to their use in the landscape (could include demonstration garden)
 - i) Utilize strategic communication vehicles for BMPs and AlterNatives messages, such as Extension Service newsletter, FL ASLA and FNGLA Chapter electronic updates, large growers’ newsletters, local environmental groups’ newsletters, etc.
 - j) Publicize signees of voluntary code of conducts lists (e.g., post on website, news articles).
- Outreach ► Identify a CISMA lead or subcommittee to **develop a work plan to build working relationships with private landowners or associations**. Some suggestions include:
- a) Identify specific private landowners for education.
 - b) Develop landowner “outreach” packets to send priority landowners (include species information, training courses, etc.).
 - c) Implement a training effort about the top 5 high priority EDRR and control species to these specific private landowners and landowner associations.
 - d) Develop, or acquire existing materials, about native, or non-invasive plants, as an alternative to invasives for erosion control, wildlife forage, landscaping, etc.
 - e) Begin annual conservation champion award to landowner.
 - f) Schedule regular contact with the media, using press/photo releases and radio to highlight private lands initiative and available resources.
 - g) Create or use existing materials for a fact sheet or poster to increase knowledge of funding opportunities, current laws and distribute to individuals with goal of enrolling landowners in funding programs (this is on FISP website).

h) Develop voluntary agreement for landowners that support HCISMA EDRR, control and prevention efforts (for plants this is on VCC).

- Outreach ► **Publicize mapping reports or other projects**, through coordinated press releases or public awareness activities. (Annual activity)
- Outreach ► Each **NISAW** week (usually in January or February), share Annual Weed/Animal Reports with elected officials. (Annual activity)

2013...

- CISMA ► Create and **publish short annual report** for 2012.
- CISMA ► **Create this year's annual work plan**, scheduling 2 general HCISMA mtgs, at least 1 workday, trainings per strategic plan. Select new chair.
- CISMA ► **Submit HCISMA proposals for grants** (this can include using landowner incentive programs, staff time as in-kind matches, shared field staff, etc.) (Annual activity)
- Prevent ► **Encourage use of HCISMA decontamination guidelines beyond just partners** -- by landscapers, lawn companies and other outdoor service contractors.
- Prevent ► **Engage local botanical gardens or similar** (such as mine lands restoration efforts) to use the WRA or other predictive tool to assess the invasive threat of new and existing accession plants, and if new/existing accession is listed as invasive, stop planting and remove from botanical garden and include in EDRR prioritization (if it has escaped).
- Prevent ► **Work with partners to identify pathways and modes of transport for invasive animals to get into the HCISMA.**
- Prevent ► **Develop or find decontamination guidelines to restrict movement of invasive animals.**
- ED/RR ► **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.
- Control ► Determine invasive-free buffer areas within HCISMA boundaries and **annually increase the size of invasive-free buffer areas around conservation lands.**
- Control ► **Increase treatment** of prioritized, invasive plants on public **non-conservation** lands (e.g., ROWs, spoil mounds, recreational parks). (Increase annually.)
- Control ► **Identify and engage sellers to voluntarily stop selling known invaders.**
- Control ► Prioritize species on list using a ranking system and best available information from CISMA partners, FFWCC, FNAI, EDDMapS and others.
- Control ► **Increase public conservation lands treated and maintained.** (Increase annually.)
- Control ► **Increase private conservation lands treated and maintained.** (Increase annually.)
- Control ► 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. And possibly establish timelines to:
 - i. Research and prioritize known and potential invasive pest /pathogen species.
 - ii. Investigate tested and potential control methods and apply as feasible and reasonable.

- Data ► **Create HCISMA prioritized invasive *management maps* of top ranked EDRR and control species, with focus on pest/pathogens**
- Data ► Develop **aerial survey plan** for CISMA (plan defined in odd-numbered years, survey carried out 1st month of even-numbered years); assign chairperson for this activity.
- Data ► Coordinate **annual update** meeting or produce a standardized report of **HCISMA invasive treatments; share this with adjacent counties and CISMAs.**
- Data ► Develop **stronger working and communication** relationship with surrounding areas and **surrounding CISMAs**; share EDDMapS training and encourage tracking.
- Outreach ► Begin **annual visits with newly elected local government officials** to support funding, EDRR, prevention and other HCISMA goals. [*can become part of NISAW week?*]
- Outreach ► Continue other outreach activities as listed in 2011 and 2012.

2014... [*the year before this 5-yr plan expires*]

- CISMA ► Create and publish short annual report for 2013.
- CISMA ► Create this year's annual work plan, scheduling 2 general HCISMA mtgs, at least 1 workday, trainings per strat plan... Select new chair.
- CISMA ► Begin updating strategic plan.
- CISMA ► **Hire a part time staff person to coordinate HCISMA activities.**
- Prevent ► **Explore the feasibility of banning the highest threat new invasive plant species** through state and local ordinances. (Note – as of March 2002, per FDACS CHAPTER 581 (4), local ordinances cannot prohibit plants that are not already listed by FDACS as a noxious weed or invasive plant).
- Prevent ► Explore avenues of reducing pathways for potentially new highest threat new invasive animal species through state or local ordinances (e.g., bans, caging requirements, gender restrictions, etc.).
- ED/RR ► **Create a Rapid Response Team(s)** and if necessary, response protocol, to eradicate high priority terrestrial and aquatic EDRR species.
 - a) -Hire contractors to eradicate high EDRR species, if needed.
 - b) Continue to reassess EDRR list.
- ED/RR ► For animals, create a Rapid Response Team and response protocol to eradicate high priority EDRR species on HCISMA lands and waters, using staff, contractors, hunters, and others:
 - a) Annually increase net acreage treated on prioritized private lands.
 - b) Identify and engage appropriate local regulatory and enforcement agencies for local ordinances, comprehensive plans, and landscape rules.
 - c) Annually assess and update prioritized list of invasive animals and control techniques.
 - d) Annually increase prioritized, invasive-treated public non-conservation lands.
 - e) Annually increase the size of invasive-free buffer areas around conservation lands (this includes private lands).
- ED/RR, Control ► **Develop an animal control training workshop.**

- Control ▶ Address the cessation of sales, importations or other modes of spread, by annually submitting requests to FFWCC to include updated prioritized control species to restrictive lists (e.g., Reptiles of Concern List, conditional species, prohibitive species, etc.).
- Data ▶ Assist partners to **complete transition to all digital reporting of treatment efforts** for updates or standardized report (e.g. WEEDDAR, WIMS, etc).
- Data ▶ 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).
- Data ▶ Biannual **aerial survey completed.**
- Outreach ▶ **Begin working with county Planning & Zoning Departments** to encourage environmentally friendly landscape ordinances.
- Outreach ▶ Continue outreach and publicity efforts as listed since 2011.

2015...

- CISMA ▶ Create and publish short annual report for 2014.
- CISMA ▶ Create this year's annual work plan, scheduling 2 general HCISMA mtgs, at least 1 workday, trainings per strategic plan Select new chair.
- CISMA ▶ **Evaluate existing CISMA partner MOUs** (or future FISP CISMA MOU), or other documents and liability releases, to facilitate partner agency participation and support of HCISMA goals and objectives.
- CISMA ▶ **Pass new 5-year strategic plan.**
- Data ▶ Develop **aerial survey plan** for CISMA (plan defined in odd-numbered years, survey carried out 1st month of even-numbered years); assign chairperson for this activity.