

SUASCO Cooperative Invasive Species Management Area

Fall Meeting – November, 13, 2012

Meeting Minutes

Attendees

Amber Carr (USFWS), Jim Snyder-Grant (Acton), Rebecca Chizzo (SWEET), Katrina Scheiner(NPS/USFWS), Helen du Tiur (SWEET), Bettina Abe (Acton), Jill Miller (Natick Garden Club), H Heusmann (Mass Wildlife), Bill Fadden (RSC), Janet Anderson (Westborough), Allan Fierce (Stow), Sue Flint (OARS), David Mckinnon (Lincoln), M John Dwyer (Maynard), Rick Findlay (Littleton), Ron Gemma (Westford), Priscilla Ryder (Marlborough), Stephanie Wilsen (NRCS), Ted Elliman (NEWFS), Karen Riggert (Friends of Assabet River NWR), Tia Pinney (Mass Audubon), Karin Paquin (SVT), Lisa Groves (Westford), Jeff Collins (Mass Audubon), Diane Duane (Westford Land Trust), Laura Mattei (SVT), Tom Largy (Wayland)

Introduction

Lynn Knight, SUASCO Cisma Vice Chair, opened the meeting by welcoming all attendees and making note that as the SUASCO Cisma was established in 2009, we have just completed our fourth field season. She continued by acknowledging and welcoming our two members, the Natick Garden Club and USDA NRCS. In closing before turning it over to Amber, Lynn mentioned some exciting news! The Nyanza settlement was finalized and Cisma was selected to lead the invasives restoration projects.

Nyanza Final Restoration Plan - Amber Carr, SUASCO Cisma Coordinator/USFWS

- The restoration plan allotted about \$3 million for mitigation activities, about \$1.1 million of which goes towards invasives work. Of that \$1.1 million, \$1,047,500 is going to Cisma for invasive species management. The remaining \$50,000 is being allotted to the Commonwealth of Massachusetts.
- Trustees have a certain number of tasks and projects that need to be completed, so the plan is to list task items and then have partners resubmit proposals and budgets related to those tasks. This way partners can update their proposals, as things change, so that no one is tied to what they proposed in 2008 and we can ensure the best possible success of the projects.
- The restoration plan is split into two main parts – management of purple loosestrife and management of water chestnut.
- Purple Loosestrife Management:

- The purple loosestrife management area extends from Ashland to Concord and management will begin with mapping purple loosestrife infestations along that stretch of the Sudbury River. The mapping will be going for bid to CISMA members in 2013.
- We will then determine where there are currently *Galerucella* sp beetles and if their populations are self-sustaining, and from there identify potential beetle release sites based upon loosestrife acreage and density. This will go out for bid to CISMA members in 2013.
- We plan to rear *Galerucella* beetles at multiple locations or will potentially purchase the beetles from a supplier. We will have a demo site at the Assabet River NWR visitor center the first year of the grant. Partners who are interested in rearing their own beetles can participate in the demo site facility to get hands on experience and training for setting up their own facility. Setting up the additional rearing facilities will go out for bid to CISMA members in 2014 and 2015.
- If any organizations that already have experience with rearing beetles wish to do so, please just let Amber know and sign up to begin a rearing facility the first year of the grant.
- After rearing and releasing the beetles, we will continue to monitor the release sites using Cornell's protocol in both the spring and fall to assess purple loosestrife stem density and evidence of *Galerucella* beetles at each life stage. Monitoring projects will go out for bid to CISMA members in 2014 and 2015.
- Water Chestnut Management:
 - Management will be conducted in two main areas – will map water chestnut infestations along the entirety of the Sudbury, Assabet, and Concord Rivers, and 130 acres of ponds in the Hop Brook watershed. The mapping will include patch size estimates and density data. It will go out for bid to CISMA members in 2013.
 - Following the data collection of the infestation sites, a map will be produced and distributed to all CISMA members. This project will go out for bid to CISMA members in 2013.
 - Management will remain the same in areas where partners have experience with and an existing relationship with USFWS and the harvester. We will be mechanically removing water chestnut on Heard Pond, Fairhaven Bay, the Sudbury River (Route 117 – Route 20), and Cardingmill Pond in 2013, 2014, and 2015.
 - The town of Wayland will receive \$50,000 to continue their work with a private contractor on Heard Pond for 2013, 2014, and 2015.
 - USFWS will be purchasing a new harvester in 2013, which may be able to expand harvester usage for as long as the old harvester is still operating. Our biggest restriction with the harvester is water levels, so having two in operation will allow greater flexibility and more effective removal.

- USFWS will purchase kayaks, canoes, bins, carts, paddles, and life jackets in 2013. USFWS will be doing the purchasing to simplify the process, but the materials will be available to all CISMA partners, with preference to harvester partners.
- There is money set aside to hire and coordinate a 10-person crew for 8 weeks, 40 hrs per weeks, for the next three years. USFWS would like to get an AmeriCorps team, which would hire 18-26 year olds for 10 months. If The AmeriCorps program doesn't work out, the opportunity to hire crews will go out for bid to CISMA members in 2013, 2014, and 2015. Note that if you wish to hire the Americorps crew members, you will need to be able to provide them with housing, showers, bathroom, fridge and a stove within an hour of their work location. They will also need to be able to secure their belongings.
- The coordination/USFWS/MAS will coordination control efforts and report writing for 2013, 2014, and 2015.
- Harvester partners will monitor their areas pre and post control efforts to track progress through 2013, 2014, and 2015.
- The additional \$50,000 that is allotted to the Commonwealth is being given directly to Massachusetts Fish and Game for a wild rice restoration effort.
 - The restoration projects will take place on USFWS property at Great Meadows; CISMA will help coordinate
 - The state and USFWS still need to meet to hash out details and involvement applications
 - Project tasks for Mass Fish and Game include:
 - Development detailed project plans for wild rice restoration
 - Survey historical information about wild rice populations
 - Survey and map current wild rice populations
 - Monitor and maintain necessary water levels
 - Purchase and plant wild rice
 - Assess planting success
 - Restore areas using adaptive management framework
- Questions for Amber:
 - Will purple loosestrife and water chestnut be managed just in the main rivers, or also in the tributaries?
 - The funds support purple loosestrife mapping from Ashland to Concord along the Sudbury River, so it could depend on infestations.
 - Water chestnut control is between Rt 117 and Rt 20 on the Sudbury, Fairhaven Bay, Cardingmill Pond, Stearnmills Pond, and Heard Pond for Tier 1. As it goes to Tier 2 control, the efforts would expand to include the Assabet and Concord Rivers
 - We are currently targeting where we have historically harvested
 - How did the wild rice restoration originate?
 - Mass Fish and Game knew of historical locations

- In the '70s, they noticed that ducks were attracted to the wild rice. The rice was crowded out by water chestnut, and as the rice populations declined, by the '80s and '90s there was much less duck habitat and fewer ducks. The idea is that by eradicating the water chestnut, wild rice will have an opportunity to recolonize on its own
 - Will there be phone apps to help with the mapping process?
 - That will be up to the organizations when they write their proposals
 - We do have four mobile mapping units available to CISMA partners
 - Ultimately we're looking for something that can be easily used to map and then share the data – something that would allow consistent data types and formatting, etc.
- The goal tonight was to give everyone a general idea of the upcoming tasks, and then in a month or so come up with RFPs.

OARS Mapping Project – Sue Flint, OARS

Sue began by summarizing OARS' efforts for mapping aquatic plants this past summer. Jeff Collins developed a data interface using CISMA's mobile mappers.

- OARS has done significant mapping on the Assabet since 2005
 - They have noted a 50% reduction in wet biomass on the river
- When collecting data for the mapping, they estimated percent cover of floating and rooted biomass in a grid system overlaid on portions of the river, collected and weighed samples, then used GIS software to interpolate larger grid areas on the river.
- They later revised the method, using the grid system to map a larger portion of the river.
 - The GPS points mark the center of each grid square
 - Attempted to conduct mapping at the height of the growing season (the end of August) to get a peak measurement.
- They also worked with two professors from UMass who used hyper spectral data and satellite imagery to remotely map aquatic biomass.

Mapping for the 2012 season

- During the 2012 season, OARS mapped aquatic invasives and water chestnut to track plant progress and to estimate biomass.
- They extended the grid system to cover more river area
- Using the mobile mappers is great because it lets you see where you are within each grid section in addition to displaying coordinates.
- When you're out on the river, you can select the grid square of your choice on the mobile mapper and can enter the data right there. It includes information such as number of plants, percent cover, any treatment done to the plants, and the date.

- When conducting the biomass survey, they recorded percent cover, percent cover of duckweed specifically, dominant species, all species present, and noted any invasive species
- They were successful in recruiting volunteers to help survey a large percentage of the river and impoundments
 - o Completed a total of 64 man hours of field work and mapping
 - o When they encountered small infestations, after recording the data they just pulled the invasives and noted that as the treatment in the mapped data.

Species to watch for:

- Water chestnut
- Water hyacinth (not seen this year)
- Water lettuce
- European water clover (in Sudbury, on Heard Pond and in the Charles) herbicide is applied to infestations
- Curly pondweed
- Eurasian and variable milfoil
- Fanwort

After four years of work, they have only pulled a total of 50-100 plants. OARS has been awarded funding from ERM Foundation to continue their mapping efforts and would like to expand their impact. They have water chestnut ID cards that they hand out with their boater trail maps.

- From here they'll develop a management plan, move to web-based reporting so anyone can help contribute to locating infestations, and expand mapping efforts to the Sudbury and Concord Rivers

Questions and comments following Sue's presentation:

- When pulling water chestnut, pull as much of the plant up as you can – some plants that were pulled early but only broken off at the stem still regrew nutlets. You don't need to pull the *entire* stem and root system up, but do be careful to get as much as practically possible.
- The mapping units have an accuracy of 5 meters or less – they're more accurate when you're out on the river because you don't have the problem of forest cover impeding satellite reception.
- When you conduct the mapping surveys is a critical variable because the biomass will change greatly over the course of the growing season. Ideally, we'd want people out a little earlier in the season to note and get an idea of where infestations are and then return later with a crew to remove the plants.
- The timing of pulling water chestnut is important too so the seeds don't drop off while you are pulling the plants. Through to the beginning of August is typically still okay.

Raising Beetles for Purple Loosestrife Control – Katrina Scheiner, SCA / NPS / USFWS Fellow

Katrina gave a brief presentation outlining a “quick and dirty” guide to raising *Galerucella* sp beetles as a bio control agent for controlling purple loosestrife. If you are interested in reading a more detailed protocol, along with lessons learned and notes on the process, please contact Amber or Katrina.

- When setting up your beetle rearing facility, make sure to select a site that will get as much sun as possible. At least eight hours is ideal so as to ensure maximum growth potential for your plants.
- It's best to collect all of your supplies and materials before you set up your facility. You will need plastic kiddie wading pools to set the pots in, 10-inch diameter plastic planters, potting soil, slow release fertilizer, wire tomato cages, and mesh sleeves or bags that you can pull over the tomato cage on each plant.
- Dig up purple loosestrife root balls in the early spring, as soon as possible after the spring thaw. Aim for a ball about the size of a softball with six or so dead stems. Locating the plants can be much easier if you find a collection site in the late summer, while the plants are still in bloom, and mark the plants that you wish to dig up with flagging tape.
- When you get to your rearing facility site, wash and scrub the root balls to remove as much soil and organic matter as possible. This is to create as much of a controlled environment as possible within your rearing facility, and to reduce the risk of planting fungus spores or predatory insects in with your beetles. Because this is a would-be destructive procedure for any overwintering *Galerucella* beetles, do your best to make sure that there is not an existing beetle population from where you are collecting your loosestrife!
- Plant the loosestrife root balls in the potting soil, one root ball to a pot. If you have a couple of smaller root balls, you can combine them in a pot. Mix the appropriate amount of slow release fertilizer in with the potting soil as your plant the roots.
- Make sure the kiddie pools are placed where they will stay for the duration of the project, because it's time consuming to move them after the fact. Arrange the pots in each pool, wet the soil, and fill the pools with several inches of water to simulate a wetland environment.
- Allow your loosestrife to grow for 5-8 weeks, checking the pools regularly to make sure that they have enough water or do not become flooded. After the plants are 18 inches tall, you're ready to add beetles! Beetles will emerge from overwintering sometime around early May, though timing varies depending on weather.
- Prep your plants for the beetles before you head out to collect them. Place a tomato cage over each plant and a net over each tomato cage.
- Locate a stand of loosestrife that has an existing beetle population. You can collect the beetles using an insect aspirator or simply a funnel made out of a soda bottle. You will want

- to add about 10-15 beetles to each plant, so it can be much easier to collect the beetles directly into smaller containers, with 10-15 in each.
- Carefully add your beetles to each netted plant, keeping an eye out for any that may try to escape.
 - It takes about 40 days from egg to new adult, so plan your monitoring accordingly. Continue to check the water levels in the pools, but also keep track of your beetle's life stages. They should begin laying eggs almost immediately from the time that you add them to your plants.
 - As the larvae hatch, your plants will become more and more defoliated. Keep a careful watch on this because you will likely need to supplement your potted plants with loosestrife cuttings from the wild in order to sustain your beetles.
 - As soon as you note new adults emerging, it's time to release your beetles! Bring the entire netted pot to your release site. Carefully remove the netting from around the pots and turn it inside out, checking for larvae. You may leave the netting draped across wild loosestrife or very carefully remove any larvae and place them on wild plants. Nestle your pots in with the wild loosestrife and break off a few stems to create bridges for your beetles. New adults cannot fly for the first day or so after pupating, but will still need access to a food source.
 - Leave the pots in the wetlands for at least a month, or even longer, to ensure that any larvae and pupae that were still on your plants in the soil have time to develop into adults.

A note from the audience: If you do have an existing beetle population, you can also carefully dig up wild loosestrife and pot it in your facility. Beetles that overwintered in the soil will emerge from your pots, so either net them when you plant them or keep a careful watch on when beetles emerge. If you go this route, you will not have to collect beetles from the wild.

- The purpose of creating a rearing facility is to provide the beetles with the most ideal growing conditions possible. They are allowed to develop free of predation, and so we will be able to help bolster wild populations.

The Vine – A Round Robin Sharing of Members' 2012 Field Season Activities

Acton – Bettina Abe - Had their second season of pulling water chestnut on Icehouse Pond, had a total of about 75 volunteers, pulled over three days, used about 40 boats, and pulled about 800 ft³ of wet plants. The Acton Democratic Committee pulls chestnut as their annual service project. This was also their fourth year picking garlic mustard and hosted pulls on 9 of their 16 conservation land properties. They had about a dozen volunteers, are having good success on two of the properties, and are at least keeping it at bay on the others.

Concord Land Conservation Trust – Used NRCS funds at Elm Brook to clear an old apple orchard of oriental bittersweet by way of cutting the stems and burning the field. Continued water chestnut removal on Fairhaven Bay and have been very successful, only needing to hand pull this year.

FARNWR – Karen Riggert -Pulled spotted knapweed on the south side of Assabet and have continued to remove purple loosestrife on the north side for the past four or five years, and it's looking better. Spotted knapweed has also been controlled in other areas of the Refuge by the bio interns.

Lincoln Conservation Commission – David Mckinnon- Hosted their fourth annual garlic mustard pull – encouraged residents to pull on their own property and around town, then the Con Com coordinated the pick up of the bags. It was their most successful pull to date and they collected over 1000 bags of garlic mustard. Unfortunately, (invasive) wall lettuce is moving in in place of the garlic mustard. They are close to having water chestnut 98% eradicated from Fairhaven Bay.

Littleton – Rick Findlay - Working on controlling mile-a-minute and garlic mustard, using money from WHIP grant to maintain control of existing infestations and control new plants.

Mass Audubon – Jeff Collins - submitted notice of intent for applying herbicide to phragmites in Marshfield, but the DEP said they'd need a higher level permit, and thus license, to do so. They met with DEP staff to try to work out a general permit solution. The 401 water quality permit originally applied to herbicide use in open water bodies, but now extends to wetlands. Their existing plans are alright, but are working out a plan for next year. Tia Pinney reported on purple loosestrife control efforts on Drumlin Farm – they had planned to rear beetles, but that fell off this year as students actually dug up the wrong plants. They're also controlling the property for spotted knapweed, garlic mustard, and oriental bittersweet.

Maynard Conservation Commission – John Dwyer – They are watching the planning developments of the Maynard Country Club as there are invasives on the property, but for now they seem to be kept in check by the course maintenance. They are also looking into management options for the Maynard Cemetery because it currently has many invasives but there are no existing management plans.

Natick Garden Club – Jill Miller - Organizing a group of members who will help manage invasives on private property and assist the land owners. They hope to expand to public property as well, but are focusing on educating land and home owners for now.

New England Wild Flower Society – Ted Elliman – had been controlling Japanese stilt grass at Conte Wildlife Refuge in West Springfield for five or six years, but then had a lapse of funding and now the stilt grass is all back as bad as it ever was. Really demonstrates how important it is to keep on top of the plants and get out there every year. They are putting together long-term volunteer monitoring program to get it back under control.

Stow – Allan Fierce - The Land Trust and Conservation Commission aren't very involved in invasives work. They noted that specific effort needs to be made to mark the location of problems. They also really want to get the Con Com involved because there are some serious infestations on their properties.

Sudbury Valley Trustees – Laura Mattei – They’re employing Ted to do work in the desert area in Marlborough, targeting the strip on Concord Road. They’re targeting a patch of phragmites and some isolated bittersweet. At the Greenways property they targeted buckthorn and are continuing their garlic mustard pulls at Wolbach Farm. They’ve generally had good success with the garlic mustard pulls, though it takes several years (they’ve been working the Wolbach property for three or four) and the populations are difficult to control when large.

USDA NRCS – Stephanie Wilsen - Supporting WHIP project activities on private land, not extending to public land as the program is getting more restrictive.

SWEET – Rebecca Chizzo – Second year for their garlic mustard pull (the first year yielded 222 bags), 53 residents helps and they collected 714 bag of garlic mustard. They also IDed and reported a black swallowwort population near the Sudbury River and removed 65 bags of swallowwort from the area. They noted additional swallowwort populations around the watershed.

USFWS – Amber Carr – pulled water chestnut, both with harvester and hand pulling. This year they borrowed the Hop Brook Protection Association’s boom to catch floaters, and were successful in keeping floaters in check. They had a crew out on the river collecting floaters the week following the harvester as well. They continued with their early detection monitoring and are on their second year monitoring Puffer Pond at Assabet River NWR. There are still no aquatic invasives, aside from the purple loosestrife that has been there.

Wayland Surface Water Quality Committee – Tom Largy – Have been using a contractor to remove water chestnut on Heard Pond for the past 10 or 11 years and expect to only need to continue for another five or six years. They’ve had excellent success thus far, but still removed about 2,000 plants this year. Dudley Pond has had a milfoil problem for quite some time. It used to be treated every couple of years with chemicals, but about eight or nine years ago they moved away from that. They spent \$25,000 on milfoil beetles to use as a bio control several years ago, but the beetles appeared to do nothing. They hired professional divers to hand pull it, but that was also unsuccessful and they had to treat the pond a couple of years later. They have continued extensively hand pulling since then and pulled about 30,000 plants this year, at an approximate cost of \$1 per plant pulled. They will likely have to go back to using a chemical treatment.

Westborough Community Land Trust – Janet Anderson – this was their 3rd year of raising and using purple loosestrife beetles as a teaching tool with scouts and high school students. They are also continuing with garlic mustard pulls and removing burning bush.

Westford Conservation Trust – Ron Gemma – completed their second year of mile-a-minute management, starting to make some progress this year, but the seeds remain viable for five years. They had nine scheduled bi-weekly pulls plus three additional special pulls, and a total of 35 volunteers. They are focusing on outreach and education, visiting people’s homes and helping residents. They are expanding their scope outwards, finding additional pockets of the plants. They’ve called their education

program Beauty and the Beast to encourage residents to manage in their own yards. Ted asked if they've tried weevils to control the plants, and they have not.

Summary of CISMA Activities for 2012 Field Season

CISMA currently has 43 members

The RSC small grants program has funded projects with CISMA members for the past three years

- \$5300 from the RSC has funded several projects:
 - o NEWFS continued early detection monitoring and rapid response trainings for two years
 - o Updated species lists, had some speakers talk about particular species and management
 - o Planned to do stilt grass control but weather didn't allow for it
 - o Some money went to SWEET for their invasives efforts
 - o Have funding for another year for Bay State Road Program (its 2nd year) with Westfield's CISMA groups; about 20 people attended last year.
 - o Some funds went to the Education Outreach Committee to continue the speaker series, have our first speaker in January and another in May.

Lynn Knight spoke about the NFWF grant and outlined the activities of the grant partners this past season:

- As mentioned at the beginning of the meeting, the National Fish and Wildlife Foundation awarded CISMA \$70,000 to conduct invasive species management work.
- There are five partners and seven management sites involved in the grant work, which spans the 2012 and 2013 field seasons.
 - o The projects will restore meadows and early successional habitat
- At Walden Woods they are controlling for bush honeysuckle, utilizing the cut and paint method
- At SVT's desert area they mapped the entire area a couple years ago and now hand pulled isolated populations and cut and painted phragmites with Ted. They hand pulled and cut and painted glossy buckthorn and plan to do a burn of the area to control new growth after they mow.
- At SVT's Greenways property, they are focusing on field restoration and controlling for buckthorn and multiflora rose.
- At O'Rourke's (USFWS), they're removing multiflora rose. This past season they cleared three acres of the five-acre site, using the cut and paint method.

- At Assabet River NWR (USFWS), they are eradicating invasives along the trails on the south side of the Refuge. This season they removed spotted knapweed.
- At Foss Farm, they are managing an old open farm field and removing buckthorn and multiflora rose along the edges. The town of Carlisle is hiring a tree clearing company to help remove dense buckthorn and oriental bittersweet thickets.
- At Ben's Woods, they are controlling porcelain berry, some oriental bittersweet, and burning bush. They sprayed the field and cut and paint the burning bush stems.

If you have a task that you would like to accomplish, let Amber know. Steering committee elections are coming up and in December Amber will send out a form so that all members can vote for whom they wish to fill the four seats.

The current steering committee members whose seats are expiring are: Mass Audubon, New England Wild Flower Society, the Town of Sudbury, and FARNWR. As of this meeting, Mass Audubon and New England Wild Flower Society have stated their intent to run again.