

FINAL MINUTES

Natural Heritage & Endangered Species Advisory Committee (NHESAC)

January 10, 2019
DFW Field Headquarters, Southwest Meeting Room #103
1 Rabbit Hill Road, Westborough, MA 01581

MEMBERS:

Present: Mark Mello, Joseph Larson, Wayne Petersen, William Brumback, Tim Flanagan

Absent:

ASSOCIATE MEMBERS:

Present: Dave Small, Kevin Powers, Russ Hopping

Absent: Andy Finton, Bryan Windmiller

AGENCY STAFF:

Present: Tom French, Peter Hazelton, Sarah Maier, Mike Nelson, Marion Larson, Jennifer Longsdorf

OTHERS:

Brandi Van Roo (F&W Board Member), Brad Miner (Worcester T&G)

– The meeting was called to order at 1:32 p.m. –

1. Approval of the December Minutes

Russ Hopping motioned that the December minutes be accepted, Tim Flanagan seconded, and members voted unanimously to approve.

2. Acting Chair's Comments – Mark Mello

As mentioned at the last meeting, a new critter of concern is the Spotted Lanternfly. Mark brought in an article from the Bay Journal from December 12th titled, “Spotted Lanternfly, a Dire Threat to Crops, Shows up in MD.” Included in the Committee packets is the agenda for UMass Amherst's Spotted Lanternfly Preparedness Conference scheduled for February 7th.

3. Board Member's Comments – Joseph Larson

The Board meeting was held earlier today. The Board voted to rehire Mike Jones as the State Herpetologist.

Dave Paulson gave a presentation on the MassWildlife-MassDOT partnership. The interdepartmental service agreement was established in 2008 to create Linking Landscapes for Massachusetts Wildlife, a multifaceted effort to minimize the impact of the existing road network on wildlife, while improving highway safety. This partnership led to good teamwork and a great relationship.

Dave Stainbrook gave a presentation on chronic wasting disease (CWD), which included an update on how CWD has spread around the country and how various states are responding to this outbreak that affects deer, elk, moose, and caribou. Dave discussed how researchers are trying to get a better understanding of the disease and how to prevent it from spreading. CWD is a prion disease caused by abnormal folding of the prion proteins which leads to brain damage and the characteristic signs and symptoms of the disease. CWD is fatal to animals and there are currently no treatments or vaccines. Due to CWD, Massachusetts has adopted regulations about bringing whole carcasses or heads in from out-of-state. Massachusetts now bans importation of whole carcasses and heads from states where CWD is confirmed. Studies suggest that CWD poses a risk to non-human primates, like monkeys, that eat meat from CWD-infected animals or come into contact with brain or body fluids from infected animals. This raises concern that CWD may also be a risk to humans.

The Board discussed the monthly Natural Heritage Fund taxpayer donations. The graph and charts the Committee is provided with each month only includes the tax checkoff, but there are also people who donate directly to the Fund via check. Karen Dolan provided the Board and the Committee with a summary of direct donations by month for 2018. We know exactly who donates via check, but we do not know anything about the taxpayers who donate via the checkoff. Joe pointed out that in 2016, there seemed to be a jump in the amount of money donated to the Fund, but it is unclear what the cause of this increase was.

Periodically, best management practices are reviewed and presented to the Board. At today's meeting, the guidelines for invasive species assessment and mitigation were discussed, which spells out what the Agency's responsibilities are.

4. NHESP Report – Tom French & Pete Hazelton

Tom introduced Pete as the new Chief of Conservation Science. Pete said it is an honor to fill this position and he is looking forward to working with the Committee more. The Aquatic Ecologist position has been pushed through to HR for approval to be posted. Tom announced that he will be retiring on February 22nd, but he plans to come back on contract to work on a few projects.

Elaine Brewer has been reviewing Pat Swain's Classification of the Natural Communities of Massachusetts technical document, and Jen Longsdorf will be assisting with the editing and formatting. There will eventually be two printed natural community documents. The first being the technical document which will be a longer version to be used as a field guide, and the second will be a glossy fact sheet version with color photos. Since Pat has been retired for a few years now, we are making these publications a priority.

5. Assistant Director's Report – Tom French

The Committee should think about electing officers very soon, as the Chair and Secretary positions have been vacant since September 2018. The Committee is also down four members, two full and two associate members. Please let Tom and Joe know if you have any suggestions for new members.

Kevin Powers pulled together a list of citations and abstracts related to pollinator-friendly and wildlife-friendly, which are included in the Committee's packets. Also included in the packets were the following:

- MassWildlife news article remembering George (Gige) Darey
- MassWildlife news article on prescribed fire for habitat management
- Habitat Management Grant Program awards
- National Geographic article about Lonely George, a Hawaiian tree snail that was the last of its species and recently died at 14 years old
- Newly discovered blind, burrowing amphibian named donaldtrumpi
- North Atlantic Right Whales in Cape Cod Bay
- Yale article by Bruce Babbitt about why we must save the Endangered Species Act from the Trump Administration

Marion Larson added that about 30 papers across the state have picked up on our news release about the record number of Bald Eagles in 2018.

6. Continue Discussion on Solar Arrays and Wildlife

Zara Dowling from UMass presented at the December Advisory Committee meeting on the wildlife-friendly certification program for solar PV facilities in Massachusetts. The purpose of today's meeting is to have an interactive discussion as a Committee and see if we can reach a consensus. If we'd like to continue the discussion into another meeting, we can ask Kaitlin Kelly, Solar Programs Manager for the Department of Energy Resources, if she would be willing to present at the February meeting. The discussion included the following:

- Committee is in consensus that solar is a good renewable form of energy, but how do you choose where solar arrays are constructed, what are the best management practices, and how do you make them greener than they already are?
- Brandi Van Roo briefly discussed her study at the December meeting, but she wanted to expand and provide the following details:
 - Study took place over one year, but included two summers
 - Four solar arrays were opened up to her, but she didn't have any choice in their locations. All four were no more than 10 miles from the comparison control sites (though most within 3 miles), which included agricultural (hay) fields or wildlife management areas (WMA).
 - The WMAs and agricultural sites were about the same size, the solar sites were larger, but Brandi ensured she kept the sampling size the same at each site.
 - Baited sites for mammal trapping (box traps, infrared cameras, and track plates), mist netted for birds, insect sampling with sweet nets and cups (only identified to order), plant sampling (identification by a botanist, Bryan Connolly)
 - There's large ductwork winding through the solar arrays, which may limit mobility for mammals. The ductwork also generates an audible hum.
 - Species richness numbers didn't differ if you look at the number of species observed from the solar to agricultural to WMA sites, but the species identified were different.

- Mammal and bird species richness was similar, with nothing unique being observed. Carnivores were abundant at the solar sites; are larger mammals getting trapped inside the solar arrays due to the duct work?
- In most cases, the solar site was most similar to the agricultural field.
- The solar site seemed to only have common/generalist species, and species found at the solar sites were found at the other sites.
- The WMAs had the greatest number of unique species (birds and mammals), especially compared to the solar sites.
- Species richness for insects did not differ among the sites, but the species abundance did. The solar arrays had much lower species abundance than the other sites.
- Solar sites seemed to serve as feeding areas, but abundance was lower.
- Solar sites were vegetated, not gravel, but growing just whatever can grow there. The certification program will select what to grow and how to manage it. With the certification program, you can manage to increase diversity by diversifying the plant species.
- The soil in the solar and agricultural sites was more compacted than in the WMAs.
- For birds, there was significant species richness outside the fence line of the solar arrays. The forest birds seemed to be selecting areas around the edge of the solar arrays.
- The coolest temperatures were right under the solar panels, and it was slightly warmer just above the panels. However, the open area between the panels was significantly warmer, likely due to there being no shade or air flow. The temperature above the solar array was equivalent to the same height above the agriculture field.
- Brandi's solar array sites were mowed twice in the two month period she was there because the vegetation cannot grow taller than the bottom of the panels. Comparatively, the agricultural sites are mowed twice per year and the WMAs are mowed once every 2-3 years.
 - One thought is to raise the height of the panels so the solar arrays require less frequent mowing, but that would require more wiring and, therefore, more money for the infrastructure.
- Our solar arrays are much different than those out west where all of the energy is funneled into the center.
- If this study was replicated or continued, Brandi would ensure diversity of sites, include gravel sites, and do several point counts and several days of mist netting. Mark noted that the insects should be identified down to family.
- Kevin Powers mentioned that the state of New York has attacked this issue and there is now a bill related to certification of solar arrays. UMass's goal is to have their certification criteria written into legislation. Governor Baker has made a mandate for more renewable energy, but there are a lot of unknowns.
- Solar arrays are being constructed in record numbers. There is a permitting process if a solar array is going to be constructed on a landfill or the top of a building, but there is no permitting process if land is cleared and a solar array is constructed.
- Many towns are installing solar sites thinking they'll generate money, but they are not getting revenue because the developer receives a tax exemption.

The Committee turned their focus back to the UMass certification program and the need for best management practices. The discussion included the following:

- Depending on the level of compaction, gravel could be considered either a loss of habitat or a benefit for some species. Gravel would also mean no maintenance and no herbicide use.
- It's better to have habitat for diverse generalist species opposed to nothing at all.
- It's almost an incentive to clear natural habitat because there's not much permitting required and the disincentive for clearing is negligible. It's financially and logistically easier to construct a solar array in a cleared area.
- Have there been any studies on a loss of carbon capture?
- UMass is trying to mitigate what is already occurring, but the problem is how the incentive program is laid out. UMass needs to incentivize the right things.

The Committee agreed that they'd like to continue this discussion and invite Kaitlin Kelly, Solar Programs Manager at the MA Department of Energy Resources, to present at the next meeting. The Committee is also considering writing a joint position statement or recommendation.

7. Member's and Associate Member's Comments

Bill Brumback – Bill announced that he will be retiring as of March 1st, but similar to Tom, Bill will also be sticking around on contract.

Tim Flanagan – Tim brought in a few newspaper articles from the Berkshire Eagle, including a front page article titled, "Mountain lions in the northeast: Just a matter of time," which discusses controversy concerning the presence of mountain lions in Massachusetts. Tim also shared a letter to the editor titled, "Mass Audubon honors legacy of Gige Darey," and a third article titled, "George L. Gige Darey, leading light of Berkshire conservation, dies at 90." Tim commented on the several remembrances of Gige saying he had an incredible ability to get things done.

Dave Small – The Athol Bird and Nature Club met last night. Matt Hickler gave a presentation on the Flora of Franklin County. As a result of the comprehensive survey effort, several new species were discovered and several others were documented that hadn't been recorded in a while. It is fascinating that a group of volunteer botanists can find and identify every plant in the whole county.

Kevin Powers – Stellwagen Bank National Marine Sanctuary has been satellite tagging shearwaters for 6 years. However, this year they are in jeopardy of not being able to tag due to the federal government shutdown. Stellwagen may not have appropriate funding to purchase the tags in time.

– The meeting adjourned at 3:58 P.M. –

Drafted & Submitted by: Jennifer Longsdorf, NHESP Program Coordinator