



MASSWILDLIFE

DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581

p: (508) 389-6300 | f: (508) 389-7890

MASS.GOV/MASSWILDLIFE

COMMONWEALTH OF MASSACHUSETTS
DIVISION OF FISHERIES AND WILDLIFE
FISHERIES AND WILDLIFE BOARD
MEETING MINUTES

PRESENT: Dr. Joseph Larson/Chair, Michael Roche/Vice Chair, Bonnie Booth/Secretary, Bob Durand, Ernest W. Foster IV, Stephen Sears, Dr. Brandi Van Roo, Ron Amidon/Commissioner/DFG, Mark Tisa/Director, Jon Regosin/Deputy Director, Kris McCarthy/Associate Director/Finance and Administration, Eve Schlüter/Assistant Director/NHESP, Michael Huguenin/Assistant Director/Wildlife, Trina Moruzzi/Assistant Director/Operations, Todd Richards/Assistant Director/Fisheries, Marion Larson/Chief/Information and Education, Nicole McSweeney/Marketing and Outreach Manager, Joseph Rogers/Supervisor/Conn. Valley Wildlife District, Todd Olanyk/Supervisor/Central Wildlife District, Jason Zimmer/Supervisor/Southeast Wildlife District, Andrew Madden/Supervisor/Western Wildlife District, Pat Huckery/Supervisor/Northeast Wildlife District, Lt. Colonel David Loos/OLE

DATE: May 17, 2021

LOCATION: Via Zoom Meeting

The Chairman had technical issues and could not join the meeting immediately. Vice Chair Roche opened the meeting at 1:10 p.m.

Acceptance of Minutes

A motion was made by Secretary Booth to accept the minutes from the March meeting as presented. The motion was seconded by Mr. Foster.

Vice Chair Roche: yes

Secretary Booth: yes

Dr. Van Roo: yes

Mr. Foster: yes

Mr. Sears: yes

Mr. Durand: yes

The motion passed unanimously.

Chair's Comments

The Chairman's comments were held until his arrival.

Commissioner's Comments

Commissioner Amidon was not able to join the meeting immediately and his comments were held until he arrived.

Director's Comments

Director Tisa reported that he had no comments at that time.

MASSWILDLIFE

Law Enforcement Comments

The OLE's Lt. Colonel David Loos reported that the spring turkey hunting season had commenced with no safety issues and no incidents. The Lt. Colonel reported that there were a few violations for baiting but otherwise it was a safe, uneventful season. He reported that shad fishing had also commenced on the Connecticut and Merrimack rivers, and officers were patrolling in those waters; no incidents.

Lt. Colonel Loos also reported that there continue to be a high number of bear calls from around the state, and more than ever recorded in the Southeast, with one relocation of a bear in Auburn to an undisclosed location. He stated that there had been two off-road accidents, in Chalet WMA and the Town of Sterling, and officers are investigating. The DCR's OHV season had also opened, with increased patrols in those areas as needed. The Lt. Colonel also reported that 40 hours of training had begun for the members of the Connecticut River task force about which he previously reported to the Board members.

Climate Change Refugia as Cornerstones to Aquatic Conservation (Rebecca Quiñones)

Assistant Director for Fisheries Todd Richards introduced Stream Biologist Project Leader Dr. Rebecca Quiñones, who was returning to update the Board members about her research on coldwater refugia and their role in helping to mitigate the effects of climate change for coldwater species.

Assistant Director Richards first reported that MassWildlife was having a very good stocking season, with a lot of positive comments and conversations on social media about the quality of the fish and the fishing. He reported that the Southeast and Western districts were finishing up stocking out their allotments in the coming week, with the other districts already finished.

Dr. Quiñones gave a detailed, graphics-rich presentation on her ongoing research into and analysis of the locations and relative viability of climate-change refugia in the Commonwealth's coldwater streams. She reminded the Board members that refugia are roughly defined as a network of refuges in streams (in this case) that are interconnected and provide refuge from different kinds of risks, such as drought, isolation, flow, and flood risks. Refugia alter more slowly and are therefore more resilient as the climate changes, providing places where populations can survive despite the challenges they face. Examples of refugia for coldwater species included natural-bed streams in forested areas that benefit from deep shade, more constant flows, and highly variable stream bottoms with deeper areas of water that stay colder longer. She reported about brook trout occupancy models that are used to predict the probability that trout are present in some streams and showed a state map of watersheds that showed the highest probable occupancy rates currently occur in the northwestern part of the state. Dr. Quiñones then presented a series of state maps showing existing coldwater streams (identified in fisheries surveys since the year 2000), with each map indicating the effect on those streams as the July air temperatures warm in 2° increments. This analysis also showed that after a 6° increase in July air temperatures, most coldwater refugia would likely only be located in the northwestern part of the state.

Dr. Quiñones then reported more specifically on her current research, which was recently reported on by herself and her colleagues in the journal of the Ecological Society of America, *Frontiers in Ecology and the Environment*. The article is titled "Managing climate refugia for freshwater fishes under an expanding human footprint" [Lead author: J.L. Ebersole]. She and her colleagues reported on their work, which includes validating the existing models with a combination of temperature loggers and fish surveys. Dr. Quiñones stated that her work for the summer of 2021 was to research what characterizes refugia, i.e., how many refuges are needed, how far apart can they be, and how big do they have to be to protect populations. She will also be exploring how fishes in refuges interact with each other in a collaboration with U.S.G.S. [the U.S. Geological Survey] using thermal imagery, PIT tags, and thermal

tags. Showing examples of the outputs from each of these tools, Dr. Quiñones then showed a map of the potential sites in North-central Massachusetts and Southern New Hampshire along the Millers River, where she will be working to explore climate-change resiliency and species richness at various sites.

Dr. Quiñones then reported on the current and future resource-management applications of MassWildlife's work on coldwater refugia. In land protection, e.g., in MassWildlife's land acquisition program and the development of BioMap3, understanding and accurately predicting the locations of potential refugia helps MassWildlife and other conservation organizations identify and target areas of both high resiliency and high biodiversity for protection and/or acquisition. And in land management, barrier removal (e.g., culverts and dams) can be prioritized in areas with high resiliency and medium biodiversity and also in areas with medium resiliency but high biodiversity. Dr. Quiñones closed by noting that a big part of her work is developing collaborations with the many different organizations that share a common mission to conserve species and habitat and to study the ongoing effects of climate change, and she cited many of the ones that are currently collaborating in this work, including the Mass. Division of Ecological Restoration, New Hampshire Fish and Game, UMass/Amherst, the U.S.G.S., Trout Unlimited, the Northeast Climate Adaptation Science Center, American Rivers, the Nature Conservancy, Mass Audubon, the Nashua River Watershed Association, and the North Atlantic Aquatic Connectivity Collaborative.

After questions from the Board members and a brief discussion, Chair Larson and the other Board members thanked Dr. Quiñones for her work and her excellent presentation.

Chairman's Comments

Chairman Larson joined the meeting during Dr. Quiñones' presentation. He reported his own wildlife experience the previous week when a bear came up onto the deck outside his home. His wife then frightened it away.

Commissioner's Comments

Commissioner Amidon also joined the meeting during the presentation. He reported that there are some bills in the legislature that seek to control management of some state lands by putting them in reserves. He reported that it would probably not be allowed under Article 97 and that DFG counsel is working on it. He reported that he is working with a local advocacy group that will develop a public relations campaign to educate the public about the issue and the importance of management for maintaining habitat.

The Commissioner offered his thanks to Deputy Director Regosin, Habitat Program Manager Brian Hawthorne, and representatives of the Ruffed Grouse Society and American Woodcock Society for leading an effort to illustrate why habitat-forestry programs are so important in Massachusetts. He reported that he should be receiving a report from the working group to a larger group of interested readers in the coming weeks, and that he hopes the partners will help with telling a compelling story. The report will include video and photos to show before, during, and after management. The Commissioner stated that he will keep the Board apprised of developments.

Set Meeting Date

Members briefly discussed dates for the June Fisheries and Wildlife Board meeting, scheduling it for Tuesday, June 15, 2021, at 1:00 p.m.

Moved by Secretary Booth; seconded by Dr. Van Roo.

Chair Larson: yes

Vice Chair Roche: yes

Secretary Booth: yes

Dr. Van Roo: yes

Mr. Foster: yes

Mr. Sears: yes

Mr. Durand: yes

The motion passed unanimously.

Member's Comments

Secretary Booth, Dr. Van Roo, Mr. Sears, Mr. Foster, and Mr. Durand reported no further comments.

Vice Chair Roche reported that he had seen many turkeys in places where he had not seen them before. He also offered his kudos to the trout stocking crews, stating that he had also had great comments from anglers.

There being no more discussion, a motion was made by Vice Chair Roche to move into Executive Session for the purpose of discussing certain land acquisitions and to not return to open session afterward. The motion was seconded by Dr. Van Roo.

Chair Larson: yes

Vice Chair Roche: yes

Dr. Van Roo: yes

Mr. Foster: yes

Mr. Sears: yes

Mr. Durand: yes

The motion passed unanimously.

Executive Session

Deputy Director Jon Regosin presented nine proposed acquisitions, which were each reviewed and each unanimously approved by the Board.

There being no further business, the meeting was adjourned at 2:45 p.m.

Respectfully submitted,

Bonnie Booth
Secretary

List of documents presented to the Board in its May meeting packets

May agenda

Draft April meeting minutes for review

Spreadsheet of Natural Heritage Fund Taxpayer Donations (1992 to 2020)

Documentation for the executive session