

Meeting of the Vermont Fish and Wildlife Board

Minutes for Wednesday February 21, 2018

The Vermont Fish and Wildlife Board held a meeting at 5:00 p.m. EST on Wednesday, February 21, 2018 at 1 National Life Drive, Montpelier VT 05620 in the Dewey Building.

Members of the Board in Attendance: Theresa Elmer (Vice Chair/Acting Chair), Cheryl Frank Sullivan, Tim Biebel, Johanna Laggis, Pete Allard, Dennis Mewes, Dave Fielding, Craig Greene, Brian Wiles, Craig Nolan, Bill Pickens, and David Robillard.

Fish and Wildlife Staff: Louis Porter (Commissioner), Will Duane (Executive Assistant), Mark Scott (Wildlife Director), Susan Warner (Outreach Director), George Scribner (Deputy Chief Warden), Adam Miller (Fish Culture Operations Manager) Shawn Goode (Fisheries Biologist), Tom Jones (Fish Health Biologist), Tom Rogers (Information Specialist), Katy Gieder (Biometrician), David Sausville (Migratory Game Bird Project Leader), Cedric Alexander (Moose Project Leader), Scott Darling (Wildlife Management Program Manager-via Phone)

Members of the Public in Attendance: Lindzey Beal, Renate Callahan, Roy Kilburn, Dody Bleau, Lynn Andrews, Pat Rayta, Kristin Cameron, Rodney Elmer, and Mark Swenson (ORCA Media).

The Board Meeting was called to order at 5:01 PM, EST by Vice Chair Theresa Elmer.

Agenda:

- Approval of January 17, 2018 minutes
 - Public Comments
 - Presentation of Petition to the Board by Lindzey Beal
 - Fish Pathogen & Aquatic Nuisance Species Presentation
 - Rulemaking Calendar Discussion
 - 2018 Vermont Migratory Web-less Bird and Waterfowl Hunting Season Preview
 - 2018 Moose Hunt Proposal
 - Commissioner's Update
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1.) Approval of Board Meeting Minutes from the January 17, 2018 Board Meeting

Vote: 11-1 in favor of approving the minutes. Minutes passed

Members in Favor: Theresa Elmer, Tim Biebel, Johanna Laggis, Pete Allard, Dennis Mewes, Dave Fielding, Craig Greene, Brian Wiles, Craig Nolan, Bill Pickens, and David Robillard.

Members Opposed: Cheryl Frank Sullivan

2.) Public Comment – 15 minutes

Roy Kilburn—Glad that members of the public who attend meetings now have the opportunity to speak.

Dody Bleau—Hunt of a Lifetime—as guides and hunters we're concerned about the upcoming moose proposals. Some cuts to the number of permits are okay, ending the moose hunt altogether is not a good idea.

Leah Andrews—Cites studies on increase of Lyme disease in Vermont, and that foxes are number one predators of mice that spread disease. Please take into consideration that foxes are an important component in the fight against Lyme disease.

Pat Rayta—Commenting on the current moose proposal, he's a moose guide, asking that the Board should not end the moose hunt; the hunt should continue. Limiting the permit numbers some may be appropriate.

Christen Cameron—Concerned about depleted moose population, asking the Board to stop the moose hunt to let them recover. Lowering the permit numbers and hoping for success is wishful thinking. Please count wounded moose as the total bag limit as some other states do.

3.) Lyme Disease Trapping Petition (10 minutes)

A Petition was received by the Board by Lindzey Beal of Lamoille County. She was granted time to present her petition to the Board. The petition materials are attached at the end of these minutes.

Discussion Points:

- Mice are responsible for the majority of tick Lyme transfer
- Fox are the primary predators of these carrier mice and can be a valuable ally in ending the spread of Lyme disease.
- Trapping inhibits the ability of fox to control the mice and tick population. Recreational trapping is not necessary.
- After the presentation of the petition Commissioner Porter and Mark Scott recommend to the Board that the Department present a review of scientific research on Lyme disease and its relation to habitat, ecosystem health, deer abundance, and predators to the Board at a later date this calendar year.

Motion: Board Member Craig Green moves to table this petition until after the Department can make a presentation to the Board on Lyme Disease, Board Member Dave Fielding seconds the motion.

Discussion:

- Members of the Board, Department staff, and Ms. Beal discussed foxes, ticks, Lyme disease, Department data, and other furbearing species trends and records.
- Board Chair Elmer requests that Department prepare a presentation on Lyme disease no later than the Board's September meeting.

Vote: 8-3 in favor of the motion to table the petition and take it up again after the Department can make its presentation to the Board.

Members in Favor:, Cheryl Frank Sullivan, Johanna Laggis, Pete Allard, Dennis Mewes, Dave Fielding, Craig Greene, Brian Wiles, Bill Pickens, and David Robillard.

Members Opposed: Theresa Elmer, Tim Biebel, Craig Nolan

4.) Fish Pathogen & Aquatic Nuisance Species Presentation

Adam Miller—Department of Fish and Wildlife Fish Culture Operations Manager

Presentation on Fish Pathogens and Aquatic Nuisance Species. The Presentation will be made available on the Board's Website. The focus of the presentation is to inform the Board about fish pathogens, aquatic nuisance species, the spread of these threats, an update on the recent enforcement action concerning a Vermont baitfish wholesaler, and to gather feedback from the Board regarding research on the topics listed above.

Discussion:

- After the presentation Board Members and Department staff discussed aquatic nuisance species, fish pathogens, baitfish importation and process, permitting, fish health in Vermont, and the Department’s fish research.
- Also discussed were the implications of the recent enforcement action against a Vermont baitfish dealer and the Department’s response and procedures and the availability of certain species of baitfish due to this action.

5). Upcoming Rulemaking Calendar Discussion

- Mark Scott and Board Chair Elmer discussed the upcoming public hearings schedule with Board Members to ensure there would be representation by the Board at those upcoming hearings. The hearing schedule is attached to these minutes.
- It was confirmed via a show of hands that each upcoming meeting and hearing on the calendar would have representation by Board Members.
- Mark Scott explained the large group/small group format and what is expected at the upcoming meetings and hearings.
- Department Staff and the Board discussed the upcoming Board schedule. The rulemaking schedule is attached at the end of these minutes.

6:32 PM EST Adjourned for Dinner Break

6:59 PM EST Reconvened from Dinner Break

6). 2018 Vermont Migratory Web-less Bird and Waterfowl Hunting Season Preview

Dave Sausville—Migratory Game Bird Project Leader.

Presentation to the Board on the upcoming migratory bird and waterfowl hunting season. The full proposal is available on the Board’s Website. The presentation focused on

reasons for Department's recommendations and the dates and locations of the upcoming seasons and the Department's recommendations. Specifically, the following:

- Hold the liberal season allowed under the federal framework related to season lengths and daily bag limits. The Board has the option to be more conservative.
- When to open the 2018 duck season.
 - Open the 2018 duck season on a Saturday. This year is scheduled to be a Saturday opening, following our tradition of two Wednesdays and a Saturday opening schedule.
 - Any splits within seasons to create segments should be considered for the Lake Champlain and Interior Vermont zones.
 - Open this year on Saturday, October 13 and run through December 11, for the Interior Zone.
 - Lake Champlain Zone: October 13 - Oct. 28 and Nov 10 - Dec. 23.
- Alter the current approach for Wednesday and Saturday openings from a two Wednesday and one Saturday schedule to every other year cycle.
- Opening the resident Canada goose season September 1st and continue through September 25.
- When to hold the 2018 migratory goose seasons.
 - Open the migratory Canada goose season on October 13.
 - Opening the Snow goose season on October 1.
- Increasing the northern pintail daily bag limit from one to two daily.
- Hold youth hunting weekend – September 29-30.
- Hold woodcock/snipe season: October 1- November 14.

Discussion:

- Also discussed was the Department's role in the Atlantic Flyway Initiative.

Vote:

- **The Board Conducted a straw vote to gauge interest among the board for the above proposals and submit to the public for comment:**
 - **12-0 Yes**, to hold the liberal season allowed under the USFWS federal framework related to season lengths and daily bag limits. The Board has the option to be more conservative.
 - **12-0 Yes**, to open the 2018 duck season on a Saturday. This year is scheduled to be a Saturday opening, following our tradition of two Wednesdays and a Saturday opening schedule.
 - **12-0 Yes**, to open this year on Saturday, October 13 and run through December 11, for the Interior Zone.
 - **11-1 Yes**, on Lake Champlain Zone: October 13 - Oct. 28 and Nov 10 - Dec. 23.
 - **12-0 Yes**, to opening the resident Canada goose season September 1st and continue through September 25.

- **12-0 Yes**, to open the migratory Canada goose season on October 13.
 - **12-0 Yes**, to opening the Snow goose season on October 1
 - **11-1 Yes**, to increasing the northern pintail daily bag limit from one to two daily.
 - **12-0 Yes**, to hold youth hunting weekend – September 29-30.
 - **12-0 Yes**, to hold woodcock/snipe season: October 1- November 14.
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7). 2018 Moose Hunt Proposal

Mark Scott introduced Katy Gieder—Staff Research Coordinator and Biometrician, Cedric Alexander—Moose Project Leader, and Scott Darling—Wildlife Management Program Manager (via Phone).

Presentation to the Board on moose herd health, historical harvest and permit data, and status of the ongoing moose collar study.

The study, the proposal and the presentation will be made available on the Board Website.

Discussion:

- The Department’s Big Game Team presents the Board with the following proposal for the 2018 moose hunt:
 - Recommend that the Fish and Wildlife Board authorize 10 hunting permits to take only antlered moose during for the regular season, 5 each for WMUs E1 and E2.
 - Further recommend that Fish and Wildlife Board authorize 4 hunting permits to take only antlered moose for the archery season, 2 each for WMUs E1 and E2.
 - Recommend that 0 hunting permits are allocated for all the remaining WMUs.
 - The annual auction and Special Opportunity Permits (SOP) were introduced when hundreds of permits were issued annually. With only 14 permits, the Big Game Team feels these allocations should be re-evaluated, but current statute probably requires at least 1 additional permit to be auctioned. The first 5 permits go in the lottery for Veterans.

- The Board and Department staff discussed the allocation of permits and statutory obligations for their issuance, the potential for no moose hunting during the 2018 season, the division of rifle and archery permits. Commissioner Porter stated that the cost to conduct a lottery and auction of this size approximates the income derived from the permits and applications.

- Biologists note that a harvest of the size as currently proposed will not have an impact on moose densities in WMU E1 and E2.
- The Board holds a straw poll to gauge support for the proposal. If supported, the Department needs to take immediate action to start preparing for the lottery for the upcoming 2018 moose hunting season.

Vote: The Board Chair conducts a straw vote to gauge support for the 2018 moose hunting season as proposed by the Department. The straw vote is unanimous in supporting the proposed 2018 moose hunting season.

8). Commissioner's Update

- Vermont is hosting the Northeast Association Fish and Wildlife Conference in Burlington April 15-17, 2018.
 - The Budget for the Department is in the house now, it's in good shape; it contains a slight increase from the current fiscal year.
 - A Fish and Wildlife miscellaneous bill passed second reading in the Vermont House, that looks like it will pass the House this week.
 - The Commissioner is working on bill regarding ATVs. Hoping this brings more accountability to the ATV riders.
 - The Fish and Wildlife website is currently down due to contract issues.
 - Staff is meeting with Windsor Town folks to discuss management of the newly acquired Windsor Wildlife Management Area; it's going to be an unusual piece of property. The intention is keep all available uses if they don't interfere with priority wildlife uses.
 - Deer winter survival seems good right now.
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9). Board Member Roundtable Discussion

Bill Pickens asked for 2017 turkey harvest data for WMU C and Craig Greene asked for the same for WMU A.

Board Member Craig Greene motioned to adjourn the meeting at 9:15 PM EST

Board Chair Theresa Elmer seconded the motion.

Vote: Unanimous in support of adjournment.

Meeting adjourned at 9:15 PM EST

The mission of the Vermont Fish and Wildlife Department is the conservation of all species of fish, wildlife and plants and their habitats for the people of Vermont.

Attachment 1

Date: January 29,2018

Memo to: FWB

From: Lindzey Beal, Vermont

Re: Moratorium on the sport killing of Red and Gray Fox in Vermont to help protect public health from Lyme Disease and other tick borne diseases.

Based upon my review of Vermont's steady rise in Lyme Disease and other tick borne illnesses and new research regarding the increase of mice population in connection to the decrease of key rodent predators, such as foxes, I request that the Fish & Wildlife Board halt the sport killing (hunting and trapping) of foxes. This proposed moratorium will not impact landowners' rights to kill foxes in defense of property under 10 V.S.A 4828.

Vermont is experiencing a Lyme epidemic and the state should be employing all measures possible to stop the spread of Lyme and other dangerous tick borne diseases. Supported by evidence, this proposed moratorium has strong potential to help reduce human exposure to the diseases contracted by ticks who feed heavily on white-footed mice, a major host. In addition to the comments in my petition, you will find letters from Vermont residents who are suffering from Lyme Disease and are in support of the petition.

As little as 10 years ago the words "Lyme Disease" and "Tick Borne Diseases" were rarely uttered in the Green Mountain State and presented minimal risk to people and animals. Fast forward to 2018 and the threat of Lyme Disease and other tick borne diseases is a completely different story. According to the Vermont Department of Health , in 2015, Vermont had the highest rate of reported Lyme Disease cases in the United States and new cases are steadily rising. In 2017, Vermont was one of the top two states with the highest incidences of Lyme Disease (1). In addition, according to the CDC, Vermont is currently listed #1 in the U.S for confirmed cases of Lyme and is designated as an "Endemic State" (2).

Lyme Disease has spread at an alarming rate in our state, growing from 60 cases of people contracting the disease in 2003 to 500 in 2015. According to The Tickborne Disease Program in Vermont, 763 cases of Lyme Disease were reported in 2016. It is predicted that upwards of 600-700 cases will happen again in 2017 (3). In March of 2017 it was reported that over 50 percent of ticks that were surveyed in Vermont tested positive for Lyme Disease, which means that the majority of tick bites could lead to an illness (4 & 5). According to another study by Doctor Marie J. George of the Infectious Disease Department at Southwestern Vermont Medical Center, upwards of 63 percent of ticks are infected statewide with at least one tick borne illness, with some carrying two at the same time. To put it simply, in the words of Trevor Szymanowski, a Vermont Game Warden since 1999: "The pests used to be of little concern; now they've become a huge problem" (6).

Ticks and Lyme Disease are an enormous public health concern that must be addressed immediately. An efficient and cost effective solution is to work with mother nature rather than against. That means stopping the recreational and commercial killing of foxes, who are the main predator of mice.

According to wildlife specialists, expanded habitats for tick- carrying mice and deer are "mostly to blame for more Lyme infested ticks" (7). There is evidence to suggest that there is a link between the increase of mice populations and activity and the decline of predators that hunt mice, such as, foxes. Although ticks can get infected with Lyme Disease and other tick borne diseases from other animals, the bulk are infected by mice. In fact, mice infect up to 95 percent of ticks that feed on them and "are responsible for infecting the majority of ticks carrying Lyme Disease in the Northeast" (8). There is a high likelihood based on evidence that if we place a moratorium on the recreational/commercial killing of foxes, that we will see a decline in the spread of Lyme Disease and tick borne illnesses. Worried mice tend to stay in hiding and wander less when there is a larger presence of predators, such as, foxes. This increased level of predator activity means the mice will not supply food for the next generation of ticks and the ticks will not become infected.

Foxes not only kill what they will immediately eat, but they kill and cache large quantities of mice for future consumption. What is even more interesting is that a recent study revealed that the very presence of foxes on the landscapes may impede mice mobility. Studies performed by a variety of research groups found that increased predator activity caused mice to spend more time hiding, which means less time roaming and becoming key hosts for ticks. The researchers noted: *"The results suggest that predators can indeed lower the number of ticks feeding on reservoir-competent hosts, which implies that changes in predator abundance may have cascading effects on tick-borne disease risk ... Many prey species show decreased movement and increased refuging behavior in the presence of a predator". In addition " A growing body of evidence suggests that Lyme disease risk may now be more dynamically linked to fluctuations in the abundance of small-mammal hosts that are thought to infect the majority of ticks. The continuing and rapid increase in Lyme disease over the past two decades, long after the recolonization of deer, suggests that other factors, including changes in the ecology of small-mammal hosts may be responsible for the continuing emergence of Lyme disease."*(9).

In addition, areas with the highest occurrence of predator activity had one fifth as many ticks and one eighth as many infected ticks (10). The New York Times stresses this fact by stating that locations where there were less red foxes and other small mammal predators saw an increased number of Lyme Disease cases (11). Predators can drastically lower the number of ticks feeding on mice, which calls for the much deserved appreciation and protection of predator species, such as, foxes. This simple solution of halting the sport killing of foxes may have tremendous and lifesaving results for the health and safety of Vermont residents.

Lyme Disease is a serious health threat. Initial signs can include flu like symptoms, such as, fever, fatigue, stiffness and swelling in joints. According to VT Lyme some people can experience long term, debilitating side effects and that includes individuals who have received treatment. Some of these life changing implications include memory loss or the ability to concentrate, mood swings, joint and muscle pain, speech problems and complications with the brain, heart and nervous system. A study by the National Institutes of Health showed that life for people living with Lyme Disease can be similar to living with type 2 Diabetes or a recent heart attack: "There is considerable impairment of health related quality of life" (12). For instance, there have been cases where Vermonters who have contracted Lyme find their daily routine very challenging and must drastically alter their life, such as, leaving their job or school and receiving help with raising their children. Some individuals also become isolated because they have difficulty partaking in social gatherings. Adults are not the only population that face challenges, children with Lyme may display changes that affect their " learning abilities, social interactions, and overall development" (13).

Lyme Disease not only impacts humans, but animals, especially dogs and horses, are also at risk of contracting the illness. Dogs show similar symptoms that people display who have Lyme Disease and the list includes fever, swelling in the joints, swollen lymph nodes, lethargy and loss of appetite. In severe scenarios, dogs may also develop heart disease, central nervous system disorders, or kidney disease. The importance of small mammal predators working to reduce Lyme Disease and other tick borne diseases that stem from mice is irreplaceable.

Unfortunately, Lyme Disease is not the only tick borne disease that affects our state. There are a handful more illnesses that are emerging and spreading fast. One of these tick borne diseases is known as the Powassan virus. While the virus remains rare (but widely untested), experts are concerned it will only grow: "Powassan virus is most definitely here in Vermont," said Bradley Tompkins, vector-borne epidemiologist with the Vermont Department of Health. Most patients will show signs of a fever and headache, with slightly more serious symptoms including vomiting, weakness and confusion. More serious symptoms can include loss of coordination, speech difficulties, seizures, and eventually meningitis and encephalitis (14).

Anaplasmosis and Babesiosis are two more tick borne illnesses that are being monitored closely and are of great concern. Anaplasmosis is a bacterial illness that can lead to high fever and low white blood cell counts. The rising trend of the illness is troubling: "While the rate of Lyme disease statewide was 394 per 100,000 in

population in 2015, Anaplasmosis is catching up with a rate of 217 cases per 100,000" (15). In fact, the number of anaplasmosis incidences in 2016 was up 45 percent compared to 2015 (The Tickborne Disease Program). Patients who contract Anaplasmosis can have more serious side effects compared to Lyme Disease. For instance, people in Vermont have had brain inflammation and symptoms similar to septic shock; more patients are hospitalized with Anaplasmosis than with Lyme disease because of the severity of illness. Reported in 2016 by The Tickborne Disease Program, 24 percent of all anaplasmosis cases in the state were hospitalized.

To further explain Anaplasmosis and Babesiosis research explains: " Statistics show that the rate of anaplasmosis is steadily rising in Vermont, with significant growth in Bennington County specifically. In 2014 there were 69 reported cases of anaplasmosis in Vermont, with 43 percent of cases in Bennington County. In 2015 the number of reported cases rose to 139 statewide, 63 percent of which were in Bennington County. The Vermont Department of Health estimates that approximately 7 percent of all ticks in the state are currently infected with anaplasmosis.

Also rising in incidence is babesiosis, which has become more prevalent in neighboring states including Massachusetts and Connecticut. Because rates of tick borne illness tend to rise from south to north, experts worry that babesiosis may soon become more severe in Bennington County as well. "More southern states are seeing their numbers increase over the past few years, so we are concerned that Bennington and Windham county may see an increase in the coming years as well," said Tompkins. "Babesiosis is particularly nasty, and it hospitalizes just about half of the Vermonters that get it. In comparison, about 3 percent of the people that get Lyme are hospitalized, and about a third for anaplasmosis." Babesiosis is caused by a parasite which targets the red blood cells, and requires a different treatment than Lyme or anaplasmosis, which can often be treated in conjunction" (15). Yearly cases have been low but are slowly increasing- nine cases in 2015 and 15 cases in 2016 (The Tickborne Disease Program).

Recreational killing of foxes, that only serves a small portion of people living in the state, must not take priority over the health and the interests of the general public. According to the North American Fur Auctions 2017 fur sale, red foxes prices are down, with 100 percent of the offering selling for averages of \$13.00 to \$17.00. In addition to red fox fur sales, very few grey fox furs were sold at all. Wearing fur is becoming less popular, which means there is less of a demand. Also, it must be noted that foxes are not killed for food. Hunters and trappers are not intending to feed themselves and their family. Allowing foxes to be killed for "tradition" or "recreation", when they offer the potential to help fight Vermont's Lyme epidemic is not a defensible policy.

A moratorium on the sport killing of foxes is one of the most safe, sensible and effective policies that could be adopted to combat the rise in tick illnesses for several reasons:

- There would be no use of harmful chemicals, which is an immense bonus for everyone's health and safety, including the environment. According to the New York Department of Health, children can often have adverse reactions to tick repellent chemicals. Jay Feldman, executive director of Beyond Pesticides, explains that tick repelling chemicals, such as, bifenthrin and permethrin work by attacking the nervous system of insects. According to Mr. Feldman "the problem is that they also attack the nervous system of species you are not trying to kill-including people, pets and fish. Exposure to these chemicals can result in neurological problems." According to Beyond Pesticides bifenthrin and permethrin cause "acute and chronic health problems, kill bees and harm wildlife. Bifenthrin damages surface water and permethrin damages groundwater."
- We would be allowing nature to create healthy ecosystems by balancing predator to prey numbers, which is vital for all animals and their habitat. Foxes are a key species that help to maintain a healthy ecosystem by managing prey populations, which means their presence is much more valuable alive than

dead. While human intervention can solve some of these issues, it is much better to let predators perform the task they were designed to do.

- Foxes already face numerous threats, ranging from human caused mortality, either due to Vermont's lenient "nuisance" wildlife provision, to cars and domestic dogs. Foxes also have a host of predators from fishers to eagles who prey on fox kits. It does not make sense to add another threat to the fox population that only stands to benefit a small minority of less than one percent of Vermont's total population: " The Department and the Board do a great injustice to the residents of the state as well as future generations, when they manage most wildlife in terms of sustainable "harvest" levels, rather than for the abundant populations that contribute to dynamic, vigorous, and resilient ecosystems", Mollie Matterson, a senior scientist, with the Center for Biological Diversity, based in Richmond, Vermont.
- In addition, our world and state is rapidly changing; habitat loss, warmer temperatures, unpredictable weather patterns, less food sources, and the department continually depends on outdated data and trends to justify their management policies: Dr. Tom Serfass, " I do have a different viewpoint with regards to the validity of current scientific data on *harvesting* animals and the sustainability of specific species. Yes, probabilities of a species' survival will most likely not be affected by the status quo of trapping or hunting. *However*, all information we have at this moment in time about the effects of past animal behaviors and the effects of humankind on wildlife is based on the past 150 plus years of evidence. The planet was very, very different in the past. Even just fifteen years ago, the temperatures of the globe were very different. We had more ice caps, more bees, fewer ticks, fewer humans, etc. Policies of any kind, including trapping and hunting policies, cannot be based strictly on evidence gathered from decades past because that data, quite simply, is becoming irrelevant" (PH.D in Wildlife & Fisheries, Professor of Wildlife Ecology). For example, killing 100 foxes today does not have the same impact as killing 100 foxes fifty years ago primarily because "regeneration possibilities are now clouded and uncertain".
- Vermont Fish & Wildlife has incomplete data on the number of foxes who are hunted or trapped each year. For instance, foxes killed under the nuisance wildlife provision go entirely unreported and those numbers could be significant. When the Vermont Fish and Wildlife Department was asked about the current population of foxes several times they continually refused to answer and could not provide any data: "We believe that the population of red fox has stabilized over the past 10 years, except when diseases such as distemper may influence them in the short term. Gray fox, which are at the northern edge of their range, may actually do better as the climate warms up". The majority of population estimates rely on harvest data from trappers and hunters, which is undependable data. Only 20 percent of hunters and trappers return their surveys. Wildlife populations need to be centered on concrete evidence and data, not based on a *belief*, which is just another way to say a *guess*.
- Overall, interventions, such as, culling the deer population, coating lawns or using body sprays that contain tick killing pesticides have made minimal differences in lessening the spread of ticks and ultimately end up being a short term solution. Interventions like protecting foxes or factoring the habitat needs of particular predators into land use decisions to advance their population is getting to the root of the problem, as opposed to quick fixes.

In conclusion, the health benefits of establishing a moratorium on the sport killing of foxes to the entire population of Vermont far outweigh any recreational benefits experienced by a small fraction of Vermonters. No one can equate the price of a fox pelt with the cost of bearing Lyme Disease or other tick borne illness. Taking a modest, evidenced-based step to assist our state in arresting the rapidly rising rate of tick borne diseases is well worth the time and effort of the Board.

Sources:

1. 24/7 Wall Street: Samuel Slebbins, July 2 2016
2. VT Digger: Bradley Tompkins- Infectious Disease Epidemiologist at the Vermont Department of Health, August 24, 2017 and Vermont Lyme: Rebecca Zelis, March 16, 2017-"Report for the Legislature"
3. State epidemiologist Erica Berl, D.V.M., M.P.H. from the University of Vermont and Burlington Free Press: Carly Dawson, March 13, 2017
4. My Champlain Valley: Alan Graham- Entomologist in Vermont, March 31, 2017
5. VT Digger: Bradley Tompkins- Infectious Disease Epidemiologist at the Vermont Department of Health, April 24, 2017
6. Burlington Free Press: Trevor Szymanowski- Vermont Game Warden with the VT Fish & Wildlife Department, May 15, 2017
7. North Country Public Radio: a state infectious disease specialist, March 13, 2017
8. NPR: Rick Ostfeld and Felicia Keesing- both studying Lyme Disease for over 20 years and Keesing is an Ecologist at Bard College, March 6, 2017
9. Royal Society Publishing (Biological Sciences): Tim R. Hofmeester and many additional experts on the "Cascading effects of predator activity on tick-borne disease risk", June 16, 2017
10. Times Herald: Michael Eckert, August 17, 2017
11. New York Times: Dr. Levi- Ecologist at Oregon State University and Richard S. Ostfeld- Senior Scientist at the Cary Institute of Ecosystem Studies , June 8, 2012
12. VT Lyme: National Institutes of Health (NIH), 2016
13. VT Lyme: 2016
14. VT Digger: Konstance Knox- a virologist, microbiologist and founder of Coppe Laboratories in Waukesha, Wisconsin, May 7, 2017
15. Bennington Banner: Doctor Marie J. George of the Infectious Disease Department at Southwestern Vermont Medical Center, April 24, 2017

Attachment 2

2017-2018 Fish and Wildlife Board Calendar

- July** No meeting
- August 17:** Petitions
Bear Rule – Second Vote
Lands and Habitat Presentation
- Sept. 20:** Bear Rule – Third Vote
Baitfish Regulations Update
- October 18:** No Meeting
- November:** No Meeting
- Dec. 20:** No meeting
- Jan. 17, 2018** “Working Meeting” (processes; timelines; efficiencies; effectiveness)
30 min. Baitfish educational update: Geographic areas of risk. Big Game Review Issues (Scott)
Board Minutes (Exec Session)
- February 21:** Red Fox petition
Migratory Game Bird Season Preview (Straw vote)
30 min. Baitfish educational update: Risk evaluation of VHS, other fish pathogens, and aquatic nuisance species; spread and spread vectors
Moose Hunting Permit numbers
- March 21:** No Board Meeting
Deer and Moose Hearings
Migratory Game Bird Hearings
- April 4:** Migratory Game Bird Hunting Seasons – Final Vote
30 min. Baitfish educational update: Other states’ regulations OR Preserved Bait
Rule-Making Calendar Discussion
- April 25:** 2018 Antlerless Deer Permits and Youth Season – Preliminary Vote
2018 Moose Hunting Permit Numbers
Baitfish Regulation Concept Proposal to Board
- May 23:** 2018 Antlerless Deer Permits and Youth Season - Final Vote

June 20:

July 18:

August 15:

Attachment 3

VT Fish & Wildlife Board Winter / Spring Public Meeting Schedule					
Date	Day of Week	Meeting Topic	Physical Location	Address	Town
12.13.17	W	Moose Public Informational Meeting	Northwoods Stewardship Center	154 Leadership Drive	Island Pond
12.14.17	Th	Moose Public Informational Meeting	Montpelier High School	5 High School Drive	Montpelier
12.19.17	T	Moose Public Informational Meeting	Billings Farm & Museum Visitor Center Theater	69 Old River Road	Woodstock
1.30.18	T	Baitfish Public Discussion Session	Springfield Middle School, Riverview Cafeteria	15 Fairground Road	Springfield
2.13.18	T	Baitfish Public Discussion Session	Richmond Free Library	201 Bridge Street	Richmond
2.28.18	W	Baitfish Public Discussion Session	Lakes Region Union High School	317 Lake Region Rd	Orleans
3.13.18	T	Waterfowl Meeting	Bennington Town Fire House	130 River Street	Bennington
3.15.18	W	Waterfowl Meeting	Memorial Hall	5 Towers Road	Essex
3.20.18	Th	Waterfowl Meeting	Senior Citizens Center	28 Williams Street	Whitehall, NY
3.19.18	T	Deer Meeting/ Moose Hearing	Montpelier High School	5 High School Drive	Montpelier
3.21.18	W	Deer Meeting/ Moose Hearing	Windsor Welcome Center	3 Railroad Avenue	Windsor
3.22.18	Th	Deer Meeting / Moose Hearing	Lake Region Union High School	317 Lake Region Rd	Orleans
5.8.18	T	Deer Hearing	Rutland High School	22 Stratton Road	Rutland
5.10.18	Th	Deer Hearing	South Burlington High School	550 Dorset Street	South Burlington

CHANGE OF VENUE

Echo Center Community Room
cancelled