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Agency of Natural Resources

October 16, 2023

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115 State Street
Montpelier, VT 05633-5301

Re: Furbearing Species Rules

The Department of Fish and Wildlife is submitting this memorandum in response to the direct request of LCAR members, as set forth in the letter from Committee Counsel Anthea Dexter-Cooper on October 6, 2023.

- I. Response to the memorandum from Michael O'Grady and Anthea Dexter-Cooper to Representative Amy Sheldon, Representative Seth Bongartz, Representative Trevor Squirrell and Senator Christopher Bray, provided to the Department on September 22, 2023.**

Introduction - Setbacks

The memorandum states that the setbacks do not comply with the legislative intent because there are no setbacks proposed for "playgrounds, parks, and other public locations where persons may reasonably be expected to recreate," in accordance with Act 159 of 2022. Specifically, the language of Act 159 states that rule must include requirements for traps "at a safe distance" from these locations.

As noted during the presentation on October 5, 2023, trapping is not a public safety issue in that

there has never been a report of a member of the public trapped or harmed by a trap. In addition, although the memorandum assumes that there is potential risk associated with trapping, the level of risk that trapping poses to domestic pets and incidental wildlife is extremely low, and will be reduced by the imposition of new conditions in the final proposed rules. Please see Appendix A. The regulated trapping season on land occurs between the last Saturday in October and December 31st. Trapping for aquatic species extends until March 31st. Many public camps, campgrounds, and parks are closed during this time period. Given the seasons, and the extremely low risk associated with trapping, as well as the need to define trails and other public places in a way that is clear and enforceable, the Board promulgated the final rule filed with the Legislative Committee on Administrative Rules. Nonetheless, to address the concerns raised by public comment and the September 22, 2022 memorandum, the Department plans to recommend additional setback requirements to the Vermont Fish and Wildlife Board (Board) for consideration.

Proposed Additions to Board Trail Setbacks

The definition of legal trails and public highways would remain the same, and any legal trail or highway that is mapped by VTrans would be subject to the setback requirements. The definition of public trails would be significantly expanded to include other nonmotorized uses on any trail designated and mapped by: a municipality on municipal land, a federal agency on federal land, or a state agency on state land. In addition, the setbacks would be applicable to Vermont Rail Trails, and the Appalachian and Long Trails. The updated trail definitions that the Department is proposing for Board consideration, is as follows:

3.14 “Public Trail” for the purposes of this rule, means:

- a) a recreational path or corridor open to the public, used for non-motorized recreational purposes including hiking, biking, walking, cross-country skiing, horseback riding, and other similar activities; that is designated and mapped by a municipality on municipal lands, a federal agency on federal land, within the state of Vermont;
- b) a recreational path or corridor open to the public, used for non-motorized recreational purposes including hiking, biking, walking, cross-country skiing, horseback riding, and other similar activities; on Vermont state-owned public land, and designated and mapped by the managing agency or department; and
- c) Vermont Rail Trails designated and mapped by the Vermont Agency of Transportation, the Appalachian Trail designated, mapped and managed by the National Park Service, and the Long Trail designated, mapped and managed by the Green Mountain Club.

The updated trapping setback language that the Department will propose for trails, for Board consideration, is as follows:

4.16 Trapping Setbacks:

- a) No foothold traps or body-gripping traps shall be set on or within 50’ of the edge of the travelled portion of a legal trail, public trail, or public highway, unless set in the water or under ice.

This means that the proposed definition of trail would be expanded to include all public highways and mapped and designated trails, on municipal, state or federal lands, as well as Vermont Rail Trails, the Appalachian and Long Trails. As such, setbacks will be applicable to trails on municipal, federal and state lands, including bike and horseback riding trails.

While setbacks would not be applicable to some private management roads on state lands and some trails on municipal land that have not been mapped and designated, these proposed definitions and setback provisions would provide a significant increase over the Board's original rule in the number of trails subject to setbacks. In addition, the mapped and designated trails on public land are well defined and enforceable. The Department will compile a list of trail resources that depict where trail setbacks are located, so that the public and trappers have notice of the setback requirements.

These proposed rules far exceed most of the trail offset regulations in our neighboring New England states, which generally either have no setbacks or limited setbacks. For a table that depicts the other New England state setbacks, please see Appendix B.

Wildlife Management Area Setbacks

The Fish and Wildlife Board has explicit authority to fashion rules for the uses of Fish and Wildlife Lands. Title 10 V.S.A. § 4144 (b) states that the Board “may regulate the taking of wild animals on such lands or of fish in such waters” Wildlife Management Areas, with the exception of refuge areas,¹ have always been open to the public, including non-consumptive users, for dispersed recreational activities. These lands have been primarily funded and managed with Pittman Robertson funds, matched by state license dollars. The source of Pittman Robertson funds are federal excise taxes on firearms, ammunition, and archery equipment. This means that funding provided primarily by “consumptive users” have paid for the purchase and management of these lands for the benefit of all Vermonters. Given that Department lands have specifically been purchased for habitat enhancement and wildlife-based recreation including trapping, it is reasonable and consistent with the primary management purposes of these lands to encourage dispersed recreation on Wildlife Management Areas (WMAs). The proposed changes do not exempt WMAs and the setbacks will apply to public roads, public trails, and wildlife viewing areas. The Department plans to post signs advising the public of hunting seasons at kiosks and other locations that may be interpreted to be recreational trails, following the adoption of this rule.

Setbacks at Other Public Locations Where Persons May Be Reasonably Expected to Recreate

In addition, the Department will propose amendments to Section 4.16 for Board consideration, to apply setbacks to the developed portions of parks; playgrounds; picnic areas, shelters, and pavilions; schools, camps or campgrounds; and recreational facilities.

4.16 Trapping Setbacks:

¹ Refuge area constitute approximately 500 acres of Wildlife Management Areas which total approximately 133,000 acres. Refuge areas are designated to protect species during critical nesting or migratory periods and are not open to the public.

b) No foothold traps or body-gripping traps, unless set in the water or under ice, shall be set on or within 100 feet of the buildings, parking lots, and maintained portions (cleared, continuously mowed and landscaped portions) of designated wildlife viewing areas, visitor centers, parks; playgrounds; picnic areas, shelters, and pavilions; schools, camps or campgrounds; and recreational facilities, such as, ball fields or tennis courts; owned and managed by municipal, state, or federal entities; except that: trapping may occur with the explicit permission of the schools, camps or campgrounds.

This proposal will apply setbacks to public locations where the public may reasonably be expected to recreate, while also providing a definition for those areas that are covered and thus ensuring that the rules are enforceable.

LCAR's Sept 22, 2023 memorandum asked why the Board did not respond to public comments that the scope of the setbacks were too narrow. The Department and Board attempted to balance concerns that the proposed setbacks are too narrow with concerns that the proposed setbacks are too restrictive, as described on page 10 of the Board's responsiveness summary. The Department and the Board were cognizant of the timing of the trapping season and the low risk associated with trapping compared to many other risks to pets and wildlife, and sought to fashion a rule that was proportional to that level of risk. Nonetheless, the additional amendments that the Department will propose to the Board (see above) are responsive to the public comments related to the scope of the setbacks and the memorandum from Legislative Counsel. These recommendations significantly expand the applicability of setbacks to public trails and public places where people recreate. The 50 foot set back from legal and public trails, and highways, will assure that traps are a safe distance from persons and leashed pets on a trail. In addition, a setback of 100 feet is recommended for other public places such as, camps, playgrounds, and other recreational facilities, many of which are either not in use or are used less frequently during trapping seasons.

Rule 4.13

The Department will propose that the prohibition against poisonous mixtures be reinserted into the rule. The amended language of the rule will read as follows:

4.13 A person shall not take a fur-bearing animal by use of any ~~poisonous mixture~~ explosives.

4.14 A person shall not take a fur-bearing animal by use of any chemical or poisonous mixture, with the exception of a carbon dioxide chamber.

4.15 A person shall not take a fur-bearing animal from dens by cutting, digging, smoking, ~~by the use of chemicals,~~ or by the use of mechanical devices other than a legal trap set in accordance with these rules.

The American Veterinary Medical Association (AVMA) has recommendations relating to humane euthanasia of animals, including wildlife. These recommendations are complex and depend on the species and situation, but the dispatch methods of gunshot and carbon dioxide are acceptable methods. The AVMA guidance can be found here: <https://www.avma.org/resources-tools/avma-policies/avma-guidelines-euthanasia-animals>. Because we are making this

recommendation, we would also propose the following change to the 4.16 relating to the legal methods dispatch of trapped wildlife; and we will make sure that the appropriate sections are applicable to persons trapping for compensation in defense of property.

Section 4.16

Dispatch of Trapped Animals: Upon discovery, a trapper shall immediately dispatch a live trapped furbearer with a muzzleloader or gun fired at arm's length; or a bow and arrow, or crossbow; or a carbon dioxide chamber in compliance with the American Veterinary Medical Association guidelines. This subsection shall not be interpreted to prevent a trapper from releasing an unharmed captured animal, or a domestic pet.

Section 4.23

The Department will propose amendments to the reporting language in this section that will read as follows:

4.23 Biological Collection

- a) Except for persons exempt from the rules under section 4828 of title 10, any person who obtains a trapping license and traps for furbearers shall complete and submit an annual biological collection trapper survey, including reporting the taking of incidental wild animals, for the license season to the Department, within the timeline specified by the Commissioner.
- b) Any person who intends to trap furbearers and traps a dog or cat shall report the taking to a warden within 24 hours of discovery.
- c) The failure to complete and submit a biological collection survey to the Department shall be a nonpoint violation under 10 V.S.A. § 4502.

Standard for Control of Dogs

Section 3 (a) of Act 165 states that the General Assembly “intends to reduce conflicts between landowners and persons pursuing coyotes with the aid of dogs.” In addition, section (b) (4) requires that the definition of control “minimize the risk that dogs pursuing coyote” do not encroach on posted land, do not enter land where unauthorized, and do not harm, harass or damage property, domestic animals, or people.

The legislative counsel memorandum asks how the proposed definition of control meets the legislative intent to reduce conflicts with landowners. The memorandum quotes the Responsiveness summary statement that “almost all hunters who hunt coyotes with dogs are already using some form of GPS equipment.” However, the definition of control also requires training/control collars which are defined in the rules as follows:

3.19 “Training/control” collar is any family of collars that deliver electrical stimulation of varying intensity and duration to the neck of a dog via a radio-controlled electronic device incorporated into the collar.

This is a new requirement and means that hunters must have the capability of remotely locating and recalling a dog via its collar during both the training and hunting seasons while taking coyote with dogs. Although some GPS collars have training functions for remote recall of dogs, many do not; this rule requires Vermont hunters pursuing coyote with the aid of dogs to ensure their dogs' collars have both tracking and training functions for remote recall. In addition, in order to emphasize the requirements for control, the Department will recommend the following changes to the definition of control and the directives relating to hunting coyote with dogs:

2.1 "Control of dogs(s)" means that during the transportation, loading, or unloading of dogs from vehicle(s); and the handling, catching, restraining, following or releasing of dogs at all times during the training and taking of coyote with the aid of dogs; the permittee shall be able to locate and remotely recall the dogs. Collar(s) with GPS functions, track log capability, and training/control features in the collar(s) shall be required to locate and track dogs at all times while taking coyote with the aid of dogs. At no time shall dogs be in pursuit of coyote without a GPS track log being maintained by the permit holder.

4.20.3 d) 3) A person taking coyote with the aid of dogs shall attach a collar or collars with GPS capabilities and training/control functions for remote recall, and shall attach a Department Registration Dog-Tag and a metal identification name plate with the person's name, address and telephone number to each dog's collar.

4.20.3 d) 4) A person taking coyote with the aid of dogs shall maintain a GPS location log of each dog taking coyote; shall retain the log for at least 30 days after the close of the season, and shall display the location log to a warden upon request.

The addition of the training/control collar is designed to ensure that hunters can maintain control over hunting coyotes with dogs, and locate and remotely recall their dogs at any time.

Many of the comments received by the public assert that the dog must be on a leash or within sight of the hunter(s). The imposition of either of these two options is essentially a defacto ban on this hunting activity; which involves pursuing coyote through fields and forest, in locations where there are no roads or trails. The Department proposed much of the language of Act 165 to the General Assembly. The Department proposed the statutory provisions that provide for penalties for allowing dogs to enter posted property or property where any person in the hunting has been informed that hunting dogs are not welcome. Hunting coyote with dogs is currently completely unregulated but these rules will impose some significant new requirements which in combination with the statutory provisions, are designed to reduce conflicts with landowners.

Trespass/Landowner Permission

As noted in the memorandum and above, Act 165 requires the Board to include provisions that encourage persons hunting coyote with dogs to seek landowner permission before entering or releasing dogs onto land that is not legally posted. The statutory sections of Act 165, Title 10 V.S.A. § 5009, was recommended by the Department and requires written permission in order

for a hunter or their dogs to go onto posted land. On non-posted land, there are penalties for releasing a dog on private land if, in the previous 365 days, law enforcement has informed a member of the hunting party that hunting dogs are not permitted. None the less, the Department will propose the following provision for Board consideration:

4.21.7 A person hunting coyotes with dogs shall not release the dogs on land posted in accordance with Title 10 V.S.A. § 5201, without the written permission of the landowner. In addition, a person hunting coyotes with the aid of dogs is encouraged to seek landowner permission before releasing dogs or entering land that is not posted in accordance with Title 10 V.S.A. § 5201. Hunter education shall include the recommendation that persons hunting coyotes with dogs seek landowner permission prior to pursuing coyotes with dogs.

The Department does not have the authority to impose additional penalties or sanctions in order to require that a hunter seek landowner permission to hunt on land that is not posted in accordance with Title 10 V.S.A. § 5201. In addition, Article 67 of the Vermont Constitution states as follows:

§ 67. [Hunting; fowling and fishing]

The inhabitants of this State shall have liberty in seasonable times, to hunt and fowl on the lands they hold, and on other lands not inclosed, and in like manner to fish in all boatable and other waters (not private property) under proper regulations, to be made and provided by the General Assembly.

There are a number of Vermont Supreme Court cases that define the word “inclosed” in Article 67 of the Vermont Constitution as properly posted against hunting.

Seasons for Training and Hunting Coyote with Dogs

Act 165 states that the General Assembly intends that the rules for pursuing coyote with dogs should support the humane taking of coyote and the management of the population in concert with sound ecological principles. As part of the rules, Act 165 required the Fish and Wildlife Board rules to consider seasonal restrictions on pursuing coyote with dogs.

The Board’s proposed rules include a training season of June 1 through September 15. The rules also include a hunting season from December 15 through March 31. In the responsiveness summary, the Board noted that the dates for the seasons were based on observation and hunter input based on the fact that proposed seasons are the primary times when persons hunted coyote with dogs prior to the current moratorium established by Act 165. The response to comments also noted that the proposed training season is the same season as for training dogs to take other species.

There were public comments or questions regarding the establishment of a coyote season. Comments advised on setting the seasons based on science or the breeding season for coyote. The memorandum from Legislative Counsel states that the Responsiveness Summary does not address the ecological principles for setting the seasons, and the summary does not appear to

respond to the public comments that the seasons be based on science or the breeding season for coyote.

Response:

First and foremost, the Department values Eastern coyotes as a wildlife species and, though not native, as an integral part of Vermont's landscape. Our primary goal is to maintain a stable and healthy coyote population. Current hunting and trapping seasons are designed to be compatible with this.

Act 165 directed the Board to pass rules based on coyote population management "in concert with sound ecological considerations" and, to consider seasons. Much of the Act 165 directives are based on social issues. There is currently no ecological or biological necessity for seasons. The coyote population is currently healthy and stable, despite there never being a closed hunting season, other than the current moratorium on hunting coyotes with the aid of dogs.

The proposed seasons and restrictions in the rule were created from recommendations of Department staff while reviewing the available information related to eastern coyote ecology, science, life history (which includes breeding season), and public comments from individuals connected to both animal rights and hunting organizations. Again, these seasons are being created primarily for social reasons, not biological need.

Some of the science and breeding seasons facts the department considered:

- Vermont's coyote population has been stable since the mid-1990s, as demonstrated by trends in catch per unit of effort (CPUE).
- Coyotes breed in February (have a 9-week gestation period).
- Pups are born in late April or early May.
- Pups venture from the dens at two months of age, early July.
- Pups leave adults from fall to early winter.
- 50%-68% of young die during the first year of life from a variety of causes, (diseases, conflict with territorial coyotes, car strikes, starvation, etc.). Coyote | Vermont Fish & Wildlife Department (vtfishandwildlife.com)
- Coyotes usually begin breeding at two years of age. Mates are found during the first year.
- Coyotes are habitat generalists and are very adaptable to environmental changes such as food supply and competition from other coyote family units.
- Coyotes are density dependent breeders; their litter size adjusts with available food and habitat as the body condition of the female changes.

Seasons set with information based on science or breeding season ecology:

Training season (June 1 to Sept. 15):

- Pups are mobile by the start of training season.
- The season avoids the birthing and early pup rearing period.
- The training season does not allow the taking of coyotes.

- The training season dates are consistent with other training seasons, which allows for improved enforceability.
- Historic training of dogs to hunt coyotes had no effect on coyote populations as demonstrated by CPUE data.

Hunting season with the aid of dogs (December 15 to March 31):

- Coyotes have been hunted since they first became established in Vermont. The current open hunting season dates back to the early years when coyotes were termed “coydogs” and considered vermin newcomers by the public. Since then, coyote populations have not been negatively impacted by any form of hunting, as evidenced by CPUE data.
- The season was set conservatively. With a lack of a regulated season prior to the moratorium, CPUE data demonstrates that Vermont’s coyote population was easily tolerating a longer hunting season with higher harvest.
- The season could have been expanded to take full opportunity of the species fur being prime, which starts in early November.
- The season allows for the full utilization of the harvested animal, which eliminates the issue of wanton waste.
- There is a mandatory reporting component to the season, which will supply hunter effort data and further our understanding of coyote hunting with the aid of dogs.
- The hunting season (Dec. 15 to March 31) is outside of the pup rearing season and young have primarily dispersed from the adults.
- The quiet season of April 1 to May 31 is concurrent with other training season quiet periods \which also increases the ease of law enforcement.
- It must be reiterated that Vermont’s coyote population is stable and healthy, and that, as species, the coyote is a generalist that adapts to changing habitat conditions. This adaptability allowed them to colonize Vermont in the 40s and 50s and to continue to thrive today in a landscape that is changing dramatically.

The Department’s 2018 report on Vermont’s coyote population can be read in full here: <https://vtfishandwildlife.com/sites/fishandwildlife/files/documents/Hunt/trapping/Vermont%20Coyote%20Population%20Report%20to%20Legislature-2018.pdf>

II. Response to Senator Christopher Bray’s Request for More Information on How Trapping is Used for Wildlife Management.

The Department’s Furbearer Project staff are devoted to the protection, conservation, and respectful and sustainable use of wildlife in Vermont, for all Vermonters, as guided by science and the law. Individually, we are also Vermonters with a variety of backgrounds and training bound by our commitment to the mission: *The conservation of fish, wildlife, and plants and the habitats they depend on for the people of Vermont.* We care deeply about Vermont’s wildlife and have spent our careers as advocates for both wildlife and their habitats. We have done this through our work with private landowners, with partners in the acquisition of critical wildlife habitats and connected corridors, and with researchers who have helped to expand our knowledge around species habitat use, disease, and the looming threats to wildlife such as

climate change and habitat loss. Regulated trapping is essential to many of the Furbearer Project's initiatives, and our professional opinion backed by survey data supports the continued place of regulated trapping in our state—but we acknowledge that regulated trapping is a complicated and controversial activity. The following is an explanation of some of conservation, scientific, and social benefits that regulated trapping provides.

Regulated trapping has conservation and scientific benefits.

The conservation and scientific benefits provided by regulated trapping are contingent upon a community of trappers maintaining the knowledge and skills required for this practice to continue on the Vermont landscape. Without a community of avocational trappers, as opposed to professional wildlife nuisance control operators, the community science model that the Department relies on for the following conservation and research benefits will likely cease to exist.

Regulated trapping has been used as an essential tool for the protection and reintroduction of rare, threatened and endangered species (RT&E).

- There are just a handful of crucial turtle nesting beaches left in Vermont, which play a vital role in the reproduction of Northern map turtles and spiny softshell turtles. Unfortunately, the presence of just one skunk or raccoon can devastate an entire turtle population by predation on their nests. Biologists use traps and sand fencing to protect nesting beaches from predators (Steve Parren, pers. com.). Across the nation, trapping programs are frequently used to protect RT&E species.

When biologists capture and radio collar animals for research or capture animals to relocate them and establish a new population, they use the same methods and live-restraining devices that fur trappers use, including the foothold trap.

- The state endangered American marten was successfully reintroduced to Vermont through the trapping and release of individuals from New York and Maine. Trapping by avocational trappers was the only viable method for achieving this conservation success.
- Vermont researchers and trappers used both cage traps and BMP foothold traps to capture bobcats for a habitat study in the early/mid 2000s. The bobcats were collared and released unharmed. Subsequent monitoring of these bobcats indicated no long-term issues.
- Foothold traps were used to trap and live-restrain otter for release in several states including New York and Missouri.
- Biologists have a tremendous stake in ensuring that the animals they trap for conservation live long and healthy lives.
- Some species, such as coyotes, are extremely difficult to catch in cage traps. Modern traps are an effective way to catch and hold these animals for research efforts.

Regulated trapping can help minimize property damage and maintain the public's appreciation for wildlife rather than seeing it as nuisance.

- When populations become too large or individuals become habituated, many furbearer species can cause problems for people.
 - Weasels, foxes, raccoons, and fishers kill chickens and other farm animals.
 - Skunks and raccoons dig up gardens and lawns, destroy bird feeders, and get into garbage.
 - Coyotes harass and kill people's pets or livestock.
 - Beavers flood roads, septic systems, wells, and parking lots.
- People are only willing to accept so much encroachment from wildlife before they no longer value an animal and start seeing it as pest or vermin.
- Habituated coyotes often interact with people and pets. In urban and suburban areas, they will often harass and/or take pets, and in rare cases have been known to attack small children. Many jurisdictions have tried multiple non-lethal aversive conditioning methods. If done early, before the animals become too bold, these methods can be effective. However, research suggests that once a coyote becomes aggressive, the only means to address the behavior is to dispatch the animal (Baker 2007, Breck et.al 2017). Baker has suggested that "when foothold traps are used to take and euthanize the animal, it works well to extinguish bold behaviors within the population, especially if the alpha male and/or female are taken."
- Once people's perceptions of furbearer species shift from valued wildlife to that of a nuisance, our ability to effectively conserve the species and their habitats is greatly diminished (Dr. Nathan Roberts, Cornell University, pers. com). People generally conserve what they value and conversely, eradicate what they see as pests.
- Massachusetts banned trapping in 1996. In the years that followed, populations of some species including beaver skyrocketed. The public began to see them as a pest and nuisance complaints increased substantially, resulting in as many beavers being trapped after the ban as before the ban. Unfortunately, in contrast to regulated trapping during the trapping season, nuisance trapping often means that these valuable renewable resources are not used for fur or food. See Appendix C
- "In Europe, where regulated trapping has been banned, millions of muskrats and hundreds of thousands of foxes are killed each year to protect human health, safety and property and these animals are simply destroyed. This is a shameful waste and violated the North American Model of Wildlife Conservation." (Bryant White, pers. com).

Modern trapping regulations ensure that trapping does not threaten wildlife populations.

- Prior to the 20th century, trapping was completely unregulated. Animals could be trapped or hunted at any time of year, as much as possible and by any means. In fact, Native Americans and early European settlers used to block the entrances of beaver lodges and remove the entire family. Today, trapping is the most heavily regulated activity the Department oversees with many regulations regarding seasons, methods, and trap types.
- Many species that are trapped are likely more abundant than they were 200 years ago, including raccoon, coyote, skunk, fox, and bobcat, in the face of 60+ years of regulated trapping and hunting. All species that are currently trapped are common and abundant.
- We carefully monitor wildlife populations and routinely adjust regulations to ensure stable populations of these species.

- Trapping regulations are deliberately conservative to ensure that only a small portion of the population is removed every year.
- The environment contains only enough food, water, and habitat for a certain number of animals of each species (carrying capacity). Some wildlife populations may exceed the habitat's carrying capacity without the regulated hunting, which includes trapping. Potential results include threats to human health and safety, damage to the animals' habitat, damage to agricultural crops or other human structures, death from starvation or disease outbreaks.

Wildlife managers collect valuable biological information through trapping that helps them monitor and protect many species.

- Trapping is not done just to monitor wildlife populations – monitoring is just one of the many benefits of trapping.
- Monitoring Vermont's furbearers is a challenging task since many of these animals are secretive and elusive. Without the means to track their population status, certain species could suffer declines due to factors like habitat loss, disease, toxins, climate change, etc., making it hard to detect these issues without the data gathered from trapper harvest.
- Vermont has the longest running database of sex, age, town of kill data for bobcat, fisher and otter in the region and likely the country because of over 40 years of mandatory carcass collection of harvested species. These data are often shared with other states to improve models for monitoring regional populations.
- In addition, these carcasses are used to monitor diseases such as rabies, echinococcus multilocularis, Sars CoV2, and parvovirus, as well as toxins such as mercury and rodenticides, and the genetics of reintroduced fisher and marten. We have partnered with the University of Vermont to collect genetic information from fisher, bobcat, otter, fox, and coyote to inform wildlife movement across the landscape.
- Catch per Unit of effort (CPUE) trend information is collected from the mandatory trapper mail survey instituted in 1987 and continues to provide valuable trend data on all harvested species.
- Trapping is not the only monitoring tool we use. Although we routinely employ many non-lethal monitoring techniques such as remote cameras, citizen sightings, radio collar studies, and track surveys, the data derived from trappers is the most cost effective and informative. [[Monitoring Vermont Furbearers | Vermont Fish & Wildlife Department \(vtfishandwildlife.com\)](https://www.vtfishandwildlife.com)]
- We use trapper sourced carcasses to monitor for diseases, parasites and toxicity as well as for the overall health of the populations. We strive to get the most information possible from trapping activities to conserve populations for current and future generations.

Regulated trapping has social and cultural benefits.

The current system of regulated trapping plays a vital role in ensuring the sustainability of animals that are hunted and trapped. Trappers, in particular, often demonstrate a strong connection to the natural resources that sustain them, a connection that is increasingly rare in today's culture. As our society becomes more detached from the resources we depend on, we risk losing this valuable connection that is essential for a sustainable future.

Wildlife harvesting, whether through hunting or trapping, offers a sustainable outdoor opportunity for those who choose to engage in it, similar to activities like camping, hiking, or birdwatching. See Appendix D. Those who spend time in the outdoors hunting or trapping often develop a profound and enduring relationship with nature and wildlife. This connection frequently leads to a unique land ethic, an understanding that humans are an integral part of nature and reliant on the health of the ecosystem for our own survival.

As a result, many hunters and trappers actively support efforts to protect habitat, endangered species, and demonstrate a genuine love for the land. Historically, early hunter-trapper conservationists like Teddy Roosevelt and Aldo Leopold played crucial roles in advocating for the user pay/user benefit model of taxation. The dollars contributed by sportspeople have funded, at least in part, the recovery and restoration of iconic species in the state, including beavers, turkeys, American martens, fishers, and Canada geese, as well as the acquisition of critical habitat.

The principle of public trust emphasizes conserving wildlife for the benefit of all, including minority groups such as trappers. The goal is to connect more people to wildlife and the outdoors, not fewer, to ensure the continued conservation and enjoyment of our natural resources.

The knowledge trappers possess has frequently helped the Department and other wildlife and land protection organizations in our conservation efforts.

- To be a successful trapper requires an intimate knowledge of the species, understanding its habitat, habits, biology, and behavior.
- Trappers have alerted us to important bobcat road crossings, local changes to populations in certain areas of the state, or sightings of rare species they've encountered while out checking traps.
- Trappers have advocated for specific habitat conservation/protection efforts in areas that are critical to specific furbearer species.
- Trappers have offered expertise in the capture of fisher for reintroduction to Connecticut and with American marten for reintroduction from Maine and New York into Vermont.

Trappers fund wildlife conservation.

- Trapping license fees paid by trappers are used for the protection of wildlife habitat and populations.
- Trapping organizations have donated time and funds to the acquisition of critical habitats, the education of students about furbearer conservation, beaver carcasses to support reintroduced American marten, and to research efforts related to coyote and bobcat.

Trapping minimizes risk of disease to humans and pets.

- Trapper provided data helps to identify emerging disease risk with people and pets. For example, *Echinococcus multilocularis* is a zoonotic parasitic disease that has been detected in Vermont. Hosts include foxes, coyotes and dogs, and cause parasitic tumors in the liver, lungs, brain, and other organs. This can be fatal. Without trapper-derived data, we would not be aware of these threats to human health and safety in Vermont.

Please see Appendix E and F for the literature citations and the 2022 Department Furbearer Newsletter.

III. Response to Representative Seth Bongartz’s Request for More Information on the Board’s Decision to Add “Hunt” to the Definition of “trapping” in Sec. 3.20 of the final rule.

The definition of trapping in section 3.20 of the rule was in the draft rule prior to filing the rule with the Secretary of State, months before the Board voted on the final rule for filing with LCAR. The draft rule with the definition was first voted on by the Board on April 5, 2023. It was posted on the Board section of the Department website before the Board’s first vote, prior to the filing with the Interagency Committee on Administrative Rules. This language remained in the draft rule, was posted on the website, and was readily available to the public, before the public comment period and the public hearings related to the rule. No one commented on the definition until after the public comment period when Ms. Galdenzi of Protect Our Wildlife inquired about the change on August 30, 2023, and subsequently asserted on September 1, 2023 that “trapping is not a form of hunting.”

Trapping is likely one of the oldest form of hunting in the world, certainly used before the invention of firearms. Taking wildlife with a gun, muzzle loader, archery equipment, crossbow, or trapping are all forms of capturing, harvesting, and utilizing wildlife. The idea that trapping is a form of hunting is consistent with the history of trapping, the Department’s long term position on the issue based on its subject matter expertise, and the language of several Vermont Supreme Court cases.

Article 67 of the Vermont Constitution states as follows:

§ 67. [Hunting; fowling and fishing]

The inhabitants of this State shall have liberty in seasonable times, to hunt and fowl on the lands they hold, and on other lands not inclosed, and in like manner to fish in all boatable and other waters (not private property) under proper regulations, to be made and provided by the General Assembly.

There are several Vermont Supreme Court cases that discuss trapping in the context of Article 67 of the Vermont Constitution. For example, it is well established that the Legislature has the authority to delegate rulemaking to the Vermont Fish and Wildlife Board. *Elliott v. State Fish & Game Commission*, 117 Vt. 61, 69 (1951). The Vermont Supreme Court has specifically rejected the claim that Article 67 of the Vermont Constitution does not authorize the General Assembly to delegate rules regarding hunting, fishing, or trapping. *Id.*

Similarly, the Court in *Cabot v. Thomas*, 147 Vt. 207 (1986) noted that the Constitution distinguishes between fishing and; hunting and fowling. Specifically, fishing is allowed on all boatable waters that are not private. In contrast, hunting and fowling is allowed on private land that is not “inclosed.” As such the Supreme Court held that the lower court properly found that hunters could not hunt, fowl, or trap on lands that were “inclosed,” and that land that was properly posted in accordance with 10 V.S.A. § 5201 was “inclosed” under the Article 67. *Id.* pages 212-214. See also, *Hunters, Anglers and Trappers Ass'n of Vermont, Inc. v. Winooski Park District*, 181 Vt. 12, 23-24 (2006)(finding that a municipal district in Chittenden County that was authorized by statute, to purchase and own property did not violate Article 67 when it banned the discharge of firearms, and hunting and trapping). When examining the matter, the Court explicitly stated that “Section 67 vests the Legislature with the power to regulate hunting and trapping” *Id.* page 16. The Court found that the district (and any municipality) has the right to allow or prohibit hunting and trapping on its property. *Id.* at pages 23-24.

There are numerous states across the United States that specifically define trapping as a form of hunting, as well as several states like Vermont that define “taking” wildlife to include all forms of hunting, including trapping. At least 26 states define hunting to specifically include trapping. In contrast, very few states specifically exclude trapping from the definition of hunting. These are definitions that have been formulated by other state agencies with fish and wildlife expertise. In summary, the Department’s position that trapping is a form of hunting is entirely consistent with the purpose of trapping, the history of trapping, the language of Vermont court decisions, and the definitions of hunting in most states.

Thank you for your attention to this matter and please do not hesitate to contact me at 802-595-3331 or catherine.gjessing@vermont.gov with any questions or concerns you may have.

Sincerely,

/s/ Catherine Gjessing

Catherine Gjessing
General Counsel

Cc: Christopher Herrick, Commissioner, Department of Fish and Wildlife
David Sausville, Wildlife Management Program Manager

Appendix A: Trapping Statistics

- The Association of Fish and Wildlife Agencies Best Management Practices study found that 1.25% of over 9000 animals trapped during the study were free ranging domestic dogs. Every dog was released unharmed without the need for veterinary treatment.
- Between 2017 and 2022 (period of mandatory reporting), the Department received 44 reports of trapped dogs or cats. Of this total, 32 were dogs (one feral) and 12 were cats (five feral, one purposeful). An additional case was omitted because, upon investigation, there was evidence that the incident had not occurred. 26 of the 44 (60%) cases occurred during a regulated trapping season and involved a licensed trapper. Of these, five resulted in violations. The remaining 18 occurred outside of a regulated trapping season and, of those, nine were known to be nuisance-related, four involved violations, and three were unknown. None of the cats or dogs were leashed and at least 12 (38%) of the dogs were roaming without their owners. The vast majority of the cases (38, or 86%) occurred on private property. At least 18 of 24 (66%) trappers trapping during a regulated season had permission, and outside the regulated season, at least 9 of 17 (53%) trappers had permission. Almost a quarter 10 (23%) occurred on the trapper’s property, and 1 pet owner was trespassing. Only 3 of the 44 (7%) occurred on public land. The majority (39, or 89%) were non-fatal and most of the animals (38) either had no injuries or only minor injuries. There were 5 fatalities (3 dogs, 2 cats). This included one feral cat and one likely feral dog. One was nuisance-related and set by a landowner (dog, body-gripping).
- By law, trappers must already obtain permission from private landowners and municipalities to trap. The Vermont Fish and Wildlife Department partnered with the Vermont Veterinary Medical Association to survey Vermont veterinarians in 1998 and again in 2018. The results suggest that the number of domestic animals that needed medical care as a result of trapping has been consistent and low.

Table 1: Results from a 1998 and 2018 survey of Vermont veterinarians regarding animals treated for trap-related injuries

Year	1998	2018
Number of Surveys Sent	250	362
Number of Small Animal Veterinarians	~200	~252
Number of Responses	42	54
Average Number of Treated Domestic Animals/Year	6 per year (1 year survey period)	6 per year average (total 30 over 5 years)
Average Number of Trap Nights (1 trap x 1 night)	308,355	320,695
Number of Harvested Animals	13,187	12,798

- State lands are open to the public but managed for different uses. State Forests are managed primarily for multiple user groups, while Wildlife Management Areas are managed primarily wildlife habitat and dispersed wildlife-based recreation. The use of the sites by one user group, (such as dog walkers) should not exclude the use of another group (trappers) when the lands are designated for use by all Vermont citizens.

Appendix B: New England State Setbacks

State	Trail offsets	Road offsets	Parks, picnic areas, etc
Maine	None	None	none
New York	Body-gripping traps on land shall not be within 100' of public trails (except for WMA's. (culverts, drainage ditches excluded).	None	[Trappers] are not allowed to set a trap within 100 feet of a house, school, playground, or church unless [they] have permission from the owner of the land where the trap is set.
Rhode Island	none	None	none
Connecticut	None	None	none
Massachusetts	None but: "It is illegal to trap in a public way, cart road, path or other way commonly used as a passageway for human beings or domestic pets"	None	none
New Hampshire	None but: "no person may set or arrange any trap in a public way, cart road, or path commonly used as a passageway by human beings or domestic animals."		

CONSERVATION BRIEF



The Implication of a Statewide Ban on Trapping: The Massachusetts Experience





After the Massachusetts trap ban passed in 1996, it took only four years for the beaver population to double from approximately 23,000 to nearly 50,000. In the absence of an annual regulated harvest, complaints about the species increased by 90 percent. *Photo: Vermont Fish and Wildlife Department*

The Implication of a Statewide Ban on Trapping: The Massachusetts Experience

The mission of state Fish and Wildlife agencies across the country is to maintain and conserve sustainable wildlife populations while meeting the needs and interests of all citizens. Beavers are a keystone species in the environment, as they provide valuable habitat for many other fish, wildlife, and plant species and offer sustenance to people when they are harvested for food and fur. Wildlife biologists maintain beaver populations for their ecological, utilization, and intrinsic values by integrating multiple goals, objectives, and regulations.

Historically, beavers occupied all of North America except for a small portion of Florida and some western desert habitats. They were extirpated throughout most of their original range by the 19th century as a result of unregulated harvest and habitat loss. As the country was developed, a great deal of human infrastructure was constructed while beaver populations were low or absent. In the 20th century, Fish and Wildlife agencies across the country worked to restore beaver and/or establish restricted and regulated harvest seasons. Their restoration provided multiple benefits including the creation of wetland habitats and ponds that

recharge groundwater, filter sediments, control erosion, and create wildlife habitat. As beaver populations rebounded and expanded, conflicts between humans and beavers increased, impacting public and private property and, in some cases, threatening public health and safety. Roads, septic systems, wells and other infrastructure are affected by beaver activity. Proactively managing beaver populations through regulated trapping aided in preventing and resolving these conflicts which helped maintain the public's acceptance and tolerance for beavers on the landscape.

In Massachusetts a Trap Ban was passed in 1996 by ballot referendum under the auspices of "public safety and wildlife protection." It banned the following trap types for the capture of beaver and other wildlife species:

- Foothold traps
- Snares (including cable restraints)
- Bodygrip traps (except common mouse and rat traps)
- Cage type traps were still legal following the ban

At the time, trapping (season timing and length, methods, and size and types of devices) was already heavily regulated by the Massachusetts Division of Fisheries & Wildlife (MDFW).

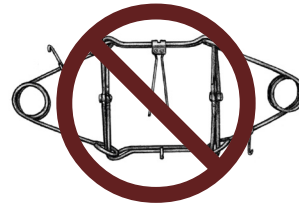
Prior to the 1996 Trap Ban

- MDFW was able to manage beaver populations through regulated trapping which helped control the growth and expansion of the beaver population and resolve damage problems.
- The beaver population was maintained within cultural carrying capacity at limited or no cost to towns and citizens. The beaver population was maintained at around 23,000 animals statewide through an annual regulated harvest of approximately 1,270 beavers (8% of the population at that time). In general, as a result, beavers and wetlands were valued by citizens.
- Most conflicts were prevented proactively. When conflicts occurred, there was the option of free removal during the trapping season when young are independent, and pelt and meat were utilized.
- The public who participated were trained and licensed.

After the Trap Ban Passed

- Most trap types effective for capturing beavers were prohibited from use. Cage traps (including Bailey and Hancock) were the only traps allowed but are specialized for open water only (can't be used in winter) and are more expensive. Bodygrip traps cost between \$18 and \$30 dollars while cage traps cost \$400-\$500 each.
- Annual beaver harvest dropped from 1,270 to 98 the first year after the ban.
- In 4 years, the beaver population doubled from approximately 23,000 to almost 50,000 and beaver complaints increased 90%.
- Most of these complaints required site visits, causing the MDFW to shift resources from wildlife conservation priorities to resolving human/beaver conflict/damage.
- Beaver-related expenses for several town highway departments in Worcester County ranged from \$4,000 to \$21,000 per year from 1998-2002, and individual landowners are paying upwards of \$300 per beaver to have them trapped by nuisance animal control agents in conflict situations.

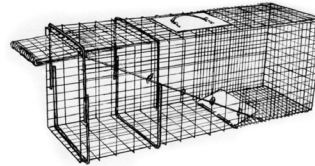
TRAP DEVICES LIMITED FOR USE BY LICENSED TRAPPERS AFTER TRAP BAN



Bodygrip



Foot Hold



Box Trap



Bailey/
Hancock

A Broken Law

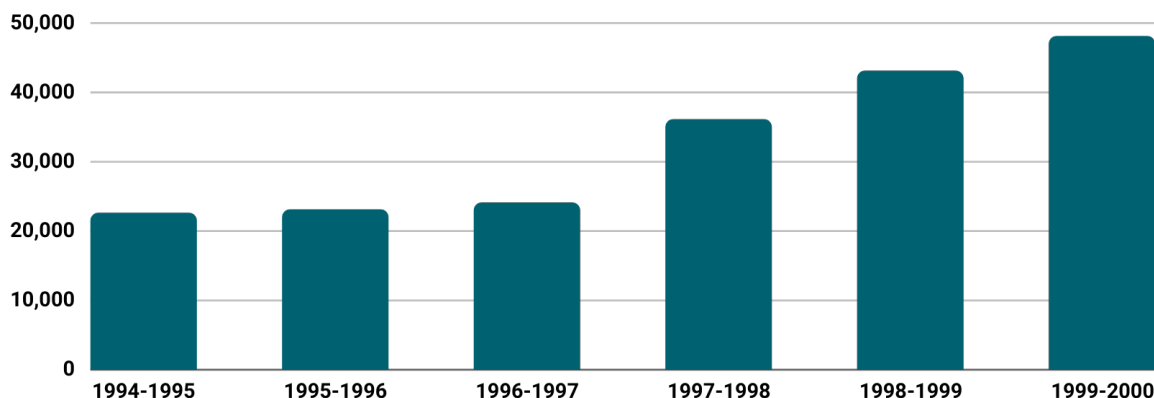
In 2000, the Legislature modified the trap ban legislation in response to growing beaver complaints and changes in public attitudes.

The modifications allowed local municipalities (351 towns) to approve the use of bodygrip traps via emergency permits, which allowed year-round trapping with bodygrip traps and the year-round alteration/removal of a beaver dam without MDFW approval or review. The legislature allowed the bodygrip trap due to its effectiveness in winter compared with a cage-type trap.

Unfortunately, today, the use of banned traps is reactive and only in response to damage occurring and/or threats to human safety. No reporting regarding the number of complaints, number of permits issues, or outcome is currently required.

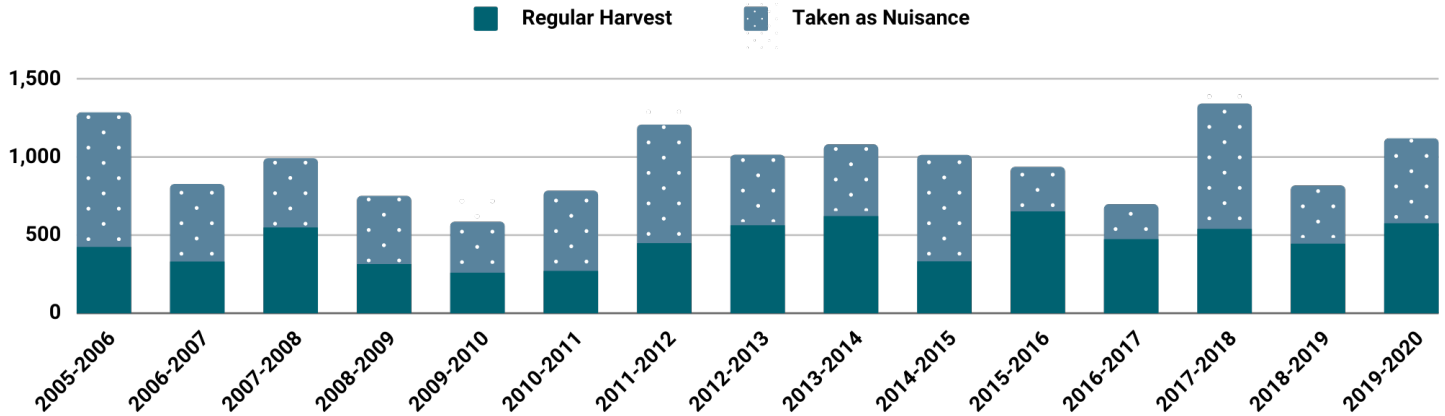
Reactive Management resulted in increased costs to towns/landowners and loss of wetland habitats and the many wetland-dependent species such as otter, mink, muskrat, waterfowl, and amphibians. (D. Wattles, pers com)

BEAVER POPULATION IN MASSACHUSETTS



ANNUAL BEAVER HARVEST 2005-2020

Between 2005 and 2020, upwards of 50% of the beaver have been taken via a "nuisance" permit with the banned bodygrip trap.



Today in Massachusetts: “Reactive Management”

Massachusetts lost a valuable scientific technique in trapping, for managing furbearer populations, conducting research, dealing with human-wildlife conflicts, and collecting important biological data.

Paradoxically, the trap ban in Massachusetts resulted in as many beaver killed today as those taken prior to the ban in 1996. Unfortunately, the number of beavers currently being killed can no longer control the growth of the expanded population which has increased exponentially since 1996. In addition, today’s trapping is less regulated, is allowed only after damage has occurred or public health is threatened and is conducted year round instead of during the recommended time of year.

IN SUMMARY

- Banned bodygrip traps are still being used but are no longer regulated by MDFW.

- Hundreds of beavers are taken annually with bodygrip traps. Beavers are taken year-round, including when young are dependent.
- Today, upwards of 50% of beaver are taken as “nuisance” with the banned bodygrip trap. Many of these animals are wasted and not utilized.
- Emergency trapping permits and permits to modify or remove beaver dams are issued by local municipalities and are no longer regulated by MDFW, resulting in the destruction of wetland habitats.
- Lack of reporting requirements under the permit system has resulted in MDFW losing the ability to collect critical data to monitor and manage beaver populations and beaver harvest.
- MDFW lost trapping devices that could be used to conduct wildlife research.
- MDFW lost trapping devices used to remove individual problem animals (e.g. beaver, coyotes).
- Costs to towns and landowners has increased significantly.
- The Massachusetts beaver population has increased beyond cultural carrying capacity. Beaver are now viewed, and treated, as pests by many residents (Jonker 2006).



Flooding from beaver dams has damaged homes, septic systems, wells, and agricultural crops and equipment. At right, before and after images of clearing a beaver dam that clogged a box culvert under a highway. Left, Bo Benton USDA Wildlife Services; center and right, USDA Wildlife Services



Wildlife Specialist Tyler Brown prepares a "beaver baffle," a device that allows water to pass through a dam without breaching it and destroying wetland. Baffles are one technique that Vermont Fish & Wildlife staff recommend to minimize beaver damage. *Photo: Vermont Fish and Wildlife Department*

Fact or Fiction?

Beaver populations are self-regulating. Wildlife biologists recognize that beaver populations, if left to their own devices, “self-regulate” by cycling through peaks and valleys. Unfortunately, in areas where humans, their infrastructure, and wildlife overlap, human/wildlife conflicts increase as the population approaches the peak. Today, the cultural carrying capacity (the tolerance of humans to wildlife) in most states is lower than the biological carrying capacity (how many beavers can live in the existing wetland), except in areas where very few humans reside.

Water level control devices (WLCD) will solve all human-beaver conflicts. WLCDs can be an effective tool and are part of an integrated approach to human-beaver conflicts. While these devices can mitigate some flooding issues, they are not appropriate at all sites. As such, they cannot replace lethal control. Most devices require maintenance by the landowner or the installer to function long term. Callahan (2005) installed 43 devices in the town of Bellerica, Massachusetts at a cost of \$83,000 (\$1,500 per installation, \$79 annual monitoring costs). In spite of the WLCD, he also had to continue to trap at 12 other sites (average of 18.5 beaver per year at a cost of \$409 annually per site). The total cost for the Town of Bellerica was \$135,000 (excluding costs to private landowners). These devices don’t control the beaver population.

In Vermont, 95 WLCD structures installed between 2001 and 2017 were inspected in 2019 and 2020. Fifty-nine of the structures continued to function while 36 (38%) had either failed or the area had been abandoned by beaver. Research done in Vermont in 2003 (Algeo) found that in many cases landowners or municipalities must be tolerant of water level fluctuations even after the installation of a water control device. Of the 26 sites studied, only 16% maintained water

levels within a 6-inch threshold and 61% within a 12-inch threshold. Regardless, several states continue to promote WLCDs as a valuable tool for dealing with select human/beaver conflicts depending on the wetland topography and the type of damage. Effective management means recognizing that regulated trapping is required to manage populations at some sites.

This brief was prepared by the Association of Fish and Wildlife Agencies Furbearer Conservation Working Group.

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*Cover Photo by Jillian Cooper/Getty Images
Trap Illustrations (Except for Bailey/Hancock) by Joe Goodman*



SCIENCE BRIEF

SUSTAINABLE USE OF WILDLIFE

As members of the natural system, humans have always relied on the land for food, clothing, and shelter. When well-regulated, the use of abundant wildlife is sustainable and ecologically sound. Using wildlife sustainably not only ensures that future generations will continue to benefit from these resources, but also that wildlife populations will remain in balance with the environment.

What is sustainability?

Living populations naturally fluctuate. Many wildlife populations experience peaks right after birthing and hatching seasons and seasonally low populations at the end of winter. Sustainable use of wildlife refers to the long-term stability or persistence of a population, often on a scale of years, decades, or longer. Sustainability occurs when natural systems are diverse, productive, and capable of supporting healthy wildlife. And because humans are a major part of natural systems, we play an active role in responsibly managing them using techniques based on the best available science. Unlike some other human activities, the sustainable harvest of wild fur, food and fiber results in little pollution and development or degradation of habitat.

Use of wildlife

People from diverse cultures who use wildlife often feel a deeper connection to the land and develop a strong conservation ethic. People who value wildlife work to maintain and conserve those resources for future generations. Unfortunately, when wildlife (such as beavers or muskrats) becomes overabundant, they are considered pests by some members of the public. At this point, society has little tolerance for these species and people become indifferent to their treatment, intrinsic value, and whether the wildlife population will even persist.

For example, bobcats, like many carnivores, were once viewed as a “varmint” with little to no legal protection in much of the United States. In the 1970s, bobcat pelts experienced a resurgence in wild fur markets and started to be viewed as a valuable resource to conserve and use.

Conservation is a widely-used and popular term, but what does it mean?

Conservation means “wise use.” Conservationists believe in using land and wildlife resources sustainably to allow for a prudent and thoughtful approach to their management, ensuring they’re used by future generations and not exploited to a level where they are lost forever.





"Ironically, the elimination of hunting and trapping cultures may actually speed industrial 'development' and exploitation of nonrenewable resources — with disastrous consequences for wildlife and the environment."

— Alan Hescovici,
Second Nature 1997

Between 1981 and 2008, the United States took more than 1.3 million bobcats through regulated hunting and trapping programs. During this same time, the bobcat population grew from an estimated 1 million animals in 1981 to around 3.5 million animals in 2008. The bobcat population grew while allowing for an average of 47,000 animals to be taken by trappers and hunters. Bobcats, and furbearers in general, are a great example of sustainability.

Ensuring sustainability

Today, trapping and hunting are highly regulated by management agencies to prevent long-term negative impacts to populations. The sustainability of wild animal populations can be confirmed through scientific management and the monitoring of wild populations to ensure that the long-term trends are sustainable. Monitoring helps to better understand the impact of human actions on wildlife as well as other potential impacts resulting from disease, toxins, or habitat loss.

How can wildlife be sustainable?

Mortality in the wild occurs in many different forms including diseases (e.g., rabies, mange), accidents (e.g., roadkill), predation, and starvation. If the number of animals that die are offset by the number born, the population should be secure over the long term. However, these causes of mortality are often exacerbated by habitat loss and fragmentation, pollution, and other human influences to the landscape.

Regulated trapping can replace — and help manage — other forms of mortality in a much more controlled manner. This is done using scientifically-tested traps and through the careful control of harvest via season timing, bag limits, harvest methods, and other regulations.

Trapping during the suitable time of year not only ensures that harvest replaces other mortalities, such as disease, but also that the fur, meat, bones and other parts are prime and can be used. This is important, as the harvest of wild animals may provide a positive incentive to trap during the appropriate season, proactively managing wildlife and fostering a positive value on wildlife. Ultimately, this helps to ensure their long-term sustainability.

MORE INFORMATION CAN BE FOUND AT
<https://furbearermanagement.com>



Vermont Furbearer Management Newsletter

SPRING 2022

VOLUME 18 ISSUE 1

AFWA—A Wealth of Furbearer Management Resources

The Association of Fish and Wildlife Agencies (AFWA), formerly the International Association of Fish and Wildlife Agencies (IAFWA), was founded in 1902. AFWA represents North America's fish and wildlife agencies to advance sound,

science-based management and conservation of fish and wildlife and their habitats in the public interest. The 50 US state fish and

wildlife agencies,

as well as provincial and territorial governments in Canada, are members. Federal natural resource agencies in Canada and the United States are also members.

Furbearer managers and trappers alike have benefitted from the work AFWA does. The

(continued on page 5)



Inside This Issue

A Wildlife Monograph	2
Renew Your Permanent License	2
A Word (or Three Hundred!) of Thanks	3
Necropsy News	4
Take the High Road	5
Permanent License Holder But Not a Trapper?	5
Vermont Habitat Stamp	6-7
Furbearer Harvest and Effort Data	8-9
Vermont Conservation Design.....	10
Recipe: BBQ Beaver-wiches	10
Your Furbearer Management Project Staff ...	11
Meet Tyler Brown	12

Reflecting On 40+ Years Working With Furbearers

Hi All! It is with mixed feelings that I write to say that this is likely my last newsletter. After a long, fulfilling, enjoyable, sometimes challenging but never boring, career with the Fish & Wildlife Department, I have plans to retire sometime in late May of this year. I have truly enjoyed working with Vermonters to further the conservation of all wildlife including furbearers in this beautiful state. In the 40+ years I have been involved with the furbearer program, there have been many changes and numerous collective accomplishments to be proud of:



Kim Royar
Furbearer Management Project Leader

Tom Rogers

- ❖ The recovery of American marten in the southern Green Mountains.
- ❖ Ten years of participation in the national trap testing research effort to develop Best Management Practices (BMPs) to improve animal welfare, selectivity, safety, efficiency, and practicability—the largest trap research effort in history.
- ❖ Assistance with the recovery of fisher in Connecticut.
- ❖ The collection of anecdotal furbearer road crossing information that has led to partnerships with Vermont Agency of Transportation and the restructuring and/or modification of under- and overpass structures.
- ❖ The establishment of one of the longest running beaver baffle programs in the country (20+ years) with the goal of maintaining beaver-created wetlands while addressing human/beaver conflicts.
- ❖ The researching of coyote and fox habitats and home range requirements in partnership with the University of Vermont.
- ❖ Participation in a research study of bobcat habitat needs with the University of Vermont Cooperative Research Unit.

(continued on page 3)

A Wildlife Monograph

“Demonstrating that trapping devices and methods can be acceptably humane, selective, and efficient is critical for ensuring that traps remain viable tools for use by avocational trappers, wildlife control operators, public health officials, and wildlife managers and researchers (Novak 1987b). Batcheller et al. (2000) identified the adoption of BMPs as an essential component of sustaining avocational trapping and the use of traps in furbearer management and research.”

The Wildlife society publication, *Wildlife Monographs*, publishes articles on focused investigations in the area of conservation and management of wildlife. A monograph is a detailed written study of a single, specialized subject. The paragraph above is an excerpt from an article published in *Wildlife Monographs* in 2020 titled “Best Management Practices for Trapping Furbearers in the United States.” Written by 14 wildlife biologists in federal, state, and non-government organizations from around the country, it is an article of significant importance considering the ongoing challenges to trapping and the management of furbearers.

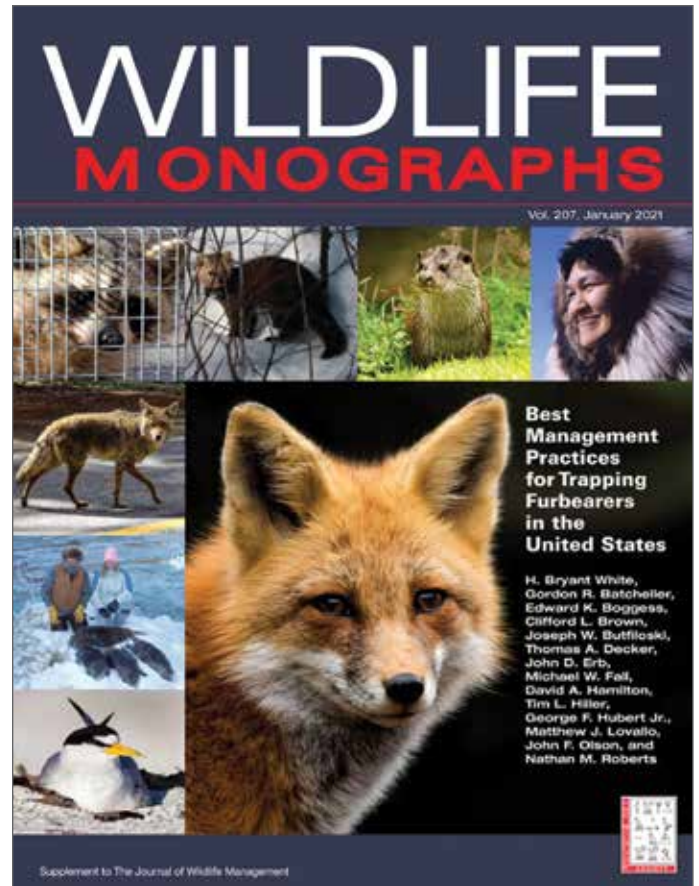
Many of you are familiar with Best Management Practices (BMPs) for Trapping Furbearers. The development of BMPs was a response to address concerns and requirements of the Wild Fur Regulation in the European Union in 1991 that *“included a commitment by the United States to evaluate trap performance and advance the use of improved traps.”*

“The need for trapping BMPs was borne out of both national and international concerns related largely to animal welfare and selectivity. Our data and trapping BMPs are critical mechanisms by which to move those discussions forward in a more objective manner, and to help ensure that a variety of traps remain viable tools in wildlife research, wildlife conservation, wildlife damage management, and sustainable harvest of these species.”

Since the research began in 1997, over 600 trap types have been evaluated for 23 species of furbearers in North America. The article explains the methods that were used, how testing efforts were prioritized, field and laboratory data collection, and the criteria used to evaluate the traps. It presents performance data for 84 models of restraining traps across 19 furbearing species, or 231 trap-species combinations.

Additionally, there are discussions concerning the financial and cultural benefits of trapping to individuals and society, the indirect and direct benefits of trapping to management and conservation, societal concerns and regulatory challenges to trapping, and the management implications for anyone with an interest in furbearers.

The article can be found online here:
wildlife.onlinelibrary.wiley.com/doi/10.1002/wmon.1057



Reminder to Renew Your Permanent License

If you are a permanent or lifetime license holder, please take a minute to “renew” your license each year to help us refine our mailing lists. Licenses can be renewed online at our website or in person at your nearest licensing agent or VFWD District Office (*Note: A license agent may charge you up to \$1.50 for reprinting your license.*)

To renew online, visit our website at vtfishwildlife.com. Click “Buy Your License” photo on the homepage. Look for the green “Update Your Permanent License” button and then follow the instructions from there.



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UPDATE YOUR PERMANENT LICENSE ONLINE

A Word (or Three Hundred!) of Thanks

When you consider the challenges and responsibilities that come with managing 14 different species of wildlife under the umbrella of one management program, it should come as no surprise that the Furbearer Project Management team relies upon the efforts of other VFWD staff along with partner organizations and a crew of dedicated volunteers to help us fulfill our department's mission to conserve fish, wildlife, and plants and their habitats for the people of Vermont. Along with the help of department biologists, game wardens, our education and outreach specialists and biologists and technicians from other organizations, we value the role trappers, hunters, researchers, students, and community scientists play in the management and conservation of Vermont's furbearers.

Trappers in particular have contributed to much of the conservation work we have accomplished and continue to do. Many of the projects in the list outlined in the article *Reflecting On 40+ Years Working With Furbearers* of this newsletter would not have been successful without your help as ethical, responsible, conservation-minded trappers.

We would not be a regional leader in collecting biological data and tissue samples for research without the carcasses you bring to us. And we would not be able to respond to requests from researchers on short notice without knowing that you are willing to make the extra effort to support studies such as those mentioned prior. An example demonstrating all three is the outstanding response we received from those of you who participated in the coyote/fox sample collection for *Echinococcus multilocularis*, without much lead time. The way you stepped up to the plate when called upon was truly commendable.

Sincere and many thanks from the Furbearer Management Project staff to all of you—trappers, hunters, community members, researchers, wardens, biologists, and support staff. It is a privilege and a pleasure to work alongside of you. Your cooperation and efforts are a vital part of maintaining sustainable furbearer populations for future generations, and for that we are grateful!

*Thank you from the
Furbearer Management
Project staff!*



Kim Royar and MaryBeth Adler prepare a beaver dam for the installation of a beaver baffle.

Reflecting On 40+ Years (continued from page 1)

- ❖ Working jointly with the Vermont Trappers Association (VTA) and the Vermont Fish and Wildlife Board to improve trapping practices and expand and/or reduce seasons based on science as needed to maintain sustainable populations of furbearers.
- ❖ The collection and maintenance of the largest available database of biological data for bobcat, fisher, and otter in the Northeast (and possibly the nation).
- ❖ The collaboration with Cornell University and New York and Maine furbearer biologists to model bobcat and fisher harvest and biological data to create a more in-depth population model.
- ❖ Ongoing partnerships with multiple universities and researchers to collect disease, genetic, and contaminate data from the carcasses trappers are required to turn in on an annual basis. These data are critical to understanding the status of furbearer population health and well-being.
- ❖ Improving website content and outreach materials.
- ❖ The protection and/or acquisition of thousands of acres of wildlife habitat which will benefit all wildlife populations in the state for current and future generations.

We can all be proud of our respective roles in these efforts. The information, expertise, and support provided by trappers have contributed to the long-term sustainability of Vermont's wildlife. It has been an honor and a pleasure to have partnered with you over the years in these valuable conservation actions. I encourage you to continue to work to be effective leaders in conservation and maintain your critical efforts to conserve these populations for future generations.

Necropsy News

The carcasses you provide are put to good use. Besides the annual collection of sex and age data that are used to monitor furbearer populations over the long term, we are also collecting important disease, contaminant, and genetic information that furthers the conservation and management of these species for future generations. Without the support and help of trappers and hunters, much of the critical information below would be difficult to collect.

SARS CoV2 in Vermont canids and furbearers

SARS-CoV-2 is the pathogen that causes Covid-19. Recent studies show that SARS-COV-2 may have spilled over from humans to wildlife species. At present, it is unclear which members of the wildlife community may be exposed, how spillover occurs, whether wildlife experience symptoms, and whether spill back to humans is possible. The University of Vermont have been sampling furbearers, coyotes, and foxes turned in by trappers and hunters to explore whether SARs-CoV-2 is present in Vermont's furbearer and canid populations, what the prevalence is, and how prevalence varies among species.

Rodenticides

This will be the third year that the department will collect liver samples from fisher for rodenticide testing. We hope to fill in some of the gaps with this year's testing. We also plan to collect samples from bobcat to see if the rodenticide levels are similar to what we found with fisher. Other states in the region are also planning on sending samples to the same lab; however, they are more challenged due to the fact that, unlike Vermont, few other states have mandatory collection of fisher, otter, and bobcat carcasses.



The department collected samples from bobcats to test for rodenticides levels.

Echinococcus multilocularis

The department is working with Virginia Tech University to collect samples from coyotes and foxes voluntarily turned in



Bill Byrne

The department collected samples from coyotes voluntarily turned in by trappers to test for a zoonotic tapeworm.

by trappers and hunters to test for *Echinococcus multilocularis* (EM) a zoonotic tapeworm that can cause Alveolar echinococcosis (AE), a severe zoonotic disease in humans that affects the liver.

Collection of genetic material from furbearers, canids, and other species to better understand wildlife movement and landscape connectivity

The Northeast region provides key habitats that allow for the movement and genetic exchange of animals across several states and provinces, which promotes healthier and more resilient populations. This region also represents a critical linkage for the movement of species northward as climate conditions change. However, habitat fragmentation, alteration, and loss represent persistent conservation problems that can substantially impact wildlife populations by limiting how and where species move across the landscape.

A team of researchers from the University of Vermont is collecting genetic samples from 11 species including furbearers and canids to enhance the understanding of wildlife movement and connectivity across the northeastern states, based on the composition and configuration of land cover. This work will help to inform future land and species management decisions, and conserve/enhance connectivity for these species across the region.

Genetic testing for fisher diversity

The University of New Hampshire will continue the collection of genetic material from fisher to build on work done in the past. Using the samples we provide, researchers will analyze and characterize fisher genetic diversity in Maine, Vermont, New Hampshire, and New York, characterize microsatellite diversity, compare populations across the regions and between states, and attempt to identify borders to diversity from natural or man-made boundaries.

(continued on page 5)

Necropsy News *(continued from page 4)*

Testing bobcats for the presence of gammaherpes-virus and parvovirus

To better understand the frequency and potential impact of viral infections on bobcat population health, St. Michaels College will be conducting an ongoing molecular epidemiological study of two viruses in the Vermont bobcat population. Through the collection of samples from trapped and hunted bobcats, they will identify the presence of viral DNA from gammaherpesvirus and parvovirus in wild Vermont bobcat tissue samples, estimate the relative prevalence of viral infection, test for associations with bobcat age, sex, and location and characterize levels and types of genetic diversity in viral genomes.

Take the High Road

Many forms of hunting and trapping are being challenged by members of the public—many of whom have limited exposure to these activities. Therefore, it is critically important that participants put their best foot forward when engaging in, or advocating for, these pursuits.

Hunters and trappers have a history of promoting conservation not only through their generous funding of conservation work but also through their commitment to species and habitat protection and the respect they show for the animals they harvest. Today's sportsperson must take the high road and continue to be leaders in conservation as well as demonstrate regard for the people who may disagree with them.

It is easy to grow defensive in the face of a blatant attack, but it is counter-productive to cave to the baiting. Continue to take the lead in on-the-ground conservation efforts, advocate and show respect for wildlife and the habitats they depend on, follow the law, and maintain the highest ethical standards—the future of furbearer conservation depends, at least in part, on our actions going forward.

Permanent License Holder But Not a Trapper?

Those of you who hold permanent combination licenses but are **not** trappers may wonder why you get the Annual Trapper Reports in the mail. Trapping might have been inadvertently added to your license without your knowing of it, most likely because the clerk forgot to ask or just didn't know to ask if you wanted it and checked the box. If this is the case, please call or email:

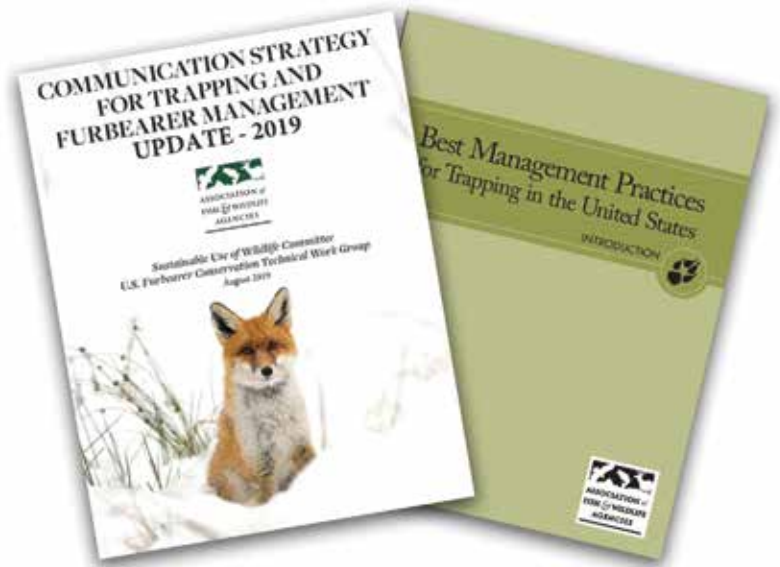
Mary Beth Adler 802-289-0629 | marybeth.adler@vermont.gov
or

Melissa Currier 802-289-0613 | melissa.currier@vermont.gov

We'll have trapping removed from your license and take your name off our mailing list.

AFWA—A Wealth of Furbearer Management Resources *(continued from page 1)*

Association represents its state agency members on Capitol Hill and before the Administration to advance favorable fish and wildlife conservation policy and funding and works together with member agencies to ensure furbearer management has a clear and collective voice.



AFWA staff, working with member agencies, including the Vermont Fish & Wildlife Furbearer Management Team, have developed a strategic plan for effective communication about regulated trapping and furbearer management, conservation briefs and science briefs that underscore the value of modern, regulated trapping, the selectivity of traps, and the sustainable use of fur, and a variety of resources for trapper education.

Most notably for furbearer management, AFWA developed the *Best Management Practices (BMPs) for Trapping in the United States* with the cooperation and participation of many state wildlife agencies, expert trappers, and trapper organizations. The BMP program is an effort to improve regulated trapping by evaluating trapping devices and techniques used for the capture of furbearers and educating those who use traps about the most humane, safe, selective, efficient, and practical devices.

The BMPs and many other projects have helped to further the AFWA goal “to maintain the regulated use of trapping as a safe, efficient, and acceptable means of managing and harvesting wildlife for the benefits it provides to the public, while improving the welfare of trapped animals,” in Vermont and throughout North America.

Check out the wealth of resources available at the AFWA Furbearer Management webpage:
fishwildlife.org/afwa-inspires/furbearer-management



Donations made to the Vermont Habitat Stamp in 2021 totaled \$239,163. An 18 percent increase from 2020, it was the highest amount of contributions since the program began in 2015.

Helping Landowners Improve Wildlife Habitat

Projects in 2021 included working with private landowners to improve habitat for birds, pollinators, and

other wildlife. Department biologists worked with 16 different partner organizations to provide landowners with the best possible technical assistance available and delivered interactive workshops, trainings, and other resources.

These partnerships also allowed the department to complete a variety of on-the-ground projects in towns like Charlotte and Hinesburg to improve shrubland and streambank habitat by removing large amounts of invasive plants, planting native shrubs and trees, and collecting native seeds for future songbird and pollinator habitat enhancement.

(continued on page 7)

Wildlife biologists with the department along with conservation partners created and participated in online workshop training events and virtual presentations. Topics included strategic wood addition to improve stream habitat, timber harvesting for habitat improvements, increasing hunter access on private lands, how to use BioFinder (a conservation planning and mapping tool), how to improve habitat in landowner's backyards, and how to strengthen our society's connections to the land we depend upon.



Department habitat biologist Andrea Shortsleeve leading a workshop on Hinesburg Town Forest.

Ethan Tapper

Habitat Stamp *(continued from page 6)*

Using Habitat Stamp funds, a collection of informational signs describing the habitat improvement work being done was installed at the Hinesburg Town Forest to form a self-guided walking tour for visitors.

Restoring Aquatic Habitat

Efforts continued to reconnect streams and rivers by removing dams and upgrading culverts to increase the resilience of wild fish populations and other aquatic organisms. The department supported the Connecticut River Conservancy's efforts to implement four dam removals in the lower Connecticut River watershed and the Pelletier Dam on the North Bretton Brook in Castleton. Removing the dam will allow trout to access 37 miles of habitat.



Habitat Stamp donations made in 2021 will be used to remove the Pelletier Dam on the North Bretton Brook in Castleton, opening up 37 miles of habitat for trout.

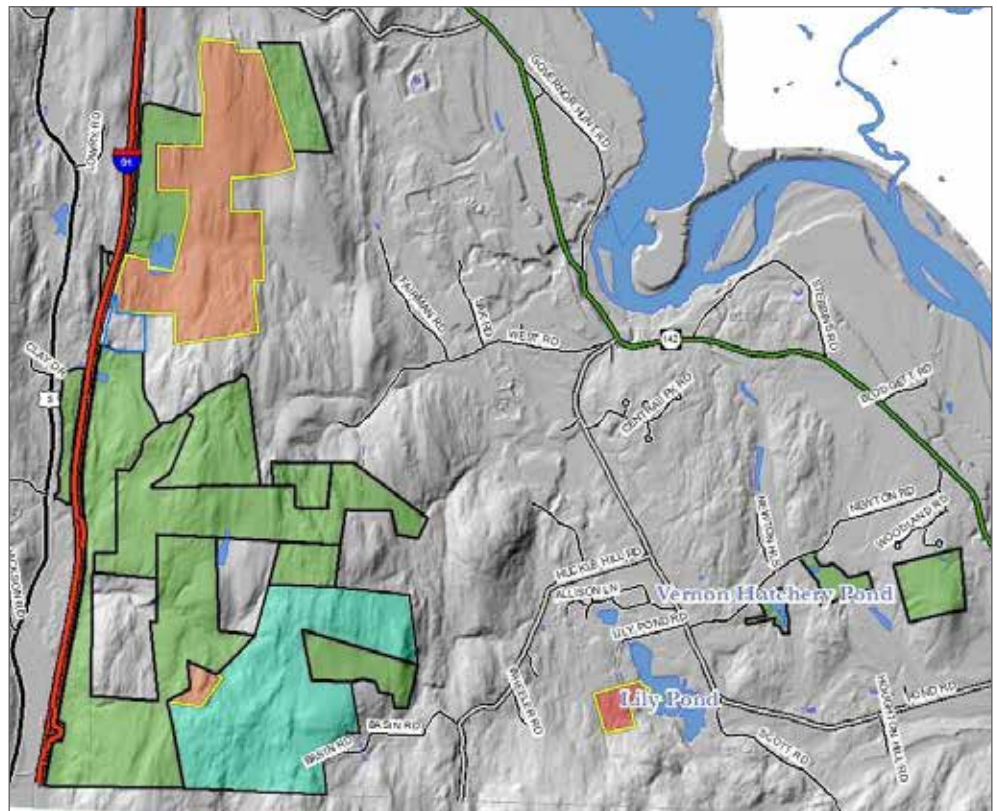
Karina Dailey

The department's fisheries biologists worked with partners to restore natural forest communities in riparian areas along Vermont's streams and rivers by protecting and restoring trees to shade and feed fish, filter pollutants, and stabilize streambanks. An experimental tree planting was designed and implemented on the Otter Creek WMA to test forest restoration in the presence of beavers.

Caring For Our Wildlife Management Areas

The Habitat Stamp is essential for the stewardship of the department's 100 Wildlife Management Areas (WMAs). In 2021, Habitat Stamp funds were used to control invasive plants, to maintain forested openings, to mow grasslands for improving bird habitat, and to restore riparian habitat by planting native trees and shrubs. The funds were used to match federal Recovery Land Acquisition Grant funds to add 446 acres to the Roaring Brook WMA. This land supports the state and federally endangered northeastern bulrush and long-eared bat, along with a rare black gum swamp, deer winter habitat, vernal pools and important oak and beech that provide valuable food for many wildlife species.

You can help protect Vermont's wild places by donating when you purchase your hunting or fishing license or by visiting our website to donate online: vtfishandwildlife.com/vthabitatstamp
















Roaring Brook WMA 2021 acquisition funded in-part by the Habitat Stamp.

 Land added to the WMA  Existing WMA Property  Vernon Town Forest

Furbearer Harvest and Effort Data

The furbearer team thanks you for your efforts to provide the critical data necessary to monitor the health and sustainability of furbearer populations in Vermont. Below are the harvest numbers for every furbearer species based on your trapper mail survey reports and the blue card returns (otter, bobcat, and fisher). We use this information both to monitor changes in harvest levels and to compare the harvest with the effort expended (number of traps X number of nights) by trappers. This is very important when monitoring wildlife populations so we can know what factors may be most significantly affecting the harvest.

Summary of annual trapper mail survey derived estimated* furbearer harvests, 2011-12 through 2020-21.**

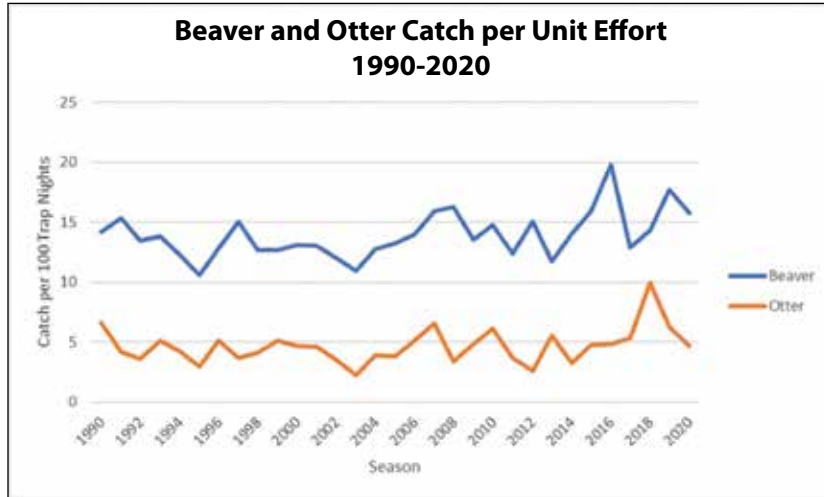
Season	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	10-year Average
Mink 	601	749	748	800	299	212	168	95	125	184	398.1
Raccoon 	850	1,044	1,004	953	648	382	504	442	273	361	646.1
Muskrat 	4,222	10,770	8,737	9,053	8,199	2,490	1,558	1,291	686	716	4,772.2
Skunk 	245	385	218	218	241	204	106	183	89	105	199.4
Opossum 	99	139	61	214	79	63	109	56	27	66	91.3
Weasel 	26	340	36	92	11	72	14	54	18	46	70.9
Coyote 	494	612	726	626	462	378	511	357	298	352	481.6
Red Fox 	184	229	306	270	181	126	221	118	81	130	184.6
Grey Fox 	109	175	130	81	69	31	60	51	26	43	77.5
Bobcat 	55	80	116	55	51	54	44	39	117	111	112.7
Fisher 	407	588	359	432	235	213	190	239	198	179	312.2
Otter 	234	269	246	154	155	113	111	73	85	90	156.7
Beaver 	1,472	2,125	2,139	1,504	1,789	1,198	865	776	725	844	1,343.7
Total Estimated Harvest	9,065	17,526	14,922	14,509	12,489	5,608	4,512	3,864	2,748	3,227	88,470

*Total reported harvest multiplied by correction factors until 2017-18 season when figures represent those reported from the mandatory survey.

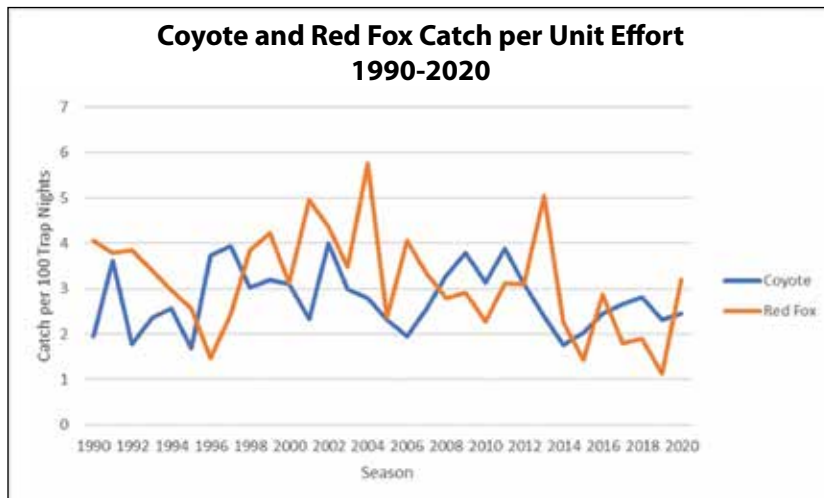
**Fisher, otter, bobcat data are from pelt tagging records.

The Fish & Wildlife Department monitors furbearer population trends through the annual collection and assessment of trapper derived Catch per Unit of Effort (CPUE) data. It is an indirect index of population trends that helps biologists track the growth or decline of furbearer populations over time. This index is universally used across the world to measure capture rates for trapping, and is similarly used for other applications including wildlife field camera surveys, hunter sighting rates, etc.

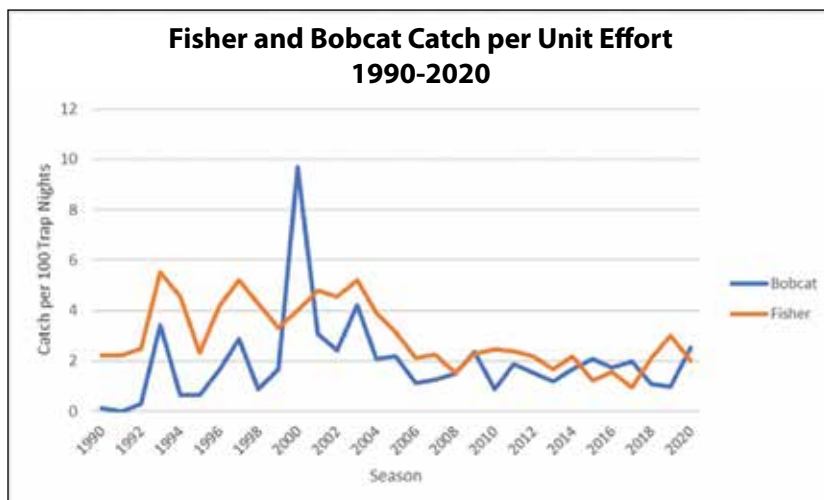
In the case of trapping, CPUE is the average number of animals trapped per 100 trap nights, where trap nights equals the number of traps set multiplied by the number of days they were deployed (e.g. 5 traps X 6 days = 30 trap nights). The graphs below show the trends from 1990 to 2020.



iStock



Paul Hamelin



ForestWander.com, CC BY-SA 3.0 us, commons.wikimedia.org

REMINDER – Annual Trapping Reports are due May 15, even if you did not trap!

Vermont Conservation Design—A Roadmap For The Future

For the past 10 years, the Vermont Fish & Wildlife Department has led an effort with a wide group of partners to develop a map that identifies high priority large forest blocks and connecting corridors in order to ensure an ecologically functional landscape into the future. A connected landscape with large intact forest blocks is more likely to sustain clean air and water, store carbon to slow climate change, and protect against severe floods. It will also allow plants and animals to move across the state and region and adapt to climate change as well as support numerous social and economic values, including



outdoor recreation, the forest products economy, and the natural beauty that draws people to Vermont.

The Vermont Conservation Design map is a science-based vision to sustain the state's valued natural areas, forests, waters, wildlife, and plants for future generations. The full range of conservation tools will be needed to achieve this vision. Voluntary stewardship and management of private lands, with public support and incentives, will be essential to success.

For more information, visit: anr.vermont.gov/node/1182

Recipe: BBQ Beaver-wiches

- | | |
|--|--------------------------------|
| 1 medium beaver, cut into serving pieces | 2 tsp. Worcestershire sauce |
| 1 cup chili sauce | 1 tsp. dry mustard |
| 1 cup beer | ½ tsp. liquid smoke |
| 3 tbsp. brown sugar | Dash hot pepper sauce |
| 2 tbsp. minced onion | Salt and black pepper to taste |
| 1 tbsp. minced garlic | Kaiser rolls |
| | Coleslaw for a relish |



In Dutch oven, combine all ingredients except Kaiser rolls and coleslaw; stir well to mix. Heat to boiling. Reduce heat and simmer for 1½ hours, or until meat is falling from bone. Remove beaver pieces with tongs and set aside until cool enough to handle. Pull meat from bones and return to sauce; discard bones. Reheat gently if necessary. Warm Kaiser rolls in oven and fill with meat mixture. Top with coleslaw. This is also very good served over rice. *From G. E. McIntyre from Gamecalls.net's Online Cookbook*



Your Furbearer Management Project Staff!

We are here to serve the wildlife resource and you! Please don't hesitate to contact us with questions or comments.



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*The MISSION of the Vermont Fish & Wildlife Department
is the conservation of fish, wildlife, and plants
and their habitats for the people of Vermont.*



Welcome Tyler Brown

Many of you have already met Tyler Brown. He has been employed as a seasonal technician with the department for the last 10 years in both the fisheries and wildlife divisions. For the past six years Tyler has been working with private landowners, Vermont Agency of Transportation, town road crews, and on public lands to mitigate human infrastructure/beaver conflicts with the goal of protection and maintaining beaver-created wetland habitats.



In January of this year, we were able to transition Tyler to a year-round limited-service employee. Tyler will continue to work to maintain wetland habitats and mitigate human/beaver conflicts, but he will also take on some new responsibilities including working with private landowners to improve wildlife habitat and protecting critical wildlife habitats through Act 250.

Tyler is an avid outdoors person who spends his off time out in the woods. Please welcome Tyler when you see him. His commitment to wildlife conservation and his expertise has been and will continue to be a great asset to the department.

Vermont Furbearer Management Newsletter

Editors: Kim Royar
Chris Bernier
Mary Beth Adler
Melissa Currier
Designer: Lilla Stutz-Lumbra



Your purchase of
hunting and fishing
licenses as well as
equipment supports fish
and wildlife restoration.



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