

**BAY CIRCUIT ALLIANCE  
TRAIL MAINTENANCE ADVISORY COMMITTEE**

**GUIDANCE FOR BEAVER DAM PROBLEMS**



Version 1: February 28, 2006

*Bay Circuit Alliance  
3 Railroad Street  
Andover, MA 01810*

## TABLE OF CONTENTS

<b>INTRODUCTION.....</b>	<b>1</b>
<b>GUIDANCE FOR TRAIL MAINTAINERS.....</b>	<b>2</b>
<b>BEAVER FACTS AND FIGURES .....</b>	<b>4</b>
<b>Family Characteristics .....</b>	<b>4</b>
<b>Mammal Characteristics.....</b>	<b>4</b>
<b>Habitat Ecology.....</b>	<b>4</b>
<b>Food.....</b>	<b>5</b>
<b>Impact .....</b>	<b>5</b>
<b>PREVENTION.....</b>	<b>6</b>
<b>Trees.....</b>	<b>6</b>
<b>Breaching.....</b>	<b>6</b>
<b>Trapping .....</b>	<b>6</b>
<b>Water-Flow Control Techniques.....</b>	<b>6</b>
<b>CONTROL .....</b>	<b>8</b>
<b>Initial Action.....</b>	<b>8</b>
<b>Further Action .....</b>	<b>9</b>
<b>PERMITTING PROCESS.....</b>	<b>10</b>
<b>Flow Charts .....</b>	<b>10</b>
<b>Permit Forms .....</b>	<b>13</b>
<b>REFERENCES.....</b>	<b>15</b>
<b>Books.....</b>	<b>15</b>
<b>Additional Information .....</b>	<b>15</b>
<b>APPENDIX .....</b>	<b>17</b>
<b>A-1 MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH.....</b>	<b>17</b>
<b>Summary of the Law .....</b>	<b>17</b>
<b>Making Public Health/Safety Determinations .....</b>	<b>19</b>
<b>How Does the Board of Health Interact with the Conservation Commission?.....</b>	<b>20</b>
<b>Types of Permits for Health and Safety Threats .....</b>	<b>20</b>
<b>A-2 MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE .....</b>	<b>24</b>
<b>Rules and Regulations .....</b>	<b>24</b>
<b>Prohibited .....</b>	<b>26</b>

## **INTRODUCTION**

The 200-mile Bay Circuit corridor circles Boston roughly between interstate 495 and Route 128. It is primarily a flood plain with low-lying hills on the perimeter. Residential and commercial development occupies most of the upland except for pockets of protected open space. Our efforts to establish a continuous recreational trail from Newburyport to Kingston Bay have focused on the remaining open space not preempted by development, which means largely low lying and often wetlands.

Over the last several years, we have seen an increase in problems with beaver dams on the Bay Circuit Trail (BCT). Some trails have been flooded by increased water levels along streams, ponds and wetlands, and several footbridges have been submerged underwater. With limited resources and funding available, it has been a challenge for the Bay Circuit Alliance (BCA) to keep affected trails open. In addition to flooding trails, beaver-induced flooding has caused health and safety problems. Flooding has compromised septic systems and low-lying roads throughout the Bay Circuit corridor. State and local governments have responded to this crisis with a complex regulatory process. Understandably, it places its highest priority on protecting in-ground septic system and road networks. Most of the regulatory process requires a threat to the public, although sometimes a trail flooding problem can be solved by associating the flooding with real or potential septic system or highway issues.

The main remedies are rerouting the trail to higher ground, installing water-level control devices (beaver deceivers) and boardwalks, redesigning bridges, and new bridge construction. Except for rerouting, the remedies entail difficult and time-consuming permitting and engineering issues and usually involve prolonged negotiation with state and local agencies, during which time trails remain compromised. The BCA is working to gain a greater priority and less complex process for solving beaver related trail problems.

If you have a beaver dam that has flooded a trail, the Trail Maintenance Advisory Committee (TMAC) is interested in hearing about your experience in dealing with the problem. And, if we can be of assistance in helping to resolve a flooded trail problem, please feel free to contact us ([tmac@baycircuit.org](mailto:tmac@baycircuit.org)). We also wish to serve as a clearing house for water-level control device or floating boardwalk technology and related experience. We welcome your input and will share our findings with any interested parties.

## **GUIDANCE FOR TRAIL MAINTAINERS**

The intent of this document is to provide trail maintainers guidance on beaver flooding problems in Massachusetts, legitimate reasons for remedial action, and insight into the regulatory process. It by no means covers all possible solutions nor is it a handbook for a guaranteed successful resolution. Instead, it is meant to give trail maintainers background information, a sampling of techniques and devices that have been used to control beaver dam flooding, a summary of the regulations in place, and guidance if you pursue the regulatory process.

First, there are proactive steps that can be taken to evaluate potential beaver problems and in planning trail projects.

- Evaluate all trail sections for potential beaver activity. Beaver dams are typically located at drainages structures such culverts, spillways, or natural choke points in a watercourse. If there are sites conducive to beaver activity, some changes may be made in the trail alignment to limit the impact of beaver flooding should it occur.
- Caution is needed with trail structures. In a number of cases, boardwalks and bridges built to improve BCT crossings of watercourses and wetlands have added to beaver flooding problems by providing a foundation for beaver to start a dam. Planning the location of trail structures in beaver prone areas should anticipate beaver activity. For example, boardwalks or stepping stones at a wet stream crossing should be placed on the upstream side of the crossing so that the crossing area will not be inundated if beaver take interest in the area.
- Get to know town officials who have jurisdiction over wetlands and beaver issues. There are often individuals who are very sympathetic to trail and open space concerns that might be influential to the process. The Conservation Commission is a key player no matter what action is desired or how the permitting process starts, since the Conservation Commission is normally most familiar with active beaver locations and will have jurisdiction over the work area.
- Maintain good relationships with nearby landowners. Their cooperation will possibly be needed to give permission for access to the site of a beaver dam or to initiate a public health and safety complaint.

There are actions outside of the regulatory process for dealing with beaver flooding problems. Note that Conservation Commission approval may be needed for this type of work.

- Trail reroute. Moving the trail uphill to a higher location may solve the problem. Try to move the trail substantially uphill so as to provide enough of a buffer for possible higher flooding and to keep away from wet edge effects.
- Trail relocation. Study the trail map for the area and look for an alternate routing using existing trails to bypass the flooded section.
- Boardwalks and footbridges. Design them to account for maximum flooding and to minimize the possibility that the supports become a foundation for a beaver dam.

There are several types of remedial actions that can be applied to control and mitigate the flooding of trails.

- Flow control devices and other non-lethal action. Devices have been developed to prevent

flooding by beavers that are installed in the waterway. These are usually considered to be long-term solutions, but require maintenance and can be costly to implement. Exclusion fencing around trees can also be used to deter beaver activity.

- **Dam Breaching.** Breaching a beaver dam will eliminate flooding problems immediately. If beaver remain in the area, they will quickly rebuild however. A dam breach with trapping can be a good long term remedy. A permanent breach may cause some complications with excessive flows and possible wetland alteration, and access to the dam site for the appropriate equipment needed to open the breach may be an issue. A temporary breach to allow the installation of a flow control device is likely to be less controversial. Cost is variable based on scope and location.
- **Trapping.** Trapping can be controversial as it does involve the killing of the beaver and may stir emotions in the community. Removal of the beaver is of course very effective in that all beaver activity stops. No maintenance is required as long as beaver do not return to the area. Cost may be \$100-200 per beaver trapped if a professional trapper is hired. Trapping can be conducted in season from November 1 to April 15 and at anytime with a BOH emergency permit.

The regulatory process is well defined and can be short and simple, but can be lengthy and complex. There are five government agencies that control the process.

- **Local Board of Health.** If the beaver dam is causing a public health or safety problem, go to the local Board of Health and file for a permit to trap and remove the beaver, breach the beaver dam, or use a non-lethal remedy such as a flow control device. Examples of reasons for removal are: flooded water supplies, septic systems, utilities, basements, and roadways. These can be on either private or town owed land. Since there is some latitude in what constitutes a health or safety problem, it is best to discuss the problem with the Board of Health even if you are unsure it will be covered.
- **Local Conservation Commission.** Discuss the flooded trail with the Conservation Commission to help evaluate the problem and find a solution. They know the open space, wetlands and waterways, and may very well be aware of the problem and have initiated corrective action. They also will work with the Board of Health to evaluate and analyze the problem, make recommendations, and approve implementation.
- **Massachusetts Department of Public Health.** You can appeal to this state agency, if an emergency permit is not approved by the local Board of Health.
- **Massachusetts Division of Fisheries and Wildlife.** If it is not a public health or a safety hazard, you can appeal the decision to this state agency.
- **Massachusetts Department of Environmental Protection.** This state agency will determine if there is a threat to a public water supply.

**BEAVER FACTS AND FIGURES**

**Family Characteristics**

Name	Castor Canadensis
Species	Castoridae order Rodentia Amphibious, semi aquatic, colony, monogamous.
Members	Typically 6 animals per lodge, 2 adults, 2-4 kits, 2 yearlings.
Mate	Jan – March.
Birth	April– June.
Life	Up to 11 years of age in the native environment.

**Mammal Characteristics**

Body Style	Large Brown Mammal, Rodent.
Back Feet	Large webbed black hind feet 5 toed 6” long 5” wide.
Forefeet	Small dexterous 5 clawed forefeet 3”long.
Body Length	3’ – 4’
Body Weight	35 lbs - 80 lbs.
Tail Length	Black scaled 11” – 18”
Tail Width	6” – 7”
Teeth	20 teeth, 4 incisors.
Vision	Poor vision; Small eyes located above the swimming water line.
Hearing	Functional, unknown hearing sensitivity. Small ears located above the swimming water line.
Nostrils	Acute sensitive sense of smell. Small nostrils located above the swimming water line.

**Habitat Ecology**

Habitat	Fresh Water Rivers, Streams, Ponds, Lakes, Wetlands, Marsh.
Home Site	Multi-chamber freestanding stick and mud elliptical dome lodge. Burrows entrance below the water level. Some locations with bank lodges.
Mounds	Scent mounds 1’ high x 3’ diameter around the periphery.
Dams	Up to 10’ high and 100’ long, branches, logs, mud, stone.
Trails	Tread way 15” to 18” wide, pathway to water. Create canals and channels for mud and log sluiceways.
Predators	Fox, Otter, Coyotes, Cougar, Wolf, Bear
Preferences	Relatively broad flat depressed terrain, shallow marsh or pond depth, earth or muddy bottom, slow moving creek or stream, quiet area, deciduous forest.

**Food**

Tree Bark	Alden, Aspen, Birch, Cottonwood, Willow, Maple, Poplar, Beech, Hornbeam.
Aquatic	Thistles, Meadowsweet, Water Lilies, Duck Weed, Horsetail Roots, Winterberry, Blueberry, Witch Hazel Water Shield, Ferns, Raspberry, Grasses, Sedges.

**Impact**

Positive	Provides habitat for fish, water birds, insects, otters, amphibians, moose, water plants, water storage, create wetlands. Creates wetlands, ponds, water habitats, develops biodiversity, water storage areas, and prevents floods.
Negative	Removes free flowing water for trout, floods fields, meadows, alters tree population.
Conflict	Spectacular expansion of beaver range into abutting developed land. Negative impact of domestic, economic and industrial losses by flooding. Beavers repopulating areas previously unoccupied by recent human development.

## **PREVENTION**

There are a variety of non-lethal and lethal options available for the control of beaver damage. A hands-off approach may be used when beaver activity does not negatively affect the homeowner. Exclusion fencing can be used to prevent tree damage, and permits may be obtained for the breaching of dams and installation of water flow devices to control water levels. Trapping beavers is also an option. There is a legal trapping season from November 1 to April 15 when any licensed trapper may trap beavers. Beavers may also be trapped out of season with special permits.

### **Trees**

Hardware cloth or heavy gauge wire fencing can be installed surrounding the bottom of trees. The wire should be a minimum of 4 feet tall and flush with the ground. Do not wrap the wire tightly around the tree as beavers may try to chew through it. Instead, leave a 6-inch space between the tree and the wire

### **Breaching**

In Massachusetts, in order to breach a beaver dam to lower the pond level, or to install pipes through a dam to control the water level, or to trap beaver from April 16<sup>th</sup> to October 31<sup>st</sup> (when it is not beaver trapping season), a permit is required from either the Massachusetts Division of Fisheries and Wildlife or the local Board of Health. This permit can be issued whenever a threat to human health or safety occurs. Once a permit is issued a licensed trapper or problem animal control professional can then legally trap problematic beaver. Conservation Commission approval is required.

### **Trapping**

Any licensed trapper may trap beavers during the regular trapping season from November 1 to April 15. To trap on property other than your own, you must register your traps with Mass Wildlife. To obtain a trap registration number, you must first attend a trapper education class. For information contact the Hunter Education Program of Division of Fisheries and Wildlife at 508-792-7434.

### **Water-Flow Control Techniques**

Techniques have been developed to mitigate the beaver's natural tendency to block culverts or dam waterways. These techniques are not hard and fast solutions, but are methods that have worked in controlling many flooding problems. Here are some of the techniques used:

- **Culvert Protective Fences.** Culverts appear to beavers as holes in dams, and since they are relatively small in size and contained, a beaver can easily plug the culvert. To make it more difficult to plug, a fence is placed in front of the culvert to extend the area that the beaver must block. Different shapes and sizes are used depending on the geometry and flow conditions. Another method is to use a cylindrical fence, which acts as an elongated extension of the culvert. This has not proven as effective and is more difficult to maintain.



- **Fences and Pipe Devices.** This technique uses a fence in front of a culvert which prevents beavers from entering and blocking it, but which lets the beavers dam the fence. To control the water level, a flexible pipe is used at the dammed fence to provide a water bypass.
- **Diversion Dams.** In conjunction with using culvert fences, a diversion dam is constructed upstream to encourage the beavers to build a dam away from the fence and thus maintain water flow.
- **Beaver Deceivers.** A pipe system is used to create a permanent leak in the dam that the beavers cannot detect nor block. This is most effective in maintaining the level of a pond at least three feet deep. The intake is submerged underwater and protected by a fence. The pipe runs along the bottom of the pond, and is elevated where it goes through the dam. Both inflow and outflow are kept underwater so there is no sound of running water. This method will maintain the level of the pond under normal conditions, and heavy storm run-off will flow over the top of the dam.

## **CONTROL**

### **Initial Action**

The local Board of Health has initial enforcement jurisdiction. Issues of public health and safety shall take precedence. Flooding and or contamination of public water supplies, septic systems, roadways, and public utilities public facilities shall be justification for remediation. The local Board of Health and the local Conservation Commission shall develop a letter of conditions and determination for the disposition of the offending beavers.

The Massachusetts Legislature recently amended G.L. c.131, s.80A, with the passage of “An Act Relative to Foothold Traps and Certain Other Devices.” This new law became effective on July 21, 2000, and makes it easier for applicants to alleviate threats caused by beaver and muskrat-related flooding.

Any person may apply to the Board of Health for a 10-day emergency permit to immediately alleviate a threat to human health and safety from beaver or muskrat-related activity. The law includes a list of activities, summarized here, that may constitute a threat to human health and safety.

- Beaver or muskrat occupancy of a public water supply.
- Beaver or muskrat-caused flooding of drinking water wells, well fields, pumping stations, sewage beds, septic systems, sewage pumping stations, public or private ways, driveways, railways, airport runways or taxi-ways, electrical, gas, communication, or other public utility structures or facilities.
- Beaver or muskrat-caused flooding affecting the public use of hospitals, emergency clinics, nursing homes, homes for the elderly, fire stations, hazardous waste, incineration, or resource recovery facilities, or other facilities where flooding may result in the release of hazardous or noxious materials.
- Damage (gnawing, chewing, entering or other damage) to electric or gas facilities, transmission or distribution equipment, cable, alarm systems, or facilities, caused by beavers or muskrat.
- Beaver or muskrat-caused flooding or structural instability on the applicant’s property, if it poses an imminent threat of substantial property damage or income loss of the following types: flooding of residential, commercial, or industrial facilities; flooding of or access to commercial agricultural lands which prevents normal agricultural practices from being conducted; reduction in the production of an agricultural crop caused by flooding or compromised structural stability of commercial agricultural lands; and flooding of residential lands in which the Board of Health, its chair or agent or the state or federal department of health has determined a threat to health and safety exists.

If the Board of Health determines that such a threat exists, the Board of Health shall immediately issue a 10-day emergency permit to alleviate the threat. The permit is valid for ten days. In some cases, the applicant may apply to the Board of Health for two additional ten-day permits. If denied, the applicant may appeal to the Massachusetts Department of Public Health (DPH) for a determination as to the existence of the threat.

The Board of Health permit authorizes the applicant to remedy the threat in one of three ways:

- Use of conibear or box or cage-type traps (subject to Massachusetts Division of Fisheries and Wildlife but not Conservation Commission regulation).
- Breaching of dams, dikes, bogs or berms, subject to determinations and conditions of Conservation Commissions.
- Use of any non-lethal management or water-flow devices, subject to determinations and conditions of Conservation Commissions.

The emergency permit for trapping is for ten days during which trapping can be carried out and dams may be removed as allowed or permitted by the local Conservation Commission.

In order to breach a beaver dam, to lower the pond level, or to install pipes through a dam to control the water level, or to trap beaver from April 16 to October 31 (when it is not beaver trapping season), a permit is required from either the Massachusetts Division of Fisheries and Wildlife (30 day) or the local Board of Health (10 day). This emergency permit can be issued whenever a threat to human health or safety occurs. Once a 10 day emergency permit is issued a licensed trapper or problem animal control professional can then legally trap problematic beaver.

If there is a perceived threat to a public water supply, then the local Board of Health must immediately report it to the Massachusetts Department of Environmental Protection (MDEP). The MDEP then takes authoritative control for determination and resolution, and will work with the local Board of Health to implement remedial action.

### **Further Action**

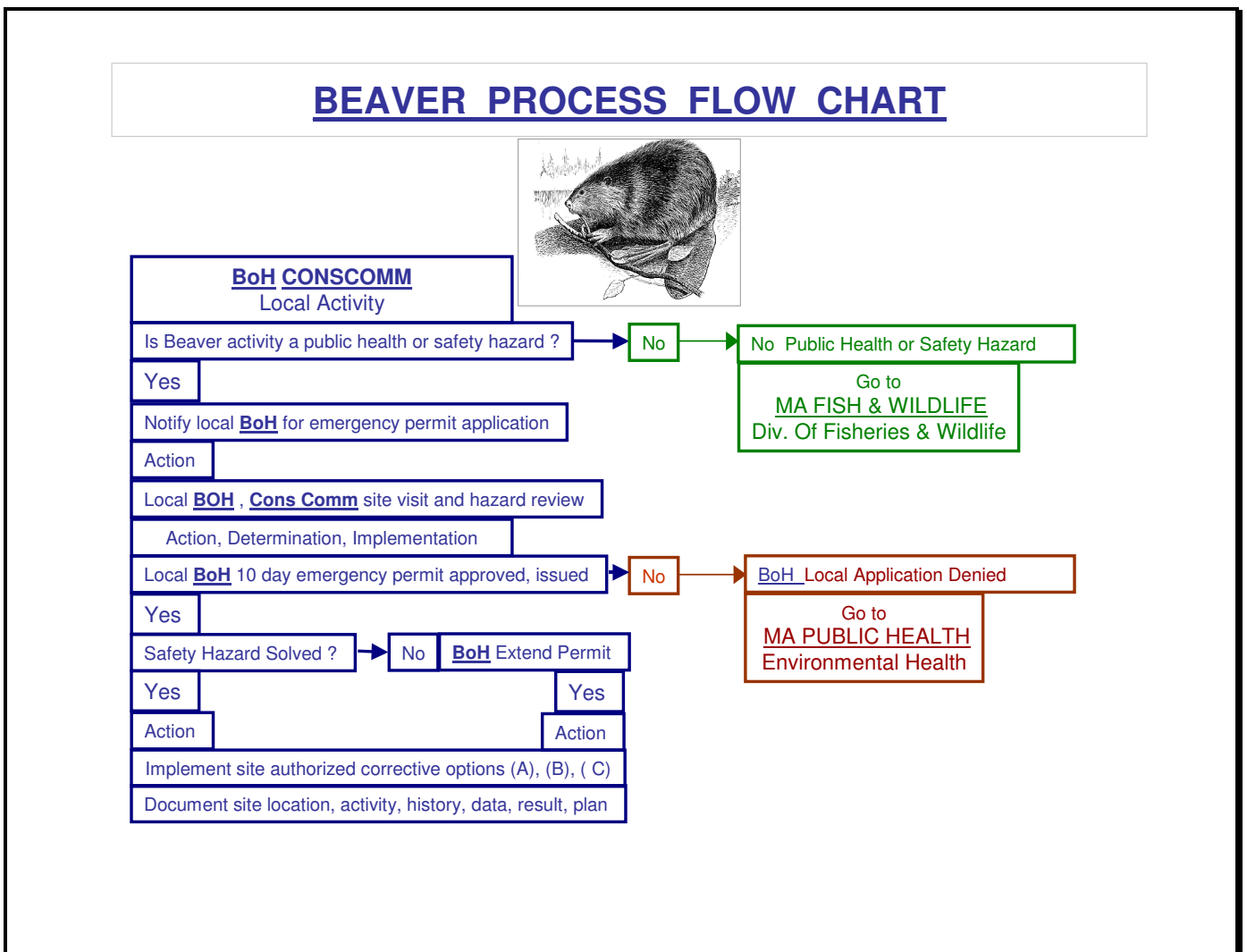
There is authority by Massachusetts Division of Fisheries and Wildlife (DF&E) for their Director to permit an extension for an additional 30 days. The applicant, in conjunction with the Board of Health may apply to the DF&W for a 30-day extension permit. If the extension is granted, the DF&W shall develop, with the assistance of the applicant, the Board of Health, and the Conservation Commission, a plan to abate the beaver or muskrat problem using alternative, non-lethal management techniques in combination with water-flow devices, subject to Conservation Commission determinations and conditions. The plan may include box and cage type-traps, if necessary, subject to all applicable permitting requirements, including, but not limited to, any permits required by the DF&W.

For more information on the regulations and responsibilities of the Board of Health and the Division of Fisheries and Wildlife, see the Appendix.

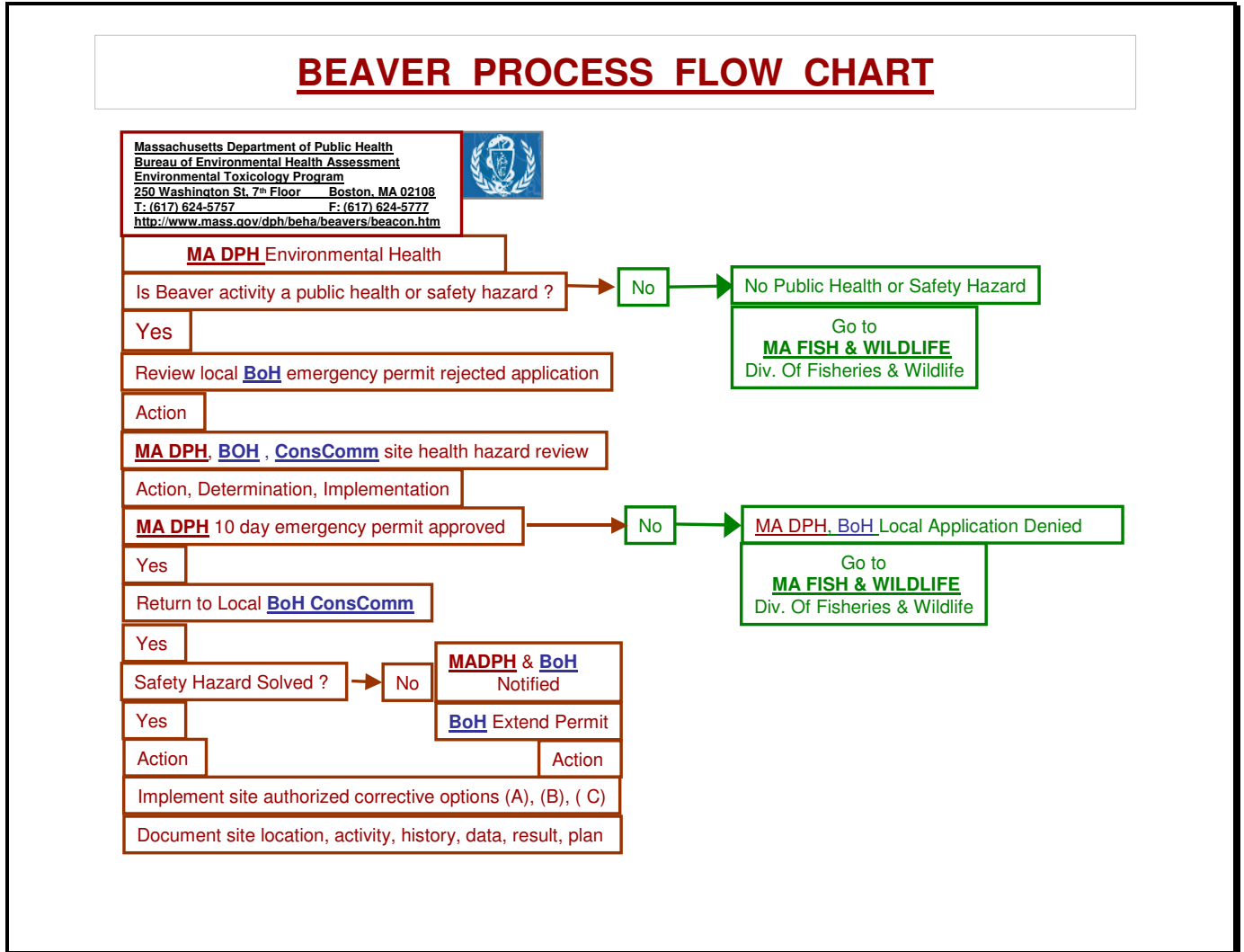
## PERMITTING PROCESS

### Flow Charts

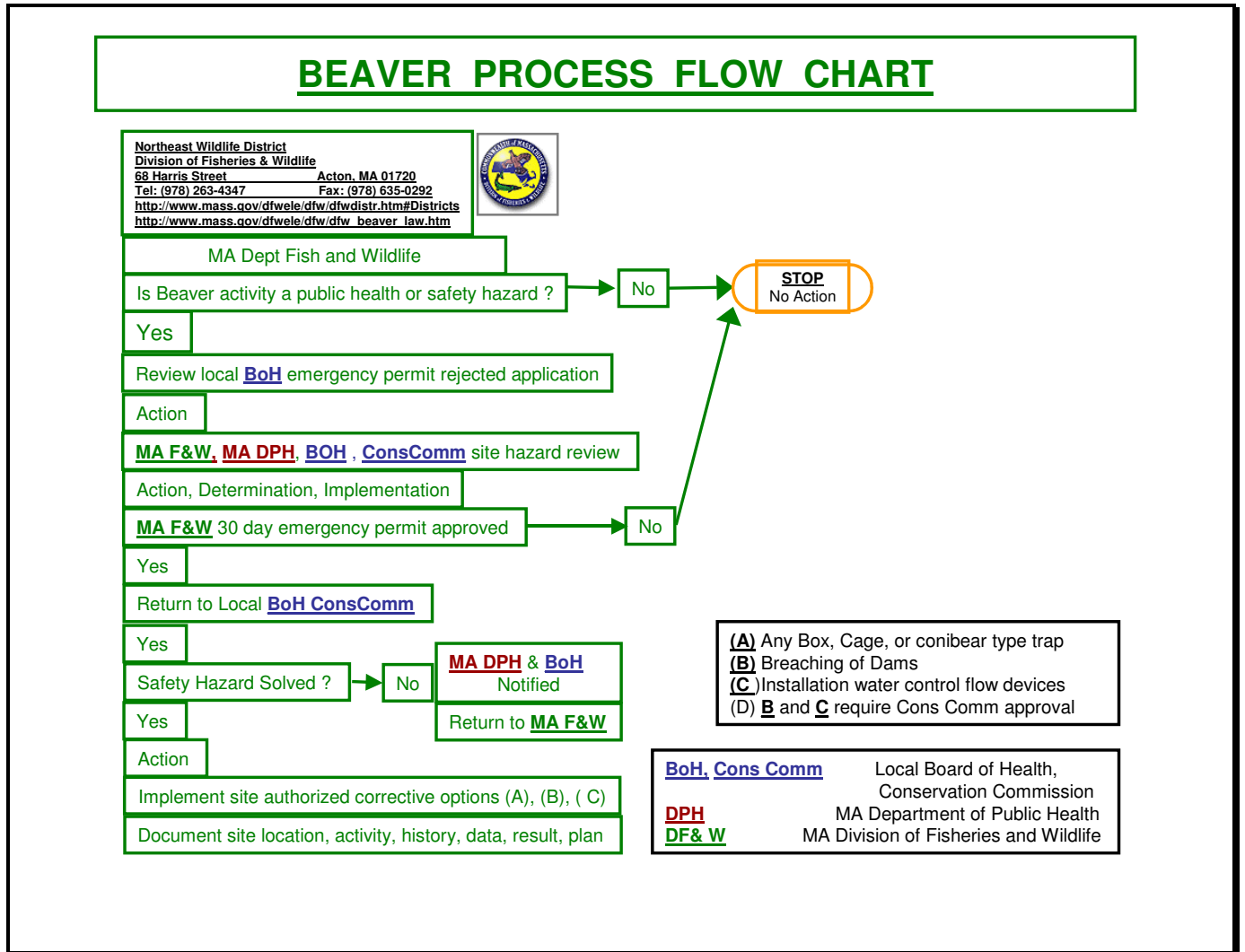
In this section we show the process for obtaining permits from the local Board of Health and for filing appeals to the Division of Fish and Wildlife and the Department of Public Health. The flow charts show: 1) the steps in applying for a permit, 2) the actions taken by town and state agencies to determine the validity of the request, and 3) how they interact to plan a course of action. Contact information is provided for the Division of Fish and Wildlife and the Department of Public Health on the second and third charts. Abbreviations used in the charts are listed in a box on the third chart.



Flow Chart 1: Local Board of Health and Conservation Commission



Flow Chart 2: Massachusetts Department of Public Health



Flow Chart 3: Massachusetts Division of Fisheries and Wildlife

### Permit Forms

There are five forms which cover applying for beaver and muskrat permits. The forms for these permits can be found at the Department of Public Health's website on beavers (See References, Additional Information #4. Follow steps and then click on "Permits and Permit Information"). The permits forms available from the website are:

- Application for 10-Day Emergency Beaver or Muskrat Permit
- 10-Day Emergency Beaver or Muskrat Permit
- 10-Day Additional Emergency Beaver or Muskrat Permit
- Application for 30-Day Extension Permit
- 30-Day Beaver or Muskrat Extension Permit

As an example, the permitting process is initiated by submitting an application for a 10-day emergency permit with the Board of Health. Here is the form that you fill out to start the process:

#### APPLICATION FOR 10-DAY EMERGENCY BEAVER OR MUSKRAT PERMIT

TO BE FILLED OUT BY APPLICANT Fee (if applicable): \$ \_\_\_\_\_

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

Town: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Daytime Tel. # \_\_\_\_\_ Evening Tel. # \_\_\_\_\_

Agent Name: \_\_\_\_\_ Tel. # \_\_\_\_\_  
(if applicable)

Complaint Location:

---



---



---



---



---

Is the problem entirely on your property? Yes: \_\_\_\_ No: \_\_\_\_ Don't Know: \_\_\_\_

Note: If the problem does not occur entirely on the applicant's property, consent forms from all other property owners must be obtained.

Type of Complaint: Provide a detailed description of the perceived threat to public health and safety:

---

---

---

---

---

---

---

---

Under M.G.L. c. 131, s. 80A, an emergency permit authorizes the applicant or his duly authorized agent to immediately remedy the threat to human health and safety by one or more of the following options: (a) the use of conibear or box or cage-type traps for the taking of beaver or muskrat, subject to regulations; (b) the breaching of dams, dikes, bogs or berms; and/or (c) employing any non-lethal management of water-flow devices. The emergency permit will be good for 10 days from the date of issue.

Signature of Applicant: \_\_\_\_\_ Date: \_\_\_\_\_

Note: Options (b) and/or (c) above require applicant to get conservation commission approval prior to such work in accordance with the wetlands protection act.



## REFERENCES

### Books

1. *The Beaver: Natural History of a Wetlands Engineer*; Dietland Muller-Schwarze, Lixing Sun; Ithaca, N.Y.: Comstock Publication Associates, 2003.
2. *The Smithsonian Book of North American Mammals*; Don E. Wilson & Sue Ruff; Washington: Smithsonian Institution Press, 1999.
3. *National Audubon Society Field Guide to North American Mammals*; John O. Whitaker, Jr.; New York: Knopf; distributed by Random House, 1996.
4. *Mammal Tracks & Sign A Guide to North American Species*; Mark Elbroch; Mechanicsburg, PA: Stackpole Books, 2003.
5. *Beavers in Massachusetts: Natural history, benefits, and ways to resolve conflicts between people and beavers*; Scott Jackson, Thomas Decker; University of Massachusetts Cooperative Extension System: Massachusetts Division of Fisheries and Wildlife, 1993.
6. *Grzimek's Encyclopedia of Mammals*; Bernhard Grzimek (Editor); McGraw-Hill, 1989

### Additional Information

1. Beaver Solutions - Company providing solutions and consulting.  
98 Bay Road  
Hadley, MA 01035  
Phone: 413-527-6472  
Email: info@beaversolutions.com  
Website: www.beaversolutions.com
2. Beavers Deceivers, Inc. - Skip Lisle, inventor of the beaver deceiver  
1187 Cabell Road  
Grafton, VT 05146  
Phone: 802-843-1017
3. Mass Wildlife - Massachusetts government agency supporting wildlife  
Division of Fisheries & Wildlife  
251 Causeway St, Suite 400  
Boston, MA 02114-2152  
Phone: 617-626-1590  
Email: mass.wildlife@state.ma.us  
Website: www.mass.gov, then in the box at top right of page, type "beavers", and click on "Search".  
When the search results appear, click on link "MassWildlife - Beavers in Massachusetts."

4. Mass Health and Human Services - Massachusetts government agency for public health.  
Massachusetts Department of Public Health  
Center for Environmental Health  
250 Washington Street, 7th Floor  
Boston, MA 02108  
Phone: 617-624-5757  
Website: [www.mass.gov](http://www.mass.gov), then in the box at top right of page, type "beavers", and click on "Search".  
When the search results appear, click on link "Beavers - Health and Human Services."
5. Non-Lethal Beaver Management - Steps and photos for building a beaver deceiver  
Natural Resources and Parks  
King County, WA  
Email: [fred.bentler@metrokc.gov](mailto:fred.bentler@metrokc.gov)  
Website: <http://dnr.metrokc.gov/wlr/Dss/beavers/beaverintro.htm>
6. Beavers: Wetlands and Wildlife - Educational nonprofit organization.  
146 Van Dyke Road  
Dolgeville, NY 13329  
Phone: 518- 568-2077  
Fax: 518-568-6046  
Email: [BWW@BeaversWW.org](mailto:BWW@BeaversWW.org)  
Website: [www.beaversww.org](http://www.beaversww.org)
7. Wildlife 2000 - Dedicated to promoting coexistence with beaver. Newsletter available.  
PO Box 6428  
Denver, CO 80206  
Phone: 303-935-4995  
Fax: 303-935-3525

## **APPENDIX**

### **A-1 MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH**

A letter of guidance for Boards of Health implementing the new law for threats from beaver and muskrat-related activities was issued on February 14, 2001. The letter was issued by the Executive Office of Health and Human Services, Department of Public Health, and appears below.

#### **Summary of the Law**

The Massachusetts Legislature recently amended M.G.L. c.131, s.80A, with the passage of “An Act Relative to Foothold Traps and Certain Other Devices.” This new law became effective on July 21, 2000, and was intended to make it easier for applicants to alleviate threats caused by beaver and muskrat-related flooding.

Any person may apply to the Board of Health (Board) for an emergency permit to immediately alleviate a threat to human health and safety from beaver or muskrat-related activity. The law includes a list of activities, set forth below, that may constitute a threat to human health and safety. The activities in this list are intended to be suggestions about what could constitute a threat, but the determination of whether an activity poses a threat is left to the judgment of the local health officials. If local health officials determine that there is not a threat to public health or safety, this does not mean that the person seeking assistance is without options. With appropriate permits, they can still install water flow devices, breach dams, or trap, under different conditions, which are outlined within the last three paragraphs of MGL c. 131, s. 80A. The person can also appeal the Board’s decision to the Massachusetts Department of Public Health (MDPH) or the Division of Fisheries and Wildlife (DF&W).

A threat to human health and safety may include:

- a) Beaver or muskrat occupancy of a public water supply;
- b) Beaver or muskrat-caused flooding of drinking water wells, well fields or water pumping stations;
- c) Beaver or muskrat-caused flooding of sewage beds, septic systems or sewage pumping stations;
- d) Beaver or muskrat-caused flooding of a public or private way, driveway, railway or airport runway or taxi-way;
- e) Beaver or muskrat-caused flooding of electrical or gas generation plants or transmission or distribution structures or facilities, telephone or other communications facilities or other public utilities;
- f) Beaver or muskrat-caused flooding affecting the public use of hospitals, emergency clinics, nursing homes, homes for the elderly or fire stations;
- g) Beaver or muskrat-caused flooding affecting hazardous waste sites or facilities, incineration or resource recovery plants or other structures or facilities whereby flooding may result in the release or escape of hazardous or noxious materials or substances;
- h) The gnawing, chewing, entering, or damage to electrical or gas generation, transmission or distribution equipment, cables, alarm systems or facilities by any beaver or muskrat;
- i) Beaver or muskrat-caused flooding or structural instability on property owned by the applicant if such animal problem poses an imminent threat of substantial property damage or income loss,

which shall be limited to: (1) flooding of residential, commercial, industrial or commercial buildings or facilities; (2) flooding of or access to commercial agricultural lands which prevents normal agricultural practices from being conducted on such lands; (3) reduction in the production of an agricultural crop caused by flooding or compromised structural stability of commercial agricultural lands; (4) flooding of residential lands in which the municipal board of health, its chair or agent or the state or federal department of health has determined a threat to human health and safety exists. The Department of Environmental Protection shall make any determination of a threat to a public water supply.

If the Board of Health determines that such a threat exists, the Board shall immediately issue an emergency permit to alleviate the threat. The permit is valid for ten consecutive days. If the Board determines that such a threat does not exist, the Board shall immediately deny the permit and specify, in writing, the reasons for the denial. In case of a denial, the Board shall also inform the applicant that he or she can employ one of the following options for resolving their problem:

- 1) appeal to the state Department of Public Health for a determination as to the existence of the threat;
- 2) appeal to the DF&W if there is a question as to the cause (i.e., type of wildlife) of the threat;
- 3) contact DF&W for assistance with solutions covered under the non-health or safety threat section of the law (last three paragraphs of M.G.L. c. 131, s. 80A); or
- 4) contact a private contractor or non-governmental organization for assistance.

MDPH and DF&W have agreed to consult with each other on issues where either agency clearly has more expertise, i.e., DF&W will take the lead on issues requiring wildlife expertise, and MDPH will take the lead on issues requiring public health expertise.

The permit authorizes the applicant to remedy the threat in one of three ways:

- 1) use of Conibear or box or cage-type traps (subject to DF&W but not Conservation Commission regulation);
- 2) breaching of dams, dikes, bogs or berms, subject to determinations and conditions of Conservation Commissions; or
- 3) use of any non-lethal management or water-flow devices, subject to determinations and conditions of Conservation Commissions.

If the applicant has been unable to solve the problem within the 10-day emergency permit period, the applicant, in conjunction with the Board of Health, shall subsequently apply to the DF&W for a 30-day extension permit. While awaiting approval from the DF&W for the 30-day extension permit, the applicant may apply to the Board for two additional ten-day emergency permits (see Permitting Process for Extension Permits).

Beaver and muskrat-related problems that are determined not to constitute threats to public health and safety under this new law may still be addressed. DF&W staff, private contractors, and non-governmental organizations specializing in this work, can assist individuals with dam breaching, installation of water control devices, and trapping subject to any necessary permit. Under M.G.L. c. 131, s. 80A, permits to use a Conibear trap can be issued by DF&W if box or cage traps and alternative methods like water control devices have been tried unsuccessfully for 15 days.

## Making Public Health/Safety Determinations

The Board of Health must make a determination as to whether the applicant has a “threat to human health and safety”. The intent of the legislation was to provide a quick remedy to flooding caused by beaver or muskrat. In the law, the permit is termed an “emergency permit”. Such terminology is meant to imply that the permit is short lived (i.e., ten days) and will be issued quickly. The term “emergency” is NOT meant to imply that the applicant has a public health or safety emergency. The “emergency permit” is issued by the Board of Health to solve a “public health or safety threat”. As defined under Chapter 131, Section 80A “A threat to human health or safety may include, but shall not be limited to:” the nine items listed in the law under sub-headings (a) through (i). Although this may become a simple determination once Boards of health become experienced with such threats, DF&W has had four years of experience making such determinations. DF&W and MDPH have agreed to assist Boards of Health upon request. MDPH has likewise had four years of experience in addressing these types of public health threats. During this four-year period, less than ten such incidents have been reported to MDPH. Such assistance may be as simple as a phone conversation with the DF&W District Office. That office may have an existing file of the applicant’s flooding complaint. Such a file could be used to make a determination not only of the applicant’s complaint but also as to the best strategy to solve the problem (e.g., traps, breach or water flow device). DF&W has reported that it has been their experience, however, that a site visit is usually necessary to make a determination as to the cause of the problem as well as to design a strategy for solving the problem. DF&W has agreed to accompany the Board of Health on site visits when requested. It is also recommended that conditions at the site be appropriately documented (e.g., with photographs, videos, maps, drawings, etc.).

The list of nine (a through i) public health/safety threats may be difficult to apply to each situation. For example, the applicant may request a permit to trap beaver because of a threat to a septic system. Under the law, “(c) beaver or muskrat-caused flooding of sewage beds, septic systems or sewage pumping stations” may be cause to issue a permit. A site visit may reveal that the flooding is caused by a beaver, but that the water is quite a distance from the septic system and the real problem for the homeowner is a flooded lawn (or the smell of the wetland or the mosquitoes in the wetland). While the Board of Health could make a determination under sub-section (i) (4) that the flooding of residential land is a public health/safety threat, it may be prudent to deny the application and have the applicant work with DF&W using non-lethal strategies such as a water flow device. Therefore, if the Board of Health denied the permit, the applicant would apply to DF&W for a non-emergency permit to breach the dam and install a water flow device. Permission would still be needed by the Conservation Commission. The difference between the two outcomes has to do with the speed with which the applicant gets a permit and whether the applicant gets permission to use Conibear traps. If the Board of Health determines that a public health/safety threat exists, a ten-day emergency permit can be issued that authorizes the use of Conibear traps. If a water flow device is to be installed in the dam or the dam is to be breached, the Board of Health sends the applicant to the Conservation Commission (i.e., that the Conservation Commission issues an Emergency Certification under the Wetlands Protection Act for the installation of the device). Conversely, if the Board of Health makes a determination that there is NOT a threat to public health/safety, the applicant can employ one of the following options for resolving their problem:

- 1) appeal to MDPH for a determination as to the existence to the threat;
- 2) appeal to DF&W if there is a question as to the cause (i.e., type of wildlife) of the threat;

- 3) contact DF&W for assistance with solutions covered under the non-health or safety threat section of the law (last three paragraphs of M.G.L. c. 131, s. 80A); or
- 4) contact a private contractor or non-governmental organization for assistance.

Conservation Commission approval is still necessary for breaching a dam or installing a water flow device. If a Board of Health or MDPH determines that no threat exists, the Conservation Commission should not use the emergency certification mechanism but use its normal permitting process to address the activity.

The law provides that the Department of Environmental Protection (MDEP) shall make any determination of a threat to a public water supply. MDEP has issued a “Standard Operating Procedure” for such determination. In these cases the MDEP should notify the MDPH, Bureau of Environmental Health Assessment.

### **How Does the Board of Health Interact with the Conservation Commission?**

Once a determination has been made by the Board of Health that an applicant has a public health or safety threat, the Board of Health shall issue an emergency permit to:

- 1) trap beaver and/or
- 2) breach beaver dams (and install water flow devices as above).

The Board of Health has sole authority over permitting trapping, but joint authority with the Conservation Commission over the breaching of beaver dams.

The Legislature recognized that Conservation Commissions have an important role to play in solving beaver and muskrat problems, and specifically declared that breaching and other water management proposals are subject to “determinations and conditions” of Conservation Commissions pursuant to the Wetlands Protection Act (M.G.L. c.131, s.40). MDEP has recently developed a similar Guidance Document to all Conservation Commissions. On page four of that document, MDEP outlines a “Recommended Process” for the issuance of breach permits. Emergency Certifications may be issued by the Conservation Commission for up to 30 days to allow for the breaching of beaver dams or the installation of water flow devices. MDEP recommends that the Emergency Certification be issued to overlap the ten-day Board of Health permit. No matter what process is used, it is essential that the Conservation Commission approve modifications to beaver dams prior to such work.

### **Types of Permits for Health and Safety Threats**

There are two types of permits for health and safety threats-- emergency permits issued by Boards of Health and extension permits issued by DFW. Emergency permits may be subdivided into initial permits and additional permits.

### **Initial Emergency Permit**

If the Board of Health determines that a threat to human health and safety exists, the Board may authorize a ten-day emergency permit to applicants or their duly authorized agents that authorize s the applicant to take the following actions:

- 1) trap beaver or muskrat using Conibear-type traps, or cage or box type traps (subject to DFW regulations),
- 2) breaching of dams, dikes, bogs or berms (subject to approval and conditions of the Conservation Commission), and
- 3) use of any water- flow device or control structure (subject to approval and conditions of the Conservation Commission).

### **Discussion of Remedies Allowed by the Emergency Permit**

1. **Conibear-type Trap:** upon determination that a public health or safety threat exists, the Board of Health has the authority to issue the ten-day emergency permit to the applicant or his/her duly authorized agent to use Conibear-type body-gripping traps. These traps are restricted under the law and can only be used with a valid permit. Licensed trappers and Problem Animal Control agents have received training to use Conibear-type traps. DFW regulations also restrict the setting and placing of such traps. For example, Conibear-type traps can only be used underwater for the capture of beaver or muskrat. It is recommended that Boards of Health advise the applicant that during the period from June 1 through July 15, the kits are completely dependent on their mother. Beaver kits are born at the end of May and the beginning of June. Removal of the adults at this time may orphan beaver at an age when their survival may be jeopardized. In the case of public health and safety threats, the Board of Health does have the authority to issue emergency permits at this time.

2. **Breaching:** beaver dams are protected by law and cannot be breached without a permit. The Board of Health has the authority to issue the ten-day emergency permit to breach a beaver dam (and similar structures), subject to the conditions of the Conservation Commission. The permittee or his/her duly authorized agent has the responsibility to obtain the permission of the landowner where the beaver dam is located. The Board of Health emergency permit does not authorize the permittee to trespass on private property. Water may be lowered from a site by breaching or removing a beaver dam. If beavers are not residing at the complaint site, this action can provide a long-term solution. Breaching a dam is usually only a temporary solution when beaver are occupying the site since they will repair the breach or rebuild the dam, thus re- flooding the site. The Conservation Commission will issue conditions for the breach to ensure that both upstream and downstream impacts to people, property and habitat are minimized. The Conservation Commission should advise the applicant that if a dam is breached during the winter months, the entrance to the beaver lodge might be exposed to the elements. Such exposure may jeopardize the survival of the beavers inside the lodge. Environmental conditions are such (i.e., snow and ice hinders establishment of new lodges or establishment of winter food caches) that beavers cannot relocate to a new area after October 1 and before April 1. Limited breaches based upon Conservation Commission conditions may be warranted at this time.

3. **Installation of Water Flow Devices:** Boards of Health may issue emergency permits to breach beaver dams (or similar structures) for the purpose of installing water flow devices. Such permits are subject to

Conservation Commission conditions. These devices can provide long-term solutions to beaver flooding problems provided that appropriate environmental conditions exist. Such devices do not work well in flat or shallow wetlands. The guidance above relative to breaching should also pertain to the installation of flow devices.

### **Permitting Process for Extension Permits**

If the Board of Health has issued the initial ten-day emergency permit, and the threat to human health and safety has not been alleviated within the ten days, the applicant or his duly authorized agent, in conjunction with the Board of Health, shall apply to DFW for a 30-day extension permit. This permit allows all three remedies specified above, subject to determinations and conditions of the Conservation Commission.

If the 30-day extension permit is granted, DFW shall develop, with the assistance of the applicant, his/her agent, the Board of Health, and the Conservation Commission, a plan to abate the beaver or muskrat problem using alternative, non-lethal management techniques in combination with water flow devices, subject to Conservation Commission determinations and conditions. The plan may include cage or box type traps, if necessary.

### **Permitting Process for Additional Emergency Permits**

Depending on the scenario, an applicant may obtain additional ten-day emergency permits, as follows:

Procedure 1: if the applicant has applied for and is awaiting, approval from DFW for the 30-day extension permit, the Board of Health may issue an additional ten-day emergency permit for all three remedies (see above). If, after such additional permit has expired, the applicant has still not received approval for the 30-day extension permit, the Board may issue a second ten-day additional permit. Such second additional emergency permit shall not allow the use of Conibear-type traps. In other words, an applicant is limited to two additional 10-day emergency permits under this procedure.

Procedure 2: the applicant applied for and received the initial ten-day emergency permit, and seemingly solved the problem within nine or less days (i.e., did not apply for the 30-day extension permit). However, the problem then recurs. He/she may then apply to the Board for an additional ten-day emergency permit. The applicant must state in writing that there exists on his/her property an animal problem which poses a threat to human health and safety, and which cannot be reasonably abated by the use of alternative non-lethal measures or cage or box traps, and that the applicant has tried to abate the problem using such alternative measures or cage or box traps.

Procedure 3: the applicant has applied for and received the initial ten-day emergency permit, has applied for and received the 30-day extension permit, and may have received one or two additional emergency permits under procedure one. The applicant appears to have trapped all beaver using the initial emergency permit, and is utilizing the extension permit to implement dam breaches or water flow device installation. The beaver problem then recurs. The applicant may then apply to the Board for an additional ten-day emergency permit. The applicant must state in writing that there exists on his/her property an animal problem which poses a threat to human health and safety, and which cannot be reasonably abated by the



use of alternative non-lethal measures or cage or box traps, and that the applicant has tried to abate the problem using such alternative measures or cage or box traps.

Procedure 4: the applicant has applied for and received the initial ten-day emergency permit and has applied for the 30-day extension permit. While awaiting approval for the 30-day extension permit, the applicant has applied for and received one or two additional emergency permits. The 30-day extension permit is granted. The applicant appears to have trapped all beaver using the initial and additional emergency permits, and is utilizing the extension permit to implement dam breaches or water flow device installation. The beaver problem then recurs. The applicant may then apply to the Board for an additional ten-day emergency permit. The applicant must state in writing that there exists on his/her property an animal problem which poses a threat to human health and safety, and which cannot be reasonably abated by the use of alternative non-lethal measures or cage or box traps, and that the applicant has tried to abate the problem using such alternative measures or cage or box traps.

### **Denials and Appeals**

The applicant has the right to appeal a Board of Health decision to deny a permit to either DPH or DFW. DPH and DFW have agreed to the following appeal process. DPH will determine appeals if the reason for appeal is related to threats to human health or safety as set forth in (a) through (i) in §80A, and DFW will determine appeals if the reason for appeal is related to the type of wildlife causing the problem.

### **Reporting**

Boards of Health should send a copy of each permit (mailed on a monthly basis) to the Assistant Commissioner for Environmental Health, Department of Public Health, 250 Washington Street, Boston, MA 02108-4619.

## **A-2 MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE**

### **Rules and Regulations**

#### RELATIVE TO THE USE OF CERTAIN TRAPS FOR THE TAKING OF FUR-BEARING MAMMALS AND TO BREACH ANIMAL DAMS

1. Purpose: These regulations govern the possession and use of certain traps for the taking of fur-bearing mammals, and the breaching of beaver and muskrat dams or the installation of water flow devices to alleviate certain types of animal damage. The regulations implement the provisions of M.G.L. c. 131, § 80A, as amended by c. 139, St. 2000.

2. Definitions: Several terms are defined as specifically used in the regulations. Certain of the most relevant include:

- Fur-bearing mammals includes all mammals as defined in G.L. c. 131, § 1.
- Permissible traps include cage or box type traps, common type mouse and rat traps, and net traps.
- Prohibited traps include all traps except permissible traps.
- Restricted traps include Conibear-type traps.

3. Prohibitions Regarding Trap Use: Except as provided in these regulations, a person shall not use, set, place, maintain, or possess any prohibited trap for the taking of fur-bearing mammals.

4. Health and Safety Exception: The MA Department of Public Health, the U.S. Public Health Service, and a municipal Board of Health may use prohibited traps for the purpose of protection from threats to human health and safety.

5. Threats to Human Health and Safety: Threats to human health and safety may include, but are not restricted to, beaver or muskrat: (a) occupancy of a public water supply; (b) flooding of drinking water wells, well fields, or water pumping stations; (c) flooding of sewage beds, septic systems, or sewage pumping stations; (d) flooding of public or private ways, driveways, railways, or airport runways or taxiways; (e) flooding of electrical or gas generation or telephone plants, transmission or distribution facilities, or other public utilities; (f) flooding affecting public use of hospitals, emergency clinics, nursing homes, homes for the elderly, or fire stations; (g) flooding affecting hazardous waste sites of facilities, incineration or resource recovery plants, or other situations which may result in the release of hazardous materials; (h) gnawing, chewing, etc. of electrical or gas generation equipment, cables, or facilities; and (i) flooding or structural instability on the applicant's property when such animal problem poses an imminent threat of substantial property damage or income loss including: 1. Flooding of buildings or facilities, 2. Flooding or restriction of access to commercial agricultural lands affecting the normal practices on those lands, 3. Reduction in the production of a commercial agricultural crop resulting from flooding or compromised structural stability, and 4. Flooding of residential lands when the board of health determines this is a threat to human health and safety.

6. Permits to Use Restricted Traps: A person or his agent can obtain a permit to use restricted traps from: (a) the municipal board of health, in situations involving threats to human health and safety, or (b) from DFW in non-emergency situations.

7. Permits involving Human Health and Safety: The municipal board of health may give the applicant or his agent a 10-day permit to: (a) use restricted traps, (b) breach dams or dikes, subject to conditions of the municipal conservation commission, or (c) install water flow devices, subject to the conditions of the municipal conservation commission.

8. Denial of Permit: If the municipal board of health denies the permit, the applicant may appeal to: (a) the state Department of Public Health, if the denial involves a question as to human health and safety, or (b) DFW, if the denial involves a question as to whether the damage was caused by beaver or muskrat.

9. Extension Permits: If the 10-day emergency permit does not solve the animal problem, the applicant, with the approval of the board of health, shall apply to DFW for a 30-day extension permit.

10. Management Plans: If the DFW director determines that the 30-day extension should be issued, he shall, within 30 days, develop an alternative, non-lethal management plan to address the situation. The plan is to be developed with the participation of the applicant, the board of health, and the conservation commission. The plan is to describe long-term solutions, using barriers, fencing, water flow devices, continued use of permissible traps, or other options appropriate to the situation. DFW is to provide such technical advice and assistance as is necessary to implement the plan.

11. Additional Emergency Permits: If the initial 10-day emergency permit does not solve the animal problem, the applicant or his agent may apply to the board of health for additional emergency permits. The applicant must state in writing that either: (a) he has attempted and failed to control the situation with alternative, non-lethal means or permissible traps, or (b) he has applied for, but not yet received, a 30-day extension from the DFW director.

12. Authorizations under such Additional Emergency Permit: A person may receive only 2 additional emergency permits, each valid for 10 consecutive days. The first allows the use of any of the means allowed under the initial permit. The second allows only dam breaching and installation of flow devices. Such emergency permit expires upon the issuance of a 30-day extension permit by the DFW director.

13. Non-Emergency Permits: In situations not involving threats to human health and safety, a person may apply to the DFW director for a permit either to use restricted traps, to breach a beaver or muskrat dam or dike, or install water flow devices. Dam breaches or installation of flow devices must also be approved by the municipal conservation commission.

14. Procedures for Obtaining Non-Emergency Permit: Upon receipt of an application to use restricted traps, DFW shall review the situation and may make a field inspection. If issuance of a permit is warranted, the applicant must: (a) demonstrate that he has used permissible traps for at least 15 consecutive days and has failed to abate the problem, and (b) has attempted to use alternative, non-lethal methods and has failed to abate the problem. The director may then issuance a permit to use restricted traps for up to 30 consecutive days. The applicant shall make a report to DFW after the period is up. If the problem is still not solved, the applicant may again go through the entire process to obtain another permit.

15. Review of Problem Situations: When an animal complaint is received, DFW shall determine the nature of the problem, and direct problems relating to human health and safety, which may necessitate the use of restricted traps or dam breaches, to the board of health. Situations not involving human health and safety, or those not necessitating restricted traps or dam breaches, shall be handled in accordance with DFW practice.

16. Sub regulatory Guidelines: The Department of Public Health, and the Department of Environmental Protection, in consultation with DFW, has prepared guidelines for boards of health and conservation commissions, to aid them in the implementation of these regulations and §80A. These guidelines have been mailed to all municipalities, and will be posted on the DFW website. Sample permits and forms may also be available in like manner.

Note: This is not the complete law and is subject to change. Refer to the Rules and Regulations relative to the Use of Certain Traps for the Taking of Fur-bearing Mammals in the Code of Massachusetts Regulations, 321 CMR 2.08, as well as to M.G.L. c. 131, § 80A and other relevant provisions of the General Laws.

## **Prohibited**

### CHAPTER 131. INLAND FISHERIES AND GAME AND OTHER NATURAL RESOURCES

Chapter 131: Section 80A Leg hold traps and certain other devices restricted; punishment Section 80A. Notwithstanding any other provision of this chapter, a person shall not use, set, place, maintain, manufacture or possess any trap for the purpose of capturing fur bearing mammals, except for common type mouse and rat traps, nets, and box or cage type traps, as otherwise permitted by law. A box or cage type trap is one that confines the whole animal without grasping any part of the animal, including Hancock or Bailey's type live trap for beavers. Other than nets and common type mouse or rat traps, traps designed to capture and hold a fur bearing mammal by gripping the mammal's body, or body part are prohibited, including steel jaw leg hold traps, padded leg hold traps, and snares.

The above provision shall not apply to the use of prohibited devices by federal and state departments of health or municipal boards of health for the purpose of protection from threats to human health and safety. A threat to human health and safety may include, but shall not be limited to:

- Beaver or muskrat occupancy of a public water supply;
- Beaver or muskrat-caused flooding of drinking water wells, well fields or water pumping stations;
- Beaver or muskrat-caused flooding of sewage beds, septic systems or sewage pumping stations;
- Beaver or muskrat-caused flooding of a public or private way, driveway, railway or airport runway or taxi-way;
- Beaver or muskrat-caused flooding of electrical or gas generation plants or transmission or distribution structures or facilities, telephone or other communications facilities or other public utilities;
- Beaver or muskrat-caused flooding affecting the public use of hospitals, emergency clinics, nursing homes, homes for the elderly or fire stations;

- Beaver or muskrat-caused flooding affecting hazardous waste sites or facilities, incineration or resource recovery plants or other structures or facilities whereby flooding may result in the release or escape of hazardous or noxious materials or substances;
- The gnawing, chewing, entering, or damage to electrical or gas generation, transmission or distribution equipment, cables, alarm systems or facilities by any beaver or muskrat;
- Beaver or muskrat-caused flooding or structural instability on property owned by the applicant if such animal problem poses an imminent threat of substantial property damage or income loss, which shall be limited to:
  - Flooding of residential, commercial, industrial or commercial buildings or facilities.
  - Flooding of or access to commercial agricultural lands which prevents normal agricultural practices from being conducted on such lands.
  - Reduction in the production of an agricultural crop caused by flooding or compromised structural stability of commercial agricultural lands.
  - Flooding of residential lands in which the municipal board of health, its chair or agent or the state or federal department of health has determined a threat to human health and safety exists.
- The Department of Environmental Protection shall make any determination of a threat to a public water supply.

An applicant or his duly authorized agent may apply to the municipal board of health for an emergency permit to immediately alleviate a threat to human health and safety, as defined in the previous paragraph. If the municipal board of health determines that such a threat exists, it shall immediately issue said emergency permit to alleviate the existing threat to human health and safety, for a period not exceeding ten days. If denied, the applicant or his duly authorized agent may appeal said emergency permit application to the state department of public health or director. If the state department of public health or director determines that such a threat exists, it shall immediately issue said emergency permit to alleviate the existing threat to human health and safety, for a period not exceeding ten days.

The aforementioned emergency permit authorizes the applicant or his duly authorized agent to immediately remedy the threat to human health and safety by one or more of the following options: (a) the use of conibear or box or cage-type traps, subject to the regulations promulgated by the division; (b) the breaching of dams, dikes, bogs or berms, so-called, subject to determinations and conditions of municipal conservation commissions under section 40; and (c) employing any non-lethal management or water-flow devices, subject to determinations and conditions of municipal conservation commissions under section 40.

If said threat to human health and safety has not been alleviated within said ten days, the applicant or his duly authorized agent in conjunction with the municipal board of health, shall apply to the director for an extension permit to continue the use of alleviation techniques, specified in this section, for a period not exceeding 30 days. If the director determines that such a threat to human health or safety exists, as defined in this section, the director shall immediately issue an extension permit.

If the director determines that said extension permit should be continued for 30 days, the director shall within 30 days of such decision develop, with the assistance of the applicant or his duly authorized agent, municipal board of health and municipal conservation commission, a plan to abate the beaver or muskrat problem using alternative, non-lethal management techniques in combination with water-flow

devices, where possible, subject to the determinations and conditions of municipal conservation commissions under section 40, and if necessary, box and cage type-traps in order to provide a long-term solution. The director shall take reasonable steps to implement the plan within this 30-day period.

Compliance with the provisions of any or all of the previous four paragraphs shall not preclude the applicant or his duly authorized agent from applying to the municipal board of health for an additional emergency permit, provided the applicant (a) states in writing that there exists on the property an animal problem which poses a threat to human health and safety, as defined in this section, which cannot reasonably be abated by the use of alternative, non-lethal management techniques or box or cage traps, and that the applicant has attempted to abate the animal problem using alternative, non-lethal management techniques or box or cage traps, or (b) is awaiting the director's approval for an extension permit.

An applicant or his duly authorized agent under clause (b) shall be eligible for only two additional emergency permits, the first of which shall entitle the applicant or his duly authorized agent the use of all or any of the alleviation techniques previously allowed under the initial emergency permit. Said first additional emergency permit shall expire in ten days. If the director still has not acted within this ten-day period, the applicant or his duly authorized agent shall be eligible for a second additional emergency permit. Said second additional emergency permit shall entitle the applicant or his duly authorized agent the use of all alleviation techniques previously allowed in this section, except for the use of conibear traps. The second additional emergency permit shall expire on the rendering of a decision by the director regarding the extension permit.

The division shall provide a report annually to the joint committee on natural resources and agriculture on the creation, implementation and efficiency of such animal problem plans.

A person or his duly authorized agent may apply to the director for a special permit to use otherwise prohibited traps on property owned by such person. Issuance of such special permits shall be governed by rules and regulations adopted by the director pursuant to chapter 30A. Such rules and regulations shall include, but not be limited to, provisions relative to the following:

- The applicant shall apply to the director in writing and shall state that there exists on the property an animal problem which cannot be reasonably abated by the use of traps other than those prohibited by this section, and that the applicant has attempted to abate the problem using traps permitted under this section. If the director determines that the applicant has complied with sections 37 and 80, if required to do so, and any other laws regarding trapping, and that such an animal problem exists which cannot reasonably be abated by the use of alternative, non-lethal management techniques or traps other than those prohibited by this section, the director may authorize the use, setting, placing or maintenance of such traps, not including leg hold traps, for a period not exceeding 30 days during which time the applicant shall remain in compliance with the procedures for obtaining a special permit as set forth in regulations adopted pursuant to this section.
- Whoever violates any provisions of this section, or any rule or regulation made under the authority thereof, shall be punished by a fine of not less than \$300 nor more than \$1,000, or by imprisonment for not more than six months, or by both such fine and imprisonment for each trap possessed, used, set, placed, maintained, or manufactured. Each day of violation shall constitute

a separate offense. A person found guilty of, or convicted of, or assessed in any manner after a plea of nolo contendere, or penalized for, a second violation of this section shall surrender to an officer authorized to enforce this chapter any trapping license and problem animal control permit issued to such person and shall be barred forever from obtaining a trapping license and a problem animal control permit.