



# Department of Environmental Protection

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## Standard Operating Procedure (SOP) - Drinking Water Program Determining a Threat to Public Water Supplies Related to the Presence of Beaver or Muskrat

Effective Date: October 2005

Amended Date: December 21, 2012

Approved by: Marielle Stone, Acting Program Director, Drinking Water Program

### Applicability

This SOP applies to staff reviewing requests from public water suppliers to determine whether or not there is a public health threat to public water supply sources or pump stations from the presence of beaver or muskrat.

### Background

The presence of beaver or muskrat near public water supply sources may pose a threat to the protection of public health. Both animals have commonly been identified as carriers of *Giardia Lamblia* and *Cryptosporidium*--pathogens identified within the Surface Water Treatment Rule and the Enhanced Surface Water Treatment Rule as posing an unacceptable risk to drinking water. In addition, beaver or muskrat may dam up and change the water level and/or flow, potentially creating water quality and quantity issues at a public water supply source. An amendment to the Massachusetts trapping laws charge MassDEP with determining when a threat to human health and safety exists as a result of the presence of beaver and muskrat in and around public water supply sources and pump stations. A MassDEP determination that a threat exists may be used by an applicant to petition the local Board of Health for an emergency permit to eliminate the threat.

### Information Required To Be Submitted For a Determination

Applications to MassDEP requesting a determination as to the existence of a threat to human health and safety resulting from beaver and muskrat in and around public water supply sources and pump stations must include the following information:

1. A scaled site map showing the location of areas where determinations are requested in relation to potentially impacted public water supply sources or pump stations. Public water supply sources and pump stations must be labeled on the site plan.
2. A narrative which:
  - a. Details the reason for the determination request;
  - b. Identifies the duration of the problem;
  - c. Identifies control mechanisms already used;
  - d. Identifies changes in water levels or flow path; and
  - e. Includes available evidence of interaction between groundwater sources and surface waters.
3. A description of the proposed method for eliminating the threat which:
  - a. Specifies the type of trap, if any, that will be used;
  - b. Specifies if dams will be breached; and
  - c. Specifies if the use of non-lethal management or water-flow devices is proposed.

### Criteria Used For Making a Determination

MassDEP may determine that a threat to human health and safety exists if beaver, muskrat, dams, or active lodges are observed:

- Within a Pathogen Control Zone previously sanctioned by the Massachusetts Division of Fisheries and Wildlife.
- Within a terminal reservoir or in a tributary within 400 feet of a terminal reservoir.
- Within 400 feet of a public water supply well or wellfield.
- Within 200 feet of a public water supply pump station.
- In a tributary, beyond 400 feet of a terminal reservoir, if the applicant can demonstrate that degradation in water quality is occurring. Parameters used to demonstrate a degradation in water quality include:
  - Fecal coliform;
  - Total coliform;
  - Turbidity;
  - Total Organic Carbon;
  - *Giardia*;
  - *Cryptosporidium*.
- Reducing the amount of water flowing, or changing the flow path, to a public water supply reservoir to the extent that there is the potential to negatively impact public health through water quality or water quantity issues.

### Coordination with Local and State Agencies

Following the submittal of a complete application, the MassDEP will conduct a site visit to determine if a threat exists to a public water supply source or pump station. The MassDEP Wetlands Program, local Board of Health, and local Conservation Commission will be invited to the site visit. After the site visit, the MassDEP will send the applicant a determination letter with a copy to the local Board of Health, the Massachusetts Division of Fisheries and Wildlife, and

the Massachusetts Department of Public Health. The MassDEP will try to issue its determination within 5 business days from receipt of a complete application. If that determination identifies that a threat exists, the applicant may petition the local Board of Health for an emergency permit to abate the threat. The determination from the MassDEP will require that the applicant notify the MassDEP within a specified time period as to the actions completed and whether the threat was successfully eliminated. Proposals for the removal or breaching of dams, or other actions which will lower water levels, must receive the approval of the local Conservation Commission within the city/town where the proposed action will take place.

The emergency permit for trapping is for ten days during which trapping can be carried out and dams may be removed as allowed. There is authority by Fisheries and Wildlife for their Director to permit an extension of the emergency permit for an additional 30 days.

December 21, 2012