

Sec. 22a-411a-2. Requirements for Emergency Action Plans (EAPs).

(a) **Emergency Action Plans.** Each owner of a Class C or Class B dam shall prepare an emergency action plan (EAP) for each Class C or Class B dam that he or she owns. The owner shall coordinate with the agencies responsible for providing emergency services when developing the plan. The owner shall update the EAP a minimum of every two years, or more frequently as necessary to reflect significant changes. Copies shall be filed with the commissioner and the chief executive officer and the emergency management officer of any municipality that would potentially be affected in the event of an emergency involving the dam for which the EAP has been prepared.

(b) **Emergency Action Plan Components.** A complete EAP shall include the following components:

(1) An inundation map prepared by a professional engineer who uses all elevations based on a reference to Geodetic North American Vertical Datum (NAVD88).

(A) The map shall show, at minimum, the following features:

(i) The name and address or location of the dam,
(ii) Pertinent downstream features such as buildings, homes, railroads, bridges, schools, hospitals, camp grounds, other dams, and any other significant facilities, etc.,

(iii) The inundation zone for wet weather with arrows indicating the direction of the flood wave,

(iv) A north arrow and bar scale, and

(v) Pertinent downstream cross sections, such as roads (identify the road names).

(B) The following information related to the inundation map shall also be included with the map:

(i) An estimated timeline that shows arrival times of peak floodwaters expressed in hours and minutes and incremental increase in water depth above the baseline elevation at critical intersection(s), structure(s), or inhabited structure(s).

(ii) A list of all streets, roads, and highways, including the address of the residences and businesses subject to flooding.

(iii) A location map sufficient in scale to clearly show the exact location of the impoundment in relation to the surrounding area, other dams in the area, and the delineation of the drainage area. Said map shall include a north arrow, a bar scale, and the size of the drainage area noted in square miles.

(iv) A description of the method or computer model used to prepare the inundation map.

(v) Identification of any road closures.

(vi) Identification of any evacuation routes.

(vii) Identification of any emergency shelters.

(2) A dam monitoring procedure that shall outline procedures for monitoring the dam during periods of heavy rainfall and runoff, or when the dam owner observes any of the conditions noted in subdivision (3)(A)(i), (3)(A)(ii) or (3)(C)(i) to (3)(C)(v), inclusive, of this subsection. At a minimum, the dam monitoring procedure shall provide for the following:

(A) The identification of the personnel and their alternate(s) responsible for conducting monitoring of the dam and features of the dam to be inspected at given intervals.

(B) The initiation of monitoring of the dam when the National Weather Service

announces a Flood Warning for the area where the dam is located or when the dam owner observes any of the conditions noted in subdivision (3)(A)(i), (3)(A)(ii) or (3)(C)(i) to (3)(C)(v), inclusive, of this subsection. Said monitoring shall be conducted at an interval that has been calculated by a professional engineer retained by the owner, to correspond with the particular hydrologic, hydraulic and structural components of the dam. Such monitoring shall include viewing the dam and, if it is safe to do so, walking the dam crest at regular intervals to determine if any sloughing of the embankment, cracking, settlement, or movement of the dam has occurred. This shall also include the inspection of the toe of the dam and the abutment contacts to detect any signs of deterioration of the dam or its components, and inspection of the spillway(s) and outlet structure(s) for accumulations of debris.

(C) A notification to the local authority that monitoring under the procedure has been initiated in accordance with the EAP on file with the municipality.

(D) The maintenance of a written record of all monitoring activity which shall include at a minimum, date and time of each inspection interval, rainfall data, reservoir level, observation of any changes in the dam including sloughing of the embankments, cracking, settlement, movement, erosion, seepage, deterioration of abutment contacts, debris obstructing the spillway(s) or outlet structure(s), or any other sign the dam is deteriorating. When observing seepage, the written record shall comment on location, amount of flow and whether it is clear, cloudy or muddy. When observing movement, sloughing or erosion of the dam the written record shall comment on the depth and location of said conditions.

(E) If applicable, a description of all automated monitoring equipment the owner or operator will utilize to conduct monitoring, and a description of a testing procedure for such equipment that occurs at a minimum semi-annually, to ensure proper operation and maintenance.

(F) The steps to be taken to provide adequate lighting to view the dam at night.

(G) An inventory of emergency equipment and supplies and their location, and personnel which could be utilized by the dam owner or operator to respond to emergencies at the dam, including, but not limited to, clearing debris blocking the spillway, repairing surface erosion of an embankment, or placing sandbags.

(H) A list identifying personnel and their alternate(s) that would be utilized by the dam owner or operator(s) responsible for decision making and for implementing emergency repairs, when the owner is absent.

(3) A warning notification procedure that shall provide a formal warning notification process in accordance with this subdivision to alert the local authority who is responsible for acting on the warning or determining whether to evacuate residents or others within the inundation zone in the event of an emergency, including a warning notification list with addresses for residences, businesses, and highways located in the inundation zone, to be used to warn inhabitants downstream that the dam may fail, or is in imminent danger of failing.

(A) The dam owner or operator shall provide an early warning notification to the local authority responsible for providing emergency services when any of the following conditions have been observed:

(i) A marked increase in seepage through an embankment, particularly if evidence of a

boil (release of seepage under pressure which tends to “float” away the material through which it flows) is observed.

(ii) An increase in the rate of rise of the impoundment such that the non-overflow section(s) of the dam may be overtopped.

(iii) Conditions are developing at the dam that could lead to a potential failure.

(B) The early warning notification shall state:

(i) The name of the dam owner and operator,

(ii) The name and location of the dam,

(iii) Conditions that indicate the dam may be compromised, and

(iv) A notice to the emergency management authority to warn residents in those areas within the limits of potential flooding as described in the emergency action plan for such dam that an evacuation of this area may be necessary.

(C) The dam owner or operator shall provide a final warning notification to alert the local authority who is responsible for acting on the final warning or evacuating residents in the inundation zone in the event of an emergency when any of the following conditions have been observed:

(i) A dramatic increase in seepage flow (or a pre-existing boil), particularly if piping is occurring.

(ii) Cracking, settlement, or movement of masonry or concrete spillways, training walls or other structures.

(iii) The rise of the impoundment is such that the non-overflow section(s) of the dam will overtop or is overtopping and the dam is failing or is in imminent danger of failing.

(iv) Substantial erosion or sloughing of dam embankments.

(v) An increase in the rate of rise of the impoundment such that the non-overflow section(s) of the dam will be overtopped.

(vi) Any other condition resulting in a probable failure of the dam.

(D) The final warning notification shall state:

(i) The name of the dam owner or operator,

(ii) The name and location of the dam,

(iii) Conditions at the dam indicate that the dam is in imminent danger of failing,

(iv) That this is a final warning, and

(v) That this is a notice to the emergency management authority to warn residents in those areas within the limits of potential flooding as described in the emergency action plan for such dam that an evacuation of this area is necessary.

(4) The location of an emergency operation center where responsible officials will gather during an emergency to direct and coordinate emergency operations.

(5) A notification flow chart that shows titles or associated contact names with phone numbers of local, state, federal, or tribal agencies, and any public service company that are responsible for providing emergency services. The contacts on the flow chart shall be called when dam monitoring is initiated in response to a National Weather Service Flood Warning, when an early warning notification is recommended by the owner or operator and when a final warning notification (evacuation) is recommended to the appropriate local authority. The flow chart shall clearly depict the order and circumstance under which named contacts will be notified.

(6) A distribution list of all local, state, federal, and federal tribal agencies affected that will receive a copy of the EAP.

(7) A description of the procedure for determining when the emergency can be terminated.

(8) A description of an exercise, or test to be conducted at a minimum of every two years of the EAP that includes participation of all appropriate personnel identified in the EAP that are responsible for providing emergency services in the event the EAP is initiated.

(9) A title page with the date the EAP is submitted. The title page shall identify the document as an emergency action plan and specify the dam for which it was developed. The dam, reservoir names, hazard class, and town(s) in which the dam is located shall be included on the title page along with the CT Dam ID number.

(10) An executive summary that describes the physical components of the dam, pertinent history, the riverine system on both the upstream and downstream area of the dam and any associated purpose of those waters.

(c) **Submission of Emergency Action Plans.** New and updated EAPs for Class C Dams shall be submitted to the commissioner not later than twelve (12) months from the effective date of this section. New and updated EAPs for Class B Dams shall be submitted to the commissioner not later than eighteen (18) months from the effective date of this section.

(d) **Failure to submit EAPs or EAP updates.** Failure to submit an EAP by the deadline imposed by subsection (c) of this section or to submit an EAP update every two (2) years, as required by subsection (a) of this section, shall be cause for the imposition of a civil penalty by the commissioner or the commissioner's designee on the dam owner in accordance with section 22a-6b of the Connecticut General Statutes and section 22a-6b-1 of the Regulations of Connecticut State Agencies.

(e) **Incomplete submission.** The submission of an EAP lacking information required by this section shall be cause for the commissioner to issue an order to the dam owner requiring the submission of a complete EAP within sixty (60) days of the order. If a submitted EAP is incomplete, the order shall identify the information needed to complete the EAP. The commissioner may impose a civil administrative penalty in accordance with section 22a-6b of the Connecticut General Statutes and section 22a-6b-1 of the Regulations of Connecticut State Agencies for failure to submit a complete EAP in compliance with any order issued by the commissioner or the commissioner's designee pursuant to this subsection.

(Effective February 3, 2016)