



## STATE/MUNICIPAL FISCAL IMPACT STATEMENT Dams and Similar Structures

**Agency Submitting Regulation:** Department of Energy & Environmental Protection (DEEP)

**Date:** January 9, 2015

**Subject Matter of Regulation:** Requirements for dam owners to hire professional engineers to inspect their dams in accordance with a schedule prescribed by the Commissioner. Dam owners will also be required to prepare emergency action plans for high hazard and significant hazard dams.

**Regulations:** Regulations of Connecticut State Agencies Amendments to §§ 22a-409-1 through 22a-409-2 and the addition of 22a-409-3.

**Statutory Authority:** Connecticut General Statutes §§ 22a-409, Public Act 13-197

**Other Agencies Affected:** None

**Effective Date Used In Cost Estimate:** September 2015.

**Estimate Prepared By:** Elizabeth Napier **Telephone No.:** 860-424-3717

### Estimated Cost/Revenue Impact

#### SUMMARY OF STATE COST AND REVENUE IMPACT OF PROPOSED REGULATION

**Agency:** DEEP

**Fund Affected:** Not applicable

	First Year 2015	Second Year 2016	Full Operation
<b>Number of Positions</b>	0	0	0
<b>Personal Services</b>	0	0	0
<b>Other Expenses</b> Materials and supplies Maintenance	Minor or no change	Minor or no change	Minor or no change
<b>Equipment</b>	0	0	0
<b>Grants</b>	0	0	0
<b>Total State Cost or (Savings)</b>	Minor or no change	Minor or no change	Minor or no change
<b>Estimated Revenue Gain or (Loss)</b>	0	0	0
<b>Total Net State Cost or (Savings)</b>	Minor or no change	Minor or no change	Minor or no change

**Explanation of State Impact:**

DEEP is proposing to amend Regulations of Connecticut State Agencies (RCSA) sections 22a-409-1 and 22a-409-2 to implement recent statutory changes that require dam owners to hire a professional engineer to inspect their dams according to a schedule prescribed by the Commissioner, and add a new section 22a-409-3, to implement recent statutory changes that require dam owners to prepare emergency action plans for high and significant hazards dams. The referenced statutory changes and new requirements were mandated by Public Act 13-197.

The enclosed proposal is expected to have no adverse economic impact on the state government. The legislature has transferred the responsibility to inspect regulated dams from the state to dam owners. The state is no longer burdened with the responsibility to conduct regularly scheduled inspections for more than 3000 regulated dams. The state will inform dam owners when their dams are due for inspection, provide oversight, review inspection reports, and notify dam owners when maintenance or dam repairs are required based on review of the inspection reports. The state will also continue to inspect dams under certain circumstances, such as auditing regulatory inspections, when an owner fails to undertake a regulatory inspection, when necessary to investigate a complaint, or as determined necessary after a flood event.

Dam owners will be required to hire professional engineers to regularly inspect their dams to ensure the dam is maintained in a safe condition and minimizes any threat to downstream inhabitants. Prior to the statutory changes mandated by Public Act 13-197, the state was required to regularly inspect dams and charged fees to dam owners to recover some of the cost of the inspection. It is anticipated that professional engineers will charge higher fees than the state has in the past for providing this service. Therefore dam owners will incur a higher inspection cost than they did when the state inspected dams for a fee that did not adequately cover the real cost of the inspection.

The state will conduct an inventory of low hazard dams prior to implementing the notification process to low hazard dam owners to retain engineers to inspect their dams. This will ensure the state has up to date information regarding these dams.

DEEP anticipates the statutory changes will, after full implementation under the regulatory proposal, result in significant improvement in compliance with mandated inspection schedules and proper maintenance of dams across the state and improve public safety to those residents who reside downstream of these dams.

DEEP will implement the proposal with current staff and resources.

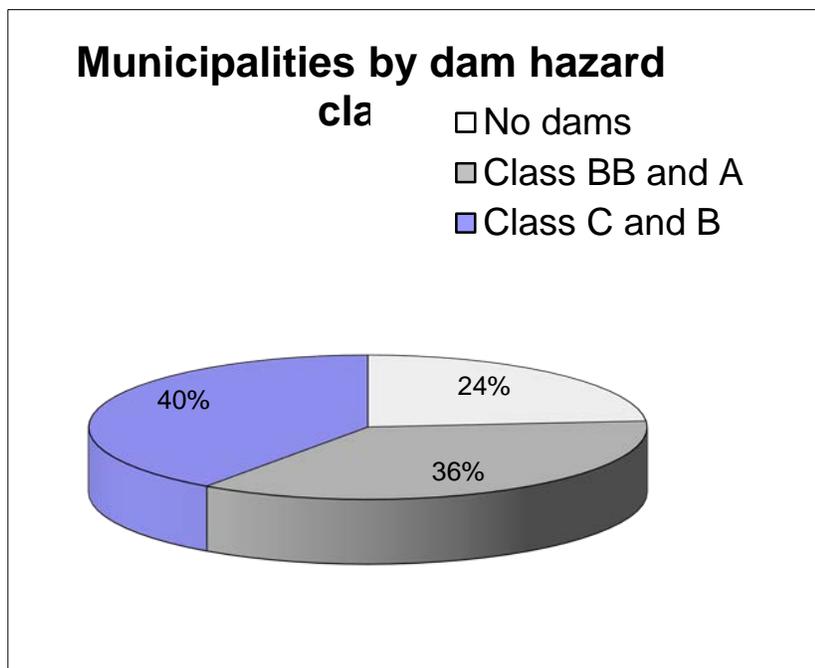
**Explanation of Municipal Impact:** The cost impact on municipalities is expected to be minimal or none. If towns choose to use engineers on staff to inspect their own dams and prepare their own emergency action plans the cost impact is expected to be zero. If towns choose to hire professional engineers from the private sector to inspect their town owned dams the cost will be the same as it will be for private dam owners. Municipalities will no longer enjoy a 50% discount on the cost of a dam inspection done by the state.

The statutory change resulted in an increased cost to dam owners who will be charged the fair market price by professional engineers to inspect their dams. Professional engineers are currently charging \$1,500 to \$5,000 for dam inspections depending on site conditions and complexity of the structure. The proposed regulations do not determine the cost of the inspection but allow the free market and competition to dictate the price for an inspection. The department anticipates the cost for subsequent inspections will be less than the initial inspection which typically requires more research and

preparation by the professional engineer conducting the initial inspection and preparing the initial inspection report. Dams with higher hazard classifications will require more frequent inspections.

There are 512 dams throughout the state with various hazard classifications that are owned by a municipality. Many of those municipalities are likely to have professional engineers on staff and they may choose to inspect their own dams, or prepare emergency action plans where needed, and avoid the cost of hiring a professional engineer from the private sector. Some municipalities may prefer to hire professional engineers to perform the necessary tasks to avoid liability issues. There are 68 towns that own either high or significant hazard dams. There are 61 towns that own only moderate or low hazard dams which will require less effort to inspect and are inspected less frequently. There are 40 towns that do not own any of the dams in their town. See the pie chart below:

	<b>Municipalities</b>	<b>% of Municipalities</b>
No dams	40	24%
Class BB and A	61	36%
Class C and B	68	40%



Currently there are 46 towns in full compliance with the requirement to have an emergency action plan (EAP) and those plans will need to be updated once the proposed regulation is adopted. There are 22 towns that currently do not have EAPs.

Owners may, on their own, prepare the narrative information required by the regulations for EAPs to mitigate the cost for preparing the plan. However, the proposed regulation requires that a professional engineer prepare the inundation map, a critical piece of the EAP which shows the area downstream of the dam which will be inundated with flood water should the dam fail. Towns may choose to have their own professional engineers employed by them prepare the full EAP including the inundation map. Professional Engineers in the private sector are currently charging \$8,000 to \$13,000 for the

preparation of an EAP that includes an original inundation map. Professional engineers are currently charging \$10,000 for the inundation map alone, and \$3,000 to \$5,000 to update an existing inundation map.

Once dam owners have updated their EAPs and continue updating them every two years, the cost for keeping an EAP current should be minimal.

The DEEP has conducted extensive outreach within the past 10 months to dam owners who own high and significant hazard dams, including municipalities, to inform them of recent changes in the dam safety statutes that affect them.

In December of 2013 DEEP sent a postcard to all Connecticut dam owners, including municipal owners, who own high and significant hazard dams. The postcard outlined the changes to the dam safety program. In this postcard, owners were notified of their responsibility to retain a professional engineer to inspect their dams when they receive a notice from DEEP that an inspection is due, and of their responsibility to prepare emergency action plans for every high and significant hazard dam they own.

In January of 2014 DEEP sent notices to owners, including municipal owners, of high or significant hazard dams that were due for an inspection in 2014.

On May 1, 2014 DEEP conducted an informational meeting for dam safety engineers and municipalities that received a notice in January that they had a high or significant hazard dam that was due for an inspection in 2014. The informational meeting covered the new proposed regulations regarding dam safety, which includes inspection requirements, emergency action plans, proposed general permits for dam repairs, and new information available on the dam safety website. This informational meeting was also broadcast as a live webinar. There were 93 engineers from the private sector in attendance, and 13 individuals representing 10 towns were present. There were 33 locations logged onto the webinar, with 5 municipal locations represented.

On July 15, 2014 DEEP broadcast a webinar for all dam owners, including municipal dam owners, who owned high and significant hazard dams that were due for an inspection in 2014. The webinar covered the new proposed regulations which included inspection requirements, emergency actions plans, and proposed general permits for dam repairs.

DEEP sent 241 invitations to dam owners, including municipalities, regarding the free webinar with instructions on how to register.

There were 47 municipalities that received the invitation to the webinar. There were 39 locations logged onto the webinar, with 3 municipal locations represented.

All dam owners were notified the webinar would be recorded and made available for free on the DEEP dam safety website soon after the webinar was broadcast.

## **SMALL BUSINESS IMPACT STATEMENT**

### **Amendment of RCSA Section 22a-409**

Prior to adopting a new section or amendment, section 4-168a of the Connecticut General Statutes (CGS) requires that each state agency consider the effect of such action on small businesses as defined in CGS section 4-168a. When such regulatory action may have an adverse effect on small businesses, CGS section 4-168a directs the agency to consider regulatory requirements that will minimize the adverse impacts on small businesses if the addition of such requirements (1) will not interfere with the intended objectives of the regulatory action and (2) will allow the new section or amendment to remain consistent with public health, safety and welfare.

State Agency Submitting Proposed Amendment: Energy and Environmental Protection (DEEP)

Date: January 9, 2015

Subject of Regulation: Inspection requirements for dam owners and required emergency action plans for high and significant hazard dams.

In accordance with CGS section 4-168a, staff analyzed the effect on small businesses of the proposed regulations and determined the following:

Check all appropriate boxes:

- The regulatory action will not have an effect on small businesses.
- The regulatory action will have an effect on small businesses, but will not have an adverse effect on such small businesses.
- The regulatory action may have an adverse effect on small businesses, and no alternative considered would be both as effective in achieving the purpose of the action and less burdensome to potentially affected small business. Alternatives considered include the following:
- (1) The establishment of less stringent compliance or reporting requirements for small businesses;
  - (2) The establishment of less stringent schedules or deadlines for compliance or reporting requirements for small businesses;
  - (3) The consolidation or simplification of compliance or reporting requirements for small businesses;
  - (4) The establishment of performance standards for small businesses to replace design or operational standards required in the new section or amendment; and
  - (5) The exemption of small businesses from all or any part of the requirements contained in the new section or amendment.
- The regulatory action will have an adverse effect on small businesses that cannot be minimized in a manner that is consistent with public health, safety and welfare.

**Explanation:** DEEP is proposing to amend Regulations of Connecticut State Agencies (RCSA) sections 22a-409-1 and 22a-409-2 to implement recent statutory changes that require dam owners to hire a professional engineer to inspect their dams according to a schedule prescribed by the Commissioner, and add a new section 22a-409-3, to implement recent statutory changes that require dam owners to prepare emergency action plans for high and significant hazard dams. The referenced statutory changes and new requirements were mandated by Public Act 13-197.

It is anticipated that the statutory changes that now require most dam owners to hire professional engineers to inspect their dams will increase demand for engineering services in the state and stimulate the economy for small engineering businesses. The proposed regulations will clarify the requirements for submittal of inspection materials and emergency action plans to DEEP.

The majority of dams regulated by the state are privately owned, and most are not owned by businesses.

All dam owners who must hire a professional engineer will incur a higher inspection cost than in the past when the state inspected dams and under charged for the dam inspection. Professional Engineers in the private sector will charge a fee that is more representative of the real cost of the inspection than the low fees previously charged by the state. The state will continue to conduct inspections of dams for a number of reasons, including when an owner fails to conduct a regulatory inspection. In this case, the state will charge a fee that is commensurate with fees charged by the private sector and representative of the real cost of the inspection.

Dam owners of high and significant hazard dams are now required by statute to prepare an Emergency Action Plan for their dams and one of the requirements for this plan is to prepare an inundation map which requires the skill of a professional engineer. This component of the emergency action plan will be an increased cost to those dam owners of high and significant hazard dams who have never prepared an emergency action plan. Many dam owners of high and significant hazard dams have already prepared emergency action plans. For example, many water companies who own high and significant hazard dams have been hiring professional engineers to conduct regular inspections and prepare emergency action plans for many years.

The state will conduct an inventory of low hazard dams in the state prior to implementing the notification process to low hazard dam owners to retain an engineer to inspect their dams. This will ensure the state has up to date information regarding these dams.

The proposed regulatory amendment and adoption of the new section implement the current statutory requirements brought about by the recent statutory changes. The proposal is not expected to impose significant increase in compliance costs on small businesses. Because the proposal is predicted to have little to no impact on small businesses, no further burden reducing measures are necessary.