

## STATE/MUNICIPAL FISCAL IMPACT STATEMENT

### Dams and Similar Structures

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

**Date:** October 1, 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 sections 22a-411a-1 and 22a-411a-2.

**Statutory Authority:** Connecticut General Statutes §§ 22a-409 and 22a-411a and Public Act 13-197

**Other Agencies Affected:** None

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

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#### Estimated Cost/Revenue Impact

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

**Agency:** DEEP

**Fund Affected:** Not applicable

	<b>First Year 2015</b>	<b>Second Year 2016</b>	<b>Full Operation</b>
<b>Number of Positions</b>	0	0	0
<b>Personal Services</b>	0	0	0
<b>Other Expenses</b>			
Materials and supplies	Minor or no change	Minor or no change	Minor or no change
Maintenance			
<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 to adopt new sections 22a-411a-1 and 22a-411a-2 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.

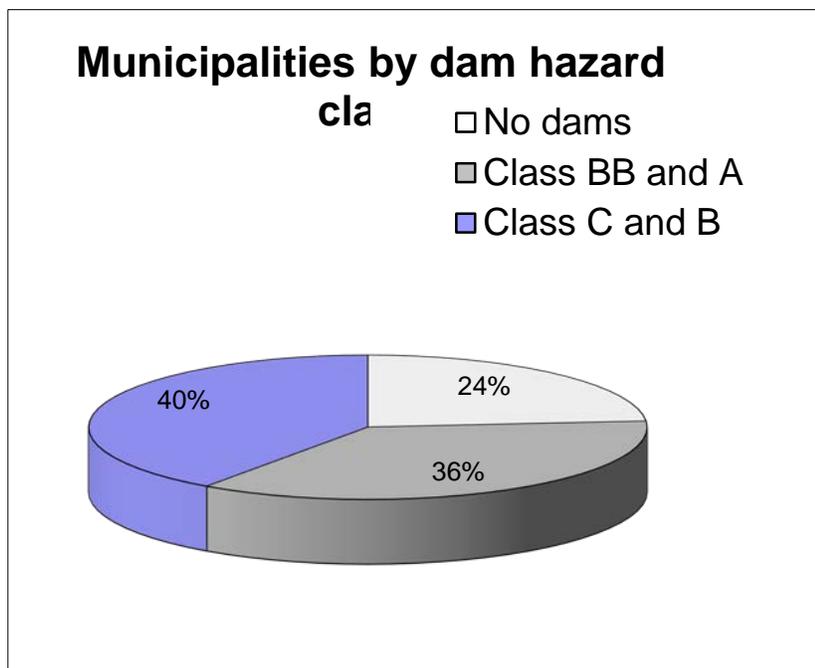
**Explanation of Municipal Impact:** The cost impact on municipalities is expected to be minimal or none. If towns choose to use engineers on staff to inspect their own dams and prepare their own emergency action plans the cost impact is expected to be zero. If towns choose to hire professional engineers 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.