



An Act Concerning the Dam Safety Program dramatically changes the responsibilities of dam owners for inspections

Municipal Dams: Changes to Connecticut's Dam Safety Program



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An Act Concerning the Dam Safety Program dramatically shifts responsibilities

"Purposes of Dam Inspections are:

- Assess the condition of the dam.
- Identify potential hazards.
- Detect changes in the dam over time.
- Compare present condition with previous reports for detecting changes.
- Identify needed maintenance and repairs.
- Identify needed engineering evaluation."

Connecticut Department of
Energy & Environmental Protection

New Inspection, Maintenance, and Repair Responsibilities of Dam Owners

The Connecticut Department of Energy & Environmental Protection (DEEP) is responsible for the administration and enforcement of Connecticut's dam safety laws, which regulate the approximately 5,500 dams in the state. On October 1, 2013, sHB-6441, An Act Concerning The Dam Safety Program, takes effect. This legislation shifts the responsibility for the periodic inspection of private and municipally-owned dams from the DEEP to the dam owners themselves.

Reasons for the Bill

An Act Concerning the Dam Safety Program was sponsored by the DEEP because it no longer has the resources to perform periodic dam inspections. Almost 3,000 dams are regulated by the DEEP for their hazard potential; of these about 470 are rated as posing a Significant Hazard and 240 are rated as a High Hazard to life and property if they fail. The frequency of inspection required by the Connecticut's Dam Safety Program is determined by the hazard classification of the dam, which are as frequent as once every two (2) years for High Hazard, Class C dams.

The Act makes technical changes and modifies existing registration fees. The new Section 5 of the Act requires owners of High-Hazard or Significant-Hazard dams to develop, implement and file an Emergency Action Plan, or Emergency Operations Plan, with DEEP and the affected municipalities. The DEEP will develop regulation governing such plans.

A Summary of: An Act Concerning the Dam Safety Program

The Department of Energy and Environmental Protection (DEEP) Commissioner has jurisdiction over dams, dikes, and similar structures whose failure might endanger life or property. This bill makes several changes to the laws on dams and dam inspections. Specifically, it:

1. Requires owners of unregistered dams or similar structures to register them with the DEEP Commissioner by October 1, 2015 (§ 4);
2. Establishes construction and regular inspection requirements for owners of registered dams or similar structures (§§ 3 & 4);
3. Creates an audit procedure and independent inspection process for inspection reports that are materially inaccurate, incomplete, or misleading (§ 4);
4. Requires an owner of a High-Hazard or Significant-Hazard dam or similar structure to develop and implement an Emergency Action Plan (§ 5);
5. Requires DEEP to consider the impact on tidal wetlands when issuing a permit for construction work on a dam or similar structure and exempts permittees from needing to secure certain other permits (§ 2);
6. Eliminates a requirement that the owner of a dike (an embankment for controlling floodwaters or erosion) notify the DEEP Commissioner within 10 days of a transfer in ownership (§§ 1 & 4).

Effective Date: October 1, 2013

All dams must be registered by October 1, 2015.

Connecticut's Act Concerning the Dam Safety Program

Registrations

The Act gives the owner of any dam or similar structure that is not registered with the DEEP Commissioner until October 2015 to register it.

Inspection Requirements

The Act requires, with certain exceptions, an owner of a registered dam or similar structure to :

- 1) Have it inspected by a Connecticut-licensed registered Professional Engineer according to regulations, and
- 2) Submit the inspection results to the DEEP Commissioner on a DEEP form by March 15th of the year after the inspection.

Before October 1, 2013, the law required the DEEP Commissioner to periodically inspect certain registered dams. Under the Act the Commissioner must conduct such inspections for quality assurance:

- 1) When an owner fails to undertake a regularly scheduled inspection, and
- 2) After a flood. Until regulations are adopted concerning inspection fees, the fee for such an inspection is \$660, the fee under current law.

By law, the DEEP Commissioner must adopt regulations establishing:

- 1) A frequency schedule for inspection,
- 2) Fees for regularly scheduled inspections that cover their reasonable cost,
- 3) Registration procedures and criteria for waiving registration and inspection fees, and
- 4) Criteria for determining if a dam has potential for negligible damage.

The Act requires that the regulations also address dam inspection procedures and fees for department inspections only, instead of fees for regularly scheduled inspections.

Audit Procedure

The Act allows the DEEP Commissioner to audit an inspection report submitted by the owner of a dam or similar structure. He may request, in writing, any information he needs to perform the audit, such as additional information or field inspections.

It also permits the DEEP Commissioner to require an independent inspection if he determines the inspection report is materially inaccurate, incomplete, or misleading. The independent inspection must be:

- 1) Performed by a disinterested registered Professional Engineer licensed in the state; and
- 2) At the owner's expense. Under the Act, "disinterested" means that the engineer (a) has no financial interest except the expectation of reasonable compensation for services, (b) did not participate in preparing or developing the inspection to be audited, and (c) is not employed by the owner or the engineer who performed the inspection to be audited.

"Drawdowns for inspection and repairs, dock maintenance, and weed control are allowed as an exemption in the water diversion regulation, provided advance notification to DEEP Commissioner, Fisheries, and any nearby water companies are made and Best Management Practices are in place, including minimizing erosion and sedimentation."

Connecticut Department of
Energy & Environmental Protection

Permits are required for some, but not all types of repairs.

“Repairs that require prior permitting from Dam Safety:

- Re-grading of embankment slopes, re-constructing embankments.
- Spillway construction, replacing spillway, adding a spillway.
- Removal of tree roots.
- Reconstructing deteriorated concrete or masonry walls.
- Repairing or replacing damaged / deteriorated low level outlets.
- Installation of toe drains to control seepage/leakage.
- Excavations adjacent to dams.
- Numerous other activities may also require permitting.”

Connecticut Department of
Energy & Environmental Protection

The Act requires the DEEP Commissioner to adopt regulations establishing procedures for an owner to

- 1) Receive notice, and
- 2) Appeal an independent inspection’s cost.

Dam Construction

Permit Requirement

By law, anyone constructing, altering, rebuilding, substantially repairing, adding to, replacing, or removing a dam or similar structure must obtain a permit from the DEEP Commissioner.

The legislation requires the DEEP Commissioner or his representative, engineer, or consultant to determine the proposed construction’s impact on tidal wetlands before issuing a permit, in addition to determining its impact on the:

- 1) Environment,
- 2) Safety of people and property, and
- 3) Inland wetlands and watercourses, as required under current law.

Exemptions

Under the Act, an applicant seeking to alter, rebuild, repair, or remove an existing dam need not obtain permits to:

- 1) Conduct a regulated activity in tidal wetlands, or
- 2) Dredge, erect structures, or place fill, obstructions, or encroachments in tidal, coastal, or navigable waters.

Existing law exempts such permit applicants from permit requirements for:

- 1) Stream channel encroachment,
- 2) Diversion, and
- 3) Regulated activity in an inland wetland and watercourse.

The Act also exempts permit applicants for new dam construction from the permit required to conduct a regulated activity in a tidal wetland. The law already exempts them from needing a similar permit in inland wetlands and watercourses.

The Act specifies that permit applicants are exempt from needing to obtain flood management certification approval from the DEEP Commissioner. By law, a state agency seeking to perform an activity in or affecting a floodplain must obtain his approval or an exemption from approval.

Construction Inspections

The Act requires a dam owner or its representative who is supervising work on a dam or similar structure under DEEP’s jurisdiction, to have it inspected by a Connecticut-licensed registered Professional Engineer to determine if it will be safe and secure. Previously, the DEEP Commissioner or his representative was required to inspect it.

The bill requires a dam owner to submit a sworn statement from the inspecting engineer to the DEEP Commissioner within 30 days of completing work. The statement must attest that:

Owners of High-Hazard or Significant-Hazard dams must have an Emergency Action Plan.

- 1) The engineer inspected the work and determined the dam or similar structure to be safe within its design parameters, and
- 2) All appurtenances were built, repaired, altered, or removed according to the plans, specifications, and drawings approved by the DEEP Commissioner under a permit or order. The sworn statement must bear the engineer's professional seal.

The bill allows the DEEP Commissioner to place a competent inspector on construction work of a dam or similar structure if it involves:

- 1) A High-Hazard or Significant -Hazard dam, or
- 2) The Commissioner determines a sensitive ecological condition exists. Current law allows him to do so when he believes circumstances warrant it. Unchanged by the bill, the law requires that such inspector's compensation is shared equally by the state and the owner.

Emergency Action Planning

The Act requires the owner of a High-Hazard or Significant-Hazard dam or similar structure to develop and implement an Emergency Action Plan. The plan must be updated every two years. Copies of it must be filed with the 1) DEEP Commissioner and 2) Chief Executive Officer of a municipality that may be affected in an emergency.

It also requires the DEEP Commissioner to adopt regulations establishing the content of an emergency action plan, including:

- 1) Criteria and standards for inundation studies and zone mapping,
- 2) Procedures for monitoring the dam or structure during heavy rainfall and runoff periods such as (a) personnel assignments and (b) dam features to be inspected at given intervals, and
- 3) A formal notification system to alert appropriate local officials responsible for warning and evacuating residents in the inundation zone during an emergency.

Hazard Classification

High-Hazard or Significant-Hazard Dam

State regulations classify dams by the hazards they would pose if they failed. A High-Hazard dam is one whose failure would result in:

- 1) Probable loss of life;
- 2) Major damage to habitable structures, homes, hospitals, convalescent homes, or schools;
- 3) Damage to main highways; or
- 4) Great economic loss.

A Significant-Hazard dam is one whose failure would result in:

- 1) Possible loss of life;
- 2) Minor damage to habitable structures, homes, hospitals, convalescent homes, or schools;

"Under the Dam Safety Program, the Commissioner of Energy and Environmental Protection shall investigate and inspect or cause to be investigated and inspected all dams or other structures which, in his or her judgment, would, by breaking away, cause loss of life or property damage."

Dam ownership is a significant responsibility

- 3) Damage to, or interruption of, utility service;
- 4) Damage to primary roadways or railroads; or
- 5) Significant economic loss (Conn. Agencies Reg. § 22a-409-2(d)).

Dam owners are encouraged to visit and inspect their dams frequently to become aware of their features and current condition.

DEEP-Required Periodic Inspections

Hazard Class	Class Description	Inspection Frequency
AA	Negligible	At Least Once
A	Low Hazard	Every 10 years
BB	Moderate Hazard	Every 7 years
B	Significant Hazard	Every 5 years
C	High Hazard	Every 2 Years

Resources

For additional information on this topic, please contact George Tammaro, Risk Management Supervisor, CIRMA at 203-498-3076, or at gtammaro@ccm-ct.org.

CIRMA's *Municipal Dams and Levees: Risk Management Best Practices Guide* is available to assist municipal dam and levee owners effectively manage dams and levees. Copies of the Guide may be ordered online at www.CIRMA.org/LearningResourceLibrary. Contact your CIRMA Risk Management Consultant for assistance.

The Connecticut Department of Energy & Environmental Protection's website, www.ct.gov/dep contains information on the Dam Safety Program, Emergency Operations Plan guidelines, Guidelines for Inspection and Maintenance of Dams, and other forms and information.

Until the DEEP website explaining these changes is available, please contact:

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