



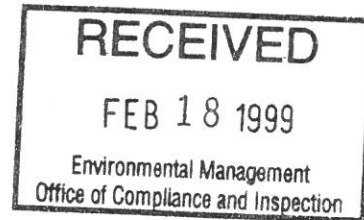
RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-831-5508

February 16, 1999

The Honorable Lincoln C. Almond, Governor
State of Rhode Island
Executive Chamber
State House
Providence, RI 02908



Dear Governor Almond:

I am pleased to submit the 1998 *Annual Report to the Governor*, on the activities of the Department of Environmental Management's Dam Safety Program. The report has been prepared in accordance with Chapter 46-19-1 of the General Laws.

In January 1999, the Department hired a dam safety inspector, filling the vacancy that existed since July, 1996. This is a major step in revitalizing the Dam Safety Program. Initial tasks include reviewing and organizing the dam files, and developing a list of dams to be inspected. We have prioritized inspections of the dams on the Woonasquatucket River in response to the Senate and House Resolutions that were passed on January 19 and January 20, respectively. The Department expects to complete inspections of these dams and have a report available by February 22.

The Department has also retained a consultant to assist in a comprehensive review and evaluation of the Dam Safety Program. A final report, which will include recommendations for specific changes to provide a more effective regulation of dams, is expected to be completed in late spring of 1999. A public workshop to present recommendations and obtain comments on the report's findings will be held in April.

I believe that the Department is now headed in the right direction to provide the appropriate attention and response to the public's heightened interest in dam safety.

Sincerely,

George Welly, Acting Director

cc: Paul Kelly, Senate Majority Leader
John Harwood, Speaker of the House
Fred Vincent, Associate Director for Planning and Administrative Services
Edward Szymanski, Associate Director for Environmental Protection
Dean Albro, Chief, Office of Compliance and Inspection
Robert Sutton, Chief, Office of Planning and Development

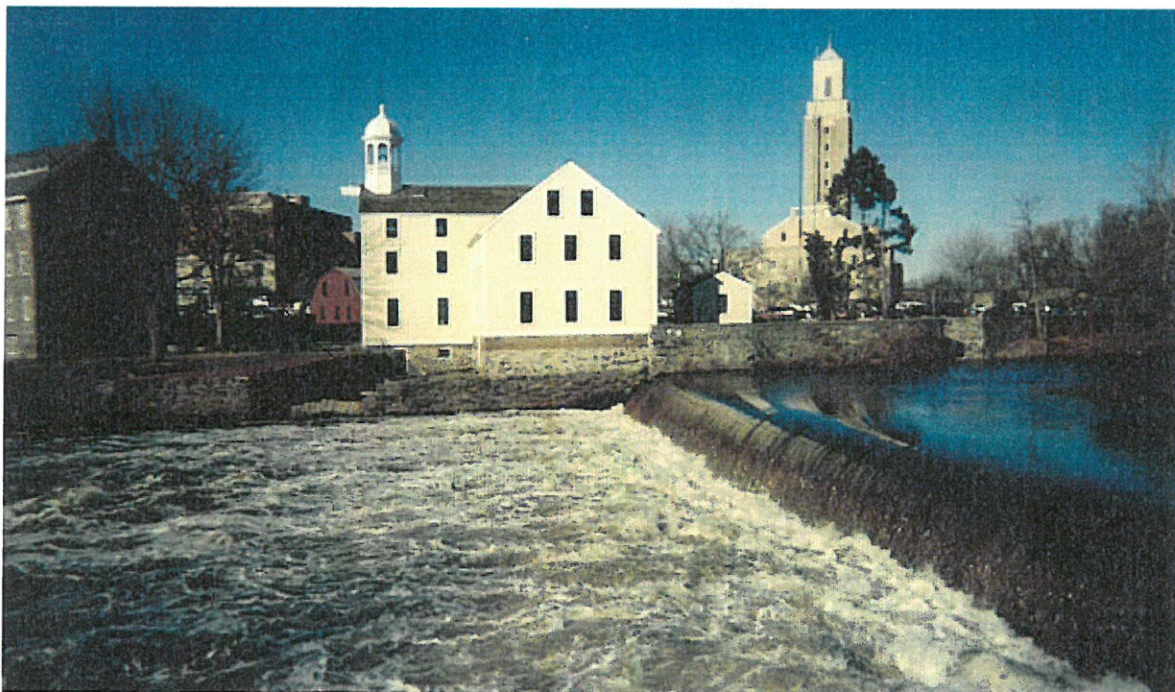
STATE OF RHODE ISLAND

1998

Annual Report to the Governor

on the Activities of the

DAM SAFETY PROGRAM



Slater Mill Dam #65, Pawtucket

Photo by Louis Ragozzino, Louis Berger & Associates, Inc.

Department of Environmental Management
Office of Compliance and Inspection

History of Rhode Island's Dam Safety Program

The Rhode Island dam inspection and inventory program had its inception in 1883, and was under the authority and responsibility of the Commissioner of Dams and Reservoirs. At that time, there were 86 dams included in the inventory records; today, there are 510 registered dams.

Of the 510 registered dams, 195 have been classified to identify the potential hazard to human life and property in the event of a dam failure. These classifications are as follows:

High Hazard – Failure of the dam would most probably result in the loss of more than a few lives and extensive property damage.

Significant Hazard – Failure of the dam could possibly result in the loss of life and appreciable property damage.

Low Hazard – Failure of the dam would result in no apparent loss of life and only minimal or no property damage.

As is indicated above, these classifications relate to the potential for harm if the dam fails; it does not relate to the current condition of the dam. There are currently 16 high hazard dams, 41 significant hazard dams and 138 low hazard dams classified.

As set forth in Rhode Island General Laws, Chapters 46-18 and 46-19, a dam owner has the responsibility for the safe operation of their dam, and is liable for the consequences of accidents or failures of the dam. In general, a dam owner is required to use "*reasonable care*" in the operation and maintenance of a dam and/or reservoir. This responsibility includes the proper operation, maintenance, repair and rehabilitation of a dam, which are the essential elements in preventing a dam failure.

The regulations governing the administration and enforcement of Rhode Island's Dam Safety Program are contained in the General Laws of Rhode Island, Chapter 46-19. The Department of Environmental Management (DEM) has the responsibility to inspect dams to determine their condition, to review and approve plans for construction or substantial alteration of a dam or reservoir and to order the owner to make repairs or to take other necessary action to make the dam or reservoir safe.

Inspection Program

Each dam's classification and its size determines the frequency of inspection. The higher the classification and size, the more frequently the inspection is conducted. A dam of any classification would also be inspected upon request by the owner, a town/city official, or by a person owning or representing property liable to damage from the dam.

The inspections performed by DEM are visual inspections and are conducted under a general inspection format based on guidelines established in 1976 by the United States Army Corps of Engineers (ACOE) for the National Program for the Inspection of (Non-Federal) Dams.

Following a visual inspection, a dam inspection report is prepared, identifying specific deficiencies and, when warranted, recommending corrective measures. A copy of the report is forwarded to the owner, with the expectation that the deficiencies will be corrected.

Professional Associations

Rhode Island has been a member of the Association of State Dam Safety Officials (ASDSO) since its inception in Denver, Colorado in 1984. ASDSO membership consists of state representatives along with corporate and individual members representing dam owners and professional engineering firms. ASDSO was formed to serve these initial functions:

- Provide a forum for the exchange of ideas and experiences on dam safety issues;

- Foster interstate cooperation on dam safety issues;

- Provide information and assistance to state dam safety programs;

- Provide representation of state interests before Congress and federal agencies responsible for dam safety; and

- Help improve state dam safety programs.

ASDSO has helped to improve dam safety in Rhode Island mainly through its sponsorship of regional dam safety workshops and its national annual conferences. In addition, various grants have provided funds for the purchase of computers, camera and video equipment and various types of field equipment to aid in the inspection and inventory of dams. These grant programs have also been supported, in part, by the Federal Emergency Management Agency (FEMA).

To further promote dam safety in Rhode Island and to foster interstate cooperation with our neighboring New England states, Rhode Island has been a member of the New England Association for Dam Safety (NEADS) since its inception in 1982. NEADS is comprised of delegates from each of the six New England states, each of whom are responsible for administering and/or managing their respective state's dam safety program.

NEADS and FEMA have co-sponsored public awareness and dam safety workshops. These workshops, which were dam-owner oriented, were usually one or two day events

and covered such topics as dam hydraulics and hydrology, dam structure integrity, inspection and maintenance procedures, corrective action measures and emergency action planning.

Activities in 1998

DEM did not have a dam safety inspector and was unable to routinely inspect dams. During January, there was a failure of dam number 578 at the Peacedale Reservoir in South Kingstown, also known as California Jim's Pond. This dam was classified as low hazard. Damage was caused to nearby property, particularly lawns and basement flooding, and affected traffic on an adjacent roadway; but no evacuations or injuries were reported.

The failure of this dam prompted DEM, with assistance from the ACOE and the Department of Transportation, to inspect 14 high hazard dams in January and February. The dams are identified as follows:

Dam No.	Dam Name	City/Town
016	Pascoag Reservoir Upper	Burrillville
068	Woonsocket Reservoir #3	Woonsocket
073	Harris Pond	Woonsocket
077	Diamond Hill Reservoir	Cumberland
078	Pawtucket Reservoir	Pawtucket
108	Stillwater Reservoir	Smithfield
120	Sprague Upper Reservoir	Smithfield
126	Georgiaville Pond	Smithfield
145	Natick Pond	West Warwick
148	Arctic	West Warwick
163	Westconnaug Reservoir	Scituate
167	Flat River Reservoir	Coventry
172	Cranston Print Works Pond	Cranston
407	James V. Turner Reservoir	East Providence

An inspection report for each dam was completed in February and March, and DEM met with the inspectors to discuss their findings. In general, the inspections revealed deficiencies at each of the dams, although none of the observations appeared to indicate that the dams posed an imminent threat of failure. The newly hired dam safety inspector will finalize these reports and forward a copy to the owners.

DEM was aware of the conditions at the two remaining high hazard dams, therefore inspections were not performed at these dams, which are identified as follows:

Dam No.	Dam Name	City/Town
102	Olney Pond	Lincoln
161	Gainer Memorial	Scituate

The Olney Pond dam is owned and maintained by the Department and the Gainer Memorial dam is owned and maintained by the Providence Water Supply Board.

Although lacking a dam safety inspector for inspection activities, the Department moved forward under its capital planning program with the study, design and repairs to two state owned dams. The Olney Pond dam in Lincoln Woods State Park, as noted above, is under substantial reconstruction. The major repairs to the dam and its spillway commenced in November 1998 under a \$300,000 contract with the Narragansett Improvement Company.

The Department also retained a consultant to perform a dam study and evaluation report for the Bowdish dam in Glocester. The detailed report provides specific recommendations for dam repairs and estimates the cost at approximately \$770,000. The Department has forwarded a copy of this study to the Town for review and comment. Consultant selection and design will commence in FY2000.

This completes the activities performed in 1998.

For further information on the dam inspection and safety program please contact David Chopy at 222-1360.