

FACT SHEET

DAM INSPECTIONS BY OWNERS

It is recommended that dam owners in New York inspect their dam(s) at least once every three months or after a significant storm event. A manual entitled "An Owners Guidance Manual for the Operation and Maintenance of Dams in New York State" is available upon request from the Dam Safety Unit.

The Inspection

It is helpful to prepare an inspection route in advance to assure that you will observe every part of the dam. The following is a recommended sequence to assist you in your inspection:

CREST - Walk across the crest from abutment to abutment.

UPSTREAM/DOWNSTREAM SLOPE - Walk across the slope in an up and down or zigzag pattern from abutment to abutment.

EMBANKMENT-ABUTMENT CONTACTS - Walk the entire length of the embankment-abutment contacts (groin).

OUTLET CONDUIT - Observe all accessible features of the outlet conduit.

SPILLWAY - Walk back and forth along the entire length of the spillway.

ABUTMENTS - Traverse abutments in a practical manner so as to gain a general feel for the conditions that exist along the valley sidewalls.

DOWNSTREAM CHANNEL - Travel the route of the stream below the dam to maintain familiarity with locations of residences and property that can be affected by dam failure.

DOWNSTREAM TOE - Walk the entire length of the downstream toe.

RESERVOIR SLOPES - Scout the reservoir perimeter in an effort to develop an overall familiarity with its conditions.

What To Look For

The following is a list of some of the conditions a dam owner may discover. This list should not be construed as an all-encompassing, last word on the problems that may be encountered.

SETTLEMENT, STRUCTURAL CRACKING, EROSION

SINKHOLES, ANIMAL BURROWS, DEPRESSIONS

SEEPS, EXCESSIVE VEGETATION, BOILS

TURBID DISCHARGE, FOUNDATION MOVEMENT, VANDALISM

DEBRIS IN GATES AND SPILLWAYS

Keeping Records

It is important for the dam owner/operator to keep records throughout the life of the dam. Accurate records can better illustrate the dynamic nature of the structure. The DEC recommends that dam owners establish a permanent file to retain inspection records, including records of actions taken to correct conditions found in such inspections. The following items will aid the dam owner/operator in keeping good records.

STATE OF NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION
BUREAU OF FLOOD PROTECTION, DAM SAFETY UNIT

Inspection Checklist

A convenient way of compiling inspection observations is by recording them directly onto an inspection checklist. The checklist should be attached to a clipboard and carried by the dam inspector as he/she traverses the entire structure. Copies of the checklist can be found in the Guidance Manual.

A good practice in addition to filling out the inspection checklist is to draw a field sketch of observed conditions. The field sketch is intended to supplement the information recorded on the inspection checklists; however, it should never be used as a substitute for clear and concise inspection checklists.

Photographs - Inspection photographs can be vitally important. Over time, photographs serve to provide a pictorial history of the evolving characteristics of a dam. The dam owner/operator often finds them to be great money savers because they can illustrate that some observed conditions (seepage, foundation movement, etc.) have existed for many years and may have reached a state of equilibrium. With this knowledge, quick and economical remedial actions can be developed and implemented. Photographs should be dated on the back and provided with brief descriptions of the locations shown in the pictures.

Monitoring Data - As previously indicated, it may become necessary to make measurements of various items during the course of a dam inspection. This may include measurements of seepage rates, spillway discharge rates, settlement, and for some dam owners, readings from instruments such as piezometers. It is important that this data also be compiled in a systematic manner and placed in a permanent file.

Accompany Your Engineer During Periodic Inspections

Many engineers encourage dam owners or operators to accompany them or even assist them on dam inspections. Also, many owners accompany DEC engineers during their periodic inspections. Owners can learn many things from experienced inspectors, such as:

- ❖ What to look for
- ❖ How to photograph certain features of a dam
- ❖ What records to keep
- ❖ How to read different types of instrumentation

For more information contact:

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Bureau of Flood Protection, Dam Safety Unit
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(518) 457-3157

This fact sheet and related environmental information are also available electronically via
<http://www.dec.state.ny.us> on the Internet.

George E. Pataki, Governor
STATE OF NEW YORK

John P. Cahill, Commissioner
DEPARTMENT OF ENVIRONMENTAL CONSERVATION