

§ 222.6

examined for proper functioning. The available records and readings of installed instruments should be reviewed to detect any unusual performance of the instruments or evidence of unusual performance or distress of the structure. The adequacy of the installed instrumentation to measure the performance and safety of the dam should be determined.

a. *Headwater and Tailwater Gages.* The existing records of the headwater and tailwater gages should be examined to determine the relationship between other instrumentation measurements such as stream flow, uplift pressures, alignment, and drainage system discharge with the upper and lower water surface elevations.

b. *Horizontal and Vertical Alignment Instrumentation (Concrete Structures).* The existing records of alignment and elevation surveys and measurements from inclinometers, inverted plumb bobs, gage points across cracks and joints, or other devices should be examined to determine any change from the original position of the structures.

c. *Horizontal and Vertical Movement, Consolidation, and Pore-Water Pressure Instrumentation (Embankment Structures).* The existing records of measurements from settlement plates or gages, surface reference marks, slope indicators and other devices should be examined to determine the movement history of the embankment. Existing piezometer measurements should be examined to determine if the pore-water pressures in the embankment and foundation would under given conditions impair the safety of the dam.

d. *Uplift Instrumentation.* The existing records of uplift measurements should be examined to determine if the uplift pressures for the maximum pool would impair the safety of the dam.

e. *Drainage System Instrumentation.* The existing records of measurements of the drainage system flow should be examined to establish the normal relationship between pool elevations and discharge quantities and any changes that have occurred in this relationship during the history of the project.

f. *Seismic Instrumentation.* The existing records of seismic instrumentation should be examined to determine the seismic activity in the area and the response of the structures of past earthquakes.

6. *Reservoir.* The following features of the reservoir should be examined to determine to what extent the water impounded by the dam would constitute a danger to the safety of the dam or a hazard to human life or property.

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a. *Shore line.* The land forms around the reservoir should be examined for indications of major active or inactive landslide areas and to determine susceptibility of bedrock stratigraphy to massive landslides of sufficient magnitude to significantly reduce reservoir capacity or create waves that might overtop the dam.

b. *Sedimentation.* The reservoir and drainage area should be examined for excessive sedimentation or recent developments in the drainage basin which could cause a sudden increase in sediment load thereby reducing the reservoir capacity with attendant increase in maximum outflow and maximum pool elevation.

c. *Potential Upstream Hazard Areas.* The reservoir area should be examined for features subject to potential backwater flooding resulting in loss of human life or property at reservoir levels up to the maximum water storage capacity including any surcharge storage.

d. *Watershed Runoff Potential.* The drainage basin should be examined for any extensive alterations to the surface of the drainage basin such as changed agriculture practices, timber clearing, railroad or highway construction or real estate developments that might extensively affect the runoff characteristics. Upstream projects that could have impact on the safety of the dam should be identified.

7. *Downstream Channel.* The channel immediately downstream of the dam should be examined for conditions which might impose any constraints on the operation of the dam or present any hazards to the safety of the dam. Development of the potential flooded area downstream of the dam should be assessed for compatibility with the hazard classification.

8. *Operation and Maintenance Features.*

a. *Reservoir Regulation Plan.* The actual practices in regulating the reservoir and discharges under normal and emergency conditions should be examined to determine if they comply with the designed reservoir regulation plan and to assure that they do not constitute a danger to the safety of the dam or to human life or property.

b. *Maintenance.* The maintenance of the operating facilities and features that pertain to the safety of the dam should be examined to determine the adequacy and quality of the maintenance procedures followed in maintaining the dam and facilities in safe operating condition.

APPENDIX III TO APP. D TO § 222.6—PUB. L. 92–

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Public Law 92-367
92nd Congress, H. R. 15951
August 8, 1972

An Act

To authorize the Secretary of the Army to undertake a national program of inspection of dams.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the term "dam" as used in this Act means any artificial barrier, including appurtenant works, which impounds or diverts water, and which (1) is twenty-five feet or more in height from the natural bed of the stream or watercourse measured at the downstream toe of the barrier, or from the lowest elevation of the outside limit of the barrier, if it is not across a stream channel or watercourse, to the maximum water storage elevation or (2) has an impounding capacity at maximum water storage elevation of fifty acre-feet or more. This Act does not apply to any such barrier which is not in excess of six feet in height, regardless of storage capacity or which has a storage capacity at maximum water storage elevation not in excess of fifteen acre-feet, regardless of height.

National dam inspection program.
"Dam."

Sec. 2. As soon as practicable, the Secretary of the Army, acting through the Chief of Engineers, shall carry out a national program of inspection of dams for the purpose of protecting human life and property. All dams in the United States shall be inspected by the Secretary except (1) dams under the jurisdiction of the Bureau of Reclamation, the Tennessee Valley Authority, or the International Boundary and Water Commission, (2) dams which have been constructed pursuant to licenses issued under the authority of the Federal Power Act, (3) dams which have been inspected within the twelve-month period immediately prior to the enactment of this Act by a State agency and which the Governor of such State requests be excluded from inspection, and (4) dams which the Secretary of the Army determines do not pose any threat to human life or property. The Secretary may inspect dams which have been licensed under the Federal Power Act upon request of the Federal Power Commission and dams under the jurisdiction of the International Boundary and Water Commission upon request of such Commission.

Army, authorization.

Exemptions.

41 Stat. 1063;
49 Stat. 863.
16 USC 791a.

86 STAT. 506
86 STAT. 507

Sec. 3. As soon as practicable after inspection of a dam, the Secretary shall notify the Governor of the State in which such dam is located the results of such investigation. The Secretary shall immediately notify the Governor of any hazardous conditions found during an inspection. The Secretary shall provide advice to the Governor, upon request, relating to timely remedial measures necessary to mitigate or obviate any hazardous conditions found during an inspection.

Notice to Governors.

Sec. 4. For the purpose of determining whether a dam (including the waters impounded by such dam) constitutes a danger to human life or property, the Secretary shall take into consideration the possibility that the dam might be endangered by overtopping, seepage, settlement, erosion, sediment, cracking, earth movement, earthquakes, failure of bulkheads, flashboard, gates on conduits, or other conditions which exist or which might occur in any area in the vicinity of the dam.

Sec. 5. The Secretary shall report to the Congress on or before July 1, 1974, on his activities under the Act, which report shall include, but not be limited to—

Report to Congress

- (1) an inventory of all dams located in the United States;
- (2) a review of each inspection made, the recommendations furnished to the Governor of the State in which such dam is located and information as to the implementation of such recommendation;

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(3) recommendations for a comprehensive national program for the inspection, and regulation for safety purpose of dams of the Nation, and the respective responsibilities which should be assumed by Federal, State, and local governments and by public and private interests.

Liability. Sec. 6. Nothing contained in this Act and no action or failure to act under this Act shall be construed (1) to create any liability in the United States or its officers or employees for the recovery of damages caused by such action or failure to act; or (2) to relieve an owner or operator of a dam of the legal duties, obligations, or liabilities incident to the ownership or operation of the dam.

Approved August 8, 1972.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 92-1232 (Comm. on Public Works).
 CONGRESSIONAL RECORD, Vol. 118 (1972):
 July 24, considered and passed House.
 July 25, considered and passed Senate.
 WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 8, No. 33:
 Aug. 9, Presidential statement.

APPENDIX E TO § 222.6—SUGGESTED OUTLINE	1. Introduction
Inspection Report—National Dam Inspection Program (RCS-DAEN-CWE-17 and OMB No. 49-R0421)	a. Authority b. Purpose and Scope of Inspection
Title Sheet	2. Project Information
Name of Dam	a. Site Information
ID Number from Inventory	b. Description of Structures—Dam, Outlet, Spillway and other principal features.
State, County and River or Stream where dam is located	c. Purpose of Dam
Owner	d. Design, Construction and Operating History
Size and Hazard Classification	3. Field Inspection
Names of Inspectors	Briefly describe physical condition of the dam and appurtenant structures as they were observed during the field inspection. (If field inspection form is appended, only present summary.) Describe operational procedures, including any warning system, condition of operating equipment, and provision for emergency procedures. Describe any pertinent observations of the reservoir area and downstream channel adjacent to dam.
Names of Review Board	
Approval Signature of District Engineer	
Table of Contents	
General Assessment	
Give brief assessment of general condition of dam with respect to safety, including a listing of deficiencies, and recommendations indicating degree of urgency.	