

Resource Contact: Dam Safety Office

Effective Date: 07-01-91

References: RCW 43.21A.064
RCW 86.16.035
Chapter 173-175 WAC

Revised: 07-01-1999

FREQUENCY OF PERIODIC DAM INSPECTIONS**POLICY STATEMENT:**

Periodic inspections of existing dams should be conducted on regularly scheduled intervals. The time interval between inspections should depend on the dam and reservoir size and the potential downstream hazard posed by the facility. Those dams which reside above populated areas should ideally be inspected on a 6 year cycle. Those dams which do not pose a threat to life can be inspected less frequently.

Should staffing levels be insufficient to inspect all dams under Ecology jurisdiction, the dams will be ranked according to size and downstream hazard and a prioritization scheme will be used to aid in the selection of dams for inspection. Those dams which could pose the greatest threat to life and property will be selected for inspection on regular intervals. The remaining dams would be inspected as the workload and time permit.

DISCUSSION:

Guidelines for dam safety prepared by the Federal Emergency Management Agency recommend annual inspections of high hazard dams (3 or more homes at risk), a 2-year interval for significant hazard dams (1 or 2 homes at risk), and a 5-year interval for low hazard dams (no homes at risk). The Bureau of Reclamation currently inspects their high and significant hazard dams on a 3 year interval for an Operation and Maintenance Inspection, and a 6 year interval for a Comprehensive inspection. Considering the large number of high and significant hazard dams to be inspected by the Dam Safety Section and the limited staffing currently available, a goal of a 6 year comprehensive inspection interval was selected and is considered to provide the minimum acceptable level of protection to the public.

This policy also identifies a longer inspection interval for dams with "low" downstream hazards. The primary reason for inspecting low hazard dams is to evaluate the downstream floodplain for new development. If development has occurred and lives could be at risk by a dam failure, then the inspection frequency should be increased.

Staffing is anticipated to be insufficient for the foreseeable future to meet the desirable goals for frequency of periodic inspections. This policy identifies that a ranking and prioritization scheme is to be used to aid in the selection of projects to be inspected with available workforces.

PROCEDURES:

The physical characteristics of dam size, reservoir storage and magnitude of a dam break flood are to be used to assess the consequences of dam failure on lives and property in the downstream valley. This information is to be used to rank the dams according to their potential public safety threat if a dam failure were to occur.

A prioritization scheme is to be used to aid in the selection of dams for inspection from the ranked dam listing. Those dams which could pose the greatest threat to life and property will be selected for inspection on regular intervals. The remaining dams would be inspected as the workload and time permit.

The following periodic inspection schedule is a minor modification of the schedule that was reviewed and accepted by the Ecology Executive Management Team during the 1991 Strategic Budget Planning Process. Table 1 outlines the general format for conducting the periodic inspection program.

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Special Note: These policies and procedures are used to guide and ensure consistency among water resources program staff in the administration of laws and regulations. These policies and procedures are not formal administrative regulations that have been adopted through a rule-making process. In some cases, the policies may not reflect subsequent changes in statutory law or judicial findings, but they are indicative of the department's practices and interpretations of laws and regulations at the time they are adopted. If you have any questions regarding a policy or procedure, please contact the department.

PERIODIC INSPECTION CLASSIFICATIONS

TYPE	PURPOSE	USAGE	DESCRIPTION
CLASS I	COMPREHENSIVE INSPECTION	First Periodic Inspection	Visual inspection of all project elements; Detailed engineering analysis of project elements under extreme flood and earthquake; Prepare comprehensive report of findings.
CLASS II	INTERMEDIATE LEVEL INSPECTION	Subsequent Periodic Inspections	Visual inspection of all project elements; Some engineering analysis of selected elements; Prepare summary report of findings.
CLASS III	RECONNAISSANCE INSPECTION	Preliminary Inspection	Visual inspection of most project elements; Minimal engineering analyses; Prepare memo to file summarizing inspection.

PRIORITIZATION SCHEME FOR PERIODIC INSPECTION OF EXISTING DAMS

DOWNSTREAM HAZARD CLASSIFICATION	CYCLE	NUMBER OF DAMS	INSPECTIONS	
			NUMBER /YEAR	TYPE
FIRST TIER				
<u>High</u> Downstream Hazard Dams (Downstream Hazard Class 1A, 1B, 1C)	6 years	111	18	Class I or II
<u>Significant</u> Downstream Hazard Dams (Downstream Hazard Class 2) Greater than 20 ft. high	8 years	75	9	Class I or II
SECOND TIER				
<u>Significant</u> Downstream Hazard Dams (Downstream Hazard Class 2) & <u>Low</u> Downstream Hazard Dams (Downstream Hazard Class 3) Greater than 15 ft. high	10 Years	106 119	23	Class III
THIRD TIER				
<u>Low</u> Downstream Hazard Dams (Downstream Hazard Class 3) Less than 15 ft. high	None	471	5	Class III
TOTALS			55	