Inspections Requirements for Operation Permit Renewal DNRC Regulated High Hazard Dams[1]

1. *PERIODIC INSPECTIONS* must be made and a report completed on a frequency of at least once every 5 years or with the period stated in the terms of an operation permit for a high-hazard dam.

2. Within 90 days of the periodic inspection, the owner shall deliver a *COPY OF THE REPORT* to the department, together with a statement of the owner's intent in regard to any deficient or unsafe items identified by the report, and a time schedule to remedy the items. The original copy of the report shall be retained by the owner.

3. *THE INSPECTION MUST INCLUDE, BUT NOT BE LIMITED TO:*
   a) review and analysis of previous inspection reports and available data on the design, construction, operation, and maintenance of the dam and its appurtenances;
   b) visual inspection of the dam, its appurtenances, the downstream area, and all other areas affected by the structure;
   c) evaluation or plan for a full evaluation of the general conditions of the dam, including an assessment of any conditions that constitute or could constitute a hazard to the integrity of the structure. Currently, an evaluation of spillway adequacy with respect to the new standard is *not* required for *all* dams. The engineer and owner may decide to examine compliance at this time, however, DNRC is not *requiring* this evaluation. Instead, the focus is on the dams that are known to be out of compliance, or have upcoming rehabilitation work scheduled. DNRC will notify the owner if a spillway adequacy analysis is required as part of the inspection. If you have any questions on the spillway standard please call Terry Voeller (406) 444-6664.
   d) evaluation of operation, maintenance, emergency, and inspection procedures, manuals and plans employed by the owner;
   e) analysis of piezometric levels or other data from any instrumentation or monitoring of the dam;
   f) review and analysis of the rate and volume of seepage and condition and maximum flow capability of any seepage collection system;
   g) review and documentation of the condition of surfaces and vegetation on the crest and slopes of the dam and area beyo0nd the downstream toe of the dam;
   h) review of maximum operating water surface elevation and amount of freeboard;
   i) review and documentation of the condition of the spillways and water level control structures, including all conduits exiting the dams; and
   j) other items the engineer determines are necessary to document and determine the safety of the dam.

4. *THE ENGINEER SHALL PREPARE A WRITTEN REPORT AND PHOTOGRAPHIC RECORD OF THE INSPECTION. THE REPORT MUST CONTAIN THE FOLLOWING:*

   a) the date and findings of the inspection and an assessment of the conditions of the dam and reservoir based on the visual observations, available data on the design, construction, operation, and maintenance of the structure, and hydrologic, hydraulic, stability, and other evaluations;
   b) recommendations for any critical or emergency measures or actions;
   c) recommendations for corrective measures or actions relating to design, construction, operation, maintenance, and inspection of the structure;
   d) recommendations for time periods appropriate for implementing any necessary emergency or corrective measures or actions to improve the safety of the dam to an acceptable level;
   e) recommendations for additional detailed studies, investigations, and analyses;
   f) recommendations for the safe storage level of the dam or reservoir; and
   g) recommendations for the time of the next inspections by an engineer.

5. *THE ENGINEER SHALL DELIVER THE REPORT AND DISCUSS IT WITH THE OWNER WITHIN 60 DAYS OF THE INVESTIGATION.*

[1]Reference: Administrative Rules of Montana 36.14.601–36.14-603