

Bureau of Waterways Engineering Regulatory Proposal

Chapter 105 Dam Safety and Waterway Management (Dam Safety Portion Only)



April 8, 2009



The Purpose of Today's Presentation

Review and answer questions on proposed revisions to Chapter 105 regulations for those sections relating to dams



Review of Scope of Regulations

(No changes proposed)

(1) Dams on a natural or artificial watercourse, other than those licensed under the Federal Power Act, where one or more of the following occur:

- (i) The contributory drainage area exceeds 100 acres,
- (ii) The greatest depth of water measured by upstream toe of the dam at maximum storage elevation exceeds 15 feet, or
- (iii) The impounding capacity at maximum storage elevation exceeds 50 acre-feet.



Review of Scope (continued)

(2) Dams used for the storage of water not located on a watercourse:

- where the greatest depth of water measured at upstream toe of the dam at maximum storage elevation exceeds 15 feet, **and**
- the impounding capacity at maximum storage elevation exceeds 50 acre-feet.



Review of Scope (continued)

(3) Dams used for the storage of fluids or semi-fluids other than water, the escape of which may result in air, water or land pollution or in danger to persons or property.



Purpose of Revisions

- Address findings in audit of the Dam Safety Program by the Auditor General's office
- Clarify application, permitting and construction requirements
- Revise outdated sections



Proposed Revisions

§ 105.20, Proof of financial responsibility:

- Require proof of financial responsibility for the operation and maintenance of all existing High Hazard Potential Dams.
- Allow the Department to request an increase in the amount of the bond or other legal device as necessary once every ten years unless the facility is being modified by permit.



Proposed Revisions

§ 105.41, Reports and Notices:

- Require a pre-construction meeting.
- Includes the permittee, the Department, the contractor and the engineer responsible for construction supervision.
- Must be scheduled at least 15 days but not more than 30 days prior to the commencement of construction.



Proposed Revisions

§ 105.42(a), Terms and conditions of Department permits and approvals:

- Eliminates permittee signing the permit and returning a signed copy of the permit to the Department.
- The permit will now be effective upon the Department signing the permit and sending it to the permittee.



Proposed Revisions

Terms and conditions of Department permits and approvals (continued):

- Permittee will sign a form acknowledging the terms, conditions, restrictions and covenants in the permit at the pre-construction meeting.



Proposed Revisions

§ 105.43, Time limits:

- Dam Permit or other Department approval for construction or modification will not have an expiration date.
- If authorized work is to commence after December 31 of the 5th year following authorization:
 - The Department must be notified six months prior to the anticipated commencement of work.
 - The Department may require revisions to the design due to changes in site conditions or new technology.
 - The Department will reauthorize the project upon completion of the reassessment and any required revisions.



Proposed Revisions

Time limits (continued):

- If, at any time, the permittee or owner decides not to perform the work, the Department must be notified in writing and the dam permit or Department approval will become void.



Proposed Revisions

§ 105.81 and § 105.82, Permit Applications:

- Information requirements for permit applications for construction and modification of dams and for operation and maintenance of existing dams are more clearly outlined.



Proposed Revisions

§ 105.88, Dam Permit Issuance:

- The Department will issue construction only permits for new dams or modification of existing dams.
- Upon satisfactory completion of work the Department will issue a separate operation and maintenance permit for the dam.



Proposed Revisions

§ 105.89, Letter of Amendment and Letter of Authorization:

- A new section clarifies Letters of Amendment and Letters of Authorization for authorizing the modification of a dam or reservoir where a Dam Permit is not required.
- Outlines the information required to be submitted for review and approval of this type of authorization.



Proposed Revisions

§ 105.91, Classification of dams and reservoirs:

- Adds a fourth Hazard Potential Category.
- Eliminates confusion of existing regulations having Category 2 High and Category 2 Non-High Dams.
- Brings Pennsylvania's Hazard Potential Categories in line with pending revisions of the National Dam Safety Program.



Proposed Revisions

<i>Category</i>	<i>Loss of Life</i>	<i>Economic Loss</i>
1	Substantial (Numerous homes or small businesses or a large business or school.)	Excessive such as extensive residential, commercial, or agricultural damage, or substantial public inconvenience.
2	Few (A small number of homes or small businesses.)	Appreciable such as limited residential, commercial, or agricultural damage, or moderate public inconvenience.
3	None expected (No permanent structures for human habitation or employment.)	Significant damage to private or public property and short duration public inconvenience such as damage to storage facilities or loss of critical stream crossings.
4	None expected (No permanent structures for human habitation or employment.)	Minimal damage to private or public property and no significant public inconvenience.



Proposed Revisions

§ 105.97, Stability of Structures:

- This section was expanded to explain the conditions under which the dam must be demonstrated to be stable.

§ 105.98, Design Flood Criteria:

- Requires Incremental Dam Breach Analysis to determine the spillway design flood for high hazard dams.



Proposed Revisions

§ 105.107, Final Inspection:

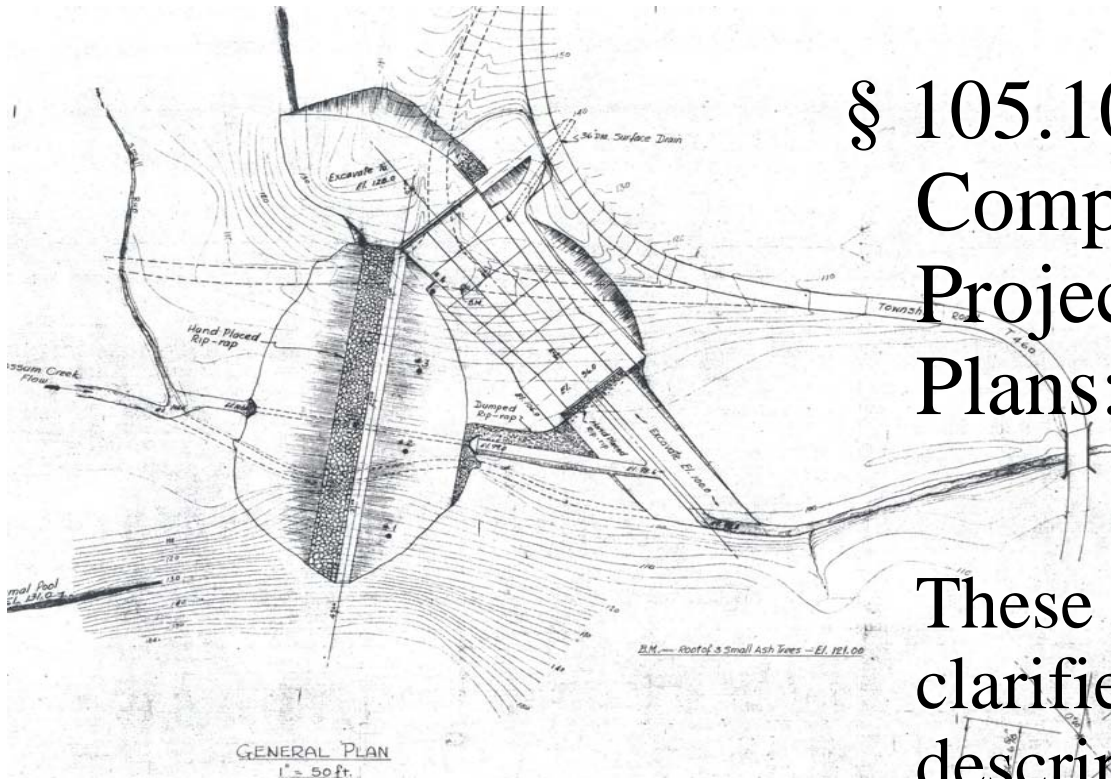
- Requires a final inspection.
- Mandatory attendance of permittee or owner, the permittee or owner's supervising engineer, and the Department's field representative.



Proposed Revisions

§ 105.108 and § 105.109,
Completion Certification,
Project Costs and As-built
Plans:

These requirements are clarified with a better description of the information that must be submitted upon completion of the project.



Proposed Revisions

§ 105.111, Commencement of storage of water, fluid or semi-fluid:

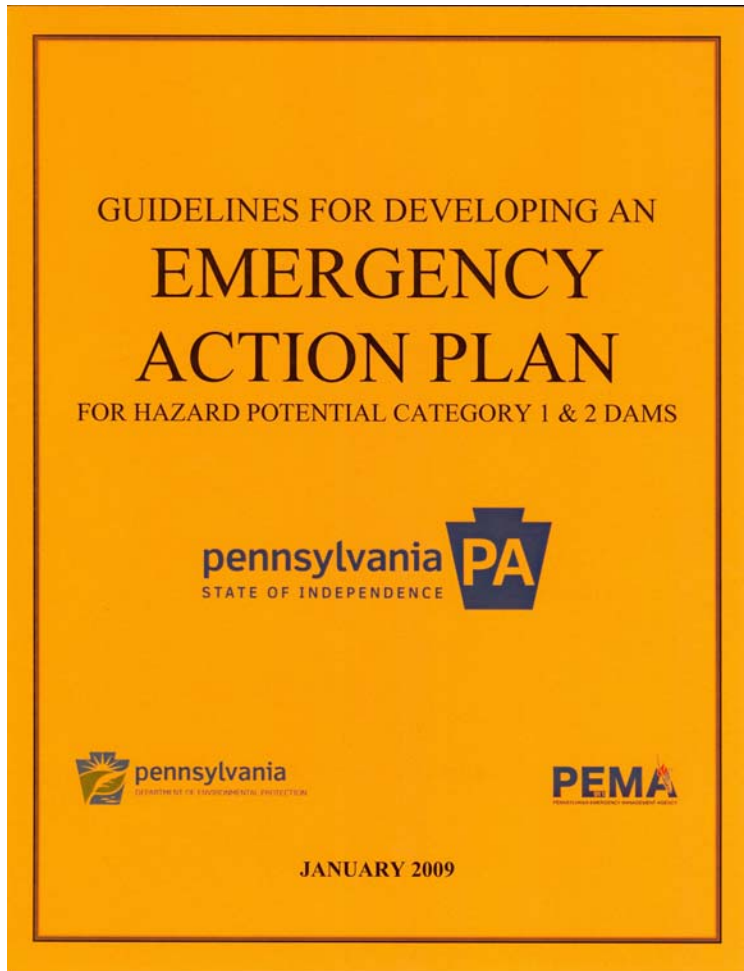
- Requires refilling plan prior to the commencement of storage of water, fluid or semi-fluid behind a newly constructed or modified dam.



Proposed Revisions

§ 105.134, Emergency Action Plan:

- Explains the requirements and steps for developing an Emergency Action Plan needed to protect the public in the event of a dam hazard emergency.



Proposed Revisions

Emergency action plan (continued):

- The permittee or owner shall meet with the county emergency management coordinators.
- The Emergency Action Plan must be signed by:
 - The dam owner and operator.
 - The county emergency management coordinators.



Proposed Revisions

Emergency action plan (continued):

- The Emergency Action Plan shall be prepared in accordance with the most recent guidelines developed by the Department and PEMA.
- Upon approval, the permittee or owner shall provide a signed copy of the Emergency Action Plan to the municipal emergency management and emergency response agencies.



Proposed Revisions

Emergency action plan (continued):

- Within 60 days of the date of the Department's approval, the permittee or owner shall:
 - Provide the Department a written statement certifying that a signed approved copy of the Emergency Action Plan has been distributed.
 - Provide the Department a written statement certifying that the Notices have been posted.



Proposed Revisions

Emergency action plan (continued):

- The permittee or owner shall certify in each subsequent annual inspection report that the Notices remain posted.
- The Emergency Action Plan shall be reviewed and updated every 5 years or the frequency interval indicated in the most recent EAP guidelines.



Proposed Revisions

Emergency action plan (continued):

- The Department may require the Emergency Action Plan be updated if:
 - There is a new owner or operator.
 - Changes occur in the downstream inundation area.
 - There is a change in the Hazard Potential Category.



An aerial photograph of a large dam and reservoir. The dam is a long, low structure with a spillway on the left. The reservoir is a large body of water behind the dam. The surrounding area is a mix of green grass, trees, and some buildings. The text "Questions or Comments" is overlaid in the center of the image.

Questions
or
Comments

