

PROPOSED RULEMAKING

ENVIRONMENTAL QUALITY BOARD

[25 Pa. Code Ch. 105]

Dam Safety and Waterway Management

The Environmental Quality Board (Board) proposes to amend 25 Pa. Code, Chapter 105 (relating to Dam Safety and Waterway Management). The proposed amendments address the findings from an audit of the Dam Safety Program (Program) by the Auditor General's office, clarify existing sections, as well as amend outdated sections.

This proposal was adopted by the Board at its meeting of February 16, 2010.

A. *Effective Date*

These amendments will go into effect upon publication in the *Pennsylvania Bulletin* as final-form rulemaking.

B. *Contact Persons*

For further information, contact Dennis R. Dickey, P. E., Chief, Division of Dam Safety, P. O. Box 8554, Rachel Carson State Office Building, Harrisburg, PA 17105-8554, (717) 772-5951; or Marylou Barton, Assistant Counsel, Bureau of Regulatory Counsel, P. O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-7060. Information regarding submitting comments on this proposal appears in Section J of this preamble. Persons with a disability may use the Pennsylvania AT&T Relay Service by calling (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This proposal is available electronically through the Department of Environmental Protection (Department) web site at <http://www.dep.state.pa.us>.

C. *Statutory Authority*

The proposed rulemaking is being made under the authority of section 5 of the Dam Safety and Encroachments Act (35 P. S. § 693.5), which grants the Board the authority to adopt regulations and standards for the design, construction, operation, monitoring, maintenance, modification, repair and removal of dams and reservoirs, water obstructions and encroachments as are necessary and proper to carry out the purposes of the act, and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P. S. §§ 510-17 and 510-20).

D. *Background and Purpose*

The purpose of the proposed rulemaking package is to amend the Department's Dam Safety and Waterway Management regulations to address the findings of a recent audit of the Program by the Auditor General's office and to incorporate amendments to strengthen the Program. The Board proposes to amend its regulations to address the concerns of the Program and issues raised in the audit. The proposed rulemaking package will amend numerous sections within Chapter 105 to address Program concerns and address the audit findings by clarifying existing sections and amending outdated sections. The protection of the public will be improved by providing the Commonwealth the financial wherewithal to remove or otherwise modify unsafe or deficient high-hazard dams that are abandoned by the owner or when owners refuse to make necessary safety improvements. The protection of the public will also be improved by the clarification of

engineering design requirements necessary for the proper design and construction of dams.

In summary, the Board proposes to incorporate these amendments into the Dam Safety and Waterway Management regulations (25 Pa. Code Chapter 105) to clarify and make existing regulations easier to understand and amend outdated sections.

The draft proposed amendments were submitted to the Water Resources Advisory Committee (WRAC) on April 8, 2009, and July 15, 2009. The proposed amendments were approved by WRAC on July 15, 2009.

E. *Summary of Regulatory Requirements*

The proposed amendments address the findings from an audit of the Program by the Auditor General's office, clarify existing sections, as well as amend outdated sections. There are no companion Federal regulations.

§ 105.13a. *Complete applications.*

This section was previously § 105.19, but was moved to new § 105.13a in an effort to keep the application-requirement sections together. Minor revisions were made to this section.

§ 105.13b. *Proof of financial responsibility.*

This section was previously § 105.20, but was moved to new § 105.13b in an effort to keep the application requirements together. The following changes were made to this section:

- Proof of financial responsibility will now be required for all existing Hazard Potential Category 1 and Category 2 dams. The current regulation only requires proof of financial responsibility when a permit is issued for a dam. This change will ensure that sufficient funds are available for the continued operation and maintenance during the lifetime of all existing Hazard Potential Category 1 and Category 2 dams.

- The Department may, upon review, request an increase in the amount of the bond or other legal device noted in § 105.13b(a)(3) as necessary to ensure that sufficient funds are available for continued operation and maintenance during the lifetime of the facility. The Department may not increase this amount more than once every 10 years unless the facility is being modified by permit.

§ 105.41. *Notices and reports.*

This section was amended to require, for dams, a preconstruction meeting between the permittee, the Department, the contractor and the engineer responsible for construction supervision, at least 15 days but not more than 30 days prior to the commencement of construction unless a different time is established by the Department.

§ 105.42(a). *Terms and conditions of Department permits and approvals.*

This section was amended to eliminate the requirement for the permittee to sign the permit, certifying acceptance of the terms and conditions of the permit, and returning a signed copy of the permit to the Department. The permittee is still required to sign an acknowledgement form, provided by the Department, acknowledging the terms, conditions, restrictions and covenants in the permit. This eliminates a duplication of the permittee signing both the

permit and acknowledgement form and streamlines the permit issuance process. The permit will now be effective upon the Department signing the permit and sending it to the permittee.

§ 105.43. *Time limits.*

This section was amended for dams as follows:

- The Dam Permit or other Department approval for construction or modification will not have a completion date.

- If the work authorized has not commenced on or before December 31 of the 5th year following permit issuance or other Department approval, the Department must be notified 6 months prior to the anticipated commencement of work so that the project design can be reassessed and reauthorized.

- During the design reassessment, the Department may require revisions to the design due to changes in site conditions, dam classification, new technology or revisions to this Chapter.

- 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.

§ 105.81. *Permit applications for construction and modification of dams and reservoirs.*

This section was rewritten to more clearly outline the information that needs to be submitted with the application to better inform the regulated community of the information required.

§ 105.82. *Permit applications for operation and maintenance of existing dams and reservoirs.*

This section was rewritten to more clearly outline the information that needs to be submitted with the application to better inform the regulated community of the information required.

§ 105.88. *Dam permit issuance.*

This new section explains the issuance of a dam permit. The Department will now issue a permit for construction upon approval of application for a new dam or modification of an existing dam. Upon satisfactory completion of work, the Department will issue an operation and maintenance permit for the dam.

§ 105.89. *Letters of Amendment and Letters of Authorization for modification of dams and reservoirs.*

This new section explains the use of a Letter of Amendment and Letter of Authorization for authorizing the modification of a dam or reservoir where a permit is not required. Also, it outlines the information required to be submitted for review and approval of the authorization.

§ 105.91(b). *Classification of dams and reservoirs.*

This section was amended to add a fourth Hazard Potential Category to eliminate confusion of existing regulations Category 2 High and Category 2 Non-High and to bring the Hazard Potential Category designation in line with the revision that is expected in the National Dam Safety Program. The revision is as follows:

<i>Category</i>	<i>Population at Risk</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.

§ 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.*

This section was amended to more clearly explain how the spillway design flood is determined.

§ 105.107. *Final Inspection.*

This section was added to require a final inspection with the permittee or owner, the permittee or owner's supervising engineer, and the Department's field representative at the completion of work to construct a new dam or the modification of an existing dam.

§ 105.108. *Completion certification and project costs.*

§ 105.109. *As-built plans.*

These two new sections were a part of old § 105.107. These sections were added and rewritten to better explain the requirements and the information that needs to be submitted at the completion of work to construct a new dam or to modify an existing dam.

§ 105.111. *Commencement of storage of water, fluid or semifluid.*

This section was expanded to better explain the requirements which must be met prior to the commencement of storage of water, fluid or semifluid behind a newly constructed or modified dam.

§ 105.134. *EAP.*

This section was rewritten to more accurately explain the requirements and steps in developing an emergency action plan (EAP) needed in protecting the public in the event of a dam emergency. Some of the changes are:

- Prior to submitting the EAP for review or approval, the permittee or owner shall schedule a meeting with the county emergency management coordinators for those counties affected by the dam's failure.

- Each submission of the EAP shall be signed by the dam owners, the dam operators, and the county emergency management coordinators for those counties affected by the dam's failure signifying concurrence with the EAP.
- The EAP shall be prepared in accordance with the most recent EAP guidelines developed by the Department and the Pennsylvania Emergency Management Agency (PEMA).
- Upon approval of the EAP, the permittee or owner shall provide a copy of the signed approved EAP to the municipal emergency management agencies and the emergency response agencies listed in the EAP.
- Within 60 days of the date of the Department's approval letter, the permittee or owner shall provide the Department a written statement certifying that a signed approved copy of the EAP has been provided to each municipal emergency management agency and to each emergency response agency listed in the EAP.
- Within 60 days of the date of the Department's approval letter, the permittee or owner shall provide the Department a written statement certifying that the notices have been posted in the locations listed in the EAP. The permittee or owner shall certify in each subsequent annual inspection report that the notices remain posted or were reposted in the locations listed in the EAP.
- The EAP shall be reviewed and updated every 5 years or the frequency interval indicated in the most recent EAP guidelines developed by the Department and PEMA.
- The Department may require the EAP be updated, as necessary, if there is a new owner or operator of the dam, if changes occur in the downstream inundation area, or if there is a change in the Hazard Potential Category.

F. *Benefits, Costs and Compliance*

Benefits

The proposed amendments will clarify existing regulations, making them easier for the regulated community to understand and to better assure proper planning, design, construction, operation, maintenance and monitoring of dams and reservoirs to protect the health, safety, welfare and property of the public and protect the water quality and natural regime of watercourses.

The proposed rulemaking package is to amend the Department's Dam Safety and Waterway Management regulations to address the findings of a recent audit of the Program by the Auditor General's office and to incorporate amendments to strengthen the program. The audit highlighted regulatory changes to improve the Program. The Board proposes to amend its regulations to address the concerns of the Program and issues raised in the audit. The proposed rulemaking package will amend numerous sections within Chapter 105 to address Program concerns and address the audit findings by clarifying existing sections and amending outdated sections. The protection of the public will be improved by providing the Commonwealth the financial wherewithal to remove or otherwise modify unsafe or deficient high-hazard dams that are abandoned by their owner or when owners refuse to make necessary safety improvements. The protection of the public will also be improved by the clarification of engineering design requirements necessary for the proper design and construction of dams.

Compliance Costs

The regulations will apply to any owner or operator of a dam. There are approximately 2,333 owners of 3,256 dams that are affected by the existing regulations. The following table shows a breakdown of the ownership type:

<i>Ownership</i>	<i>New Hazard Potential Category</i>			
	<i>Category 1</i>	<i>Category 2</i>	<i>Category 3</i>	<i>Category 4</i>
County Owned	78	0	2	22
Municipally Owned	183	10	38	331
Privately Owned	340	73	221	1,685
State Owned	89	5	17	162

- Category 1: Substantial population at risk, 10 or more people, or numerous small businesses or a large business or school.
- Category 2: Few people at risk, less than 10 people or a small number of small businesses.
- Category 3: No population at risk, but significant damage to private or public property and short duration public inconvenience.
- Category 4: No population at risk and only minimal damage to private or public property and no significant public inconvenience

The only additional cost in the proposed revisions to the regulation is for providing proof of financial responsibility. Proof of financial responsibility will be required from private individuals or businesses who own an existing Hazard Potential Classification Category 1 or Category 2 dam. The proof of financial responsibility shall be a bond or other legal device of a form acceptable to the Department, payable to the Commonwealth, which guarantees proper construction, repair, operation and maintenance,

inspection and monitoring, and removal, if necessary, of the facility. The cost is derived from an engineering estimate for the removal of the dam, and is dam-specific based on the size and type (earthfill, concrete, stone masonry, and the like) of dam. The proof of financial responsibility can be met by providing the Department with a Surety Bond or a Collateral Bond secured by a Negotiable Bond, Cash, Certified Check, Cashier's Check, Treasurer's Check, Irrevocable Letter of Credit or Certificate of Deposit. The amount of the bond or other legal device could range from \$25,000 to \$200,000 per dam. This would be the actual cost to the owner if they used a Negotiable Bond, Cash, Certified Check, Cashier's Check, Treasurer's Check or Certificate of Deposit. If the owner provides a Surety Bond or Irrevocable Letter of Credit the actual cost would range from \$250 to \$4,000 annually. Because most of the privately owned dams are generally on the smaller side, the amount of the bond and annual maintenance cost will be toward the lower end of the range. Businesses regulated by the Public Utility Commission (PUC) need only provide a certificate of public

convenience from the PUC to meet the proof of financial responsibility requirement. Ownership of the dam by a governmental agency meets the requirement to provide proof of financial responsibility. If this amendment is not approved, the cost to the Commonwealth could be significant. When no bond or other legal device is in place, the Commonwealth would be responsible, at its expense, to take corrective actions. This would be necessary when a dam hazard emergency develops and the owner is unwilling or unable to take corrective actions necessary to prevent dam failure and potential loss of life downstream.

Compliance Assistance Plan

No financial assistance is necessary. Dam owners affected by the revisions will be advised by letter advising of the changes and how they can comply with the changes. Because most of the revisions are for clarification purposes there will be little effect on the dam owner.

Paperwork Requirements

The only additional paperwork required would be that required to obtain the necessary proof of financial responsibility. This is not an annual requirement as the amount needed for proof of financial responsibility is updated every 10 years.

G. Pollution Prevention (if applicable)

Pollution prevention is not applicable.

H. Sunset Review

These regulations will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfill the goals for which they were intended.

I. Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on April 14, 2010, the Department submitted a copy of these proposed amendments to the Independent Regulatory Review Commission (IRRC) and to the House and Senate Environmental Resources and Energy Committees (Committees). In addition to submitting the proposed amendments, the Department has provided IRRC and the Committees with a copy of a detailed Regulatory Analysis Form prepared by the Department. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey any comments, recommendations or objections to the proposed amendments within 30 days of the close of the public comment period. The comments, recommendations or objections shall specify the regulatory review criteria that have not been met. The Regulatory Review Act specifies detailed procedures for review of these issues by the Department, the General Assembly and the Governor prior to final publication of the regulations.

J. Public Comments

Written Comments—Interested persons are invited to submit comments, suggestions or objections regarding the proposed regulations to the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477 (express mail: Rachel Carson State Office Building, 16th Floor, 400 Market Street, Harrisburg, PA 17101-2301). Comments submitted by facsimile will not be accepted. Comments, suggestions or objections must be received by the Board by May 24, 2010. Interested persons may also submit a summary of their comments to the Board. The summary may not exceed one-page in length and must also be received by the Board by May 24, 2010. The one-page

summary will be provided to each member of the Board in the agenda packet distributed prior to the meeting at which the final regulations will be considered.

Electronic Comments—Comments may be submitted electronically to the Board at RegComments@state.pa.us and must also be received by the Board by May 24, 2010. A subject heading of the proposal and a return name and address must be included in each transmission.

JOHN HANGER,
Chairperson

Fiscal Note: 7-452. No fiscal impact; (8) recommends adoption.

Annex A

**TITLE 25. ENVIRONMENTAL PROTECTION
PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION**

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE II. WATER RESOURCES

CHAPTER 105. DAM SAFETY AND WATERWAY MANAGEMENT

**Subchapter A. GENERAL PROVISIONS
GENERAL**

§ 105.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

Archaeological site—A known site of archaeological significance based on the Comprehensive State Plan for Conservation of Archaeological Resources. The Comprehensive State Plan is available from the Historic and Museum Commission [, **Bureau of Historic Preservation, Box 1026, Harrisburg, Pennsylvania 17108**].

* * * * *

Contributory drainage area—Area upstream of a proposed or existing dam, water obstruction or encroachment that contributes runoff to a watercourse.

* * * * *

Dam—An artificial barrier, together with its appurtenant works, constructed for the purpose of impounding or storing water or [**another**] other fluid or semifluid, or a refuse bank, fill or structure for highway, railroad or other purposes which does or may impound water or [**another**] other fluid or semifluid.

* * * * *

EAP—Emergency Action Plan—A formal document that identifies potential emergency conditions at a dam and specifies preplanned actions to be followed to minimize property damage and loss of life.

(i) The EAP contains procedures and information to assist the dam owner in issuing early warning and notification messages to responsible downstream emergency management authorities of the emergency situation.

(ii) The EAP also contains inundation maps to show the emergency management authorities of the critical areas for action in case of an emergency.

* * * * *

Flowage easements—An acquired right of use of another person’s land for water temporarily or permanently impounded by a dam or backwater from the installation, operation and maintenance of a water obstruction or encroachment.

* * * * *

Hydrologic and hydraulic analysis—

(i) A study of the effects of an encroachment or water obstruction on the flow carrying capacity of a watercourse.

(ii) A study determining the watershed runoff into a dam and reservoir and the resulting routed outflow from the dam and its spillway structures.

Incremental dam breach analysis—A process to determine the highest runoff event during which a dam failure would cause a threat to life, health, property or the environment in areas below the dam in excess of the threat level caused by the same runoff event with no dam failure.

* * * * *

Letter of Amendment for dams—A letter from the Department amending an existing Dam Permit for major maintenance, repair or improvement projects which do not involve modification to the top-of-dam elevation or modification of the normal pool reservoir elevation.

Letter of Authorization for dams—A letter from the Department approving major maintenance, repair or improvement projects which do not involve modification to the top-of-dam elevation or modification of the normal pool reservoir elevation of a dam which has not been previously permitted by the Department and meets the waiver of permit requirements under § 105.12(b)(1) or (2) (relating to waiver of permit requirements).

* * * * *

Limited Power and Water Supply Act—The act of June 14, 1923 (P. L. 700, No. 293) (32 P. S. §§ 621-625); and the act of June 14, 1923 (P. L. 704, No. 294) (32 P. S. §§ 591-600), regarding Limited Power Permits and Limited Water Supply Permits from the Water Supply Commission of Pennsylvania and the conditions thereof, to the flooding and use by holders of Limited Power Permits of lands owned by the Commonwealth, to the unlawful use for water or steam power developments of dams and changes in streams hereafter constructed or made otherwise than under Limited Power Permits, and to proceedings for the enforcement of this act.

Maintenance dredging—[Dredging conducted as part of construction of a dam, water obstruction or encroachment, and periodic] Periodic dredging conducted to accomplish one or more of the following purposes:

* * * * *

(iv) Restoring the natural or previously permitted reservoir capacity

(v) Restoring flood protection projects to original design dimensions.

Major dam design revision—A revision to a previously approved or permitted dam design which requires either the Department’s review or model-

ing of a revised hydrologic and hydraulic analysis of the dam and reservoir’s capacity to pass or store, or both, the required spillway design flood; the Department’s review or modeling of an analysis to determine the ability of the dam’s spillway or decant to dewater after runoff events; or the Department’s review or modeling of a stability analysis of the revised dam design.

Maximum credible earthquake—A seismic event with a 2% probability of exceedance in 50 years.

* * * * *

PMF—Probable maximum flood—The flood that may be expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in an area. The PMF is derived from the probable maximum precipitation (PMP) as determined on the basis of the most recent data [obtained] available from the National Oceanographic and Atmospheric Administration (NOAA).

* * * * *

Person—

(i) A natural person, partnership, association, corporation, public utility, municipality, municipal authority, political subdivision of [the] this Commonwealth, receiver or trustee, firm, estate and a department, board, commission or authority of the Commonwealth or other legal entity which is recognized by law as the subject of rights and duties.

(ii) Whenever used in a section prescribing and imposing a penalty or sanction, the term includes the members of an association and the officers of a corporation, municipality or municipal authority.

* * * * *

Practicable alternative—An alternative is practicable if it is available and capable of being carried out after taking into consideration construction cost, existing technology and logistics. An area not presently owned by the applicant which could reasonably be obtained, utilized, expanded or managed to fulfill the basic purpose of the project will be considered as a practicable alternative.

* * * * *

Reservoir filling plan—A plan that sets a schedule for the initial filling of the reservoir behind a new dam or the refilling of a reservoir after the rehabilitation of an existing dam.

* * * * *

Spillway—A device which safely conveys the design flood of a dam without endangering [its] the dam’s safety or integrity.

* * * * *

Wild trout streams—A stream [classified] identified as supporting naturally reproducing trout populations by the Fish and Boat Commission under 58 Pa. Code § 57.11 (relating to listing of wild trout streams).

For a list of wild trout streams, **contact** the Fish and Boat Commission [**can be contacted at: Fish Commission, Bureau of Fisheries, Division of Fisheries Management, 450 Robinson Lane, Bellefonte, Pennsylvania 16823-9616**], **www.fish.state.pa.us**.

§ 105.4. Delegations to local agencies.

* * * * *

(b) [**No**] A delegation may be made of the authority to issue permits for a water obstruction or encroachment constructed, owned or maintained by the Commonwealth, a political subdivision or a public utility. Delegations may be made of the powers to inspect and monitor the activities, if the Department retains final authority to approve or disapprove permits, and concurrent authority to inspect, monitor and enforce the act.

* * * * *

(d) A delegation agreement [**shall**] **will**:

* * * * *

(e) A permit for a water obstruction or encroachment issued by a delegated agency is subject to review by the Department, unless the right of review is waived by the Department. A permit issued by a delegated agency shall become effective 30 days following the receipt of notice by the Department of issuance, unless the permit is disapproved by the Department or an appeal is filed with the Department under section 17 of the act [(32 P. S. § 693.17)].

* * * * *

PERMIT APPLICATIONS

§ 105.11. Permit requirements.

* * * * *

(d) A permit issued by the Department after July 1, 1979, for the construction and operation of a water obstruction or encroachment [**shall**] **will** incorporate authorization for normal repairs and maintenance of permitted structures conducted within the original specifications for the water obstruction or encroachment. A repair or maintenance involving modification of the water obstruction or encroachment from its original specifications and a repair or reconstruction involving a substantial portion of the structure shall require the prior written permit of the Department under subsection (a).

(e) A [**dam,**] water obstruction or encroachment or modification thereof, constructed or authorized pursuant to the terms of a permit issued under this chapter prior to October 12, 1991, [**shall**] **will** be deemed to comply with the construction permit requirements of this subchapter. These projects [**shall**] **must**, after October 12, 1991, comply with the operating, maintenance, monitoring and other requirements of this chapter.

(f) A dam or modification thereof, constructed or authorized pursuant to the terms of a permit issued under this chapter prior to _____, will be deemed to comply with the construction permit requirements of this subchapter. These projects **must**, after _____, comply with the operating, maintenance, monitoring and other requirements of this chapter. (*Editor's Note: The blanks refer to the effective date of adoption of this proposed rulemaking.*)

§ 105.12. Waiver of permit requirements.

* * * * *

(b) The requirements for a permit for existing structures or activities, as provided in section 6(c) of the act (32 P. S. § 693.6(c)), are waived for the following structures or activities, if construction was completed prior to July 1, 1979. If the Department upon complaint or investigation finds that a structure or activity which is eligible for a waiver, has a significant effect upon safety or the protection of life, health, property or the environment, the Department may require the owner of the structure or activity to apply for and obtain a permit under this chapter.

* * * * *

(2) A dam which the Department determines, on the basis of preliminary data submitted by the applicant, is of Size Classification C and Hazard Potential Classification [**3**] **4**, as defined in § 105.91 (relating to classification of dams and reservoirs) and does not have a significant effect on coastal resources or an adverse impact on the environment.

* * * * *

§ 105.13. Permit applications—information and fees.

* * * * *

(d) An application for a permit shall be accompanied by information, maps, plans, specifications, design analyses, test reports and other data specifically required [**by**] **under** this chapter and additional information as required by the Department to determine compliance with this chapter.

(1) For all permit applications, except small projects, this information [**shall include**] **includes**, but is not limited to, the following:

(i) A *site plan*. A site plan [**shall**] **must** include:

* * * * *

(ii) A *location map*. The location map [**shall**] **must** be of a scale factor of 1:24000 (standard U.S.G.S. Topographic Map). The location map [**shall**] **must** show all natural features including the names and boundaries of regulated waters of this Commonwealth, natural areas, wildlife sanctuaries, natural landmarks, political boundaries, locations of public water supplies and other geographical or physical features including cultural, archeological and historical landmarks within 1 mile of the site. U.S.G.S. maps may be reviewed at County Conservation District Offices or obtained by writing to: United States Geological Survey Map Distribution, Box 25286 Federal Center, Denver, CO 80225.

* * * * *

(iv) *Color photographs*. Color photographs of the proposed site shall be submitted. The photos [**shall**] **must** accurately depict the project area and provide a relative scale of the project to the surrounding area and a map showing the location and orientation of each photograph.

* * * * *

(e) A permit application for small projects located in streams or floodplains shall be accompanied by the following information. This permit application may not be used for projects located in wetlands. If upon review the Department determines that more information is required to determine whether a small project will have an insignificant impact on safety and protection of life, health, property or the environment, the Department may

require the applicant to submit additional information and processing fees required [**by**] **under** this chapter.

(1) *A site plan.* A site plan [**shall**] **must** include:

* * * * *

(5) *Color photographs.* Color photographs of the proposed site shall be submitted. The photos [**shall**] **must** accurately depict the project area and provide a relative scale of the project to the surrounding area and a map showing the location and orientation of each photograph.

(f) Except for small projects, an application for a permit under this chapter shall be accompanied by proof of an application for an Earth Disturbance Permit or an erosion and sedimentation control plan for activities in the stream and earthmoving activities. The plan [**shall**] **must** conform to [**the**] requirements [**contained**] in Chapter 102 (relating to erosion and sediment control) and [**shall**] **must** include a copy of a letter from the conservation district in the county where the project is located indicating that the district has reviewed the erosion and sediment control plan of the applicant and considered it to be satisfactory, if applicable. Earthmoving activities, including small projects, shall be conducted pursuant to an earth disturbance plan.

* * * * *

§ 105.13a. Complete applications.

(a) An application for a permit is complete when the necessary information is provided and requirements under the act and this chapter have been satisfied by the applicant.

(b) When the Department determines that an application is incomplete or contains insufficient information, it will notify the applicant in writing. The applicant shall have 60 days from the date of the Department's letter to complete the application or the Department will consider the application to be withdrawn. Requests for a specific extension shall be submitted by the applicant in writing. The applicant will be notified in writing when an application is considered withdrawn. If the applicant chooses to reapply for a permit, a new complete application and fee will be required.

§ 105.13b. Proof of financial responsibility.

For continued operation and maintenance of all existing Hazard Potential Category 1 or Category 2 dams, as classified in § 105.91 (relating to classification of dams and reservoirs), and water obstructions or encroachments, which present a substantial potential risk to life or property; and as a requirement for approval of a permit under this chapter for a Hazard Potential Category 1 or Category 2 dam, and water obstruction or encroachment, which presents a substantial potential risk to life or property, the Department will require proof of financial responsibility or security assuring the proper construction, repair, operation and maintenance, inspection and monitoring and removal, if necessary, of the facility.

(1) As proof of responsibility or security, the Department may require one or more of the following:

(i) A certificate of public convenience from the Public Utility Commission if the owner of the proposed facility is subject to regulation under 66 Pa.C.S. (relating to Public Utility Code).

(ii) Ownership or management of the facility by an agency of the Federal, State, county or municipal government or of an interstate compact.

(iii) A bond or other legal device of a form acceptable to the Department, payable to the Commonwealth, which guarantees proper construction, repair, operation and maintenance, inspection and monitoring, and removal, if necessary, of the facility. The amount of bond or legal device must be sufficient to cover the costs of entry, repair, correction, operation, maintenance, inspection, monitoring or removal of the facility by the Commonwealth in the event of failure of the owner to comply with orders of the Department, terms and conditions of the permit, this chapter and the act and section 302 of the Flood Plain Management Act (32 P. S. § 679.302).

(2) The Department may, upon review, request an increase in the amount of the bond or other legal device noted in paragraph (1)(iii) as necessary to ensure that sufficient funds are available. The Department may not increase this amount more than once every 10 years unless the facility is being modified by permit.

(3) This chapter applies to already existing permits issued for a Hazard Potential Category 1 or Category 2 dam. The owner of an already existing permitted Hazard Potential Category 1 or Category 2 dam shall satisfy the requirements of this section by ____ (*Editor's Note: The blank refers to a date 5 years after the effective date of adoption of this proposed rulemaking.*).

§ 105.14. Review of applications.

* * * * *

(b) In reviewing a permit application under this chapter [**for construction or substantial modification of a dam or reservoir, water obstruction or encroachment,**] the Department will use the following factors to make a determination of impact:

(1) Potential threats to life [**or**], property **or the environment** created by the dam, water obstruction or encroachment.

* * * * *

(3) The effect of the dam, water obstruction or encroachment on the property or riparian rights of owners [**above, below**] **upstream, downstream** or adjacent to the project.

(4) The effect of the dam, water obstruction or encroachment on regimen and ecology of the watercourse or other body of water, water quality, stream flow, fish and wildlife, aquatic habitat, instream and downstream uses and other significant environmental factors. **In reviewing permit applications, existing and designated uses will be maintained and protected.**

* * * * *

(6) Compliance by the dam, water obstruction or encroachment with applicable laws administered by the Department, the Fish and Boat Commission and river basin commissions created by interstate compact.

* * * * *

(8) Present conditions and the effects of reasonably foreseeable future development within the affected water-

shed [above] upstream and [below] downstream of the dam, water obstruction or encroachment:

* * * * *

§ 105.15. Environmental assessment.

(a) A person may not construct, operate, maintain, modify, enlarge or abandon the following categories of structures or activities until an [environmental assessment] Environmental Assessment has been approved in writing by the Department. The [environmental assessment shall] Environmental Assessment must be on a form provided by the Department and [shall] include the following information:

* * * * *

(3) For dams located in, along or projecting into an exceptional value water as defined in Chapter 93 (relating to water quality standards) for which a permit is not otherwise required under this chapter, the Department will base its evaluation on the information required by the factors included in [§ 95.1] Chapter 93 (relating to [general requirements] water quality standards) and §§ 105.13(d) and 105.14(b) and the following information submitted by the applicant:

* * * * *

(b) For structures or activities where water quality certification is required under section 401 of [The] the Clean Water Act (33 U.S.C.A. § 1341), an applicant requesting water quality certification under section 401 shall prepare and submit to the Department for review, an environmental assessment containing the information required by subsection (a) for every dam, water obstruction or encroachment located in, along, across or projecting into the regulated water of this Commonwealth.

* * * * *

§ 105.19. [Complete applications] (Reserved).

[(a) An application for a permit is not complete until the necessary information and requirements under the act and this chapter, including proof of financial responsibility, have been satisfied by the applicant.

(b) When the Department determines that an application is incomplete or contains insufficient information to determine compliance with this chapter, it will notify the applicant in writing. The applicant shall then have 60 days to complete the application or the Department will consider the application to be withdrawn by the applicant. Requests for a specific extension may be sought by the applicant in writing. The applicant will be notified in writing when an application is considered withdrawn. When an application is considered withdrawn, the Department will close the application file and take no further action to review the file, unless the applicant requests the file to be reopened after submitting the previously identified information to complete the application and a new fee. Fees will not be refunded after an application is withdrawn.]

§ 105.20. [Proof of financial responsibility] (Reserved).

[(a) Prior to the approval of a permit under this chapter for construction or modification of a dam, water obstruction or encroachment which may

present a substantial potential risk to life or property, the Department will require proof of financial responsibility or security for continued operation and maintenance during the lifetime of the facility. Dams, water obstructions or encroachments which may be subject to the proof of financial responsibility include, but are not limited to, Category 1 dams, Hazard Potential Classification, as defined in § 105.91 (relating to classification of dams and reservoirs) stream enclosures, bridges, levees, fills and floodwalls.

(b) As proof of responsibility or security, the Department may require one or more of the following:

(1) A certificate of public convenience from the Pennsylvania Public Utility Commission if the owner of the proposed facility is subject to regulation under 66 Pa.C.S. (relating to the Public Utility Code).

(2) Ownership or management of the facility by an agency of the Federal, State, county or municipal government or of an interstate compact.

(3) A bond or other legal device of a form acceptable to the Department, payable to the Commonwealth, which guarantees proper construction, repair, operation and maintenance, inspection and monitoring, and removal if necessary of the facility. The amount of bond or legal device shall be sufficient to cover the costs of entry, repair, correction, operation, maintenance, inspection, monitoring or removal of the facility by the Commonwealth in the event of failure of the owner to comply with orders of the Department, terms and conditions of the permit, this chapter and the act and section 302 of the Flood Plain Management Act (32 P. S. § 679.302).]

§ 105.20a. Wetland replacement criteria.

(a) Wetlands replacement [shall] must meet the following general criteria:

* * * * *

PERMIT ISSUANCE, TRANSFER AND REVOCATION

§ 105.21. Criteria for permit issuance and denial.

(a) In addition to the other requirements of this chapter, a permit application will not be approved unless the applicant demonstrates that the following conditions are met:

* * * * *

(2) The proposed project or action complies with the standards and criteria of this title and with other laws administered by the Department, the Fish and Boat Commission and river basin commissions created by interstate compact.

* * * * *

(5) The applicant has not been found to be in continuing violation of this title or other laws administered by the Department, the Fish and Boat Commission, or a river basin commission created by interstate compact, including, but not limited to, a violation of an adjudication and order, agreement, consent order or decree, whether or not the applicant's violation resulted in an order or civil penalty assessment.

(6) The applicant has submitted adequate proof of financial responsibility, if required under § [105.20] 105.13b (relating to proof of financial responsibility).

(b) A permit issued under this chapter shall be subject to the general and special conditions regarding construction, operation, maintenance, inspection and monitoring of a project or action that the Department may deem necessary to assure compliance with the requirements and purposes of this chapter, the act, the Flood Plain Management Act (32 P. S. §§ 679.101—679.601) and other laws administered by the Department, the Fish and Boat Commission and river basin commissions created by interstate compact.

(c) The Department may not issue a permit to operate and maintain a dam, water obstruction or encroachment constructed without a permit unless one of the following is met:

(1) The Department determines that the structure or activity complies with the standards and criteria of this title, including replacement in accordance with § 105.20a (relating to wetland replacement criteria), and with other laws administered by the Department, the Fish and Boat Commission and river basin commissions created by interstate compact.

* * * * *

§ 105.23. Compliance with other applicable statutes.

Receipt of a permit under [the provisions of] this chapter [shall] does not relieve the permittee of the obligation of complying with Federal, interstate compact and State laws, regulations and standards applicable to the construction, operation or maintenance of the dam or water obstruction.

§ 105.25. Transfer of permits.

(a) A permit [may] must be transferred [to a new owner if there is a change of ownership of the dam, water obstruction or encroachment.] or notification provided to the Department as follows:

(1) If the owner and permittee are the same person and there is a change in ownership, the permit must be transferred to the new owner of the dam, water obstruction or encroachment.

(2) If the owner and permittee are not the same person and there is a change of permittee, but not ownership of the dam, water obstruction or encroachment, the permit must be transferred to the new permittee.

(3) If the owner and permittee are not the same person and there is a change in ownership, but not permittee of the dam, water obstruction or encroachment, the change in ownership must be reported by the permittee to the Department in writing within 30 days.

(b) A permit [may] will only be transferred [only] upon application to and approval by the Department. An application for transfer shall be submitted [upon] on forms provided by the Department.

* * * * *

(d) The new [owner] permittee shall expressly agree to abide by the permit conditions and shall, if applicable:

(1) Provide the Department with proof of financial responsibility [and] or security in accordance with § [105.20] 105.13b (relating to proof of financial responsibility).

* * * * *

(f) Upon receipt of the approved application for transfer, the applicant shall affix the approved application for transfer to the original permit. The approved application for transfer shall become part of, and remain affixed to, the original permit [, until the Department issues a new permit]. The Department may prepare a new permit to replace worn or obsolete documents.

§ 105.26. Revocation and suspension of permits.

(a) Failure to comply with a provision of this chapter, an order of the Department, or a term or condition of a permit issued under this chapter, or the submission of false or misleading information on a permit application, will be cause for the Department to revoke or suspend a permit.

(b) The Department will issue to the permittee a written notice of the suspension or revocation of a permit. The notice shall be subject to the procedure for appeal and hearing before the [Environmental Hearing Board] EHB as provided [by] under section 24 of the act (32 P. S. § 693.24); section 503(b) of the Flood Plain Management Act (32 P. S. § 679.503(b)); section 1921-A of The Administrative Code of 1929 (71 P. S. § 510-21), and 2 Pa.C.S. §§ 501—508 and 701—704 (relating to the Administrative Agency Law).

SUBMERGED LANDS OF THE COMMONWEALTH—LICENSES AND ANNUAL CHARGES

§ 105.31. Property rights.

(a) Except as provided in §§ 105.32 and 105.33 (relating to projects—proper purpose; and licenses for public service corporations), [no] a permit issued under this chapter may not give real or personal property rights nor grant exclusive privileges; nor may it be construed to grant or confer a right, title, easement or interest in, to or over lands belonging to [this] the Commonwealth.

(b) [No] A permit for a dam, water obstruction or encroachment to occupy submerged lands of the Commonwealth will not be issued by the Department until the applicant has first obtained one of the following:

* * * * *

§ 105.34. Navigation and public trust.

[No] An easement, right-of-way, lease or license will not be granted by the Department if it may adversely affect navigation or significantly impair the right in lands of the public held in trust by [this] the Commonwealth.

§ 105.35. Charges for use and occupation of submerged lands of this Commonwealth.

* * * * *

(c) Charges may not be imposed under section 15 of the act or section 514 of The Administrative Code of 1929 for the following categories of activities and structures:

* * * * *

(4) A project or activity constructed, owned or operated by a political subdivision of [the] this Commonwealth which provides potable water supply, sewage disposal or other similar services necessary for public health and

welfare, or in connection with a service for which no fees or charges other than general taxes are imposed.

* * * * *

(e) This section does not apply to a crossing contiguous to or in a State park or State forest lands. Easements for the crossings shall be administered in accordance with section 514 of The Administrative Code of 1929 and the park and forest land management practices of the Department of Conservation and Natural Resources.

* * * * *

CONSTRUCTION REQUIREMENTS AND PROCEDURES

§ 105.41. Notices and reports.

(a) [The] Except for work authorized under §§ 105.12(a), 105.64 and Subchapter L (relating to waiver of permit requirements; emergency permits; and general permits), the permittee shall [notify the Department, in writing, of the proposed time for commencement of work at least 15 days prior to the commencement of construction.] meet the following:

(1) For permits or approvals issued for water obstructions or encroachments, requirements to provide notice of commencement of work and status reports, if any, shall be identified in conditions of the permit or by order of the Department.

(2) For permits or approvals issued for dams, a preconstruction meeting between the permittee, the Department, the contractor and the engineer responsible for construction supervision, must be conducted at least 15 days but not more than 30 days prior to the commencement of construction unless a different time is established by the Department. Thereafter, a detailed report on the status of construction must be submitted monthly to the Department of Environmental Protection, Division of Dam Safety, until construction has been completed.

(b) The Department may require submission of [the] additional reports, as it deems necessary, on the status of construction.

§ 105.42. [Acknowledgment of] Terms and conditions of Department permits and approvals.

(a) [Upon receipt of a permit, the permittee shall sign the permit thereby expressly certifying the permittee's acceptance of, and agreement to comply with, the terms and conditions of the permit. The permittee shall return a signed copy of the permit to the Department. The permit will not be effective until the signed copy of the permit is received by the Department.

(b) [The permittee or owner shall fully inform the engineer or contractor responsible for the supervision and conduct of work of the terms, conditions, restrictions and covenants covered by a permit, letter of amendment, letter of authorization, or other Department approval issued under this chapter [of the terms, conditions, restrictions and covenants of the permit].

[(c)] (b) Prior to the commencement of construction, the permittee or owner shall file [with the Department in writing, on a form provided by the Department,

a statement] an acknowledgment form provided by the Department, signed by the permittee or owner and [an individual responsible for the supervision or conduct of the construction work] other project personnel, as specified on the form, acknowledging [and accepting the general and special conditions contained] the terms, conditions, restrictions and covenants in the permit and, required by the Department, for a Letter of Amendment or Letter of Authorization. Unless the acknowledgment [and acceptance have] form has been completed and filed, the permit or other Department approval is void.

[(d)] (c) A copy of the permit or other Department approval and the acknowledgment [shall] form must be available at the work site for inspection upon request by an officer or agent of the Department or another Federal, State, county or municipal agency.

§ 105.43. Time limits.

(a) The Department will set time limits for the commencement and completion of work under a permit and may set time limits for the commencement and completion of work under a Letter of Amendment or Letter of Authorization issued under this chapter that it deems reasonable and appropriate to carry out the purposes of this chapter.

(b) [If] For water obstruction and encroachments, if the [work] construction is not completed on or before the dates [set by the Department] established in the permit, unless extended by the Department in writing, the permit shall become void without further notification [being required] by the Department.

(c) For dams, unless otherwise stated, if work authorized by the dam permit or other Department approval has not commenced on or before December 31 of the 5th year following permit issuance or other Department approval, the permittee or owner shall notify the Department 6 months prior to the anticipated commencement of work so that the project design can be reassessed and reauthorized in writing. During the design reassessment, the permittee or owner may be required to make revisions due to changes in site conditions, dam classification, new technology or revisions to this chapter. At any time if the permittee or owner does not intend to perform the work, the Department shall be notified in writing and the Dam Permit or Department approval will become void without further notification by the Department.

§ 105.44. Implementation of work according to specifications.

(a) Work undertaken under a permit or other Department approval issued under this chapter [shall] must be conducted in accordance with the maps, plans, profiles and specifications as approved by the Department.

(b) [No changes] Changes in the maps, plans, profiles and specifications for work covered by a permit or other Department approval which would affect the waterway area or structural stability of the project may not be made except with the written approval of the Department. Upon written approval by the Department, the changes shall become part of the permit.

(c) The Department will have the right during the progress of work to require changes or modifications in

the maps, plans, profiles and specifications for work covered under a permit **or other Department approval** it may determine are necessary and proper to protect public health, public safety and the environment.

§ 105.45. Inspections by the Department.

Work, structures and land covered under a permit **or other Department approval** issued under this chapter shall at all times be subject to inspection by representatives of the Department **and its authorized agents**, and the permittee **or owner** shall allow representatives of the Department **and its authorized agents** to enter a property, premises or place associated with the [permit] **permitted or approved project** for the purposes of the inspection.

§ 105.46. Implementation of erosion and sedimentation control plans.

(a) During the construction of a dam, water obstruction or encroachment, the permittee **or owner** shall follow the erosion and [sedimentation] **sediment** control plan prepared in accordance with Chapter 102 (relating to erosion and sediment control) and submitted [with and approved] as part of [his] the application.

(b) Construction [shall] **must** be done in a manner [so as] to minimize erosion of banks and bed of the stream and disturbance of the regimen of the stream.

§ 105.47. Removal of [structures] **dams and removal or abandonment of water obstructions and encroachments.**

(a) If construction work has not been completed within the time specified in the permit **or other Department approval** and the time limit specified in the permit has not been extended in writing by the Department or if a permit has been revoked for any reason, the permittee **or owner** shall, at his own expense and in a manner that the Department may prescribe, remove all or any portion of the work as the Department requires and restore the [water course and floodplain] **regulated waters of this Commonwealth** to their former condition.

(b) Prior to discontinuing use or abandonment, the permittee **or owner** of a [structure] **water obstruction or encroachment** covered by this chapter, [regardless of whether or not it was constructed under a permit from this Department or its predecessors,] shall remove all or part of the facility and take other actions as [are] necessary to protect safety and the environment in accordance with a permit **or other approval** issued by the Department.

(c) **The owner of a dam covered by this chapter, shall remove all or part of the facility and take other actions as necessary to protect safety and the environment in accordance with a permit or other approval issued by the Department.**

OPERATION, MAINTENANCE AND INSPECTION

§ 105.51. Operation and maintenance.

The permittee or owner of a dam, water obstruction or encroachment shall operate and maintain the facility and appurtenant structures in a safe condition in accordance with permit terms and conditions [and], the provisions of this chapter, **and Operation and Maintenance Manual as required by the Department** so that the facility cannot imperil life, health, safety or property located above or below the facility.

§ 105.52. [Inspection] (Reserved).

[Regardless of the date of construction of a dam, water obstruction or encroachment or whether or not it was permitted by the Department or its predecessors, it shall be the duty of the permittee or owner of a dam, water obstruction or encroachment to evaluate the safety of the facility and appurtenant structures and to modify the facility in accordance with the permit requirements of § 105.11 (relating to permit requirements) to ensure protection of life and property in accordance with changed conditions and current safety criteria.]

§ 105.53. Inspections by permittees or owners and inspection reports.

(a) The permittee or owner of a dam, water obstruction or encroachment shall inspect the facility and appurtenant works according to the following schedule:

(1) Dams, reservoirs and their appurtenant works shall be inspected at least once every 3 months.

(2) For **Hazard Potential** Category 1 dams and Category 2 dams as classified in § 105.91 (relating to classification of dams and reservoirs) [, which are defined as high hazard dams in § 105.1 (relating to definitions),] annual reports regarding the condition of the dam, [certified by a registered professional engineer] **affixed with the seal of a registered professional engineer and certification, which reads "This is to certify that the above dam has been inspected and the following are the results of the inspection."**, shall be submitted to the Department on or before December 31 of each year. More frequent reports of dam conditions may be required by the Department if in its discretion conditions indicate the reports are necessary to assure adequate protection of health, safety and property.

* * * * *

(4) The **permittee or owner** of a water obstruction or encroachment shall conduct periodic inspections to ensure the safe operation, monitoring and maintenance of the facility in accordance with this title, terms and conditions of the permit and approved operating or monitoring plans.

(5) The **permittee or owner** shall retain records of the inspections, including records of actions taken to correct conditions found in the inspections. Copies of the records shall be provided to the Department on request.

(6) The Department may, through terms and conditions of the permit or by request at any time, require the **permittee or owner** to submit certified reports regarding the condition of the facility to the Department.

(7) [In] **For water obstructions and encroachments, in lieu of inspections conducted by the permittee or owner and certified reports submitted by the permittee or owner, the Department may accept reports of equivalent inspections conducted and prepared by governmental agencies. In addition, the Department may accept equivalent inspection reports certified by the permittee or owner and submitted to other governmental agencies.**

(b) Regardless of the date of construction of a dam, water obstruction or encroachment or whether or not it was permitted by the Department or its predecessors, it shall be the duty of the permittee or owner of a dam, water obstruction or encroachment to evaluate the safety of the facility

and appurtenant structures and to modify the facility in accordance with the permit requirements of § 105.11 (relating to permit requirements) to ensure the protection of life and property with respect to changed conditions and current safety criteria. If structural or operation modifications are required as a result of the inspection findings, the permittee or owner shall apply for a permit, or request an amendment to an existing permit to perform the modifications.

INVESTIGATION AND CORRECTION OF UNSAFE CONDITIONS—EMERGENCY PROCEDURES

§ 105.61. Procedures for investigations.

The Department may, if it finds there is reasonable cause to suspect the existence of conditions adversely affecting the safety of a dam, water obstruction or encroachment, **or the environment**, order the owner to conduct investigations, studies, tests and analyses that may be required to properly evaluate the safety of the structure. The investigations, studies, tests and analyses shall be accomplished under the supervision of a registered professional engineer, experienced in the design, construction, operation and maintenance of the facilities and approved by the Department, and shall be accomplished in accordance with methods the Department may prescribe. Failure to **conduct the ordered investigations, studies, tests and analyses** and provide the investigation results **of the activities** to the Department on request will constitute adequate grounds for revocation or suspension of a permit.

§ 105.63. Emergency procedures.

* * * * *

(b) The permittee or owner of a dam or reservoir shall immediately notify the Department and responsible emergency management authorities in adjacent and downstream communities of conditions which may indicate a potential dam hazard emergency **in accordance with § 105.135 (relating to dam hazard emergencies)** including [, **but not limited to,**] one or more of the following conditions:

- (1) [**Sliding of upstream or downstream slopes or abutments contiguous to the dam.**
- (2) **Sudden subsidence of the crest of the dam.**
- (3) **Longitudinal or transverse cracking of the crest of the dam.**
- (4) **Unusual release of water from the downstream face or toe of the dam.**
- (5) **Other unusual conditions at the downstream slope of the dam.**
- (6) **Significant landslides in the reservoir area.]**

The lake or pond level is at or near the top of the dam and water is flowing, or about to flow, over the top of the dam.

(2) The overflow pipe or spillway is damaged, or clogged with debris or ice, which is resulting in a rapid rise in the lake or pond level.

(3) The primary or emergency spillway is experiencing heavy flows which are causing severe erosion to the spillway or the dam embankment.

(4) Any structural movement or failure of the concrete (masonry) spillway or the spillway abutment walls.

(5) Any sloughing or sliding of the dam embankment's upstream or downstream slope. Also, earth slides in the spillway channel, either upstream or downstream of the dam's crest, which could impede the flow in the spillway.

(6) Subsidence, sinkholes or cracks found in any part of the dam embankment or abutting slopes.

(7) Any new discharge of water is observed through the dam embankment or abutting slopes, adjacent to any conduit outlets, or under the dam, which appears as a boil along the downstream toe. If a discharge occurs and the water is cloudy or muddy in color, then a very serious problem exists.

(8) Other conditions, which the owner's engineer knows are a concern for the dam's safety.

(c) In case of emergency, telephone calls should be directed to the **Public Safety Answering Point (PSAP)—911, the Pennsylvania Emergency Management Agency at (717) [783-8150 or] 651-2001 or 800-424-7312** and the Department's emergency number at (717) 787-4343 or (800) 541-2050.

§ 105.64. Emergency [permit] permits.

The Department may issue emergency permits if it finds that immediate remedial action is necessary to alleviate an imminent threat to life, property or the environment.

* * * * *

(4) [**If the municipality in which the emergency occurs has waived notice, the emergency permit is effective immediately. If notice has not been waived by the municipality, the emergency permit is effective 30 days after notice is sent to the municipality in which the emergency occurred.**] The emergency permit will expire in [**30**] **60 days after the effective date of the permit** unless extended in writing by the Department.

(5) The permittee shall notify the affected municipality of the issuance of an emergency permit as soon as possible and provide a follow-up notice in writing to the affected municipality within 48 hours from the issuance of the emergency permit.

[*(Editor's Note: The act of August 14, 1991 (P. L. _____, No. 35) supersedes the first two sentences of § 105.64(4).*]

Subchapter B. DAMS AND RESERVOIRS

GENERAL PROVISIONS

§ 105.71. Scope.

Except as provided in §§ 105.3 and 105.12 (relating to scope; and waiver of permit requirements), this subchapter governs the construction, [**alteration, enlargement, repair, maintenance,**] operation [**and removal**] , **maintenance, and modification** of a dam or reservoir regulated under the act.

PERMITS, LETTERS OF AMENDMENTS AND LETTERS OF AUTHORIZATIONS

§ 105.81. Permit applications for construction and modification of dams and reservoirs.

(a) In addition to the information required [**by**] under §§ 105.13, 105.13a, 105.13b and 105.15 [(relating to permit applications—information and fees)], per-

mit applications under this subchapter for the construction or modification of dams and reservoirs [shall give] must provide the following information:

(1) [The name and address of the applicant.] Reports and data detailing the conduct and results of investigations and tests necessary to determine the safety, adequacy and suitability of design, including:

(i) Data concerning subsoil and rock foundation conditions.

(ii) Data concerning exploratory pits, drilling, coring and tests to determine seepage rates.

(iii) Data concerning the strength tests necessary to measure the physical properties and behavior of foundations and embankment materials at the dam or reservoir site.

(iv) Data concerning the geology of the dam site or reservoir area, indicating possible hazards such as faults, weak seams and joints.

(v) Data concerning availability and quality of construction materials.

(vi) A "Dam Stability Report" as required under § 105.97 (relating to stability of structure).

(vii) Other information as may be necessary to determine the safety, adequacy and suitability of the design, including the design calculations for the dam, which shall be made available to the Department on request.

(2) [The location, type, size, height and purpose of the proposed dam and reservoir and appurtenant works] Site plan and cross sectional views required under § 105.13(d)(1)(i) (relating to permit applications-information and fees).

(3) Construction plans, specifications and design reports in sufficient detail to evaluate the safety, adequacy and suitability of the proposed dam, reservoir and appurtenant works.

(4) A schedule indicating proposed commencement and completion dates for construction.

(5) For projects involving storage of fluids or semifluids other than water, information concerning the chemical content, viscosity and other pertinent physical characteristics of the fluid or semifluid impounded.

[(4) The storage capacity and reservoir surface areas for normal pool and maximum high water.

(5) Plans] (6) An instrumentation plan including justification and design for [purposed] the installation of permanent monitoring instruments to measure the performance of [performance by instrument installations in] the dam [, including the purposes of the instrumentation]. If no instrumentation is considered necessary, [reasons for this judgment may] justification shall be [stated] provided.

[(6)] (7) [As accurately as may be readily obtained, the area] A hydrologic and hydraulic analysis, submitted as a separate report, which includes:

(i) The size, shape and characteristics of the drainage basin [, pertinent rainfall and streamflow].

(ii) Current precipitation data and precipitation distribution information as required by the Department.

(iii) Streamflow records [, and flood].

(iv) Flood flow records and estimates.

(v) An incremental dam breach analysis, storage capacity and reservoir surface area for normal pool and maximum storage elevations.

(vi) Other hydrologic and hydraulic determinations necessary for the design and operation of the dam.

[(7)] (8) [The proposed time for commencement and anticipated completion of construction] For existing dams, copies of the structure's most recent inspection reports.

[(8)] (9) [The method and schedule of operation of the dam including an emergency warning system and operation plan] EAP if required under § 105.134 (relating to [emergency action plan] EAP).

[(9) Plans for control of erosion and water pollution during the anticipated construction operations including plans for adequate measures to limit the erosion of the soil from exposed slopes after completion of construction. The plans shall indicate that adequate control measures will be taken during construction to protect the quality of stream flow below the project site. The application shall include a copy of a letter from the conservation district in the county where the project is located indicating that the district reviewed the erosion and sediment control plan of the applicant and considers it to be satisfactory.]

* * * * *

(11) An Operation and Maintenance Manual for the dam as required under § 105.131 (relating to operation, maintenance and monitoring).

(12) Other information the Department may require.

(b) [The application shall be accompanied by a design report, construction plans and specifications, in sufficient detail to evaluate the safety, adequacy and suitability of the proposed work.

(c) The applicant shall conduct and submit the results of the investigations and tests as the Department, in its judgment, believes are necessary to determine the safety, adequacy and suitability of design, including but not limited to:

(1) Data concerning subsoil and rock foundation conditions and the materials entering into the construction of the dam or reservoir.

(2) Data concerning exploratory pits, drilling, coring and tests to determine seepage rates.

(3) Data concerning the strength tests necessary to measure the physical properties and behavior of foundation and embankment materials at the dam or reservoir site.

(4) Data concerning the geology of the dam or reservoir area, indicating possible hazards such as faults, weak seams and joints.

(5) Data concerning availability and quality of construction materials.

(6) Other information as may be necessary, including the design calculations for the dam, which shall be made available to the Department on request.

(d) Plans and specifications and the results of tests or investigations shall be prepared under the supervision of and certified by a registered professional engineer experienced in dam design and construction and assisted by qualified engineers, geologists and other specialists, when necessary.]

The Department may waive specific information requirements of this section in writing, if the Department finds that specific information is not necessary to review the application.

§ 105.82. Permit applications for operation and maintenance of existing dams and reservoirs.

(a) In addition to information required [by] under §§ 105.13 [and 105.14], 105.13b and 105.15 (relating to permit applications—information and fees; [and review of applications] proof of financial responsibility; and environmental assessment), a permit application for the operation and maintenance of existing dams and reservoirs [shall give] must provide the following information:

(1) [The name and address of the applicant] Site plan and cross sectional views required under § 105.13 (d)(1)(i).

(2) [The location,] “As built” construction plans, specifications and design reports not already on file with the Department, which show the type, size, height and [purpose] other pertinent dimensions and features of the existing dam and reservoir and appurtenant works.

* * * * *

(4) [The storage capacity and reservoir surface areas for normal pool and maximum high water.

(5)] A description of facilities and plans for monitoring the performance of the dam.

[(6) Information on the area] (5) A hydrologic and hydraulic analysis, submitted as a separate report, which includes:

(i) The size, shape and characteristics of the drainage basin [, rainfall and stream flow].

(ii) Current precipitation data and precipitation distribution information as required by the Department.

(iii) Streamflow records [, and flood].

(iv) Flood flow records and estimates [, when available].

(v) An incremental dam breach analysis, storage capacity and reservoir surface area for normal pool and maximum storage elevations.

(vi) Other relative hydrologic and hydraulic information that may be available.

[(7)] (6) Information [readily] available regarding the foundation, embankment stability, specifications and construction of the dam.

[(8) The method and schedule of operation of the dam, if deemed necessary by the Department.]

(7) A manual which includes plans for the operation and maintenance of the dam in accordance with § 105.131 (relating to operation, maintenance and monitoring).

[(9)] (8) The [emergency warning plan] EAP for the dam or reservoir, if completed, or work plan to prepare and submit an emergency [warning] action plan in accordance with § [§ 105.131 and] 105.134 (relating to [operation and monitoring plans; and emergency action plan] EAP).

[(10)] (9) Proof of title or flowage easements for land areas below the top of the dam elevation that is subject to inundation.

[(11)] (10) Reports of the most recent inspections of the dam conducted by the owner or by the State or Federal government agencies.

[(12)] (11) Other information as the Department may require.

* * * * *

§ 105.88. Dam permit issuance.

(a) Upon the Department’s review and approval of the dam permit application for the construction or modification of a dam in accordance with § 105.81 (relating to permit applications for construction and modification of dams and reservoirs), the Department will issue a dam construction permit.

(b) For newly constructed or modified dams permitted under subsection (a), the Department will issue a dam operation and maintenance permit after the following conditions have been met:

(1) Meeting the requirements of §§ 105.107—105.109 (relating to final inspection; completion certification and project costs; and as-built plans) by the owner or permittee.

(2) Acceptance of construction or modification by the Department.

(c) Upon the Department’s review and approval of the dam permit application for operation and maintenance of existing dams in accordance with § 105.82 (relating to permit applications for operation and maintenance of existing dams and reservoirs), the Department will issue a dam operation and maintenance permit.

§ 105.89. Letters of Amendment and Letters of Authorization for modification of dams and reservoirs.

(a) Projects which do not modify top of dam elevation, normal pool elevation, or normal operation of the pool level may be authorized by Letter of Amendment when the dam has an existing permit or by Letter of Authorization when the dam meets § 105.12(b) (relating to waiver of permit requirements). The permittee or owner shall provide the following information:

(1) Reports and data detailing the conduct and results of investigations and tests necessary to determine the safety, adequacy and suitability of design, including:

(i) Data concerning subsoil and rock foundation conditions.

(ii) Data concerning exploratory pits, drilling, coring and tests to determine seepage rates.

(iii) Data concerning the strength tests necessary to measure the physical properties and behavior of foundations and embankment materials at the dam or reservoir site.

(iv) Data concerning the geology of the dam site or reservoir area, indicating possible hazards such as faults, weak seams and joints.

(v) Data concerning availability and quality of construction materials.

(vi) A "Dam Stability Report" as required under § 105.97 (relating to stability of structures).

(vii) Other information as may be necessary to determine the safety, adequacy and suitability of the design, including the design calculations for the dam, which shall be made available to the Department on request.

(2) In addition to the site plan and cross sectional views required under § 105.13(d)(1)(i) (relating to permit applications—information and fees), construction plans, specifications and design reports in sufficient detail to evaluate the safety, adequacy and suitability of the proposed dam, reservoir and appurtenant works, and a schedule indicating proposed commencement and completion dates for construction.

(3) For projects involving storage of fluids or semifluids other than water, information concerning the chemical content, viscosity and other pertinent physical characteristics of the fluid or semi-fluid impounded.

(4) Plans for proposed permanent monitoring of performance by instrument installations in the dam, including the purposes of the instrumentation. If no instrumentation is considered necessary, reasons for this engineering judgment shall be stated.

(5) A hydrologic and hydraulic analysis, submitted as a separate report, which includes the following:

(i) The size, shape and characteristics of the drainage basin.

(ii) Current precipitation data and precipitation distribution information as required by the Department.

(iii) Streamflow records.

(iv) Flood flow records and estimates.

(v) An incremental dam breach analysis, storage capacity and reservoir surface area for normal pool and maximum storage elevations.

(vi) Other hydrologic and hydraulic determinations necessary for the design and operation of the dam.

(6) For an existing dam, copies of the structure's most recent inspection reports.

(7) An EAP if required under § 105.134 (relating to EAP).

(8) A manual documenting the operation and maintenance procedures for the dam.

(9) For projects impacting wetlands or exceptional value waters, or if the project requires 401 water quality certification, environmental assessment approval will be required under § 105.15 (relating to environmental assessment).

(b) The Department may waive the specific information requirements of this section in writing, if upon review of the request for Letter of Amendment or Letter of Authorization, the Department finds that specific information is not necessary to approve the project.

CLASSIFICATION AND DESIGN CRITERIA FOR APPROVAL OF CONSTRUCTION, OPERATION, MODIFICATION AND MAINTENANCE

§ 105.91. Classification of dams and reservoirs.

(a) A dam or reservoir shall be classified in accordance with [size] **Size Category** and the [hazard potential] **Hazard Potential Category** which might occur in the event of an operational or structural failure. In approving a [hazard potential] classification, the Department will consider, without limitation:

* * * * *

(b) **Size Category** will be determined by either storage or height of structure, whichever results in the higher category. **Hazard Potential Category** will be determined by either loss of life or economic loss, whichever results in the higher category. The following shall be the [classifications] categories and descriptions as used in this subchapter:

SIZE [CLASSIFICATION*] CATEGORY

[Class] Category	Impoundment Storage (Acre Feet)	Dam Height (Feet)
	A	
B	Less than 50,000 but greater than 1000	Less than 100 but greater than 40
C	Equal to or less than 1000	Equal to or less than 40

[*Note: Size classification may be determined by either storage or height of structure, whichever gives the higher category.]

HAZARD POTENTIAL [CLASSIFICATION] CATEGORY

[Extent of Development]

Category	[Loss of Life] Population at Risk	Economic Loss
	1	

Excessive such as [() extensive residential, commercial, or agricultural [and] damage, or substantial public inconvenience [)].

<p><i>Category</i></p> <p>2</p> <p>3</p> <p>[3] 4</p>	<p>[Loss of Life] Population at Risk</p> <p>Few (A small number of homes or small businesses.)</p> <p>[Few (no rural communities or urban developments and no more than a small number of habitable structures)] None expected (no permanent structures for human habitation or employment.)</p> <p>None expected (no permanent structure for human habitation or employment.)</p>	<p><i>Economic Loss</i></p> <p>Appreciable such as limited residential, commercial, or agricultural damage, or moderate public inconvenience.</p> <p>[Appreciable] Significant [()] damage to private or public property and short duration public inconvenience [()] such as damage to storage facilities or loss of critical stream crossings.</p> <p>Minimal [(undeveloped or occasional structures with no significant effect on public inconvenience)] damage to private or public property and no significant public inconvenience.</p>
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require submission of models utilizing current acceptable methodologies to demonstrate this capability without excessive erosion and failure of the spillway system.

(b) Each spillway [shall] must include a satisfactory means of dissipating the energy flow at its outlet to assure conveyance of flow without endangering the safety and integrity of the dam or the natural environment of the stream.

(c) Each spillway floor slab must be provided with adequate drainage, anchors, or drainage and anchors to be stable against uplift.

§ 105.96. Outlet works.

(a) Dams [shall] must include a device to [permit] allow the complete draining of the reservoir [within a reasonable period of time as determined by the Department] unless the Department determines that an outlet works is not feasible for a specific dam. At minimum, the device must be sized to pass a minimum of 70% of the highest mean monthly inflow at the site plus the capacity to drain the top 2 feet of reservoir storage below normal pool in 24 hours. The Department may require an increased size to provide for the integrity of the dam and to protect life and property with an adequate margin of safety.

(b) In determining the reasonable time period for drainage of the reservoir, the dam owner, the dam owner's engineer, and the Department may consider, without limitation, the following factors:

* * * * *

(c) Under normal conditions, the maximum rate of drawdown for reservoirs impounded by earthfill dams should not exceed 1 foot per day without prior approval by the Department. Under emergency conditions, the maximum rate of partial or complete drawdown of reservoirs must be approved by the Department, when feasible.

(d) Each outlet works [shall] must include upstream closure, trashrack, and a means of dissipating the energy of flow at its outlet to assure conveyance of flow without endangering the safety and integrity of the dam or the natural environment of the stream.

§ 105.97. Stability of [structure] structures.

(a) Dams [shall] must be structurally sound and [shall] be constructed of sound and durable materials. The [completed] structure [shall] must be stable [under all probable conditions of operation] during and at the completion of construction.

(b) [In reviewing the stability of a structure, the Department may consider, without limitation, the following] As part of the permit application for the construction or modification of a dam, the design engineer shall submit to the Department, under professional seal and certification, a report entitled "Dam Stability Report" which clearly demonstrates to the Department that the requirements of subsection (a) have been satisfied. At a minimum, this report must address the following considerations:

* * * * *

§ 105.92. Foundations.

(a) The foundation of a dam or reservoir [shall] must be stable under all probable conditions.

(b) In analyzing the stability of the foundation of a proposed or existing dam or reservoir, the applicant shall consider [all of] the following factors:

(1) The seismic forces and liquefaction potential at the site.

(2) The [shearing] shear strength of the foundation.

(3) Settlement [and], subsidence, and carbonate karst solution features, such as sinkholes and solution channels.

(4) [Leakage, permeability and solubility] Seepage potential through the soil and rock components of the foundation.

(5) The dispersive characteristics of the soil foundation and borrow areas.

§ 105.93. Design stress.

In the construction of dams and reservoirs, allowable stresses [shall] must conform to the current standards accepted by the engineering profession.

§ 105.94. Spillways.

(a) Every dam [shall] must be provided with a spillway system which is capable of safely conveying the design flood, as provided in § 105.98 (relating to design flood criteria), of the dam without endangering the safety or integrity of the dam. The Department may

(2) [The] A stability analysis based on the properties of the structure's materials and on the seismic forces and [hydraulic forces] seepage conditions affecting the structure.

* * * * *

(c) Earthfill dams must be demonstrated to be stable for the following conditions:

(1) Normal pool with steady-state seepage conditions with a factor of safety of 1.5.

(2) Maximum pool with steady-state seepage conditions with a factor of safety of 1.4.

(3) Sudden drawdown from normal pool conditions with a factor of safety of 1.2.

(4) Normal pool with steady-state seepage conditions under seismic forces produced by the maximum credible earthquake with a factor of safety of 1.1.

(5) Completion of construction with no pool with a factor of safety of 1.3.

(d) Gravity dams must be demonstrated to be stable for the following conditions:

(1) Normal pool with appropriate uplift pressures, ice loads and silt loads with a factor of safety of 2.0.

(2) Maximum pool with appropriate uplift pressures and silt loads with a factor of safety of 1.7.

(3) Normal pool with appropriate uplift pressures and silt loads under seismic forces produced by the maximum credible earthquake with a factor of safety of 1.3.

(e) For gravity dams, the overturning stability is acceptable when the resultant of all forces acting on the dam is located as follows:

(1) Within the middle third of the structure for normal pool conditions.

(2) Within the middle half of the structure for maximum pool conditions.

(3) Within the structure for earthquake conditions.

(f) For gravity dams, the foundation bearing pressures must be less than or equal to the allowable for no pool, normal pool and maximum pool conditions and less than 133% of the allowable for earthquake conditions.

(g) The factors of safety for earthfill dams or gravity dams must be the higher of:

(1) The factors of safety in subsections (c) and (d).

(2) The factors of safety in the most recent Engineering Manuals developed by the United States Army Corps of Engineers relating to stability of dam structures.

§ 105.98. Design flood criteria.

[(a)] The discharge capacity or storage capacity, or both, [shall] must be capable of safely accommodating the recommended design flood for the [size and hazard potential classification of the dam as determined by] dam as classified under § 105.91 (relating to classification of dams and reservoirs). The [design flood is intended to represent the largest flood that need

be considered in the evaluation of a given project. When a range of] design flood [is indicated, the magnitude that most closely relates to the size and hazard potential shall be selected. Design flood criteria shall be as indicated in the following table:] must be determined by an incremental dam breach analysis. The minimum required design storm duration is 24 hours. When considered appropriate by the Department, engineering judgment may be used to determine the design flood within the design flood range indicated below for dams of Hazard Potential Category 3 or 4. The classification or damage, or both, resulting from dam failure will determine the design flood within the design flood range.

[Size and Hazard Potential]

Classification	Design Flood Range
[A-1, A-2, B-1]	[PMF]
A-3, [B-2, C-1] B-3	1/2 PMF to PMF
[B-3, C-2] A-4, B-4, C-3	100 year to 1/2 PMF
[C-3] C-4	50 year to 100 year frequency

[(b) The Department may, in its discretion, require consideration of a minimum design flood for a class of dams or reservoirs in excess of that set forth in subsection (a) when it can be demonstrated that the design flood requirement is necessary and appropriate to provide for the integrity of the dam or reservoir and to protect life and property with an adequate margin of safety.

(c) The Department may, in its discretion, consider a reduced design flood for a class of dams or reservoirs when it can be demonstrated that the design flood provides for the integrity of the dam or reservoir and protects life and property with an adequate margin of safety.]

CONSTRUCTION REQUIREMENTS AND PROCEDURES

§ 105.101. [Notices and reports] (Reserved).

[At least 15 days prior to commencement of construction, the permittee shall notify the Department, in writing, of the proposed time for commencement of work. Thereafter, a detailed report on the status of construction shall be submitted monthly to the Department of Environmental Resources; Division of Dam Safety; Post Office Box 2357, Harrisburg, Pennsylvania 17120, until construction work has been completed.]

§ 105.102. Personnel and supervision.

(a) Work [shall] must be conducted under the oversight and supervision of a [competent] professional engineer approved by the Department [, and the]. The professional engineer or [a competent] Department-approved representative shall be on the work site during significant construction activities until the completion of the dam.

(b) The permittee or owner shall file with the Department, at least 15 days prior to the commencement of construction, a statement setting forth the name [of the contractors conducting the work authorized by the permit and the names and employers of personnel

responsible for the supervision of construction.] and employer, including contact information, of the following:

(1) The professional engineer responsible for oversight and supervision of construction.

(2) Representatives of the professional engineer.

(3) Contractors conducting the work authorized by the permit, Letter of Amendment or Letter of Authorization as required by the Department.

§ 105.103. Weather and ground conditions.

(a) No earth or other embankment material [which is] may be covered, placed, compacted, or graded when in a frozen condition [may be covered or placed in embankments].

* * * * *

§ 105.104. Removal and disposal of vegetation.

(a) Work shall be conducted in [such] a manner [as] to minimize the destruction of or damage to trees and other vegetation on and adjacent to the construction site.

(b) Vegetation cleared and removed from the site shall be disposed of in accordance with [all] applicable laws and regulations.

§ 105.106. Activities and facilities on the construction site.

Activities and facilities on the construction site [shall] must be conducted and operated in [such] a manner [as] to avoid pollution of the air and waters of this Commonwealth and in accordance with applicable laws and the provisions of this title.

§ 105.107. [Completion certificate and final plans] Final inspection.

[(a) Within 30 days after the completion of work authorized by permit issued under this subchapter, the permittee shall file with the Department a certified statement signed by the supervising engineer and by the permittee that work has been performed in accordance with the terms and conditions of the permit; with the approved maps, plans, profiles and specifications; and with applicable laws and the provisions of this title.

(b) Within 90 days after the completion of work, the permittee shall file with the Department a set of final "as built" plans for the project, showing changes from the original plans and specifications.]

Within 10 days after the completion of work on a dam authorized by the Department, the permittee or owner shall schedule a final project inspection with the Department. The final inspection must include the permittee or owner, the permittee or owner's supervising engineer, and the Department's field representative. Upon conclusion of this final inspection, the Department's field representative will present the permittee or owner with a list of any deficient items, if necessary. A follow-up final inspection may be required by the Department. At the discretion of the Department, the final inspection may be waived for projects authorized by Letter of Amendment or Letter of Authorization.

§ 105.108. Completion, certification and project costs.

Within 30 days after the final inspection or within 30 days of completion of the work if the final inspection is waived by the Department, the permittee or owner shall file with the Department a completion certification provided by the Department stating that work has been performed in accordance with the terms and conditions of the permit or other Department authorization; the approved maps, plans, profiles and specifications; and applicable laws and the provisions of this title. The completion certification must contain the following:

- (1) Original signature of the permittee or owner.
- (2) Seal and original signature of the supervising engineer.
- (3) Design cost.
- (4) Construction cost.
- (5) Construction inspection cost.
- (6) Estimated percentage of the total cost for each major feature of the project.

§ 105.109. As-built plans.

Within 90 days after the final inspection or completion of the work, if the final inspection is waived by the Department, the permittee or owner shall file with the Department "as built" plans for the project, indicating revisions from the original plans and specifications.

[WATER] STORAGE AND DISCHARGE

§ 105.111. Commencement of [water] storage of water, fluid or semifluid.

(a) The permittee shall notify the Department, in writing, at least [1 week] 7 days in advance of the date proposed for the commencement of [water] storage of water, fluid or semifluid in the reservoir [or pond] created by the dam for which the permit is issued.

(b) The Department may [, at its discretion,] require that a reservoir filling plan be developed and approved by the Department prior to commencement of storage of water, fluid or semifluid. This plan will provide the acceptable rate of rise of the reservoir and, if necessary, elevations and durations for constant reservoir levels within the filling period. This plan may also require lowering of the reservoir level if the prescribed rate of rise is not controlled or attained. The plan may also require monitoring of instrumentation of the dam.

(c) The Department may require that a representative of the Department be at the site before or during the filling of the [pond or] reservoir.

(d) The initial storage in the reservoir of new dams and refilling of reservoirs of rehabilitated dams may not commence prior to the submission of the information required in § 105.108 (relating to completion certification and project costs) and the acceptance of the certification, in writing, from the Department.

§ 105.112. Stream flow during construction, filling and repair.

During the period of construction, [alteration] modification, enlargement or repair and during the period

that the [**pond or**] reservoir is being filled, the permittee shall allow a sufficient flow of water, as determined by the Department, into the stream below the dam to support fish and other aquatic life and to preserve the water quality in the stream.

§ 105.113. Releases.

(a) The Department will impose general and special conditions regarding release rates in a permit for a dam or reservoir that it deems necessary to maintain stream flows for the purposes of protection of public health, water quality control, conservation of fisheries and aquatic habitat, improvement of recreation and protection of instream and downstream water uses. The appropriate release rates for the dams and reservoirs [**shall**] will be established in accordance with subsections (b) and (c).

* * * * *

(d) Every dam [**shall**] **must** at all times be operated in [**such**] a manner [**as**] to allow the required flow of water into the stream below the dam as established under this section, and as otherwise necessary to support fish and other aquatic life and to assure compliance with the water quality [**criteria set forth**] standards in Chapter 93 (relating to water quality standards) and to provide for other instream uses for the affected stream.

PROTECTION AND RESTORATION OF AQUATIC LIFE

§ 105.121. Fishways.

Upon the request of the Fish and Boat Commission, the permittee shall install and maintain chutes, slopes, fishways, gates or other devices that the Fish and Boat Commission may require [**under sections 185—187 of The Fish Law of 1959 (30 P. S. §§ 185—187) (Repealed)**] under 30 Pa.C.S. §§ 3501—3505.

§ 105.122. Drawdown of impounded waters.

Impounded waters which are inhabited by fish may not be drawn down except with the written approval of the Fish and Boat Commission [**issued under section 191 of The Fish Law of 1959 (30 P. S. § 191) (Repealed)**] under 30 Pa.C.S. § 3506 (relating to drawing off or interference with dams or devices).

§ 105.123. Restoration of aquatic life.

If the Department finds that construction of a dam or reservoir has [**so**] substantially disrupted aquatic life [**as**] to preclude natural restoration of the stream ecology within a reasonable period of time, the permittee shall be required to submit and implement a plan to restore the aquatic life of the stream to its prior condition, to the maximum extent possible. The plan shall be subject to review and modification by the Department in consultation with the Fish and Boat Commission and [**shall**] **must** include, but not be limited to, the following:

* * * * *

OPERATION, MAINTENANCE AND EMERGENCIES

§ 105.131. Operation, **maintenance** and monitoring [**plans**].

(a) In addition to the requirements of §§ 105.51—105.54 (relating to operation, maintenance and inspection), the permittee or owner of a dam [**or reservoir**] shall follow the [**method and schedule of operation**

of] **operation and maintenance manual for the dam [or reservoir], [including] and the emergency action plan if required [by] under § 105.134 (relating to emergency action plan), as approved by the Department and shall implement a monitoring plan [approved by the Department for permanent monitoring of performance by instrument installation in the dam] as required under § 105.81(a)(4) (relating to permit applications for construction and modification of dams and reservoirs).**

(b) A permittee or owner of a dam or reservoir may not modify or cease implementation of all or part of the approved plans and methods of operation or monitoring without the prior approval of the Department **by permit, Letter of Amendment, or Letter of Authorization. The permit will be issued in accordance with § 105.82 (relating to permit applications for operation and maintenance of existing dams and reservoirs). The letter of amendment or letter of authorization will be issued only after review and approval of necessary engineering calculations, construction plans and construction specifications. If the project impacts wetlands or exceptional value waters, or if the project requires 401 water quality certification, an environmental assessment shall also be submitted to the Department for review and approval under § 105.15 (relating to environmental assessment). Modifications of a dam are subject to the construction requirements and procedures under Subchapters A and B (relating to general provisions; and dams and reservoirs), unless specifically waived by the Department.**

(c) The permittee or owner of a dam or reservoir shall operate and maintain the dam in accordance with the authorized plans and specifications. [**Normal repairs and**] **Routine** maintenance of the dam and the reservoir's design storage capacity will not require further authorization **under this chapter** except as provided in § 105.122 (relating to drawdown of impounded waters).

§ 105.132. [**Inspection**] (Reserved).

[**The permittee or owner of a dam or reservoir shall follow the inspection schedule set forth in § 105.53 (relating to inspections by owners and inspection reports).**]

§ 105.133. Directed repairs.

The permittee **or owner** shall immediately take steps that the Department may prescribe as necessary to preserve the structural stability and integrity of the dam and protect health, safety [**and**], property **and the environment.**

§ 105.134. EAP.

(a) The permittee or owner of [**a**] an existing or proposed Hazard Potential Category 1, Category 2 or Category 3 dam [**or reservoir that may cause loss of life or serious damage to property if a failure of the dam occurs,**] as classified in § 105.91 (relating to classification of dams and reservoirs) shall develop an [**emergency action plan**] EAP to be followed in the event of a dam hazard emergency as defined in § 105.135 (relating to dam hazard emergencies). The [**emergency action plan**] EAP shall be submitted to **the Department** and approved by the

Department and [local emergency management officials] the Pennsylvania Emergency Management Agency (PEMA).

(1) Prior to submitting the EAP for review or approval, the permittee or owner shall schedule a meeting with the county emergency management coordinators for those counties affected by the dam's failure.

(2) Each submission of the EAP must be signed by the dam owners, the dam operators, and the county emergency management coordinators for those counties affected by the dam's failure signifying concurrence with the EAP.

(3) In the case of a proposed dam, the EAP shall be submitted to the Department and approved by the Department and PEMA prior to commencement of [water] storage [in the reservoir or pond created by the dam during any stage of construction of the dam] of water, fluid or semifluid.

(4) The [emergency action plan shall, at a minimum, contain the following elements:] EAP must be prepared in accordance with the most recent EAP guidelines developed by the Department and PEMA.

[(1) An identification of the area below the dam which may be threatened with loss of life or serious damage to property if a failure of the dam occurs.

(2) A listing of key municipal and emergency management officials and their telephone numbers. The list shall be readily available at the dam site near a telephone or other means of communication, if available.

(3) An identification of handicapped or other persons who may have difficulty evacuating the area which may be threatened if a failure of the dam occurs. Procedures for identifying and evacuating these people in a dam hazard emergency shall be developed in cooperation with local and emergency management officials.]

(b) [For an existing dam or reservoir that may cause loss of life or serious damage to property if failure of the dam occurs, an emergency action plan shall be submitted to and approved by the Department and local emergency management officials.] Upon approval of the EAP, the permittee or owner shall provide a copy of the signed approved EAP to the municipal emergency management agencies and the emergency response agencies listed in the EAP.

(c) Within 60 days of the date of the Department's approval letter, the permittee or owner shall provide the Department a written statement certifying that a signed approved copy of the EAP has been provided to each municipal emergency management agency and to each emergency response agency listed in the EAP.

[(c)] (d) In addition to the requirements in subsections (a) [and], (b) and (c), the permittee or owner of a [high hazard potential] Hazard Potential Category 1 or Category 2 dam shall post notices in public [places] locations in areas that may be affected by the failure of the dam [; for example, areas where public

water or sewage service may be interrupted]. The notice [shall] must indicate that copies of the [emergency action plan] EAP are available for review at the appropriate county and municipal emergency management offices. Also, the notice shall be posted by the permittee or owner in [the following] public places within each political subdivision situated within the inundation area downstream of the dam [:]. The notice shall be posted in the city, borough, and township buildings in the affected municipalities, with the management's permission. Additionally, the notice shall be posted in locations within the inundation area, such as, post offices, libraries, grocery stores, or gas stations, with the management's permission.

(e) Within 60 days of the date of the Department's approval letter, the permittee or owner shall provide the Department a written statement certifying that the notice has been posted in the locations listed in the EAP. The permittee or owner shall certify in each subsequent annual inspection report, as required in § 105.53(a), that the notices remain posted or were reposted in the locations listed in the EAP.

[(1) The city, borough or township building.

(2) The police department offices.

(3) The fire company halls.

(4) The tax collector's office.]

(f) The EAP shall be reviewed and updated every 5 years or the frequency interval indicated in the most recent EAP guidelines developed by the Department and PEMA.

(g) The Department may require the EAP be updated, as necessary, if there is a new owner or operator, if changes occur in the downstream inundation area or in the Hazard Potential Category.

§ 105.135. Dam hazard emergencies.

(a) For the purposes of this section, a dam hazard emergency means a condition which the Department, permittee or owner of the dam reasonably finds constitutes an imminent threat to life or property above or below a dam, whether arising from the condition of the dam and appurtenant works or extraordinary natural conditions, affecting the safety and stability of the dam, including [, but not limited to,] flood, earthquake [, fire] and ice jam.

(b) The emergency procedures and the [emergency warning system and operation plan] EAP required [by] under §§ 105.63 and 105.134 (relating to emergency procedures; and [emergency action plan] EAP) shall be followed by the permittee and owner of a dam or reservoir in the event of an actual or potential dam hazard emergency.

(c) If a dam hazard emergency exists, [the Department and] the permittee or owner of the dam shall immediately notify appropriate emergency management officials of the existence of the hazard and request the authorities to initiate appropriate action to assure protection of life and property; and the permittee or owner shall immediately take [the steps as are] actions as authorized by the Department necessary to prevent dam failure or loss of life or property [, including, but not limited to, the following:].

- [(1) Draw down of the reservoir.
- (2) Reinforcement of the dam structure.
- (3) Breach or removal of the dam.
- (4) Removal of debris.
- (5) Repair or installation of structures necessary to assure the stability and safety of the dam.]

(d) The Department, upon determining that a dam hazard emergency exists, will notify the owner immediately to take [steps] actions the Department determines are necessary to prevent dam failure or loss of life or property.

§ 105.136. Unsafe dams.

* * * * *

(b) The owner of an unsafe dam shall do the following:

(1) Immediately notify the Department upon receipt of any information indicating the dam is unsafe.

(2) Drain the [dam] reservoir as [approved or] required and approved by the Department and in accordance with § 105.122 (relating to drawdown of impounded waters).

* * * * *

(c) The Department may issue a permit for modification of an unsafe dam, under section 9 of the act (32 P. S. § 693.9), which authorizes the owner of an unsafe dam to modify the dam within the time prescribed in the permit to meet the requirements of the act and this chapter. The permit shall be conditioned upon:

* * * * *

(2) Implementation by the owner of the dam of measures deemed necessary by the Department to reduce risks to health [and] , safety and the environment pending correction or modification of the unsafe condition, including, but not limited to, special provisions relating to operation, emergency planning, monitoring and warning systems, and development of an alternative source of water supply if the dam serves as a water supply dam.

(d) In determining whether to require removal of an unsafe dam or to permit the owner to modify the dam, the Department will consider whether there is a substantial adverse impact to the public health [and] , safety and the environment which will result from the draining and removal of the dam [, and whether that]. If the Department determines that this adverse impact outweighs the danger to public health [and] , safety [, which outweighing will result in allowing] and the environment resulting from leaving the dam in place, the Department may decide to allow the unsafe dam to remain until it has been modified.

* * * * *

(f) If the Department finds that conditions upon which the permit [authorizing modification] , letter of amendment, or letter of authorization was issued

have substantially changed or that the owner does not meet the schedule for modification contained in the permit, letter of amendment, or letter of authorization, the Department will review the status of the dam. An extension of the time period for completion of a modification may be issued by the Department if the owner has proceeded in good faith with the previous schedule of modification and the requirements of subsections (c) and (d) are met.

(g) Nothing in this section may be construed to limit the power of the Department to take immediate action, prior to public hearing, to do one or more of the following:

(1) Revoke or suspend a permit [where] , Letter of Amendment, or Letter of Authorization when deemed necessary by the Department to protect public health [and] , safety and the environment.

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Subchapter K. DISBURSEMENTS OF MONIES FROM THE DAMS AND ENCROACHMENTS FUND

§ 105.431. General provisions.

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(b) Moneys paid into the Dams and Encroachments Fund may be disbursed at the discretion of the Department for use in the elimination of hazards to life, property and the environment resulting from unsafe dams, water obstructions and encroachments. [The moneys shall be available for use by the Bureau of Dams and Waterway Management in addition to funds otherwise available to it.]

(c) For purposes of this chapter, the full and normal range of program activities [of the Bureau] necessary to administer this chapter will be considered to contribute to the elimination of hazards from unsafe dams, water obstructions and encroachments [under subsection (b)]. Disbursement of moneys from the Dams and Encroachments Fund moneys may therefore be made for, but will not be limited to, the following purposes:

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§ 105.432. [Authorization for disbursement] (Reserved).

[The Director of the Bureau of Dams and Waterway Management will authorize the use of monies disbursed from the Dams and Encroachments Fund consistent with the established policies and procedures of the Department. For disbursements from the fund not falling within the explicit categories established in § 105.431 (relating to general provisions), the Director of the Bureau of Dams and Waterway Management will submit a request to the Secretary of the Department requesting an authorization to disburse the funds for the project in question.]

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