



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING
**INSTRUCTIONS FOR COMPLETING
DAM PERMIT APPLICATION**

GENERAL INFORMATION

The following instructions are intended to assist the applicant in properly completing a DEP Dam Permit Application. DEP is committed to the explanation of its permitting requirements and assisting, to the fullest extent possible, those persons whose activities require them to secure a DEP Dam Permit.

The basic procedures for making application involves submitting (3) complete application packages, three (3) completed application forms and three (3) complete sets of attachments and the required application fee to:

Department of Environmental Protection
Bureau of Waterways Engineering
Division of Dam Safety
P.O. Box 8554
Harrisburg, PA 17105-8554

Upon receipt of the complete application packages and required fee, DEP will begin to review the application. The Department will also determine if the project is eligible for Federal authorization under the terms of the Pennsylvania State Programmatic General Permit (PASPGP-2). If required, the Department will forward a copy of the permit application to the appropriate U.S. Army Corps of Engineer's District Office. The address and telephone numbers of the three U.S. Army Corps of Engineers District Offices covering Pennsylvania are listed on page 6 of the instructions for completing the Environmental Assessment form.

Please review the application form and attachments carefully before submitting to the Department. The Department will only begin its review after receipt of a complete application package. Errors, omissions and other irregularities must be resolved before detailed reviews of the application may begin. Accordingly, it is important that the following instructions be followed very closely.

ACTIVITIES WHICH REQUIRE A PERMIT:

A Dam Permit is required from DEP before any person may construct, operate, maintain, modify, enlarge or abandon a dam that meets any one of the following criteria.

1. The dam is located across a watercourse and the contributory drainage area to the dam exceeds 100 acres.
2. The dam is located across a watercourse and the maximum depth of water, measured from the upstream toe of the dam to the top of the dam at

maximum storage elevation, is greater than 15 feet.

3. The dam is located across a watercourse and the impounding capacity (storage volume) at maximum storage elevation is greater than 50 acre-feet.
4. The dam stores water, is not located on a watercourse, and has no contributory drainage, but the maximum depth exceeds 15 feet and the maximum storage volume exceeds 50 acre-feet.
5. The dam is used for storage of fluids or semi-fluids other than water, the escape of which may result in air, water, or land pollution or in danger to persons or property.

If the proposed dam does not require a Dam Permit, but is located in, along or projecting into a wetland or Exceptional Value Waters, or requires 401 Water Quality Certification, Department approval of an Environmental Assessment is required. An Environmental Assessment form will be provided by the Department with the notification of our jurisdictional determination or upon request. County Conservation District Offices also have copies of this form. Any excavation of wetlands within the impoundment area would require a Water Obstruction and Encroachment Permit from the Department. Excavation in the impoundment area, not in wetlands but within the floodway of a watercourse, may also require a Water Obstruction and Encroachment Permit. This determination will be made by the Department upon receipt of the information discussed above.

PERMIT WAIVERS:

Before preparing a Dam Permit Application, the applicant should review the availability of permit waivers. These waivers are listed under Section 105.12 of DEP's Chapter 105 Rules and Regulations and have been reproduced below. Most of the waivers are automatic and do not need prior DEP approval. Any person using such waivers needs only to develop and retain such information that will verify their qualification to use a waiver. This information would be made available to DEP only if so requested as a result of a general inquiry or in the investigation of a complaint. The only exceptions to the "automatic" waivers concern sub-sections 105.12(a)(4), 105.12(a)(11), 105.12(a)(16) and 105.12(b)(2). These subsections require that any person wishing to use these permit waivers must first submit specified information to DEP for its review and approval.

§105.12 Waiver of permit requirements (for dams)

(a) Under Section 7 of the act (32 P.S. §693.7), the requirements for a permit are waived for the following structures or activities, regardless of when commenced. 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 to apply for and obtain a permit under this chapter.

(1) A dam not exceeding 3 feet in height in a stream not exceeding 50 feet in width, except wild trout streams designated by the Pennsylvania Fish and Boat Commission.

(4) A dam subject to the requirements of the Mine Safety and Health Administration, 30 CFR 77.261-1 and 77.261-2 (relating to water, sediment or slurry impoundments and impounding structures; identification; and water, sediment, or slurry impoundments or impounding structures, minimum plan requirements; changes or modifications; certification), if the Department determines on the basis of preliminary data submitted by the applicant that the dam is of Size Classification C and Hazard Potential Classification 3 as defined in §105.91 (relating to classification of dams and reservoirs) and is not located in a watercourse or body of water designated as a wild and scenic river under the Wild and Scenic Rivers Act of 1968 or the Pennsylvania Scenic Rivers Act.

(6) A water obstruction or encroachment located in, along, across or projecting into a stormwater management facility or an erosion and sedimentation pollution control facility which meets the requirements in Chapter 102 (relating to erosion control), if the facility was constructed and continues to be maintained for the designated purpose.

(11) The removal of abandoned dams, water obstructions and encroachments if the Department determines in writing on the basis of data, information or plans submitted by the applicant that the removal of the abandoned dam, water obstruction or encroachment cannot imperil life or property, have significant effect on coastal resources or have an adverse impact on the environment and the plans provide for restoration and stabilization of the project area.

(14) The maintenance of an artificial pond or reservoir to its original storage capacity where:

(i) The contributory drainage area is less than or equal to 100 acres, and

(ii) The greatest depth of water at maximum storage elevation is less than or equal to 15 feet, and

(iii) The impounding capacity at maximum storage elevation is less than or equal to 50-acre feet.

(16) Restoration activities undertaken and conducted pursuant to a restoration plan which has been approved, in writing, by the Department.

(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.

(1) A dam not exceeding 5 feet in height in a nonnavigable stream operated and maintained for water supply purposes.

(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, as defined in §105.91 and does not have a significant effect on coastal resources or an adverse impact on the environment.

LIMITED POWER PERMITS:

These permits are required for all power projects consisting of complete units of improvements or development for the supply of water power or for the procuring or supply of light, heat or power, by electricity, consisting of a power dam or changes in streams to develop water power or to supply water for steam power. When, upon review of a Dam Permit Application, it is determined that a Limited Power Permit is required, **DEP will forward a separate Limited Power Permit application to the applicant.**

401 WATER QUALITY CERTIFICATION:

Applications submitted to the Bureau of Waterways Engineering for projects requiring a Dam Permit will also be considered a request for Water Quality Certification under Section 401 of the Federal Water Pollution Control Act (33 U.S.C.A. 1341(a)) for either a U.S. Army Corps of Engineers' (ACOE) individual permit nationwide permit or Pennsylvania State Programmatic General Permit.

COMPLETING THE APPLICATION FORMS

SECTION A. APPLICANT IDENTIFIER

Applicant Name: Reference is made to Section G of this application form for instructions on who must sign the application. Please list the name of all persons who will be signing the application on this line.

SECTION B. PROJECT LOCATION DATA

- Provide the USGS name of the stream, river or body of water. If none, enter "unnamed".
- Place an "X" on the appropriate Corps District line. Baltimore covers the Susquehanna River basin; Philadelphia covers the Delaware River basin; Pittsburgh covers the Ohio River, Genesee River and Lake Erie basins.
- Provide the name of the USGS 7½ minute Quad-range map where the project is located and provide the other site location information as requested.
- Provide a concise and accurate narrative of the project's purposes and need.

SECTION C. PROJECT DATA

Please provide the project's physical data in the units requested. Most of the requested items are self explanatory, but attention is drawn to the following:

- Maximum depth to top of dam.
- Size and Hazard Classification - The determination of size and hazard classifications shall be made in accordance with the requirements of section 105.91 of the Department's Chapter 105 Rules and Regulations. Additionally a narrative providing justification for selection of the Hazard Classification must be provided. In most cases, a dam breach analysis should be completed to determine downstream impacts resulting from a failure of the dam. Continue the justification narrative on additional sheets of referenced paper if required.

SECTION D. DETERMINATION OF APPLICATION FEES (DEP FEES ONLY)

The determination of application fees shall be made in accordance with Section 105.13(b)(1) and Section 105.91. All fees are waived for Federal, State, county, municipal agencies or municipal authority applications.

SECTION E. APPLICATION COMPLETENESS CHECKLIST

CHECKLIST ITEMS:

(Applicant must place an entry - Y = Yes, N = No, N/A = Not Applicable - in each left side column space).

The Department's review of all applications begins with a determination of completeness. If an application package is incomplete, the Department will correspond with the applicant and request submission of corrected and/or previously omitted documents. The department's review of permit applications will not begin until a complete application has been received. See Section 105.13 of the DEP's Chapter 105 Rules and Regulations for

specific requirements. Additional guidance for the required checklist items is as follows:

CHECKLIST ITEMS

- 1. Permit application properly signed, sealed and witnessed:** Self explanatory, but reference is made to the instructions for completing application **Section G** which must be closely followed.
- 2. Permit Application General Information Form.** Reference instruction.
- 3. Application Fee enclosed (see Section D):** Please attach the check, made payable to "**Commonwealth of Pennsylvania**" to the front of the application package.
- 4. Copies and proof of receipt - Act 14 notification:** Act 14 Municipal and County Notification requires that the department wait 30 days from the date of project notification to both the local and county governments before issuing its permit(s). Typically, this 30-day waiting period will run concurrently with the Department's review period. For this to occur, DEP must receive a copy of the Act 14 notification letters to each affected municipality and **proof** that each municipality received the notification letter. This must be accomplished by requesting that the letters be endorsed and a copy returned to the applicant by the local and county governments or send the letters by certified mail. Copies of the endorsed letters or and signed mail receipts must be received by the Department and the 30 day waiting period must expire before a permit may be issued. DEP is specifically inviting the local municipality and the county to submit comments to DEP related to comprehensive plans and zoning ordinances under Act 67 and 68. Act 14 notices must be amended to include specific language as outlined on the enclosed sample notification letter. (Act 14 Notification Letter)
- 5. Determination of historic/archaeological sites:** Complete and attach to each copy of the application package, completed form "**CULTURAL RESOURCE NOTICE**" and the Return Receipt that shows that the PHMC received this notice. Additional instructions for completing this notice are listed on the form.
- 6. Completed and approved Supplement No. 1 Form (PNDI):** This form (included in the application) must be submitted to the department and returned to you before the application is prepared. The final project design and the application package that is prepared must reflect the presence of, and potential impacts to, any endangered or threatened species or critical habitat within the project area discovered in the PNDI (Pennsylvania Natural Diversity Inventory) search. A copy of this form must be attached to each copy of the application package.
- 7. Site plan (including cross sections and location maps):** Each set of plan drawings (a total of three

is required) must be legible, and must include the following:

(a) All drawings shall contain a title block at the lower right corner of the sheet. The title block shall contain the project name, name of the applicant, name of the plan PREPARER (if different than the applicant) and the date the plan was prepared.

(b) Location Maps: The submission must contain a project location map drawn to, or otherwise utilizing an existing 1:24,000 scale (1 inch equals 2,000 feet). This is the scale used on U.S.G.S. 7.5 minute topographic maps. A photocopy of the appropriate U.S.G.S. topographic map, with the project site identified in red, is the recommended method to comply with this requirement. The photocopy must include a 3 inch radius of map coverage around the project site. If a U.S.G.S. photocopy is used for a location map, all the requirements of Subsection 105.13(d)(1)(ii) of the DEP's regulations will be satisfied. Refer to that subsection for required location map features if another type, or hand drawn map is used.

(c) Site Plans: A site plan must be included which provides a complete plan view of the proposed structure or activity and those adjoining upstream and downstream areas where potential and/or actual hydraulic or environmental impacts will occur. Specific requirements for site plans include:

(i) Plans shall clearly show existing and proposed limits for all regulated waters of the Commonwealth (edges of streams, rivers, lakes, etc.) and the limits of their floodplains. When the proposed worksite is located within a detailed Federal Emergency Management Agency (FEMA) flood study area, the existing and proposed FEMA 100-year frequency floodway limits must be shown on the site plan. When the project involves impacts to wetlands, the wetland boundaries must be delineated in accordance with the Department's Wetland Delineation Policy (see instructions for completing the Environmental Assessment form).

(ii) Plans must be drawn to a scale of 1 inch equals 200 feet or larger and show all proposed structures or activities and all existing roads, utility lines, lots (show property lines and names of adjoining property owners), buildings and other man-made structures in the area of the proposed project. Natural features such as contours, surface drainage patterns and other prominent topographic features should be illustrated. Place a north arrow on the site plan.

(iii) Cross Sectional Drawings: A cross sectional drawing of existing and proposed conditions at the project site must be included on the site plan or on a separate plan. If the proposed project causes changes in upstream or downstream flood water surface elevations, cross sectional drawings are required for the channel and floodway conditions in these areas. All cross sections must show existing and proposed design

discharge water surface elevations and the 100 year frequency flood water surface elevation.

8. Project description narrative: Provide a detailed description of the project including structure type(s), amounts of excavation/fill and what purpose the structure or activity will serve. The narrative must also describe in detail what effects the project will have on public health, safety and the environment. Information for this part of the narrative can be obtained from completion of the "**Environmental Assessment**" (**Section E, item 15.**) The narrative must contain a statement on why the project must be built in, along, across or over a watercourse, floodway or body of water. Is there an alternative to the proposed project that would not require such impacts? Be sure to discuss this in detail under the Section E, item 16. "Alternatives Analysis" requirements.

9. Color photographs with map showing location taken: Color photographs (one set for each of the three application packages) must be taken of the site which illustrate watercourse, floodway or body of water conditions at the project site and for areas extending both upstream and downstream. The number of photographs needed to meet this requirement will vary with the size and/or length of proposed work. For singular or small worksites such as a stormwater detention dam, two photographs taken at the site, one looking upstream and one looking downstream, may be all that is required if the impoundment area is not obscured by trees, brush or similar visual impediments. Additional photos will be needed if the impoundment area is obscured or for larger dams to show the relative location, elevation and condition of nearby buildings and the area that the dam embankment will occupy and the pool will inundate. The location that the photographs were taken from the direction of view must be indicated on a separate site plan drawing. Usual practice is to number each photograph, mount in transparent photoholders, mark the numbers on the plan and then draw an arrow from the number in the direction of view.

10. Erosion and Sedimentation Control Plan and approval letter: Attach proof of an application for an NPDES Permit for stormwater discharge or copies of a letter of plan approval from the appropriate county conservation district and copies of the actual Erosion and Sedimentation Control Plan that was so approved.

11. Hydrologic and hydraulic analysis: This should be prepared as a separate report and contain the seal and certification statement of the licensed Professional Engineer who prepared the report.

12. Stormwater Management Analysis with consistency letter: Dams requiring DEP permits are often additionally regulated under local municipal stormwater control ordinances adopted under the Stormwater Management Act (32 P.S. §§680.1–680.17). If such an ordinance exists, an analysis of the proposed project's

impact on the Stormwater Management Plan must be undertaken and reviewed by the local municipality. The analysis and a letter from the municipality indicating consistency with the Stormwater Management Plan must be included in the application package.

13. Floodplain Management Analysis with consistency letter: If the proposed dam is located within a floodway delineated on a FEMA map, an analysis of the project's impact on the floodway delineation and water surface profiles will be required. The analysis and a letter of review from the municipality must be included in the application package.

14. Risk Assessment: If the stormwater and/or the floodplain management analysis conducted under items 12 or 13, indicate increases in peak runoff rates or flood elevations, include as a separate document, a description of property and land uses which may be affected and an analysis of the degree of increased risk to life, property and the environment.

15. Environmental Assessment form: An incomplete Environmental Assessment form will result in the entire application being considered **INCOMPLETE**. Please refer to the instructions on completing the Environmental Assessment form. Blank Environmental Assessment forms are included with the application package.

16. Alternatives Analysis: Provide, as a separate report, a detailed analysis of alternatives to the proposed dam, or other activities, including alternative locations, designs and routings.

17. Mitigation Plan: As defined under Section 105.1 of DEP's Chapter 105 Rules and Regulations, Mitigation is:

(a) **An action undertaken to accomplish one or more of the following:**

(i) **Avoid and minimize impacts by limiting the degree or magnitude of the action and its implementation.**

(ii) **Rectify the impact by repairing, rehabilitating or restoring the impacted environment.**

(iii) **Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action.**

(b) **If the impact cannot be eliminated by following clauses (i)—(iii), compensate for the impact by replacing the environment impacted by the project or by providing substitute resources or environments.**

The mitigation plan must be a separate document which describes how project planning employed mitigation concepts as defined in DEP's Chapter 105 Rules and Regulations. If these impacts cannot be eliminated, then the mitigation plan must include details

and plans for replacing the impacted environment. The specific replacement resources or environments must be itemized and construction, operation and maintenance activities must be detailed in the plan.

18. Proof of title or adequate flowage easements: Included with the application package shall be copies of deeds showing ownership and/or copies of fully executed flowage easements for all land areas below the top of the dam elevation that is subject to inundation. Show all property lines on the site plan.

19. Data on site and construction materials: Attached to the application shall be a report which lists the results of investigations and tests to determine the safety, adequacy and suitability of design for the dam and, when applicable, include:

(a) Data concerning subsoil and rock foundation conditions and the materials to be used in construction.

(b) Data on exploratory pits, drilling, coring and seepage rate tests.

(c) Data on strength tests to measure the physical properties and behavior of foundation and embankment materials at the dam site.

(d) Data on the dam site geology including possible hazards.

(e) Data on the availability and quality of construction materials.

(f) Other information as may be required, including dam design calculations.

20. Design drawings, reports and technical specifications: The application must include a design report, construction plans and specifications in sufficient detail to evaluate the safety, adequacy and suitability of the proposed work.

21. Emergency Action Plan: Applicants for any dam or reservoir that may cause loss of life or serious damage to property if a failure of the dam occurs shall develop (and attach to the application) an emergency action plan to be followed in the event of a dam hazard emergency. The plan shall be prepared in accordance with the requirements of Section 105.134 and the Emergency Action Plan Guidelines available from the Division of Dam Safety.

22. Instrument performance monitoring plan: Submit plans for proposed permanent monitoring of dam performance by instrument installations in the dam. If none are proposed, explain the reasons why.

23. Proof of financial responsibility: For dams that present a substantial potential risk to life or property, the application must include proof of the applicant's financial responsibility or security for continued operation and maintenance during the lifetime of the facility. Refer to

Section 105.20 for detailed instruction on completing this requirement.

24. Data on chemical content, viscosity and other characteristics: 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.

25. Operation and Maintenance Manual: A separate Operation and Maintenance Manual must be prepared in accordance with the requirements of Section 105.131 and include a schedule of inspections as required under Section 105.53.

26. Copies of the most recent inspection reports: Applicable to existing dams.

27. Professional Engineer's Seal and Certification: All plans, specifications and reports accompanying the applications shall be affixed with the seal of a registered professional engineer and a certification, signed by the registered professional engineer, which shall read as follows:

"I (name) do hereby certify pursuant to the penalties of 18 Pa. C.S.A., Section 4904 to the best of my knowledge, information and belief, that the information contained in the accompanying plans, specifications and reports has been prepared in accordance with accepted engineering practice, is true and correct, and is in conformance with Chapter 105 of the rules and regulations of the Department of Environmental Protection."

28. Pertinent Construction Dates: Proposed time for commencement and anticipated completion of construction.

SECTION F. LIST APPROVALS, CERTIFICATION, DENIALS OR NOTICES OF VIOLATION RECEIVED FROM FEDERAL, INTERSTATE, STATE OR LOCAL AGENCIES FOR STRUCTURES, CONSTRUCTION, DISCHARGES OR OTHER ACTIVITIES DESCRIBED IN THIS APPLICATION:

Use additional sheets of paper, if required, and attach to application.

SECTION G. CERTIFICATION AND SIGNATURE

Please see instructions on page 3 of the Permit Application form.