INDUSTRIAL WASTEWATER MANAGEMENT

A Guide to Requirements and Procedures for Obtaining Permits and Other Approvals and for the Planning and Design of Industrial Wastewater Management Systems

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection
For more information, visit DEP directly at www.dep.state.pa.us or through the PA PowerPort at www.state.pa.us
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Water Supply and Wastewater Management

DOCUMENT NUMBER: 362-0300-004

TITLE: Industrial Wastewater Management

EFFECTIVE DATE: October 1, 1997
Minor changes were made throughout (November 13, 2003)

AUTHORITY: Federal Water Pollution Control Act (33 U.S.C.A. §§1251 to 1387) and the
Clean Streams Law (35 P.S. §§691.1-691.1001) Title 25 Pa. Code Chapters
16, 91, 92, 93, 94, 95 and 96.

POLICY: To protect the quality of both surface and underground waters of the
Commonwealth through the abatement and prevention of water pollution.

PURPOSE: To outline the requirements and procedures for obtaining permits and other
approvals for industrial wastewater management systems and discharges in PA.

APPLICABILITY: The guidance document applies to the permitting of industrial wastewater
management systems and discharges.

DISCLAIMER: The policies and procedures outlined in this guidance are intended to
supplement existing requirements. Nothing in the policies or procedures
shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or a regulation.
There is no intent on the part of DEP to give the rules in these policies that
weight or deference. This document establishes the framework within
which DEP will exercise its administrative discretion in the future. DEP
reserves the discretion to deviate from this policy statement if circumstances
warrant.

PAGE LENGTH: 41 pages

LOCATION: Volume 33, Tab 01

DEFINITIONS: Industrial Waste: Any liquid, gaseous, radioactive, solid or other substance,
not sewage, resulting from manufacturing or industry or from any
establishment, and mine drainage refuse, silt, coal mine solids, rock, debris,
dirt and clay from coal mines, coal collieries, breakers or other coal
processing operations. The term includes all of these substances whether or
not generally characterized as waste.
# TABLE OF CONTENTS

## I. Introduction

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Applicable Laws and Regulations Pertaining to Industrial Wastewater Management</td>
<td></td>
</tr>
<tr>
<td>1. Federal Water Quality Act (1987)</td>
<td>1</td>
</tr>
<tr>
<td>2. Pennsylvania Clean Streams Law</td>
<td>2</td>
</tr>
<tr>
<td>3. DEP’s Rules and Regulations Which Deal with Industrial Wastewater Management</td>
<td>2</td>
</tr>
<tr>
<td>4. DEP’s Rules and Regulations Which Deal with Coal Mining</td>
<td>3</td>
</tr>
<tr>
<td>5. The Continuing Planning Process</td>
<td>4</td>
</tr>
<tr>
<td>B. Bureau of Water Supply and Wastewater Management</td>
<td>4</td>
</tr>
<tr>
<td>C. Required Permits and Approvals for Industrial Wastewater Dischargers</td>
<td>4</td>
</tr>
<tr>
<td>1. NPDES Permits</td>
<td>5</td>
</tr>
<tr>
<td>2. Water Quality Management (WQM) Permits</td>
<td>5</td>
</tr>
<tr>
<td>3. Other Permits and Approvals</td>
<td>6</td>
</tr>
<tr>
<td>a. Preparedness, Prevention, and Contingency (PPC) Plan</td>
<td>6</td>
</tr>
<tr>
<td>b. Soil Erosion and Sedimentation Control</td>
<td>7</td>
</tr>
<tr>
<td>c. Headwall/Outfall and Other Encroachment Permit</td>
<td>7</td>
</tr>
<tr>
<td>d. River Basin Commission Approvals and Other Requirements</td>
<td>7</td>
</tr>
<tr>
<td>e. Hazardous and Residual Waste Permits (RCRA)</td>
<td>8</td>
</tr>
<tr>
<td>f. Air Quality Plan and Permit</td>
<td>8</td>
</tr>
<tr>
<td>D. Permit Coordination</td>
<td>8</td>
</tr>
</tbody>
</table>

## II. Procedures for Obtaining Industrial Wastewater Permits

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. NPDES Permits</td>
<td>9</td>
</tr>
<tr>
<td>1. General Requirements</td>
<td>9</td>
</tr>
<tr>
<td>a. Application Forms</td>
<td>9</td>
</tr>
<tr>
<td>b. Services of Professional Consultants</td>
<td>9</td>
</tr>
<tr>
<td>c. Application Fee</td>
<td>10</td>
</tr>
<tr>
<td>d. Public Newspaper Notification Requirements</td>
<td>10</td>
</tr>
<tr>
<td>e. Notification of Municipality and County</td>
<td>11</td>
</tr>
<tr>
<td>2. Review of NPDES Permit Applications by Regional Water Quality Management Staff (Figure 1)</td>
<td>11</td>
</tr>
<tr>
<td>a. Initial Acceptance Review</td>
<td>11</td>
</tr>
<tr>
<td>b. General Basis for Application Reviews</td>
<td>13</td>
</tr>
</tbody>
</table>
3. Determination of Wastewater Treatment Requirements
   a. Water Quality-Based Effluent Limits
      (1) Water Quality Criteria
      (2) “High Quality” or “Exceptional Value” Waters
      (3) “Dry Stream” Discharges
      (4) Time Extensions to Achieve WQBEL
      (5) Additional Information
   b. Technology-Based Effluent Limits
   c. Best Management Practices

4. Transfers, Amendments, Termination, and Revocation and Reissuance of NPDES Permits
   a. Transfer of Permits
   b. Amendments to Permits
   c. Revocation and Reissuance of Permits
   d. Termination of Permits
   e. Renewal of Permits

B. WQM Permits
   1. General Requirements
      a. Application Form
      b. Application Fee
      c. Requirements for Utilizing the Services of a Registered Professional Engineer
         (1) General
         (2) Preliminary Conference
      d. Public Newspaper Notification Requirements for Projects Involving Land Application
      e. Notification of Municipality and County
   2. Review of WQM Permit Applications by the Regional Water Quality Management Staff
      a. Initial Acceptance Review
      b. General Basis for Application Reviews
      c. Preliminary Design Considerations
         (1) General
         (2) Preliminary Hydrogeologic Review
         (3) Design of Impoundments for Storage or Treatment of Residual Wastes
3. Procedures for Obtaining Experimental WQM Permits........................................27
   a. General Information...................................................................................27
   b. Duration of Experimental Permits .............................................................27
4. Transfers, Amendments, and Termination of WQM Permits................................27
   a. Transfer of Permits ....................................................................................27
   b. Amendments to Permits.............................................................................28
   c. Termination and Revocation of Permits ....................................................28
   d. Cancellation of Permits..............................................................................28

FIGURES
1. NPDES Permit Application Review Sequence .................................................12
2. WQM Permit Application Review Sequence ....................................................26
3. General Outline of Design Engineer’s Report .................................................29

TABLES
1. Application Forms to be Used for NPDES Permits for New or Existing Discharges ..........9

APPENDICES
A. Guidelines for the Preparation of the Design Engineer’s Report .........................29
B. Notification Letter..........................................................................................36
I. Introduction

The Department of Environmental Protection (DEP) is authorized by law to protect the quality of both surface and underground waters of the Commonwealth through the prevention and abatement of water pollution. This section discusses the authorizing statutes, and the appropriate rules and regulations upon which DEP bases its actions. Copies of the Clean Streams Law and technical guidance documents are available for viewing on DEP’s website at http://www.dep.state.pa.us/EPS/.

A. Applicable Laws and Regulations Pertaining to Industrial Wastewater Management


The basic structure of the Water Quality Act originated with the Federal Water Pollution Control Act of 1972 (PL 92-500). The name was changed to the Clean Water Act by the 1977 amendments, and then to the Water Quality Act by the 1987 amendments.

Section 101 of the Act establishes national goals, and policy and objective of the Act. The objective being to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” The national goals being:

- a. to eliminate the discharge of pollutants to navigable waters by 1985;
- b. attainment of an “interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water by July 1, 1983.”

The statement of policy includes:

- a. the prohibition of discharges of toxic pollutants in toxic amounts;
- b. a major research and demonstration effort be made to develop technology necessary to eliminate the discharge of pollutants into the navigable waters, waters of the contiguous zone, and the oceans.

The Act defines two major approaches to be used to deliver these goals - technology-based and water quality-based effluent limitations.

Section 301 of the Act establishes requirements for minimum degrees of treatment through technology-based effluent limitations. This section also establishes deadlines for achieving such effluent limitations by various types of dischargers.
Section 302 of the Act provides for the second major approach of establishing water quality related effluent limitations. These water quality limitations are intended to protect both human health and aquatic life, beyond the protection afforded by the technology-based effluent limitations of Section 301 of the Act.

Section 402 of the Act provides the mechanism for implementing these two approaches by requiring a discharger to receive a permit, from the state or Environmental Protection Agency (EPA), before the discharge can begin. EPA has established the National Pollutant Discharge Elimination System (NPDES) in order to fulfill this requirement and to provide for an enforcement mechanism.

In addition, the Act also requires that EPA address spills of oil and hazardous substances, develop guidelines for permissible dumping of dredged and fill material, and develop guidelines for land disposal of biosolids.

2. Pennsylvania Clean Streams Law

The Pennsylvania Clean Streams Law was originally enacted in 1937, and has been amended several times in order to respond to changing needs for water pollution control in Pennsylvania.

Article III of the Clean Streams Law deals specifically with industrial wastes. It requires industrial dischargers to obtain permits to discharge industrial wastes to the waters of the Commonwealth, to obtain approval of plans and specifications prior to construction of industrial wastewater treatment facilities, and to obtain permits to construct those treatment facilities. The article also requires industrial wastewater dischargers to operate the treatment facilities in accordance with DEP’s regulations.

The Clean Streams Law also establishes appropriate enforcement procedures and penalties which apply to violations of the law.

3. DEP’s Rules and Regulations Which Deal with Industrial Wastewater Management

The Environmental Quality Board, under Title 25 of the Pennsylvania Code, has established Rules and Regulations to control water pollution and to protect water quality. All chapters of DEP’s Rules and Regulations are available at http://www.pacode.com. Those chapters which directly or indirectly relate to the control of industrial wastewater discharges are as follows:

a. Chapter 16 - This chapter sets forth specific water quality criteria for toxic substances.

b. Chapter 91 - This chapter sets forth general provisions for administration and enforcement of Pennsylvania’s water quality management program, and establishes specific application requirements, fee schedules, and
conditions for the approval and permitting of the construction and operation of wastewater treatment projects within Pennsylvania.

c. **Chapter 92** - This chapter sets forth the provisions for administration of the NPDES program within Pennsylvania, and establishes criteria for the content of NPDES permit applications, effluent standards, monitoring requirements, standard permit conditions, public notification procedures, and other requirements pertaining to the NPDES program.

d. **Chapter 93** - This chapter sets forth specific water quality criteria and designated water uses to be protected for each stream in Pennsylvania.

e. **Chapter 94** - This chapter sets forth provisions for municipalities to address pretreatment and other management requirements for industrial wastewater discharged to municipal sewage collection and treatment systems.

f. **Chapter 95** - This chapter sets forth basic wastewater treatment requirements for all dischargers and includes requirements and procedures for dealing with special circumstances, such as dealing with discharges to acid-impregnated streams, and special considerations for dealing with discharges to lakes, ponds, and impoundments.

g. **Chapter 96** - This chapter sets forth the process for achieving and maintaining water quality standards.

4. **DEP’s Rules and Regulations Which Deal with Coal Mining**

Coal mining activities in Pennsylvania which involve anthracite and bituminous surface and underground mines and coal preparation plants are regulated by several laws including the Pennsylvania Clean Streams Law, the Pennsylvania Surface Mining Conservation and Reclamation Act, the Federal Clean Water Act, and the Federal Surface Mining Control and Reclamation Act. Each of these laws have permit implications which impose somewhat different requirements on coal mine operators. DEP’s Mining Permit Program under Chapters 86 through 90 of its Rules and Regulations, integrates the requirements of the four laws and supplemental regulations for permitting purposes in order to reduce the regulatory burden on the coal mine operators.

Non-mining facilities which have the potential to generate leachate and runoff from the storage of coal (i.e., iron and steel facilities, institutional or commercial coal users, small coal dealers, etc.) will be regulated under DEP’s Industrial Wastewater Permit and/or Stormwater Programs. Additional information may be obtained by referring to DEP’s *Comprehensive Stormwater Management Policy* DEP ID: 392-0300-002, available on DEP’s website. In some instances (i.e., the steam electric power industry), EPA’s Effluent Limitation Guidelines deal specifically with the coal storage areas and may be used along with the appropriate water quality criteria in developing the facility’s permit limitations.
Additional information regarding Pennsylvania’s Mining Program can be obtained by referring to DEP’s *Engineering Manual for Mining Operations* DEP ID: 563-0300-101, available on DEP’s website.

5. **The Continuing Planning Process**

DEP, in accordance with Section 208 of the Clean Water Act and Article I, Sections 4 and 5 of Pennsylvania’s Clean Streams Law, has prepared a state-wide Water Quality Management Plan (WQMP). This plan assesses the present condition of both ground and surface waters in the state, identifies their existing uses by residential, municipal, and industrial users, and describes the anticipated wastewater management needs, together with a description of the proposed actions to meet those needs. It also addresses the existing and anticipated needs for nonpoint source management, along with the proposed actions needed to meet those needs.

Any action which involves the issuance or modification of a permit for the treatment or discharge of industrial wastes under Article III of the Clean Streams Law must be in conformance with the appropriate provisions of the WQMP. For further information refer to *Pennsylvania’s Continuing Planning Process for Water Quality Management* DEP ID: 394-0810-001, available on DEP’s website.

B. **Bureau of Water Supply and Wastewater Management**

The Bureau of Water Supply and Wastewater Management (BWSWM) is organized under the Office of Water Management and is responsible for maintaining and improving the quality of Pennsylvania’s water resources, for the protection of planned and probable uses, and for the protection of public health.

BWSWM maintains six regional offices which are responsible for implementing and enforcing Pennsylvania’s Water Quality Management laws, handling complaints, processing permit applications, conducting inspections, and investigating environmental incidents.

The central office of BWSWM, in Harrisburg, is responsible for providing overall program management.

A complete listing of regional offices and the counties under their jurisdiction can be found on DEP’s website.

C. **Required Permits and Approvals for Industrial Wastewater Dischargers**

The Commonwealth of Pennsylvania received delegation of the NPDES Permit Program from the EPA on June 30, 1978. As part of the plan to integrate the NPDES program into the existing state permit system, a two-part permitting process was instituted. The following sections describe these two state-issued permits.
1. **NPDES Permits**

Any person or facility which discharges pollutants into surface waters within Pennsylvania must obtain an NPDES permit. Included are those facilities that discharge stormwater associated with industrial activity as defined by 40 CFR 122.26(b)(14). Information on stormwater associated with industrial activity can be found on EPA’s website at cfpub.epa.gov/npdes/stormwater/indust.cfm or in EPA’s *Guidance Manual for the Preparation of NPDES Permit Application for Storm Water Discharges Associated with Industrial Activity* EPA Publication Number 505/8-91-002 available at [www.epa.gov/npdes/pubs/owm0241.pdf](http://www.epa.gov/npdes/pubs/owm0241.pdf).

The purpose of this permit is to establish appropriate effluent limitations, monitoring and reporting requirements, and schedule (as required) for complying with the terms and conditions of the permit. This permit has a fixed life not exceeding 5 years. The specific permit application requirements and procedures are contained in Chapter 92 of DEP’s Rules and Regulations.

Certain activities within Pennsylvania are not required to obtain an NPDES permit. These activities are as follows:

a. Closed systems, where there is no discharge of industrial wastes from the facility.

b. Industrial waste pretreatment facilities, which discharge to Publicly Owned Treatment Works (POTW), via a sanitary sewerage system. These discharges will be regulated by both new source and existing source categorical pretreatment standards for the industry in question.

c. Nonpoint source agricultural and silviculture activities including runoff (but not including discharges from concentrated animal feeding operations).

d. Return flows from agricultural irrigation.

e. Discharge to groundwater of the Commonwealth (i.e., spray irrigation, subsurface disposal, etc.).

2. **Water Quality Management (WQM) Permits**

The WQM permit provides for the approval of plans and specifications for waste treatment facilities and the construction and operation of these facilities. Treatment facilities which discharge directly to surface or groundwater of the Commonwealth are required to obtain this permit.
Certain activities within Pennsylvania are not normally required to obtain a WQM permit. These activities are as follows:

a. Closed systems, where there is no discharge of industrial wastes from the facility. DEP may, pursuant to Section 402 of the Clean Streams Law, require a permit if there exists the possibility of an occasional discharge from the system or the potential for pollution to occur.

b. Industrial waste pretreatment facilities which discharge into a POTW are not normally required to obtain a WQM permit, although DEP reserves the right to require such a permit pursuant to Section 308 of the Clean Streams Law.

c. Storage and land application of animal manure from concentrated animal feeding operations (CAFO) less than 1,000 animal equivalent units (AEU), which is carried out in a manner which is consistent with DEP’s *Manure Management for Environmental Protection* DEP ID: 361-0300-001, available on DEP’s website.

d. Groundwater cleanup treatment facilities using demonstrated remediation technology and approved by DEP.

e. Impoundments constructed for the detention/settling of stormwater.

For further information regarding what permits are required for various activities, refer to the *Guide to DEP Permits and Other Authorizations*, available on DEP’s website.

The requirements for preparing applications and obtaining a WQM permit are included in Chapter 91 of DEP’s Rules and Regulations.

3. **Other Permits and Approvals**

A number of other permits and approvals may be required for industrial waste treatment facilities in conjunction with NPDES and WQM permits. The following is a brief description of such permits and approvals.

a. **Preparedness, Prevention, and Contingency (PPC) Plan** - All industrial activities which have the potential for an accidental release of pollutants to surface or groundwater must prepare a PPC Plan. A copy of this plan may be required to be submitted for review as part of the NPDES permit application. For proposed new dischargers, where the source of wastewater generation does not yet exist, or if the facility does not require an NPDES Permit, a copy of the PPC Plan should be submitted with the WQM permit application. For further information on PPC planning requirements, see DEP’s *Guidelines for the Development and Implementation of Environmental Emergency Response Plans* DEP ID: 400-2200-001, available on DEP’s website.
b. Soil Erosion and Sedimentation Control - If the construction of any project involves the disturbance of greater than 5,000 square feet, an Erosion and Sedimentation Control (E&SC) Plan must be prepared.

For additional information regarding the contents and requirements of an E&SC Plan, refer to DEP’s Erosion and Sedimentation Pollution Control Program Manual DEP ID: 363-2134-008, available on DEP’s website, and Chapter 102 of DEP’s Rules and Regulations.

c. Headwall/Outfall and Other Encroachment Permit - Any persons planning to construct, operate, maintain, enlarge, or abandon any obstruction (bridge, channel change, etc.) that will affect a watercourse, its 100-year floodway or any lake, pond, reservoir, swamp, marsh or wetland, must obtain a DEP permit. Examples of work requiring a permit include changing a stream channel, dredging, or crossing; building or modifying a bridge, dock, culvert, or pier; installing or changing an intake or outfall structure; working on bank protection, including fill, levees, dikes, bulkheads, and flood walls; placing an aerial crossing, such as a power line, over a navigable stream. Contact the regional office of DEP for more information.

Any state or local government agency or public utility working in a 100-year flood plain, which has been identified by FEMA, must also obtain a permit.

For additional information regarding Headwall/Outfall and Other Encroachment Permits, refer to Chapters 105 and 106 of DEP’s Rules and Regulations.

d. River Basin Commission Approvals and Other Requirements - Any project located within the Delaware River Basin which has a discharge of greater than 50,000 gpd or the discharge contains toxic pollutants (i.e., heavy metals, certain organic compounds, etc.) must be reviewed and approved by the Delaware River Basin Commission (DRBC). In these cases, an additional copy of both the NPDES application and the WQM application should be submitted to the regional office to be forwarded to DRBC for review.

The DRBC application and fee form may be obtained from the website at www.state.nj.us/drbc or by writing the Commission at:

Delaware River Basin Commission
P.O. Box 7360
25 State Police Drive
West Trenton, NJ 08628
The completed application and fee form should be sent directly to the above address.

In certain instances, the Susquehanna River Basin Commission (SRBC) may wish to review a facility’s permit application. In cases such as these, the applicant will be notified by DEP, and a copy of the application will be required to be sent to SRBC.

For dischargers within the Ohio River Basin, the discharge requirements and water pollution control standards of the Ohio River Valley Water Sanitation Commission (ORSANCO) must be satisfied in conjunction with the issuance of NPDES permits.

For dischargers located within Erie and Allegheny Counties, an additional copy of all documents must be submitted. The regional office will forward this material to the county health department for review.

e. Hazardous and Residual Waste Permits (RCRA) - Any industrial facility which generates, processes, treats, disposes, stores, or transports hazardous or residual wastes must obtain the applicable licenses, permits, and approvals for such activities from DEP’s Bureau of Land Recycling and Waste Management (BLRWM).

For further information regarding residual waste permit application and approval requirements, refer to Chapters 271, 273, 277, 281, 283, 287-289, 291, 293, 295, 297, and 299 of DEP’s Rules and Regulations. For hazardous waste application and approval requirements, refer to Chapter 270a. Contact BLRWM at the appropriate regional office.

f. Air Quality Plan and Permit - Since July 1, 1972, anyone planning to acquire, construct, modify, or reactivate any air pollution source, or install any air pollution control device must obtain plan approval, unless the construction, modification, reactivation, or acquisition is specifically exempt or determined by DEP to be of minor significance.

For further information regarding what permits are required for various activities, refer to the Guide to DEP Permits and Other Authorizations.

D. Permit Coordination

DEP has established a permit coordination process to ensure that permits or approvals issued under one environmental program will not conflict with permits or approvals issued by another program.

Upon receipt of a WQM permit application by the regional offices, the various environmental programs in the regional offices will be notified and will indicate whether or not they have an interest in requiring additional permits or approvals for the project. The applicant will then be notified of any other required permits or approvals.
Depending upon the environmental sensitivity or other concerns related to the project, DEP may then elect to coordinate issuance of all permits and approvals.

II. Procedures for Obtaining Industrial Wastewater Permits

A. NPDES Permits

1. General Requirements
   a. Application Forms - Persons or facilities wishing to obtain an NPDES permit must file the required number of copies of the appropriate application form(s) listed in Table 1. Additional forms and supplemental materials, as specified by DEP must also be included as part of the application.

Table 1: Application Forms to be Used for NPDES Permits for New or Existing Discharges

<table>
<thead>
<tr>
<th>Type of Outfall Addressed</th>
<th>Application Form No.</th>
<th>Number of Copies</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Process Wastewaters (includes contact cooling water), non-contact cooling water, miscellaneous wastewaters (boiler, cooling tower blow down, etc.), or stormwater mixed with any of the above.</td>
<td>3800-PM-WSWM0008b</td>
<td>3</td>
</tr>
<tr>
<td>b. Stormwater Only (for industrial activity)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Individual Permit Application</td>
<td>3800-PM-WSWM0008b</td>
<td>3</td>
</tr>
<tr>
<td>2. Notice of Intent to be covered under General Permit (GP)</td>
<td>3920-PM-WM0024b</td>
<td>3</td>
</tr>
</tbody>
</table>

* An additional copy of the application form and supplemental materials must be submitted for projects located in Erie and Allegheny Counties or for certain projects located in the Delaware River Basin.

Requests for confidentiality of information being submitted must comply with the general requirements of Section 607 of Pennsylvania’s Clean Streams Law and Chapter 92 of DEP’s Rules and Regulations pertaining to the NPDES permit program.

Claims for confidentiality must be substantiated at the time of application and must be so indicated. Information on the application may not be claimed as confidential. However, the applicant may request confidentiality for information which goes beyond that required by the application, except for effluent data, which will not be considered confidential.

b. Services of Professional Consultants - It is not necessary for the applicant to obtain a registered professional engineer to prepare the NPDES Permit Application. However, it may be advantageous, in a more complex situation, to consider obtaining such services. Often it will be necessary to obtain a commercial laboratory to perform the required testing.

362-0300-004 / December 11, 2003 / Page 9
c. **Application Fee** - An application fee, in the amount of $500.00, must be submitted with the Individual NPDES Permit Application. A variable fee (not to exceed $500.00) specified by the general permit must be submitted with the Notice of Intent for coverage by an NPDES General Permit. The check should be made payable to “**Commonwealth of Pennsylvania**” and should not be more than 10 days old prior to receipt by DEP.

d. **Public Newspaper Notification Requirements** - Section 307b of the Clean Streams Law requires that for cases involving a new discharge\(^1\) or previously unpermitted discharge of industrial waste to the waters of the Commonwealth, the applicant must publish a notice of its intent to apply for a permit in a newspaper of general circulation, in the locality in which the industrial facilities are located. This notice must appear once a week for 4 consecutive weeks. The notice may read as follows:

```
“NOTICE

Notice is hereby given that the (Company name, address, and telephone number) intends to make application to the Department of Environmental Protection (DEP) for a Water Quality Management Permit for the discharge of industrial wastes in a manner which meets DEP requirements, from its facility located in (municipality), (county). This is a (new, existing) discharge of a (temporary, intermittent, continuous) nature, to (describe location and type of discharge, including the name of the receiving stream where applicable, and the method of discharge).

This application is made under the provision of the Clean Streams Law, the Act of June 22, 1937, P.L. 1987, as amended. Persons desiring additional information, or who wish to provide comment concerning this permit application should contact the Company as indicated above, or DEP at the following address: Regional Water Quality Manager (appropriate address and telephone number), after (date on which application will be submitted).”
```

The notice should be located at or near the top of a right-hand page, as far forward as possible in the first section of the newspaper.

The notice should appear as a “display” type advertisement. Whenever possible, it should be set off from the surrounding material by a black border. The notice should be at least 2 3/4 inches, or two columns, wide (whichever is greater), and at least 4 inches high.

As part of the NPDES permit application materials, the applicant must attach acceptable evidence of its fulfillment of the public notification requirement.

---

\(^1\) These public notification requirements must also be met for existing dischargers which have significantly changed the character of their wastes. (Public newspaper notification requirement does not apply to Notice of Intent to be covered under the Stormwater Discharge General Permit.)
requirements described above. This evidence may consist of either a properly notarized “proof of publication,” or clippings of the advertisement, intact with the datelines of the four required publication dates.

e. Notification of Municipality and County - Act 14, which amended the Commonwealth’s Administrative Code (effective April 17, 1984), and Acts 67, 68, and 127, which amended the Municipalities Planning Code, requires every applicant for a new, amended or renewed NPDES permit to give written notice to each municipality and county in which the facility is located. State agencies may rely upon comprehensive plans and zoning ordinances under certain conditions described in Sections 619.2 and 1105 of the Municipalities Planning Code. The written notices shall be received by the municipalities and counties at least 30 days before DEP may issue or deny the permit. The notification may read as shown in Appendix B.

Submit with your application:

(1) A copy of your correspondence notifying your intentions to the municipality(ies) and the county(ies) in which the permitted activity will occur.

(2) Evidence that the municipality(ies) and county(ies) have received your notification. Acceptable forms of this evidence include, certified mail receipt, or written acknowledgement of the notification from the municipality(ies) and county(ies).

Failure to provide a copy of your notification correspondence and evidence of municipal and county receipt of your notification with the application will delay processing of your permit. Failure to comply with Acts 14, 67, 68, and 127 will result in permit denial.

2. Review of NPDES Permit Applications by Regional Water Quality Management Staff (Figure 1)

a. Initial Acceptance Review - When, upon receipt by the regional office, the application is found to be properly completed, signed and notarized, and the supporting data and application fee appear to be complete and satisfactory, the application will be accepted for review.

If the application is not properly completed or if any of the enclosures are missing or obviously incomplete, a letter stating the deficiency will be sent to the applicant. If corrections are not made or acceptable supplementary data received within the time specified by DEP, the application may be returned to the applicant without action.
Start

Receipt of Application Materials

Examine for Completeness

Complete?

Technical Review

Request Additional Information from Applicant

NO

YES

Coordinate Technical Review of Application

- Obtain input from other sections/bureaus
- Request additional information from application
- Prepare Protection Report and Other Supporting Documentation (i.e. Fact Sheet)

Prepare Draft Permit and Public Notice

Forward Draft Permit and Supporting Documentation to EPA (1), DRBC (3)

Forward Copy to EPA, County Health Dept. (2), DRBC (3)

Return all Material if Major Deficiencies

YES

YES

NO

YES

NO

NO

NO

NOTES
(1) For Non-Waived Cases
(2) Erie and Allegheny Counties only
(3) Where DRBC review necessary

Prepare Public Notice of Hearing

Publish Notice in Pennsylvania Bulletin and Mail to Mailing List

Conduct Public Hearing

Prepare Final Permit Documents

Final Action on Permit Application

Permit Issuance

Notice of Final Action

FIGURE 1
NPDES PERMIT APPLICATION REVIEW SEQUENCE

FORWARD PUBLIC NOTICE TO PA BULLETIN

PUBLISH NOTICE IN PENNSYLVANIA BULLETIN

FORWARD DRAFT PERMIT AND PUBLIC NOTICE TO APPLICANT

RECEIVE AND EVALUATE COMMENTS

DOES SIGNIFICANT PUBLIC INTEREST EXIST?

(If Necessary) Hold Administrative Conference

PUBLIC HEARING PROCESS

SELECT TIME AND PLACE FOR HEARING

PREPARE PUBLIC NOTICE OF HEARING

CONDUCT PUBLIC HEARING

PUBLISH NOTICE IN PENNSYLVANIA BULLETIN

PREPARE FINAL PERMIT DOCUMENTS

NOTES
(1) For Non-Waived Cases
(2) Erie and Allegheny Counties only
(3) Where DRBC review necessary
b. General Basis for Application Reviews - After acceptance of the application, the regional office staff will review the application and take appropriate action.

As discussed in Section II.A.3. below, NPDES permit applications are reviewed from the perspective of protecting water quality in the receiving stream and of achieving technology-based effluent standards to meet the requirements of Section 301(b) of the Federal Clean Water Act.

A draft permit will be sent to the applicant for review and comment, and will be published in the Pennsylvania Bulletin for a 30-day comment period.

3. Determination of Wastewater Treatment Requirements

The effluent limits developed and included in an NPDES permit may be either water quality-based or technology-based, or they may be the result of a “best management practices” approach to controlling or abating a pollution problem, or a combination of any or all of the above.

The final effluent limits will be based on the more stringent of either the technology-based or water quality-based considerations.

a. Water Quality-Based Effluent Limits

(1) Water Quality Criteria

Water quality-based effluent limits (WQBEL) are established in order to attain or maintain a specific degree of water quality in the receiving stream. Chapter 93 of DEP’s Rules and Regulations sets forth water quality standards on a stream-by-stream basis, which include the designated water use(s) to be protected and the instream water quality criteria for conventional parameters which are necessary to insure protection of the designated water uses. Chapter 16 of DEP’s Rules and Regulations sets forth instream criteria for toxics parameters.

In cases where no numerical criteria exist in Chapter 93 or Chapter 16 for a particular pollutant, the General Water Quality Criteria portion of the regulation will apply. Numerical criteria may be developed based upon the literature or a bioassay, as appropriate, in accordance with procedures outlined in the regulation.

These instream water quality criteria are not effluent limitations, but rather are used to develop effluent limitations based on stream modeling techniques. Where the waste discharge volume equals or
exceeds the design low-flow of the receiving stream, the effluent limitations may be equal to the instream criteria.

(2) “High Quality” or “Exceptional Value” Waters

Situations may arise where an industrial wastewater treatment facility, or its discharge, is located on a stream which is designated under “Water Uses Protected” as either “High Quality” or “Exceptional Value” Waters in Chapter 93 of DEP’s Rules and Regulations, and special rules apply. See DEP’s Water Quality Antidegradation Implementation Guidance DEP ID: 391-0300-002, available on DEP’s website.

(3) “Dry Stream” Discharges

Situations may exist whereby a wastewater discharge is to either an intermittent stream which is dry during the “dry season,” or to a stormwater drainage ditch which only has flow during and immediately following storms.

DEP’s policy regarding discharges to “dry streams” considers the protection of general water uses as well as stream uses where they exist downstream of the discharge.

The hydrogeologic conditions in some parts of Pennsylvania are such that discharges to these essentially “dry streams” will infiltrate, at least in part, to recharge groundwater. Therefore, groundwater uses downgradient from the point of discharge may become the controlling factor, rather than the usual established stream uses.

In order to implement this policy, an industrial waste discharger will be required to provide preliminary hydrogeological information and documentation whenever the proposed discharge is to a “dry stream” channel. The type of information that will be required is in DEP’s Implementation Guidance for Evaluating Wastewater Discharges to Drainage Ditches and Swales DEP ID: 391-2000-014, available on DEP’s website.

A regional hydrogeologist will review the preliminary information in consultation with a soil scientist, if necessary. Based upon the review, it will be determined whether the proposed discharge will protect groundwater uses. If it is determined that the groundwater uses will not be protected, the reasons will be indicated, and the proposed project may then be revised accordingly.

The applicant may be requested to submit additional information if the hydrogeologist or soil scientist determines that more
information is necessary before a decision can be made. If necessary, the applicant may be required to conduct monitoring of the existing groundwater uses.

If the proposed project cannot be revised to protect both groundwater and surface water uses, then a permit for a discharge to the “dry stream” channel will be denied.

(4) Time Extensions to Achieve WQBEL

In certain instances, an existing industrial waste discharger may be given an extension of time in which to meet WQBEL. DEP, in accordance with Chapter 95 of its Rules and Regulations, may grant such time extensions to qualifying dischargers. Refer to Chapter 95.4 for more information.

(5) Additional Information

Further information regarding NPDES permit effluent limitation development can be obtained by referring to:

• Toxics Management Strategy DEP ID: 361-0100-003, available on DEP’s website

• DEP Rules and Regulations Chapter 16

• EPA’s Technical Support Document for Water Quality-Based Toxics Control


• Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances DEP ID: 391-2000-022, available on DEP’s website

• Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits DEP ID: 362-0400-001, available on DEP’s website

• Permitting Policy and Procedure Manual DEP ID: 362-2000-001, available on DEP’s website
b. **Technology-Based Effluent Limits**

Technology-based effluent limits are requirements under Section 301 of the Federal Clean Water Act, which represent the minimum level of control that must be achieved by industrial dischargers. These levels of control are based on “Best Practical Control Technology Currently Available” (BPT), “Best Conventional Pollutant Control Technology” (BCT), and “Best Available Technology Economically Achievable” (BAT). EPA has developed these standards for a wide variety of industrial categories and their respective subcategories. These standards can be found in 40 CFR Subchapter N (Parts 401-471).

c. **Best Management Practices**

For some types of discharge situations, it is impractical or infeasible to establish numerical effluent limits. In cases such as these, a Best Management Practices (BMP) approach may be the only way of reasonably controlling the discharge. Section 304(e) of the 1977 Clean Water Act authorizes such BMPs and provides for their incorporation into permits.

Examples of when numeric effluent limitations are infeasible include:

1. Regulating a pollutant for which limited treatability or aquatic impact information are available to allow development of technology-based or water quality-based effluent limits.

2. Regulatory releases when the types of pollutants vary greatly over time.

Other circumstances when BMPs could be imposed include:

1. When chemical analyses are inappropriate or impossible.

2. When a complex facility lacks toxic pollutant data.

3. When other discharge control options are prohibitively expensive.

Practices such as monitoring or routine inspections, preventative maintenance, and good housekeeping measures, as well as actual treatment facilities, are recognized as acceptable BMPs. Additional information on BMPs can be found in EPA’s *Guidance Manual for Developing Best Management Practices (BMP)* EPA Publication Number 833-B-93-004 available at [www.epa.gov/npdes/pubs/owm0274.pdf](http://www.epa.gov/npdes/pubs/owm0274.pdf).

BMPs will be incorporated into NPDES Permits on a case-by-case basis.
4. Transfers, Amendments, Termination, and Revocation and Reissuance of NPDES Permits

a. Transfer of Permits

An NPDES permit may be transferred from one owner/operator to another owner/operator provided that the treatment facilities are the same and that neither the quantity nor quality of the discharge from that facility has changed from that originally permitted.

If the proposed transfer will involve a change in wastewater discharge’s character, the new owner/operator must submit a new Application for NPDES Permit for Industrial Dischargers (3800-PM-WSWM0008b), available on DEP’s website, and the appropriate filing fee.

At least 30 days prior to the change in ownership or control, the permittee should notify DEP by submission of a completed Application for NPDES or WQM Permit Transfer (3800-PM-WSWM0041b), available on DEP’s website, of the pending change and request a permit transfer. If so specified in a general permit, a letter may be submitted in lieu of the transfer application. The letter should be accompanied by a written agreement between the existing permittee and the new owner or operator, stating that the existing permittee will be liable for violations of the permit up to the date of permit transfer and that the new owner or operator will be liable for permit violations from that date on. No fee is normally required for the transfer of NPDES permits.

After receipt of the above documentation, DEP will notify the existing permittee and the new owner or operator of its decision concerning approval of transfer.

If the facility is not in compliance at the time of transfer, the new owner/operator will be liable for any violations. A schedule leading to compliance will normally be required prior to the transfer of the permits.

If the facility also possesses a WQM permit, the proposed transfer of both permits should be completed simultaneously.

b. Amendments to Permits

An NPDES permit may be amended by DEP for any of the following reasons:

(1) If the permittee desires to expand or change production which will significantly increase the flow or change the wastewater’s characteristics.
(2) If any new information is received which indicates that the cumulative effects of a particular pollutant parameter listed in the existing permit are unacceptable.

(3) If the standards or regulations on which the existing permit is based are amended.

(4) If the permittee is eligible for a variance or time extension under the CWA.

(5) To incorporate any toxic effluent standard, technology-based treatment requirement, net effluent limitations, or to modify any compliance schedule.

(6) If required by a reopen clause in the existing permit.

For “major” amendments, if the regional office decides to modify a permit, or if it receives a request from the permittee for such an amendment, a draft permit will be prepared and the normal issuance procedures (i.e., publication, comment period, etc.) are followed. For cases involving an “applicant initiated” major amendment, a new permit fee is required.

An NPDES permit may also be modified or corrected to allow for “minor” changes. These “minor amendments” may be used to correct typographical errors, require more frequent monitoring or reporting by the permittee, change an interim compliance date (by no more than 120 days), allow for change in ownership, or delete a point source outfall from which a discharge is terminated. Such minor modifications do not normally require a fee, draft permit, or public notice and comment period.

c. Revocation and Reissuance of Permits

An NPDES permit may be revoked and then reissued for one or more of the reasons listed in Section b. above, or if a cause listed in Section d. below exists for termination of the permit, and it has been determined that revocation and reissuance is appropriate.

In cases such as these, the entire permit is reopened and is subject to revision. The revised permit is then prepared as a draft permit and is processed according to normal issuance procedures. The permit is then reissued for a new term.
d. Termination of Permits

An NPDES permit may be terminated during its term for the following reasons:

(1) Noncompliance by the permittee with any condition of the permit.

(2) The failure of the applicant to disclose fully all relevant facts during the application or issuance process, or the misrepresentation of any relevant facts at any time.

(3) If a determination that the permitted activity endangers human health or the environment.

(4) If a change in any condition requires either a temporary or a permanent reduction or elimination of the discharge.

e. Renewal of Permits

All NPDES Permits have a fixed term which may not exceed 5 years. At least 180 days prior to the expiration of the permit, the permittee must submit a renewal application along with the application fee to the appropriate regional office. Should the permit expire prior to issuance of the new permit through no fault of the permittee, the terms and conditions of the expired permit may be extended, provided that a proper renewal application has been submitted in a timely manner.

B. WQM Permits

1. General Requirements

a. Application Form - Persons or facilities wishing to obtain a WQM permit must file three copies of the Water Quality Management Permit Application form (3800-PM-WSWM0400b), available on DEP’s website, and applicable design modules. An additional copy of the application form and supplemental materials must be submitted for projects located in Erie and Allegheny Counties. Certain projects located in the Delaware River Basin must submit an additional copy of the application form and supplemental materials to the regional office to be forwarded to DRBC for review. Additional forms and supplemental materials as specified by DEP, must also be included as part of the application.

b. Application Fee - An application fee, in the amount of $500.00, must be submitted with the WQM Permit Application. The check should be made payable to “Commonwealth of Pennsylvania” and should not be more than 10 days old prior to receipt by DEP. The application fee is not required of agencies of the Commonwealth.
c. Requirements for Utilizing the Services of a Registered Professional Engineer

(1) General - Any person or facility wishing to obtain a WQM permit must use the services of a registered professional engineer, legally qualified to practice in Pennsylvania and competent in the design of industrial wastewater treatment facilities. The Design Engineer’s Report (see Appendix A), plans, drawings, and other reports or technical documents must bear the seal and signature of the registered professional engineer.

By signing the report and application, the engineer is certifying that under penalty of law, the information he/she is providing in this certification is true, accurate, and complete. He/she is aware that there are significant civil and criminal penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Furthermore, he/she is certifying that implementation of this report will, in his/her professional opinion as a licensed professional engineer, ensure that operation of the treatment facility will result in a treated effluent that will meet or exceed the NPDES permit limitation for the discharge.

(2) Preliminary Conference - Prior to preparation and submittal of a WQM permit application, it is recommended (particularly for complex situations) that the applicant and/or design engineer arrange a preliminary conference with the applicable regional office of Water Quality Management to discuss the requirements of DEP pertaining to effluent limitations, facilities, design, etc.

d. Public Newspaper Notification Requirements for Projects Involving Land Application

For projects which involve actual discharges to groundwater via land application of industrial waste (such as spray irrigation or underground injection), Section 307 of Pennsylvania’s Clean Streams Law requires that for cases involving a new industrial waste discharge\(^2\) or previously unpermitted discharge to the waters of the Commonwealth (i.e., groundwater in these cases), the applicant must publish a notice of its intent to apply for a WQM permit in a newspaper of general circulation in the locality in which the industrial facilities are located. This notice must appear once a week for 4 consecutive weeks. The notice may read as follows:

\(^2\) These public notification requirements must also be met for those permitted (existing) industrial waste dischargers which have significantly changed the character of their wastes.
“NOTICE

Notice is hereby given that the (Company name, address, and telephone number) intends to make application to the Department of Environmental Protection (DEP) for a Water Quality Management Permit for the discharge of industrial wastes in a manner which meet DEP requirements, from its facility located in (municipality), (county). This is a (new, existing) discharge of a (temporary, intermittent, continuous) nature, to (describe location and type of discharge, including the name of the receiving stream where applicable, and the method of discharge - such as spray irrigation - where appropriate).

This application is made under the provisions of the Clean Streams Law, the Act of June 22, 1937, P.L. 1987, as amended. Persons desiring additional information, or who wish to provide comment concerning this permit application should contact the Company as indicated above, or DEP at the following address: Regional Water Quality Manager (appropriate address and telephone number), after (date on which application will be submitted).”

The notice should be located at or near the top of a right-hand page, as far forward as possible in the first section of the newspaper.

The notice should appear as a “display” type advertisement. Whenever possible, it should be set off from the surrounding material by a black border. The notice should be at least 2 3/4 inches, or two columns, wide (whichever is greater), and at least 4 inches high.

As part of the WQM permit application materials, the applicant must attach acceptable evidence of its fulfillment of the public notification requirements described above. This evidence may consist of either a properly notarized “proof of publication,” or clippings of the advertisement, intact with the datelines of the four required publication dates.

No public notification is required for WQM permits approving the operation, maintenance, or use of surface impoundments which do not have a discharge to waters of the Commonwealth.

e. Notification of Municipality and County - Act 14, which amended the Commonwealth’s Administrative Code (effective April 17, 1984), and Acts 67, 68, and 127, which amended the Municipalities Planning Code, requires every applicant for a new, amended, or renewed WQM permit to give written notice to each municipality and county in which the facility is located. State agencies may rely upon comprehensive plans and zoning ordinances under certain conditions described in Sections 619.2 and 1105 of the Municipalities Planning Code. The written notices shall be received
by the municipalities and counties at least 30 days before DEP may issue or deny the permit. The notification may read as shown in Appendix B.

Submit with your application:

(1) A copy of your correspondence notifying your intentions to the municipality(ies) and the county(ies) in which the permitted activity will occur.

(2) Evidence that the municipality(ies) and county(ies) have received your notification. Acceptable forms of this evidence include certified mail receipt, or written acknowledgement of the notification from the municipality(ies) and the county(ies).

Failure to provide a copy of your notification correspondence and evidence of municipal and county receipt of your notification with the application will delay processing of your permit. Failure to comply with Acts 14, 67, 68, and 127 will result in permit denial.

2. Review of WQM Permit Applications by the Regional Water Quality Management Staff

a. Initial Acceptance Review - After receipt by the regional office, once the application is found to be properly completed, signed, and notarized, and the supporting data and check or money order appear to be complete and satisfactory, the application will be accepted for review.

If the application is not properly completed or if any of the enclosures are missing or obviously incomplete, a letter stating the deficiency will be sent to the applicant with a copy to his engineer. If corrections are not made or acceptable supplementary data received within the time specified by DEP, the application and supplemental information will be returned to the applicant without action.

b. General Basis for Application Reviews - After acceptance of the application, the regional office staff will review the application materials and take appropriate action. WQM permit applications are reviewed from a functional point of view to assure the suitability and adequacy of the existing or proposed treatment works to control or eliminate pollution, and to assure that the treatment units will operate reliably under present or future conditions. Matters of structural design and mechanical, electrical, and other details are of interest to DEP only to the extent that they directly affect the functioning of the treatment process. If, however, a Hazardous Waste permit is required for these same treatment facilities, the structural design, construction, and operation will be reviewed for compliance with applicable DEP regulations.
The permit application review will mainly concentrate on the Design Engineer’s Report, as discussed in Appendix A. The permit review staff will not necessarily check all details of the design computations and will largely rely upon the statements of the design engineer. Therefore, it is essential that the same information appearing at different places in the application documents be consistent and correct.

DEP will consider the registered professional engineer whose seal is affixed to facility design documents to be fully responsible for the adequacy of all aspects of the facility design and compliance with the state standards and requirements.

Staff limitation does not permit detailed comments as such on applications with a large number of deficiencies. As discussed in subparagraph a., above, such applications will be returned to the applicant without a detailed commentary. In most cases, if the application satisfies established requirements and standards, the permit will be issued.

c. Preliminary Design Considerations

(1) General

As discussed above, it is recommended that the applicant and/or design engineer arrange a preliminary conference with the appropriate regional office. This preliminary conference should be used by the applicant to discuss any details of the WQM permit application which may need special consideration. A preliminary design and any associated information provided by the applicant and/or the design engineer at this time may help answer any questions the review engineer may have, and ultimately facilitate the processing of the permit application.

(2) Preliminary Hydrogeologic Review

In cases involving review of hydrogeologic conditions (such as land application of wastewater via spray irrigation or subsurface injection), the applicant will be required to submit the following preliminary hydrogeologic information for review prior to submittal of a formal WQM permit application for the project:
(a) Topographic location of the discharge including latitude and longitude, geologic quadrangle, and major drainage basin.

(b) Land application rate (inches/acre/day) and concentrations of waste constituents (mg/l).

(c) Estimated infiltration rate to groundwater during various times of the year.

(d) Expected degree of renovation during infiltration (based on soil conditions, type of discharge, etc.).

(e) Estimated area of impacted groundwater. This should include a discussion on the wastewater dispersion plume and mixing zone within the dispersion plume, the depth and direction of the gradient, and other physical attributes of the plume’s movement.

(f) Identification of any existing or potential groundwater uses in the area of impact.

For projects involving deep-well injection, refer to the EPA’s Underground Injection Control (UIC) Program and 40 CFR 144.

A regional hydrogeologist will review the preliminary information in consultation with a soil scientist, if necessary. Based upon the review, it will be determined whether the proposed discharge will protect groundwater uses. If it is determined that groundwater uses will not be protected, the reasons will be indicated and the proposed project may then be revised accordingly.

Based on the preliminary review, as part of the Design Engineer’s Report, the applicant may be requested to submit supplemental groundwater, soils, and geology information if the hydrogeologist determines that more information is necessary before a decision can be made. If necessary, the applicant may be required to conduct monitoring of the existing groundwater uses prior to formal permit application submittal.

(3) Design of Impoundments for Storage or Treatment of Residual Wastes

Impoundments that are to store or treat residual wastes\(^3\) shall be designed, constructed, and operated according to Title 25 Pa. Code Chapter 299 Subchapter A (Standards for Storage of Residual Wastes).

\(^3\) As defined by Title 25 Pa. Code Chapter 287.1.
Waste). This requirement is subject to the exemptions and conditions listed in Title 25 Pa. Code Chapters 287.2, 287.101, and 299.141.

d. **Application Review Time Frame**

Although not as administratively complex as the NPDES permit program (see Figure 2), a 60- to 120-day time period should be anticipated for review of WQM permit applications and permit issuance. If review by a river basin commission or county health department is required, an additional 30 days may be involved. The above time frame may be shortened considerably through proper attention on the part of the applicant and/or the design engineer to the accuracy and adequacy of technical detail, and the consistency of information submitted in support of this application.
Start → Receipt of Application Materials → Request Additional Information from Applicant

Examine for Completeness → Complete?

YES → Technical Review

NO → Return all Material if Major Deficiencies

Forward Copy of Pertinent Application Materials to:
- Pa. Fish Commission
- River Basin Commission
- County Health Department

Publish Notice in Pennsylvania Bulletin of Application Receipt

YES → Does Significant Public Interest Exist?

NO → Final Action on Permit Application

Prepare Final Permit Documents

Permit Issuance

Notice of Final Action Pennsylvania Bulletin

Public Hearing Process → Select Time and Place for Hearing

Prepare Public Notice of Hearing

Publish Notice in Pennsylvania Bulletin and Mail to Mailing List

Conduct Public Hearing

Coordinate Technical Review of Application of Application

- Obtain input from other bureaus
- Request additional information from application

Receive and Evaluate Comments

FIGURE 2

WQM PERMIT APPLICATION REVIEW SEQUENCE
3. Procedures for Obtaining Experimental WQM Permits

a. General Information - An industrial discharger which proposes to utilize a new or unconventional treatment process(es), for which no full-scale operational data is available, may apply to DEP for an “experimental permit.” A reasonable basis or justification must be presented for the proposed design, and should be thoroughly described in the Design Engineer’s Report.

b. Duration of Experimental Permits - The permit will be normally issued for an experimental period having a duration not exceeding 18 months (included to provide adequate opportunity to demonstrate operational efficiency and reliability over a representative range of operating conditions), during which time the permittee will submit periodic reports on the operational and discharge characteristics of the process(es), as specified by DEP. The permittee must also insure that the failure of the experimental process(es) will not result in serious pollution or a hazard to public health.

Generally, no more than one experimental permit for the same treatment method will be issued during the experimental period.

4. Transfers, Amendments, and Termination of WQM Permits

a. Transfer of Permits - A WQM permit may be transferred from one owner/operator to another owner/operator provided that the treatment facilities are the same and that neither the quantity nor quality of the discharge from that facility has changed from that originally permitted.

If the proposed transfer will involve a change in the treatment plant’s unit processes (i.e., upgrading treatment processes, etc.), the new owner/operator must submit a new WQM permit application indicating the changes and the appropriate filing fee.

At least 30 days prior to the change in ownership or control the permittee should notify DEP of the pending change by submitting a completed Application for NPDES or WQM Permit Transfer (3800-PM-WSWM0041b). No fee is normally required for the transfer of WQM permits.

After receipt of the above documentation, DEP will notify the existing permittee and the new owner or operator of its decision concerning approval of transfer.

If the facility also possesses an NPDES permit, the proposed transfer of both permits should be completed simultaneously.
If the facility is not in compliance at the time of transfer, the new owner/operator may be liable for any violations. A schedule leading to compliance will normally be required prior to the transfer of the permits.

b. **Amendments to Permits** - A WQM permit may be amended by DEP for various reasons. Any physical changes to the treatment facilities (which add or delete unit processes) as a result of changes in

1. the volume of wastewater to be treated, or
2. the effluent quality requirements

require submittal of a new WQM permit application and filing fee.

Other types of modifications or “corrections” not requiring a new permit application may be requested, in writing, from the appropriate regional office. No fee is required for these types of modifications.

c. **Termination and Revocation of Permits** - A WQM permit may be terminated or revoked for projects which have either not been constructed or have not been constructed in accordance to the submitted application, designs, or plans. A revoked permit cannot be reinstated.

d. **Cancellation of Permits** - A WQM permit may be canceled upon request of the permittee, except in cases where the cancellation would relieve the permittee of responsibility in correcting existing or possible future violations at facilities covered by the permit.

A letter requesting such an action should be sent to the appropriate regional office. Upon receipt of this written request, the regional office will notify the permittee indicating the cancellation. The canceled permit should then be returned to DEP.
APPENDIX A

GUIDELINES FOR THE PREPARATION OF THE DESIGN ENGINEER’S REPORT

A Professional Engineer, registered in Pennsylvania, and competent in the field of industrial wastewater treatment, must prepare a Design Engineer’s Report as part of the WQM permit application. This Appendix describes the type of information that should be considered both before and during the preparation of such a report.

Figure 3 outlines the general sequence of items to be included in the Design Engineer’s Report.

FIGURE 3
GENERAL OUTLINE OF DESIGN ENGINEER’S REPORT

<table>
<thead>
<tr>
<th>Title</th>
<th>Preparer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Preparation</td>
<td></td>
</tr>
<tr>
<td>Table of Contents</td>
<td></td>
</tr>
</tbody>
</table>

I. General Information
A. Facility Status
B. General Facility Layout Diagram
C. General Project Description
D. Schematic of Water/Wastewater Flow
E. Treatment Facility Size, Capacity, & Dimension Diagram

II. Detailed Description of Existing and Proposed Wastewater Treatment Processes
A. Basis for Design of Individual Treatment Unit Processes
B. Supplemental Chemical Addition or Treatment (if Applicable)
C. Pumping Equipment (if Applicable)
D. Monitoring and Control Equipment
E. Handling, Conditioning, and Storage of Residual Materials

III. Operational Flexibility and Reliability of Treatment Systems
A. Alarms and Sensing Devices
B. Control of the Quantity and Quality of Wastewater When the Treatment System is Inoperative
C. Personnel Training
D. Availability of Instructions and Guidelines for the Operation and Maintenance of Treatment Units
E. Site Security

IV. Preliminary and Supplemental Groundwater, Soils, and Geology Information (If Applicable)

V. Appendices Containing Supporting Information (i.e., Maps, Charts, Literature, etc.) Which Have Been Referenced in the Report
GENERAL INSTRUCTIONS FOR COMPLETING THE DESIGN ENGINEER’S REPORT

I. General Information - The Design Engineer’s Report should be concise, however, it should completely cover the type of information and the level of detail listed below so that clarity is not sacrificed.

Prior to any detailed description of the proposed or existing treatment unit process(es), the Design Engineer should briefly discuss the following topics:

A. Facility Status

A brief narrative summary should be prepared which describes the relationship between the:

• consumption of raw materials and/or the manufacture of products;
• associated water uses within the facility; and
• the volume, nature, and strength of the wastewater to be treated.

The above summary should include a description of each industrial operation and the special types and quantities of the raw materials involved and/or the products which result.

Any anticipated variability or change in these industrial operations or their associated usage of raw materials and levels of production should also be briefly discussed. Any relationships between water uses and wastewater production should also be discussed.

For facilities which have an NPDES permit, some of this information may already have been presented as part of the NPDES permit application, in which case, an appropriate cross reference should be made to that portion of the NPDES application in conjunction with the narrative description.

Requests for confidentiality of information being submitted must comply with the General Requirements of Section 607 of Pennsylvania’s Clean Streams Law and Chapter 92 of DEP’s Rules and Regulations pertaining to the NPDES permit program.

B. General Facility Layout Diagram

Plans or sketches showing the general layout of the industrial facility and the wastewater treatment works (existing & proposed), should be included as part of the Design Engineer’s Report. The location of protective fencing and other site security measures should also be indicated on this diagram.
C. General Project Description

1. Wastewater Treatment Facilities

A brief narrative summary should be prepared which first describes any existing wastewater treatment facilities currently being used. This part of the summary should be brief but should describe such items as volume, wastewater flow pattern (continuous, batch, etc.), and the existing degree of treatment being provided.

The narrative should then describe the proposed wastewater treatment system, and the reasons for considering such a system (i.e., improved treatment efficiency, less operation and maintenance, etc.).

This narrative should also describe: a sequence of construction which includes any provisions for maintaining treatment efficiency and protecting water quality during construction, should it be necessary to remove existing treatment units from operation; the anticipated time-table for completing the proposed project; and a discussion on provisions for future treatment system expansion to meet any anticipated changes in wastewater quantity or quality.

In addition to these narrative descriptions, information on existing and proposed treatment units should be summarized as part of the application package.

2. Wastewater Characteristics

Information on the characteristics of the wastewater to be treated should be summarized as part of the application package. This includes characteristics of untreated wastewater, quality of effluent from existing treatment facilities, and the expected quality of effluent from new or modified treatment facilities.

Additional narrative discussion should be provided, as considered necessary, to further clarify any of the information presented in the application.

D. Schematic of Water/Wastewater Flow

An 8½” x 11” Schematic Wastewater Flow Diagram should be included in this portion of the Design Engineer’s Report and should show the following information:

1. Source(s) of water intake and wastewater generation.

2. A water balance showing average water and wastewater flows between the intake(s) and the point(s) of discharge.

3. Existing and proposed treatment facilities and the functional relationship between treatment units.

4. Piping arrangements, location of pumps, and other flow controlling devices.
5. Location of overflows and bypasses.

6. Location of other related equipment.

E. Treatment Facility Size, Capacity, & Dimension Diagram

Another diagram should be included which indicates the size, capacity, and dimensions of each treatment unit. The plans should also show the relative location of the industrial establishment, the waste treatment works, and the discharge point relative to the location of the receiving stream. These plans should be no larger than 36” x 50”.

II. Detailed Description of Existing and Proposed Wastewater Treatment Processes

This portion of the Design Engineer’s Report should contain a concise narrative summary of each new, modified, or “upgraded” industrial wastewater treatment unit process, and of any existing wastewater treatment unit process(es) which will continue to be used.

A. Basis for the Design of Individual Treatment Unit Processes

This summary should briefly describe the function each unit process will provide, including all of the basic assumptions and rationale used in its design. The narrative should clearly identify all key process design parameters including the appropriate calculations.

This portion of the Design Engineer’s Report should also discuss the treatment system’s ability to meet the established effluent limitations. The discussion should include (if possible) the expected removal rates of each unit process and any factors which may affect its performance or operational efficiency (i.e., temperature, toxics, etc.). These expected levels of treatment may be based on literature reviews, bench scale tests or pilot plants, or on the performance of similar treatment facilities.

Manufacturer’s literature, line drawings, or specifications may also be submitted if considered appropriate. These additional sources of information should be referenced in the narrative portion of the Design Engineer’s Report.

B. Supplemental Chemical Addition or Treatment

If supplemental chemical addition or specific chemical treatment is used in conjunction with any of the wastewater treatment unit processes or in conjunction with conditioning of waste treatment residual materials, the types of chemicals used, the dosage rates (in lbs. or gals. per day), the points of application, and the feeder equipment used should be described. These items should also be shown on the water/wastewater flow diagram as described in I.D. above. As will be discussed later, under item D. below, the type of monitoring and control equipment associated with the use of chemical treatment should also be discussed and shown either on the water/wastewater flow diagram or on a separate “Meter-Location” diagram, if necessary.
Any control measures, safety precautions, etc., which are associated with chemical treatment, should be addressed in the facility’s PPC Plan.

C. **Pumping Equipment**

The *Design Engineer’s Report* should describe any pumping equipment that may be used as part of the treatment facilities. This description should include the type of pump, and where and for what purpose it will be used, along with its rated capacity.

In situations where a relatively large number of pumps are used, a table may be used to facilitate the above description. The location of the pumping equipment should also be shown on the water/wastewater flow diagram as described above in I.D.

D. **Monitoring and Control Equipment**

The *Design Engineer’s Report* should briefly discuss the industrial wastewater treatment facility’s monitoring and control equipment and how it is applied at each particular point in the facility’s treatment scheme. The discussion should indicate the point of application, the type of monitoring and recording or control device (e.g., Venturi Meter with Chart Totalizer), and the purpose of application. A chart and a diagram may be used in lieu of a narrative description.

E. **Handling, Conditioning, and Storage of Residual Materials**

The *Design Engineer’s Report* should discuss the provisions for handling, conditioning, and storage of all residual materials generated as a result of the industrial wastewater treatment process. This discussion should include the chemical nature and the quantity of the residuals produced, and the particular method or technique used in their handling, conditioning, and storage.

A discussion should also be included which covers the handling of liquids (i.e., filtrate, supernatant, centrate, etc.) which are generated during the handling, storage, and conditioning process. This discussion should cover the quantities and strengths of these liquids and the methods of their final disposal and/or utilization.

This portion of the *Design Engineer’s Report* should describe any Hazardous Waste or Solid Waste Management Permits which may have been obtained, or applied for, as a result of the above mentioned residuals handling procedures. The discussion should include the type of permit, permit number, and the dates of issuance and expiration.

III. **Operation Flexibility and Reliability of Treatment Systems**

The *Design Engineer’s Report* should contain a narrative summary which describes the provisions for assuring the operational flexibility and the reliability of the industrial waste treatment facilities. This narrative should discuss the following areas:

A. **Alarms and Sensing Devices**
As indicated in Section II.D. above, attention should be given to the types and locations of all alarms and sensing devices which are used to monitor normal operating conditions such as liquid levels, pressures, temperatures, etc. This discussion should also address the procedures for responding to these alarms.

B. Control of the Quantity and Quality of Wastewater When the Treatment System is Inoperative

This portion of the Design Engineer’s Report should include a discussion on the procedures which will be used by the facility to control the quantity and quality of the wastewater discharge in the event that the treatment facility is inoperative, either because of routine maintenance or equipment failure. This discussion should include a description of any in-plant control measures that may be taken, such as the bypassing of treatment units, or the alteration or cessation of selected production operations. If bypassing of treatment units is an option, the narrative should list the method of bypass, the quantity and quality of the wastewater, and the expected effects (if any) the wastewater will have on the receiving stream or groundwater.

The narrative should also include a discussion of any provisions for standby or backup systems, such as alternative electrical service, duplicate treatment units, or storage facilities. This is especially important during the construction phase of the facility. To assist in determining what standby provisions are needed, the electric utility providing services to the facility should be consulted to determine the past frequency and extent of electric power outages within the local service area.

C. Personnel Training

The Design Engineer’s Report should describe the provisions a facility has regarding the training given to personnel which will enable them to understand the treatment processes and prepare them for proper operation and maintenance, and any emergency situation that may occur.

The discussion should address the structure of the training program, a reasonable time-frame for its completion, and any provisions for updating the scope of the program.

D. Availability of Instructions and Guidelines for the Operation and Maintenance of Treatment Units

The Design Engineer’s Report should briefly describe the availability of an instructions and guidelines document for the proper operations and maintenance of the treatment facility.

This document may coincide with the facilities personnel training program and should address such items as inspections, monitoring, preventative maintenance, and good housekeeping practices, along with the areas of emergency response discussed in Section (3) above.
This guideline document should not be included in the Design Engineer’s Report, but it should be available at the facility for general use.

E. Site Security

The Design Engineer’s Report should address security measures employed at the wastewater treatment facility.

The appropriate sections of the Preparedness, Prevention, and Contingency Plan prepared for the facility may be cross referenced for any area pertaining to such security measures in lieu of a detailed narrative answer to this Section (E).

IV. Preliminary and Supplemental Groundwater, Soils, and Geology Information

As part of the WQM permit application materials, the Design Engineer’s Report may provide supplemental information for those projects which require hydrogeologic review.

The exact nature and level of detail of this groundwater, soils, and geology information will be specified ahead of time by the regional office of Water Quality Management. This information must be prepared by a person(s) knowledgeable in the fields of soil science, geology, and hydrogeology.

V. Appendices Containing Supporting Information (i.e., Maps, Charts, Literature, etc.) Which Have Been Referenced in the Report

As part of the permit application materials, the Design Engineer’s Report may reference maps, charts, literature or other information. This supporting information should be attached to the report as appendices and listed in this section.
APPENDIX B
NOTIFICATION LETTER

Dear (Municipal Secretary:) or
Dear (County Commissioners:)

The purpose of this notice is to inform you of intent to submit an application to the Pennsylvania Department of Environmental Protection (DEP) for the following:

Permit Application Type: ____________________________________________

Application Contact: ______________________________________________

Project Location: _________________________________________________

Project Description: ______________________________________________

DEP Contact Information: (DEP Regional Office and address)

Acts 67 and 68 of 2000, which amended the Municipalities Planning Code (MPC), direct state agencies to consider comprehensive plans and zoning ordinances when reviewing applications for permitting of facilities or infrastructure, and specify that state agencies may rely upon comprehensive plans and zoning ordinances under certain conditions as described in Sections 619.2 and 1105 of the MPC.

Enclosed is a General Information Form (GIF) completed for this project. Please review the enclosed GIF for the accuracy of answers provided with regard to land use aspects of this project; please be specific and focus on relationship to zoning ordinances. If you wish to submit comments for a land use review of this project, you must respond within 30 days to the DEP Regional Office referenced in this letter. If there are no land use comments received by the end of the comment period, DEP will assume that there are no substantive land use conflicts and proceed with the normal application review process.

This letter serves as your notification of (Company Name) intent to submit an application to DEP as required by Act 14, which amended the Commonwealth of Pennsylvania’s Administrative Code and Acts 67, 68, and 127, which amended the Commonwealth’s Municipalities Planning Code.

Sincerely,

(Name)

Enclosure