



Date Prepared/Revised
DEP USE ONLY
Date Received



FORM 7 HYDROGEOLOGIC INFORMATION PHASE 1

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 7, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General References: Sections 273.114, 273.115, 273.118, 277.114, 277.115, 277.118

SECTION A. SITE IDENTIFIER

Applicant/permittee

Site Name

Facility ID (as issued by DEP)

SECTION B. HYDROLOGIC CHARACTERIZATION

Instructions: A narrative description of the general characteristics of the hydrogeology at the proposed site and adjacent area (down to and including the lowest aquifer that may be affected by the facility) must be submitted, as well as the characteristics listed below. Information, except maps, may be provided on attached 8 1/2 x 11 inch sheets as needed.

Hydrologic characterization of each aquifer will be based upon multiple well aquifer tests when possible; the following determinations must be made and calculations included:

1. Hydraulic conductivities.
2. Storage coefficients for confined aquifers and specific yield for unconfined.
3. Transmissivities.
4. Hydraulic gradients.
5. Groundwater velocities.
6. Number of wells, borings or test pits used.
7. Maximum depth to regional water table or piezometric surface within the site with date of measurement.
8. Minimum depth to regional water table or piezometric surface within the site with date of measurement.
9. Twelve month characterization of regional water table fluctuations, within the uppermost aquifer (based on monthly measurements).
10. Description of perched or special water table conditions including seasonal high water table.
11. Minimum depth to any perched water.
12. Effects of any deep mines in the area.
13. Directions of ground water movement (shown on Phase 1 base maps) including description of how determined.
14. Uses of aquifers.
15. Groundwater divides (shown on Phase 1 base maps).
16. Three-dimensional ground water flow with discharge/recharge characteristics.
17. Description of any well head protection areas in accordance with Section 109.01.
18. Groundwater contour map based upon the highest groundwater level recorded monthly in each boring for the previous year.

SECTION C. PROPOSED GROUNDWATER QUALITY MONITORING POINTS

Proposed Groundwater Quality Monitoring Points (wells, piezometers, etc.) should be described in the following format and are subject to Department approval. Proposed monitoring points are to be permanently numbered in consecutive order. A "U" or "D" should be added to the monitoring point number to identify upgradient/downgradient. For existing monitoring points, information will be based upon completion; for proposed new monitoring points, construction information will be based upon specifications. Monitoring wells will be designed, constructed and maintained in accordance with Sections 273.281 and 277.281 (relating to general requirements), Sections 273.282 and 277.282 (relating to number, location and depth of monitoring points), and Sections 273.283 and 277.283 (relating to standards for casing of wells) and consistent with the requirements of Form 18 (relating to Phase II Water Quality Monitoring System Information). Any proposed surface water monitoring point must have adequate flow to allow sampling even in the driest quarter of the year.

SECTION C. PROPOSED GROUNDWATER QUALITY MONITORING POINTS (Continued)

ALL MONITORING POINTS MUST HAVE AN ASSOCIATED LATITUDE AND LONGITUDE DETERMINED ACCURATELY TO THE NEAREST ONE TENTH OF A SECOND (DD° MM' SS.S'')

Wells and Piezometers

Monitoring Point Number	Drilling Method	Depth (ft)	Borehole Diameter (in.)	Casing		Location		Measuring Point Elevation (Ft/MSL)
				Diameter (in.)	Screened Interval (ft.)	Latitude	Longitude	

Springs, Streams, Other Surface Water

Monitoring Point Number (Spring or Surface Water)	Elevation	Flow Rate (GPM)	Date of Measurement	Location	
				Latitude	Longitude

- SP - Spring
- ST - Stream
- S.W. - Surface Water

SECTION D. GROUNDWATER QUALITY DESCRIPTION

Items below pertain only to Municipal and Construction/Demolition Landfill Sites; not to Composting Facilities, Transfer Stations, Storage Facilities, Resource Recovery or other Processing Facilities.

An application for a municipal waste landfill must contain a description of the chemical characteristics of each aquifer in the proposed permit area and adjacent area, based upon at least two quarters of monitoring data, one of which shall include the season of the highest local groundwater levels. This requires at least two (2) sets of analyses on approximately a 90 day interval in the format of Form 8.

An application for a construction/demolition waste landfill must contain a description of the chemical characteristics of each aquifer in the proposed permit area and adjacent area, based upon at least two (2) sets of analyses for consecutive quarters, in the format of Form 10.

SECTION E. SURFACE WATER INFORMATION

The application must contain a description of surface waters in the proposed permit area and adjacent areas including the questions posed below. The surface water information shall be based on a sufficient number of observations, calculations, weir or flow meter readings and sample analyses to allow an accurate characterization of the physical, chemical and biological characteristics of the surface waters.

Does the application include a description of the watershed in which the proposed permit area is located and other watersheds which may be affected by the proposed facility (including streams, springs or wetlands that are representative of the surface and groundwater system of the general area)?

Are surface elevations and rates of flow of streams, springs, seeps and mine discharges in the proposed permit area and adjacent area included?

Is a description of the quality of surface waters which will receive flows from the surface or groundwater of the proposed permit area included?

Has a description of the in-stream macroinvertebrate community in surface waters above and below the proposed permit area (within appropriate limits) been attached? Survey methods should follow the Department's Standardized Benthic Macroinvertebrate Field Collection Methods. The survey report should include the name and address of the biologist performing the survey.