



Remove and recycle these instructions prior to mailing component to DEP.

INSTRUCTIONS FOR COMPLETING COMPONENT 3s SMALL FLOW TREATMENT FACILITIES

How to Obtain Planning Module Components

Planning module components appropriate for your project can be obtained by completing an Application for Sewage Facilities Planning Module mailer available on DEP's Web site at www.depweb.state.pa.us keyword: wastewater and sending it to the agency responsible for final review of your project (the "approving agency"). This "approving agency" for a Component 3s is the DEP regional office serving your county. **Do not use this component unless you have received a code-numbered copy of this form from DEP.** You may obtain an Application for Sewage Facilities Planning Module Mailer from the municipality, a DEP regional office or on the DEP Web site.

Upon receipt of the mailer, the approving agency (DEP regional office) will assign a code number to your project and provide you with the correct planning module forms and instructions.

When Should You Use Component 3s?

This component is used to fulfill the planning requirements of Act 537 for projects proposing the use of Small Flow Treatment Facilities (SFTF). An SFTF is an individual or community sewerage system designed to adequately treat sewage flows not greater than 2,000 gallons per day (gpd) for final disposal using a stream discharge or other disposal method approved by DEP. SFTF systems may also be used, under some circumstances, for repairs to existing, malfunctioning systems serving residential or commercial developments.

Who Should Complete the Component 3s?

This component should be completed by a competent consultant, engineer or surveyor who is familiar with the municipality's Official Sewage Facilities Plan and available sewage disposal methods in the municipality in which the development project is proposed. Municipal officials and the municipality's Sewage Enforcement Officer (SEO) should be consulted in the development of the project.

Instructions for Completing Component 3s

Sections A through H, J, N, P, Q and R must be completed for all projects proposing an SFTF as a repair to a malfunctioning sewage disposal system. Repair proposals located in watersheds classified as High Quality (HQ) or Exceptional Value (EV) must also complete Section O. All other projects must complete sections A through J, and N through R. Sections K through M must be completed when indicated by DEP or if justified by preliminary test results.

Section A. Project Information and Qualification

1. **Project Name.** In the "Project Name" block, enter the name by which this proposed land development project is, or will be, known, such as "Smith Subdivision."
2. **Brief Project Description.** Briefly describe the intended project in the space provided.
3. **Qualification.** Small flow treatment facilities (SFTF) may only be used under a specific set of circumstances. For planning purposes the SFTF is treated differently than other sewage treatment facilities because it is not required to have a certified treatment plant operator. Since only certain types of proposals qualify for SFTF use, this section is designed to help the applicant and DEP determine whether the proposed use meets these qualifications.
 - a. Check the appropriate box describing the nature of the proposal and expected sewage flows. Sewerage systems are classified as SFTFs only when they are proposed to serve residential dwellings or commercial facilities which generate domestic wastewater not containing industrial waste with flow volumes no greater than 2,000 gallons per day. The projected sewage flow, for the purpose of planning, is based upon 400 gallons per day (GPD) per residential dwelling or equivalent to be connected to the SFTF. The total flow from the subdivision cannot exceed 2,000 GPD for either an individual or community small flow treatment facility proposal.
 - b. Indicate whether sufficient site testing, as described in Title 25 Pa. Code Chapter 73, was conducted to determine if the site is suitable for onlot systems. Before an SFTF can be considered for use, the site must be tested and shown to be unsuitable for installation of onlot sewage disposal systems as described in Chapter 73, subject to the following constraints:
 - (1) In watersheds that are NOT classified as HQ or EV in Title 25 Pa. Code Chapter 93, the individual residential spray irrigation system (IRSIS), a specialized type of onlot system described in Chapter 73, is NOT included in the eligibility determination for SFTFs and need not be ruled out before an SFTF may be considered for use.
 - (2) In watersheds that ARE classified as HQ or EV, IRSIS and other non-discharge alternatives must be ruled out as a sewage disposal option before an SFTF may be considered for use.

A soil profile and percolation test must be conducted for each change in soil type, slope and erosion characteristic in order to adequately document the unsuitability of the lot for onlot sewage disposal. If the tests show that the site is unsuitable for an onlot system, an SFTF may be proposed. Help in determining the location and number of soils tests required can be obtained from USDA Natural Resources Conservation Service mapping, the municipality's SEO or a qualified soils consultant.

- c. Indicate whether the proposed SFTF will discharge to an HQ or EV stream or an unnamed tributary of an HQ or EV stream as defined in Chapter 93 of DEP regulations. SFTFs are generally not permitted to discharge to HQ or EV streams. However, discharge to an HQ stream may be approved by DEP in the following circumstances:
 - (1) Where it can be shown to DEP's satisfaction that the discharge will not change the long-term average water quality of the receiving HQ stream. Include evidence supporting this contention in the planning module submission.
 - (2) Where there is a necessary social and economic justification for the discharge, such as if the SFTF is designed to correct an existing public health, pollution or nuisance problem. Include evidence supporting this position in the planning module submission.

For more information on HQ/EV waters, please consult DEP's *Water Quality Antidegradation Guidance Manual* (391-0300-002), available on the web or contact your DEP regional office.

If there is any question regarding the stream classification, obtain the name of the stream and the waterbody to which it discharges from the appropriate USGS quadrangle map and contact the DEP regional office to confirm if the stream is in one of these classifications. If DEP discovers that discharge to an HQ/EV stream is proposed during evaluation of the Application Mailer, DEP will notify the applicant of the potential problem in the mailer response.

If the proposed system does not fit the criteria given above, the proposal does not qualify for an SFTF. Contact DEP for the correct Sewage Facilities Planning Module component(s).

Section B. Client (Municipality) Information

Municipality Name, County, Municipality Type. Enter the name of the client municipality and the name of the county in which the municipality is located. Check the appropriate block indicating the municipality type, whether **City, Boro** or **Township** (Twp).

Municipality Contact Individual Last Name, First Name, MI, Suffix, Title. Enter the requested information for the client contact in this block. The municipal client contact is often the municipal secretary, but may be another official, such as the chairman of the board of supervisors. Please indicate the appropriate title of the client contact in the Title block.

Additional Individual Last Name, First Name, MI, Suffix, Title (optional). This is an optional block to be used by municipalities that wish to provide an alternate client contact. Enter the requested information only if an alternate contact name is desired.

Mailing Address. This is the mailing address of the client municipality identified above. It should not include locational data that is not appropriate for a standard mail address. In addition to the street number and name, PO Box number, RR number, Box number or Highway Contract number designations, use any appropriate designation and number to further define the mailing address. Use these standard abbreviations:

e.g.,	APT	(Apartment)	FLR	(Floor)
	BLDG	(Building)	RM	(Room)
	DEPT	(Department)	STE	(Suite)

City, State, ZIP+4, Phone Information. **DO NOT** use abbreviations for the city name. Use the two-character abbreviation for the state. Include the four-digit extension to the ZIP code, if known.

Section C. Site Information

DEP needs to be able to accurately locate your site and to understand the physical nature of the surrounding area. Therefore, the application must be accompanied by a 7.5-minute topographic map published by the US Geological Survey or a clear copy that includes the quadrangle name. These maps can usually be obtained from most map distributors or hunting and fishing supply stores. On the topographic map, draw the outline of the development site.

Site Name. The name of the site at the specific physical location. This should be similar to the project name in A.1. **DO NOT** use abbreviations, acronyms, etc.

Site Location. Provide the physical address of the location where the permitted activities will occur. **DO NOT** use PO Box numbers for site location information. Provide the city (or municipality), state and the ZIP+4, if known.

Detailed Written Directions to Site. When providing written directions, **DO NOT** use PO Box address data. Include landmarks and approximate distances from the nearest highway.

Description of Site. Provide a written description of the proposed project.

Site Contact (Developer/Owner) Information. Provide the name of the person having overall responsibility for environmental matters at the site. This person is often the landowner or the landowner's agent. Include the

individual's name, title, firm, e-mail address (optional), mailing address and daytime phone numbers. This individual will ultimately be responsible for paying the DEP review fee.

Section D. Project Consultant Information

If this form was completed by someone other than the applicant, such as a consultant, engineer or contractor, that individual should complete this section of the form.

Section E. Availability of Drinking Water Supply

Indicate the intended source of the project's drinking water by checking the appropriate box. If a public water supply will be used, provide written documentation that the water supplier is aware of the project, possesses capacity to serve the project and is willing to serve the project. A public water supply is defined as a system that provides water to the public for human consumption that could serve 15 or more connections, or serve 25 or more people daily at least 60 days out of the year.

Section F. Project Description Narrative

This section provides basic information about the project. The narrative must include, at a minimum, the following information:

1. The total number of lots proposed. This total includes all of the subdivided lots. Any remaining acreage, parent tract or parcel under the same ownership as the subdivided lots also counts as a lot, even if no development is proposed on this tract. The plot plan, discussed in Section G, must also show this remaining acreage.
2. The number of residential dwellings or equivalent proposed. This includes all proposed or existing dwellings or equivalent which will connect to SFTFs as part of this proposal.
3. The projected sewage flow. For planning purposes, this flow is based upon a minimum of 400 gallons per day per residential dwelling or EDU to be connected to the SFTF. The total flow cannot exceed 2,000 gallons per day for each SFTF.
4. The number of proposed SFTF installations. DEP does **NOT** consider the use of numerous SFTFs serving single family dwellings, or multiple SFTFs serving numerous clusters of homes in a development, to be viable sewage facilities planning options. DEP will closely assess the number and density of existing and proposed systems in the watershed in relation to comprehensive programs of sewage facilities planning and water pollution control for the area.

The number of SFTFs proposed consists of the number of treatment/discharge systems anticipated to serve the land development. For residential development, assuming flows of 2,000 gallons per day per SFTF and 400 gallons per day per dwelling unit, a maximum of 5 dwelling units may be connected to one SFTF.

5. The total acreage of the development. For the purposes of this section, this includes only the acreage of the lots to be developed at the present time. It does not include any remaining acreage which is not being subdivided at this time.
6. The remaining acreage or land adjacent to the proposed subdivision (including tracts of land across roads, streets or rights-of-way) under the same ownership as the proposed development. The current and future use of this property is an important factor in the evaluation of the proposed sewage facilities and must be described.

Section G. General Site Suitability

The information in this section about soils and site conditions will be used by the Sewage Enforcement Officer (SEO) and the approving agency to determine if the project area is suitable for the use of SFTF systems. This section also requires that certain information listed in the planning module component be plotted on a plan which includes the project and adjacent areas. Some of the information required can be found in the municipality's Official Sewage Facilities Plan. Other information can be found in tax maps, zoning maps, USDA Natural Resources Conservation Service maps, Federal Emergency Management Agency (FEMA) flood plain maps and National Wetland Inventory maps.

1. Plot Plan

The plot plan is a drawing of the development area. The scale of the plot plan should be large enough to show the development area and adjacent areas so that the plotted items can be easily identified. Preliminary lot lines may be used if soils testing is completed before final lot lines are established, but the final plot plan must be prepared by a registered surveyor before submission of the planning module to the approving agency. The following information should be included on the plan:

- a. Locations of **ALL** soil profile examinations and percolation tests, both suitable and unsuitable.

The location of all soil profile excavations and percolation test sites must be shown on the plot plan, including those which show unsuitable conditions for the use of onlot disposal. Excavations are to be shown by the symbol σ (triangle) and percolation tests by the symbol \bullet (large dot). When the scale of the plot plan makes it impossible to show each percolation hole, the area of the test may be shown using a rectangular box labeled with the percolation test symbol. Each test must be referenced by number to the appropriate "Site Investigation and Percolation Test Report for Onlot Disposal of Sewage."

- b. Slope at each test area.

Slopes must be taken from in-field measurements recorded on "Site Investigation and Percolation Test Report" forms (3800-FM-WSFR0290A (formerly known as "Appendix A" and available from the Municipal SEO)) or from a registered surveyor's in-field slope measurements. The slopes should be shown on the plan with a slope arrow identifying measured percentage of grade and the source of the measurement ("Test Report" or surveyor). When slopes are measured, they must be taken across the soil profile/percolation test area from the down-grade extent to the up-grade extent of the proposed absorption area or spray field.

- c. Soil types (as shown in USDA Natural Resources Conservation Mapping) and their boundaries.
- d. Locations of all proposed treatment units and discharge points.
- e. Locations of existing and proposed adjacent streets, roadways and access roads.
- f. Lot lines and sizes of individual lots in the proposed development.

Show the relationship of the development boundaries to those of the existing lot. Where the boundaries of the existing lot have not been formally surveyed, but are plotted from deed records, this must be noted on the plan.

- g. Existing and proposed rights-of-way. Proof of legal recording of rights-of-way may be required if the right-of-way is necessary to implement the chosen sewage facilities alternative.
- h. Existing and proposed water supplies (wells, reservoirs, etc.) and surface water (ponds, lakes, streams, impoundments) on the adjacent and proposed developments must be shown on the plan.

Identify existing water supplies and surface waters on properties adjacent to the proposed land development which may affect site suitability related to required isolation distances. If determined that the identified water supplies and surface waters are far enough away from the proposed development that they will not affect the suitability of the site for onlot sewage disposal, their locations do not have to

be plotted. If the identified water supplies or surface waters may be located within required isolation distances, they must be shown on the plan.

- i. Show the location of any existing buildings in the project area.
- j. Surface waters, including ponds, streams, lakes and impoundments.
- k. Wetland areas. DEP is required by statute to protect the wetlands of the Commonwealth from unnecessary destruction. Show any wetland areas on the plot plan as they are identified by hydric soils in USDA Natural Resources Conservation Service maps and by National Wetland Inventory mapping. If there is a disagreement with the mapping, or wetlands are present and they are not shown in the mapping, plot the results of actual in-field delineation of the wetlands on the plan. Use the delineation process required by Title 25 of the Pennsylvania Code, Chapter 105, §105.451, Identification and Delineation of Wetlands-Statement of Policy.

If wetlands are present, the applicant may be required to obtain permits for any construction activities such as encroachments (fill, roads, utility lines) or obstructions (bridges, walls, piers) in, along or across the wetlands. Contact the DEP regional office for further information.

Full delineation may be required as a condition of permit issuance, including issuance of onlot system permits, Clean Streams Law permits, or encroachment or obstruction permits for construction activities in, along or across wetlands. The plot plan must distinguish between in-field delineations and transcribed mapping from existing sources.

- l. Floodplains and floodways. As with wetlands, these areas should be plotted on the plan as they are indicated in Federal Emergency Management Agency Flood Plain mapping.
- m. Open space areas designated within the proposed development and any parks, state forests or other state land adjoining the development.
- n. Show the relationship of the development boundaries to those of the existing lot of which it is a part. Where the boundaries of the existing lot have not been formally surveyed, but are plotted from deed records, indicate this on the plan. Any property that is not included in the current subdivision but is under the same ownership and adjoining (whether or not it has been developed in the past, or will be developed in the future), must be plotted. Lots located across roads, streets and rights-of-way are considered adjoining.
- o. Existing onlot or sewerage systems, pipelines, transmission lines, etc. - show any functioning or abandoned facilities which may impact the use of an SFTF system.
- p. Prime agricultural land listed by the USDA Natural Resources Conservation Service as "Pennsylvania Prime Farmland Soils," or soils listed in the USDA Natural Resources Conservation Service Soil Survey as having a capability classification of I, II or III.
- q. Orientation to north, usually shown by a directional arrow.

2. Residual Tract Waiver Request

DEP believes that developers, municipal officials and future lot owners are best protected by complying with sewage planning requirements to assure that adequate sewage facilities will be available to serve all newly created subdivisions. However, DEP is aware that some subdivision proposals include residual tracts of land on which there is already an inhabited structure or are large parcels for which there is no proposed construction that would require the use of sewage disposal facilities. Developers having such residual tracts may not be required to complete sewage facilities planning for that portion of the subdivision if this claim is valid. The developer may request the residual tract waiver by checking the request block in Section G.2.

To be valid, acceptance of the request for a waiver by the municipal or county planning agency and the municipality is required. The municipal or county planning agency must indicate its acceptance of the proposed waiver by marking the appropriate blocks on Component 4. The municipality indicates its acceptance of the proposed waiver by signing and dating the appropriate statement in Component 3,

Section Q. When the proposal involves the subdivision of property on which there is an existing building currently served by an onlot septic system on the residual tract, the municipality's sewage enforcement officer must inspect the system for proper operation and complete the appropriate portion of Section N.

In addition, the planning module must include a plot plan or deed or deed notice which contains language similar to the following, directed to the residual tracts:

"As of the date of this deed/plot plan/deed notice recording, the residual tract of this subdivision is dedicated for the express purpose of _____ use. No portion of the residual tract of this subdivision has been approved by the municipality or the approving agency for the installation of sewage disposal facilities. No sewage permit will be issued for the installation, construction, connection to or use of any sewage collection, conveyance, treatment or disposal system (except for repairs to existing systems) unless the municipality and approving agency have approved any required sewage facilities planning for the residual tract of the subdivision described herein in accordance with the Sewage Facilities Act (35 P.S. Sections 750.1 *et seq.*) and regulations promulgated thereunder. Prior to signing, executing, implementing or recording any sales contract or subdivision plan, any purchaser or subdivider of any portion of this residual tract should contact the municipality which is charged with administering the Sewage Facilities Act to determine what sewage facilities planning is required and the procedure and requirements for obtaining appropriate permits or approvals."

Language similar to the above must be recorded on the plot plan or deed or deed notice and a copy of the deed or plot plan or deed notice must be submitted with this planning module submission.

3. Social or Economic Justification

Title 25 Pa. Code Section 93.4c of DEP regulations requires that sewage facilities proposing to discharge or increase an existing discharge into HQ Waterways complete a Social or Economic Justification (SEJ) and publish a public notice as part of the sewage facilities planning process. Please refer to specific requirements that may be found in Section 93.4c(c), available online at www.pacode.com or from your local DEP office. Additional information is available as Technical Guidance 391-0300-002, also available online at www.depweb.state.pa.us.

4. Wetland Protection

- a. DEP is required to protect the wetlands of the Commonwealth from unnecessary destruction. The applicant is required to answer "yes" or "no" to the question of whether there are any wetlands in the project area. If yes, show these areas on the plot plan as they are identified by hydric soils in USDA Natural Resources Conservation Service maps or by National Wetlands Inventory mapping. If there is disagreement with the mapping, or if wetlands are present and are not shown on the mapping, plot the results of actual in-field identification of the wetlands on the plan. Use the identification process required by Title 25 Pa. Code Chapter 105, §105.451, Identification and Delineation of Wetlands - Statement of Policy.
- b. If wetlands are present, indicate with a yes or no answer if the project is proposing any construction activities such as encroachments (fill, roads, utilities) or obstructions (bridges, walls, piers) in, along or across the wetlands. If any of these are proposed, please contact the DEP regional office for further information. Full delineation may be required as a condition of permit issuance, including issuance of Clean Streams Law permits, encroachment or obstruction permits for construction activities in, along or across wetlands. The plot plan must distinguish between in-field delineations and transcribed mapping from existing sources.

5. Primary Agricultural Land Protection

Indicate whether the project involves the disturbance of prime agricultural lands. If the project will result in the disturbance of these lands, it must be consistent with policies and procedures established by the municipality for protection of prime agricultural lands. The project sponsor and local officials must rectify land use problems prior to submission of the sewage facilities planning module package to DEP for review.

6. Historic Preservation Act

Coordination with the Pennsylvania Historic and Museum Commission (PHMC) is necessary for proposals meeting conditions specified in DEP Technical Guidance 012-0700-001 *Implementation of the PA State History Code*. Specific documentation required to be submitted with this planning module package is found in the Technical Guidance, available on-line at DEP's Web site at www.depweb.state.pa.us, select "Subjects" then select "Technical Guidance." As a minimum this includes copies of the completed Cultural Resources Notice (CRN), a return receipt for its submission to the PHMC and the PHMC review letter.

Section H. Treatment and Disposal Options

There are three options available for the disposal of treated effluent from an SFTF. They are: 1) spray irrigation and other land application; 2) discharge to a dry or intermittent stream channel; or 3) discharge to perennial surface waters. Each of the three options has specific technical requirements that must be met before the planning module can be approved by DEP. The following paragraphs describe the information which must be submitted for each of the discharge alternatives.

1. Spray irrigation or other land application (*Manual For Land Application of Treated Sewage and Industrial Wastewater* DEP ID: 362-2000-009, available on DEP's Web site for more detailed information).

If spray irrigation or other land application is proposed, do the following:

- a. Plot the proposed spray or land application field on a USGS topographic map showing sufficient contour lines to allow the determination of slopes in the area of the proposed system.

Please note that proposed spray sites may not be suitable on slopes greater than 8 percent. In agricultural areas with somewhat poorly drained soils, the slope may be limited to 4 percent. In these cases, a careful evaluation of the slope versus the soils characteristics must be done to ensure that the effluent will not run off. DEP recommends that the applicant consult a soil scientist for assistance when slope constraints are encountered on a site.

- b. Describe the proposed effluent discharge rate and quality, including any seasonal variations, in sufficient detail to allow DEP to assess their impact on the suitability of the site. These criteria can affect both the suitability of the site for the use of land application and spray systems and the size of the area needed. The specific soil conditions present on the site will determine how much effluent can be treated and discharged on the site.
- c. Since land application systems depend upon the soil and underlying geology of a site for adequate treatment and disposal of treated sewage effluent, provide additional site-specific soil testing information, including soils horizons and permeability testing, to document the suitability of the soils on the site. Please notify DEP verbally or in writing at least 10 days prior to testing to allow DEP staff the option to observe the testing.

Please note that, although some sites that cannot meet the soils suitability criteria for onlot systems may be suitable for spray irrigation or land treatment, systems may not be approvable in areas having the following soils conditions:

- Severely and moderately eroded phases of shallow/well-drained soils;
 - Severely eroded phases of moderately well-drained soils;
 - Poorly drained soils;
 - Floodplain soils (as mapped during Flood Insurance studies of the municipality).
- d. If you are proposing spray irrigation, submit documentation that drinking water uses will be protected, including a brief description of the topographic setting of the spray field in relation to the discharge rate and quantity and the location of proposed and existing water supplies in the area of the proposed spray site. In addition, since improperly treated or controlled spray can cause nuisance conditions or health hazards, include a plan for preventing these problems on the proposed site.

2. Dry Channel Stream Discharge

If a discharge is proposed to a dry stream channel:

- a. On a 7.5-minute USGS topographic map, show the property lines of the development and the point of discharge.
- b. Specify the quality and rate at which sewage effluent will be discharged. Seasonal variations in the discharge flows should also be discussed if they are proposed. *(Contact the appropriate regional office regarding their procedure concerning the timing for determination of preliminary effluent limits.)*
- c. Justify the proposed discharge point by identifying existing water supplies or groundwater uses for 200 feet on either side of the channel from the discharge point until perennial stream conditions (point of first use) are encountered. Document that these uses will be protected and that the discharge effluent will not create a public health hazard or nuisance, **and**
 - (1) For new construction proposals, obtain easements from downstream property owner(s) between the point of discharge and the point of perennial stream conditions (point of first use), unless the applicant can demonstrate that the proposed discharge will not create a nuisance or adverse impact to the quality or quantity of the dry stream channel flow. *(Please be advised that **even if easements are obtained, DEP will deny planning module approval IF the proposed discharge will likely cause a nuisance**);*
 - (2) For abatement of a malfunctioning onlot sewage system, public health hazard or nuisance, attach copies of certified letters and signed certified mail receipts by which you have notified all downstream property owners through which your treated effluent would flow until it would reach the point of first use. In addition to information on the nature of your proposed system and discharge, the notice must advise each property owner to provide written comment, if desired, to the municipality and DEP office to which this planning module will be directed. (This individual notification period may run concurrently with the general public notification required in section O.)

Note: If unable to comply with the provisions of paragraph c, the discharge location may be relocated to a point where perennial stream conditions exist. All necessary rights-of-way needed to reach the new discharge point must be obtained and included, or letters of intent to grant right-of-way from landowners, municipalities, agencies, etc., must be included with the planning module submission.

3. Perennial Surface Water (Stream) Discharge

If a discharge to perennial surface waters is proposed, do the following:

- a. On a 7.5-minute USGS topographic map, show the property lines of the development and the point of discharge to the stream. Label the stream name. If the discharge is to an unnamed tributary of a stream, label the first-named body of water on the map.
- b. Specify the quality and rate at which sewage effluent will be discharged to the stream, since these are factors which influence the approval of the discharge. DEP may evaluate the stream flow and current quality of the stream to determine if the level of treatment proposed is sufficient, or if additional treatment is needed. Seasonal variations in the flows should also be discussed if they are proposed. *Contact the appropriate regional office regarding their procedure concerning the timing for determination of preliminary effluent limits.*

Section I. Alternative Analysis

An alternative analysis is required to document that the method of sewage disposal selected for use is the best alternative in terms of both planning and environmental protection. The analysis should be written in narrative form and must address each of the following issues:

1. Describe the SFTF proposed. Include the method of treatment (septic tank/sand filter, aerobic tank/sand filter, etc.) and the method of disposal (spray irrigation, stream discharge, etc.).
2. Describe the method of sewage disposal identified by the municipality's Official Plan for the area of the proposal.

Instructions

3. If the use of SFTFs was not identified in the municipality's Official Plan, discuss why it was chosen as the best alternative.
4. List all of the other alternatives considered to serve this property, and why each was considered unacceptable for use. It is critical that the applicant include any environmental factors that influenced alternative selection.
5. Describe any existing sewage problem(s) in the area of the proposal as described in the municipality's Official Plan, including the nature of the problem and its location in relation to the project area.
6. If the SFTF will be replaced within 5 years by some other method of sewage disposal, describe the ultimate method of sewage disposal to be used, the portion of the current proposal to be served, and the anticipated date of service. Include a statement acknowledging the interim status of the SFTF and stating that the SFTF will be abandoned when the ultimate method of sewage disposal is installed.
7. Describe the land uses adjacent to the project area and the types of sewage disposal systems serving these areas. (Example: North, commercial, holding tank; South, residential, septic systems; East and West, agricultural, septic systems.)

If the proposal involves the use of individual SFTFs to serve multiple lots in a subdivision, or if more than one community SFTF is proposed to serve a development, this alternative analysis must include a detailed justification for this use, as compared to the use of collection, conveyance and treatment at a single treatment facility serving the entire development.

Section J. Protection of Rare, Endangered or Threatened Species

DEP's technical guidance document "Policy for Pennsylvania Natural Diversity Inventory (PNDI) Coordination During Permit Review and Evaluation," (400-0200-001) requires DEP to ensure that requests for authorizations, are coordinated with the Department of Conservation and Natural Resource's (DCNR) Pennsylvania Natural Diversity Inventory (PNDI).

Conducting a search of the PNDI database and providing a copy of a "PNDI Project Environmental Review Receipt" for the proposed project and, if potential impacts are identified by the search, any clearance or recommendation letters from the jurisdictional agency responsible for the particular species identified by a search, satisfies this requirement.

To avoid project delay, self explanatory, self conducted "PNDI Project Planning Environmental Review" searches are initiated at www.naturalheritage.state.pa.us . This interactive, online search will ask questions about the proposed project and provide the appropriate receipt, instructions or additional information regarding coordination with jurisdictional agencies.

As an alternative to the self conducted search, project sponsors may request DEP staff to conduct the search by providing a completed "PNDI Project Planning & Environmental Review Form" (PNDI Form). The form is available at www.naturalheritage.state.pa.us . Individuals making this request should be aware that, due to the nature of the search software, DEP staff may need to contact them for additional information to successfully complete the search and that exclusive of any other items, their sewage planning module submission is considered incomplete by DEP, until the appropriate receipt, clearance or recommendation letters are received.

For more information, see to the "Policy for Pennsylvania Natural Diversity Inventory (PNDI) Coordination During Permit Review and Evaluation," (400-0200-001), available on line in the eLibrary at DEP's Web site address www.depweb.state.pa.us.

Section K-M. Permeability and Hydrogeology

In certain situations, permeability testing and hydrogeology studies must be completed for the proposed development. These sections should only be completed if indicated by the approving agency. Sections L and/or M should be completed and sealed by a registered professional geologist familiar with the requirements of these sections. This person should contact the DEP Regional Hydrogeologist for further instructions.

Section K. Permeability Testing

(Complete if marked in component or if the conditions in number 1 (below) apply.)

1. Completion of this section may be required when any of the following exist:
 - a. An onlot system with a total absorption area greater than 5,000 square feet will be used.
 - b. DEP has determined that the soil, underlying parent material, geology at the site or volume of the discharge may cause adverse groundwater mounding or inadequate sewage treatment.
2. The following information is to be submitted:
 - a. Description of the soils and geology at the site and the characteristics of these which may limit the horizontal or vertical movement of effluent.
 - b. Description, location and results of any permeability testing performed, including:
 - (1) Identification and description of restrictive layers of soil, parent material and bedrock.
 - (2) Rate of flow through and laterally over those restrictive layers (in inches per hour).
 - (3) Calculation of potential groundwater mounding expected from the additional flows.
 - c. Recommendations on system design modifications needed because of poor permeability, including absorption area sizing or placement and dosing rates for onlot overland flow.

NOTE: *DEP may require more detailed hydrogeologic information based on the information submitted in this section.*

Section L. Preliminary Hydrogeologic Study

(Complete if marked in component or if the conditions in number 1 (below) apply.)

Hydrogeologic work requires an appropriate professional signature and seal.

1. This section must be completed when soil-dependent treatment methods are proposed and any of the following apply:
 - a. DEP has determined that water supplies within $\frac{1}{4}$ mile of the proposed development site exceed 5 parts per million (ppm) nitrate-nitrogen ($\text{NO}_3\text{-N}$).
 - b. DEP has determined that known geological conditions at the proposed site may contribute to the potential for groundwater pollution from such systems.
2. The following information is to be submitted on a copy of the topographic map of the area and in narrative form:
 - a. Results of background sampling for total coliform, fecal coliform, pH and nitrate-nitrogen.
 - b. If as a part of a Preliminary Hydrogeologic Study a well is drilled to assess the background nitrate-nitrogen concentrations in the shallow groundwater, the hydrogeologist shall provide a log of the well or wells. The log or logs shall provide the date of drilling, total well depth, depth to bedrock, depth to bottom of casing, depth to all water bearing zones and the static water level. The well logs do not need to be graphical. In addition, the report should contain a discussion of the well purging protocol used prior to well sampling. The protocol must assure that a fresh sample is obtained from the shallow aquifer.

Instructions

- c. Topographic location of the proposed system(s).
- d. Estimated area of impacted groundwater (dispersion plume and mixing zone within the dispersion plume) calculated from the surface topography and known geologic conditions.
- e. Identification of existing and potential groundwater uses within the dispersion plume.

Note: Based on the information submitted in this section, DEP may require more detailed hydrogeologic information (Section M, below).

Section M. Detailed Hydrogeologic Study (Complete if marked in component)

(Complete if marked in component or if DEP determines during the planning process that the additional study is necessary.)

Hydrogeologic work requires an appropriate professional signature and seal. A detailed hydrogeologic study must be completed when the proposed system(s) may degrade groundwater or surface water to the point that existing or potential groundwater uses or designated stream uses may not be protected. Often specific tasks listed in the detailed hydrogeologic study will satisfy DEP concerns. Since the level of study necessary for a particular site may vary, it is recommended to contact the DEP regional hydrogeologist to determine the level of study necessary for a project.

A. Content of Detailed Hydrogeologic Study

The following information must be included in the detailed hydrogeologic study using narrative and/or maps as appropriate.

1. Type of discharge to groundwater. This includes:
 - a. Dry stream channel
 - (1) Intermittent stream (dry under low flow conditions)
 - (2) Stormwater drainage ditch (flow in wet season or during and immediately after storms)
 - b. Onlot subsurface disposal
 - (1) Individual onlot systems
 - (2) Community onlot systems
 - (3) Large Volume onlot systems
 - c. Land Application
 - (1) Spray irrigation
 - (2) Unlined wetland cell
 - (3) Groundwater infiltration
2. Plot the topographic location of the discharge.
3. The relationship between surface water and groundwater flow.
4. Investigate, describe and plot geologic and hydrogeologic characteristics influencing groundwater flow. These characteristics include but are not limited to the following:
 - a. Bedrock formations, lithologic description and range of depth
 - b. Bedding features, the frequency and direction of dominant joints and fractures
 - c. Faults, lineaments and earth fracture traces
 - d. Karst features such as open and closed sinkholes, closed depressions, known solution channels, pinnacles or other specific features
 - e. Unconsolidated material characteristics (soil, glacial materials, fluvial materials, etc.)
 - f. Unconsolidated bedrock characteristics (saprolite, weathered zones)

Instructions

- g. Elevation of the permanent groundwater table, anticipated water table fluctuation and groundwater flow direction
 - h. Unconfined or confined aquifer characteristics
 - i. Aquifer flow characteristics as quantified through pump testing or other characterization methodology (i.e., hydraulic conductivity, storage coefficient, transmissivity, etc.)
 - j. Existing, planned and potential down-gradient groundwater uses including, but not limited to: all water supply locations; the volume of water used at these locations; the estimated horizontal extent of each well's cone of depression; and the influence of pumping upon the natural groundwater gradient, the direction of flow and including both existing and potential water supplies.
5. Groundwater/surface water characteristics, including:
- a. If as a part of a Detailed Hydrogeologic Study a well is drilled to assess the background nitrate-nitrogen concentrations in the shallow groundwater, the hydrogeologist shall provide a log of the well or wells. The log or logs shall provide the date of drilling, total well depth, depth to bedrock, depth to bottom of casing, depth to all water bearing zones and the static water level. The well logs do not need to be graphical. In addition, the report should contain a discussion of the well purging protocol used prior to well sampling. The protocol must assure that a fresh sample is obtained from the shallow aquifer.
 - b. Existing groundwater quality and quantity, including, but not limited to, the following analyses:

1) Total coliform	10) Total manganese
2) Fecal coliform	11) Sodium
3) pH	12) Magnesium
4) Total iron	13) Calcium
5) Turbidity	14) Potassium
6) Alkalinity	15) Sulfate
7) Nitrate-Nitrogen	16) Total Dissolved Solids
8) Chloride	17) Hardness
9) Ammonia-Nitrogen	18) Volatile Organic Compounds
 - c. The name, location, flow characteristics, flow volume (cfs), existing water quality and designated use of any potentially impacted surface water (receiving stream). Include all surface water uses as listed for the water body in Chapter 93.
 - d. Influence of surface water runoff and groundwater recharge on groundwater characteristics.
 - e. Designation of any watershed area that is utilized for a water supply, recreation or agricultural irrigation.
 - f. Any other information necessary to adequately analyze the hydrogeologic impact by the proposed facility.

B. Detailed Hydrogeological Study Analysis and Report

Using the information gathered, describe and analyze the proposed facility's impact. Use narrative and mapping where appropriate. A complete study should include, but not be limited to, the following items:

1. Discuss pre-treatment system components proposed to decrease effluent contaminant levels prior to groundwater discharge. Include design and testing data submitted to support any long-term, consistent, reliable and measurable treatment claims.
2. Delineate any dispersion plume in which the existing water quality will be degraded. Include all identified contaminant and hydrogeological variables from the site in this analysis.
3. Describe any natural condition and/or artificial control that confines dispersion plume flow.
4. Delineate a mixing zone within the dispersion plume where any chemical or biological concentrations will exceed rates in Federal Drinking Water Quality Standards.

Instructions

5. Identify a buffer zone for the dispersion plume and mixing zone and also discuss the effects of seasonal weather conditions on this zone.
6. Discuss impacts on existing, planned and potential groundwater uses in the delineated dispersion plume, mixing zone and buffer zone.
7. Discuss any surface waterbodies that may intercept or interact with the dispersion plume.
8. Predict and quantify any impacts the identified dispersion plume will have upon the uses listed for that surface waterbody.
9. Predict any effects of the dispersion plume on all existing, planned or future groundwater uses.
10. Predict the extent and height of any groundwater/wastewater mound and capillary fringe resulting from restrictive layers in the subsurface. Restrictive layers may include, but are not limited to, restrictive soil horizons, unconsolidated geological materials, weathered bedrock materials, low permeability bedrock or a permanent groundwater table.
11. Discuss any physical, chemical or biological impact to groundwater, surface water or treatment facility function resulting from the formation of a groundwater/wastewater mound including capillary fringe. Soil is often part of the treatment process and for analysis purposes may be considered part of the treatment facility.
12. Discuss and propose any system change or recommendations deemed necessary to mitigate the effects of the identified groundwater/wastewater mounding.
13. Discuss any groundwater monitoring program necessary to guard against adverse impacts from the facility. The program should include proposed monitoring well locations, appropriate groundwater sampling methodologies, appropriate chemical and biological sampling parameters and appropriate monitoring frequencies. If appropriate, include monitoring considerations to protect existing surface water uses.
14. Discuss authority for controlling groundwater uses within the mixing and buffer zones. Such items as groundwater easements and access rights that are necessary for mitigation or abatement purposes should be discussed.
15. Discuss contingency plan to abate pollution if groundwater monitoring reveals a problem.

IN NARRATIVE FORM ESTABLISH:

1. A monitoring program for groundwater and/or surface water where appropriate.
2. Authority for control of groundwater use in the mixing and buffer zones and access rights for abatement purposes should the contaminant leave control of the mixing zone.
3. Contingencies available to abate pollution should the contaminant leave control of the mixing zone.
4. Treatment capabilities of any pre-treatment system components proposed to decrease contaminant levels prior to discharge to groundwater. This must include design and testing data which supports claims of consistent, reliable and measurable improvements in treatment.
5. System design, placement and sizing recommendations based on the hydrogeologic study.
6. Controls of present and future water usage within the mixing and buffer zone.

Section N. Sewage Enforcement Officer Action

This section requires the SEO to review the submitted soils test data and indicate whether or not the proposed development site is not suitable for the use of a individual onlot sewage disposal system. The SEO's signature and certification number is evidence of SEO review. The SEO is required to complete the review of the soils information within 20 days of receipt of the package. If the residual tract contains an existing septic system, the SEO is required to complete Part 2 of Section N.

Section O. Public Notification Requirements

Notification of proposals for the use of SFTFs must be published at least once in the legal section of a newspaper of general circulation in the municipality in which the system will be used. This newspaper publication may be provided by the applicant or the applicant's agent, the municipality or the local agency by publication in a newspaper of general circulation within the municipality affected. Where an applicant or an applicant's agent provides the required notice for publication, the applicant or applicant's agent shall notify the municipality or local agency and the municipality and local agency will be relieved of the obligation to publish. Prior to publication of the notification, the applicant should notify the municipality that comments regarding their development will be directed to the municipality. The applicant should work with the municipality in coordinating the comment period, the time and location where the plan can be reviewed and the municipal review of the planning module package. The notification must contain the following as a minimum:

1. Name of project.
2. Type of development (residential, multi-residential, commercial, industrial).
3. Location, including road and street markers, municipality and county.
4. Acreage under development and number of equivalent dwelling units proposed.
5. Type of sewage disposal proposed (small flow treatment facility with stream discharge/spray irrigation/dry stream channel discharge, etc.).
6. Establishment of a 30-day comment and review period.
7. Where and when the land development plan can be reviewed. The recommended site for this public access to the plan is the municipal office or some other public building within the municipality where the project is proposed.
8. Address of the municipal office where comments will be accepted.

A copy of the newspaper notification, the comments received as a result of the publication, if any, and the municipal response to these comments must be submitted to DEP with the Sewage Facilities Planning Module.

Section P. False Swearing Statement

The individual completing the planning module is required to provide the information requested and to sign the false swearing statement.

Section Q. Municipal Action

This section is to be completed by the municipality.

1. Sewage Management

SFTF systems require long-term operation and maintenance to keep them working correctly and to prevent pollution or public health hazards caused by discharge of inadequately treated sewage effluent. These systems are the only sewage treatment plants that are not required to be operated and maintained by a certified treatment plant operator. Although the operation and maintenance requirements are usually minimal, problems can occur when untrained property owners are left with the responsibility to operate and maintain these systems. When these systems fail due to lack of adequate operation or maintenance, DEP holds both the property owner and the municipal government responsible to either repair or replace the improperly functioning system. The municipality should protect itself from potential future liabilities associated with improperly operated or maintained SFTFs by assuring that guarantees of long-term operation and maintenance are properly evaluated and in place before use of SFTFs is approved.

DEP's regulations (Section 71.64(c)(5)) require that all planning modules for SFTF systems include an evaluation that establishes specific responsibilities for operation and maintenance of the proposed system. This evaluation must include documentation that one or a combination of the following operation and maintenance requirements have been established or approved in writing by the municipality.

1. A maintenance agreement between the property owner and an individual, firm or corporation experienced in the operation and maintenance of sewage treatment systems.
2. A maintenance agreement between the property owner and municipality or its designated local agency which establishes the property owner's responsibility for operating and maintaining the system and the responsibility of the municipality or local agency for oversight of the system.
3. A municipal ordinance which requires that the small flow treatment facilities be operated and maintained through a maintenance agreement between the property owner and an individual, firm or corporation experienced in the operation and maintenance of sewage treatment systems.
4. Municipal ownership of the system.
5. Inclusion of the system under a sewage management agency developed in accordance with §71.73 (relating to sewage management programs for sewage facilities permitted by local agencies) operated by the municipality.
6. A properly chartered association, trust or other private entity which is structured to manage the system.
 - a. Associations must meet the following minimum requirements to be considered adequate:
 - (1) The association must be nonprofit and incorporated or must be a co-op under the Public Utility Commission's jurisdiction.
 - (2) Articles of Incorporation and Bylaws must:
 - (a) limit the purpose of the association and stipulate that funds collected for sewerage services be disbursed only in payment for expenses of these systems.
 - (b) provide for membership and voting rights for each owner of an improved property in the development.
 - (c) provide for suspension of service to property owners for non-payment of bills.
 - (d) stipulate that the corporation owns the sewerage facilities.
 - (e) establish the capability of the association to:
 - keep records and an accounting/auditing system
 - collect fees for services provided
 - disburse funds
 - contract with public or private agencies for labor or other services
 - employ personnel to operate and maintain sewage facilities
 - establish contingency funds for use in repairing system components
 - have elected officer and bylaws
 - (f) establish association membership as a deed restriction and condition of sale of the property.
 - (g) establish the legal right to enter upon property for routine inspections or maintenance and to respond to emergencies.

- (h) establish assurance that adequate operation and maintenance funds are available from the start of the sewerage system operation.
 - b. Properly chartered trusts must meet the following minimum requirements to be considered adequate:
 - (1) The sewage facilities are legally conveyed to a third party (trustee) through a trust deed.
 - (2) The trust deed contains specific provisions which require the original owner of the facilities to:
 - (a) Maintain the sewage system in accordance with normally accepted operation and maintenance standards and permit conditions at all times.
 - (b) Provide continued service to each property connected to the sewage facilities.
 - (c) Provide service at a rate established in the trust deed or by action or regulation of the Public Utilities Commission.
 - (3) The Trust Deed states that upon the original owner's default on any of the Trust Deed provisions, the Trustee named has the authority and responsibility to take possession, operate and manage the sewage facilities.
- 7. Bonding, escrow or other security must be established prior to planning approval and must be forfeited to the municipality upon notice of continuing noncompliance of the system with the operation, maintenance and monitoring standards contained in DEP's *Guidelines for Design, Installation and Operation of Small Flow Sewage Treatment Facilities*, DEP ID: 362-0300-002 available on DEP's Web site or noncompliance with the municipal assurances for management of the operation and maintenance requirements established through the provisions of this subsection. The municipality will use the forfeited security to cover the costs of repair and/or future operation and maintenance of the system over its design life. This bonding, escrow or other security must equal an amount up to a maximum of 50 percent for each of the first 2 years of operation. After 2 years of operation the bond agreement must provide for a refund of part of the bond so that only 10 percent of the cost of the equipment and installation is retained by the bondholder. The remaining 10 percent is retained for the life of the system.

2. Residual Tract Waiver

DEP believes that developers, municipal officials and future lot owners are best protected by complying with sewage planning requirements to assure that adequate sewage facilities will be available to serve all newly created subdivisions. However, DEP is aware that some subdivision proposals include residual tracts on which no construction is proposed which would require the use of sewage disposal facilities. Developers having such residual tracts may not be required to complete sewage facilities planning for that portion of the subdivision if this claim is valid. The residual tract waiver may be requested by checking the request block in Section G.2.

To be valid, acceptance of the request for a waiver by the municipal or county planning agency and the municipality is required. The municipal or county planning agency will indicate its acceptance of the proposed waiver by marking the appropriate blocks on Component 4. The municipality indicates its acceptance of the proposed waiver by signing and dating the appropriate statement in Section Q, Component 3s. When the proposal involves the subdivision of property on which there is an existing building currently served by an onlot septic system on the residual tract, the municipality's sewage enforcement officer must inspect the system for proper operation.

In addition, the planning module must include a plot plan or deed or deed notice which contains language similar to the following, directed to the residual tracts:

"As of the date of this deed/plot plan/deed notice recording, the residual tract of this subdivision is dedicated for the express purpose of _____ use. No portion of the residual tract of this subdivision has been approved by the municipality or the approving agency for the installation of sewage disposal facilities. No sewage permit will be issued for the installation, construction, connection to or use of any sewage collection, conveyance, treatment or disposal system (except for repairs to existing system) unless the municipality and approving agency have approved any required sewage facilities planning for the residual tract of the subdivision described herein in accordance with the Sewage Facilities Act (35 P.S. Sections 750.1 *et seq.*) and regulations promulgated thereunder. Prior to signing, executing, implementing or recording any sales contract or subdivision plan, any purchaser or subdivider of any portion of this residual tract should contact the municipality which is charged with administering the Sewage Facilities Act to determine what sewage facilities planning is required and the procedure and requirements for obtaining appropriate permits or approvals."

Language similar to the above must be recorded on the plot plan or deed or deed notice and a copy of the deed or plot plan or deed notice must be submitted with this planning module submission.

Section R. Planning Module Review Fees

The Sewage Facilities Act establishes a fee for the DEP planning module review. DEP will calculate the review fee for the project and invoice the project sponsor **OR** the project sponsor may attach a self-calculated fee payment to the planning module prior to submission of the planning package to DEP. After consideration of the options available, please check the appropriate box in the Component 3s form attached.

Planning module review fees for a Component 3s submission may be determined using the following formula:
A new surface or sub-surface discharge of less than 2000 gpd will use:

_____ Lots (or EDUs) X \$35.00 = \$ _____

The fee is based upon:

- The number of lots created or number of EDUs whichever is greater.
- An EDU is equal to a sewage flow of 400 gallons per day.
- For other than single-family residential projects, EDUs are calculated using projected population figures.

OTHER REQUIREMENTS

Planning Agency Review

Except when proposing an SFTF as a repair to a malfunctioning sewage disposal system, Component 4 (Planning Agency Review) and a copy of the entire completed planning module for new land development must be forwarded by the applicant to each existing municipal, county or areawide planning agency and existing health department for their action. In repair situations, where new land development is not proposed, planning agency reviews are not required. Where available, obtaining existing county health department comments is appropriate using Component 4C. The use of registered mail or certified mail (return receipt requested) by the applicant when forwarding the planning module to the agencies will establish the date of receipt. These agencies are required to provide comments within 60 days of receipt of the complete planning module package. The planning agencies will review the planning module for consistency with municipal and county official sewage facilities plans, municipal comprehensive plans, zoning and land use designations. They will also determine consistency of the plan with wetland protection, stormwater management, archaeological and historical resources and prime agricultural land protection as indicated in the comprehensive plan for the area. Proof that these agencies have been in possession of the planning module for 60 days without comment will satisfy the review requirement. When the agencies return the planning module to the applicant, or if 60 days have passed without comment, it may be submitted to the municipality for review and action.

Municipal Review

The municipality must determine if the planning module package is complete within 10 days of its receipt. If it is complete, the municipality must sign and date the checklist following this guidance to document the date of receipt of a complete module. Incomplete planning modules are returned to the applicant for completion.

The municipality must act upon a complete Component 3s planning module package within 60 days of receipt or within such additional time as the applicant and municipality may agree to in writing. Failure of the municipality to act within 60 days or the agreed-to time extension causes the planning module to be deemed approved by the municipality. The municipality or applicant may then send the complete planning module, along with the signed and dated completeness checklist, to DEP for final review.

Municipal actions can include adoption of the project as a revision to the municipality's Official Plan, adoption of the revision with modifications or denial of the revision. If the plan is adopted, the municipality forwards the revision, along with the signed and sealed Resolution for Plan Revision form and signed Transmittal Letter form, to DEP. Denied revisions are to be returned to the applicant with the reason(s) for denial. DEP must also be informed of the reasons for denial.

DEP Review

DEP must determine if the proposed residential subdivision plan is complete within 10 days of receipt. If it is complete, DEP will review the proposed revision. DEP must approve or disapprove the proposed plan revision within 120 days of receipt of a complete package, unless the proposed revision is for a residential subdivision plan which requires DEP action within 60 days of receipt of a complete plan submission. If DEP fails to act within this 120 day period (60 days for residential subdivision plans), the proposed plan revision will be deemed to be approved, unless DEP informs the municipality prior to the end of the review period that an extension of time is necessary to complete the plan review. This extension of time may not exceed 60 days.

The municipality and applicant will be informed of DEP's action by letter. If the plan is disapproved, the municipality and applicant will also be notified of the reason(s) for the disapproval.