

# RULES AND REGULATIONS

## Title 25—ENVIRONMENTAL PROTECTION

### ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CHS. 71—73]

#### Administration of Sewage Facilities, Planning Program and Standards for Sewage Disposal Facilities (Act 149)

The Environmental Quality Board (Board) by this order adopts amendments to Chapters 71—73 (relating to administration of sewage facilities planning program; administration of sewage facilities permitting program; and standards for onlot sewage treatment facilities). The amendments implement various amendments to the Pennsylvania Sewage Facilities Act (act) (35 P.S. §§ 750.1—750.20) which were enacted under the act of December 14, 1994 (P.L. 1250, No. 149) (Act 149). As described in Section E of the Preamble of the proposed amendments published at 26 Pa.B. 1491 (March 30, 1996), the amendments represent significant revisions to the planning, administrative, permitting and technical requirements of the sewage facilities program established under the act. Among the more significant amendments are provisions relating to procedures for private requests under section 5 of the act (35 P.S. § 750.5), review of official plans, update revisions, special studies and requests for exceptions from the requirement to revise an official plan, responsibilities and administrative procedures for delegated agencies authorized under section 7(b)(4.3) of the act (35 P.S. § 750.7(b)(4.3)), reimbursement to and expanded authority of local agencies under sections 6 and 8 of the act (35 P.S. §§ 750.6 and 750.8), fees for the review of planning modules and certain responsibilities of sewage enforcement officers.

The Board approved these final-form regulations at its April 15, 1997, meeting.

#### A. Effective Date

Except for § 73.31(b)(4) (relating to standards for septic tanks), these amendments will go into effect immediately upon publication in the *Pennsylvania Bulletin* as final rulemaking. The amendments to § 73.31(b)(4) will go into effect January 7, 1998.

#### B. Contact Persons

For further information regarding these final-form regulations, contact Milton Lauch, Chief, Division of Wastewater Management, Office of Water Management, 10th Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8465, Harrisburg, PA 17105-8465 (717) 787-8184 or William S. Cumings, Jr., Assistant Counsel, Bureau of Regulatory Counsel, 9th Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8464, Harrisburg, PA 17105-8464, (717) 787-7060. Persons with a disability may use the AT&T Relay Service by calling (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). These final-form regulations are available electronically through the Department of Environmental Protection (Department) Web site (<http://www/dep.state.pa.us>).

#### C. Statutory Authority

The amendments are being promulgated under the authority of section 9 of the act (35 P.S. § 750.9), which

grants the Board the authority to adopt rules and regulations relating to the implementation of the act. The amendments are also adopted under the authority of The Clean Streams Law (35 P.S. §§ 691.1—691.1001) and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510.20).

#### D. Background and Summary

During the 1994 Legislative session, the General Assembly enacted Act 149, which significantly amended the act. The Legislation was signed by the Governor on December 14, 1994. With the exception of two sections, the provisions of Act 149 became effective on December 15, 1995, 1 year after enactment. The provisions of section 7 of the act (35 P.S. § 750.7) authorizing a qualified exemption from the permitting and planning requirements of the act for the installation of onlot sewage systems to qualified owners of lots 10 acres or larger became effective upon enactment of Act 149. Section 7.3 of the act (35 P.S. § 750.7c) relating to individual residential spray irrigation systems became effective June 17, 1996.

The Board adopted final-form regulations implementing certain provisions of Act 149 at a meeting held on June 18, 1996. The final-form regulations adopted in June 1996 are based on a proposal outlined in a notice of proposed rulemaking published at 25 Pa.B. 3221 (August 5, 1995) and relate to implementation of the qualified exemption, technical and bonding criteria for the installation of onlot sewage disposal systems in areas where soil mottling is present and certain other provisions. Those final-form regulations were published at 26 Pa.B. 5347 (November 2, 1996).

The final-form regulations outlined in this rulemaking implement the remaining provisions of Act 149. Among other things, the final-form regulations include provisions relating to revised planning review processes outlined in Act 149, delegated agencies, permitting and technical requirements relating to individual residential spray irrigation systems, review fees, permitting by local agencies, reimbursements and multimunicipal local agencies. The final-form regulations are based on a proposal published at 26 Pa.B. 1491 (March 30, 1996). The proposal included a number of provisions which had been published in the August 5, 1995, notice of proposed rulemaking. As noted in the previous paragraph, those provisions have been finalized and accordingly are not included in this notice except when technical amendments were made.

The Sewage Advisory Committee (SAC), established by the act and consisting of representatives of 33 special interest groups, met on September 18, 1996, to review the draft final rulemaking. SAC also reviewed the recommendations of its Regulation Subcommittee, which conducted a detailed review of a draft of the final-form regulations, the comments received and the Department's responses to those comments. SAC made recommendations regarding the comments received and the draft of the final-form regulations.

#### E. Summary of Comments and Responses on the Proposed Rulemaking and Amendments to the Proposed Rule.

The Board held six public hearings regarding the proposed amendments. Twenty-two individuals testified at the public hearings. The Board also received written comments from 110 individuals and organizations during the public comment period. The Board also received

comments from the Independent Regulatory Review Commission (IRRC). Detailed summaries of the comments the Board received and the responses to those comments may be found in a Comment and Response Document which is available from the contact persons whose names and addresses are noted in Section B of this Preamble. Following are summaries and responses to the more significant comments which were received during the comment period.

1. *Design of spray irrigation systems and certain other components of onlot sewage systems.*

A vast majority of the comments concerned professional qualifications related to the design of certain components of an onlot sewage disposal system and individual residential spray irrigation systems. Proposed §§ 73.44(c)(1), 73.46(a)(7) and 73.161(a) provided that the components and systems could be designed by certain qualified sewage enforcement officers, as well as professional engineers. Under the existing provisions of §§ 73.44 and 73.46, only professional engineers may design these components. For the most part, commentators affiliated with the professional engineer community asserted that the design of spray irrigation systems and certain components of onlot sewage disposal systems constitutes the practice of engineering. Accordingly, these commentators believe that persons engaged in these designs are subject to the provisions of the Engineers, Land Surveyors, and Geologists Registration Law (the Registration Law) (63 P. S. §§ 148—158.2).

Other commentators suggested that the design of these components and systems does not constitute the practice of engineering. Some of these commentators asserted that section 8(e) of the act specifically authorizes sewage enforcement officers to engage in these design activities.

The Board and the Department believe some sewage enforcement officers who are not professional engineers are qualified to design these systems and components. The State Registration Board for Professional Engineers, Land Surveyors and Geologists (the Engineers' Board), however, has formally advised the Department that, with respect to the design of individual residential spray irrigation systems, the design of these systems constitutes the practice of engineering. The Engineers' Board noted that section 3 of the Registration Law (63 P. S. § 150) prohibits the practice of engineering in this Commonwealth by any person unless that person is licensed under the laws of the Commonwealth as a professional engineer.

The Board acknowledges that section 8(e) of the act (35 P. S. § 750.8(e)) does authorize sewage enforcement officers to perform design work, provided certain requirements are met related to fees and subsequent review and permit issuance. That section does not, however, provide specific authority relating to the design of individual residential spray irrigation systems. Under the principles of statutory construction, when a general provision of a statute conflicts with a more specific provision of a statute or more specific statute, the more specific provision or statute applies. The Engineers' Board has issued a formal opinion stating that design of individual residential spray irrigation systems constitutes the practice of engineering and is, thus, subject to the requirements of the Registration Law. The Board must defer to the determination of the Engineers' Board.

The Board has deleted references in the proposal as well as the existing regulations which relate to the professional qualifications for the design of onlot sewage systems and their components as well as individual

residential spray irrigation systems. Determinations regarding professional qualifications and licensing requirements for these activities are more appropriately made under relevant registration or licensing statutes.

*Chapter 71—Administration of the Sewage Facilities Planning Program*

2. *Chapters 71 and 72—Minor Changes*

Most of the revisions to the proposed amendments in these final-form regulations are discussed in the paragraphs which follow. A number of minor changes to Chapters 71 and 72 were made as follows:

Section 71.55(c) (relating to exceptions to the requirement to revise the official plan for new land development)—The reference to "exception" has been clarified to mean an application for an exception.

Section 71.58(a)(5)(vii) (relating to delegation of new land development planning)—A reference to documentation regarding administrative procedures, and the like, of delegated agencies being listed has been changed to provide that the documentation must be reviewed by the Department.

Section 71.62(b)(2)(iii) (relating to individual and community onlot sewage systems)—A reference to the United States Soil Conservation Service has been revised to more accurately reflect its current official name.

Section 71.63(c)(3) (relating to retaining tanks)—Text regarding regulations or restrictions has been added to make the provision consistent with the immediately preceding sentence.

Section 71.64(c)(7) (relating to small flow treatment facilities)—Language regarding alternative analysis for small flow treatment facilities has been revised to provide that the use of this facility must be a technically, environmentally and administratively acceptable alternative rather than the best environmentally acceptable alternative.

Section 71.65(b) (relating to individual community sewage systems)—A reference to "appropriate Department guidance manuals" has been added. These manuals provide information relating to the submission of plans and technical requirements for small flow treatment facilities.

Section 72.1 (relating to definitions)—Definitions of "qualified soil scientist" and "soil mottling" were clarified by adding more current technical language.

Section 72.22(f) (relating to permit issuance)—A reference to a previous paragraph has been added for clarity.

Section 72.23 (relating to limitation on onlot system permit issuance)—Minor clarifying amendments were made to make it clear the provisions apply to certain areas instead of the occurrence of an event. In addition, language was added to make it clear that the reference to permit limitations in subsection (c) is limited to this section.

Section 72.42(20)(v) (relating to powers and duties of local agencies)—A minor amendment was made to clarify an apparent grammatical error in the proposal.

Section 72.55(c) (relating to certification renewal)—The requirement for the completion of training for renewal of sewage enforcement officer certification has been clarified. A certification will lapse if a sewage enforcement officer has not completed training required by the Department

“for certification renewal” by the renewal date. In addition, the reference to subsection (b) in subsection (d) has been deleted.

3. *Sections 71.1, 72.1 and 73.1—Generic phrase relating to definitions.*

IRRC noted that the lead-in sentence to each of these sections, which define terms used in each chapter, states: “The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise.” IRRC suggested that the phrase “unless the context clearly indicates otherwise” be deleted because it believes the phrase is ambiguous. The Board does not agree with this recommendation. The phrase is standard language which appears in various provisions defining terms in statutes and regulations administered by the Department. See for example, §§ 109.1, 215.2 and 260.2. Moreover, the phrase has been included in these sections for many years and has been accepted by the regulated community and the public.

*Equivalent dwelling unit.* Two commentators raised issues with respect to the existing definition of “equivalent dwelling unit.” These commentators asserted that there was some confusion within the regulated community about the 400 gallon per day flow threshold for determining the number of lots in a subdivision. Currently, an equivalent dwelling unit is, for purposes of determining the number of lots in a subdivision, defined as “that part of a multiple family dwelling or commercial or industrial establishment with flows equal to 400 gallons per day.” The commentators assert that some municipalities may be misusing the 400 gallon per day threshold as a design flow and not for the calculation of a flow threshold for submittal of planning modules. One commentator asserts the 400 gallon threshold is excessive.

The Board acknowledges that there may be some instances where municipalities or municipal authorities have misused the definition of “equivalent dwelling unit.” The 400 gallon per day threshold was, and continues to be, intended only to establish a threshold at which sewage facilities planning would be required, as well as to establish fees for planning module reviews. In addition, the Board does not believe the 400 gallon threshold is excessive because the figure includes inflow and infiltration, which generally accounts for an important component of the flows received at treatment plants, even in relatively new systems.

In response to these comments, the definition has been clarified to specify that the 400 gallon threshold relates only to the determination of planning exemptions and fees for planning module reviews under the sewage facilities planning requirements of Chapter 71. Language has also been added to make it clear the flow figures are not intended for the calculation of flows for the design of community sewerage systems or for the allocation of flows related to community sewerage systems.

*Individual residential spray irrigation system.* One commentator asserted that the definition of “individual residential spray irrigation system” should be identical to that specified in the statute. The definition contained in the proposal was an attempt to provide a practical definition without changing the meaning of the term as defined in the act. The statutory definition includes a clause which states such a system is “permitted under section 7 of the act.” Inclusion of that clause in the context of these regulations, which relate to sewage facilities planning, would likely lead to confusion because

it implies that a permit must be received before planning may begin, which is not the case. The Board has thus not incorporated all of the statutory definition in these final-form regulations.

*Individual sewerage system.* An individual sewerage system is defined as “[a]n individual sewage system which uses a method of sewage collection, conveyance, treatment and disposal other than renovation in a soil absorption area, or retention in a retaining tank. One commentator suggested that this definition be amended by adding “spray fields” after “absorption areas.” The commentator believes this would make the term consistent with the definition of “individual onlot sewage system.” The Board disagrees because including the term in the definition as suggested would prevent a multifamily, commercial or institutional facility from using spray irrigation systems. A small flow treatment system, which is a type of individual sewerage system, can include the use of spray irrigation systems.

*Retaining tank.* The term “retaining tank” includes a subset definition of a chemical toilet. The proposal indicated that the term and definition of “chemical toilet” would be deleted. A number of commentators noted that although this was the case, the use of the term was retained in certain sections of the regulations. In light of these comments, the definition of “chemical toilet” will be retained.

*Sewage facilities.* The existing definition of “sewage facilities” in each of these sections contains a broad definition of the term as well as a subset of definitions which define various types of sewage facilities. IRRC questions the need to place the subset definitions under the term “sewage facilities” and believes that each definition should be listed as a separate definition.

The Board does not agree with IRRC’s recommendation. The subset definitions have been defined under the term “sewage facilities” because they are specific types of sewage facilities. The subset format of the definitions has been in use for many years and consequently the regulated community and the public are familiar with the placement of the terms. The Board has, however, incorporated IRRC’s suggestion that the subset be preceded by the phrase “sewage facilities include:”.

Among the terms defined in the subset is “community sewerage system.” The definition has been refined to make it clear that such a system can be either a publicly or privately-owned community system.

*Small flow treatment facilities.* The existing definition of this term is changed to make it clear that the method of final disposal of effluent from such a system is a stream discharge or other disposal method approved by the Department. The existing definition limits the discharge to a stream discharge or discharge to the surface of the ground.

*Working day.* A definition of “working day” has been added to provide a consistent basis for completeness determinations under section 5(e)(2) of the act.

4. *Section 71.14 (relating to private requests to revise official plans)*

Section 71.14(c) of the proposal included a provision that the Department will inform certain enumerated local and county agencies of its receipt of a private request and that any written comments these agencies wish to provide must be submitted to the Department within 45 days of the Department’s receipt of the private request. One commentator suggested that planning agencies and

county health departments should be given 45 days after receipt by those agencies of copies of the private request from the Department to provide written comments. The commentator believes these agencies may not receive copies of the request for up to 2 or 3 weeks after the Department receives it, thereby limiting the agencies' review time to less than 30 days.

As the commentator acknowledges, the language of § 71.14(c) is directly derived from section 5(b.1) of the act. The Board also recognizes that the time specified in the regulatory provision at issue might impose a burden on the ability of these agencies to provide substantive and meaningful comments on a private request in a timely manner. To address this situation, the Department has established an administrative time restraint of 7 working days for the Department's notification to these agencies. In addition, § 71.14(a) of the proposal has been amended to make it clear that, as part of the notification process, a person submitting a private request must, at the same time the person notifies the Department, notify not only the municipality, but also the municipal planning agency and appropriate planning commission, and must also include copies of the same documentation that was submitted to the Department supporting the private request. This change will ensure that the appropriate agencies authorized to comment on the private request have the appropriate documents to review early in the process, regardless of the time it takes the Department to forward the information.

In addition, the language of subsection (a) has been clarified to provide that a person filing a private request may request that the Department order a municipality to not only revise, but also implement its official plan. The proposal indicated that this request could only be filed to request an order to revise the official plan, not necessarily to implement it.

No comments were received regarding the time periods outlined in the proposed revisions outlined in subsection (e). However, the Department discerned a problem related to the time periods established in this section for the Department's review and final decision regarding a private request for revision. The proposal required the Department to make a decision within 120 days of receipt of comments from the municipality and official planning agency or at the expiration of the 45 day comment period established for these agencies. The language was clarified to establish that the Department's review period is 120 days from either receipt of the comments or 120 days after the expiration of the comment period.

5. *Section 71.21(a) (relating to content of official plans)*

In relevant part, this section currently provides that, prior to preparation of an official plan, a municipality should either meet with the Department prior to completion of a Task/Activity Report or submit a Task/Activity Report or other forms to the Department. The purpose of this Report is to determine which of the planning elements outlined in Chapter 71 are necessary to meet the specific needs of the municipality. This section has been slightly revised to require that a municipality submit a Task/Activity Report to the Department and to encourage the municipality to meet with the Department prior to submitting the Report to the Department.

6. *Section 71.21(a)(6)—Content of official plans—alternative evaluations.*

In preparing official plans or revisions thereto, proponents are required to evaluate various alternatives for solving the needs for sewage facilities in the area studied.

This section currently provides criteria for selecting the appropriate alternative. A proponent is to select an alternative and support that selection with documentation showing that the alternative selected is "the best alternative technically, environmentally and administratively." The quoted language has been revised to provide that the alternative selected must be supported by documentation which "shows that the alternative is technically, environmentally and administratively acceptable." This is intended to eliminate subjective judgments among equally acceptable alternatives.

7. *Section 71.31 (relating to municipal responsibility to review, adopt and implement official plans)*

No changes were proposed to this section. However, during the comment period the Department discerned an issue which needed to be clarified with respect to the public notification provisions of subsection (c). The existing provision provides, in relevant part, that the published notice is to contain a summary description of the nature, scope and location of the planning area and the plan's major recommendations. This provision is clarified in the final-form regulations to address those plans which propose a discharge to a body of water which is designated as "high quality" or "exceptional value" under Chapter 93 (relating to water quality standards). Notices involving these proposals must now include the antidegradation classification of the receiving water and must include a list of the sewage facilities alternatives considered. This amendment is consistent with recommendations of a regulatory-negotiation stakeholders' group established by the Department to address certain issues related to special protection waters. The stakeholders' group recommended that the Department increase public participation opportunities in sewage facilities planning where high quality or exceptional value waters are involved.

8. *Section 71.32 (relating to Department responsibility to review and act upon official plans)*

Subsection (a) outlines the basis for completeness determinations relating to the Department's review of official plans and official plan revisions. Among the criteria are items required by § 71.31. No changes were proposed. However, subsection (a) is being revised in these final-form regulations to provide that when a special study is submitted in support of an existing official plan, existing plan revision or existing update revision, the Department may waive inapplicable requirements of § 71.31.

9. *Section 71.43 (relating to approval of grants)*

No changes were proposed to existing § 71.43. However, during the comment period, the Department discerned a need to cross reference related provisions in § 71.32(d)(7). The referenced section provides that when a plan is proposing sewage facilities which impacts the sewerage facilities of other municipalities, the other municipalities must also adopt the plan. This is directly related to § 71.43(d)(1) which establishes the conditions under which planning grants may be paid for plans in which more than one municipality participated.

10. *Section 71.51(b) (relating to general)*

Proposed § 71.51(b)(1) outlined the criteria for determining exemptions from sewage facilities planning requirements. Among the criteria outlined was that in subparagraph (ii), which stated that the area proposed for the use of individual or community sewage systems could not be underlain by carbonate geology or be located in an area within 1/4 mile of water supplies documented to exceed 5 parts per million (5ppm) nitrate-nitrogen. One

commentator suggested that when considering the location of a proposed sewage system relative to water supplies documented to exceed 5ppm, consideration should be given to watershed location. For example, a proposed sewage disposal site could be within 1/4 mile of known water supplies with elevated nitrate-nitrogen concentrations, but not even be in the same drainage area.

The Department administers requests for planning exemptions by evaluating existing United States Geologic Survey geologic maps, topographical maps and other relevant data on water supplies in the immediate area of the development. Determinations of the location of a proposed development within a specific watershed may not accurately reflect the aquifer or direction of groundwater flow within which the development is to be located. This requires additional studies which may be submitted in support of a planning exemption, but would not normally be required. Accordingly, the suggested change was not made.

Subparagraph (v) provided a requirement that to qualify for a planning exemption, a replacement soil absorption area or spray field must be available for each lot of a proposed subdivision. These replacement areas must be confirmed by a signed report of the sewage enforcement officer serving the municipality in which the new land development is proposed. This subparagraph has been expanded by adding a new sentence providing that a local agency or municipality may require deed restrictions or other actions it deems necessary to protect the replacement soil absorption area or spray field from any damage which would make it unsuitable for future use.

11. *Section 71.51(b)(2)(iii)*

Subsection (b)(2) incorporates the provisions of section 7(b)(5.1) of the act, which outline the criteria which are to be utilized by the Department and delegated agencies in determining whether a subdivision proposing a connection to or an extension to public sewers would require a revision for new land development or a supplement. One of the criteria relates to permittees of the receiving sewerage facilities documenting that the existing collection, conveyance and treatment systems do not have an existing or a projected hydraulic or organic overload. One commentator, representing a large regional plant operator, suggested that the procedure outlined could create some difficulties for these operators. He believes the procedure does not specifically provide that the receiving facilities themselves certify that they do not have an existing or projected overload, particularly when the receiving facility is located in a municipality other than where a subdivision is being proposed. In this official's case, some municipalities have submitted planning exemption requests without having obtained certification from the receiving facility. The commentator believes the regulation could be interpreted as merely requiring that the applicant provide "written certification . . . to the municipality" without certification from the receiving facility. Consequently, the receiving facility might not be aware of the proposed project and the negative effect of the project on its future capacity.

The Board and the Department acknowledge these concerns. The Department has in the past utilized a postcard mailer which, among other things, requires certification from a municipal official that the receiving facility has adequate capacity to serve the proposed development. To address the situation discussed by the commentator, subsection (b)(2)(iii) has been revised in the final-form regulations to provide that the certification

must be provided to the Department or appropriate delegated agency, if applicable, as well as the municipality. In addition, the "application mailer" used to process planning exemptions will also be modified to require a copy of certifications from the receiving collection, conveyance and treatment facilities be submitted to the Department with the application mailer after it has been reviewed by the municipality.

12. *Section 71.53 (relating to municipal administration of new land development planning requirements for revisions)*

Among other things, proposed revisions to subsection (b) outlined the procedure for the review of planning modules by sewage enforcement officers and appropriate planning or zoning agencies. It requires a municipality to determine if a planning module is complete within 10 days of the receipt of comments from sewage enforcement officers and the appropriate agency. One commentator raised some concerns about this process, including whether the municipality should formally notify the applicant that the submission is complete and whether a sewage enforcement officer's request for additional testing extends the 10-day period for completeness determinations.

Although not raised by any commentator, the Department discerned an issue which should be addressed in this section. As noted in paragraph 11 of this Preamble, a concern was expressed relating to verification of the hydraulic and organic loading capacity of a receiving facility. In light of this concern, subsection (b) is being amended to provide that the owner of the receiving facility should receive a copy of the planning module.

If an applicant is not formally notified by the municipality within 10 working days of receipt of the planning module that the submission is incomplete, the applicant can assume the submittal is complete. The review by the sewage enforcement officer and the planning or zoning agency must be done within 10 days of receipt. If additional information is required by any of the reviewers, the planning module is incomplete.

In addition, the time frame of 10 days has been modified to 10 working days. This modification is a practical change to ensure consistent application of completeness determinations among the municipalities and local agencies. This is derived from the completeness determination provision of section 5(e)(2) of the act.

Subsection (d)(6) of the existing regulation outlines the types of sewage facilities planning proposals for which public notice by newspaper publication is required. No changes were proposed. However, a new subparagraph (x) is being added to provide that newspaper publication is required for sewage facilities proposed to discharge in areas of high quality or exceptional value bodies of water. This is consistent with the amendments to § 71.31 and Chapter 93 noted in paragraph 7 of this Preamble.

Subsection (h) was proposed to be revised to provide that a municipality may not adopt a proposed revision to an official plan unless it had determined that the proposal complies with the sewage related provisions of municipal zoning, land use or other comprehensive plans. The Board has determined that deciding what is "sewage related" is subject to conflicting interpretations and is not easily susceptible to satisfactory resolution. Accordingly, the proposed amendment of this subsection is deleted in these final-form regulations.

13. *Section 71.54 (relating to Department administration of new land development planning requirements for revisions)*

Subsection (b) of the proposal indicated that a proposed plan revision would not be considered complete unless, among other things, processing fees for the Department's review of the sewage facilities planning module was paid at the time of submission of the module. This fee requirement for completeness is being deleted in these final-form regulations. A similar change is made in § 71.55(d) (relating to exceptions to the requirement to revise the official plan for new land development).

14. *Sections 71.58 and 71.59 (relating to delegation of new land development planning; and delegated agency administration of new land development planning requirements)*

As proposed, those sections would have required delegated agencies to submit to the Department quarterly reports detailing each subdivision exempted from the planning process. One commentator noted that proposed §§ 71.58(a)(6) and 71.59(d) would require delegated agencies to submit a copy of each supplement approved by the delegated agency and letters of disapproval. This commentator believes the documentation delegated agencies would be required to submit to the Department regarding actions taken with respect to their review of supplements is excessive. The commentator suggests that the quarterly report process should be used to monitor the delegated agency instead of to require the submittal of the modules.

The Board has considered these comments and they are well taken. The Department will use its oversight authority to evaluate the activities of the delegated agencies and may review planning module approvals and denials randomly or on a periodic basis. Accordingly, § 71.58(a)(6) has been revised to delete the requirement that delegated agencies submit copies of planning modules to the Department. A similar requirement of § 71.59(d) has also been deleted.

15. *Section 71.62 (relating to individual and community onlot sewage systems)*

Existing subsection (c)(3)(ii) outlines one of the components required for a preliminary hydrogeologic evaluation necessary to determine the technical and institutional feasibility of using an onlot sewage system. The preliminary hydrogeologic evaluation must include, among other things, the estimated wastewater dispersion plume. SAC recommended that this section be clarified in the final-form regulations to set forth with specificity the sewage flows to be used in determining the estimated wastewater dispersion plume. The plume is to be determined by using an average daily flow of 262.5 gallons per equivalent dwelling unit, or some other flow supported by documentation.

16. *Section 71.63 (relating to retaining tanks)*

Existing subsection (e) exempts certain facilities having a sewage flow of 400 gallons per day or less from the planning requirements outlined in this section. The 400 gallon threshold has been increased to 800 gallons.

Existing subsection (f) outlines the conditions under which privies may be used in lieu of other methods of sewage disposal. This subsection has been clarified to make it clear that "other methods of sewage disposal" includes individual residential spray irrigation systems. In addition, existing subsection (f)(1) provides that the site where the privy is located must meet the requirements for ultimate sewage disposal by using an onlot

system to ensure that adequate sewage facilities will be available if water under pressure or piped water becomes available. The proposed amendment to this subsection would have included the availability of piped wastewater also. The references to water under pressure and piped water, as well as the proposed addition of piped wastewater, have been moved from subsection (f)(1) to subsection (f)(2) in these final-form regulations.

Existing subsection (f)(2) requires a municipality to assume responsibility for the removal of a privy and require the installation of an approved onlot system when water under pressure or piped water becomes available to the lot. This subsection has been clarified to provide that the municipality or entity with jurisdiction is responsible for ensuring the removal of privies and requiring the installation of approved onlot systems if water under pressure or piped water is available to the lot or when the property owner installs water under pressure, piped water or plumbing to move wastewater from the structure to the privy vault or to an unpermitted disposal system on the lot. Existing subsection (g) has been amended to exempt privies situated on a lot of record in existence prior to May 15, 1972.

17. *Section 71.64 (relating to small flow treatment facilities)*

Subsection (c)(1) of the proposal provided that a proposal for a small flow treatment facility must include, among other things, documentation that soils are not suitable for the installation of individual or community onlot sewage systems under §§ 73.11—73.16. One commentator noted that this, in effect, appears to preclude the use of individual residential spray irrigation systems. This commentator suggested that when a lot does not otherwise meet conditions for a regular onlot system or a sand mound, the property owner should have a choice between a small flow treatment facility and an individual residential spray irrigation system, depending on site conditions.

The Board agrees with the commentator. Accordingly, the regulations have been modified to provide the property owner with the option of choosing a small flow treatment facility or an individual residential spray system when the site is suitable for either, provided the lot proposed for development is outside the watershed of areas designated as high quality or exceptional value under Chapter 93.

Existing subsection (c)(2), which provides that an update revision proposing the use of small flow treatment facilities contain documentation that, among other things, the proposed system will not discharge to high quality or exceptional value waters, was deleted in its entirety to be consistent with proposed regulatory amendments to Chapter 93 resulting from recommendations of the regulatory-negotiation stakeholder's group established by the Department to address certain issues related to special protection waters. Deletion of this outright prohibition of small flow treatment facility discharges into special protection waters will properly place consideration of the proposals under the processes established by Chapter 93.

Subsection (c)(6) of the proposal required that one or a combination of operation and maintenance requirements be included in an official plan or revision proposing the use of small flow treatment facilities. In addition, proposed subsection (c)(7) provided that financial security, such as bonding, escrow or other security, is to be established prior to planning approval.

One commentator provided extensive comments regarding these requirements. Among other things, the commentator asserts that the bonding requirements are excessive, that there is no statutory basis for the financial assurance requirements and that bonding requirements are already covered under section 509 of the Pennsylvania Municipalities Planning Code (53 P.S. § 10509). The commentator also believes that requiring bonding as well as options relating to operation and maintenance is excessive and that proposed subsection (c)(7) lacks clarity with respect to the posting of the financial assurances outlined therein.

With respect to the commentator's assertions regarding statutory authority, section 9 of the act (35 P.S. § 750.9) provides that the Board "shall adopt such rules and regulations of the Department . . . as shall be necessary for the implementation of this act. Such rules and regulations shall establish standards for [inter alia] the . . . maintenance and operation of individual sewage systems and community sewage systems . . ." The financial assurances outlined in this section generally incorporate existing financial assurance provisions relating to sewage management programs for Department permitted sewage facilities outlined in existing § 71.72, which were adopted in 1989. See 19 Pa.B. 2429 (June 10, 1989).

The Board has considered the commentator's suggestion that the proposal to require financial security as well as operation and maintenance options is excessive. The proposal has been revised to provide that financial security is one of the options to be considered, along with operation and maintenance options by incorporating the language outlined in proposed subsections (c)(6) and (c)(7) into one subsection, (c)(5). This will allow a developer to propose, and a municipality to accept, financial security or any of the other maintenance options instead of requiring the municipality to demand both. Similar revisions are being made with respect to the provisions relating to sewage management programs for Department permitted sewage facilities and individual residential spray irrigation systems in §§ 71.72 and 72.25(h) respectively.

Subsection (c)(7) of the proposal (subsection (c)(5)(vii) of these final-form regulations) provided that the financial security is to be established for an amount up to a maximum of 50% of the equipment and installation costs of the system for the first 2 years of operation and not more than 10% of the costs each year thereafter. It was suggested that this subsection was unclear in the sense that the last sentence of the subsection implied that up to 50% of the equipment and installation cost must be posted for each of the first 2 years and no more than 10% for each year thereafter. This posed the question of whether the 10% cost must be posted each year or whether the 10% cost must be retained for the entire life of the system. The Board agrees this subsection needs to be clarified. Accordingly, the provision has been revised to make it clear that 10% of the cost must be retained over the life of the system after the first 2 years of operation. The remainder of the original financial security may be refunded at the expiration of the initial 2-year period. A similar revision has been made to the financial security provisions relating to sewage management programs in § 71.72(a)(1).

The commentator also believes that requiring financial security prior to planning approval is inappropriate and should be required prior to permit approval instead. The Board disagrees. Given the fact that other options besides establishing financial security are now available, requir-

ing financial security at the planning stage is not an excessive burden in those cases where the option is chosen by a developer.

Finally, the commentator asserts that bonding requirements for new systems are already covered under section 509 of the Pennsylvania Municipalities Planning Code. The Board does not agree. That section of the Pennsylvania Municipalities Planning Code is not applicable to the long-term operation and maintenance of sewage facilities. Rather, it relates to bonding to ensure the completion of certain improvements as a prerequisite to final plat approval and does not apply to the repair or replacement of a sewage system which has already been installed.

18. *Section 71.73 (relating to sewage management programs for sewage facilities permitted by local agencies)*

Subsection (d) of the proposal outlined a procedure for providing reimbursement to municipalities which assume responsibility for the administration of a sewage management program in cases where the municipality is not the local agency administering the permitting program. Under the proposal, the municipality would have been required to bill the local agency and receive reimbursement through the local agency. This would have resulted in a cumbersome reimbursement process. The final-form regulations provide that the municipalities may apply directly to the Department for reimbursement and will, therefore, be reimbursed by the Department.

19. *Section 71.83 (relating to Department fees)*

Subsection (a) of the proposal provided, in relevant part, that the fees charged by the Department for the review of planning modules would be "in accordance with section 10(12) of the act . . ." IRRC suggested that the appropriate fees and fee exemption be listed in the section for easy reference by the public and the regulated community. The section has been revised to incorporate this suggestion.

Subsection (b) of the proposal provided that any subsequent submission of a planning module following denial would be considered a new submission for purposes of establishing review fees. During the comment period the Department discerned the need to clarify when a second planning module review fee would be charged to an applicant. The revised language limits additional review fees to those cases where substantial changes to the original submittal were made subsequent to the denial.

*Chapter 72—Administration of the Sewage Facilities Permitting Program*

20. *Section 72.21 (relating to general)*

Subsection (f) of the proposal would have provided that property owners bear the costs of activities associated with conducting, observing or confirming percolation tests. This provision has been modified in these final-form regulations to provide that the costs are to be borne only by property owners proposing a bonded disposal system under § 73.77 (relating to general requirements for bonded disposal systems) when soil mottling is present. This would make the section consistent with the requirement of section 7.2(a)(1) of the act that the local agency perform a percolation test at the owner's expense when the owner of the property requests such a test if the local agency has determined that soil mottling is present.

21. *Section 72.22 (relating to permit issuance)*

As proposed, subsection (b) would have been amended to provide for permits for certain connections to an existing onlot system involving not only repair, as is

currently required, but also a disturbance, modification or enlargement of a treatment tank, soil absorption area or spray field. A number of commentators suggested that the subsection, as proposed, would require a permit when a septic tank is dug open and the lid lifted, when the tank is pumped or a manhole access is added, or for unclogging a line in an absorption area. This was not the intent of the proposal, and this subsection has accordingly been clarified. A permit would be required for alterations or connections to an existing onlot system when the alterations or connections require the repair, replacement or enlargement of a treatment tank or retention tank. Permits would also be required for the repair, replacement, disturbance, modification or enlargement of a soil absorption area or spray field, or the soil within or under a soil absorption area or spray field.

Subsection (g) of the proposal (subsection (h) in these final-form regulations), which incorporated the provisions of section 7(a)(1) of the act, provided that a permit would not be required for a sewage system in those situations where a new dwelling is proposed to replace a previously existing dwelling when the size and anticipated use of the new dwelling is the same as the previously existing dwelling and that dwelling was in use within 1 year prior to the anticipated date of the completion of the new dwelling. One commentator expressed a concern that sewage enforcement officers would be compelled to condone the connection for a replacement dwelling even if the existing system had illegal repairs, modifications or alterations made to it. The Board disagrees. The language of subsection (g) is based on the language appearing in section 7(a)(1) of the act. Moreover, the conditions described by the commentator are generally violations of the act and the local agency has the authority to cite owners of systems if illegal repairs or alterations were made. However, the language of this subsection has been modified to more clearly outline the circumstances which would qualify the size and use of a new dwelling as being equal to those of the previously existing dwelling. Size and use determinations would be based on absorption areas and sewage flows.

22. *Section 72.26(c) (relating to denial of permits)*

As outlined in the proposal, this subsection concerned procedures related to the waiver of retesting and reapplication fees following denial of an application after verification of testing conducted by a previous sewage enforcement officer. During the comment period, the Department discerned a potential issue related to which a sewage enforcement officer's denial of the application would affect the fee waiver. The language has been clarified to describe that the sewage enforcement officer denying the application, for purposes of subsection (c), is a currently employed sewage enforcement officer, not a prior one.

3. *Section 72.31 (relating to conditions related to installation of permit exempt systems)*

The existing provisions of this section outline indemnification requirements for persons installing permit exempt systems. The Department discerned an incorrect reference to "this section" in that the language of the section refers to permit exemptions under § 72.31. Section 72.31 contains no permit exemptions. The permit exemptions are outlined in other sections of this chapter, such as § 72.32 (relating to sales contracts). Accordingly, references to "this section" have been changed to "this chapter."

As noted in the text of the proposal, the provisions of subsection (b) were proposed to be incorporated into

§ 72.32(a). These final-form regulations effectuate that proposal by deleting subsection (b).

24. *Section 72.32 (relating to sales contracts)*

The proposal incorporated the provisions of certain sections of the act which require that contracts for the sale of lots under certain circumstances contain specific provisions. Two new subsections have been added to these final-form regulations. Proposed subsection (e) is relettered (g). New subsection (e) provides that contracts for the sale of lots for which a required revision for new land development, exception to the requirement to revise or a required supplement has not been approved are to include language clearly indicating to the buyer that sewage facilities are not available to that lot and will not be available, nor may construction begin, until sewage facilities planning has been approved. New subsection (f) incorporates the provisions of section 7(a) of the act which requires certain language in contracts for the sale of lots for which there is no existing community sewage system.

25. *Section 72.33 (relating to well isolation distance exemption)*

Subsection (b) of the proposal provides that a local agency may, at its sole discretion, waive the isolation distance requirements of this section when a repair to a malfunctioning system is being considered under the provisions of § 73.3, which outlines the policy regarding corrective measures for malfunctioning sewage disposal systems. One commentator suggested that the proposed language allows the local agency to waive the requirement for a hydrogeologic study when a sewage system is proposed to be too close to a well in a repair situation at an existing structure. Although the commentator believes this waiver authority is a good idea, the commentator questions the legality because she believes the act makes no distinction between repairs and new systems in this regard.

Section 8(f) of the act provides, in relevant part, that any "minimum distance requirement between a private well and a proposed absorption area specified in the regulations . . . shall not be applicable if the local agency finds, after reviewing appropriate groundwater studies submitted by an applicant, that the installation of a proposed individual sewage system does not pose a threat of pollution to any well on the same lot within the distance specified by regulation." The key word in the quoted language is "installation." Installation, in effect, means the installation of a new system. Thus, a repair not involving replacement by means of a new system is separate and distinct from an installation. This analysis of the legality of the provision should address the commentator's concerns.

Subsection (c)(1) of the proposal provides that the request for an exemption from the well isolation distance requirements must, inter alia, contain appropriate groundwater studies. One commentator and IRRRC recommended that this subsection specify the types of groundwater studies which would be required. Accordingly, they suggested that the term "appropriate" be replaced by "required" to make it clear what is required. The Board disagrees with this recommendation. Section 8(f) of the act, which is the basis for the regulatory provision, provides that the local agency's determination on the exemption application be made after "reviewing appropriate groundwater studies submitted by an applicant . . ." Moreover, the types of groundwater studies appropriate for a specific situation are necessarily case and site specific. The types of studies appropriate for specific



environmental situations are constantly evolving. In any event, the local agency may utilize the services of an expert who can determine the type of study which is appropriate for the specific site.

Subsection (c)(2) of the proposal provides that the request for this well isolation distance exemption also include the payment of fees or costs incurred by the local agency to review the groundwater study submitted. The same commentators suggested that these groundwater studies be reviewed for the local agency by a qualified professional geologist with expertise in ground water studies and that the payment required be only for the services of such geologists. The Board disagrees. Section 8(f) of the act does not set forth the qualifications required for personnel reviewing these studies. It merely provides that the local agency conduct the review. In addition, there are professionals other than professional geologists who are qualified to review these studies. SAC does not believe the Board is authorized to establish minimum qualifications for personnel reviewing these studies, in part, because professional qualifications are governed by other statutes.

Subsections (d) and (e) contained references to an "exception" from the well isolation distances. A more appropriate term is "exemption" and the term "exception" has accordingly been replaced.

26. *Section 72.41 (relating to powers and duties of sewage enforcement officers)*

Subsection (i) of the proposal incorporates provisions of section 8(e) of the act relating to conflicts of interest. In particular, the subsection provides that sewage enforcement officers may not provide consulting, design or related services regulated under the act within the municipality or local agency by which the officer is employed unless the services are set forth in a fee schedule, the fees for these services are paid directly to the municipality or local agency and the consulting or design work is reviewed and a permit is issued by another sewage enforcement officer employed by the entity issuing the permit.

The Board received a number of comments regarding this provision. These comments address various scenarios which are more fully described in the Comment and Response Document. Among the concerns raised was that there appears to be nothing in the regulations which would prevent sewage enforcement officers working for the same company from reviewing each other's work. The Board disagrees. Existing subsections (g) and (h) explicitly prohibit this kind of activity. Another commentator objected to the requirement that the fees for consulting or design services under the circumstances described in this Preamble be set in a fee schedule of the local agency and that the fees be paid directly to the local agency. The provisions are mandated by section 8(e) of the act.

27. *Section 72.42 (relating to powers and duties of local agencies)*

Proposed subsection (a)(14) relating to continuing maintenance has been renumbered as subsection (a)(24) for ease of reading. Subsection (a)(21) of the proposal (subsection (a)(20) of these final-form regulations) sets forth a time frame and certain procedures for site suitability review, soil probe testing or soil percolation testing which may be necessary following the receipt of a permit application. Among other things, the proposal provides that an applicant is to have a site prepared for testing in accordance with instructions which must be provided to the applicant at least 48 hours before the scheduled testing. If the applicant does not follow the instructions,

the applicant may not submit soil tests performed by another sewage enforcement officer and is not entitled to a refund in the event the local agency fails to comply with the time limits for review specified in proposed subsection (a)(21). IRRC believes this type of site preparation is for standard soils tests and that the regulation should provide "at least some guidance on the site preparation required for the tests." IRRC believes providing guidance will also prevent extraneous requirements from being imposed on the applicant.

The Board does not believe it is necessary to amend the regulation along the lines suggested. There are various types of soil conditions within this Commonwealth. Site preparation requirements are generally specific to the types of testing being conducted and thus, there is a need for flexibility. For many years, the Department, local agencies and the regulated community have utilized a guidance document, *Technical Manual for Sewage Enforcement Officers*, which contains detailed procedures for site preparation and soils testing. The *Manual* includes diagrams which would be extremely difficult to translate into regulatory text.

Subsection (a)(20)(v) provided that an applicant was required to have a site prepared for soil testing in a manner required by "this section." The quoted phrase has been deleted and replaced by "the local agency" to make it clear where the requirements for site preparation originate from.

Proposed subsection (a)(24) (subsection (a)(23) in these final-form regulations) would require local agencies to ensure that individual residential spray irrigation systems are sampled at least once a year by the property owner and establishes effluent limits with respect to the discharges. Component characteristics to be sampled include fecal coliforms, biological oxygen demand, suspended solids and disinfectant residual or effectiveness. Individual effluent samples could not exceed a 5 day Biological Oxygen Demand (BOD) of 60 mg/l and suspended solids concentration of 100 mg/l. In addition, chlorine residuals would have been required to be maintained at a range of 1.0—2.0 ppm, unless a higher level is required to control disease producing organisms.

One commentator asserted that the effluent limits proposed would not protect the public health and environment. The commentator noted that following a sand filter, a 5 day Biological Oxygen Demand of 30 mg/l or less and a suspended solids of 20 mg/l would be expected. The commentator also believes there would be a problem with the system violating the fecal coliform standard of 200 colonies/100 ml if the suspended solids are 100 mg/l.

The sampling requirements and effluent limits have been adjusted in these final-form regulations to more closely reflect the effluent quality from a functional sand filter and the Department's requirements relating to monitoring requirements for other surface discharge systems. Accordingly, the term "biological oxygen demand" has been modified to "carbonaceous biological oxygen demand." The effluent limit for the 5-day BOD has been reduced from 60 to 25 mg/l and the suspended solids concentration limit reduced from 100 to 30 mg/l. In addition, the phrase "Chlorine residual shall be maintained at a range of 1.0—2.0 ppm . . ." has been revised to read: "Free chlorine residual shall be maintained at a range of 0.2—2.0 ppm . . ." This revision better describes the form of chlorine to be measured and provides a more realistic measure of free chlorine residual.

IRRC indicated that the language of the same subsections relating to fecal coliform organisms should be

clarified. This language has been clarified to provide that the effluent limit is to be "not greater than 200 fecal coliform organisms per 100 milliliters in a single sample."

Another commentator believes proposed § 72.25(h) (relating to issuance of permits) gives municipalities, not local agencies, the responsibility to assure proper operation and maintenance of these systems. That section provides, in relevant part, that prior to the issuance of a permit for an individual residential spray irrigation system, the local agency must require documentation that the municipality in which the system is to be located has taken action to assure compliance with the operation and maintenance provisions of § 73.167 (relating to operation and maintenance) for the life of the system. The commentator is essentially correct, but appears to misconstrue the application of this section. Section 7.6(6) of the act provides that the system owner must annually test the discharge for the effluent components outlined and a copy of the test results must be sent to the local agency. If the sampling indicates there are problems, action must be taken by whatever agency or entity has assumed responsibility for assuring proper operation and maintenance of these systems. That entity or agency could be the municipality acting under the authority of section 7.3(4) of the act, or a local agency which has assumed responsibility for a program under section 8(a) of the act or which has established a sewage management program under section 8(b)(4.1) of the act.

28. *Section 72.43 (relating to powers and duties of the Department)*

Subsections (f)—(h) of the proposal outlined amended procedures and criteria relating to the suspension, revocation and reinstatement of sewage enforcement officer certifications. One commentator provided extensive comments suggesting clarification of various provisions of these subsections. For the most part, these comments were later withdrawn. In spite of the withdrawal of these comments, subsections (f) and (h) have been modified to make it clear what constitutes a suspension or revocation of a certificate. IRRC asserted that in some situations, there are two essentially separate penalties for the same infraction. While there are in fact separate penalties for the same infraction in some instances, the seriousness of the penalty is determined by the degree of culpability associated with the action. The subsections have been revised to incorporate culpability factors appropriate to the penalty. Thus, a certificate would be revoked where a sewage enforcement officer "knowingly" conducted some proscribed activity, while suspension penalties are based on a lesser standard of negligence.

29. *Section 72.44 (relating to reimbursement)*

Subsection (d)(5) of the proposal provided that to qualify for 85% reimbursement under section 6(c) of the act, a local agency must, among other things, employ or contract with a qualified soil scientist. That subsection further provided that, to qualify for 85% reimbursement, a soil scientist must be a person "who has documented experience in the characterization, classification, mapping and interpretation of soils as they relate to the function of an onlot sewage system" and meet certain other educational and certification requirements. One commentator asserted that the definition of "a qualified soils scientist" for purposes of 85% reimbursement is inconsistent with the definition of a "qualified soils scientist" outlined in section 2 of the act (35 P. S. § 750.2) because it does not require the soils scientist to be a certified sewage enforce-

ment officer, while the definition in the act does. The commentator, therefore, recommends that the qualifying language be deleted.

Other commentators, while acknowledging the inconsistency between the definitions, assert that requiring the qualified soils scientist to be a sewage enforcement officer places a burden on soils scientists which is not placed on engineers or geologists and limits the number of soils scientists available to contract with local agencies seeking 85% reimbursement. One commentator asserts that there would, at most, be only 12 individuals who would meet the criteria for a qualified soils scientist if the definition in the act was applied.

The Board has considered these comments related to this issue and determined that, for the sake of consistency, the definition in the act should apply. Accordingly, the qualifying language in the proposal has been deleted in these final-form regulations.

30. *Section 72.52 (relating to conditions of certification or reinstatement of certification)*

The heading of this section has been revised to make it clear that the provisions relate to the reinstatement of a sewage enforcement officer's certification, as well as the original certification.

Existing subsection (a)(3) provides that the Certification Board may recertify a sewage enforcement officer whose certification has been revoked. The Certification Board suggested that the term "recertify" and its progeny be revised to refer to reinstatement of certification to be consistent with the terms used in the act. The suggestion has been incorporated into these final-form regulations.

A new subsection (a)(4), has been added to provide that a requirement for certification as a sewage enforcement officer is that the applicant's certification has not lapsed due to failure to complete mandatory training during a previous renewal cycle unless training has been subsequently completed.

Subsection (b) of the proposal specified, inter alia, that applicants for renewal of sewage enforcement officer certification who are employees of the Department would not be subject to the renewal fee requirements. Although not raised in the public comments, the Department discerned an issue with respect to the payment of the renewal fee by sewage enforcement officers employed by other Commonwealth agencies. The language has been revised to provide that these sewage enforcement officers would not be required to pay the renewal fee so long as their sewage enforcement officer activities are limited solely to Commonwealth service.

31. *Section 72.58 (relating to Certification Board hearings and procedures)*

Existing subsection (a) outlines the procedures for appealing actions of the Department relating to the suspension or revocation of sewage enforcement officer certification to the Certification Board. The Board received comments from the Certification Board suggesting that the procedures be revised, especially with respect to specifying the grounds for appeal when a request for a hearing is filed with the Certification Board. In response to these comments, the procedures outlined in subsection (a) have been revised to provide that if a request for a hearing does not specify the grounds for appeal, the secretary of the Certification Board may notify the appellant that the appeal does not specify the grounds for appeal and that the appellant must file an amended appeal and request for a hearing within 30 days of receipt

of notification. The Certification Board may dismiss the appeal if the appellant fails to do so. Subsection (a) has also been revised to provide that the adjudications of the Certification Board are to be in accordance with 1 Pa. Code Part II (relating to general rules of administrative practice and procedure).

*Chapter 73—Standards for Onlot Sewage Treatment Facilities*

32. *Chapter 73—General revisions*

During the comment period, the Department interacted with SAC, other organizations and individuals with expertise in the area of onlot system design and siting to improve the technical standards for onlot systems in Chapter 73. This resulted in numerous changes to these standards to allow system designers more flexibility, to eliminate requirements which were determined to be unnecessary and to clarify others. In addition, input from groups was solicited by the Department to improve standards. For example, the Pennsylvania Aggregate and Concrete Association assisted the Department in establishing better standards for sand and aggregate in elevated sand mounds and sand filters. This type of input resulted in numerous changes to these final-form regulations in the following sections as more fully described in the Comment and Response Document:

Section 73.1—a definition for “dosing pump” has been added and the definition of “undisturbed soil” has been slightly modified; § 73.14(b)(6)—clarified the term “excessive,” § 73.16—added subsurface sand filters and added leaching chambers as a standard system; Table B—reformatted to make it more readable; § 73.31(d)—clarified the minimum septic tank opening size; § 73.44(b) and (c)—deleted the undefined term “individually designed system”; § 73.44(b)(12)—eliminated a chart of hole sizes versus gallons per minute to allow for more design flexibility; § 73.46(a)(8) and (b)(1)—corrected incorrect references to “subsection”; § 73.51(a)—added a specification for coarse aggregate as recommended by the Pennsylvania Aggregate and Concrete Association; § 73.161(a)—clarified the listing of other sections applicable to spray irrigation systems; § 73.162(b)(1)(vi)—deleted the requirement for minimum and maximum tank depth for sand filters; § 73.162(b)(1)(vi) and (vii)—deleted the requirement for a specific amount of freeboard above the sand in a sand filter tank and clarified the standard for minimum tank access opening; § 73.162(b)(2) and (4)—modified the sand and aggregate specifications for a free access sand filter as recommended by the Pennsylvania Aggregate and Concrete Association; § 73.162(b)(4)(viii), (ix) and (xi)—expanded the options available to a designer to configure multiple sand filter dosing plumbing, limited the size of the central distribution piping and provided for optional splash block material; § 73.162(c)(3)—provided a minimum depth standard for aggregate over the bottom drain of the sand filter and deleted the mandatory use of geotextile material between aggregate layers; § 73.165(a) clarified the term 200/100 milliliters of fecal coliform organisms; § 73.165(b)—clarified the maximum depth standard for erosion chlorinators; § 73.166(a)(3)—allowed design flexibility in protection spray irrigation lines against freezing; § 73.166(a)(6)—deleted the need for uniform distribution of effluent in a spray irrigation system and minimized the number of spray nozzles required;

and § 73.167—established a minimum standard for frequency of operational inspections of spray irrigation systems.

33. *Section 73.1 (relating to definitions)*

The Board received comments with respect to certain terms defined in this chapter.

A definition of “geotextile” has been added. “Geotextile” is defined as “material consisting of mesh polypropylene, polyester, nylon or similar material used to prevent migration of fine aggregate into coarser aggregate.”

One commentator asserted that the term “experimental sewage systems” was not defined. That term is defined in existing § 73.1. However, the definition has been revised somewhat to be consistent with the definition which now appears in the act.

The proposal defined “lift pump” as “[a] submersible pump used to convey effluent to the sand filter and from the sand filter to the chlorine/retention tank.” A number of commentators suggested that this definition be modified because of a belief that the definition does not encompass all of the uses specified in Chapter 73. One commentator also suggested that the definition should include conveyance to an in-ground system.

Some of the comments regarding lift pumps appear to be based on a misunderstanding regarding their use. Lift pumps do not connect a treatment tank to a distribution box or header pipe. This connection is accomplished by a gravity line or, in the case of a pressurized system, a dosing pump in a dosing tank. For the purposes of Chapter 73, a lift pump is used only as part of an individual residential spray irrigation system to convey effluent to the sand filter. Standards for lift pumps are outlined in § 73.46(b).

The proposal incorporated the definition of the term “soil mottling” as outlined in section 2 of the act. One commentator, a professional soils scientist, noted that the term “soil mottles” has been retired from the lexicon of soils science. The term now used for soil characteristics that indicate saturation and reduction, which can be observed in the field, is “redoximorphic features.” Another commentator noted that what used to be referred to as “drainage mottling” is now termed “redoximorphic concentrations and depletion of iron.”

The term “soil mottling” is defined in the act. In addition, the term “mottling” is found in a majority of the Soil Conservation Surveys in use in this Commonwealth and is commonly used to identify soil characteristics that indicate saturation and reduction. Accordingly, the term “soil mottling” has been retained in these final-form regulations. However, the term “redoximorphic features” has been added as a parenthetical to “soil mottling” to indicate that the two terms have similar meanings.

34. *Section 73.3 (relating to policy)*

Subsection (b) outlines the policy with respect to corrective measures for malfunctioning sewage systems constructed in accordance with Chapter 73. Among other things, the existing policy provides that the Department and sewage enforcement officers are to “first consider all individual and community sewage systems described in this chapter in the correction of existing malfunctions and, when the systems are not physically possible, to provide the best technical guidance possible in attempting to resolve existing pollution or environmental health problems.”

The existing policy indicates that sewage enforcement officers, as well as the Department, are to make determi-

nations regarding this policy. To more accurately reflect the responsibilities regarding this policy, the term "sewage enforcement officer" has been replaced by the term "local agency" because the local agency retains the ultimate responsibility for setting forth this policy in the administration of the act within its jurisdiction.

A concern was raised that the phrase "when the systems are not physically possible" is impractical. The phrase "are not physically possible" has been deleted and replaced with "cannot be constructed in accordance with this chapter."

Subsection (b) of the proposal also outlines a policy regarding isolation distances. That policy provides that when application of best technical guidance results in an absorption area or spray field encroaching on the regulated isolation distance to a well, proper well abandonment procedures or relocation of the well should be considered. One commentator suggested that consideration be given to the existing isolation distance between the well and disposal area when evaluating the relocation of wells in a repair situation. The commentator believes, for example, that if the malfunctioning system is 70 feet from the well and the absorption area can be installed 90 feet from the well, the property owner should not have to abandon and relocate the well.

The Board believes the comments are reasonable, but that other provisions of these regulations adequately address the commentator's concerns. A sewage enforcement officer may allow an isolation distance of less than 100 feet between a well and an absorption area to accommodate a repair. The policy described in subsection (b) also provides that when a required well isolation distance must be encroached to site a repair system, the proper well abandonment procedure or relocation of the well should be considered. If a property owner does not wish to consider well relocation as an option to accommodate a repair, the property owner may employ an expert to assess the impact of the isolation distance encroachment and submit the expert's findings to the local agency in support of that position. This procedure is outlined in § 72.33.

Subsection (b) of the proposal also expanded the types of onlot sewage systems which could be considered or used in repair situations. The proposal provided that the policy would not limit or preclude the use of experimental systems, but also would not preclude the use of small flow treatment systems permitted under The Clean Streams Law. Although no comments were received regarding this particular provision, the Board has determined that it is appropriate to clarify that the policy also does not preclude the use of holding tanks, but only when no other alternatives are available. The policy has been so clarified in these final-form regulations.

#### 35. *Section 73.11 (relating to general)*

Subsection (c) of the proposal incorporated a provision which would allow a permit to be modified to authorize a property owner to use a newly installed septic tank as a holding tank pending the completion of the rest of a sewage system when weather or soil conditions prevent completion of the proposed sewage system prior to occupancy of the house. The proposal also outlined certain sections of the regulations which would be applicable in these situations.

Commentators representing the sewage enforcement officer community expressed reservations about this provision. Since system installers determine when a system is to be installed, there was a concern that the installers

would invoke this provision every time they mistime or run late on a project, citing unexpected rain, and the like. A second concern expressed was that this provision would create administrative nightmares in rapidly growing areas. It was suggested that local agencies be authorized to establish conditions in the permit relating to the use of septic tanks in the situations described in the proposal.

The Board agrees with the recommendation that conditions be established. Accordingly, a phrase has been added to these final-form regulations. In addition, the sections of the applicable regulations outlined in the proposal have been revised to outline only those sections of the regulations which are not applicable so as to more clearly define the extent of the exception.

Existing subsection (f) prohibits discharges from roof gutters, foundation drainage and surface runoff to a treatment tank. A number of commentators suggested that discharges from floor drains should also be prohibited, except in cases where showers and laundries in basements are connected to floor drains. The Board agrees and the suggested revision has been made.

#### 36. *Section 73.12 (relating to site location)*

Existing subsection (a) outlines certain characteristics which render an absorption area unsuitable for the installation of an onlot system. Among the characteristics is an absorption area is unsuitable in areas where completed flood mapping is not available, but the soil has been mapped or identified as floodplain soil or a floodprone area. Some commentators noted that there are areas within this Commonwealth with broad floodplains. However, there are many areas that are in floodplains, but are not designated as being in either floodways or floodprone areas in maps. It was suggested that the existing language be replaced with a presumption contained in the definition of "floodway" in § 105.1 (relating to definitions). The Board has agreed to this recommendation. Accordingly, subsection (a)(2) has been revised by adding a sentence providing that "[w]here there is no flood mapping, a floodway extends 50 feet from the top of the stream bank as determined by the local agency." That provision does not, however, apply to spray fields.

Existing subsection (b), in essence, provides that fill must be in place for 4 years before an absorption area may be placed therein. The Board received a number of comments raising questions about the application of the section in relation to proposed § 73.14(a)(1)(iv) (relating to site investigation). It was also noted that this section appears to conflict with a provision of proposed § 73.14(a)(1)(iv) which would have provided a limited exception to this requirement. That exception was that an onlot system may be installed in fill soil that has remained undisturbed for a period of less than 4 years if a soil scientist has determined that natural soil conditions have been reestablished.

As evidenced by the numerous questions outlined in the Comment and Response Document, the proposed changes to § 73.14(a)(1)(iv) have the potential to create administrative problems for both the local agency and the Department. In light of this, the proposed amendment to § 73.14(a)(1)(iv) has been deleted except for the last sentence, which has been retained in this rule. That sentence provides clarification that "[e]xcavating soil to system installation depth for the purposes of installing the system may not be considered disturbing the soil." It should also be pointed out that the Board believes the existing regulations and related administrative processes adequately address onlot system proposals in areas where soils have either been filled or excavated.

37. *Section 73.13 (relating to minimum horizontal isolation distances)*

Existing subsection (b) establishes required minimum horizontal isolation distances between certain features and enumerated types of tanks. One commentator suggested that other features be added to eliminate what is asserted to be a great disparity that exists in the distances required by different local agencies. It was also suggested that an isolation distance be included between spray fields and swimming pools.

These suggestions have been incorporated into the final rule. Isolation distances of 10 feet have been established for detention basins, retention basins and stormwater seepage beds. In addition, a 100 foot isolation distance has been established between swimming pools and spray fields.

Proposed subsection (c) would have provided that building sewers would be required to meet certain isolation distances outlined in subsection (b). This proposal has been deleted from these final-form regulations because it would have been impossible to meet the proposed regulation where a sewer line and a water line enter a small residential structure.

38. *Section 73.14 (relating to site investigation)*

Proposed subsection (a)(1)(iv), which concerned the installation of onlot sewage systems in fill soil, has been revised as discussed in paragraph 36 of this Preamble relating to site location.

Proposed subsection (b) established certain criteria to be utilized in site investigations relating to the establishment of spray fields. Subsection (b)(2) and (3) of the proposal would have required that soil profile evaluations be spaced within 10 feet outside the perimeter of the proposed spray field. One commentator suggested that soil profiles be considered within the perimeter of the spray field, particularly where the spray field is in excess of 20,000 square feet. The commentator also requested that a provision be added authorizing a sewage enforcement officer, at his discretion, to require additional soil profiles on the perimeter or inside the spray field.

The Board partially agrees with the commentator's suggestion that soil profile evaluation be within the perimeter of the proposed spray field. Accordingly, the language of proposed subsection (b)(2) and (3) has been revised to make it clear that these evaluations are to be spaced at specified intervals within 10 feet of the perimeter of the proposed spray field. However, the Board does not fully agree with the commentator's request for discretionary authority to require additional soil profiles, at least in the manner requested, because it is much too broad. However, the Board acknowledges a need for additional testing in some circumstances. Accordingly, a new subsection (b)(4) has been added which essentially provides that additional soil profiles may be required if a sewage enforcement officer identifies specific enumerated trends in soil profiles or surface features which document variable soil conditions.

Subsection (b)(5) of the proposal, renumbered as subsection (b)(6) in these final-form regulations, provided that a permit for an individual residential spray irrigation system would be denied if a limiting zone was indicated by bedrock or excessive coarse fragments within 16 inches of the mineral soil surface. To be consistent with the definition of "rock" under the term "limiting zone," the language has been revised to provide that the limiting zone is indicated by bedrock or coarse fragments

with insufficient fine soil to fill voids located within 16 inches of mineral soil surface.

39. *Section 73.15 (relating to percolation tests)*

This section outlines the procedures and measurements required for percolation tests, which are a tool for determining whether a proposed absorption area is suitable for the installation of an onlot sewage disposal system. One commentator suggested that the existing provisions of this section are too stringent and asserted that applications for over 80% of the permits for installation of onlot sewage disposal systems would not meet the standards. The Board disagrees. No other commentator expressed similar concerns and the procedures outlined in the existing regulations have been utilized without any major problems since 1983. Moreover, the permit denial rate for onlot sewage system applications is only 9% in this Commonwealth.

Paragraph (7) of the proposal outlined a revised method for calculating the results of a percolation test. The proposed method specified the results of the tests for holes that drain too slow or too fast. A number of commentators suggested that the proposed language be fine-tuned to fully delineate the calculation process. Among the issues raised were whether the absorption area could include the percolation test holes.

The proposed subsection has been substantially revised. A provision has been added which states that absorption areas may be placed over holes with no measurable rate of drop when the average percolation rate for the proposed absorption area is within specified limits. This is because the absorption area would be sized large enough with the use of a drop rate of 240 minutes per inch to accommodate a slowly permeable area. The proposal also stated that when the rate of drop in a percolation test hole using 10 minute intervals is too fast to obtain a measurable rate, the hole would be considered a failed hole. This has been clarified to make it clear that a percolation test hole may not be used in calculating the arithmetic average percolation rate if it is dry at the end of a 10 minute testing interval. In addition, a provision has been added which states that a proposed absorption area may not be installed over the dry holes where more than 1/3 of the percolation test holes are dry at the end of the 10 minute testing interval unless the local agency determines that an anomaly caused the fast percolation rate and a retest of the area is within acceptable percolation test rate limits. If there is no anomaly, percolation tests from the remaining holes which are within the acceptable limits may be accepted by the local agency when they are supplemented with additional percolation testing conducted outside of the area in which the dry percolation holes were found.

40. *Section 73.16 (relating to absorption and spray field area requirements)*

The proposal incorporated existing requirements establishing minimum aggregate absorption area requirements for treatment tank effluent and proposed requirements for calculating the minimum square footage necessary for spray fields. Spray fields are areas where effluent from individual residential spray irrigation systems are discharged.

A number of commentators noted that the formula in Table A for calculating the absorption area requirements for all systems except elevated sand mounds where average percolation rate is 16-30 minutes per inch was erroneous. The commentators were correct. The parenthetical (Avg Perc Rate—30) should be (Avg Perc Rate—15). The appropriate correction has been made.

An issue was raised with respect to the interpretation of Table A. If the average percolation rate falls between the increments outlined in Table A, which increment is applicable? For example, the average percolation rate may be 5.6, and the increments in Table A are 3-5 and 6-15. Which increment would apply? In this case, the standard rules for rounding off numbers apply and thus, the average would fall within the 6-15 increment.

One commentator suggested that proposed Table B, which outlined the formula for calculating the square footage of spray fields, be clarified. Table B has been substantially revised for simplicity and ease of use. In addition, the minimum square footage required for spray fields under various soil characteristics (depth to rock and depth to water table) and slopes have been revised. Proposed Table B established minimum spray field area requirements for three and four bedroom residences and established various incremental differences to be utilized to calculate the required spray field for residences with more than four bedrooms. The Board and the Department have determined that the proposed increments were confusing and accordingly, Table B has been revised to establish minimum spray field areas for three bedroom residences under the various conditions outlined in Table B and the additional spray area required for each additional bedroom over three. For purposes of illustration, if there are five bedrooms proposed, and the soil characteristics are 16 to 20 inches depth to rock and 10 to 40 inches depth to water table and the slope is less than 12%, the required spray field would be 60,000 square feet (40,000 for three bedrooms plus 20,000 for the two additional bedrooms 10,000 each).

#### 41. *Section 73.17 (relating to sewage flows)*

This section outlines the sewage flows of various types of residential and commercial establishments which are to be utilized in the design of community onlot sewage systems. The proposal outlined revisions and clarifications to the table establishing figures for minimum design flows expressed in gallons per unit. For most residential units, the minimum number of gallons per unit were proposed to be increased. The Board received one public comment strongly supporting the revised figures. This commentator believes the revised figures will eliminate some malfunctioning systems which have occurred.

Another commentator suggested that the section be clarified to make it clear that the flows outlined in § 73.17 are to be used strictly for the design of onlot systems and not for calculating the flows for the design or allocation of flows to a domestic wastewater treatment system. The Board agrees and appropriate clarifying language has been inserted as a lead-in to this section as well as the text of subsection (a).

The proposal outlined revisions and clarifications to the table establishing minimum design flows expressed in gallons per day for certain types of establishments. However, the proposal did not outline revisions relating to the table relating to the Biological Oxygen Demand per day (BOD/DAY) for those establishments. Appropriate adjustments for BOD/DAY have been made in these final-form regulations based on recommendations of SAC.

A number of commentators suggested that the listing of the types of establishments for which flows are specified in the tables could be significantly expanded. Among the establishments allegedly not included in the tables are fire houses, medical/dental practice offices, stores and restaurants. The Board notes that some of the establishments the commentators assert are not included in the

tables are, in fact, included in the existing regulations. The list accompanying the proposal published in the *Pennsylvania Bulletin* included only those types of establishments for which design flows were proposed to be revised or clarified. In any event, it is not feasible to list all types of establishments. Moreover, some types of establishments, such as fire houses, experience considerable variation in sewage flows. To address the gaps in the listing of the types of establishments, subsection (c) has been modified to make it clear that an applicant proposing a type of establishment not listed in the regulation may submit information regarding average daily flows obtained from meters of similar establishments. The peak daily flow of such a proposed facility is to be calculated by multiplying the average daily flow of the similar establishment by two.

One commentator questioned the need to raise the proposed daily flows for each space in a mobile home park from 250 gallons per day to 400 gallons per day. This commentator suggests that experience indicates daily flows of less than 200 gallons per day from mobile home units. The Board agrees that the average daily flow from each mobile home unit is about 200 gallons per day. However, the design flows outlined in the regulation are peak flows which must take into account inflow and infiltration where mobile home parks are proposed. The increase from 250 to 400 gallons per day is based on county health departments' experience with hydraulic overloads to community onlot systems serving mobile home parks and a peaking factor of 2 times the average daily flow.

Subsection (d) of the proposal required that food preparation facilities install "adequately designed" pretreatment units and traps to reduce grease and BOD prior to their discharge to an individual or community sewage system. One commentator suggested that the standard for the design of the pretreatment units be "in accordance with the manufacturer's specifications" rather than "adequately designed." It was also suggested that standards for grease removal and BOD reduction be established. The Board notes that most grease traps used in onlot systems are individually designed rather than manufactured. With respect to establishing standards for grease removal and BOD reduction, this would require monitoring of effluent by the local agency after initiation of operation and would be impractical in light of the additional administrative burden it would impose on local government.

#### 42. *Section 73.21 (relating to specifications)*

Subsection (j) of the proposal specified that the use of portland cement grouting would be prohibited for connecting building sewers to treatment tanks. Because of the prohibition, some commentators inquired whether other types of grouting may be used to make these connections. The proposal has been revised to make it clear that watertight mechanical seals or hydraulic grouting may be used in making these connections. Hydraulic grouting specifically made for watertight connections, such as piping to concrete tankage, is widely available under various brand names. The material usually contains bentonite clay as an ingredient. Portland cement tends to crack and does not adhere well to nonconcrete surfaces.

#### 43. *Section 73.31 (relating to standards for septic tanks)*

Subsection (a)(1) of the proposal rephrased the requirement that the minimum liquid septic tank capacity for any installation be 900 gallons. As further modified by

proposed subsection (b)(4) septic tank installations are to consist of tanks with multiple compartments or multiple tanks. A concern was expressed that if a contractor uses two 500 gallon septic tanks to meet the 900 gallon minimum capacity, the first tank will fill up so rapidly that the second tank will not serve the purpose of a secondary tank but rather will become a primary tank. The Board does not share this concern because the first compartment of a multiple-tank installation will fill with solids and would require pumping long before it will have a significant impact on the quality of the effluent from the second compartment. In addition, other commentators support the requirement of a two compartment septic tank because of a belief that these requirements have been proven to improve the quality of the effluent that is sent to the soil absorption area and will prolong the life of the system.

Subsection (a)(2) of the existing regulation provides that the required septic tank capacity is to be based on the calculation of daily flow. The daily flow includes, among other things, the discharge from water softeners. One commentator believes that the discharge of super-saline water softener backwash effluent is deadly to absorption areas. The Board disagrees. The National Sanitation Foundation has concluded that a search of the relevant literature indicates there has been no deleterious effect from the discharge of water softener backwash salt on the hydraulic conductivity of soils in septic tank absorption areas and that it is better to discharge the backwash to a septic system than to discharge to separate dry wells or ditches.

Subsection (b)(4) of these final-form regulations provide that septic tank installations are to consist of tanks with multiple compartments or multiple tanks. During the comment period, the Department was advised by tank manufacturers that if the proposal to require multiple compartments was adopted, the manufacturers would need extra lead time to manufacture these tanks. Accordingly, as noted in Section A of this Preamble, the effective date of this subsection is January 7, 1998.

Subsection (d)(1) was proposed to be revised to provide, among other things, that the top of the septic tank containing the manhole or the top of a manhole extension is to be extended to grade, rather than be not more than 12 inches below grade as is currently required. The Board received a number of comments opposing the revision as well as comments in favor. Those supporting the revision believe the extension of the manhole access to grade would ensure that septic tanks are cleaned properly through the manhole port rather than the inspection port. Those opposing expressed concerns regarding aesthetics, safety and unauthorized access. The comments also indicated that the safety and nuisance concerns outweigh the value of the "at grade" manhole to the property owner. In view of the comments received, the proposed language has been deleted and the original language of the second sentence of this subsection has been reinserted.

Subsection (d)(1) currently provides that the grade level access covers be secured by bolts or locking mechanism or have sufficient weight to prevent access by children. Some commentators expressed concerns as to how to define a "child" for purposes of determining the sufficient weight appropriate to prevent access by children. Given the difficulty of defining exactly what a child is and variability in the sophistication of the adult population, the Board believes it is appropriate that the weight of the cover be sufficient to prevent access by any unauthorized individual. The last sentence of this subsection has been

revised accordingly. This subsection was also amended to clarify the required size of the access opening to the tank as being a manhole with an inside dimension of at least 20 inches square (20 × 20).

The proposal indicated that subsection (e), which provides that a maximum 4-inch diameter inspection port with a sealed cover must be installed to grade level above the inlet tee of a septic tank, would be deleted. One commentator noted that blockage of the inlet baffle of a septic tank is very common. Eliminating the requirement that an inspection port be installed to grade would make it very difficult to identify and repair the blockage. The Board agrees. Accordingly, subsection (e) is reinserted in these final-form regulations. The Board acknowledges that this reinsertion could create problems in that a pumper could damage the inlet, but this is not anticipated to be a major problem.

#### 44. Section 73.41 (relating to general)

Subsection (b) of the existing regulation requires that absorption areas over 5,000 square feet be divided into equal areas. The proposal would have clarified that the equal areas are not to exceed 5,000 square feet. One commentator questioned why equally divided absorption areas need to be limited to 5,000 square feet given the extent of hydrologic and geologic analysis that is typically part of a system siting. The proposal to limit the size of the absorption areas to 5,000 square feet was based on the belief that reaeration of the absorption area (limited to the perimeter of the system) would be minimal in systems above 5,000 square feet. More recent information indicates that perimeter reaeration becomes insignificant in systems larger than 1,000 square feet. The Board believes limiting the size to 1,000 square feet would be impractical. Moreover, the existing language has been interpreted in various ways by different sewage enforcement officers, resulting in uneven application throughout the Commonwealth. Accordingly, subsection (b) has been deleted in these final-form regulations.

#### 45. Section 73.44 (relating to pressurized distribution design)

Subsection (a)(1) of the existing regulations provides that piping used in a pressurized effluent system must, among other things, meet the Department's current standards as listed in the *Technical Manual for Sewage Enforcement Officers*. The Sewage Advisory Committee suggested that the reference to the standards in the technical manual be deleted. The suggested change has been made.

Subsection (b) sets forth design standards for seepage beds of 2,500 square feet or less. Proposed subsection (b)(1) specified, among other things, that check valves are prohibited on all delivery pipes, not those of 25 feet or less as is the current requirement. A commentator supported this change, but suggested that the problem of water hammer in the force line must be addressed as a result. The commentator also suggested that check valves may be needed in some instances, particularly to get from the pump tank to the absorption area.

The Board agrees that the problem of water hammer in the force line should be addressed. Accordingly, a provision has been added to subsection (b)(1) which provides that thrust blocks may be installed in delivery lines when the system designer determines that water hammer may be a problem. As to the commentator's belief that check valves are needed in some instances, the Board notes that check valve usage has been directly linked to the buildup of an anaerobic scum layer which clogs pipe orifices and

sand interfaces. The regulations formalize a Department policy banning the use of check valves. Thus, where pumped volume is large because of pipe length, a transfer tank should be installed to pump effluent to a second tank at the elevation of the base of the absorption area or spray field or a larger volume of effluent should be pumped during each pump cycle.

Subsection (b)(2) of the proposal provides, among other things, that a transfer tank may be used between the treatment tank or storage tank and the dosing tank where the distance from the treatment tank to the absorption area would cause excessive backflow into the dosing tank. One commentator inquired as to what is considered "excessive backflow" in these circumstances. Excessive backflow is that volume of flow back to the dosing tank which will result in a failure to meet the design specifications related to frequency of dose and equal distribution. The system designer may use a transfer tank in these cases to overcome the dose volume lost in long pipe runs.

One commentator suggested that in light of previous recommendations from the Department that lateral end cleanouts be installed on pressure dosed systems, the recommendation should be codified in this section. The Department made this recommendation because of problems associated with the clogging of 3/16 inch holes in the laterals, as currently required under subsection (b)(5). The proposed amendments to this subsection enlarged the size of the holes in the laterals and are finalized in this regulation. Since larger hole sizes (at least 1/4 inch) are now required, clogging should not be a problem. Cleanouts are optional and may be used at the applicant's discretion.

Subsection (c)(2) of the proposal (subsection (c)(1) of these final-form regulations) would have required that discharge holes be at least 3/16 of an inch for systems using pumps in individually designed systems or where seepage beds are greater than 2,500 square feet. One commentator suggested that the discharge hole should be at least 1/4 inch, not 3/16ths. The Board agrees and has made the appropriate revision.

#### 46. Section 73.45 (relating to dosing tanks)

Paragraph (5) of the existing regulation provides that the electrical connections to dosing tanks are to be moisture resistant and located at the highest point of the dosing tank or manhole extension. The Department determined that this subsection needed to be clarified to take into account local electrical codes and physical restraints limiting the location of electrical connections. Accordingly, the subsection has been revised to provide that unless otherwise regulated by local electrical codes, electrical connections shall be moisture resistant and located at a point higher than the inlet pipe or mounted above grade outside of the dosing tank or manhole extension within a tamper-resistant, lockable box.

#### 47. Section 73.46 (relating to dosing pumps, siphons and lift pumps)

Existing § 73.46 outlines requirements relating to dosing pumps. The proposal amended certain requirements for dosing pumps and added requirements for siphons and lift pumps. A number of general comments were received. One commentator suggested that pumps should be submerged at all times to prevent the possibility of explosion and to keep the pump cool. Thus, it was suggested that the volume needed to submerge the pump be added to the minimum dosing tank volume. The heading of this section in the proposal stated, among

other things, "lift station pump." A question was raised as to whether that was the same as lift pump. The heading has been revised to make it clear that the term "lift pump" applies.

The *Technical Manual for Sewage Enforcement Officers* contains a recommendation that effluent pumps be submerged to prevent corrosion and explosions and to increase pump life. However, this recommendation is not applicable to all pumps on the market. The Board believes the adoption of the proposed language in subsection (a)(1) requiring the pumps to "be rated by the manufacturer for handling of sewage effluent" adequately addresses the concerns expressed regarding the possibility of overheating or of an explosion.

Subsection (a)(1) requires that dosing pumps be rated by the manufacturer for handling of sewage effluent. Some commentators suggested that the pumps should be approved by the manufacturer for that use, not rated. The Board notes that the term "rated" is the customary term used by manufacturers when establishing the list of appropriate uses for their products or equipment. Accordingly, the suggested change was not made.

Subsection (a)(12) of the proposal specified that siphon discharge lines be equipped with an observation port and ball valve. One commentator suggested that the requirement that the siphon discharge line be equipped with a ball valve is unnecessary and would add considerable expense. The commentator noted that an observation port (overflow pipe) is required as well as access to grade. If the flow needs to be stopped for a period of time, the septic tank may be pumped. The Board agrees with these comments. Accordingly, the requirement for the installation of a ball valve has been deleted in these final-form regulations.

Subsection (b) of the proposal, among other things, would have provided dosage and discharge rates for lift pumps meeting certain characteristics. Lift pumps would have been required to deliver a minimum dose of 100 gallons when used to lift effluent to the sand filter or be designed to discharge at a rate of 20-30 gallons per minute when used to lift effluent to the sand filter. These rates have been deleted in this final rulemaking and replaced with a requirement that the lift pumps be designed to discharge a minimum flood dose of 2 inches over the sand surface. This would make the requirement consistent with other revisions to the proposal effectuated in these final-form regulations.

Subsection (c) of the proposal specifies that dosing pumps used to pressurize a spray field distribution system be designed in accordance with specified sections of the regulations relating to individual residential spray irrigation systems. One commentator opined that methods other than pumps, such as siphons, may be used to pressurize these systems. The commentator believes the subsection would preclude the use of siphons in these systems.

Subsection (c) does not preclude the use of siphons. However, the Department is not aware of a siphon capable of achieving sufficient pressure to operate the sprinkler head of an individual residential spray irrigation system in a way that the effluent is properly distributed on the spray field. System designers contemplating siphons should check with the manufacturer to determine if use of the siphon is appropriate.

#### 48. Section 73.51 (relating to general)

Existing subsection (e), which is renumbered as subsection (c), provides that soil moisture levels during the construction of the absorption area are to be such that a



sample of the soil taken from the level of the proposed installation will crumble if compressed into a ball. One commentator suggested that the moisture level of the sample should be "at or below field capacity (-0.1 to -0.3 bars)," rather than be based on the crumble method. The commentator believes this would provide a scientific method of testing and an avenue to appeal a sewage enforcement officer's decision based on what is asserted to be a more subjective method used in the field.

The Board acknowledges that the crumble test may be a less scientific method of determining soil moisture than a tensiometer or other methods requiring specialized equipment. As a practical matter, however, most sewage enforcement officers do not have sophisticated equipment to determine soil moisture. In addition, under existing regulations, such as § 72.29 (relating to review of denials and revocations), a property owner may challenge decisions of a sewage enforcement officer related to onlot systems. Results of field capacity tests could be submitted in support of this challenge. The Board believes the existing process adequately addresses the issues raised by the commentator, and, therefore, there is no need to incorporate the changes suggested.

49. *Section 73.52 (relating to standard trenches)*

Existing subsection (a)(1) provides that detailed engineering designs for standard trenches with slopes between 15% and 20% in relation to elevation are to be provided. For slopes between 20% and 25%, subsection (a)(2) provides that these systems be designed by a registered professional engineer. One commentator suggested that there is no reason for the distinction and suggested that engineering design requirements for trenches with slopes between 15% and 25% be uniform. The Board agrees. Subsection (a) has been revised accordingly. It should be noted that, consistent with the rationale provided in comment 1 of this Preamble, the references to professional engineers are being deleted and replaced with a generic term, "designer."

Existing subsection (b)(7) provides that when a trench is being constructed, the minimum width of the undisturbed earth between trenches is to be 5 feet. One commentator suggested that this requirement makes it difficult to fit an onlot system on the property and felt an approach allowing less separation would be more appropriate. The Board disagrees. The 5-foot requirement allows for equipment access for large systems and more lateral movement from systems located on slopes. Reducing this distance may very well result in hydraulic failure of the trenches. However, it is noted that an applicant may request a reduction in the required trench separation distances through the alternate/experimental system procedures of these final-form regulations.

Proposed subsection (c)(13) stated that geotextile fabric may be used to cover the top of the aggregate material used in the construction of trenches. IRRC noted that the use of geotextile fabric is authorized in other sections of the regulations, but that no definition of geotextile fabric is given. IRRC suggested, therefore, that the term be defined. The Board agrees that it would be appropriate to define the term. Accordingly, the term is defined in Section 73.1 of these final-form regulations.

One commentator noted that there was no provision in the proposal which would require the fitting of end caps on trench laterals. The commentator believes this requirement was inadvertently left out of a previous amendment to this section. The Board notes that end caps for pressure distribution systems are currently required un-

der § 73.44(b)(5). The Board acknowledges there is no requirement for the gravity systems. Subsection (c)(16) of these final-form regulations requires end caps for gravity systems.

50. *Section 73.53 (relating to seepage beds)*

Existing paragraphs (2)(i) and (ii) establish certain minimum separation distances between the individual seepage beds of onlot systems. One commentator suggested that the required distance between pressure-dosed seepage beds should be brought in line with gravity beds and pressure-dosed trenches. The commentator believes that a property owner who voluntarily pressure doses a system which could be gravity fed is penalized by the disparity. The Board acknowledges this comment and the regulation has been revised. The references to gravity distribution have been deleted. The final-form regulations merely provides that individual beds of a single onlot system are to be separated by a minimum of 5 feet. The requirement of paragraph (2)(ii) for a minimum separation distance of 20 feet where pressure distribution is required under § 73.43 has been deleted.

Paragraph (2)(iii) of the proposal provided that when elevated sand mound beds are used, this distance is to be measured from the toe of the sand. The paragraph has been renumbered paragraph (2)(ii) and clarified to provide that the distance between seepage beds is to be measured from the toe of the sand of each bed.

51. *Section 73.54 (relating to subsurface sand filter beds and trenches)*

The heading of this section has been revised to make it clear that the section applies to subsurface sand filter beds and trenches, not just subsurface sand filters.

Existing subsection (a)(2) provides that the average percolation rate is to be no greater than 90 minutes per inch to qualify for a subsurface sand filter. One commentator suggested that before qualifying for a subsurface sand filter, a percolation test must fail at 12–36 inches before a deeper test is run. The commentator asserts that this delays construction and increases costs. The commentator believes the regulations should allow a soils scientist to make a determination that the upper layer of soil will not percolate when this is obvious from the soil horizons, such as in areas where heavy argillic horizons overlay sandy C horizons.

The Board does not agree with this recommendation. Soils in the upper horizons are more effective at renovating sewage than are soils in the deeper horizons. A percolation test is a more accurate method of assessing soil permeability than the more subjective soil horizon evaluation, even when done by a soil scientist.

Existing subsection (a)(3) provides that the range of depths for percolation tests relating to the installation of subsurface sand filters is 36 to 72 inches. One commentator noted the maximum depth for the percolation test (72 inches) is inconsistent with the maximum depth at which the system can be installed (60 inches) under subsection (b)(1). The commentator suggested that subsection (b)(1) be revised to allow installation at a depth of 72 inches. The commentator asserts it is common to have argillic layers extending below 60 inches overlying sandy C horizons. The commentator also asserted there is no evidence that subsurface sand filters do not renovate adequately at a depth of 72 inches and believes there is considerable evidence that they work quite well.

The Department is unaware of any documentation that subsurface sand filters work well at a depth of 72 inches

since they are currently required to be installed at a depth of no more than 60 inches and no proposals for the installation of alternate or experimental systems at deeper levels have been submitted. Moreover, the commentator provided no information substantiating the belief that subsurface sand filters do renovate adequately at a depth of 72 inches. The Board and the Department encourage the evaluation of these systems through the alternate/experimental system process. To be consistent with subsection (b)(1), the range of depths at which percolation tests may be run under subsection (a)(3) has been revised by reducing the maximum depth from 72 to 60 inches.

Proposed subsection (a)(3) also would have changed the range of the acceptable average percolation rates for subsurface sand filters from 3-90 minutes per inch to 6-90 minutes per inch. Comments were received suggesting that the change of the minimum from 3 to 6 was inconsistent with the acceptable minimum percolation rate of 3 inches per minute applicable to elevated sand mounds while the sand utilized in both cases is the same. The Board agrees and appropriate changes have been made reestablishing the minimum percolation rate as 3.

52. *Section 73.55 (relating to elevated sand mounds)*

Subsection (c)(1) of the proposal outlined proposed gradation and quality specifications for sand used in elevated sand mounds. The Board received a number of comments indicating that the proposed specifications were too lenient, especially with respect to fine sand. Among other things, it was asserted that the proposed sand specifications allow too many fines and the presence of these fines leads to system failure. Subsection (d) of the proposal provided mechanisms for determining compliance with the gradation and quality specifications outlined in proposed subsection (c).

The technical staff of the Department reviewed the sand specifications and held a series of meetings with the Pennsylvania Aggregate and Concrete Association. In light of the comments received and the further review, subsection (c) has been completely revised and proposed subsection (d) deleted. The review has resulted in an improved sand specification which has more stringent sieve analysis criteria, a soundness test and a better uniformity coefficient. These specifications are based on Department of Transportation specifications outlined in subsection (c) and are currently being used for the construction of free access intermittent sand filters in individual residential spray irrigation systems and have been incorporated into sections of these regulations relating to elevated sand mounds, subsurface sand filters and buried sand filters serving individual residential spray irrigation systems. As a result, the maximum allowable sand passing through the no. 200 sieve will be 10%. Sand specifications for free access sand filters are more stringent because the filter surface is small and requires sand with a higher uniformity coefficient. Most of the sand specified in these regulations will be available Statewide in Department of Transportation certified stockpiles, which should ensure the reliability and availability of the product. Sand for free access filters, however, will be available from suppliers of sand blasting sand as well as various other suppliers.

Proposed subsection (c) also would require sand suppliers to provide certification to the sewage enforcement officer and the permittee that all sand supplied meets the requirements of the subsection. One commentator suggested that the language be clarified to make it clear that the certification applies to every source of the sand (such

as a quarry) and list the amount of sand delivered. This would ensure that all sand is documented as to origin and compliance with Department specifications. The Board has incorporated this suggestion into these final-form regulations. Similar requirements are provided in § 73.162(b)(3) with respect to aggregate used in intermittent sand filters utilized with individual residential spray irrigation systems.

Proposed subsection (e)(4) would have prohibited the stacking of absorption areas vertically on a slope greater than 8%. Two commentators suggested that the term "stacking" is undefined and subject to varying interpretations. They also were concerned that the language did not provide for separation distances that, if followed, would be defined as "not stacking."

The Board acknowledges these concerns. Section 73.55 incorporates, as standard technology, elevated sand mounds on relatively steep slopes which were evaluated under specific criteria as alternate systems. One of the criteria was that these systems be placed on the site to take advantage of down gradient dispersion of effluent through a critical and restricted soil window. Placing systems above or below each other on a grade doubles the hydraulic loading on the down gradient window and may cause mounding. The "stacking" was not evaluated and the Board and the Department are not aware of any information which indicates that stacking elevated sand mounds on slopes greater than 8% can be accomplished without causing a hydraulic problem. Where sites are not conducive to a single elevated sand mound bed installation, elevated sand mound trenches may be proposed. These systems have sufficient trench separation to eliminate hydraulic concerns.

The proposed language of subsection (e)(4) has been deleted and is replaced with language which provides that "locating multiple absorption areas so that one absorption area is placed hydraulically upgradient or downgradient from the other may cause the lower absorption area to fail because of excessive hydraulic loading from the upper absorption area. Unless the potential for such an impact is shown to be nonexistent by the applicant through the alternate/experimental system process, this type of absorption area placement is prohibited." This change is incorporated in subsection (d)(4) of these final-form regulations.

Subsection (e)(5) of the proposal limits sewage loading to an absorption area of an elevated sand mound on slopes of 8-12% to 500 gallons per day. One commentator asserted that this restriction would limit the size of a residence to be served by such a system to a maximum of 4 bedrooms. As a result, the commentator believes, residences with more than 4 bedrooms in these circumstances would need to utilize 2 elevated sand mounds and would potentially require 4 suitable sites where replacement testing is required. It was suggested that loading requirements for the systems be based on the type of structure served (single family residence) rather than flow.

The Board agrees with the commentator that the restriction would limit the size of the residence in some cases, but disagrees with the commentator's suggestion that the loading requirements for the systems be based on type of structure served. The loading capabilities of the systems are necessarily governed by the size of the absorption area available. Following publication of the proposal, the Department became aware of situations where the absorption areas were larger than anticipated and fully capable of achieving a load of more than 500

gallons per day. In light of this information, the proposal to limit loading to 500 gallons per day has been deleted.

53. *Section 73.62 (relating to standards for holding tanks)*

Proposed subsection (b) would have increased the required minimum capacity of a holding tank from 1,000 gallons to 3,000. Existing subsection (c) requires that holding tanks be equipped with an audible and visual warning device to indicate when the tank is filled to within 75% of its capacity. One commentator expressed concerns about the proposed increase in the minimum capacity and questioned the need for an audible warning device. The commentator noted that seasonal homes on leased State park and forest lands are served by previously approved holding tanks which have a capacity of 1,000 gallons and do not have audible alarms. The commentator acknowledged that approval of these systems was intended to eliminate pollution from then existing earthen privies. However, the commentator believes the proposed increase would require the installation of 3,000 gallon tanks on these homes. The commentator suggested there be an exception for these homes with respect to the requirement for audible alarms because they would disturb the neighborhood.

The current required minimum 1,000 gallon capacity of a holding tank will be retained. Following publication of the proposal, the Department received additional information regarding the capacity of holding tank pumper trucks used in rural areas. Many of these trucks have capacities of 1,000 to 1,500 gallons. The Board and the Department suggest that the sizing of a holding tank can be adjusted by the property owner or lessee (provided the lessee has authorization from the property owner) if an existing tank is inadequate or requires pumping too frequently.

The requirement for an audible warning device is being retained. In a sense, the commentator documented the need for an audible warning device. When a seasonal dwelling is not occupied and a holding tank is near overflow, the alarm alerts others that there is an imminent overflow. This allows action to be taken to avert public health problems associated with an insufficient maintenance of a holding tank.

54. *Section 73.64 (relating to chemical toilet or other portable toilet)*

The proposed amendments to this section would have deleted the requirement that permits be issued for the use of chemical or other toilets. The Board received a number of pro and con comments regarding this proposed change. Some commentators noted that enforcement of the existing permitting requirement by local agencies has been inconsistent from area to area and permit fees were allegedly unnecessary and extreme in some cases. Other commentators suggested that the permit requirement be retained because there have been occasions when the number of toilets provided for public events had been inadequate. Other commentators suggested that this section be revised by prescribing that a minimum number of chemical toilets be provided based on some formula.

The Board acknowledges the concerns expressed in the comments. The Board also notes that, in the past, enforcement of this requirement has been spotty and it perceives no reason to believe this situation will improve in the future. The Board believes that reinstating the permit requirement for chemical toilets will only perpetuate the existing problem of spotty enforcement. However, the proposal has been revised to provide an option for local agencies to require permits for chemical or other

portable toilets. This will allow local agencies desirous of requiring permits for these toilets to do so while excusing those which do not.

With respect to the suggestion that these final-form regulations establish some minimal number of toilets for public events, the Board believes that the customer and the supplier can establish the number of units needed or the frequency of service, or both, since either may be adjusted to provide adequate maintenance and service. Moreover, the number of toilets required is necessarily event specific.

The proposed amendments also would have provided that when permanent use of a chemical or other portable toilet is proposed, these toilets would be considered retaining tanks. This provision has been deleted from these final-form regulations. Chemical or other portable toilets may only be used on a temporary basis as provided in this section.

55. *Section 73.162 (relating to intermittent sand filters)*

The proposal, which added this section, outlines certain criteria related to intermittent sand filters used in the installation of individual residential spray irrigation systems. Subsection (b)(2) of the proposal would have required that sand supplied for free access sand filters meet Department of Transportation specifications for type A sand. One commentator suggested that this type of sand is not appropriate for use in a sand filter. As noted in paragraph 52 of this Preamble, sand specifications have been under review by the Department. Subsection (b)(2) has been revised as outlined in paragraph 52 of this Preamble.

Subsection (b)(1)(v) provided specifications regarding precast tank tops which support access covers for free access sand filters. One commentator suggested that, as written, the language requires the use of these tank tops in all cases. The commentator recommended that the use of nonconcrete tank tops be authorized. The Board agrees. The provision has been revised to implicitly allow for other types of tank tops by specifying that the requirements therein are applicable if precast slabs are used as tank tops.

Subsection (b)(3)(viii) of the proposal provided that when two sand filters or chambers are required to treat septic tank effluent, the duplicate units are to be flooded alternately. One commentator asserted that these should be flooded simultaneously rather than alternatively through a header pipe and delivery line. The Board acknowledges the comment. This subsection has been revised in these final-form regulations to provide that the duplicate units, at the discretion of the designer, be flooded alternately, simultaneously or by periodically using ball valves.

Subsection (c)(1) of the proposal would have prohibited the installation of sand filters in areas where bedrock is encountered above the proposed depth of the sand filter or where the seasonal high groundwater table rises above the proposed depth of the sand filter unless a concrete bottom and sides are used. The Department became aware of other methods which are as effective as concrete in providing protection to buried sand filters in these areas. Accordingly, the final-form regulations been revised to authorize material other than concrete so long as the designer considers measures to prevent filter and liner damage and groundwater contamination.

Subsection (c)(2)(ii) of the proposal provided that the minimum sand filter area for buried sand filters serving a single family residence would be based on a maximum

hydraulic load of 0.67 gallons per day per square foot. One commentator asserted that free access sand filters have a loading rate of 5 gallons per day per square foot. The commentator suggested that additional studies should be done to determine the safe loading rate for in-ground sand filters and that the proposed rate of 0.67 was onerous.

The Board notes that this research is currently being conducted under the auspices of Delaware Valley College. The rate specified in the proposal translates to 1.5 square feet per gallon per day. To make this figure consistent with the design requirements for Department permitted sand filters, the rate has been revised to 1.15 square feet per gallon per day in this final rule. This requirement may be reevaluated upon completion of the research project being undertaken at Delaware Valley College.

Another commentator noted that subsection (c)(2) specifies the size of the buried sand filter, but asserts that there is no distinction between that required for septic tank effluent and that required for aerobic tank effluent. The commentator asserts there is considerable evidence to support a smaller filter size for aerobic tank effluent. The Board agrees. Accordingly, a new paragraph is being added to subsection (c)(2) which provides that where aerobic treatment precedes a sand filter, a 1/3 reduction to the filter area may be used to size the filter.

56. *Section 73.165 (relating to disinfection)*

Subsection (a) of the proposal provides that disinfection of effluent by chlorination is required prior to spraying. One commentator suggested that disinfection should be expanded to include methods other than chlorination, such as the use of ultraviolet light and ozone generation. The commentator asserts that chlorination presents certain difficulties to a homeowner such as the handling and toxicity of chlorine, monitoring of concentrations and maintenance of equipment. It was suggested that ultraviolet light disinfection is not toxic, easy to use and maintain and requires no use of chemicals. The commentator also suggested the same could be said for ozone generation except that power demands and complexity are greater than ultraviolet light.

The Board does not agree that either ozone disinfection ultraviolet light technology are currently viable options. SAC believes that ozone disinfection technology provides an unacceptable risk of explosion. The Board believes ultraviolet light technology currently available is not conducive for use in conjunction with sewage effluent from a sand filter. Maintenance problems associated with dirt buildup on the ultraviolet light glass and the masking of biota from ultraviolet light exposure are common problems in larger systems currently in use and these problems have not been eliminated from smaller units. The Department is interested in, and encourages the use of, new methods of disinfection. The use of new methods and ultraviolet disinfection may be proposed under the alternate/experimental procedures of §§ 73.71 and 73.72.

57. *Section 73.167 (relating to operation and maintenance)*

The proposal included a provision which would require the designer of an individual residential spray irrigation system to provide an operation and maintenance manual to the permittee. IRRC suggested that the regulation should specify whether the manual must be written by the system designer or whether factory manuals prepared by the manufacturer of the tanks, filters and spray equipment would suffice. A provision has been added which provides that these manuals may be submitted as

supplements to an operation and maintenance manual. IRRC also suggested that a frequency of inspections of tanks and related equipment should be specified in paragraphs (1) and (2). A frequency of inspections of every 6 months has been incorporated into the regulations.

Paragraph (3)(i) of the proposal provides that chlorine residual sampled after the contact/retention tank must be maintained at a concentration of at least 1.0 ppm. One commentator asserted that information provided at training courses sponsored by the Department indicated that chlorine contact time is to be a minimum of 30 minutes. The commentator believes that the method of achieving 30 minute chlorine contact time by allowing one dose to accumulate in the pump tank prior to pumping will not work. The commentator asserts that this method does not insure that the last effluent to the pump tank will be the last discharge to the spray field. The commentator also suggested that the minimum chlorine residual of 1.0 ppm may not be possible if tablet chlorinators are used.

The existing regulations themselves do not specify a chlorine contact time of 30 minutes. The regulations are very general and chlorine contact time has been outlined in guidance documents issued by the Department in conjunction with training courses related to the design of individual residential spray irrigation systems. This guidance is incorporated into §§ 73.165 and 73.167. System designers are to design a system capable of both achieving the contact time and meeting the fecal coliform effluent limit. There are various methods of achieving the desired result, one of which is manufactured chlorine contact tanks. In-line chlorination followed by a 30 minute contact time in the storage tank may also result in a satisfactory effluent because the system is dosed once per day in the early morning when influent flow is very low. With respect to the proposed minimum chlorine residual requirement of at least 1.0 ppm, the minimum level has been reduced to 0.2 ppm to accommodate the use of tablet chlorinators. The Board notes, however, that some tablet feeders have performed poorly and care should be exercised in the choice of this equipment.

F. *Benefits and Costs*

Executive Order 1996-1 requires a cost/benefit analysis of the final-form regulations.

These changes to Chapters 71—73 are necessary to make the existing regulations consistent with recent amendments to the act and to update some technical standards for onlot sewage treatment systems.

Some proponents of new residential subdivision plans will qualify for an exemption from sewage facility planning requirements for their development. In addition, developers and builders will be able to receive deemed approvals if an agency responsible for reviewing sewage facilities plans or onlot sewage system permit applications, or both, does not act in a time period specified in the act or these regulations. This elimination of some planning and the requirements for action within certain time frames are expected to be of benefit to builders, developers, realtors and mortgage lenders.

The Department's authority to impose limitations on new land development as a result of a municipality's lack of an adequate comprehensive sewage facilities plan is limited to certain circumstances. This limited authority will benefit developers, realtors and mortgage lenders who will now be able to sell and finance lots in these areas. However, there is expected to be a cost to property purchasers and builders because appropriate sewage facilities might not be available. Property owners and builders

will not be able to build on these lots until the municipality complies with planning requirements due to severe public health hazards in the municipality.

Developers are authorized to make their own public notifications which were formerly within the sole province of a municipality or local agency when they propose significant developments. This will benefit developers, builders, realtors and mortgage lenders because they will not have to wait for the municipality to make the public notification and as a result, the review process will be shortened and construction may begin more quickly if the plan is approved.

The Department has initiated a compliance assistance program related to these amendments. Municipalities involved in developing official sewage facilities plan update revisions are eligible for up to 50% reimbursement from the Department for the costs incurred in developing these plans. In addition, penalties assessed for failure to develop or implement the plans will be deposited in a special fund. Municipalities assessed penalties may later apply for a return of these monies to help them correct sewage related problems. The Department will continue to work closely with PENNVEST and other sewerage project funding agencies to ensure that viable sewage plans are implemented.

The Department will continue to pay 50% of the costs incurred by local agencies to administer the onlot permitting program. Local agencies also qualify for 85% reimbursement if they meet certain criteria specified in these regulations. In addition, local agencies which assume delegation for new land development also qualify for 85% reimbursement. Fees collected and penalties assessed by local agencies will be retained by the agency for use in the administration of the program and abating public health hazards associated with sewage facilities. The Department will continue to work closely with PENNVEST and the Housing Finance Authority to provide low interest loans to property owners experiencing malfunctioning onlot systems.

The Department's ongoing commitment to the research and development of new and alternative means of onlot sewage disposal will allow more property owners to comply with a broader range of options outlined in the regulations. In addition, the Onlot System Hotline will provide a source of independent information on the Department's requirements and, thus, aid in compliance.

Local agencies which have a quality permitting program will benefit from an opportunity to apply for and receive up to 85% reimbursement for the costs of these activities instead of the current 50%. This is expected to reduce the local costs of administering the program and provide a better local agency to serve the needs of the affected public.

Local agencies which meet certain criteria will be given authority under a delegation agreement to review and approve or disapprove sewage facilities planning modules relating to new land developments. Developers, builders, realtors and mortgage lenders in areas where a local agency has entered into such a delegation agreement are expected to benefit from the more streamlined process since the Department will not be involved in the review process except in an oversight capacity. In addition, the local review is expected to result in a one-stop review process.

The Sewage Facilities Program will benefit from the review fees charged to applicants for sewage facilities planning approvals from the Department. The fees will be

deposited in a special fund created under section 13.2 of the act (35 P.S. § 1750.13b). These fees will be used for, among other things, training of sewage enforcement officers, onlot sewage system research and municipal outreach programs. Developers and other applicants will experience an increased cost for the review of their sewage facilities plans.

Individuals who propose to build a new dwelling to replace an existing dwelling in accordance with the criteria specified in these regulations will benefit from provisions which allow the activity without the need to obtain a permit for sewage facilities. The Commonwealth is expected to experience a cost of continued pollution in cases where the existing system is old and substandard.

Some owners of properties or lots which are too small to support both a well and an onlot sewage disposal system will benefit from an exemption from isolation distance requirements which will permit them to build a residence anyway. The same property owners may experience a cost if they have to treat or upgrade, or both, their water supplies where an expert they relied upon made an erroneous determination with respect to the isolation distance, and hence the exemption.

Property owners, developers, builders, realtors and mortgage lenders will benefit from a streamlined review process for alternate onlot sewage system proposals. In addition, the reclassification of several current types of alternate systems and technologies as standard technology and the implementation of individual residential spray irrigation system standards are expected to make much land previously unusable for these systems more readily available for development.

The mandatory filing system for permit applications will be a small cost to local agencies, but will provide a more organized and readily available source of information for the affected public.

The expanded powers and duties of local agencies will pose more of an administrative cost to the local agencies. However, these costs are expected to be largely offset by the fees the local agencies are now authorized to charge for these expanded services. Developers and builders will have to absorb these higher fees, but are expected to benefit from improved and more streamlined services from the local agency.

The clarified conflict of interest provisions related to the employment of sewage enforcement officers will result in local agencies losing the services of a sewage enforcement officer when conflicting employment is occurring. This will necessitate the services of a replacement sewage enforcement officer, by contract or otherwise. Some sewage enforcement officers will not be able to continue consulting activities and still act as a sewage enforcement officer in certain circumstances.

Applicants for a permit to install an onlot sewage system on a lot which was tested by a previous sewage enforcement officer and determined to be unsuitable for an onlot sewage system will benefit from a fairer assessment process for retesting the same lot. Local agencies will bear the cost of additional soils testing and administrative fees associated with the retesting.

Local agencies applying for reimbursement from the Department for expenses incurred in the administration of the onlot permitting program will benefit from an extension of the application deadline outlined in these final-form regulations.

Sewage enforcement officers and onlot system installers will benefit from the training courses the Department will

develop and administer as a result of these regulations. There will be costs to the Commonwealth to develop and administer these courses.

Purchasers of property will benefit from clauses and warnings required in sales contracts associated with the sale of properties or lots which are exempt from the planning or permitting requirements under the regulations. These exemptions may result in the property or lot being unsuitable for building or otherwise less valuable.

The Department and the public will benefit from provisions which allow actions against sewage enforcement officers who act in violation of applicable law in their capacity as consultants. Developers will benefit from provisions which require the Department to provide technical information regarding sewage treatment systems and the authority of the Department to waive its review of sewage facilities plans.

#### G. *Sunset Review*

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

#### H. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on March 12, 1996, the Department submitted a copy of the notice of proposed rulemaking, published at 26 Pa.B. 1491 to IRRC and the Chairpersons of the Senate and House Environmental Resources and Energy Committees for review and comment. In compliance with section 5(b.1) of the Regulatory Review Act, the Department also provided IRRC and the Committees with copies of the comments received, as well as other documentation.

In preparing these final-form regulations, the Department has considered the comments received from IRRC and the public. No comments were received from either of the Committees.

These final-form regulations were deemed approved by the House Environmental Resources and Energy Committee on May 27, 1997, and was deemed approved by the Senate Environmental Resources and Energy Committee on May 27, 1997. IRRC met on June 5, 1997, and disapproved the amendments in accordance with section 6(a) of the Regulatory Review Act (71 P. S. § 745.6(a)). Under section 7(b) of the Regulatory Review Act (71 P. S. § 745.7(b)), the Department determined it was desirable to implement the final-form regulations without revisions or modifications recommended by IRRC and submitted a report to the Standing Committees of the House and Senate on September 22, 1997. The Committees did not act on the Department's report within 14 days of receipt of the Department's report. These final-form regulations were accordingly deemed approved on October 6, 1997, and may thus be promulgated in accordance with section 7(d) of the Regulatory Review Act.

#### I. *Findings of the Board*

The Board finds that:

(1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P. L. 769, No. 240) (45 P. S. §§ 1201 and 1202) and regulations promulgated thereunder at 1 Pa. Code §§ 7.1 and 7.2.

(2) A public comment period was provided as required by law and the comments were considered.

(3) These regulations do not enlarge the purpose of the proposal published at 26 Pa.B. 1491.

(4) These final-form regulations are necessary and appropriate for the administration and enforcement of the authorizing acts identified in Section C of this Preamble.

#### J. *Order of the Board*

The Board, acting under the authorizing statutes, orders that:

(a) The regulations of the Department, 25 Pa. Code Chapters 71—73, are amended by amending §§ 71.1—71.3, 71.11, 71.14, 71.21, 71.22, 71.31, 71.32, 71.41, 71.43, 71.44, 71.51, 71.53—71.55, 71.62—71.65, 71.72, 71.73, 71.75, 72.1, 72.2, 72.21, 72.22—72.28, 72.31, 72.41—72.44, 72.52—72.55, 72.58, 73.1—73.3, 73.11—73.17, 73.21, 73.31, 73.32, 73.41—73.45, 73.51—73.55, 73.62, 73.64, 73.65, 73.71, 73.72; and by adding §§ 71.58, 71.59, 71.81—71.83, 72.32, 72.33 and 73.161—73.167 to read as set forth in Annex A, with ellipses referring to the existing text of the regulations.

(b) The Chairperson of the Board shall submit this order and Annex A to IRRC and the Senate and House Environmental Resources and Energy Committees as required by the Regulatory Review Act.

(c) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.

(d) This order shall take effect as set forth in Section A of the Preamble.

JAMES M. SEIF,  
Chairperson

*(Editor's Note: For the text of the order of the Independent Regulatory Review Commission relating to this document, see 27 Pa.B. 3000 (June 21, 1997).)*

**Fiscal Note:** 7-294; (1) General Fund; (2) Implementing Year 1997-98 is \$934,162; (3) 1st Succeeding Year 1998-89 is \$879,467; 2nd Succeeding Year 1999-00 is \$1,074,812; 3rd Succeeding Year 2000-01 is \$1,270,157; 4th Succeeding Year 2001-02 is \$1,465,502; 5th Succeeding Year 2002-03 is \$1,660,847; (4) Fiscal Year 1996-97 \$2.5 million; Fiscal Year 1995-96 \$2.5 million; Fiscal Year 1994-95 \$2.5 million; (7) Sewage Facilities Enforcement Grants; (8) recommends adoption.

The increased costs to the Sewage Facilities Enforcement Grants Appropriation have been included in the 1997—1998 Governor's Executive Budget Proposal and have also been carried forward for planning purposes.

#### Annex A

### TITLE 25. ENVIRONMENTAL PROTECTION

#### PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

#### Subpart C. PROTECTION OF NATURAL RESOURCES

#### CHAPTER 71. ADMINISTRATION OF SEWAGE FACILITIES PLANNING PROGRAM

#### Subchapter A. GENERAL

#### GENERAL

#### § 71.1. Definitions.

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

\* \* \* \* \*

*Clean Water Act*—The Clean Water Act (33 U.S.C.A. §§ 1251—1387).

*Delegated agency*—A municipality, local agency, multimunicipal local agency or county or joint county department of health to which the Department was delegated the authority to review and approve subdivisions for new land developments as supplements to the official plan of a municipality in which the subdivision is located.

*Equivalent dwelling unit*—For the purpose of determining the number of lots in a subdivision only as it relates to the determination of planning exemptions and fees for planning module reviews under this chapter, that part of a multiple family dwelling or commercial or industrial establishment with flows equal to 400 gallons per day. These flow figures are not intended to be used for the calculation of flows for the design of community sewerage systems or for the allocation of flows related to community sewerage systems. Community sewerage system flows for design and permitting purposes shall be calculated using the procedures established in the Department's *Domestic Wastewater Facilities Manual* (DEP-1357).

*Individual residential spray irrigation system*—An individual sewage system which serves a single dwelling and which treats and disposes of sewage using a system of piping, treatment tanks and soil renovation through spray irrigation.

\* \* \* \* \*

*Municipality*—A city, town, township, borough or home rule municipality other than a county.

\* \* \* \* \*

*Official plan revision*—A change in the municipality's official plan to provide for additional, newly identified future or existing sewage facilities needs, which may include one or more of the following:

(i) *Update revision*—A comprehensive revision to an existing official plan required when the Department or municipality determines the official plan or one or more of its parts is inadequate for the existing or future sewage facilities needs of a municipality or its residents or landowners.

\* \* \* \* \*

(iii) *Special study*—A study, survey, investigation, inquiry, research report or analysis which is directly related to an update revision. The studies provide documentation or other support necessary to solve specific problems identified in the update revision.

(iv) *Supplement*—A sewage facilities planning module for a subdivision for new land development which will not be served by sewage facilities requiring a new or modified permit from the Department under The Clean Streams Law, and which is reviewed and approved by a delegated agency.

(v) *Exception to the requirement to revise*—A process established in § 71.55 (relating to exceptions to the requirement to revise the official plan for new land development) which describes the criteria under which a revision for new land development is not required.

\* \* \* \* \*

*Retaining tank*—A watertight receptacle which receives and retains sewage and is designed and constructed to facilitate ultimate disposal of the sewage at another site. The term includes:

(i) *Chemical toilet*—A permanent or portable nonflushing toilet using chemical treatment in the retaining tank for odor control.

(ii) *Holding tank*—A tank, whether permanent or temporary, to which sewage is conveyed by a water carrying system.

(iii) *Privy*—A tank designed to receive sewage where water under pressure is not available.

(iv) *Incinerating toilet*—A device capable of reducing waste materials to ashes.

(v) *Composting toilet*—A device for holding and processing human and organic kitchen waste employing the process of biological degradation through the action of microorganisms to produce a stable, humus-like material.

(vi) *Recycling toilet*—A device in which the flushing medium is restored to a condition suitable for reuse in flushing.

*Sewage*—A substance that contains the waste products or excrement or other discharge from the bodies of human beings or animals and noxious or deleterious substances being harmful or inimical to the public health, or to animal or aquatic life, or to the use of water for domestic water supply or for recreation. The term includes any substance which constitutes pollution under The Clean Streams Law.

*Sewage enforcement officer*—An official of the local agency who reviews permit applications and sewage facilities planning modules, issues permits as authorized by the act and conducts investigations and inspections that are necessary to implement the act and the regulations thereunder.

*Sewage facilities*—A system of sewage collection, conveyance, treatment and disposal which will prevent the discharge of untreated or inadequately treated sewage or other waste into waters of this Commonwealth or otherwise provide for the safe and sanitary treatment and disposal of sewage or other waste. The term includes:

(i) *Individual sewage system*—A system of piping, tanks or other facilities serving a single lot and collecting and disposing of sewage in whole or in part into the soil or into waters of this Commonwealth or by means of conveyance to another site for final disposal. The term includes:

(A) *Individual onlot sewage system*—An individual sewage system which uses a system of piping, tanks or other facilities for collecting, treating and disposing of sewage into a soil absorption area or spray field or by retention in a retaining tank.

(B) *Individual sewerage system*—An individual sewage system which uses a method of sewage collection, conveyance, treatment and disposal other than renovation in a soil absorption area, or retention in a retaining tank.

(ii) *Community sewage system*—A sewage facility, whether publicly or privately owned, for the collection of sewage from two or more lots, or two or more equivalent dwelling units and the treatment or disposal, or both, of the sewage on one or more of the lots or at another site.

(A) *Community onlot sewage system*—A system of piping, tanks or other facilities serving two or more lots and collecting, treating and disposing of sewage into a soil absorption area or retaining tank located on one or more of the lots or at another site.

(B) *Community sewerage system*—A publicly or privately-owned community sewage system which uses a

method of sewage collection, conveyance, treatment and disposal other than renovation in a soil absorption area, or retention in a retaining tank.

\* \* \* \* \*

*Small flow treatment facilities*—An individual or community sewerage system designed to adequately treat sewage flows not greater than 2,000 gallons per day for final disposal using a stream discharge or other disposal methods approved by the Department.

\* \* \* \* \*

*Subdivision*—The division or redivision of a lot, tract or other parcel of land into two or more lots, tracts, parcels or other divisions of land, including changes in existing lot lines. The enumerating of lots shall include as a lot that portion of the original tract or tracts remaining after other lots have been subdivided therefrom.

\* \* \* \* \*

*Working day*—Calendar days as specified in 1 Pa.C.S. § 1908 (relating to computation of time) excluding Saturdays and Sundays, or a day made a legal holiday by the statutes of the Commonwealth or of the United States. The period shall be calculated to exclude the first and include the last day of the period.

### § 71.2. Scope and time periods.

(a) This chapter is adopted in accordance with the duties imposed upon the Department under the act and the Clean Streams Law and applies to municipalities, local agencies and delegated agencies administering the planning provisions of the act and to persons subdividing land or planning, designing or installing sewage facilities.

(b) This chapter governs the sewage planning requirements for sewage facilities being proposed by municipalities to resolve existing sewage disposal problems, to provide for the sewage disposal needs of new land development and otherwise to provide for future sewage disposal needs of a resident or landowner in a municipality.

(c) Time periods referred to in this chapter will be computed under 1 Pa.C.S. § 1908 (relating to computation of time).

### § 71.3. Purposes.

This chapter is separated into six subchapters:

(1) Subchapter A (relating to general) provides general background information.

(2) Subchapter B (relating to official plan requirements) provides a comprehensive sewage planning mechanism to identify and resolve existing sewage disposal problems, to avoid potential sewage problems resulting from new land development and to provide for the future sewage disposal needs of a municipality.

(3) Subchapter C (relating to new land development plan revisions) provides a mechanism for revising sewage facilities plans to provide for new land development.

(4) Subchapter D (relating to official plan requirements for alternative evaluations) provides the planning requirements for evaluating alternatives for sewage facilities.

(5) Subchapter E (relating to sewage management programs) provides the requirements for establishing sewage management programs.

(6) Subchapter F (relating to fees) provides for fees for the review of new land development sewage facilities planning modules.

## Subchapter B. OFFICIAL PLAN REQUIREMENTS GENERAL

### § 71.11. General requirement.

Municipalities are required to develop and implement comprehensive official plans which provide for the resolution of existing sewage disposal problems, provide for the future sewage disposal needs of new land development and provide for the future sewage disposal needs of the municipality. Official plans shall be developed, submitted to the Department for approval and implemented by municipalities under the act and §§ 71.12—71.14, 71.21, 71.22, 71.31, 71.41—71.44 and Subchapters C—F.

### § 71.14. Private request to revise official plans.

(a) A person who is a resident or legal or equitable property owner in a municipality may file a private request with the Department requesting that the Department order the municipality to revise or implement its official plan if the resident or property owner can show that the official plan is not being implemented or is inadequate to meet the resident's or property owner's sewage disposal needs. This request may be made only after a prior written demand upon and written refusal by the municipality to so implement or revise its official plan or failure of the municipality to reply in either the affirmative or negative within 60 days or, failure of the municipality to implement its official plan within the time limits established in the plan's implementation schedule or failure to revise its official plan within the time limits established in this chapter. The request to the Department shall contain a description of the area of the municipality in question and a list of reasons that the plan is believed to be inadequate. The person shall notify the municipality, official planning agency within the municipality and planning commission with areawide jurisdiction in writing of the filing of the request with the Department at the same time notice is sent to the Department. This notification shall include a copy of the documentation supporting the private request which was submitted to the Department.

(b) Private requests to revise an official plan shall contain evidence that the municipality has refused in writing to revise its plan, is not implementing its plan or has failed to act within the time limits established in § 71.13(a) (relating to Department responsibility to require official plan revisions) for plan updates or § 71.53(b) (relating to municipal administration of new land development planning requirements for revisions) for new land developments.

(c) Upon receipt of a private request for revision, the Department will notify the municipality and appropriate official planning agencies within the municipality, including a planning agency with areawide jurisdiction if one exists, under the Pennsylvania Municipalities Planning Code (53 P. S. §§ 10101—11202) and the existing county or joint county department of health of receipt of the private request and will inform them that written comments shall be submitted to the Department within 45 days after the Department's receipt of the private request for revision.

(d) In arriving at its decision, the Department will consider the following:

- (1) The reasons advanced by the requesting person.
- (2) The reasons for denial advanced by the municipality.
- (3) Comments submitted under this section.



(4) Whether the proposed sewage facilities and documentation supporting the proposed sewage facilities are consistent with this part.

(5) The existing official plan developed under this chapter.

(e) The Department will render its decision, and inform the person requesting the revision and the appropriate municipality, in writing, within 120 days after either receipt of the comments permitted by this section or 120 days after the expiration of the 45-day comment period when no comments have been received or within an extended period if agreed to in writing by the person making the request.

(1) The Department's decision will specify the nature of the revision to the municipality's official plan that the municipality will be required to implement or the reasons for refusal. If the Department orders a requested revision, the order will specify time limits for plan completion, including interim deadlines and compliance schedules the Department deems necessary.

(2) If the Department refuses to order a revision requested under subsection (a), it will notify the person who filed the request, in writing, of the reasons for the refusal.

(3) The Department may not refuse to order a requested revision because of inconsistencies with any applicable zoning, subdivision or land development ordinances, but will make its order subject to any limitations properly placed on the development of the property by the municipality under its zoning, subdivision or land development ordinances or by court orders.

**OFFICIAL PLAN PREPARATION**

**§ 71.21. Content of official plans.**

(a) A municipality shall submit a Task/Activity Report or other appropriate form prior to preparation of an official plan to determine which of the planning elements listed in this section are necessary to meet the specific needs of that municipality. It is recommended that the municipality meet with the Department prior to submitting the Task/Activity Report to the Department. A determination does not constitute a final Department action until the completed plan is submitted by the municipality and acted upon by the Department. If applicable to the specific planning needs of the municipality, as determined by the Department, the completed plan submitted to the Department shall:

\* \* \* \* \*

(2) Evaluate existing sewage facilities in the planning area through the following:

(i) An identification, mapping and description of municipal and nonmunicipal, individual and community sewage systems in the planning area including:

\* \* \* \* \*

(B) A description of problems with the existing facilities, including existing or projected overload under Chapter 94 (relating to municipal wasteload management) or violations of a National Pollutant Discharge Elimination System permit, a Clean Streams Law permit or other permit, rule or regulation of the Department.

\* \* \* \* \*

(ii) An identification, mapping and description of areas that use individual and community onlot sewage systems in the planning area, including:

\* \* \* \* \*

(C) A comparison of the types of onlot sewage systems installed in an area with the types of systems which are appropriate for the area according to soil, geologic conditions and Chapter 73 (relating to standards for onlot sewage treatment facilities).

\* \* \* \* \*

(5) Evaluate each alternative listed in response to paragraph (4), including, but not limited to:

(i) Consistency between the proposed alternative and the objectives and policies of:

\* \* \* \* \*

(B) Municipal wasteload management under Chapter 94.

\* \* \* \* \*

(6) Select one alternative to solve the need for sewage facilities in each area studied and support this choice with documentation that shows that the alternative is technically, environmentally and administratively acceptable.

\* \* \* \* \*

**§ 71.22. Coordination of official plans with Federally funded sewage facilities planning.**

Planning for Federally funded sewage facilities under Subchapter II of the Clean Water Act (33 U.S.C.A. §§ 1281—1299) or State Revolving Funding under Title VI of the Water Quality Act of 1987 (33 U.S.C.A. §§ 1382—1387) shall meet the requirements of § 71.31 (relating to municipal responsibility to review, adopt and implement official plans) and be approved by the Department as a revision to the municipal official plan.

**OFFICIAL PLAN APPROVAL**

**§ 71.31. Municipal responsibility to review, adopt and implement official plans.**

(a) A municipality shall develop and evaluate alternatives in official plans and official plan revisions and shall determine, prior to adopting the plan, which technical and administrative alternatives are proposed to be implemented.

(b) A municipality shall request, review and consider comments by appropriate official planning agencies of a municipality, including a planning agency with areawide jurisdiction if one exists, under the Pennsylvania Municipalities Planning Code (53 P. S. §§ 10101—11202) and the existing county or joint county department of health. Evidence that the official plan has been before these agencies for 60 days without comment is sufficient to satisfy the requirements of this subsection.

(c) A municipality shall submit evidence that documents the publication of the proposed plan adoption action at least once in a newspaper of general circulation in the municipality. The notice shall contain a summary description of the nature, scope and location of the planning area including the antidegradation classification of the receiving water where a discharge to a body of water designated as high quality or exceptional value is proposed and the plan's major recommendations, including a list of the sewage facilities alternatives considered. A 30-day public comment period shall be provided. A copy of written comments received and the municipal response to each comment, shall be submitted to the Department with the plan.

(d) An implementation schedule shall be submitted as part of the official plan. This schedule shall designate the time periods within which the specific phases of the facilities or program will be completed and the methods and sources of financing each phase.

(e) When an official plan or official plan revision identifies a conflict between a proposed alternative and the consistency requirements contained in § 71.2(a)(5)(i)—(iii) (relating to content of official plans), the municipality shall submit written documentation that the appropriate agency has received, reviewed and concurred with the method proposed to resolve identified inconsistencies.

(f) The municipality shall adopt the official plan by resolution, with specific reference to the alternatives of choice and a commitment to implement the plan within the time limits established in an implementation schedule.

**§ 71.32. Department responsibility to review and act upon official plans.**

(a) No official plan or official plan revision will be considered complete by the Department unless it contains the information and supporting documentation required by the Department, including those items required by § 71.31 (relating to municipal responsibility to review, adopt and implement official plans). If a special study is submitted in support of an existing official plan, existing official plan revision or existing update revision, the Department may waive inapplicable requirements of § 71.31 (relating to municipal responsibility to review, adopt and implement official plans).

(b) Within 120 days after submission of a complete official plan or official plan revision, with supporting documentation, the Department will either approve or disapprove the plan or revision, except as provided in § 71.54(d) (relating to Department administration of new land development planning requirements for revisions) for a plan revision for a residential subdivision plan.

(c) Upon the Department's failure to act on a complete official plan or revision within 120 days of its submission, the official plan or official plan revision will be considered approved, unless the Department informs the municipality prior to the end of 120 days that additional time is necessary to complete its review. The additional time may not exceed 60 days.

(d) In approving or disapproving an official plan or official plan revision, the Department will consider:

(1) Whether the plan or revision meets the requirements of the act, the Clean Streams Law and this part.

(2) Whether the municipality has adequately considered questions raised in comments, if any, of the appropriate areawide planning agency, the county or joint county department of health, and the general public.

(3) Whether the plan or revision furthers the policies established under section 3 of the act (35 P. S. § 750.3) and sections 4 and 5 of the Clean Streams Law (35 P. S. §§ 691.4 and 691.5).

(4) Whether the official plan or official plan revision is able to be implemented.

(5) Whether the official plan or official plan revision adequately provides for continued operation and maintenance of the proposed sewage facilities.

(6) Whether the official plan or official plan revision contains documentation that inconsistencies identified in

§ 71.21(a)(5)(i)—(iii) (relating to content of official plans) have been resolved under § 71.31(e).

(7) If the official plan or official plan revision includes proposed sewage facilities connected to or otherwise affecting sewage facilities of other municipalities, whether the other municipalities have submitted necessary revisions to their plans for approval by the Department.

(e) If the official plan or official plan revision is disapproved by the Department, written notice will be given to each municipality included in the plan, together with a statement of reasons for the disapproval.

(f) In a municipality that does not have an official plan, or fails to revise or implement its official plan as required by order of the Department or this part the following apply:

(1) The limitations on the issuance of permits under § 72.23(a) and (b) (relating to limitation on onlot system permit issuance) are in effect.

(2) The Department will not issue a permit under section 5 of The Clean Streams Law (35 P. S. § 691.5) for projects in those areas of the municipality for which an official plan, official plan revision or implementation of an official plan is required.

(3) A supplement or a revision for new land development will not be denied nor will an exception to the requirement to revise be found inadequate solely because the municipality in which the new land development is being proposed has failed to do one of the following:

(i) Submit an update revision or special study.

(ii) Implement its plan as required by an order of the Department or this part.

(4) A supplement or revision for new land development will not be denied, nor will an exception to the requirement to revise be found inadequate, solely because an update revision or special study is under review by the Department.

(5) Every contract for the sale of a lot which is located within an area in which permit limitations are in effect and which is subject to permit limitations under this chapter shall contain a statement in the sales contract that clearly indicates to the buyer that sewage facilities are not available for that lot and that sewage facilities will not be available. This statement shall also clearly state that construction of any structure on the lot may not begin until the Department has approved a major planning requirement, including, but not limited to, a plan update revision or a special study.

(g) The limitations on permit issuance contained in § 72.23(a) and (b) do not apply when the provisions of § 72.23(d) have been met.

**PLANNING GRANTS**

**§ 71.41. Grants for the preparation of official plans.**

Under section 6 of the act (35 P. S. § 750.6) and §§ 71.42 and 71.43 (relating to application for grants; and approval of grants), the Department will administer grants to municipalities, counties and authorities for preparing update revisions and special studies to the extent of the appropriations made by the General Assembly for that purpose. Municipalities, counties and authorities intending to apply for the grants shall submit to the Department an outline of the proposed plan content, time schedule for plan completion and estimated cost by planning task on a form provided by the Department or other form acceptable to the Department prior to begin-

ning the plan. Costs for completion of planning activities outside the scope of the proposed plan content are not eligible for a grant unless proposals for inclusion of additional activities and increased costs associated with these activities have been submitted to and approved by the Department and are within the scope of the act.

**§ 71.43. Approval of grants.**

(a) The Department will not authorize payment of a planning grant to an applicant until the Department has approved the official plan or revision which has been adopted by the municipality.

(b) When the Department has determined that the application is complete, the Department will pay grants to applicants in the order in which the applications were received.

(c) The Department will determine the amount of the grant by evaluating:

- (1) The application for planning grants.
  - (2) The extent and nature of the activities included in the official plan or revision to the official plan and the eligibility of the costs of these activities for grant payments under the act.
  - (3) The cost of performing each activity included in the official plan or revision to the official plan.
  - (4) The contents of existing plans and studies.
  - (5) The conditions imposed upon the municipality by an order or notice of the Department.
  - (6) The final contents of the adopted official plan.
- (d) The Department may pay planning grants for joint municipal plans submitted under § 71.12(b) (relating to municipal responsibility to revise plans) without official adoption of the plan from participating municipalities when:

- (1) The Department has determined that enough municipalities have adopted the plan consistent with § 71.32(d)(7) (relating to Department responsibility to review and act upon official plans) to assure substantial plan implementation.
- (2) Costs for the planning activities done for the non-participating municipalities are deducted from the application for the grant payment.
- (3) The Department has notified the municipality not adopting the joint-municipal plan that its official plan is in a disapproved status; or has determined that the municipality's official plan adequately addresses the existing and future sewage disposal needs of the municipality.

(e) The Department will not withhold planning grants for eligible costs from a municipality, its designated authority or county when the following occur:

- (1) Sufficient appropriations have been made by the General Assembly.
- (2) The official plan has been adopted by the municipality and approved by the Department.
- (3) The official plan complies with the terms of the act and this part.

**§ 71.44. Duplicate planning.**

The Department will not pay grants under the act for information which has been completed previously under local, State or Federal funding programs. The plan shall incorporate this information by reference.

**Subchapter C. NEW LAND DEVELOPMENT  
PLAN REVISIONS**

**§ 71.51. General.**

(a) A municipality shall revise its official plan when:

- (1) A new subdivision is proposed, except as provided by § 71.55 (relating to exceptions to the requirement to revise the official plan for new land development) or subsection (b).
- (2) The official plan, or its parts, is inadequate to meet the sewage needs of the new land development.
- (3) Newly discovered or changed facts, conditions or circumstances make the plan inadequate to meet the sewage needs of new land developments.
- (4) A permit is required from the Department under section 5 of the Clean Streams Law (35 P. S. § 691.5).

(b) Except for new land developments proposing the use of retaining tanks, exemptions from sewage facilities planning for new land development will be processed as follows:

(1) Revisions for new land development, exceptions to the requirement to revise and supplements are not required, and permits for onlot systems using a soil absorption area or a spray field may be issued without this planning, when the Department or, in the case of supplements, a delegated agency determines that the following have been met:

(i) The official plan shows that those areas of the municipality are to be served by onlot sewage disposal facilities using a soil absorption area or a spray field as confirmed by signature of the municipal officials.

(ii) The area proposed for the use of individual or community sewage systems is not underlain by carbonate geology nor is this area within 1/4 mile of water supplies documented to exceed 5 PPM nitrate-nitrogen as confirmed by the Department from a USGS geology map or sampling data.

(iii) The area proposed for development is outside of high quality or exceptional value watersheds established under the regulations and policies promulgated under the Clean Streams Law as confirmed by the Department from the location of the new land development on a USGS topographic quadrangle map.

(iv) Subdivided lots and the remaining portion of the original tract after subdivision are 1 acre or larger as confirmed by signature of the applicant.

(v) Complete soils testing and site evaluation establish that separate sites are available for both a permittable primary soil absorption area or spray field and a replacement soil absorption area or spray field on each lot of the subdivision as confirmed by a signed report of the sewage enforcement officer serving the municipality in which the new land development is proposed. The local agency or municipality may require deed restrictions or take other actions it deems necessary to protect the replacement soil absorption area or spray field from damage which would make it unsuitable for future use.

(2) Revisions for new land development and supplements are not required for subdivisions proposing a connection to or an extension of public sewers when all of the following have been met:

(i) The Department or delegated agency determines that existing collection, conveyance and treatment facil-

ities are in compliance with the Clean Streams Law and the rules and regulations thereunder.

(ii) The Department or delegated agency determines that the permittees of the receiving sewerage facilities have submitted information under Chapter 94 (relating to municipal wasteload management) which documents that the existing collection, conveyance and treatment system does not have an existing hydraulic or organic overload or 5-year projected overload.

(iii) The applicant has provided written certification from the permittees of the collection, conveyance and treatment facilities to the municipality in which the subdivision is located and the Department or delegated agency with jurisdiction over the municipality in which the subdivision is located that there is capacity to receive and treat the sewage flows from the applicant's proposed new land development and that the additional wasteload from the proposed new land development will not create a hydraulic or organic overload or 5-year projected overload.

(iv) The municipality has a current approved sewage facilities plan update revision which is being implemented. For the purposes of exempting a subdivision from completing sewage facilities planning under this section, the phrase "a current approved sewage facilities plan update revision which is being implemented" shall include official plans of municipalities which are not under an order from the Department to submit an update revision or special study for the area in which the subdivision is proposed.

(3) The Department will provide delegated agencies sufficient information to make the required determinations under paragraphs (1)(ii) and (iii), (2)(i), (ii) and (iv). When the determination under paragraph (1) or (2) is made by a delegated agency, that agency shall submit to the Department quarterly reports which include the names of the subdivisions, location of the subdivisions, number of lots and projected sewage flows for each subdivision exempted from the planning provisions under this subsection.

(4) Information in support of a request for a sewage facilities planning exemption under this section shall be submitted on a form provided by the Department.

(5) This subsection does not apply to new land development proposals intended to be served by sewage facilities which require or which must apply for a new or modified permit from the Department under the Clean Streams Law.

**§ 71.53. Municipal administration of new land development planning requirements for revisions.**

(a) It is the responsibility of the municipality to act upon revisions for new land development. If the new land development is requested by a private developer, the developer or his agent may complete the Department's sewage facilities planning module and submit it to the municipality for action.

(b) The municipality shall review sewage facilities planning modules upon receipt and, if appropriate comments or documents have not been received under subsections (d)(2), (3) and (5), shall forward a copy of the sewage facilities planning modules to the sewage enforcement officer, owner of receiving sewerage facilities and appropriate planning or zoning agencies within 10 days of receipt. The municipality shall determine if the submittal of the sewage facilities planning module is complete within 10 working days of the receipt of comments from the sewage enforcement officer and appropriate planning

or zoning agencies. The municipality shall review and act upon a complete sewage facilities planning module proposing a revision for new land development within 60 days of receipt or additional time as the applicant and municipality may agree to in writing. Failure of the municipality to act within the 60-day period or an agreed-to extension will cause the revision for new land development to be deemed approved by the municipality and the complete sewage facilities planning module shall be submitted to the Department by the municipality or applicant. Documentation of the period of time the revision was in possession of the municipality shall be in the form of a completeness checklist signed by an official of the municipality confirming that the requirements of subsection (d) have been met.

(c) Municipal action shall take the form of adopting, adopting with modifications or refusing to adopt the proposal as a revision to the municipality's official plan.

(d) For the purposes of this section, no plan revision for new land development will be considered complete unless it includes the following:

(1) The information contained in § 71.52 (relating to content requirements—new land development revisions) and the Department's sewage facilities planning module.

(2) Comments by appropriate official planning agencies of a municipality, including a planning agency with areawide jurisdiction if one exists, under the Pennsylvania Municipalities Planning Code (53 P. S. §§ 10101—11202) and the existing county or joint county department of health. Evidence that the sewage facilities planning module has been before these agencies for 60 days without comment shall be sufficient to satisfy this paragraph.

(3) A written commitment from the owner of the receiving community sewerage facilities to provide service to the proposed new land development and the conditions for providing the services.

(4) Documentation that the proposal is consistent with the requirements of § 71.21(a)(5)(i)(A), (B), (E) and (I) (relating to content of official plans) or that inconsistencies have been resolved under § 71.31(e) (relating to municipal responsibility to review, adopt and implement official plans).

(5) A statement from the sewage enforcement officer for the local agency having jurisdiction for individual or community onlot sewage systems in the area where onlot systems are proposed commenting on:

(i) General site suitability for system usage.

(ii) The sewage enforcement officer shall have 20 days from receipt of a sewage facilities planning module from the municipality to provide these comments, which shall be based upon onsite verification of soil tests, general site conditions and other generally available soils information. Evidence that the sewage enforcement officer has been in receipt of the sewage facilities planning module for 20 days without commenting is sufficient to satisfy this subsection.

(6) Evidence documenting newspaper publication. The 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. When 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.

The newspaper notice shall notify the public where the plan is available for review and indicate that all comments regarding the proposal shall be sent to the municipality within which the new land development is proposed. The newspaper publication shall meet the requirement of § 71.31(c) and provide notice of the proposed plan adoption action when the proposal involves one of the following:

- (i) Construction of a sewage treatment facility.
  - (ii) A change in the flow at a sewage treatment facility of greater than 50,000 gpd.
  - (iii) Will result in a public expenditure in excess of \$100,000 for the sewage facilities portion of a project.
  - (iv) Will lead to a major modification of the existing municipal administrative organization or the establishment of new administrative organizations within the municipal government.
  - (v) A subdivision of 50 lots or more.
  - (vi) A major change in established growth projections.
  - (vii) A different land use pattern than that established in the official sewage plan.
  - (viii) The use of large volume onlot sewage systems.
  - (ix) Resolution of a conflict between the proposed alternative and the consistency requirements contained in § 71.21(a)(5)(i)—(iii).
  - (x) The sewage facilities are proposed to discharge into high quality or exceptional value waters.
- (e) Since it is the responsibility of the municipality to implement the provisions of official plan revisions, when reviewing a proposed plan revision the municipality shall consider the information requested in subsection (d) and whether the proposed plan revision is consistent with established municipal goals and capabilities.
- (f) A municipality may refuse to adopt a proposed revision to its official plan for new land development for the following reasons, including, but not limited to:
- (1) The plan is not technically or administratively able to be implemented.
  - (2) Present and future sewage disposal needs of the area, remaining acreage or delineated lots are not adequately addressed.
  - (3) The plan is not consistent with municipal land use plans and ordinances, subdivision ordinances or other ordinances or plans for controlling land use or development.
  - (4) The plan is not consistent with the comprehensive sewage program of the municipality as contained in the official plan.
  - (5) The plan does not meet the consistency requirements of § 71.21(a)(5)(i)—(iii).
- (g) Whenever a municipality refuses to adopt a proposed revision to the official plan, it shall state the reasons for the refusal and forward a copy of this statement to the person making the submission, and to the Department.
- (h) Upon adoption of the proposed revision to the official plan, the municipality shall forward the proposed revision to the Department with the information required in § 71.52 and subsection (d) for review. Adoption of the proposed revision to the official plan shall be by resolution of the municipality.

**§ 71.54. Department administration of new land development planning requirements for revisions.**

- (a) A proposed plan revision for new land development will not be approved by the Department unless it contains the information and supporting documentation required by the act, the Clean Streams Law and regulations promulgated thereunder.
- (b) A proposed plan revision for new land development will not be considered for approval unless accompanied by the information required in § 71.53(d) (relating to municipal administration of new land development planning requirements for revisions). For the purpose of this section, the Department will determine whether a submission for a residential subdivision plan is complete in accordance with § 71.53(d) within 10 working days of its receipt by the Department.
- (c) When a municipality does not have an approved official plan, or fails to revise or implement an official plan when required, §§ 71.32(f) and 72.23(a) and (b) (relating to Department responsibility to review and act upon official plans; and limitations on onlot systems permit issuance) apply.
- (d) Within 120 days after the Department has determined that a proposed plan revision and documentation is complete, the Department will approve or disapprove the proposed plan revision, except that the Department will approve or disapprove revisions for residential subdivision plans within 60 days from the date the Department determines a submission is complete.
- (e) Upon the Department's failure to act upon a proposed plan revision within 120 days of its submission, the proposed plan revision shall be deemed to have been approved, unless the Department informs the municipality prior to the end of the 120-day period that an extension of time is necessary to complete review. The additional time will not exceed 60 days.
- (f) In approving or disapproving an official plan or revision, the Department will consider the requirements of § 71.32(d).

(g) When an official plan revision for new land development is disapproved by the Department, written notice will be given to each municipality included in the plan revision, with a statement of reasons for the disapproval.

**§ 71.55. Exceptions to the requirement to revise the official plan for new land development.**

- (a) A municipality does not have to revise its official plan when the Department determines that the proposal is for the use of individual onlot sewage systems serving detached single family dwelling units in a subdivision of ten lots or less and the following apply:
- (1) The proposal, in addition to the existing or proposed subdivision of which it is a part, will not exceed ten lots.
  - (2) The subdivision has been determined to have soils and site conditions which are generally suitable for onlot sewage disposal systems under § 71.62 (relating to individual and community onlot sewage systems).
  - (3) For the purposes of determining whether a proposal qualifies for an exception under this section, the enumeration of lots shall include only lots created after May 15, 1972.
  - (4) The proposal is consistent with the requirements of § 71.21(a)(5)(iii) (relating to content of official plans).
- (b) Documentation supporting a request for exception under this section shall be submitted to the Department using the Department's sewage facilities planning module and shall include:

(1) A statement by the governing body of the municipality acknowledging that they and an existing municipal planning or zoning agency, or both, have reviewed the proposal and found it to be consistent with the municipality's official plan.

(2) Evidence of review by the municipality's sewage enforcement officer.

(c) The municipality shall review sewage facilities planning modules upon receipt. If appropriate documentation and comments required by subsection (b) were not included in the planning module, the municipality shall forward a copy of the sewage facilities planning module to the sewage enforcement officer and appropriate planning or zoning agency within 10 days of receipt. The municipality shall review and act upon an application for an exception to the requirement to revise an official plan within 60 days of receipt of a complete sewage facilities planning module or additional time that the applicant and municipality may agree to in writing. Failure of the municipality to act within the 60-day period or an agreed-to time extension shall cause the application for the exception to the requirement to revise to be deemed approved by the municipality and the complete application shall then be submitted to the Department by the municipality or the applicant. Documentation of the period of time the application for the exception to the requirement to revise was in possession of the municipality shall be in the form of a completeness checklist signed by a municipal official confirming that the requirements of subsections (a) and (b) have been met.

(d) The Department may act on requests for exceptions to the requirement to revise official plans within 30 days of the Department's receipt of the properly completed and submitted components of the Department's sewage facilities planning module, and proper written documentation. If the Department fails to act within the 30-day period, the exception to the requirement to revise the official plan shall be deemed to be applicable.

**§ 71.58. Delegation of new land development planning.**

(a) The Department may, by agreement, delegate to a local agency, multimunicipal local agency or county or joint county department of health the power and duty to require the submittal of and review, and to approve or disapprove sewage facilities planning modules for new land development which are submitted on planning module forms and other documents provided by the Department. Additionally, the following apply:

(1) Sewage facilities planning modules approved by a delegated agency under this section do not constitute a revision or exception to the requirement to revise under this chapter but shall be a supplement to the official sewage facilities plan.

(2) Delegated agencies may assess fees for the review of supplements under this section. Fees received under this section shall be used solely for the purpose of administering the delegated powers and duties related to the new land development planning provisions of this section.

(3) The Department may limit the review of supplements in the delegation agreements to specific classifications of sewage facilities or new land developments.

(4) When delegation is requested, § 72.44(c) and (d) (relating to reimbursement) shall be met as a prerequisite to the delegation.

(5) Delegation of the review and approval of supplements for new land development may be granted by the Department if the local agency or county or joint county department of health has adequately documented the following to the Department:

(i) The municipalities or counties to be included in the delegation agreement have municipal or countywide subdivision and land development ordinances in effect under the Pennsylvania Municipalities Planning Code (53 P. S. §§ 10101—11202).

(ii) The municipalities to be included in the delegation agreement have a current official sewage facilities plan which is being implemented in accordance with the content of the plan's implementation schedule and the provisions of the act, the Clean Streams Law and this part. For the purposes of determining qualifications for delegation under this section, the phrase "current official sewage facilities plan which is being implemented" shall include official plans of municipalities which are not under an order from the Department to submit an update revision or special study for the area in which the subdivision is proposed.

(iii) The municipalities or counties to be included in the delegation agreement have municipal or countywide subdivision and land development ordinances in effect which require one of the following:

(A) Sewage facilities planning approval as a condition attached to final plat approval under the Pennsylvania Municipalities Planning Code.

(B) Documentation that sewage facilities planning is not required under this part.

(iv) When delegation is requested for the review of new land developments proposing the use of public sewerage facilities which do not require a new or modified permit under the Clean Streams Law, the delegation agreement includes coordination procedures to be used with the Department to assure continued compliance with the municipal wasteload management provisions of the Clean Streams Law.

(v) The local agency and any sewage enforcement officer employed by the local agency serving the municipalities to be included in the delegation agreement have not been issued a notice of violation or order by the Department for a violation of the act or the rules and regulations thereunder for the prior 3 years as determined by the Department.

(vi) A workload analysis is completed by the entity requesting delegation which analyzes the volume of work anticipated and the staffing and support resources needed to administer the program and documents that the fees proposed to be charged by the delegated agency to administer the sewage facilities planning reviews are sufficient to allow the delegated agency to act upon supplements within the time limits established by this chapter.

(vii) The administrative procedures, rules, regulations, fee schedules and contracts for services and applicable municipal ordinances, rules and regulations proposed for use by the delegated agency in the administration of the delegated provisions of this chapter have been reviewed by the Department. Delegated agencies shall use forms provided by the Department for the submittal and review of all supplements.

(6) Supplements to an official plan shall be prepared by the person proposing the new land development and shall be reviewed and acted upon by the delegated agency.

(7) The failure of or refusal of a municipality, local agency, multimunicipal local agency or county or joint county department of health to enter into a delegation agreement may not influence the eligibility of the local agency serving that municipality or the local agency itself to receive 85% reimbursement under Chapter 72 (relating to administration of sewage facilities permitting program).

(b) The Department will review the delegated agencies' performance of the duties established by delegation agreements under this section and may revoke the agreements for cause.

**§ 71.59. Delegated agency administration of new land development planning requirements.**

(a) When the Department has delegated the authority to review and approve subdivisions for new land developments to a delegated agency, the regulatory provisions of the Department in §§ 71.54 and 71.55 (relating to Department administration of new land development planning requirements for revisions; and exceptions to the requirement to revise the official plan for new land development) shall be administered by the delegated agency except that the time limits for review shall be in accordance with subsection (c).

(b) A new land development proposal submitted as a revision or an exception to the requirement to revise may be approved by the delegated agency as a supplement to the official plan of the municipality.

(c) The delegated agency shall determine if a submission is complete within 10 working days of its receipt. Delegated agencies shall approve or disapprove supplements within 60 days of the date of a complete submission or additional time that the applicant and delegated agency may agree to in writing.

(d) If planning modules for new land development propose service by sewerage facilities requiring a new or modified permit from the Department under the Clean Streams Law, the new land development planning module shall be forwarded to the Department for final action.

**Subchapter D. OFFICIAL PLAN REQUIREMENTS FOR ALTERNATIVE EVALUATIONS**

**§ 71.62. Individual and community onlot sewage systems.**

\* \* \* \* \*

(b) When an official plan or revision proposes the renovation of sewage effluent by means of a subsurface absorption area or a spray irrigation system, the following shall be provided:

(1) Anticipated raw waste characteristics of the sewage. Where industrial wastes as defined in the Clean Streams Law are expected to be present in the raw sewage, § 72.25(g)(2) (relating to issuance of permits) applies.

(2) Documentation that the soils and geology of the proposed site are generally suitable for the installation of the systems including:

\* \* \* \* \*

(iii) Soil profiles as described in Chapter 73 (relating to standards for onlot sewage treatment facilities) shall be performed to insure that an adequate area with suitable soils is available in the area of the proposed system. These profiles shall be approximately equally distributed among the various soils mapped in the area. For the purpose of this section, each change of slope or change in

erosion characteristic specified as part of the soil classification system of the United States Department of Agriculture, Natural Resources Conservation Service will be equivalent to a change in soil type.

\* \* \* \* \*

(c) This chapter does not preclude the use of individual and community onlot sewage systems using subsurface soil absorption areas on lots less than 1 acre in size or the use of large volume onlot sewage systems. Because of the potential for the creation of a public health hazard or pollution of the waters of this Commonwealth from high density use, improper system siting or inadequate maintenance of individual and community onlot systems, particular attention shall be given in official plans and revisions to the technical and institutional feasibility of using the systems.

(1) Additional permeability testing is required when an official plan or revision proposes the use of a large volume onlot sewage system or a community onlot system with a sewage flow in excess of 10,000 gallons per day, and may be required for other onlot system proposals where the total absorption area is greater than 5,000 square feet or where soil profiles or geology reveal slowly permeable conditions below the depth at which the percolation test was performed. Sufficient testing shall be conducted to:

\* \* \* \* \*

(2) A preliminary hydrogeologic evaluation is required when the use of subsurface soil absorption areas is proposed and one of the following exists:

\* \* \* \* \*

(ii) A subdivision of more than 50 equivalent dwelling units with a density of more than one equivalent dwelling unit per acre is proposed.

\* \* \* \* \*

(3) A preliminary hydrogeologic evaluation shall include as a minimum, in map and narrative report form:

\* \* \* \* \*

(ii) Estimated wastewater dispersion plume using an average daily flow of 262.5 gallons per equivalent dwelling unit per day or other flow supported by documentation.

\* \* \* \* \*

**§ 71.63. Retaining tanks.**

(a) Retaining tanks are designed and constructed to facilitate ultimate disposal of the sewage at another site. This requires the control of retaining tanks through specific restrictions on their use.

(b) General requirements for retaining tank use are as follows:

(1) The official plan or revision shall meet the requirements of Subchapters B and C (relating to official plan requirements; and new land development plan revisions).

(2) Proposed disposal sites, the method of disposal and the retaining tank cleaner for retaining tank waste shall be approved by the Department in a manner consistent with the Solid Waste Management Act (35 P. S. §§ 6018.101—6018.1003) prior to approval of the official plan or revision allowing the use of retaining tanks.

(3) A municipality, sewer authority or sewage management agency may delegate or contract for the collection and disposal of the contents of the retaining tanks except that the ultimate responsibility for the proper collection

and disposal of the contents shall remain with the municipality, authority or agency.

(4) Whenever the local agency issues permits for retaining tanks, the municipality or local agency may impose other conditions it deems necessary for operation and maintenance of the tanks to prevent a nuisance or a public health hazard.

(c) Holding tanks require regular service and maintenance to prevent their malfunction and overflow and shall be used in lieu of other methods of sewage disposal only when the following additional conditions are met:

(1) The applicable official plan or revision thereto indicates the use of holding tanks for that lot and provides for replacement by adequate sewerage services in accordance with a schedule approved by the Department.

(2) The applicable official plan or revision includes municipal financial assurances of the replacement project's implementation, such as public financing, bonding or other security of sufficient present value to assure completion or other assurances either singularly or in combination that the Department deems necessary.

(3) The municipality, sewer authority or other Department approved entity with jurisdiction or responsibility over the site has by suitable ordinance, regulation or restriction assumed full responsibility for maintaining existing and new holding tanks. The ordinances, regulations or restrictions shall, as a minimum, include:

(i) Identification of the administrative entity to receive, review and retain pumping receipts from permitted holding tanks.

(ii) An annual inspection of holding tanks within the municipality with completion and retention of a written inspection report.

(iii) Procedures and penalties for correction of malfunctions or public health hazards from holding tanks.

(d) The restrictions in subsection (c)(1)—(3) do not apply to holding tanks when the local agency, municipality or the Department determines that the use is necessary to abate a nuisance or public health hazard.

(e) The restrictions in subsection (c)(1) and (2) do not apply to holding tanks when the use is for institutions, recreational vehicle dump stations or commercial establishments with a sewage flow of less than 800 gallons per day.

(f) A privy or chemical toilet is designed to receive sewage where there is no water under pressure and no piped wastewater. Privies shall be used in lieu of other methods of sewage disposal only when the following conditions are met:

(1) The applicable official plan or the revision thereto indicates the use of privies for that lot and documents that soil and site suitability testing of that lot under §§ 73.11—73.16 has been conducted, and the site meets the requirements for the ultimate sewage disposal by one of the systems described under §§ 73.51—73.55 and 73.167 (relating to construction of absorption areas; and spray fields) to assure that adequate sewage facilities will be available to that lot in the future.

(2) The municipality, sewer authority or other Department approved entity with jurisdiction or responsibility over the site has by suitable ordinance, regulation or restriction assumed responsibility for assuring the removal of a privy and the installation of an approved onlot sewage disposal system when water under pressure or

pipled water is available to the lot or when the property owner installs water under pressure or piped water or plumbing to move wastewater from the structure to the privy vault or to an unpermitted disposal system on that lot.

(g) The restrictions in subsection (f) do not apply:

(1) To a privy or chemical toilet when proposed for use on a lot of record in existence prior to May 15, 1972, which is 1 acre or larger and is not served now and will not be served in the future by water under pressure, piped water or plumbing to move wastewater from the structure to the privy vault or to an unpermitted disposal system on that lot.

(2) To temporary use of portable retention tanks or portable chemical toilets when their use is proposed at construction sites or at the site of public gathering and entertainments.

#### § 71.64. Small flow treatment facilities.

(a) Small flow treatment facilities require adequate operation and maintenance to prevent the creation of environmental problems or public health hazards associated with improperly treated sewage. This requires the control of small flow treatment facilities through specific restrictions on their use.

(b) Small flow treatment facilities are restricted to use as a replacement or repair system which the Department determines is necessary to abate an existing nuisance or public health hazard or as a system to serve residential dwellings or commercial facilities which generate domestic wastewater not containing industrial waste.

(c) When an official plan or update revision proposes the use of small flow treatment facilities, the official plan or revision shall, as a minimum, contain the following, in addition to the requirements of Subchapters B and C (relating to official plan requirements; and new land development plan revisions):

(1) Documentation that soils are not suitable for the installation of individual or community onlot sewage disposal systems, excluding individual residential spray irrigation systems proposed for use in areas outside the watershed of waters classified as high quality or exceptional value under §§ 93.6 and 93.9 (relating to general water quality criteria; and designated water uses and water quality criteria).

(2) A preliminary hydrogeologic evaluation when the small flow treatment facility will use land disposal or a dry stream channel discharge for final disposal. This evaluation shall include:

(i) The most recent 7 1/2' United States Geologic Survey Topographic map with the discharge accurately plotted.

(ii) The discharge rate and quality, including seasonal variations.

(iii) An identification on the topographic map of existing groundwater uses for 200 feet in width on each side of the channel downstream from the discharge from the system until perennial stream conditions are reached.

(3) Documentation, using the information developed in paragraph (2), which confirms that existing or proposed drinking water uses will be protected and that effluent will not create a public health hazard or a nuisance.

(4) Documentation that the proposed use of these small flow treatment facilities does not conflict with comprehensive sewage planning for the area.



(5) An evaluation that establishes specific responsibilities for operation and maintenance of the proposed system which shall include documentation that one or a combination of the following operation and maintenance requirements have been established or approved in writing by the municipality:

(i) A maintenance agreement between the property owner and an individual, firm or corporation experienced in the operation and maintenance of sewage treatment systems.

(ii) 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.

(iii) 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.

(iv) Municipal ownership of the system.

(v) 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.

(vi) A properly chartered association, trust or other private entity which is structured to manage the system.

(vii) Establishment of bonding, escrow or other security prior to planning approval. The bonding, escrow or other security shall be forfeited to the municipality upon notice of continuing noncompliance of the system with the operation, maintenance and monitoring standards contained in the permit or noncompliance with the municipal assurances for management of the operation and maintenance requirements established through this section. The municipality shall use the forfeited security to cover the costs of repair or future operation and maintenance of the system over its design life. The bonding, escrow or other security shall be for an amount up to a maximum of 50% for each of the first 2 years of operation. After 2 years of operation, the bond agreement must provide for a refund of a portion of the original bond so that only 10% of the cost of the equipment and installation is retained by the bond-holder. The remaining bond totaling 10% of the cost of the equipment and installation shall be maintained for the life of the system.

(6) An evaluation of the density of development and the number and density of other similar systems in the watershed. As a result of that evaluation, the Department may impose additional conditions or limit the construction or operation of small flow treatment facilities.

(7) An evaluation of the alternatives available to provide sewage facilities which documents that the use of small flow treatment facilities is a technically, environmentally and administratively acceptable alternative.

(d) Small flow treatment facilities and their appurtenances shall meet applicable design, installation, operation and other standards established for small flow treatment facilities by the Department under sections 202 and 207 of the Clean Streams Law (35 P. S. §§ 691.202 and 691.207) and shall obtain a Clean Streams Law permit and if there is a discharge to surface water, a National Pollutant Discharge Elimination System permit, prior to construction and operation.

(e) Plans and specifications shall be prepared by a licensed professional engineer in compliance with Chapter 91 (relating to general provisions).

(f) The Department may require independent oversight of the system installation.

**§ 71.65. Individual and community sewerage systems.**

(a) When an official plan or revision proposes the use of publicly or privately-owned individual or community sewerage system, the official plan or revision shall contain the following, in addition to the requirements of Subchapters B and C (relating to the official plan requirements; and new land development plan revisions):

(1) An evaluation of alternatives available to provide sewage facilities and proof that the proposed sewage facilities are the best short- and long-term, environmentally acceptable alternative.

(2) An evaluation that establishes specific responsibilities for operation and maintenance of the proposed system under Subchapter E (relating to sewage management programs).

(b) When the proposed discharge from the individual or community sewerage system is to a dry stream channel or land disposal site, the information as required in § 71.64(c)(2) and (3) (relating to small flow treatment facilities and appropriate Department guidance manuals) shall be included with the official plan or revision.

(c) Individual and community sewerage systems and their appurtenances shall meet applicable design and other standards established by the Department under sections 202 and 207 of the Clean Streams Law (35 P. S. §§ 691.202 and 691.207) and shall obtain a Clean Streams Law permit and if there is a discharge to surface water, a National Pollutant Discharge Elimination System permit, prior to construction and operation.

**Subchapter E. SEWAGE MANAGEMENT PROGRAMS**

**§ 71.72. Sewage management programs for Department permitted sewage facilities and community onlot sewage systems.**

(a) When an official plan or revision to an official plan for existing needs areas or new land development proposes the construction of Department permitted nonmunicipal sewage facilities, or a community onlot sewage system permitted by a local agency (except for small flow treatment facilities which shall comply with the management provisions of § 71.64(c)(5)) (relating to small flow treatment facilities) the official plan or revision shall evaluate the options available to assure the long-term proper operation and maintenance of the proposed sewage facilities. The municipality, prior to adoption of that official plan or revision, shall require one or more of the following:

(1) A bond or escrow account sufficient to cover the costs of future operation and maintenance of the sewage facilities under local ordinances. Bonding, escrow or other security shall be forfeited to the municipality upon notice by the Department of continuing noncompliance of the system with the operation and maintenance standards established through a condition in the permit issued by the Department or local agency. The municipality shall use the forfeited security to cover the costs of repair or future operation and maintenance of the system over its design life or until the system is in compliance and being properly operated and maintained. The bonding, escrow

or other security shall be for an amount up to a maximum of 50% for each of the first 2 years of operation. After 2 years of operation, the bond agreement shall provide for a refund of a portion of the original bond so that only 10% of the cost of the equipment and installation is retained by the bondholder. The remaining bond totaling 10% of the cost of the equipment and installation shall be maintained for the life of the system.

(2) A maintenance agreement between the property owner and an individual, firm or corporation experienced in the operation and maintenance of sewage treatment systems.

(3) 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.

(4) A municipal ordinance which requires the system to 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.

(5) Establishment of a properly chartered association, trust or other private legal entity to assure long-term administration of an operation and maintenance program.

(6) Municipal ownership of the sewage facilities upon completion.

(7) Establishment of, or inclusion of, the sewage facilities under a management agency through existing municipal codes, including but not limited to, municipal authorities, sanitary boards and boards of health.

(8) Establishment of, or inclusion of, the sewage facilities under a management agency through the adoption of local ordinances under municipal codes.

(9) One or a combination of the requirements in paragraphs (1)—(8) or other actions permitted by and consistent with the act and the Clean Streams Law found necessary by the municipality to insure proper installation, maintenance and operation of the proposed sewage facilities.

**§ 71.73. Sewage management programs for sewage facilities permitted by local agencies.**

(a) When sewage facilities are permitted by local agencies, the municipality is responsible for taking actions necessary to assure continued compliance of these sewage facilities with the act, the Clean Streams Law and regulations promulgated thereunder.

(b) When an official plan or official plan revision shows, or the Department determines, that existing sewage facilities permitted by the local agency need periodic inspection, operation or maintenance to provide long-term proper operation, or are not properly functioning because of inadequate operation and maintenance, the municipality shall revise its official plan to establish a sewage management program for these types of facilities. The update revision shall include the following as a minimum:

(1) Identification of the specific legal authority to be used by municipal officials and their designated employees to enter lands and make inspections of onlot sewage facilities. The policy concerning a schedule of inspections and methods of notification of landowners of this policy shall be included.

(2) Standards consistent with section 8(b)(9) of the act (35 P. S. § 750.8(b)(9)) for operation, maintenance, repair or replacement of sewage facilities which include:

(i) Removal of septage or other solids from treatment tanks once every 3 years or whenever an inspection program reveals that the treatment tanks are filled with solids in excess of 1/3 of the liquid depth of the tank or with scum in excess of 1/3 of the liquid depth of the tank.

(ii) Maintenance of surface contouring and other measures, consistent with Chapter 73 (relating to standards for sewage disposal facilities) to divert stormwater away from the treatment facilities and absorption areas and protection of the absorption areas from physical damage.

(iii) Requirements for the use of water conservation devices to reduce hydraulic loading to the sewage system.

(iv) Requirements for the operation and maintenance of electrical, mechanical and chemical components of the sewage facilities; collection and conveyance piping, pressure lines and manholes; alarm and flow recorder devices; pumps; disinfection equipment and related safety items.

(v) Requirements for septage pumpers/haulers which are consistent with the Solid Waste Management Act (35 P. S. §§ 6018.101—6018.1003).

(vi) Requirements for holding tank maintenance.

(3) A discussion of the specific requirements of the sewage management program and administrative or legal functions needed to carry out the program.

(4) Establishment of a fee schedule for the cost of municipal services related to implementing the provision of the sewage management program.

(5) Identification of the authority to be used to enforce the requirements of the sewage management program or restrain violations of the program.

(6) Identification of penalty provisions for violations of the program requirements.

(7) Draft ordinances, regulations or policies which relate to the sewage management program.

(8) Other requirements consistent with the act and the Clean Streams Law.

(c) When the official plan update identifies a local agency as the entity responsible for administering a municipal sewage management program and when the local agency identified in the official plan update agrees to administer the program, the local agency is eligible for reimbursement of eligible costs for administrative and personnel expenditures to implement sewage management programs under § 72.44 (relating to reimbursement).

(d) When the official plan identifies the municipality as the entity responsible for administering a municipal sewage management program and when that municipality's onlot system permitting program is administered by a multimunicipal local agency or a county or joint county department of health, the municipality is eligible for reimbursement of eligible costs for the administrative and personnel expenditures to implement a sewage management program. Application for eligible costs shall be submitted by the municipality in accordance with the provisions of § 72.44.

§ 71.75. Private request to require a sewage management program.

A person who is a resident or a legal or equitable property owner in a municipality may file a private request with the Department requesting that the Department order the municipality to revise its official sewage plan under § 71.14 (relating to private request to revise official plans) when the resident or property owner can show one of the following:

(1) That existing sewage facilities within the municipality are not being properly operated and maintained under this part.

(2) That a revision for new land development does not adequately address the administrative, technical or legal functions needed to carry out operation and maintenance of the proposed facilities.

Subchapter F. FEES

Table with 2 columns: Sec. and description. Rows: 71.81. General requirements, 71.82. Delegated agency fees, 71.83. Department fees.

§ 71.81. General requirements.

Delegated agencies and the Department may charge fees for the review of sewage facilities planning modules for new land development.

§ 71.82. Delegated agency fees.

Delegated agencies shall establish fees for the review of sewage facilities planning modules for new land development in fee schedules formally adopted by the delegated agency and available to the public. Fees may be charged for each review of a planning module.

§ 71.83. Department fees.

(a) Fees charged by the Department for the review of sewage facilities planning modules for new land development shall be as follows and will be shown on and be specific to each type of planning module component:

(1) For onlot proposals not qualifying under § 71.55 (relating to exceptions to the requirement to revise the official plan for new land development) as an exception to the requirement to revise, the fee is \$30 per equivalent dwelling unit or lot.

(2) For surface discharge proposals with flows greater than 2,000 gallons per day or onlot proposals requiring a permit under the Clean Streams Law, the fee is \$1,500. For proposals submitted by and proposing discharges by political subdivisions, the fee is \$500.

(3) For public sewerage proposals, the fee is \$50 per equivalent dwelling unit or lot, whichever is greater.

(4) For all other proposals, the fee is \$35 per equivalent dwelling unit or lot, whichever is greater.

(5) For proposals consisting of one lot subdivided from a parent tract existing as of December 14, 1995, there is no fee. The subdivision of a second lot from that tract shall disqualify the applicant from the fee exemption.

(b) A subsequent submission which proposes substantial changes to the original submittal following a planning module denial shall be considered a new submission for the purpose of fee assessment. Denial of a planning module does not include the planning module completeness review procedure.

(c) Fees may not be charged for activities relating to determinations by the Department under § 71.51(b) (relating to general).

CHAPTER 72. ADMINISTRATION OF SEWAGE FACILITIES PERMITTING PROGRAM

Subchapter A. GENERAL

§ 72.1. Definitions.

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

\* \* \* \* \*

Alternate sewage system—A method of demonstrated onlot sewage treatment and disposal not described in this part.

\* \* \* \* \*

Clean Streams Law—The Clean Streams Law (35 P. S. §§ 691.1—691.1001).

Conventional sewage system—A system employing the use of demonstrated onlot sewage treatment and disposal technology in a manner specifically recognized by this part. The term does not include alternate sewage systems or experimental sewage systems.

\* \* \* \* \*

Delegated agency—A municipality, local agency, multimunicipal local agency or county or joint county department of health to which the Department has delegated the authority to review and approve subdivisions for new land developments as supplements to the official plan of a municipality in which the subdivision is located.

Experimental sewage system—A method of onlot sewage treatment and disposal not described in this title which is proposed for the purpose of testing and observation.

Individual residential spray irrigation system—An individual sewage system which serves a single dwelling and which treats and disposes of sewage using a system of piping, treatment tanks and soil renovation through spray irrigation.

\* \* \* \* \*

Municipality—A city, town, township, borough or home rule municipality other than a county.

\* \* \* \* \*

Official plan revision—A change in the municipality's official plan to provide for additional, newly identified future or existing sewage facilities needs, which may include one or more of the following:

(i) Update revision—A comprehensive revision to an existing official plan required when the Department or municipality determines an official plan or one or more of its parts is inadequate for the existing or future sewage facilities needs of a municipality or its residents or landowners.

(ii) Revision for new land development—A revision to a municipality's official plan resulting from a proposed subdivision as defined in the act.

(iii) Special study—A study, survey, investigation, inquiry, research report or analysis which is directly related to an update revision. The studies provide documentation or other support necessary to solve specific problems identified in the update revision.

(iv) Supplement—A sewage facilities planning module for a subdivision for new land development which will not be served by sewage facilities requiring a new or modified

permit from the Department under the Clean Streams Law, and which is reviewed and approved by a delegated agency.

(v) *Exception to the requirement to revise*—A process established in § 71.55 (relating to exceptions to the requirement to revise the official plan for new land development) which describes the criteria under which a revision for new land development is not required.

*Person*—An individual, association, public or private corporation for-profit or not-for-profit, partnership, firm, trust, estate, department, board, bureau or agency of the United States or the Commonwealth, political subdivision, municipality, district, authority or other legal entity which is recognized by law as the subject of rights and duties. The term includes the members of an association, partnership or firm and the officers of a local agency or municipal, public or private corporation for profit or not-for-profit.

*Qualified registered professional engineer*—A person registered to practice engineering in this Commonwealth who has experience in the characterization, classification, mapping and interpretation of soils as they relate to the function of onlot sewage disposal systems.

*Qualified registered professional geologist*—A person registered to practice geology in this Commonwealth who has experience in the characterization, classification, mapping and interpretation of soils as they relate to the function of onlot sewage disposal systems.

*Qualified soil scientist*—A person certified as a sewage enforcement officer and who has documented 2-years' experience in the characterization, classification, mapping and interpretation of soils as they relate to the function of onlot sewage disposal systems (as defined in the Soil Science Society of America "Glossary of Soil Science") and either a bachelor of science degree in soils science from an accredited college or university or certification (certified professional soil scientist, certified professional soil classifier or certified professional soil specialist) by the American Registry of Certified Professionals in Agronomy, Crops and Soils (now known as ARCPACS: A Federation of Certifying Boards in Agriculture, Biology, Earth and Environmental Sciences).

\* \* \* \* \*

*Retaining tank*—A watertight receptacle which receives and retains sewage and is designed and constructed to facilitate ultimate disposal of the sewage at another site. The term includes, the following:

(i) *Chemical toilet*—A permanent or portable nonflushing toilet using chemical treatment in the retaining tank for odor control.

(ii) *Holding tank*—A tank, whether permanent or temporary, to which sewage is conveyed by a water carrying system.

(iii) *Privy*—A tank designed to receive sewage where water under pressure is not available.

(iv) *Incinerating toilet*—A device capable of reducing waste materials to ashes.

(v) *Composting toilet*—A device for holding and processing human and organic kitchen waste employing the process of biological degradation through the action of microorganisms to produce a stable, humus-like material.

(vi) *Recycling toilet*—A device in which the flushing medium is restored to a condition suitable for reuse in flushing.

*Sewage*—A substance that contains waste products or excrement or other discharge from the bodies of human beings or animals and noxious or deleterious substances harmful or inimical to the public health, or to animal or aquatic life, or to the use of water for domestic water supply or for recreation. The term includes any substance which constitutes pollution under the Clean Streams Law.

*Sewage enforcement officer*—An official of the local agency who reviews permit applications and sewage facilities planning modules, issues permits as authorized by the act and conducts investigations and inspections that are necessary to implement the act and the regulations thereunder.

*Sewage facilities*—A system of sewage collection, conveyance, treatment and disposal which will prevent the discharge of untreated or inadequately treated sewage or other waste into waters of this Commonwealth or otherwise provide for the safe and sanitary treatment and disposal of sewage or other waste. The term includes:

(i) *Individual sewage system*—A system of piping, tanks or other facilities serving a single lot and collecting and disposing of sewage in whole or in part into the soil or into waters of this Commonwealth or by means of conveyance to another site for final disposal. The term includes:

(A) *Individual onlot sewage system*—An individual sewage system which uses a system of piping, tanks or other facilities for collecting, treating and disposing of sewage into a soil absorption area or spray field or by retention in a retaining tank.

(B) *Individual sewerage system*—A system which uses a method of sewage collection, conveyance, treatment and disposal other than renovation in a soil absorption area, or retention in a retaining tank.

(ii) *Community sewage system*—A sewage facility, whether publicly or privately owned, for the collection of sewage from two or more lots, or two or more equivalent dwelling units and the treatment or disposal, or both, of the sewage on one or more of the lots or at another site.

(A) *Community onlot sewage system*—A system of piping, tanks or other facilities serving two or more lots and collecting, treating and disposing of domestic sewage into a soil absorption area or retaining tank located on one or more of the lots or at another site.

(B) *Community sewerage system*—A publicly or privately owned community sewage system which uses a method of sewage collection, conveyance, treatment and disposal other than renovation in a soil absorption area or retention in a retaining tank.

*Sewage management program*—A program conforming to Chapter 71, Subchapter E (relating to sewage management programs), authorized by the official action of a municipality for the administration, management and regulation of the disposal of sewage.

*Soil horizon*—A layer of soil approximately parallel to the soil surface, the chemical and physical characteristics of which are distinguishable by observation or other method of analysis from the chemical and physical characteristics in adjacent layers of soil.

*Soil profile*—The collection of soil horizons, including the natural organic layers on the surface.

*Soil mottling (redoximorphic features)*—A soil color pattern consisting of patches of different color or shades of

color interspersed with the dominant soil color which results from prolonged saturation of the soil.

*Subdivision*—The division or redivision of a lot, tract or other parcel of land into two or more lots, tracts, parcels or other divisions of land including changes in existing lot lines. The enumerating of lots shall include as a lot that portion of the original tract or tracts remaining after other lots have been subdivided therefrom.

\* \* \* \* \*

*Working day*—Calendar days as specified in 1 Pa.C.S. § 1908 (relating to computation of time) excluding Saturdays and Sundays, or a day made a legal holiday by the statutes of the Commonwealth or the United States. The period shall be calculated to exclude the first and include the last day of the period.

**§ 72.2. Scope.**

(a) This chapter is adopted in accordance with the duties imposed upon the Department under the act and the Clean Streams Law and applies to local agencies and sewage enforcement officers administering the act and to persons installing individual or community onlot sewage systems.

(b) This chapter is separated into four subchapters. Subchapter A relates to general provisions. Subchapter B relates to the permitting requirements of the act (35 P. S. § 750.7). Subchapter C relates to the administration of permits for individual and community onlot sewage systems (35 P. S. § 750.8 and 750.10). Subchapter D relates to certification of sewage enforcement officers (35 P. S. §§ 750.8 and 750.11).

(c) This chapter governs the issuance of permits for retaining tanks, or for individual and community onlot sewage systems which employ renovation of sewage effluent in a soil absorption area or spray field, except for large volume onlot sewage systems. The use of large volume onlot sewage systems creates a danger of pollution of the waters of this Commonwealth, regulation of large volume onlot sewage systems by the Department is necessary to avoid the pollution, and large volume onlot sewage systems require permits issued by the Department under sections 201, 202, 207 and 402 of the Clean Streams Law (35 P.S. §§ 691.201, 691.202, 691.207 and 691.402). A local agency or sewage enforcement officer may not issue a permit for an individual or community onlot sewage system which does one of the following:

- (1) Discharges directly to the surface of the ground or to the surface waters of this Commonwealth except when the proposed sewage system is an individual residential spray irrigation system which conforms with the standards established under Chapter 73 (relating to standards for onlot sewage treatment facilities).
- (2) Is a large volume onlot sewage system.
- (3) Is proposing or designed for the disposal of substances defined as industrial wastes under the Clean Streams Law.
- (4) Violates this chapter, Chapter 71 or 73, the act or the Clean Streams Law.

**Subchapter B. PERMIT REQUIREMENTS**

**§ 72.21. General.**

(a) A local agency shall employ or contract with at least one sewage enforcement officer and one alternate sewage enforcement officer who have been certified by the Certification Board under Subchapter D (relating to certification

of sewage enforcement officers). References to sewage enforcement officer in this part also apply to alternate sewage enforcement officers.

(b) A local agency shall employ an adequate number of sewage enforcement officers or contract with individuals, firms or corporations to adequately perform the services of sewage enforcement officers to administer the applicable provisions of this chapter within the time periods in this chapter and in accordance with this chapter and Chapter 73 (relating to standards for onlot sewage treatment facilities).

(c) A local agency may not issue a permit for the installation of an individual or community onlot sewage system except by and through a certified sewage enforcement officer employed or contracted by the local agency.

(d) The local agency by action of its sewage enforcement officer shall issue a permit for an individual or community onlot sewage system when the proposed system is in compliance with the act and this part.

(e) The actions of local agencies include actions of their designated sewage enforcement officers.

(f) A property owner proposing a bonded disposal system under § 73.77 (relating to bonded disposal systems) shall bear the cost of activities associated with conducting, observing or confirming percolation tests.

**§ 72.22. Permit issuance.**

(a) A person may install, award a contract for construction or construct an individual or community onlot sewage system, or install, construct, occupy or use a building to be served by that system without first obtaining a permit from the local agency, except as provided in subsections (c)—(e).

(b) A permit shall be required by the local agency for alterations or connections to an existing individual or community onlot sewage system when the alteration or connection requires the repair, replacement or enlargement of a treatment tank or retention tank, or the repair, replacement, disturbance, modification or enlargement of a soil absorption area or spray field, or the soil within or under the soil absorption area or spray field.

(c) Multiple installations of chemical toilets or other portable toilets proposed for temporary use at a construction site, a recreation activity or a temporary facility shall be covered by one permit.

(d) A permit is not required for the installation of a recycling toilet, incinerating toilet, composting toilet or other type of water conservation device where the existing onlot system will not be altered.

(e) Except when a local agency or municipality requires a permit by ordinance, no permit or official plan revision is required for the installation of an individual onlot sewage system for a residential structure occupied or intended to be occupied by the property owner or a member of the property owner's immediate family on a contiguous tract of land 10 acres or more if the owner of the property was the owner of record as of January 10, 1987. For the purposes of this subsection, the term "immediate family" means a brother, sister, son, daughter, stepson, stepdaughter, grandson, granddaughter, father or mother of the property owner.

(f) The installation of a permit-exempt system under subsection (e) is not required to be approved by or meet the standards of the Department or local agency under their rules and regulations for the siting, design or installation of onlot sewage systems, except for the siting

requirements of subsection (g), unless a permit is required by a regulation or ordinance of a local agency or municipality, or the person qualifying for the permit exemption chooses to not use the permit exemption. A permit exemption may also be granted where a 10-acre parcel or lot is subdivided from a parent tract after January 10, 1987. When one permit exemption has been granted for a lot, tract or parcel under this section, any lot, tract or parcel remaining after subdivision of the lot or parcel which received the permit exemption or any lots or parcels subdivided from either lot, tract or parcel in the future will not be eligible for a 10-acre permit exemption and shall meet the planning, permitting, siting and construction standards of the Department relating to onlot sewage systems. Owners of a lot, tract or parcel which otherwise qualified for the permit exemption, who do not choose to use the permit exemption remain exempt from the planning requirements of the act with respect to that lot, tract or parcel.

(g) Owners of property qualifying for a permit exemption under subsections (e) and (f) shall install permit-exempt systems in accordance with the following siting requirements.

(1) The perimeter of the septic tanks and absorption area shall be located at least 200 feet from the perimeter of any property line, nonutility right-of-way, 100-year floodplain or any river, stream, creek, impoundment, well, watercourse, storm sewer, lake, dammed water pond, spring, ditch, wetland, water supply or any other body of surface water and 10 feet from any utility right-of-way.

(2) Before a person who meets the requirements of subsections (e) and (f) for a permit-exempt system installs a system, the person shall notify the local agency of the installation and shall provide documentation relating to the siting requirement of this subsection which is satisfactory to the local agency. The local agency may charge a fee, not to exceed \$25, to verify that the system is located in accordance with the siting requirements.

(h) A permit is not required when a new dwelling is proposed to replace a previously existing dwelling when the local agency determines that the size and anticipated use of the new dwelling, as determined under §§ 73.16 and 73.17 (relating to requirements for absorption areas; and sewage flows), are the same as or less than those of the previously existing dwelling and the previously existing dwelling was in use within 1 year of the anticipated date of completion of construction of the new dwelling. This exception does not apply when an active investigation of a malfunction is under way by the local agency or the Department.

**§ 72.23. Limitation on onlot system permit issuance.**

(a) The local agency may not issue permits for individual or community onlot sewage systems unless the following exist:

(1) The proposed system is consistent with the method of sewage disposal contained in the approved official plan, special study or update revision of the municipality in which the system is to be located.

(2) The municipality is implementing its official plan, special study or update revision in accordance with a schedule approved by the Department.

(3) The municipality has received approval of a revision for new land development or exception to the requirement to revise from the Department, a supplement for new land development has been approved by the delegated

agency serving the municipality or the Department or delegated agency has determined that no planning is required under § 71.51(b) (relating to general).

(b) Permits may not be issued when the municipality has one or more of the following:

(1) No approved official plan.

(2) Not received Department approval of an update revision or special study to the official plan.

(3) Not implemented its plan as required by this part or by an order of the Department.

(c) Permit limitations under this section shall be restricted to those areas of the municipality identified in writing to the municipality by the Department as posing a serious risk to the health, safety and welfare of persons within or adjacent to the municipality because of the municipality's failure to revise or implement its plan. The limitations shall remain in effect until the municipality has submitted the official plan, update revision or special study to the official plan to, and received the approval of the Department, or has commenced implementation of its plan, update revision or special study in accordance with a schedule approved by the Department.

(d) The limitations on permit issuance contained in this section do not apply:

(1) To those areas of the municipality where the Department or the local agency finds that a replacement soil absorption area or spray field could be installed on the lot if the original system failed. This determination shall be based on the results of a minimum of two complete soils and site evaluations confirmed by the local agency's sewage enforcement officer.

(2) To those areas of the municipality outside of the areas delineated in an order of the Department as requiring an update revision.

(3) To existing subdivisions or sections thereof where the Department or delegated agency finds that either lots or homes in the subdivision or sections thereof have been sold in good faith to a purchaser for value prior to May 15, 1972, and not for the purpose of avoiding the permit limitation provisions of this section. This paragraph does not relieve the municipality of its planning responsibilities as specified in the act.

(4) When the Department or the local agency finds it necessary to issue permits for the abatement of pollution or the correction of health hazards, or both.

(5) To interim repairs to or the replacement of existing malfunctioning onlot sewage systems.

**§ 72.24. Applications for permits.**

(a) Application for a permit to install an individual or community onlot sewage system shall be made by the owner, owner in equity or a person who is an authorized agent of the owner or owner in equity to the local agency, on a form provided by the Department. For purposes of this section, an authorized agent shall have written permission to apply for a permit, signed by the owner or owner in equity of the lot for which the application is made.

(b) The local agency may require additional information consistent with the act needed to assure that the system or the site will comply with the requirements of the act and this part.

(c) The local agency shall maintain and make available for public inspection a permanent record of all permit

applications submitted, indicating the date received, type of submission and date of disposition.

**§ 72.25. Issuance of permits.**

(a) A permit shall be issued when the local agency has determined that the application is complete and meets the requirements of the act and this part.

(b) The local agency shall issue or deny a permit for a conventional system in writing within 7 days after receiving a complete initial application.

(c) If the local agency determines that an initial application is incomplete or that it is unable to verify the information contained in an application, the local agency shall notify the applicant in writing within 7 days of receipt of the application. The notice shall include the reasons why the application is not acceptable. When the required information is received, the local agency shall act upon the application within 15 days.

(d) A person desiring to install an experimental onlot sewage system shall submit complete preliminary design plans and specifications to the sewage enforcement officer and the Department for review and comment at least 60 days prior to submitting an application for a permit. The Department will determine if classification as an experimental system is appropriate for the submission and provide review comments within 60 days to the sewage enforcement officer.

(e) Applications for alternate system permits submitted to municipalities or local agencies which are not delegated agencies, shall be reviewed for completeness, and, if found to be incomplete, the nature of the deficiency shall be communicated by the municipality or local agency to the applicant in writing within 15 days of receipt of the application.

(1) Applications for alternate system permits found to be complete shall be submitted to the Department within 5 days of the determination of completeness by the local agency or authorized representative for the Department's determination whether the classification as alternate is appropriate for the submission and the Department's review of comments.

(2) Permits for alternate systems shall be issued or denied by the local agency within 45 days of transmittal of a complete application to the Department. The local agency shall consider the written comments submitted by the Department regarding the application.

(3) In municipalities or local agencies which are delegated agencies or which employ or contract with sewage enforcement officers authorized to review alternate sewage systems under § 72.43(1) (relating to powers and duties of the Department), permit applications for alternate systems shall be reviewed for completeness, and, if found to be incomplete, the nature of the deficiency shall be communicated to the applicant in writing within 15 days of receipt of the application. Permits for alternate systems shall be issued or denied by the local agency within 30 days of receipt of a complete application.

(f) Failure of a local agency to act on an application does not constitute permit approval. If the local agency does not act upon an application within 7 days of receipt, or within 15 days of receipt of supplemental information under subsection (c), the applicant may request a hearing before the local agency.

(g) A local agency may not issue individual or community onlot sewage system permits for the following systems; permits for these systems are issued by the Department:

(1) A large volume onlot sewage system.

(2) Subsurface disposal or other method of disposal of a substance defined as industrial waste under the Clean Streams Law.

(3) A method of sewage disposal other than renovation of sewage in a subsurface absorption area, an individual residential spray irrigation system or temporary storage in a retaining tank.

(h) Prior to the issuance of a permit for an individual residential spray irrigation system, the local agency shall require documentation that the municipality in which the system is to be located, has taken action to assure compliance of the system with § 73.167 (relating to operation and maintenance of individual residential spray irrigation systems) for the life of the system. The assurance shall be established through one or a combination of the following options which 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 individual residential spray irrigation systems to 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 legal entity which is structured to manage the system.

(7) Bonding, escrow or other security established prior to the issuance of a permit for an individual residential spray irrigation system and forfeited to the municipality upon notice of continuing noncompliance of the system with the operation and maintenance standards in § 73.167 (relating to operation and maintenance of individual residential spray irrigation systems) and monitoring standards in § 72.42(a)(24) (relating to powers and duties of local agencies). The municipality shall use the forfeited security to cover the costs of repair or future operation and maintenance of the system over its design life. The bonding, escrow or other security shall be for an amount up to a maximum of 50% for each of the first 2 years of operation. After 2 years of operation, the bond agreement shall provide for a refund of a portion of the original bond so that only 10% of the cost of equipment and installation is retained by the bondholder. The remaining bond totalling 10% of the cost of equipment and installation shall be maintained for the life of the system.

(i) When a local agency has issued a permit under this section and the Department disagrees with the basis for the issuance of the permit, the Department will not require the revocation of that permit unless the Depart-

ment has provided to the local agency justification for its decision based on the specific provisions of statute or regulation.

**§ 72.26. Denial of permits.**

(a) Notice of denial of a permit shall be in writing to the applicant and shall include the reasons for denial and advise the applicant of the right to a hearing before the local agency. The local agency shall provide the Department with a copy of the notice of denial within 7 days of issuance.

(b) The sewage enforcement officer shall accept prior testing data and information obtained by a previous sewage enforcement officer, if the site and prior testing is certified by the previous sewage enforcement officer and meets all of the criteria contained in paragraphs (1)–(10) and the current sewage enforcement officer certifies the data and information to the local agency using a “Verification of Prior Testing” Form provided by the Department. There shall be a presumption that, unless the prior sewage enforcement officer’s certification has been revoked or suspended by the Department or the prior sewage enforcement officer’s certification has been voluntarily surrendered to the Department or Certification Board, the testing data and information obtained by the prior sewage enforcement officer is valid unless the currently employed sewage enforcement officer finds that one or more of the criteria in the following paragraphs are not met:

(1) The soil testing performed on the property in question has not been cited in a revocation, suspension or other agreement to surrender certification which indicates violations of soil testing procedures by the previous sewage enforcement officer.

(2) The exact location of the test to be used for issuance of a permit shall be verifiable by at least one of the following methods:

(i) Location of the test pit and percolation hole remnants on the lot by the current sewage enforcement officer.

(ii) The existence of recorded measurements from at least two permanent landmarks on the property in question establishing the original test location.

(iii) A scale drawing of the lot or property in question indicating the location of the tests by reference to at least two permanent landmarks.

(iv) Identification of the exact location of the tests by the prior sewage enforcement officer, if the certification has not been revoked, suspended or voluntarily surrendered to the Department or Certification Board.

(3) Verification that the percolation test and soils evaluation were conducted in accordance with the applicable regulations.

(4) Soils description and percolation test data are available and recorded on the prescribed form, or its equivalent, in sufficient quantity and quality to be interpreted by others.

(5) The soil probes were conducted within 10 feet of the proposed absorption area.

(6) The percolation test on the lot was performed on the site of the proposed absorption area.

(7) The person who originally observed, confirmed or conducted the testing was certified under the current certification requirements of the act.

(8) No inaccuracies or falsifications of the test data are apparent or identifiable.

(9) No changes to the site have occurred since the time of the original testing which will materially affect the siting or operation of an individual or community onlot sewage disposal system.

(10) Receipt of a notarized statement from the property owner which indemnifies and holds harmless the new sewage enforcement officer, municipality and local agency for the actions of the new sewage enforcement officer in verifying the prior testing data and information obtained by a previous sewage enforcement officer.

(c) If, after conducting a verification of prior testing under subsection (b) the currently employed sewage enforcement officer denies an application for a permit or rejects the previous tests performed within the immediately preceding 6 years, retesting and reapplication fees shall be waived to the applicant and the local agency shall pay for any equipment and operators required for a retest and for any necessary redesign of the system if:

(1) The tests were certified by signature of a sewage enforcement officer.

(2) Local agency records document that the sewage enforcement officer who certified the tests was employed or under contract with the local agency at the time the testing was conducted and certified.

(3) The testing documents soils and site suitability for onlot sewage disposal.

(d) Subsection (c) does not apply if the local agency documents that one of the following exists:

(1) Changes have occurred in the physical condition of lands which will materially affect the siting or operation of an individual or community onlot sewage disposal system covered by a permit as verified by the sewage enforcement officer conducting the testing in accordance with the criteria outlined in subsection (b).

(2) The original soils testing was performed by a sewage enforcement officer whose certification was one of the following:

(i) Revoked by the Department and any subsequent appeal denied.

(ii) Voluntarily surrendered to avoid prosecution or a hearing.

(iii) Suspended by the Department for violations related to the siting, design or installation inspection of onlot systems.

(3) The soils testing and redesign required by the new sewage enforcement officer has been conducted by the local agency using its staff and equipment or contracted services.

(4) The testing under review was conducted more than 6 years prior to the date of the submittal of a permit application for the lot in question.

(e) A person aggrieved by the action of a sewage enforcement officer in the issuance or denial of a permit, or another action taken under section 7 of the act (35 P. S. § 750.7) other than a permit revocation, may within 30 days of receipt of notice of the action, file a request for a hearing before the local agency. The request shall be in writing.

**§ 72.27. Expiration and transfer of permits.**

(a) A permit shall expire if construction or installation of an individual or community onlot sewage system and



the structure for which the system is to be installed has not begun within 3 years after permit issuance. A new permit shall be obtained prior to beginning the construction or installation. When issuing a new permit the local agency may require information necessary to confirm the validity of the original application as provided by § 72.26(b) (relating to denial of permits).

(b) A permit may be transferred from the permit holder to a new property owner with the transfer of the property. Transfers are not valid until approved in writing by the local agency, and until new property owners receive a copy of the application under which the permit was issued.

**§ 72.28. Revocation of permits.**

(a) A permit shall be revoked by the local agency at any time for one or more of the following reasons:

(1) When a change has occurred in the physical conditions of lands which will materially affect the operation of an individual or community onlot sewage disposal system covered by a permit issued by the local agency under this chapter.

(2) When one or more tests material to the issuance of the permit has not been properly conducted.

(3) When information relevant to the issuance of the permit has been falsified.

(4) When the original decision of the local agency otherwise failed to conform with the act and this part.

(5) When the permittee has violated the act, this part or the requirements of the permit.

(b) The notice of revocation of a permit shall be in writing to the permit holder and shall include the reasons for revocation, notice of the permit holder's opportunity to request a hearing before the local agency within 10 days of receipt of the revocation notice, and notice that no further construction or use of either the sewage system or the structure for which it is intended may take place until a new permit is issued or the revocation is reversed by the local agency.

(c) If a permit holder fails to file a written request for a hearing under this chapter within 10 days after receipt of notice of revocation, revocation shall be final.

**§ 72.31. Conditions related to the installation of permit exempt systems.**

A person installing a permit-exempt system shall indemnify and hold harmless the Commonwealth, the local agency, the sewage enforcement officer serving the municipality in which the system is located and the municipality where the system is located from and against damages to property or injuries to any persons and other losses, damages, expenses, claims, demands, suits and actions by any party against the Commonwealth, the local agency, sewage enforcement officer and the municipality in connection with the malfunctioning of the onlot sewage system installed under the permit exemption provisions of this chapter. It is the sole responsibility of the property owner who installed or contracted for the installation of a sewage system under the permit exemption provisions of this chapter or the property owner who accepted responsibility for the system upon purchase of the property under the disclosure provisions of § 72.32(a) (relating to sales contracts) to correct or have corrected any system malfunction which contaminates surface water or groundwater or discharges to the surface of the ground. Malfunctions of systems installed under this chapter which contaminate groundwater or surface water or discharge

to the surface of the ground shall constitute a nuisance and shall be abatable in a manner provided by law.

**§ 72.32. Sales contracts.**

(a) Every contract for the sale of a lot which is served by an individual sewage system which was installed under the 10-acre permit exemption provisions of § 72.22(e)—(g) (relating to permit issuance) shall contain a statement in the contract that clearly indicates to the buyer that soils and site testing were not conducted and that the owner of the property or properties served by the system, at the time of a malfunction, may be held liable for any contamination, pollution, public health hazard or nuisance which occurs as the result of the malfunction of a sewage system installed in accordance with the 10-acre permit exemption provisions of § 72.22(e)—(g).

(b) Every contract for the sale of a lot served by a holding tank, whether permanent or temporary, to which sewage is conveyed by a water carrying system and which is designed and constructed to facilitate ultimate disposal of the sewage at another site, shall contain a statement in the contract that clearly indicates that the property is served by such a tank and shall provide a history of the annual cost of maintaining the tank from the date of its installation or December 15, 1995, whichever is later.

(c) Every contract for sale of a lot which is served by an individual sewage system which was installed under § 72.33 (relating to well isolation distance exemption) with an isolation distance less than the distance specified by § 73.13 (relating to minimum horizontal isolation distances) shall contain a statement in the contract that clearly indicates to the buyer that the isolation distances required by regulation between the individual onlot system components and the well on the property being sold were not met.

(d) Every contract for the sale of a lot which is within an area in which permit limitations are in effect shall contain a statement in the contract that clearly indicates to the buyer that sewage facilities are not available for that lot and construction of a structure to be served by sewage facilities may not begin until the municipality completes a major planning requirement.

(e) Every contract for the sale of a lot for which a required revision for new land development, exception to the requirement to revise or a required supplement has not been approved shall contain a statement that clearly indicates to the buyer that sewage facilities are not available for that lot and that sewage facilities will not be available nor may construction begin until sewage facilities planning has been approved.

(f) Every contract for the sale of a lot for which there is no currently existing community sewage system available shall contain a statement in the contract clearly indicating to the buyer that there is no community sewage system available, that a permit for an individual sewage system will have to be obtained and the buyer should contact the local agency charged with administering the act before signing the contract to determine the procedure and requirements for obtaining a permit for an individual sewage system if one has not already been obtained.

(g) A contract for the sale of a lot which does not conform to the requirements of this section is not enforceable by the seller against the buyer. Any term of the contract purporting to waive the rights of the buyer to the disclosures required in this section is void.

**§ 72.33. Well isolation distance exemption.**

(a) Any minimum distance requirement between a private well and a proposed absorption area specified in Chapter 73 (relating to standards for onlot sewage treatment facilities) is not applicable if the local agency finds that the installation of a proposed individual sewage system does not pose a threat of pollution to any well on the same lot within the distance specified by regulation. The minimum distance between a proposed individual sewage system on the applicant's lot and any wells on any other lot, regardless of the ownership of that lot, shall meet the minimum horizontal isolation distances in § 73.13 (relating to minimal horizontal isolation distances) except as provided in § 73.3(b) (relating to policy).

(b) If a repair to a malfunctioning onlot system is being considered under § 73.3(b), the requirements of this section may be waived at the sole discretion of the local agency.

(c) The applicant shall submit a formal written request for a well isolation distance exemption to the local agency. The request shall include:

- (1) Appropriate groundwater studies.
- (2) Payment of fees or costs incurred by the local agency to review the groundwater study.
- (d) Upon receipt of the items required in subsection (c), a local agency, other than a delegated agency, shall act upon an application for an exemption under this section within 45 days after receipt of a request for an exemption. A delegated agency shall act on any application for an exemption under this section within 30 days after receipt of a request for exemption.

(e) The local agency, municipality, sewage enforcement officer and Department will incur no liability as a result of the local agency granting an exemption under this section.

**Subchapter C. ADMINISTRATION OF  
PERMITTING REQUIREMENTS**

**§ 72.41. Powers and duties of sewage enforcement officers.**

(a) A sewage enforcement officer has the power and duty to issue, deny and revoke permits, and to take all other actions necessary to administer and enforce section 7 of the act (35 P. S. § 750.7), except that a sewage enforcement officer may not conduct hearings under section 16 of the act (35 P. S. § 750.16).

(b) A sewage enforcement officer shall issue permits only within the jurisdiction of the local agency in which the sewage enforcement officer is employed. When a sewage enforcement officer encounters a conflict of interest as specified in subsections (f)—(k), the local agency shall employ a certified sewage enforcement officer not having a conflict of interest regarding the system or lot.

(c) The local agency shall notify the sewage enforcement officer and the Department in writing of the specific conditions of employment, including, but not limited to, the following:

- (1) The geographic boundaries.
- (2) The specific permit applications to be processed.
- (3) The rate of compensation to the sewage enforcement officer.
- (4) The duration of employment.

(d) A sewage enforcement officer shall accept payment only from the local agency for services performed in conjunction with administration of the act.

(e) A sewage enforcement officer shall only accept an application or other processing fees for the local agency under the following conditions:

(1) The fee is in the amount prescribed by the local agency's adopted fee schedule.

(2) The fee is rendered in accordance with the local agency's adopted receipt system as required by § 72.42(a)(7) (relating to powers and duties of local agencies).

(3) The sewage enforcement officer has received written direction from the local agency to accept these fees on behalf of the local agency.

(f) A sewage enforcement officer may advise an applicant regarding available options for the planning, design and construction of an individual or community onlot disposal system, but may not select the final system design, as specified in subsection (g) except as provided by subsection (i).

(g) A sewage enforcement officer may not plan, design, construct, sell or install an individual or community onlot sewage system within the geographic boundaries of the sewage enforcement officer's authority, as specified by the local agency.

(h) A sewage enforcement officer may not, orally or in writing, suggest, recommend or require the use of any particular consultant, soil scientist or professional engineer, or any individual or firm providing these services where these services may be required or are subject to review under this article.

(i) A sewage enforcement officer may not perform consulting or design work or related services required or regulated under the act within the municipality or local agency by which the officer is employed or with which the officer has a contractual relationship unless the services are set in the fee schedule of the local agency, the fees are paid directly to the local agency and the records and products relating to consultation or design work are reviewed by and any subsequent permit is issued by another sewage enforcement officer employed by or under contract with the same local agency.

(j) A sewage enforcement officer may not conduct a test, issue a permit, participate in the official processing of an application or official review of a planning module for an individual or community onlot sewage system in which the sewage enforcement officer, a relative of the sewage enforcement officer, a business associate of the sewage enforcement officer or an employer of the sewage enforcement officer, other than the local agency, has a financial interest.

(k) For purposes of subsection (j), a financial interest includes full or partial ownership, agreement or option to purchase, leasehold, mortgage or another financial or proprietary interest in; or serving as an officer, director, employe, contractor, consultant, or another legal or fiduciary representative of a corporation, partnership, joint venture or other legal entity which has a proprietary interest in one or more of the following:

- (1) One or more lots to be served by the system.
- (2) The development or sale of the lots to be served by the system.
- (3) A contract, either written or oral, to perform a service in the development of one or more of the lots to be

served by the system. The service may be before or after the fact of development and may include professional as well as other services.

(4) A contract, either written or oral, to sell, plan, design, construct, install or provide materials or component parts for the system.

(l) Prior to issuing a permit, the sewage enforcement officer shall conduct personally, observe or otherwise confirm in a manner approved by the Department all tests used to determine the suitability of a site for an individual or community onlot sewage system. A sewage enforcement officer shall accept testing conducted by a prior sewage enforcement officer for the local agency provided the site, data and prior testing meet the criteria specified in § 72.26(b)—(d). When a sewage enforcement officer accepts testing by a prior officer, a copy of the Department's "Verification of Prior Testing" form or other form as may be specified by the Department, shall be attached to each copy of the permit application.

(m) Prior to issuing a permit, the sewage enforcement officer shall confirm that the application is complete and that the proposed system design is in compliance with the requirements of the act and this part.

(n) The sewage enforcement officer shall give timely written notice to applicants or permittees of approval, denial or revocation of a permit under this chapter.

(o) The sewage enforcement officer shall advise the local agency of a violation of the act or this part, known to the sewage enforcement officer, which occurs within the local agency's jurisdiction.

(p) The sewage enforcement officer shall advise the local agency of its responsibility to restrain a violation of the act or this part and shall independently take action within the scope of his authority necessary to restrain or correct the violation.

(q) The sewage enforcement officer shall submit the Department's copy of the completed Application For Sewage Disposal System, with necessary attachments, within 7 days of acting upon the application.

**§ 72.42. Powers and duties of local agencies.**

(a) The local agency has the power and duty to:

(1) Employ or contract with sewage enforcement officers to administer section 7 of the act (35 P. S. § 750.7) and this part.

(2) Employ or contract with other technical and administrative personnel necessary to support the activities of the sewage enforcement officer.

(3) Set rates of compensation for the sewage enforcement officer and other employees necessary for the administration of the act by the local agency.

(4) Maintain offices and purchase equipment and supplies necessary for the administration of the act.

(5) Establish a schedule of fees for the processing of applications and other services provided by the local agency. This fee schedule may establish different charges for various activities and types of systems consistent with the administrative costs of reviewing applications, conducting necessary tests and investigations and supervising the installation of the system.

(6) Collect the appropriate fees as designated in the established fee schedule. The local agency shall maintain records of income, expenses and transactions of the local agency in a manner consistent with accepted accounting practice.

(7) Establish a system of receipts of monetary transactions. The receipt system shall provide to the local agency and to the applicant a record of the amount tendered to the local agency and the specific purpose of the transaction.

(8) Adopt and maintain standards and procedures for applications and permits for individual and community onlot sewage systems identical to those of the Department, as contained in this part.

(9) Adopt and maintain other regulations the local agency deems necessary for the administration and enforcement of section 7 of the act as long as they are consistent with the act and this part.

(10) Submit reports and data to the Department as required by this part or an order of the Department.

(11) Submit to the Department annually the name and address of its certified sewage enforcement officer and alternate sewage enforcement officer.

(12) Make or cause to be made inspections and tests necessary to carry out sections 7, 8, 12, 13, 13.1, 14, 15 and 16 of the act. For this purpose, the authorized representatives of the local agency have the right to enter upon lands.

(13) Proceed under sections 7, 8, 12, 13, 13.1, 13.2(b) 14, 15, and 16 of the act to restrain violations of the act and this part, and to abate nuisances in accordance with existing statutes, or as defined in the act.

(14) Notify the Department in writing within 15 days of a change in the sewage enforcement officer or his address.

(15) Cease issuing permits in designated areas when ordered to do so by the Department under section 10(7) of the act (35 P. S. § 750.10(7)), after notice and opportunity for a Departmental hearing. The local agency may issue permits in these areas for the abatement of existing health hazards and public nuisances.

(16) When applicable, establish a program for requiring, verifying, forfeiting, administering and enforcing the provision of financial assurances under § 73.151 (relating to standards for financial assurances). Costs for administering this program shall be included in the fee schedule of the local agency.

(17) Adopt by resolution a list of individuals who are sewage enforcement officers employed by companies or corporations under contract with the local agency to perform the services of sewage enforcement officers.

(18) Set and collect fees necessary to support the administrative and personnel costs of a maintenance inspection and enforcement program.

(19) Charge for engineering or consulting services required by the local agency to complete its review of a permit application. The application or review fees charged for these services shall be reasonable and in accordance with the ordinary and customary charges by the engineer or consultant for similar service in the community, and fees may not exceed the rate or cost charged by the engineer or consultant to the local agency when fees are not reimbursed by or otherwise imposed on applicants.

(i) If the applicant disputes the amount of the fees or charges, the applicant shall, within 10 working days of the date of billing, notify the local agency that the fees or expenses are disputed as unreasonable or unnecessary, in which case the local agency may not delay or disapprove an application for any approval or permit due to the applicant's dispute over fees or charges.

(ii) If, within 20 days from the date of billing, the local agency and the applicant cannot agree on the amount of fees or charges which are reasonable and necessary, the applicant and local agency shall comply with the procedure established in section 8(b)(4) of the act (35 P. S. § 750.8(b)(4)) to resolve the fee or charge dispute.

(20) Complete and provide to the applicant the results of any site suitability review, soil probe testing and soil percolation testing within 20 working days of the local agency's receipt of a permit application.

(i) The testing and results of the testing may be deferred to a later date that the applicant may request in writing or by a later date agreed to by the sewage enforcement officer and the applicant, which is confirmed in writing by the sewage enforcement officer.

(ii) A one-call system serial number shall be obtained prior to soil testing by the permit applicant or the contractor retained by the applicant to perform the test excavation. This notification shall take place no less than 3 and no more than 10 working days prior to the excavation. The deadline for permit review by the local agency in this subsection does not apply to an applicant who fails to comply with the one-call system notification requirement.

(iii) It is the obligation of the applicant to have the site prepared in the manner required by written instructions provided to the applicant after receipt of at least 48 hours' notice from the local agency or sewage enforcement officer of the anticipated time the soils tests will be performed. Written instructions shall include provisions for deferral of testing due to weather.

(iv) Failure of the local agency to comply with these time limits shall entitle the applicant, upon request, to a refund of fees paid by the applicant for soil testing that was not performed by the local agency, and the applicant shall be entitled to submit results of soils tests, on forms provided by the Department conducted in a manner consistent with this article by a certified sewage enforcement officer, who need not be employed by or under contract with the local agency. These test results shall be accepted by the local agency and its sewage enforcement officer, who shall rely upon the results of these tests in acting on an application.

(v) An applicant who, after receiving the notice of testing, fails to have the site prepared for soil testing in a manner required by the local agency, does not have the right to submit the results of soils testing performed by a certified sewage enforcement officer not employed by or under contract with the local agency, nor is the applicant entitled to a refund of fees paid for soil testing as provided in this section.

(vi) Neither the municipality, local agency, local agency's sewage enforcement officer nor the Department will be held liable on a cause of action arising out of soil tests performed under this section by a certified sewage enforcement officer not employed by or under contract with the local agency.

(21) Make inspections of and verify measurements made by applicants on public or private properties which are determined by the local agency's authorized representative to have natural or manmade features from which specific isolation distances are required prior to the approval of onlot sewage disposal system usage in subdivisions or individual lots. The local agency's authorized representative shall have the right to enter upon lands for these purposes.

(22) Determine if a proposed individual residential spray irrigation system will create a nuisance or adversely impact existing and proposed drinking water supplies and report this information to any affected municipality served by the local agency.

(23) Assure that an individual residential spray irrigation system discharge is sampled at least once per year by the property owner through a testing laboratory for fecal coliforms, carbonaceous biological oxygen demand, suspended solids and disinfectant residual or effectiveness. Individual effluent samples may not exceed a BOD<sub>5</sub> of 25 mg/l and suspended solids concentration of 30 mg/l. Free chlorine residual shall be maintained at a range of 0.2—2.0 PPM unless a higher level is required to control disease producing organisms. This disinfection shall produce an effluent which will contain a concentration not greater than 200 fecal coliform organisms per 100 milliliters in a single sample. The local agency shall review the results of these samples and the most recent system inspection conducted under § 73.167 (relating to operation and maintenance) and take any necessary action to resolve operational or maintenance problems identified through the sample results. Additional sampling may be required by the local agency if the annual sample indicates a violation of the limitations specified in this paragraph.

(24) A county health department and joint county departments of health may also administer the continuing maintenance provisions of § 71.73 (relating to sewage management programs) when the municipality relinquishes and the county health department or joint county department of health accepts the authority and conforms with § 71.73.

(b) The local agency may offer a program to provide financial assurance, for a fee, for systems installed under § 73.77 (relating to general requirements for bonded disposal systems). Financial assurance provided by the local agency shall comply with § 73.151.

(c) The local agency may not orally or in writing, suggest, recommend or require the use of a particular consultant, soil scientist or professional engineer, or an individual or firm providing these services when these services may be required or are subject to review under this part.

#### **§ 72.43. Powers and duties of the Department.**

(a) The Department is empowered to review the performance of local agencies and their sewage enforcement officers in the administration of sections 7, 8, 12, 13, 13.1, 13.2(b), 14, 15 and 16 of the act (35 P.S. § 750.7, 750.8, 750.12, 750.13, 730.13a, 750.13b(b) and 750.14—750.16).

(b) The Department and its authorized representatives may enter upon lands, make inspections and require the submission of papers, books and records by the local agency, or its sewage enforcement officer.

(c) If the Department finds that a local agency has failed to effectively administer section 7, 8, 12, 13, 13.1, 13.2(b), 14, 15 or 16 of the act or this part, the Department, in addition to other remedies it may seek at law or in equity, may order the local agency to take actions the Department deems necessary to obtain effective administration. These actions may include, but are not limited to:

(1) Negotiation with other local agencies for cooperation in areawide administration.

(2) Modification of administrative, testing or reporting procedures.

- (3) Retention of expert consultants.
- (4) Employment of additional personnel.
- (5) Satisfactory participation by the local agency's sewage enforcement officer in special training programs designed to strengthen a specific weakness in the administration of the act and this part.
- (6) Coordination of permit issuance for sewage systems with building permit issuance or with subdivision approval under local ordinances that the local agency may be administering at the time of the order.
- (d) The Department has the duty to establish a training program for sewage enforcement officers. The Department will require timely and satisfactory completion by sewage enforcement officers of training courses sponsored by the Department. Satisfactory completion means attendance at all sessions of training and attainment of a minimum grade of 70% on tests given as part of the training course.
- (e) The Department is empowered to revoke or suspend the certification of sewage enforcement officers for cause, or to reinstate the certification under this part. The actions of the Department will become final only after provision of notice and an opportunity for hearing before the Certification Board, under § 72.58 (relating to Certification Board hearings and procedures).
- (f) The Department will suspend a sewage enforcement officer's certification if the Department determines that the sewage enforcement officer has done one of the following:
  - (1) Demonstrated incompetence to act as a sewage enforcement officer as evidenced by errors in planning, administration or permit issuance duties which evidence a failure or inability to understand and apply the requirements of the act and this part.
  - (2) Failed to complete satisfactorily a sewage enforcement officer's training course required by the Department under subsection (k).
  - (3) Demonstrated negligence or provided false information related to the administration of the act or this part or committed violations of this part which are not related to the issuance of a permit.
- (g) The Department may reinstate the certification of a person within 2 years from the date of suspension or after 2 years following the effective date of a revocation. Prior to reinstatement, the Department will require, as a minimum, that the person take and pass the appropriate certification examination administered by the Certification Board. The Department may require satisfactory completion of a special training program designed to strengthen a specific weakness in the sewage enforcement officer's administration of the act or this part. The program may entail the use of testing procedures including, but not limited to:
  - (1) Field evaluation of technical performance.
  - (2) Written or oral examination of standards and procedures.
- (h) The Department will revoke the certification of a sewage enforcement officer whenever the Department determines that the sewage enforcement officer has done one of the following:
  - (1) Demonstrated a willful disregard of, or willfully or repeatedly issued permits in violation of the act or this part.

- (2) Failed repeatedly to attend mandated sewage enforcement officer's training required by the Department under subsection (k).
- (3) Failed to comply with the applicable terms of a Departmental order for effective administration of sections 7, 8, 12, 13, 13.1, 13.2(b), 14, 15 and 16 of the act.
- (4) Issued a permit at a time when his certification was suspended.
- (5) Willfully issued a permit outside of the geographic boundaries of authority specified by the local agency.
- (6) Issued a permit which he believed to be in violation of the act or this part before being directed to do so by the local agency under a hearing.
- (7) Failed to advise the local agency of a violation of the act, this part or the responsibility of the local agency to restrain the violation.
- (8) Failed to take the necessary action to restrain a violation of the act or this part.
- (9) Knowingly and willfully submitted false information to the Department or to the local agency in a report or form required by the act, this part or by order of the Department or the local agency.
- (10) Committed an act requiring suspension under subsection (f) and had his certification suspended previously.
- (11) Issued a permit in violation of § 72.41 (relating to powers and duties of sewage enforcement officers).
- (12) Had his certification suspended for more than 2 years.
- (13) Demonstrated negligence or knowingly provided false information related to the administration of the act or this part or knowingly committed violations of the act or this part which are not related to the issuance of a permit.
  - (i) The Department will consider complaints filed by local agencies or the public relating to the performance of local sewage enforcement officers as part of the Department's evaluation of the local agency and sewage enforcement officer.
  - (j) The Department may establish minimum training requirements using a Department curriculum of training as a prerequisite for applicants for certification as sewage enforcement officers. The curriculum may include a period of training under another certified sewage enforcement officer selected by the Department as a prerequisite to certification for candidates who pass the certification test.
  - (k) The Department may require a certified sewage enforcement officer whose performance has been evaluated and found deficient to complete a training course which may include a curriculum of training or a period of training under the direction of another certified sewage enforcement officer selected by the Department for a time period established by the Department.
    - (1) The Department may require this training as an alternative to suspension or as a requirement for reinstatement of a suspended certification.
    - (2) The local agency employing the training sewage enforcement officer shall authorize that officer to provide the training services within the jurisdiction of that local agency.
    - (3) The costs of Department-required training incurred by the training sewage enforcement officer and the local

agency employing the training sewage enforcement officer shall be paid by the Department from funds made available under section 13.2 of the act (35 P.S. § 750.13b).

(l) The Department may delegate the review of certain alternate sewage systems as designated by the Department to sewage enforcement officers, within the area of their jurisdiction, qualified by the Department to review the systems.

(m) The Department has the duty to require local agencies to take necessary action to provide timely service, including, but not limited to, utilizing the services of an alternate sewage enforcement officer, employing temporary sewage enforcement officers and entering into contracts for service.

#### § 72.44. Reimbursement.

(a) Reimbursement may not exceed the total program cost minus total program income.

(b) Except as provided in subsection (c) the Department will reimburse local agencies to the extent of the appropriations made by the General Assembly for that purpose. Reimbursement shall be made annually in an amount equal to 1/2 of eligible expenses of administering and enforcing sections 7, 8, 12, 13, 13.1, 14, 15 and 16 of the act (35 P.S. §§ 750.7, 750.8, 750.12, 750.13, 750.13a and 750.14—750.16), as defined by subsections (h)—(j).

(c) A local agency complying with the act in a manner deemed satisfactory by the Department will be reimbursed in an amount equal to 85% of the cost of the expenses incurred in the administration and enforcement of the act from funds specifically appropriated by the General Assembly for this purpose if the local agency submits documentation which supports that it qualifies for the increased reimbursement as provided in subsection (d). Eligible expenses are defined in subsections (h)—(j).

(d) To qualify for 85% reimbursement, a local agency shall:

(1) Document the acceptance, delegation or transfer of the administration of sections 7, 8, 12, 13, 13.1, 14, 15 and 16 of the act from one or more municipalities.

(2) Employ or contract with at least one sewage enforcement officer actively engaged in activities related to the administration of the act in that local agency at least 1,200 hours per year, including leave and holidays.

(3) Employ or contract with adequate administrative support staff.

(4) Employ or contract with one alternate sewage enforcement officer.

(5) Employ or contract with a qualified soil scientist.

(6) Submit to the Department for review and comment administrative procedures, permit procedures, ordinances of the member municipalities related to the administration of the act, rules, regulations, permit-related fee schedules and contracted services proposed for use in the local agency.

(7) Employ or have a contractual arrangement with sufficient technical staff to provide for local agency response to signed written requests for service within the time frames established by the administrative procedures and regulations of the local agency.

(e) Applications for reimbursement shall be in quadruplicate, on the appropriate form supplied by the Department, and received by the Department of Environmental Protection, Post Office Box 8466, Harrisburg, Pennsylvania

17105-8466, no later than March 1 each year for expenses incurred during the prior calendar year. Upon cause shown, the Secretary may extend the March 1 deadline for the filing of applications for reimbursement for not more than 60 days.

(f) Applications for reimbursement shall include the following:

(1) An itemized statement in the form of an employe time and activity record.

(2) A report of total fees, fines and other money collected by the local agency during the calendar year in the enforcement of the act.

(3) The Department central file copies of the Application for Sewage Disposal System permit denials, final inspections and expirations during the prior calendar year.

(4) Municipal ordinances, acts, regulations or procedures used in enforcing the act for local agencies applying for reimbursement for the first time or when major changes are made.

(5) Copies of additions, deletions and amendments made during the preceding calendar year to municipal ordinances, acts or procedures used in enforcing the act.

(6) Proof of payment of expenses claimed, as specified in subsection (k).

(7) A copy of the schedule of fees charged to the permit applicant.

(g) An employe time and activity record shall be kept by the local agency. This is an itemized record noting the employe's name, the date of duty and application number for each task performed, the complaint or malfunction investigated, related administrative or clerical duties performed, hours spent, miles travelled and applicable hourly rate of pay, not including fringe benefits.

(h) Costs associated with the following are eligible for reimbursement, when related to enforcement and administration of the sewage facilities permitting program:

(1) Permit application processing activities, including soil evaluation and testing procedures.

(2) Administrative, management or clerical activities.

(3) Postage, office supplies and duplicating.

(4) Nonmechanically powered tools for the sewage enforcement officer's use.

(5) Costs of purchasing office equipment and maintaining offices, including building maintenance and utilities prorated on an equitable basis with other services.

(6) Employer costs for social security, workers' compensation, unemployment compensation and the following fringe benefits:

(i) Health care.

(ii) Pension programs.

(iii) Life insurance.

(iv) Errors and omissions insurance written specifically and billed separately to cover the sewage enforcement officer's enforcement responsibilities where the defense of official immunity, under 42 Pa.C.S. § 8546 (relating to defense of official immunity), is not applicable to the sewage enforcement officer.

(7) Mileage expenses at the Commonwealth rate for application processing, complaint and malfunction investigations, and required Department training courses or

other related meetings or functions required by the Department. The reimbursement of mileage expenses at the Commonwealth rate includes the cost to maintain automotive insurance coverage, and shall be the exclusive means for reimbursement of the costs.

(8) Expenses for sewage enforcement officers to attend required Department training courses or other related meetings or functions required by the Department including:

(i) Regular rate of pay for the actual hours of attendance at the course.

(ii) Lodging, meals and subsistence at the Commonwealth rate when the course is outside a 50-mile radius of both the sewage enforcement officer's place of employment and residence and no course has been scheduled within that 50-mile radius.

(9) Chemical and bacteriological supplies and analysis for confirming violations.

(10) The legal daily rate and mileage expenses for subpoenaed witnesses at a hearing.

(11) Legal services costs incurred for:

(i) Prosecuting or restraining violations and defending against appeals.

(ii) Preparing ordinances consistent with and necessary for enforcement of the act and this part.

(iii) Preparing for and conducting hearings.

(12) The legal daily rate and mileage expenses for subpoenaed witnesses at a hearing before a magistrate, when the witnesses are essential to substantiate a violation.

(13) Fees for special consultants retained by the local agency for technical consultation on specific permits.

(14) Investigations and inspections related to complaints and malfunctions.

(i) Costs associated with the staffing and administration of a sewage management program under Chapter 72, Subchapter E (relating to sewage management programs) are eligible costs.

(g) Ineligible costs include, but are not limited, to the following:

(1) Retainer fees.

(2) Legal fees resulting from an appeal or suit against the Commonwealth.

(3) Expenses for use of earth moving or excavating equipment.

(4) Clothing purchase or allowance.

(5) Development or duplication of maps.

(6) Payment for surveillance activities by employees other than sewage enforcement officers.

(7) Sewage enforcement officer certification or renewal fees and other related expenses, such as mileage and travel expenses to the certification examination.

(8) Activities and costs associated with improper administration of the act.

(9) Cost to the local agency to maintain insurance coverage in the following areas:

(i) Errors and omissions except as provided in subsection (h)(6)(iv).

(ii) Liability.

(10) Expenses for activities resulting from the submission of additional information to supplement a reimbursement application or from activities performed as a result of a Department audit.

(11) Expenses for employee attendance at local agency meetings which do not pertain to administration of section 7, 8, 12, 13, 13.1, 14, 15 or 16 of the act.

(12) Fixed or indirect costs other than those in subsection (h)(5).

(k) Proof of payment of expenses claimed shall, at a minimum, include the following:

(1) Payroll records or copies of both sides of cancelled checks stating the gross amount paid or a statement from the sewage enforcement officer certifying that he has received salaries or wages from the municipality of which he is a full-time employee.

(2) One copy of the time and activity record or receipted itemized invoices.

(3) Proof of attendance at training courses required by the Department. Reimbursable expenses for attendance at the courses shall be identified separately under "other expenses" in the reimbursement application.

(4) Copies of hotel receipts for overnight lodging.

(5) Minutes of local agency meetings for which employee attendance is claimed as a reimbursable expense which reflect discussions involving the administration of section 7, 8, 12, 13, 13.1, 14, 15 or 16 of the act.

(i) The Department may withhold reimbursement for falsification of information included in or submitted in support of the application, or for intentional omission of information required to be submitted with the application.

**Subchapter D. CERTIFICATION OF SEWAGE ENFORCEMENT OFFICERS**

**§ 72.52. Conditions of certification or reinstatement of certification.**

(a) The Certification Board shall issue a sewage enforcement officer certificate to a person who meets the following:

(1) Is a natural person or individual. Associations, partnerships or corporate entities are not qualified for certification.

(2) Has passed an applicable examination prepared by the Department.

(3) Has not had his certification revoked previously. After 2 years from a previous revocation, the Certification Board may reexamine and reinstate the certification of a person if that person requests reinstatement. In determining fitness for reinstatement, the Certification Board shall consider the nature and gravity of the misconduct which resulted in the previous revocation and the recommendation of the Department.

(4) Has not had his certification lapsed due to failure to complete mandatory training during a previous renewal cycle unless the training has been subsequently completed.

(b) Certification shall be for a period of up to 2 years. Upon the payment of a fee of \$50 by the certificateholder, the Certification Board shall renew a valid certificate of a qualified applicant, except that applicants for renewal who are employed by the Commonwealth in administering the act and whose activities under the act are limited solely to Commonwealth service are not subject to the fee

requirements of this subsection. Fees collected in excess of the actual administrative cost to the Certification Board to process certification renewals shall be dedicated to training sewage enforcement officers.

(c) If the Certification Board does not meet within 30 days of receiving the examination results from the certification testing contractor, an applicant for certification who meets the requirements of subsection (a) will be deemed certified, except that an applicant who is in violation of the regulations under the act or who is restrained from certification by § 72.43 (relating to powers and duties of the Department) will not be deemed certified.

**§ 72.53. Certification examination.**

(a) The Department will prepare an examination to be used by the Certification Board in determining the fitness of candidates for certification and will establish the passing grade for the examination and for each part of the examination in the areas of sewage facilities planning, program administration, technical criteria and enforcement.

(b) The Department will submit the examination to the Certification Board, which shall by letter to applicants at least 25 days prior to each examination announce the location, time, scope and passing grade for the examination. Annually, the Board will publish in the *Pennsylvania Bulletin* the dates, sites, scope and passing grade for all examinations scheduled in that calendar year.

(c) The Certification Board will schedule a date for the examination at least four times in each calendar year.

(d) An individual who takes, but does not successfully pass the examination on three occasions, is not permitted to retake the examination administered by the Certification Board for 1 year, and until the applicant has completed a training course approved by the Department. Thereafter, a candidate may take the examination only once in a calendar year until the examination is passed.

**§ 72.54. Applications for certification.**

(a) Correctly completed applications, documentation of the successful completion of required precertification training courses and an application fee of \$25 shall be received by the Board at least 40 days prior to scheduled examinations.

(b) Incomplete or erroneous applications shall be returned to the applicant.

(c) The application fee is a processing fee and may not be refunded.

**§ 72.55. Certification renewal.**

(a) Application for renewal will be sent to certified sewage enforcement officers at least 2 months prior to renewal date. In addition to the application, a curriculum of mandatory training will be sent to any sewage enforcement officer who has not completed the required training.

(b) An applicant for renewal of certification shall submit a signed application for renewal, with fee, to the Certification Board by the renewal date. When the application for renewal is submitted later than the renewal date, but no later than 2 years after the renewal date, the Certification Board may renew a certification for good cause shown.

(c) If the applicant has not completed a training course required by the Department for certification renewal by the renewal date, the certificate will lapse.

(d) If a sewage enforcement officer's certification lapses, a new certification shall be obtained under § 72.52 (relating to conditions of certification).

**§ 72.58. Certification Board hearings and procedures.**

(a) Actions by the Department to revoke or suspend sewage enforcement officer certifications become final only after notice and opportunity for a hearing before the Certification Board. The filing of an appeal with the Certification Board does not operate as an automatic supersedeas of the action of the Department. If no request for a hearing is filed with the Secretary of the Certification Board within 30 days of receipt of notice of the action by the certificateholder, the action becomes final. Requests for a hearing shall set forth with specificity the grounds for the appeal, including objections to the Department's action. If the request for a hearing does not specify the grounds for the appeal, the certificateholder shall, upon notification from the Secretary of the Certification Board, be given the opportunity to file an amended request for a hearing within 30 days of receipt of the notification. The amended request shall conform to the content requirements for a request for a hearing. The Certification Board may dismiss an appeal if a certificateholder fails to file an amended request for a hearing or to comply with the requirements for filing an amended request for a hearing. The adjudications of the Certification Board shall otherwise be in accordance with 1 Pa. Code Part II (relating to general rules of administrative practice and procedure).

(b) In hearings before the Certification Board, 1 Pa. Code Part II (relating to general rules of administrative practice and procedure) applies, unless it is inconsistent with this chapter. Discovery in hearings before the Certification Board shall be permitted as provided in the Pa.R.C.P.

(c) In proceedings before the Certification Board, the burden of proceeding and the burden of proof is the same as at common law, in that the burden normally rests with the party asserting the affirmative of an issue. The affirmative of the issue shall be established by a preponderance of the evidence. The Certification Board may require the other party to assume the burden of proceeding with the evidence in whole or in part, if that party is in possession of facts or should have knowledge of facts relevant to the issue.

(d) Actions and adjudications of the Certification Board shall be by a vote of a majority of members present at a meeting called for consideration of the action or adjudication. Three members of the Certification Board constitute a quorum.

(e) The Certification Board may hear matters brought before it as a whole or may appoint hearing examiners. Hearings held by hearing examiners not members of the Certification Board shall be decided by the Board based upon its review of the record and the examiner's proposed adjudication.

(f) An applicant is not entitled to a hearing when a certificate was denied because the applicant failed to pass the certification examination or failed to successfully complete a training program required by the Department.



CHAPTER 73. STANDARDS FOR ONLOT SEWAGE TREATMENT FACILITIES

GENERAL

§ 73.1. Definitions.

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

\* \* \* \* \*

Aggregate—Coarse material manufactured from stone, gravel or slag, having Type B characteristics as described in Department of Transportation specifications, Form 408, section 703.3, Table B and uniform size and grading equivalent to American Association of State Highway and Transportation Officials No. 57, as described in Form 408, section 703.3, 2 Table C.

Agricultural areas—Areas used primarily for the production of crops and where the soil is without vegetative cover during certain periods of the year.

Alternate sewage system—A method of demonstrated onlot sewage treatment and disposal not described in this chapter.

\* \* \* \* \*

Buried sand filter—A system of piping, sand media, aggregate and collection piping in a buried liner used for the intermittent filtration and biochemical treatment of sewage.

Clean Streams Law—The Clean Streams Law (35 P. S. §§ 691.1—691.1001).

Conventional sewage system—A system employing the use of demonstrated onlot sewage treatment and disposal technology in a manner specifically recognized by this chapter. The term does not include alternate or experimental sewage systems.

Dosing pump—The pump housed in a dosing tank which provides a measured volume of sewage effluent to the pressurized distribution system in an absorption area.

Experimental sewage system—A method of onlot sewage treatment and disposal not described in this title which is proposed for the purpose of testing and observation.

Filter tank—The tank housing the piping and sand of the free access sand filter.

Forested areas—Areas where the predominant vegetative cover is comprised of trees with a closed canopy.

Free access sand filter—An accessible system of tanks, dose piping, sand media, aggregate and collection piping used for the intermittent filtration and biochemical treatment of sewage.

Geotextile—Material consisting of mesh polypropylene, polyester, nylon or similar material, used to prevent migration of fine aggregate into coarser aggregate.

Grassed area—An area where the predominant vegetative cover is comprised of grasses, bushes or trees not forming a closed canopy.

Individual residential spray irrigation system—An individual sewage system which serves a single dwelling and which treats and disposes of sewage using a system of piping, treatment tanks and soil renovation through spray irrigation.

\* \* \* \* \*

Lift pump—A submersible pump used to convey effluent to the sand filter and from the sand filter to the chlorine/retention tank.

Municipality—A city, incorporated town, township, borough or home rule municipality other than a county.

NSF—National Sanitation Foundation.

\* \* \* \* \*

Person—The term includes an individual; association; public or private corporation for-profit or not-for-profit; partnership; firm; trust; estate; department; board; bureau or agency of the United States or the Commonwealth; political subdivision; municipality; district; authority; or other legal entity which is recognized by law as the subject of rights and duties. The term includes the members of an association, partnership or firm and the officers of a local agency or municipal, public or private corporation for-profit or not-for-profit.

\* \* \* \* \*

Retaining tank—A watertight receptacle which receives and retains sewage and is designed and constructed to facilitate ultimate disposal of the sewage at another site. The term includes the following:

\* \* \* \* \*

Sewage—A substance that contains the waste products or excrement or other discharge from the bodies of human beings or animals; a substance harmful to the public health, to animal or aquatic life or to the use of water for domestic water supply or for recreation; or a substance which constitutes pollution under The Clean Streams Law.

Sewage enforcement officer—An official of the local agency who reviews permit applications and sewage facilities planning modules and issues permits as authorized by the act and conducts the investigations and inspections that are necessary to implement the act and regulations thereunder.

Sewage facilities—A system of sewage collection, conveyance, treatment and disposal which will prevent the discharge of untreated or inadequately treated sewage or other waste into waters of this Commonwealth or otherwise provide for the safe and sanitary treatment and disposal of sewage or other waste. The term includes:

(i) Individual sewage system—A system of piping, tanks or other facilities serving a single lot and collecting and disposing of sewage in whole or in part into the soil or into waters of this Commonwealth or by means of conveyance to another site for final disposal.

(A) Individual onlot sewage system—An individual sewage system which uses a system of piping, tanks or other facilities for collecting, treating or disposing of sewage into a soil absorption area or spray field or by retention in a retaining tank.

(B) Individual sewerage system—An individual sewage system which uses a method of sewage collection, conveyance, treatment and disposal other than renovation in a soil absorption area, or retention in a retaining tank.

(ii) Community sewage system—A sewage facility, whether publicly or privately-owned, for the collection of sewage from two or more lots, or two or more equivalent dwelling units and the treatment or disposal, or both, of the sewage on one or more of the lots or at another site.

(A) Community onlot sewage system—A community sewage system which uses a system of piping, tanks or

other facilities for collecting, treating and disposing of sewage into a soil absorption area or retaining tank.

(B) *Community sewerage system*—A publicly or privately-owned community sewage system which uses a method of sewage collection, conveyance, treatment and disposal other than renovation in a soil absorption area, or retention in a retaining tank.

*Small flow treatment facility*—An individual or community sewerage system designed to adequately treat sewage flows not greater than 2,000 gallons per day for final disposal using a stream discharge or other methods approved by the Department.

\* \* \* \* \*

*Soil mottling (redoximorphic features)*—A soil color pattern consisting of patches of different colors or shades of color interspersed with the dominant soil color which results from prolonged saturation of the soil.

\* \* \* \* \*

*Solids retainer*—A deflection device at the outlet tee or baffle of a septic tank designed to deflect buoyed solids from escaping the tank.

*Spray field*—Piping, spray heads and ground surface to the outside edges of the wetted perimeter, used for the application and treatment of the sewage effluent in an individual residential spray irrigation system.

\* \* \* \* \*

*Undisturbed soil*—Soil or soil profile, unaltered by removal or other man-induced changes, except for agricultural activities, that would adversely affect the siting or operation of onlot systems.

\* \* \* \* \*

**§ 73.2. Scope.**

This chapter applies to sewage enforcement officers administering the act, as well as to persons installing individual onlot sewage systems or community onlot sewage systems as defined in this chapter.

**§ 73.3. Policy.**

(a) A person planning or designing a facility or intending to utilize individual or community sewage systems is advised of the importance of good water conservation practices and the potential value of water conservation, recycle or reuse systems as a means of prolonging the life of the sewage system, as well as ensuring the availability of adequate water supplies in the future.

(b) When considering corrective measures for malfunctioning sewage disposal systems which have been constructed in accordance with this chapter or applicable regulations at the time of construction, the efforts of the local agency or the Department will not be restricted by this chapter. It will be the policy of the Department and local agencies administering this chapter to first consider all individual onlot and community onlot sewage systems described in this chapter, excluding holding tanks, in the correction of existing malfunctions and, when the systems cannot be constructed in accordance with this chapter, to provide the best technical guidance possible in attempting to resolve existing pollution or environmental health problems. When application of best technical guidance results in the absorption area or spray field encroaching on the regulated isolation distance to a well, the proper well abandonment procedure or the relocation of the well should be considered. The requirements of § 72.33 (relating to well distance exemption) may be waived at the discretion of the local agency. This policy will not limit or

preclude the use of experimental systems as provided in §§ 73.71 and 73.72 (relating to experimental sewage systems; and alternate sewage systems), small flow treatment systems permitted under the Clean Streams Law or, when no other alternatives are available, holding tanks.

(c) The Department recognizes the existence of technologies related to onlot sewage disposal which are not specifically addressed in this chapter as well as technologies from other disciplines which may be applied to the design or construction of an onlot sewage disposal system. Experimental sewage system permits provide a method for the testing and evaluation of new concepts and technologies applicable to onlot disposal in this Commonwealth. Experimental permits may be limited in number on a Statewide basis. The Department will determine the number of experimental permits that may be issued for a specific experimental technology or design. An experimental onlot sewage disposal system permit shall be required for all technologies, methods, system components, systems and designs the Department deems experimental. Alternate sewage systems provide a classification for innovative and alternative technology which has been developed through the experimental program, by application of existing technologies from other disciplines or through technological advances from other areas of the United States. The alternate sewage system permit will provide a method for utilizing proven technologies within this Commonwealth without constant changes to this chapter. Systems shall be permitted only where it is demonstrated that the proposed system will protect the public health and prevent pollution of the waters of this Commonwealth.

**GENERAL SITE LOCATION AND ABSORPTION AREA REQUIREMENTS**

**§ 73.11. General.**

(a) A person may not install, and a sewage enforcement officer may not issue a permit for or approve, a sewage system which violates this chapter.

(b) A structure may not be occupied before the sewage system is finally inspected, approved and covered. Except when the sewage enforcement officer requires a change to the installation schedule because of weather and soil conditions, the permit may be modified with conditions to be established by the local agency to allow use of a septic tank as a temporary holding tank. In these instances, §§ 71.61 and 71.63(b)(1) and (2), (c)(1) and (2), 73.61 and 73.62(b) do not apply. Absorption areas shall be covered by the permittee within 5-calendar days after final inspection and approval to prevent damage.

(c) Liquid wastes, including kitchen and laundry wastes and water softener backwash, shall be discharged to a treatment tank. A sewage system may not discharge untreated or partially treated sewage to the surface of the ground or into the waters of this Commonwealth except as specifically permitted under sections 202 and 207 of the Clean Streams Law (35 P. S. §§ 691.202 and 691.207) and individual residential spray irrigation systems permitted by local agencies under section 7.3 of the act (35 P. S. § 750.7c).

(d) Where additional absorption area is installed to increase the total area of an existing system and flows are generated from a common treatment tank, loading per square foot of the new area and the existing area shall be equal.

(e) Discharge from roof gutters, foundation drainage, floor drains not from sewage generating connections and

surface runoff may not be discharged to a treatment tank; nor may the discharges be permitted to flow over an absorption area or spray fields.

(f) The discharge of inadequately disinfected effluent or the discharge of effluent in a manner inconsistent with the system design specifications from an individual residential spray irrigation system shall constitute a nuisance.

**§ 73.12. Site location.**

(a) A proposed absorption area or spray field having the following characteristics shall be considered unsuitable for the installation of an onlot system or an individual residential spray irrigation system and a permit shall be denied where:

(1) The slope of the proposed absorption area or spray field is greater than 25%.

(2) The area is identified by completed Federal Flood Insurance mapping as a floodway. Where there is no flood mapping, a flood way extends 50 feet from the top of the stream bank as determined by the local agency. This paragraph is not applicable to spray fields.

(3) One or more rock outcrops exist within the proposed absorption area.

(4) In areas underlain by limestone, depressions left by earlier sinkholes exist either in whole or in part within the proposed absorption area or spray field.

(b) Absorption areas or spray fields may not be placed in or on fill unless the fill has remained in place for a minimum of 4 years to allow restoration of natural permeability. The fill shall be composed of clean mineral soil and meet the provisions of § 73.14 (relating to site investigation).

(c) Absorption areas or spray fields shall be sited only in or on undisturbed soils.

**§ 73.13. Minimum horizontal isolation distances**

(a) Minimum horizontal isolation distances shown in subsections (b)—(e) shall be maintained between the sewage disposal system and the features itemized except as provided by § 72.33 (relating to well isolation distance exemption). If conditions warrant, greater isolation distances may be required.

(b) The minimum horizontal isolation distances between the features named and treatment tanks, dosing tanks, lift pump tanks, filter tanks and chlorine contact/storage tanks shall comply with the following:

- (1) Property line, easement or right-of-way—10 feet.
- (2) Occupied buildings, swimming pools and driveways—10 feet.
- (3) An individual water supply or water supply system suction line—50 feet.
- (4) Water supply line under pressure—10 feet.
- (5) Streams, lakes or other surface waters—25 feet.
- (6) A cistern used as a water supply—25 feet.

(c) The following minimum horizontal isolation distances shall be maintained between the features named and the perimeter of the aggregate in the absorption area:

- (1) Property line, easement or right-of-way—10 feet.
- (2) Occupied buildings, swimming pools and driveways—10 feet.

(3) An individual water supply or water supply system suction line—100 feet.

(4) Water supply line under pressure—10 feet.

(5) Streams, water courses, lakes, ponds or other surface water—50 feet (for the purposes of this chapter wetlands are not surface waters).

(6) Other active onlot systems—5 feet.

(7) Surface drainageways—10 feet.

(8) Mine subsidence areas, mine bore holes or sink holes—100 feet.

(9) Rock outcrop or identified shallow pinnacle—10 feet.

(10) Natural or manmade slope greater than 25%—10 feet.

(11) A cistern used as a water supply—25 feet.

(12) Detention basins, retention basins and stormwater seepage beds—10 feet.

(d) The following minimum horizontal isolation distances shall be maintained between the features named and the wetted perimeter of the spray field:

- (1) Property lines, easements or right of ways—25 feet.
- (2) Occupied buildings and swimming pools—100 feet.
- (3) An individual water supply or water supply suction line—100 feet.
- (4) A cistern used as a water supply—25 feet.
- (5) Water supply line under pressure—10 feet.
- (6) Streams, watercourses, lakes, ponds or other surface waters—50 feet. For the purposes of this chapter wetlands are not surface waters.
- (7) Mine subsidence, boreholes, sinkholes—100 feet.
- (8) Roads or driveways—25 feet.
- (9) Unoccupied buildings—25 feet.
- (10) Rock outcrop—25 feet.

(e) The area within the wetted perimeter of the spray field may not be sited over an unsuitable soil profile

**§ 73.14. Site investigation.**

(a) *Absorption area.* Soil tests to determine the presence of a limiting zone and the capacity of the soil to permit the passage of water shall be conducted prior to permit issuance.

(1) On all locations where the installation of an absorption area is proposed, at least one excavation for examination of the soil profile shall be provided.

(2) The depth of the excavation shall be to the top of the limiting zone, or a maximum of 7 feet.

(3) All soil profile excavations shall be conducted within 10 feet of the proposed absorption area. A description of the soil profile shall be recorded on the site investigation and percolation test report form for onlot disposal of sewage issued by the Department.

(4) Where soil has been removed by grading or excavation, the surface of the undisturbed soil shall be considered to be the point from which the depth to limiting zone is measured. Excavating soil to system installation depth for the purpose of installing the system may not be considered disturbing the soil.

(5) When the examination of the soil profile reveals a limiting zone within 20 inches of the mineral soil surface,

percolation tests may not be conducted and a permit will be denied except as provided in § 73.77 (relating to general requirements for bonded disposal systems).

(6) Where examination of the soil profile reveals the absence of a limiting zone within 20 inches of the mineral soil surface, percolation tests shall be performed within the proposed absorption area. The average percolation rate shall be within the range indicated in § 73.16 (relating to absorption area requirements).

(7) The location and depth to the limiting zone of all soil profile excavations and the location of all percolation tests conducted on a lot shall be indicated on the plot plan of the Application for Sewage Disposal System issued by the Department or attached diagram.

(b) *Spray field.*

(1) Soil tests to determine the presence of a limiting zone shall be conducted prior to permit issuance.

(2) A minimum of 4 soil profile evaluations shall be evenly spaced within 10 feet of the perimeter of the proposed spray field when the spray field is less than or equal to 20,000 square feet.

(3) Spray fields in excess of 20,000 square feet shall be evaluated by evenly spacing the soil profiles within 10 feet of the perimeter of the proposed spray field at intervals of 100 feet or less.

(4) Soil profile information collected within the proposed spray field area shall be considered in the design and permitting of the system. Additional soils profiles, both on the perimeter or within the proposed spray field, may be required when the sewage enforcement officer identifies trends in the soils profiles or surface features which document variable soils conditions in the area of the proposed spray field. These trends include, but are not limited to, unsuitable soil areas mixed with suitable soils within the proposed site and surface features such as rock outcrops, mine subsidence, boreholes and sink-holes.

(5) Soil profiles shall be evaluated to the depth of bedrock, or rock formation or 40 inches whichever is shallower.

(6) When the examination of the soil profile reveals a limiting zone of a seasonal high water table within 10 inches of the mineral soil surface or a limiting zone as indicated by bedrock or coarse fragments with insufficient fine soil to fill voids that are located within 16 inches of the mineral soil surface, a permit for an individual residential spray irrigation system will be denied.

**§ 73.15. Percolation tests.**

Percolation tests shall be conducted in accordance with the following procedure:

(1) *Number and location.* Six or more tests shall be made in separate test holes spaced uniformly over the proposed absorption area site.

(2) *Results.* Percolation holes located within the proposed absorption area shall be used in the calculation of the arithmetic average percolation rate.

(3) *Type of hole.* Holes having a uniform diameter of 6 to 10 inches shall be bored or dug as follows:

(i) To the depth of the proposed absorption area, where the limiting zone is 60 inches or more from the mineral soil surface.

(ii) To a depth of 20 inches if the limiting zone is identified as seasonal high water table, whether perched

or regional; rock formation; other stratum; or other soil condition which is so slowly permeable that it effectively limits downward passage of effluent, occurring at less than 60 inches from the mineral soil surface.

(iii) To a depth 8 inches above the limiting zone or 20 inches, whichever is less, if the limiting zone is identified as rock with open joints or with fractures or solution channels, or as masses of loose rock fragments including gravel with insufficient fine soil to fill the voids between the fragments, occurring at less than 60 inches from the mineral soil surface.

(4) *Preparation.* The bottom and sides of the hole shall be scarified with a knife blade or sharp-pointed instrument to completely remove any smeared soil surfaces and to provide a natural soil interface into which water may percolate. Loose material shall be removed from the hole. Two inches of coarse sand or fine gravel shall be placed in the bottom of the hole to protect the soil from scouring and clogging of the pores.

(5) *Procedure for presoaking.* Holes shall be presoaked, according to the following procedure, to approximate normal wet weather or in-use conditions in the soil:

(i) *Initial presoak.* Holes shall be filled with water to a minimum depth of 12 inches over the gravel and allowed to stand undisturbed for 8 to 24 hours prior to the percolation test.

(ii) *Final presoak.* Immediately before the percolation test, water shall be placed in the hole to a minimum depth of 6 inches over the gravel and readjusted every 30 minutes for 1 hour.

(6) *Determination of measurement interval.* The drop in the water level during the last 30 minutes of the final presoaking period shall be applied to the following standard to determine the time interval between readings for each percolation hole:

(i) If water remains in the hole, the interval for readings during the percolation test shall be 30 minutes.

(ii) If no water remains in the hole, the interval for readings during the percolation test may be reduced to 10 minutes.

(7) *Measurement.* After the final presoaking period, water in the hole shall again be adjusted to approximately 6 inches over the gravel and readjusted when necessary after each reading.

(i) Measurement to the water level in the individual percolation holes shall be made from a fixed reference point and shall continue at the interval determined from paragraph (6) for each individual percolation hole until a minimum of eight readings are completed or until a stabilized rate of drop is obtained whichever occurs first. A stabilized rate of drop means a difference of 1/4 inch or less of drop between the highest and lowest readings of four consecutive readings.

(ii) The drop that occurs in the final period in percolation test holes, expressed as minutes per inch, shall be used to calculate the arithmetic average percolation rate.

(iii) When the rate of drop in a percolation test is too slow to obtain a measurable rate, the rate of 240 minutes per inch shall be assigned to that hole for use in calculating the arithmetic average percolation rate. The absorption area may be placed over holes with no measurable rate when the average percolation rate for the proposed absorption area is within the limits established in § 73.16 (relating to absorption and spray field area requirements), Table A.

(iv) When a percolation test hole is dry at the end of a 10 minute testing interval, that hole may not be used in the calculation of the arithmetic average percolation rate. If 1/3 or more of the percolation test holes are dry at the end of a 10 minute testing interval, the proposed absorption area may not be designed or installed over these holes unless the local agency determines that an anomaly caused the fast percolation rate and a retest of the area is within the acceptable percolation rate limits. If no anomaly is discovered, the local agency may accept the percolation test results from the remaining holes if the results are supplemented with the results of additional percolation testing conducted outside of the area in which the dry percolation holes were found.

**§ 73.16. Absorption and spray field area requirements.**

(a) *General.* Absorption areas and spray fields for single family dwellings not served by a community sewage system shall be designed based on a minimum flow of 400 gpd for all dwellings having three bedrooms or less. The minimum flow of 400 gpd shall be increased by 100 gpd for each bedroom over three.

(b) *Absorption areas.*

(1) Only the bottom of the aggregate area of the bed or trench shall be used in calculating absorption area requirements.

(2) Absorption area requirements for single family dwellings served by a community sewage system and for apartments or nonresidential establishments served by an individual onlot or community onlot sewage system shall be designed based on flows listed in § 73.17 (relating to sewage flows) for the type of facility to be served.

(3) For nonresidential establishments, a volume of 200 gpd shall be the minimum volume used in calculating the size of the absorption area.

(c) *Required absorption area.* Table A shall be used in calculating the square footage of absorption area required based on flows determined in subsections (a) and (b). Table A includes allowances for garbage grinders, automatic washing machines or dishwashers and water softeners.

(d) *Substitute.* When a substitute for aggregate, such as a leaching chamber, large diameter pipe, or other material or device, is used in the absorption area, subsection (b)(1) applies.

**TABLE A  
Minimum Aggregate Absorption Area Requirements for Treatment Tank Effluent:**

Average Percolation Rate Expressed as Minute Per Inch	Square Feet of Aggregate Area Per Gallon Per Day	
	All Systems Except Elevated Sand Mounds and Subsurface Sand Filters	Subsurface Sand Filters and Elevated Sand Mounds
Less than 3.0 <sup>D</sup>	Unsuitable	Unsuitable
3 - 5 <sup>C</sup>	Unsuitable	1.50 <sup>AB</sup>
6 - 15 <sup>C</sup>	1.19 <sup>B</sup>	1.50 <sup>AB</sup>
16 - 30 <sup>C</sup>	$(\text{Avg. Perc Rate} - 15) \times (0.040) + 1.19^{\text{B}}$	1.50 <sup>AB</sup>
31 - 45 <sup>C</sup>	$(\text{Avg. Perc Rate} - 30) \times (0.030) + 1.79^{\text{B}}$	$(\text{Avg. Perc Rate} - 30) \times (0.026) + 1.50^{\text{AB}}$
46 - 60 <sup>C</sup>	$(\text{Avg. Perc Rate} - 45) \times (0.028) + 2.24^{\text{B}}$	$(\text{Avg. Perc Rate} - 45) \times (0.022) + 1.89^{\text{A}}$
61 - 90 <sup>C</sup>	$(\text{Avg. Perc Rate} - 60) \times (0.023) + 2.66^{\text{A}}$	$(\text{Avg. Perc Rate} - 60) \times (0.020) + 2.22^{\text{A}}$
91 - 120 <sup>ACD</sup>	Unsuitable	$(\text{Avg. Perc Rate} - 90) \times (0.017) + 2.82^{\text{A}}$
121 - 150 <sup>CD</sup>	Unsuitable	$((\text{Avg. Perc Rate} - 120) \times (0.015) + 3.33) (1.05)^{\text{A}}$
151 - 180 <sup>CD</sup>	Unsuitable	$((\text{Avg. Perc Rate} - 150) \times (0.014) + 3.78) (1.10)^{\text{A}}$
Greater than 181 <sup>CD</sup>	Unsuitable	Unsuitable

A Pressure dosing required.

B One third reduction may be permitted for use of an aerobic tank.

C May be considered for experimental or alternate proposals.

D Unsuitable for subsurface sand filters.

(e) *Spray fields.* Table B shall be used in calculating the square footage of spray fields based on flows determined in Subsection (a). Table B includes allowances for garbage grinders, automatic washing machines, dishwashers and water softeners.

TABLE B

Soil Characteristics		Slope	Required Spray Field Area (Ft <sup>2</sup> )	
Depth To Rock	Depth To Water Table		3 Bedroom Home	Additional Area Per Bedroom
16 to 20 inches	10 to 40 inches	≤12%	40,000	10,000
		≥12%	80,000	20,000
	>40 inches	≤12%	15,000	3,750
		>12%	30,000	7,500
>20 inches	10 to 20 inches	≤12%	20,000	5,000
		≥12%	40,000	10,000
	>20 inches	≤12%	10,000	2,500
		>12%	20,000	5,000

§ 73.17. Sewage flows.

(a) The flow figures in this subsection and subsection (b) are peak daily flows for the design of community onlot sewage systems. These flow figures are not intended to be used for the calculation of flows for the design of community sewerage systems or for the allocation of flows related to community sewerage systems. Design and permit sewage flows for a community sewerage system are to be calculated using the procedures established in the Department's "Domestic Wastewater Facilities Manual." The sewage flow from single family dwellings served by a community onlot sewage system or from apartments, rooming houses, hotels and motels served by an individual or community sewage system shall be determined from the following table:

Type of Establishment Residential	Gallons/Unit/day Gallons/unit	BOD/unit
Hotels and motels	100	.30
Multiple family dwellings and apartments, including townhouses, duplexes and condominiums	400	1.13
Rooming houses (per unit)	200	.60
Single family residences	400*	.90

\*For units of 3 bedrooms or less; for each bedroom over 3, add 100 gallons.

(b) The sewage flow, which shall exclude any industrial waste, for nonresidential establishments served by an individual or community sewage system shall be determined from the following table:

Type of Establishment Commercial	Gallons/day	BOD/day
Airline catering (per meal served)	3	.03
One licensed operator Beauty shops	200	—
Bus service areas not including food (per patron and employe)	5	.02
Country clubs not including food (per patron and employe)	30	.02
Drive-in theaters (not including food—per space)	10	.06

Type of Establishment Commercial	Gallons/day	BOD/day
Factories and plants exclusive of industrial wastes (per employe)	35	.08
Laundries, self-service (gallons/washer)	400	2.00
Mobile home parks, independent (per space)	400	1.00
Warehouses (per employe)	35	—
Work or construction camps (semipermanent) with flush toilets (per employe)	50	.17
Work or construction camps (semipermanent) without flush toilets (per employe)	35	.02
Churches (additional kitchen waste per meal served)	3	—
Churches (additional with paper service per meal served)	1.5	—
Schools, boarding (per resident)	100	.17
Schools, day (without cafeterias, gyms or showers per student and employe)	15	.04
Schools, day (with cafeterias, but no gym or showers per student and employe)	20	.08
Schools, day (with cafeterias, gym and showers per student and employe)	25	.10
Camps, hunting and summer residential (night and day) with limited plumbing including water-carried toilet wastes (per person)	50	.12

Type of Establishment	Gallons/day	BOD/day
Recreational and Seasonal Fairgrounds and parks, picnic—with bathhouses, showers, and flush toilets (per person)	15	.06
Fairgrounds and parks, picnic (toilet wastes only, per person)	5	.06
Swimming pools and bathhouses (per person)	10	.06

(c) Actual water meter or sewer meter flow data indicating peak daily flows different than those shown in this section over a 1-year period for a similar nonresidential establishment may be accepted for use in sizing the onlot disposal system. If average daily flows are used, the peak daily flow shall be calculated by multiplying the average daily flow by two.

(d) Establishments with food preparation facilities are required to install adequately designed pretreatment units and traps to reduce greases and biological oxygen demand (BOD) prior to discharge to an individual or community sewage system.

**BUILDING SEWERS**

**§ 73.21. Specifications.**

(a) Building sewers shall be constructed of a durable material acceptable to the Department or the local agency.

(b) The local agency may restrict the type of materials used by code, ordinance or resolution and shall notify the applicant when restrictions are imposed.

(c) When the average daily flow of sewage from an establishment is 1,000 gallons or less, building sewers shall be at least 3 inches in diameter unless otherwise specified by local plumbing or building codes. When the average daily flow exceeds 1,000 gallons per day, building sewers shall be at least 6 inches in diameter unless otherwise specified by local plumbing or building codes.

(d) Cleanouts shall be provided at the junction of the building drain and building sewer.

(e) Cleanouts shall be provided at intervals of not more than 100 feet.

(f) Bends ahead of the treatment tank shall be limited to 45° or less where possible. If 90° bends cannot be avoided, they shall be made with two 45° bends.

(g) The grade of the building sewer shall be at least 1/8 inch per foot; however, the grade of the 10 feet of building sewer immediately preceding the treatment tank may not exceed 1/4 inch per foot.

(h) Building sewers shall be constructed with watertight joints, shall be of sufficient strength to withstand imposed loads and installed on material suitable for preventing damage from settling.

(i) The building sewer shall be installed to allow continuous venting of the treatment tank through the main building stack unless otherwise specified by local plumbing or building codes.

(j) Building sewers shall be connected to treatment tanks by means of watertight mechanical seals or hydraulic grouting. Use of Portland cement grouting is not permitted.

**TREATMENT TANKS**

**§ 73.31. Standards for septic tanks.**

(a) *Capacity.*

(1) The minimum liquid septic tank capacity for any installation is 900 gallons.

(2) For single-family dwelling units, not served by a community onlot system, a minimum daily flow of 400 gpd shall be used to determine required septic tank capacity. This figure shall be increased by 100 gallons for each additional bedroom over three. The daily flow indicated provides for use of garbage grinders, automatic washing machines, dishwashers and water softeners.

(3) The minimum septic tank capacity shall be calculated from the following table using estimated sewage flows from paragraph (2), or § 73.17(a)—(c) (relating to sewage flows):

Design flow (gallons per day)	Tank capacity (gallons)
0—500	(3.5 x flow exceeding 400 gpd) + (900)
500—5,000	(1.50 x flow exceeding 500 gpd) + (1,250)
5,000—7,500	(1.45 x flow exceeding 5,000 gpd) + (8,000)
7,500—10,000	(1.35 x flow exceeding 7,500 gpd) + (11,625)
over 10,000	(1.50 x the daily flow)

Note: Septic tanks may be connected in series to attain required capacity.

(b) *Construction.*

(1) Tanks shall be watertight and constructed of sound and durable material not subject to excessive corrosion or decay.

(i) Precast concrete tanks shall have a minimum wall thickness of 2 1/2 inches and be adequately reinforced.

(ii) Precast slabs used as covers shall have a thickness of at least 3 inches and be adequately reinforced.

(iii) Tanks having a liquid capacity of 5,000 gallons or less may not be constructed of blocks, bricks or similar masonry construction.

(iv) Tanks having a capacity in excess of 5,000 gallons may be constructed onsite to meet the standards of the National Concrete Masonry Association for reinforcement and waterproofing as listed in the most recent edition of its publication "Concrete Masonry Foundation Walls," copyright 1957 NCMA.

(v) Steel tanks shall meet United States Department of Commerce Standards 177-62.

(2) The depth of liquid in any tank or its compartments shall be:

(i) Not less than 2 1/2 nor more than 5 feet for tanks having a liquid capacity of 600 gallons or less.

(ii) Not less than 3 feet nor more than 7 feet for tanks having a liquid capacity of more than 600 gallons.

(3) No tank or compartment may have an inside horizontal dimension less than 36 inches.

(4) Septic tank installations may consist of tanks with multiple compartments or multiple tanks. The first compartment or tank shall have at least the same capacity as the second but may not exceed twice the capacity of the second. Tanks or compartments shall be connected in series and may not exceed four in number in any one installation.

(c) *Inlet and outlet connections.*

(1) The bottom of the inlet shall be a minimum of 3 inches above the bottom of the outlet.

(2) Inlet baffles or vented tees shall extend below the liquid level at least 6 inches. Penetration of the inlet device may not exceed that of the outlet device.

(3) The outlet baffles or vented tees of each tank or compartment shall extend below the liquid surface to a distance equal to 40% of the liquid depth. Penetration of outlet baffles or tees in horizontal cylindrical tanks shall be equal to 35% of the liquid depth.

(4) The inlet and outlet baffles or vented tees shall extend above liquid depth to approximately 1 inch from the top of the tank. Venting shall be provided between compartments and each tank.

(5) The outlet baffles or vented tees of the last compartment or tank shall be equipped with a solids retainer.

(d) *Treatment tank access.*

(1) Access to each tank or compartment of the tank shall be provided by a manhole with an inside dimension of at least 20 inches square (20 × 20) or in diameter, with a removable cover. The top of the tank containing the manhole or the top of a manhole extension may not be more than 12 inches below grade level. If access is extended to grade, the access cover shall be airtight. Grade level access covers shall be secured by bolts or locking mechanisms, or have sufficient weight to prevent unauthorized access.

(2) The ground shall slope away from any access extended to grade level.

(e) *Inspection port.* A maximum 4-inch diameter inspection port with sealed cover shall be installed to grade level above the inlet tee.

**§ 73.32. Standards for aerobic treatment tanks.**

## (a) Capacity shall comply with the following:

(1) The rated treatment capacity of an aerobic treatment tank shall be specified by the manufacturer. The manufacturer's data shall be in conformance with the approved test sequence and protocol in subsection (b).

(2) The minimum manufacturer's rated treatment capacity of an aerobic treatment tank approved under this section is 400 gallons per day.

(3) For single family dwelling units not served by a community system, a minimum daily flow of 400 gpd shall be used to determine required aerobic tank capacity. This figure shall be increased by 100 gallons for each additional bedroom over three. The daily flow indicated provides for use of garbage grinders, automatic washing machines, dishwashers and water softeners.

(4) For all other installations, the rated treatment capacity shall meet or exceed the estimated daily sewage flow as determined from § 73.17(a), (b) or (c) (relating to sewage flows).

(b) Testing and approval shall comply with the following:

(1) Aerobic treatment tanks serving single family dwellings, or establishments, with flows of 1,500 gpd or less shall bear the seal of the NSF indicating testing and approval by that agency under Standard No. 40.

(2) Units tested and awarded a seal under other than the current standard shall be approved for use until expiration of the seal. Units initially submitted for testing

or resubmitted for testing shall be approved under the version of Standard No. 40 in effect at that time.

(3) Aerobic treatment tanks serving establishments with flows exceeding 1,500 gpd shall have either:

(i) NSF certification under Criteria C-9.

(ii) Performance data certified by NSF under the provisions of that agency's Standard Performance Evaluation Method.

(c) The Department will provide local agencies with a current list of aerobic sewage treatment tanks that have been found to be in conformance with the Department's standard.

(d) Multiple aerobic treatment tanks connected for the purpose of achieving required hydraulic capacity shall only be permitted where the tanks are connected by parallel. All tanks shall have equal capacity and receive equal loading.

(e) Every aerobic sewage treatment tank shall be equipped with a visual and audible alarm system which shall be designed to respond to any electrical or mechanical failure or malfunction of the tank or any component thereof.

**DOSING AND DISTRIBUTION REQUIREMENTS****§ 73.41. General.**

Effluent from the treatment tank shall be discharged to the dosing tank, to the distribution box or directly to the absorption area through a watertight line a minimum of 3 inches in diameter unless otherwise specified by local plumbing or building codes. All lines shall be placed on a minimum grade of at least 1/4 inch per foot, sloping away from the treatment tank. If a distribution box is used, the lines from that box to the laterals shall meet the same standard. If a free access sand filter or buried sand filter is used, the lines from the treatment tank to the pump station and the filter tank to a lift station or chlorine contact tank or storage tank shall meet the standards of this section. Connections of lines to tanks and distribution boxes shall be made using water tight mechanical seals or hydraulic grouting. Use of Portland cement grouting material is not permitted.

**§ 73.42. Gravity distribution.**

(a) Gravity distribution may be used in all instances, except where prohibited by § 73.43 (relating to pressurized distribution).

(b) The distribution system shall be arranged to provide for uniform distribution of the effluent.

(c) The flow shall be equally divided between individual laterals of a trench system or between seepage beds by use of a distribution box.

(d) The flow shall be divided between individual laterals in a seepage bed by a distribution box or by an unperforated pipe header connecting all laterals within the bed. Where distribution is by means of an unperforated pipe header, the terminal ends of all individual laterals shall also be connected with unperforated pipe.

(e) Distribution boxes shall comply with the following:

(1) When a distribution box is used, it shall be installed level to provide equal distribution of treatment tank effluent to each line. For testing purposes, the



person responsible for the installation shall provide an adequate amount of water to check the level of the inlet and outlet lines.

(2) Construction shall comply with the following:

(i) Distribution boxes shall have removable covers.

(ii) Each lateral shall be connected separately to the distribution box.

(iii) The bottom of all outlets shall be at the same elevation, and the bottom of the inlet shall be at least 1 inch above the bottom of the outlet. The bottom of the outlet shall be at least 4 inches above the bottom of the distribution box.

(iv) Baffles shall comply with the following:

(A) A baffle shall be installed in the distribution box in the event that treatment tank effluent is discharged to the distribution box by a pump or siphon.

(B) The baffle shall be perpendicular to the inlet, be secured to the bottom of the box and extend vertically to a point level with the crown of the inlet pipe.

(v) A tee or elbow directed toward the bottom of the distribution box may be substituted for the baffle required by subparagraph (iv).

(3) Distribution boxes shall be installed on an adequate base of undisturbed or properly compacted earth or aggregate outside of the absorption area. Lightweight nonconcrete distribution boxes shall be anchored or otherwise secured to prevent shifting after installation. Adjustable distribution box weirs may be used on the outlet of the box.

(f) Laterals shall be a minimum of 3 inches in diameter unless a larger diameter is specified by local plumbing or building codes. Bends used in the disposal field shall be made with standard fittings.

(g) The maximum length of individual laterals employing gravity distribution is 100 feet.

**§ 73.43. Pressurized distribution.**

Pressurized distribution is required in the following instances:

(1) All elevated sand mounds.

(2) When the percolation rate exceeds 60 minute/inch.

(3) All systems having a total absorption area in excess of 2,500 square feet.

(4) Individual residential spray irrigation system spray fields and buried sand filters.

**§ 73.44. Pressurized distribution design.**

(a) General requirements are as follows:

(1) The piping used in a pressurized effluent system shall have watertight joints.

(2) Systems using pressure distribution shall meet the general requirements of §§ 73.52, 73.53, 73.55, and 73.166.

(3) Delivery pipes from dosing pumps shall be installed to facilitate drainage of the distribution piping back to the dosing tank between doses.

(b) Seepage beds of 2,500 square feet or less shall meet the following design standards.

(1) Conveyance of effluent from the dosing tank to the absorption area shall be through a delivery pipe sized to minimize friction loss. Check valves shall be prohibited on delivery pipes. Where the system designer determines

that water hammer may be a problem, thrust blocks may be installed on delivery pipes.

(2) When equally sized absorption areas are dosed simultaneously, a header pipe shall be used to connect the delivery pipe from the tank to the manifolds. The header pipe shall be sized to minimize friction loss. Effluent application rates per square foot of absorption areas served by a common header shall have a maximum design variation of 10%. If the distance from the treatment tank to the absorption area would cause excessive backflow into the dosing tank, a transfer tank may be used between the treatment tank or storage tank and dosing tank.

(3) Distribution of effluent to the individual laterals shall be by a central manifold extending into the absorption area from the delivery pipe or header. The manifold shall have the following minimum diameters:

<i>Sq. ft. of Absorption Area</i>	<i>Minimum Manifold Diameter</i>
200 to 1,199	1 1/2"
1,200 to 2,500	2"

(4) Laterals shall be extended from both sides of the manifold by opposing tees or a double sanitary tee.

(5) Laterals shall consist of 1 1/2 inch diameter pipe, with holes placed along the bottom of the pipe; an end cap shall be cemented on the terminal end of the lateral. Minimum hole size shall be 1/4 inch.

(6) The first hole in the lateral shall be 3 feet from the manifold. Additional holes shall be placed 6 feet on center with the last hole placed directly in the end cap.

(7) The maximum length of a lateral from the manifold to the end cap shall be 51 feet and contain nine holes.

(8) The location and spacing of the laterals shall conform to § 73.53(3)—(6) (relating to seepage beds).

(9) Opposing laterals may not differ in length by more than 6 feet.

(10) When less than the maximum length of lateral is used, as described in paragraph (7), the lateral shall be shortened in 6-foot sections with hole spacing maintained as required in paragraph (6).

(11) All systems shall be designed to maintain a minimum of 3 feet of head at the terminal end of each lateral.

(12) The minimum pump capacity (gpm) shall be calculated by multiplying the total number of discharge holes contained in the laterals of a proposed distribution layout by the gpm factor determined by the hole size at the design head level.

(13) Total pump head shall be calculated by addition of all losses incurred due to elevation changes, pipe and fitting friction losses, and the head level to be maintained at the terminal end of the lateral as specified in paragraph (11).

(14) For purposes of calculating head loss due to friction, head loss in the standard lateral as described in paragraph (7) shall be assumed to be 0. Head loss due to friction in pipe and fittings used in construction of the pressure system shall be calculated using a friction loss table for smooth-walled plastic pipe (C=150).

(15) When siphons are used in a pressure distribution system, each discharge hole shall be at least 5/16 inch in diameter. The discharge from all of the holes in the distribution system may not be less than the minimum rate of the siphon and may not vary from the average discharge rate of the siphon by more than 20%.

(c) Seepage beds of greater than 2,500 square feet shall meet the following design standards:

(1) The diameter of individual laterals, size and spacing of discharge holes, and minimum diameter of the distribution manifold may not be restricted by subsection (b) except that no discharge hole may be less than 1/4 inch for systems using pumps or 5/16 inch for systems using siphons.

(2) The maximum length of a lateral designed under this subsection or subsection (d) shall be 100 feet.

(3) Discharge rates from the individual holes of the lateral at design head shall be calculated using the sharp-edged discharge hole equation:  $gpm=11.82(d^2)(Eh)$

gpm=gallons per minute

(d)=diameter of hole (inches)

(h)=head to be maintained at the terminal ends of the lateral (in feet).

(4) All piping and fittings in the system shall be sized to minimize friction losses to provide as uniform distribution of effluent as possible.

(5) The design head at the terminal end of the last lateral shall be at least 3 feet.

(6) The head loss due to friction from the beginning of the distribution manifold to the terminal end of the last lateral may not exceed 15% of the head level to be maintained at the terminal end of the lateral.

(7) Spacing of laterals and discharge holes in the laterals shall provide for uniform distribution of the effluent over the seepage bed.

(8) The arrangement of laterals and discharge holes shall result in the discharge holes being spaced at the apexes of either squares or equilateral triangles.

(i) The maximum spacing between discharge holes shall be 10 feet where an equilateral triangle pattern is utilized.

(ii) The maximum spacing between discharge holes shall be 8 feet where a square pattern it utilized.

(9) The minimum pump capacity shall equal the total discharge from all holes in the laterals when operating at designed head.

(10) The permittee shall conduct a test pressurization of the completed distribution system in the presence of the sewage enforcement officer prior to covering the piping system from view. During the test, the permittee shall confirm that all joints are watertight and that a discharge is occurring from each hole.

(d) Design of pressure distribution in trenches shall comply with the following:

(1) Subsection (c)(1)—(4) and (10) applies to design of trenches utilizing pressurized effluent distribution.

(2) Variation in head in the laterals caused by differences in elevation or friction losses shall be compensated for by individual design of the laterals.

(3) The effluent application rate per square foot of any two trenches served by a common dosing tank shall have a maximum design variation of 10%.

(4) Equalization of loading may be accomplished by variation of discharge hole diameter between trenches, variation of spacing of discharge holes between trenches or another method approved by the Department or sewage enforcement officer.

(5) The maximum spacing between discharge holes is 10 feet.

(6) The manifold for a trench system shall be placed on undisturbed soil a minimum of 6 inches above the trench bottom.

(7) A minimum isolation distance of 3 feet shall be maintained between the manifold and the beginning of any trench. The individual laterals in the trench shall be connected to the manifold using unperforated pipe. The area beneath the manifold and connecting pipe shall consist of undisturbed or compacted soil.

(8) The design head at the terminal end of each lateral shall be at least 3 feet.

#### § 73.45. Dosing tanks.

Dosing tanks shall be constructed to the following specifications:

(1) Dosing tanks shall be constructed of materials to the specifications outlined in § 73.31(b) (relating to standards for septic tanks).

(2) For all systems other than individual residential spray irrigation systems, the dosing tank shall be designed so that the estimated daily flow shall be discharged to the absorption area in one or more doses. Minimum dose volume shall be five times the internal liquid capacity of the delivery pipe, manifold and laterals, or 100 gallons, whichever is greater. When a siphon is used in a pressure distribution system, the minimum dose volume shall be equal to the internal liquid capacity of the delivery line plus five times the internal liquid capacity of the manifold and laterals.

(3) The dosing tank shall have a minimum liquid capacity equal to or greater than two times the designed dose volume.

(4) Sufficient space shall be provided for electrical connections and proper pump control operation.

(5) Unless otherwise regulated by local electrical codes, all electrical connections shall be moisture resistant and at a point higher than the inlet pipe, or mounted above grade outside of the dosing tank or manhole extension within a tamper resistant, lockable control box.

(6) A watertight manhole, at least 20 inches square or 24 inches in diameter, extended to grade, shall be provided for access to the dosing tank. Manhole covers shall meet the specifications of § 73.31(d).

#### § 73.46. Dosing pumps, siphons and lift pumps.

(a) Dosing pumps for all onlot sewage disposal systems except individual residential spray irrigation systems shall meet the following specifications:

(1) The pump shall be sized to deliver a flow in gpm equal to or greater than the combined flows from all discharge holes in the laterals when operating at designed level of head and shall be rated by the manufacturer for handling of sewage effluent.

(2) The intake of the dosing pump shall be at least 6 inches from the bottom of the tank. The intake of any dosing pump shall be at a lower elevation than the lowest lateral.

(3) Pumps may not be suspended above the bottom of the tank by chains or similar equipment.

(4) A disconnect shall be incorporated into the piping within the dosing tank for ease of pump removal.

(5) An effective warning device, as described in § 73.62(c) (relating to standards for holding tanks), shall be installed in the dosing tank to indicate failure of the pump or siphon. Electrically operated warning systems shall be on a circuit and breaker separate from the pump.

(6) A siphon or other discharge mechanism may be substituted for a pump where site conditions permit the use of a gravity flow device, if the average discharge rate of the device meets the requirements of paragraph (1).

(7) A copy of the performance curve of the pump or discharge specifications for the siphon to be used shall be attached to the system design. A copy of the manufacturer's specification showing that the pump is designed to handle sewage or sewage effluent shall also be attached to the system design.

(8) When an aeration tank is used which results in a periodic pump discharge from the treatment tank, the discharge mechanism may be substituted for a dosing tank and pump if the periodic discharge rate meets the criteria in subsections (a)(1) and (b)(2) and § 73.45(2) (relating to dosing tanks).

(9) Pumps or siphons serving systems having total absorption areas greater than 2,500 square feet shall have a minimum discharge capacity at least two times the estimated peak flow for the facility served.

(10) When an establishment produces more than 50% of its total daily flow during a peak flow period, the minimum dose volume shall equal the anticipated flow during the peak period.

(11) Pumps employed for the purpose of lifting effluent to a higher elevation may not be deemed dosing pumps when the system does not meet the criteria of § 73.43 (relating to pressurized distribution). Pumps for this purpose shall have a discharge capacity at least two times the estimated peak flow of the facility served when operating at designed level of head, but at least 5 gpm and shall be rated by the manufacturer for handling sewage effluent.

(12) Siphon discharge lines shall be equipped with an observation port. The access to the observation port shall be extended to grade, capped and secured to prevent unauthorized entry.

(b) Lift pumps shall meet the following specifications:

(1) Meet the standards in subsection (a)(1)—(5), (7) and (8).

(2) Be designed to discharge a minimum flood dose of 2 inches over the sand surface.

(c) Dosing pumps used to pressurize a spray field distribution system shall be designed in accordance with the specifications in subsection (a)(1)—(5) and (7).

**CONSTRUCTION OF ABSORPTION AREAS**

**§ 73.51. General.**

(a) In all systems, if an absorption area is proposed, the top of the limiting zone shall be at least 4 feet below the bottom of the aggregate. Coarse aggregate used in the distribution system shall meet the requirements of the Department of Transportation specifications, Publication #408, section 703. The size and grading of the aggregate

shall meet AASHTO No. 57 requirements from a PADOT certified stockpile and shall be of Type B quality requirements.

(1) Where the depth to the top of the limiting zone is 60 inches or greater, the system shall be installed so that the bottom of the aggregate is a minimum of 4 feet above the limiting zone.

(2) Where the depth to the top of the limiting zone is less than 60 inches, an elevated sand mound is required. Isolation from the limiting zone shall be achieved as required by § 73.55(a)(3)—(5) (relating to elevated sand mounds).

(3) An absorption area may not be installed where less than 20 inches of suitable undisturbed mineral soil exists.

(4) When infiltration chambers or other devices which require no aggregate are used, adequate provisions to protect the infiltrative surfaces from damage by operation of pressure distribution systems shall be made.

(b) Before and after installation, equipment and vehicles shall be kept off the proposed absorption area, including the downslope area, to prevent undue compaction of the soil. Care shall be exercised during construction to prevent undue compaction and damage to the system and the downslope area.

(c) Soil moisture levels during construction of the absorption area shall be such that a sample of natural mineral soil taken from the level of the proposed installation will crumble if compressed into a ball.

**§ 73.52. Standard trenches.**

(a) *Design.* The maximum slope of the undisturbed soil of a proposed absorption area where a trench system may be permitted is 25%.

(1) For slopes between 15% and 25%, detailed design in relationship to elevation shall be provided.

The designer shall inspect the installation and verify that, to the best of his knowledge and belief, the system was installed in accordance with the plans and specifications. Copies of the plans and specifications and the designer's report are to be attached to the applicant's copy, sewage enforcement officer's copy and the Department's copy of the application for sewage permit.

(b) *Construction.* Trenches in an absorption area shall be constructed in accordance with the following:

(1) There shall be a minimum of two trenches per field.

(2) Trenches shall follow approximately the ground surface contours so that variations in trench depth shall be minimized.

(3) There shall be at least 6 feet of soil between the treatment tank or dosing tank and the nearest trench.

(4) The width of the bottom of the individual trench shall be 12 to 72 inches.

(5) The depth to the bottom of the absorption area shall be 12 to 36 inches.

(6) The bottom of the absorption area shall be level to a tolerance of 2 inches per 100 feet.

(7) The minimum width of undisturbed earth between trenches shall be 5 feet. When elevated sand mound trenches are used, the distance between trenches shall be measured from the toe of the sand of each trench.

(8) The minimum depth of aggregate material under laterals shall be 6 inches.

(9) Laterals shall be placed in the center of the trench. The first or last discharge hole of a lateral may be no more than 5 feet nor less than 2 feet from the ends of the trench.

(10) Laterals shall be level to a maximum tolerance of 4 inches of fall per 100 feet toward the terminal end of the lateral.

(11) The minimum depth of aggregate material over the laterals shall be 2 inches.

(12) The depth of aggregate shall be uniform throughout the absorption area.

(13) The top of the aggregate material shall be covered with geotextile fabric, untreated building paper or a 2-inch layer of hay, straw or similar material to prevent backfill material from settling into the aggregate.

(14) The minimum depth of earth cover over the aggregate in all installations shall be 12 inches. Where the top of the aggregate is less than 12 inches from the undisturbed soil surface, the soil cover shall extend beyond the absorption area by at least 3 feet on all sides.

(15) The backfill material shall consist of soil suitable for the growth of vegetation, and be seeded to control erosion.

(16) Trench laterals shall be fitted with end caps.

#### § 73.53. Seepage beds.

Whenever seepage beds are employed, they shall meet the requirements of § 73.52(b)(5), (6), (8) and (10)—(16) (relating to standard trenches) in addition to the following specifications:

(1) The maximum slope of the undisturbed soil of a proposed absorption area where a seepage bed may be permitted is 8.0%.

(2) The required absorption area may be provided by one or more seepage beds:

(i) The individual beds of a single onlot system shall be separated by a minimum of 5 feet.

(ii) When elevated sand mound beds are used, the distance between beds shall be measured from the toe of the sand of each bed.

(3) The bed shall contain a minimum of two laterals or two opposing sets of laterals when pressure distribution is used.

(4) Laterals shall be equally spaced a maximum of 6 feet on center, except as provided in § 73.44(c)(8) (relating to pressurized distribution design).

(5) Laterals shall be placed no further than 5 feet nor less than 2 feet from the sidewalls of the bed.

(6) Laterals shall be placed in the bed so that the first and last discharge holes may be no more than 5 feet nor less than 2 feet from the ends of the bed.

#### § 73.54. Subsurface sand filter beds and trenches.

(a) *General.* Subsurface sand filters without underdrains shall meet the following criteria:

(1) Subsurface sand filters may not be utilized on soils where the limiting zone occurs at less than 6 feet below the mineral soil surface.

(2) The average percolation rate, as determined by § 73.15 (relating to percolation tests), shall be greater than 90 minutes per inch.

(3) The average percolation rate at a depth between 36 and 60 inches shall be within the range of 3—90 minutes per inch.

(4) The average percolation rate obtained from paragraph (3) shall be applied to § 73.16(c) (relating to absorption area requirements) for determination of the absorption area and other system requirements.

(5) System design shall meet the requirements of § 73.52 (relating to standard trenches) or § 73.53 (relating to seepage beds) except as modified by subsection (b).

(b) *Construction.* Subsurface sand filters shall be constructed as follows:

(1) The maximum depth of the excavation shall be 5 feet.

(2) Sand meeting the specifications of § 73.55(c) (relating to sand specifications) shall be placed in the entire bed or trench to a minimum depth of 12 inches.

#### § 73.55. Elevated sand mounds.

(a) *Design.*

(1) The maximum slope of the undisturbed soil, to the extremities of the berm, of a proposed absorption area where elevated sand mound trenches may be permitted is 12%.

(2) The maximum slope of the undisturbed soil, to the extremities of the berm, of a proposed absorption area where an elevated sand mound bed may be permitted is 12%.

(3) The limiting zone is the base elevation for measuring the required depth of sand to achieve a minimum of 4 feet of satisfactory material between the bottom of the aggregate and the top of the limiting zone.

(4) A minimum of 1 foot of sand shall be placed under the aggregate in all elevated sand mound systems.

(5) Existing mineral soil shall be utilized. No mineral soil in the area of the elevated sand mound may be removed or disturbed for the purpose of adding or mixing fill material.

(6) Elevated sand mound trenches shall meet the requirements of § 73.52(b) (relating to standard trenches) and this section.

(7) Elevated sand mound beds on slopes up to 8% shall meet the requirements of § 73.53 (relating to seepage beds) and subsection (b). Other sand mound beds shall comply with subsection (d).

(b) *Construction.*

(1) Vegetation shall be cut close to the ground throughout the area to be utilized for the absorption area and berm. Bushes and trees shall be cut flush with the ground surface; roots shall be left in place. Cut vegetation or organic litter shall be raked and removed from the absorption and berm areas.

(2) The proposed absorption area not obstructed by stumps or other obstacles shall be roughed or plowed parallel with the contour to a maximum depth of 6 inches, using a multiple share chisel plow or similar implement attached to light-weight equipment. Rotary tilling is prohibited.

(3) Under no circumstances may equipment travel on the plowed soil surface until the sand is in place.

(4) Immediately after plowing, sand shall be placed over the exposed plowed surface. Sand shall be placed from the upslope side of the bed using only lightweight equipment.

(5) The slope of the sand not directly beneath the aggregate area shall be approximately 50%.

(6) The top of the sand directly beneath the aggregate shall be level to a tolerance of  $\pm 2$  inches per 100 feet.

(7) The mound shall be surrounded by a berm consisting of mineral soil containing less than 20% coarse fragments with no coarse fragments greater than 4 inches in diameter, more stable and less permeable than the sand, and lightly compacted during construction to contain and protect the mound interior. The width of this berm shall be a minimum of 3 feet at the top of the aggregate.

(8) Upon completion, the outside slope of the berm may be no greater than 50% and shall be seeded to assure the stability of the berm. The cover over the aggregate shall be a minimum of 1 foot of soil suitable for the growth of vegetation.

(9) No equipment may be permitted on the downslope side of the mound with the exception of lightweight equipment that is used to form the downslope berm. To the greatest extent possible, aggregate and the cover material shall be placed from the upslope side of the mound.

(10) When a mound system with trenches is used, the area between the individual trenches shall be filled with mineral soil. A minimum distance of 5 feet shall separate sand of individual trenches. This measurement shall be from the toe of the sand.

(11) The area surrounding the mound shall be grated to provide for diversion of surface runoff waters.

(c) *Sand.* Sand suppliers shall provide certification in writing to the sewage enforcement officer and permittee, with the first delivery to the job site from every sand source listing the amount of sand delivered, and that all sand supplied meets the requirements posted in the Department of Transportation specifications Publication #408, section 703. The size and grading shall meet bituminous concrete sand Type B #1 or #3 requirements from a Department of Transportation certified stockpile. The sieve analysis shall be conducted in accordance with PTM #616 and #100.

(d) *Elevated sand mound beds.* Elevated sand mound beds on slopes greater than 8% shall meet the requirements of § 73.53 and subsection (b). In addition, the following apply:

(1) The absorption area shall have a minimum length to width ratio of 4 to 1.

(2) The long axis of the absorption area shall be perpendicular to the slope. The bed construction shall follow the ground surface contours.

(3) Upon completion, the outside slope of the berm may be no greater than 33.3%.

(4) Designing the location of multiple absorption areas so that one absorption area is placed hydraulically upgradient or downgradient from the other may cause the lower absorption area to fail because of excessive hydraulic loading from the upper absorption area. Unless the potential for an impact is shown to be nonexistent by the applicant through the alternative/experimental system process, this type of absorption area placement is prohibited.

**RETAINING TANKS**

**§ 73.62. Standards for holding tanks.**

(a) A holding tank shall be constructed to meet the specifications of § 73.31(b)(1) (relating to standards for septic tanks).

(b) The minimum capacity of a holding tank is 1,000 gallons or a volume equal to the quantity of waste generated in 3 days, whichever is larger.

(c) The holding tank shall be equipped with a warning device to indicate when the tank is filled to within 75% of its capacity. The warning device shall create an audible and visual signal at a location frequented by the homeowner or responsible individual.

(d) Disposal of waste from a holding tank shall be at a site approved by the Department.

**§ 73.64. Chemical toilet or other portable toilet.**

(a) When proposed for use at temporary construction sites, facilities providing temporary recreational or sporting activities (such as a special event) or temporary seasonal facilities other than those intended for human habitation, chemical toilets or other portable toilets may be exempt from the onlot permitting requirements of Chapter 72 (relating to administration of sewage facilities permitting program) at the discretion of the local agency but improper installation or maintenance of these toilets shall constitute a nuisance under section 14 of the act (35 P. S. § 750.14) and be enforceable by the local agency.

(b) If multiple chemical toilets or other portable toilets are proposed for temporary use at construction sites, recreational activities or seasonal facilities, all units proposed for installation shall be included under one permit.

**§ 73.65. Recycling toilet, incinerating toilet or composting toilet.**

(a) Recycling, incinerating and composting toilets shall bear the seal of the NSF indicating testing and approval by that agency under Standard No. 41.

(b) The device utilized shall meet the installation specifications of the manufacturer and shall be operated and maintained in a manner that will preclude any potential pollution or health hazards.

(c) If the installation of a recycling toilet, incinerating toilet or composting toilet is proposed for a new residence or establishment, an onlot sewage system or other approved method of sewage disposal shall be provided for treatment of washwater or excess liquid from the unit, except as provided in subsection (e). Both sewage disposal facilities shall be included under one permit.

(d) When the installation of a recycling toilet, incinerating toilet, composting toilet or another type of water conservation device is proposed for an existing residence or facility and no alteration of the onlot system is proposed, a permit is not required.

(e) When a composting toilet or incinerating toilet is proposed for installation on a lot meeting the requirements of § 71.63 (relating to retaining tanks), it shall be deemed equivalent to and permitted as a privy. The device shall be operated and maintained in accordance with the manufacturer's specifications. Discharges of liquids from these units, except to onlot sewage systems meeting the requirements of this part or other method of sewage disposal approved under this chapter or approved by the Department are prohibited.

**EXPERIMENTAL AND ALTERNATE SYSTEMS****§ 73.71. Experimental sewage systems.**

(a) Experimental systems may be considered for individual or community systems in any of the following cases:

(1) To solve an existing pollution or public health problem.

(2) To overcome specific site suitability deficiencies, or as a substitute for systems described in this chapter on suitable lots.

(3) To overcome specific site suitability deficiencies, or as a substitute for systems described in this chapter on suitable lots.

(4) To evaluate new concepts or technologies applicable to onlot disposal.

(5) To evaluate the applicability to onlot disposal of established concepts or technologies having successful use in comparable applications in the field of engineering.

(6) To demonstrate a design having successful use in other jurisdictions under environmental conditions similar to or more restrictive than those in this Commonwealth.

(7) To utilize under varying site conditions an experimental design, either in whole or in part, which has been deemed successful by the Department.

(b) A person desiring to install an experimental sewage system or alter a component of an existing system using a method, technology or design determined to be experimental by the Department shall submit complete preliminary design plans and specifications to the sewage enforcement officer and the Department for review and comment prior to submitting an application for a permit. The Department will determine if classification as an experimental system, method, technology or design is appropriate for the submission and provide review comments to the sewage enforcement officer.

(c) The following criteria shall be considered in the design of experimental systems:

(1) The volume and rate of sewage flow, including reductions attributed to water conservation devices and recycling devices.

(2) The chemical and bacteriological characteristics of the flow, including the varying nature, if any, of the contributing sources.

(3) The treatment of the sewage flow, including, if appropriate:

(i) The type of treatment, that is aerobic, anaerobic, chemical, or other.

(ii) The degree and extent of treatment afforded, including the chemical and biological characteristics of the effluent.

(iii) The hydraulic design, including flow rates, retention time, settling rates, and sludge and scum storage.

(4) The materials of construction including durability and chemical resistance of all system components.

(5) The characteristics and limitations of the disposal site, including, if appropriate:

(i) The depth, composition and projected effects of any limiting zone identified through extensive onsite evaluation of the soils present.

(ii) The determination of the soil permeability through percolation tests, hydraulic conductivity tests or other acceptable testing procedures conducted on the site.

(iii) The chemical and bacteriological characteristics of the subsurface or other waters.

(iv) The natural and modified slope of the disposal site and contiguous areas, with particular attention to downslope areas.

(v) The relationship of the disposal site to existing and proposed drainage patterns, including surface and subsurface flows.

(vi) The stability and renovative abilities of controlled fill areas.

(6) The design of the absorption area, including:

(i) Dimensions.

(ii) Method of distribution and hydraulic design considerations of the distribution system.

(iii) Rate of application.

(iv) Relationship to other sewage disposal systems or features, water supply sources, surface waters, recharge areas, rock outcrops and other site improvements.

(v) Determination of hydraulic loading limitations—that is, interface acceptance rate of hydraulic conductivity of receiving soils—in accordance with accepted principles of hydraulic flow.

(7) Effect upon the groundwater, including:

(i) Fecal coliform.

(ii) Chlorides.

(iii) Nitrates.

(iv) Nutrients.

(v) Other degrading material.

(8) Other considerations as may be appropriate to comply with the act.

(d) Except as provided in subsection (f), experimental designs will be approved for use only when it has been determined that an individual or community sewage disposal system meeting the requirements of this chapter or another successful experimental design, or that sewage services meeting the requirements of the Clean Streams Law and Article II (relating to water resources), may be installed if the experiment is deemed a failure.

(e) Except as provided in subsection (f), monitoring, observation, testing or other requirements which are deemed necessary to verify the success of the experiment shall be required.

(f) A replacement area, as specified in subsection (d), and monitoring as specified in subsection (e), may not be required where the experimental design is an attempt to solve an existing pollution or public health problem.

(g) An application for an experimental system shall include the following:

(1) Detailed plans and specifications sufficient to comply with this section.

(2) A description of the system, device or process; its capabilities; and scheduled maintenance, if any, which are necessary for continued function.

(3) The identity of the person responsible for the design of the system; performance of scheduled maintenance, if required; and responsibility for repair or replacement in event of failure of the system.

(h) Each application for an experimental system shall be accompanied by a statement acknowledging the requirement that the sewage enforcement officer be notified of any malfunction or modification of the original system design.

(i) Prior to issuing a permit for an experimental sewage system, the sewage enforcement officer shall consider the comments of the Department.

**§ 73.72. Alternate sewage systems.**

(a) Alternate systems shall be considered for individual onlot or community onlot systems in any of the following cases:

(1) To solve an existing pollution or public health problem.

(2) To overcome specific site suitability deficiencies, or as a substitute for systems described in this chapter on suitable lots.

(3) To overcome specific engineering problems related to the site or its proposed use.

(4) To utilize under varying site conditions an experimental design, either in whole or in part, which has been deemed successful by the Department.

(b) A person desiring to install an alternate sewage system shall submit complete preliminary design plans and specifications to the sewage enforcement officer and the Department for review and comment prior to submitting an application for a permit. The Department will determine if classification as an alternate system is appropriate and provide review comments to the sewage enforcement officer.

(c) The following criteria shall be considered in the design of alternate systems:

(1) The volume and rate of sewage flow, including reductions attributed to water conservation devices and recycling devices.

(2) The chemical and bacteriological characteristics of the flow, including the varying nature, if any, of the contributing sources.

(3) The treatment of the sewage flow, including, if appropriate:

(i) The type of treatment—that is, aerobic, anaerobic, chemical or other.

(ii) The degree and extent of treatment afforded, including the chemical and biological characteristics of the effluent.

(iii) The hydraulic design, including flow rates, retention time, settling rates and sludge and scum storage.

(4) Materials of construction, including durability and chemical resistance of all system components.

(5) The characteristics and limitations of the disposal site, including, if appropriate:

(i) The depth, composition and projected effects of any limiting zone identified through extensive onsite evaluation of the soils present.

(ii) Determination of the soil permeability through percolation tests, hydraulic conductivity tests or other acceptable testing procedures conducted on the site.

(iii) The chemical and bacteriological characteristics of the subsurface or other waters.

(iv) The natural and modified slope of the disposal site and contiguous areas, with particular attention to downslope areas.

(v) The relationship of the disposal site to existing and proposed drainage patterns, including surface and subsurface flows.

(vi) The stability and renovative abilities of controlled fill areas.

(6) The design of the absorption area including:

(i) Dimensions.

(ii) Method of distribution and hydraulic design considerations of the distribution system.

(iii) Rate of application.

(iv) Relationship to other sewage disposal systems or features, water supply sources, surface waters, recharge areas, rock outcrops and other site improvements.

(v) Determination of hydraulic loading limitations—that is, interface acceptance rate or hydraulic conductivity of receiving soils in accordance with accepted principles of hydraulic flow.

(7) The effect upon the groundwater, including the following:

(i) Fecal coliform.

(ii) Chlorides.

(iii) Nitrates.

(iv) Nutrients.

(v) Other degrading material.

(8) Other considerations as may be appropriate to comply with the act.

(d) An application for an alternative system shall include the following:

(1) Detailed plans and specifications sufficient to comply with this section.

(2) A description of the system, device or process; its capabilities; and scheduled maintenance, if any, which is necessary for continued function.

(3) The identity of the person responsible for the design of the system and performance of scheduled maintenance, if required.

(e) Each application for an alternative system shall be accompanied by a statement acknowledging the requirement that the sewage enforcement officer be notified of any malfunction or modification of the original system design.

(f) Prior to issuing a permit for an alternative sewage system, the sewage enforcement officer shall consider the comments of the Department.

**INDIVIDUAL RESIDENTIAL SPRAY IRRIGATION SYSTEM STANDARDS**

**§ 73.161. General.**

(a) Copies of the plans and specifications along with the designer's report shall be attached to the applicant's copy, local agency's copy and the Department's copy of the application for sewage permit.

(b) Standards for individual residential spray irrigation systems described in the following sections shall also be

met: §§ 73.1, 73.12—73.14, 73.16, 73.17, 73.21, 73.31, 73.32, 73.41 and 73.43.

**§ 73.162. Intermittent sand filters.**

(a) There are two types of intermittent sand filters available for use with individual residential spray irrigation systems. The standards for free access sand filters and buried sand filters are included in this section.

(b) Free access sand filters shall meet the following standards:

(1) *Filter.* The filter shall be constructed in a tank meeting the following specifications:

(i) The surface area of a filter tank shall be a minimum of 40 square feet for systems using an aerobic treatment tank and serving a single family residence of three bedrooms or less. The filter area shall be increased by 10 square feet for each additional bedroom over three.

(ii) Systems proposing the use of a septic tank to serve a single family dwelling of three bedrooms or less shall be designed using two filter tanks or a single tank with two chambers. Each tank or chamber shall have a surface area of 40 square feet. The filter area of each filter shall be increased by 10 square feet for each additional bedroom over three.

(iii) Tanks shall be watertight and made of a sound, durable material which is not subject to excessive corrosion or decay.

(iv) Concrete tanks shall have a minimum wall thickness of 2 1/2 inches and be adequately reinforced.

(v) If precast slabs are used as tank tops to support the access covers, the slabs shall have a thickness of at least 3 inches and be adequately reinforced.

(vi) Tanks shall be designed and constructed so that the depth from the cover to the top of the sand layer provides sufficient freeboard to allow for maintenance of the sand surface.

(vii) Access shall be provided by a minimum of two access openings. These access openings shall be a minimum of 36 inches by 36 inches and provide access to the entire surface of the filter.

(viii) The tank wall shall be extended a minimum of 6 inches above final grade.

(ix) Access covers shall be insulated against severe weather, secured by bolts or locking mechanisms, prevent water infiltration and the entrance of debris, and be lightweight to facilitate routine maintenance.

(2) *Media.* Sand suppliers shall provide certification, in writing to the sewage enforcement officer and permittee, with the first delivery to the job site, that the sand to be supplied meets the following specifications:

(i) The fine aggregate shall have an effective size of between 0.3 to 0.6 mm, a uniformity coefficient of less than 3.5 and less than 4% of the coarse aggregate passing the #100 sieve. The sieve analysis shall be conducted in accordance with Department of Transportation PTM #616 and the uniformity coefficient shall be determined by using Department of Transportation PTM #149.

(ii) The sand may not contain more than 15% by weight deleterious material as determined by Department of Transportation PTM #510.

(3) *Contents of certification.* The written certification shall include the name of the supplier, the testing results, the testing date, the amount of material purchased under this certification and the delivery date.

(4) *Construction.* The sand filter shall be constructed according to the following standards:

(i) A 4-inch diameter perforated underdrain pipe with a minimum 2,500 pound crush test specification shall be placed on the bottom of the tank.

(ii) Two rows of perforations between 1/2 to 3/4 inch in diameter shall be drilled in the underdrain pipe at 6 inch intervals and the pipe shall be placed so the perforations face downward and the rows are approximately 45° from each other.

(iii) Aggregate shall be placed around the underdrain to a total depth of 5 inches from the bottom of the tank. Coarse aggregate used in the underdrains and distribution system shall meet the Type B requirements posted in the Department of Transportation specifications Publication #408, section 703, Table B and uniform size and grading of the aggregate shall meet AASHTO No. 57 requirements, as described in Form 408, section 703.2, Table C from a Department of Transportation certified stockpile.

(iv) A minimum depth of 4 inches of aggregate shall be placed over the aggregate underdrain material. Coarse aggregate used in the transition layer shall meet the Type B requirements posted in the Department of Transportation specifications Publication #408, section 703, Table B. The size and grading shall meet AASHTO No. 8 requirements, as described in Form 408, section 703.2, Table C from a Department of Transportation certified stockpile.

(v) Sand shall be placed over the aggregate to a depth of at least 24 inches.

(vi) The sand in the filter may not be greater than 36 inches deep.

(vii) The central distribution system shall be designed and installed to convey a minimum 2 inch flood dose of effluent to the surface of the sand filter. A high water alarm shall be installed in the filter tank which produces an audible and visual alarm when effluent backs up on the filter surface to 12 inches above the surface of the sand.

(viii) When two filters or chambers are required to treat septic tank effluent, the duplicate units shall, at the discretion of the designer, be flooded alternately, periodically by using valves, or simultaneously.

(ix) The central distribution piping may not be more than 2 inches in diameter.

(x) The height of the central distribution system's effluent outlet above the sand surface shall allow for the installation of a splash plate and the maximum flooding depth of the sand filter.

(xi) A concrete splash plate or other suitable material shall be located under each effluent outlet to prevent scouring of the sand surface. Movement of the splash plate during the flooding operation shall be prevented.

(c) Buried sand filters shall meet the following standards:

(1) *Location.*

(i) When buried sand filters are proposed to be installed in areas where bedrock is encountered above the proposed depth of the sand filter, or where the seasonal high groundwater table rises above the proposed depth of the sand filter, the designer should consider measures to prevent filter and liner damage and groundwater infiltration.



(ii) A buried sand filter may not be constructed in unstabilized fill.

(2) *Size.*

(i) The size of the sand filter shall be determined on the basis of the appropriate application rate and the estimated daily sewage flow in accordance with § 73.16(a) (relating to absorption area requirements) but the sand filter area shall be at least 300 square feet for use with either an aerobic treatment tank or septic tank with solids retainers units.

(ii) For a single family residence, the minimum sand filter area shall be based on a maximum hydraulic loading of 1.15 square feet per gallon per day.

(iii) Where aerobic treatment precedes the sand filter, a 1/3 reduction to the filter area may be used to size the filter.

(3) *Media.*

(i) At least 2 inches of clean aggregate meeting subsection (b)(4)(iii) shall surround underdrains and distribution pipes. A minimum of 4 inches of aggregate meeting subsection (b)(4)(iv) shall be placed over the underdrain. A layer of porous geotextile material may be placed on top of both layers of aggregate to prevent migration of soil or sand into the aggregate.

(ii) At least 24 inches of clean sand shall be placed over the underdrain aggregate. The sand shall meet the specifications in § 73.55(c) (relating to elevated sand mounds).

(iii) The minimum depth of earth cover over the coarse aggregate in all installations shall be 12 inches. When the top of the aggregate is less than 12 inches from the undisturbed soil surface, the soil cover shall extend beyond the filter area by at least 3 feet on all sides. The soil over the sand filter shall be so graded that surface water will run off, consist of soil suitable for the growth of vegetation and be seeded to control erosion.

(4) *Underdrain piping.*

(i) Underdrain piping shall be laid on a grade of 3 to 6 inches per 100 feet sloped to the outfall pipe.

(ii) Underdrain piping shall be positioned between the distribution laterals to maximize effluent travel through the filter sand.

(iii) Underdrain piping holes shall be equal or greater in number and size to the distribution piping holes.

(iv) Underdrain piping shall have two rows of holes placed at approximately 45° angle from each other along the bottom half of the pipe.

(v) The outfall pipe from the underdrain header shall have an antiseep collar and bentonite clay plug or a leak proof boot sealed as per manufacturer's instructions to the subsurface sand filter liner.

(5) *Filter base and liner.* The base of the filter shall be sloped to the underdrain pipe a maximum of 1%. An impervious liner of hypalon, polyvinyl chloride or polyethylene sheeting of 20 millimeter thickness or equal shall be installed on a tamped earth base to prevent seepage to the groundwater. A concrete bottom and sides may also be used at the discretion of the designer. A 2-inch layer of sand or a layer of 10 ounce porous geotextile material shall be provided on each side of the liner to prevent punctures and tears. Seams shall be made according to manufacturer's specifications.

(6) *Distribution of effluent.* Distribution of effluent to the buried sand filter shall meet the requirements of §§ 73.44—73.46 (relating to pressurized distribution design; dosing tanks; and dosing pumps).

**§ 73.163. Spray fields.**

(a) The maximum slope of the undisturbed soil where a spray field may be permitted is 25%.

(b) Individual residential spray irrigation system spray fields are not permitted on:

(1) Soils with evidence of a seasonal high water table at less than 10 inches from the surface.

(2) Soils with rock formations at less than 16 inches from the surface.

(3) Floodplain soils or floodprone areas unless any required encroachment permits have been obtained from the Department and the encroachment is in compliance with local ordinances pertaining to flood areas.

(4) Agricultural areas in active production of food for human consumption.

(c) Slopes shall be as follows:

(1) Open, grassed areas—limited to 12%.

(2) Forested areas—limited to 25%.

(3) Nonfood producing agricultural areas—limited to 4%

(d) Spray field sizing based upon soils characteristics shall be in accordance with Table B in § 73.16(e) (relating to absorption area and spray field requirements).

(e) Construction shall be as follows:

(1) The area upslope of the spray field shall be graded or bermed to divert upland drainage from the spray field site.

(2) The downslope portion of the permitted spray field shall be graded or bermed to retain effluent on the permitted spray site.

(3) The permitted spray field shall be covered with vegetation.

(4) Construction activity within the spray field site shall be conducted in a manner which will minimize earth disturbance and compaction.

**§ 73.164. Chlorine contact/storage tanks.**

(a) The minimum liquid capacity of an individual residential spray irrigation system storage tank serving a three bedroom dwelling, excluding chlorine contact volume, is 2,000 gallons. The tank size shall be increased an additional 500 gallons for each additional bedroom over three. Additional increases in size may be required where more than 5 days storage is needed due to climatic conditions or when spray fields are located in floodplain or floodprone areas.

(b) Storage tanks used in individual residential spray irrigation systems shall meet the construction standards in § 73.45(1) and (4)—(6) (relating to dose tank). When more than one tank is used, the tanks shall be connected together at the bottom to equalize the liquid level in the tanks.

**§ 73.165. Disinfection.**

(a) Disinfection of effluent is required prior to spraying. The disinfection shall be by chlorination and shall produce an effluent which will contain a concentration not greater than 200 fecal coliform organisms per 100 milliliters in a single sample. Disinfection units shall be

installed in accordance with the manufacturer's specifications. Disinfection units shall be reliable, able to disinfect sewage effluent and be easily maintained by the property owner.

(b) A chlorinator shall be designed to maintain a chlorine residual of 0.2 PPM to 2 PPM and provide for a 30 minute contact time.

(1) When an erosion chlorinator is proposed, the base of the unit may be placed no deeper than 36 inches below finished grade.

(2) When a lift pump is used to keep the unit no deeper than 36 inches below finished grade, the pump shall have a discharge rate that does not exceed the manufacturer's specifications for the erosion chlorinator and shall meet the appropriate specification of § 73.46 (relating to dosing pumps, siphons and lift pumps).

(3) Chlorine contact time may be obtained using a separate chlorine contact tank or in-line chlorination followed by the storage tank.

(4) Chlorinators shall be housed separately from chlorine contact tanks or storage tanks unless the tanks are specifically designed to house chlorinators.

**§ 73.166. Design of pressure distribution for individual residential spray irrigation systems.**

(a) Design of pressure distribution in an individual residential spray irrigation system shall comply with the following:

(1) Conveyance of effluent from the storage tank to the spray field shall be through a delivery pipe sized to minimize friction loss.

(2) Check valves shall be prohibited on delivery lines. Air relief valves may be placed at high points in the delivery lines to prevent air locks.

(3) The delivery line and laterals shall be designed so that the effluent will drain back to the storage tank or otherwise designed to prevent freezing of the lines and sprinkler heads.

(4) Individual laterals shall be sized to minimize friction loss. The hydraulic loss (friction and elevation changes) within a lateral shall be less than 20 % of the operating head of the sprinklers.

(5) Design of laterals should include consideration of measures to prevent freezing of lines.

(6) Spacing of laterals and sprinklers shall provide for distribution of the effluent over the spray field using a design nozzle pattern that does not overlap adjacent spray nozzle wetted perimeters.

(7) Design of the spray field shall be based on the manufacturer's sprinkler specifications listing operating head, wetted diameter, nozzle size and discharge rate which shall be attached to the system design.

(8) Sprinklers shall be installed on risers 18 inches to 5 feet above grade level.

(9) Sprinklers shall be kept clear of obstructing vegetation for a radius of 5 feet.

(10) The design head of the sprinkler may not exceed the manufacturer's specifications for each system component.

(11) The minimum pump capacity shall equal the total discharge from all sprinklers when operating at design head.

(12) Total pump head shall be calculated by addition of all losses incurred due to elevation changes, pipe and fitting friction losses and the design head of the sprinkler.

(13) The effluent shall be discharged to the spray field once per day. A manual override shall be installed in the system to allow interruption of this spray cycle when weather conditions are not conducive to spraying.

(14) The permittee shall conduct a test pressurization of the completed spray field in the presence of the sewage enforcement officer prior to covering the piping system from view. During the test, the sewage enforcement officer shall confirm that all joints are water tight, the design head is achieved and the manual override is functional.

**§ 73.167. Operation and maintenance.**

Individual residential spray irrigation systems require periodic maintenance by the property owner and entity established under § 72.25(h) (relating to permit requirements for operation and maintenance of individual residential spray irrigation systems). Without proper maintenance, system components will fail and pollution or a public health hazard will occur. This may result in costly repairs and civil penalties. The system designer shall provide an operation and maintenance manual, which may be supplemented with manufacturer's manuals and instructions, to the permittee that includes, as a minimum, the following required standards for operation and maintenance to be met by the permittee:

(1) Septic tanks, dosing tanks, lift pump tanks and chlorine contact/storage tanks shall be inspected every 6 months for structural integrity of the tank, inlet and outlet baffles, solids retainer, pumps, siphons and electrical connections.

(2) Aerobic tanks shall be inspected every 6 months for structural integrity of the tank, inlets and outlet baffles, buoyed solids retainer, pumps, siphons and electrical connections. The inspection and concurrent pumping of excess solids shall be conducted in accordance with manufacturer's and NSF requirements.

(3) Free access sand filters, buried sand filters, chlorinators, the pressurized spray irrigation plumbing and spray nozzles and the spray fields shall be inspected periodically by the property owner and every 6 months by the maintenance entity established under § 72.25(h). Each component shall be inspected for compliance with the following standards:

(i) Chlorine residual samples after the contact/retention tank shall be maintained at a concentration of at least 0.2 PPM.

(ii) The chlorinator shall be functioning within the specifications of the manufacturer. Bridging of chlorine tablets may not be occurring.

(iii) Solids may not be accumulated on the surface of the sand in the free access sand filter nor may 12 inches to effluent be ponded over the sand. The high water alarm shall be functional.

(iv) The surface of the free access sand shall be raked and porous and any sand removed shall be replaced with sufficient clean sand to maintain the depth at a minimum of 24 inches.

(v) The plumbing in the free access sand filter tank shall be functional and free of leaks and splash plates shall be in place.

(vi) The free access sand filter tank and cover shall be structurally sound and unauthorized access equipment

shall be in place. Insulation shall be in place.

(vii) The areas of the buried sand filter shall be free of ponded effluent and downgradient seepage.

(viii) The plumbing to the spray field shall be functional and free of leaks.

(ix) The spray nozzles shall be functioning within the design specifications and the extent of the designed wetted perimeter and each nozzle.

(4) A laboratory shall test the discharge to the system for fecal coliforms, carbonaceous biological oxygen de-

mand (CBOD), suspended solids and chlorine residual to determine compliance with Chapter 72 (relating to the administration of sewage facilities permitting program). At least annually, a copy of the tests results along with the most recent inspection of the system by the maintenance entity established under § 72.25(h) shall be sent to the local agency.

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