

**ARTICLE 3. AQUIFER PROTECTION PERMITS – GENERAL PERMITS**

**PART A. GENERAL PROVISIONS**

**R18-9-A301. DISCHARGING UNDER A GENERAL PERMIT**

- A. Discharging requirements.
1. Type 1 General Permit. A person may discharge under a Type 1 General Permit without submitting a Notice of Intent to Discharge if the discharge is authorized by and meets:
    - a. The applicable requirements of Article 3, Part A of this Chapter; and
    - b. The specific terms of the Type 1 General Permit established in Article 3, Part B of this Chapter.
  2. Type 2 General Permit. A person may discharge under a Type 2 General Permit if:
    - a. The discharge is authorized by and meets the applicable requirements of Article 3, Part A of this Chapter and the specific terms of the Type 2 General Permit established in Article 3, Part C of this Chapter;
    - b. The person files a Notice of Intent to Discharge under subsection (B); and
    - c. The person submits the applicable fee established in 18 A.A.C. 14.
  3. Type 3 General Permit. A person may discharge under a Type 3 General Permit if:
    - a. The discharge is authorized by and meets the applicable requirements of Article 3, Part A of this Chapter and the specific terms of the Type 3 General Permit established in Article 3, Part D of this Chapter;
    - b. The person files a Notice of Intent to Discharge under subsection (B);
    - c. The person satisfies any deficiency requests from the Department regarding the administrative completeness review and substantive review and receives a written Discharge Authorization from the Director; and
    - d. The person submits the applicable fee established in 18 A.A.C. 14.
  4. Type 4 General Permit. A person may discharge under a Type 4 General Permit if:
    - a. The discharge is authorized by and meets the applicable requirements of Article 3, Part A of this Chapter and the specific terms of the Type 4 General Permit established in Article 3, Part E of this Chapter;
    - b. The person files a Notice of Intent to Discharge under subsection (B);
    - c. The person satisfies any deficiency requests from the Department regarding the administrative completeness review and substantive review, including any deficiency relating to the construction of the facility;
    - d. The person receives a written Discharge Authorization from the Director before the facility discharges; and
    - e. The person submits the applicable fee established in 18 A.A.C. 14 or according to A.R.S. §§ 49-107 and 49-112.
- B. Notice of Intent to Discharge.
1. A person seeking a Discharge Authorization under a general permit under subsections (A)(2), (3), or (4) shall submit, by certified mail, in person, or by another method approved by the Department, a Notice of Intent to Discharge on a form provided by the Department.
  2. The Notice of Intent to Discharge shall include:
    - a. The name, address, and telephone number of the applicant;
    - b. The name, address, and telephone number of a contact person familiar with the operation of the facility;
    - c. The name, position, address, and telephone number of the owner or operator of the facility who has overall responsibility for compliance with the permit;
    - d. The legal description of the discharge areas, including the latitude and longitude coordinates;
    - e. A narrative description of the facility or project, including expected dates of operation, rate, and volume of discharge;
    - f. he additional requirements, if any, specified in the general permit for which the authorization is being sought;
    - g. A listing of any other federal or state environmental permits issued for or needed by the facility, including any individual permit, Groundwater Quality Protection Permit, or Notice of Disposal that may have previously authorized the discharge; and
    - h. A signature on the Notice of Intent to Discharge certifying that the applicant agrees to comply with all applicable requirements of this Article, including specific terms of the general permit.
  3. Receipt of a completed Notice of Intent to Discharge by the Department begins the administrative completeness review for a Type 3 or Type 4 General Permit.
- C. Type 3 General Permit authorization review.
1. Inspection. The Department may inspect the facility to determine that the applicable terms of the general permit have been met.
  2. Discharge Authorization issuance.
    - a. If the Department determines, based on its review and an inspection, if conducted, that the facility conforms to the requirements of the general permit and the applicable requirements of this Article, the Director shall issue a Discharge Authorization.
    - b. The Discharge Authorization authorizes the person to discharge under terms of the general permit and

- applicable requirements of this Article.
3. Discharge Authorization denial. If the Department determines, based on its review and an inspection, if conducted, that the facility does not conform to the requirements of the general permit or other applicable requirements of this Article, the Director shall notify the person of the decision not to issue the Discharge Authorization and the person shall not discharge under the general permit. The notification shall inform the person of:
    - a. The reason for the denial with reference to the statute or rule on which the denial is based;
    - b. The person's right to appeal the denial, including the number of days the applicant has to file a protest challenging the denial and the name and telephone number of the Department contact person who can answer questions regarding the appeals process; and
    - c. The person's right to request an informal settlement conference under A.R.S. §§ 41-1092.03(A) and 41-1092.06.
- D. Type 4 General Permit review.
1. Pre-construction phase and facility construction. A person shall not begin facility construction until the Director issues a Construction Authorization.
    - a. Inspection. The Department may inspect the facility site before construction to determine that the applicable terms of the general permit will be met.
    - b. Review. If the Department determines, based on an inspection or its review of design plans, specifications, or other required documents that the facility does not conform to the requirements of the general permit or other applicable requirements of this Article, the Department shall make a written request for additional information to determine whether the facility will meet the requirements of the general permit.
    - c. Construction Authorization. If the Department determines, based on the review described in subsection (D)(1)(b) and any additional information submitted in response to a written request, that the facility design conforms with the requirements of the general permit and other applicable requirements of this Article, the Director shall issue a Construction Authorization to the person seeking to discharge. A Construction Authorization for an on-site wastewater treatment facility shall contain:
      - i. The design flow of the facility,
      - ii. The characteristics of the wastewater sources contributing to the facility,
      - iii. The general permits that apply, and
      - iv. A list of the documents that are the basis for the authorization.
    - d. Construction Authorization denial. If the Department determines, based on the review described in subsection (D)(1)(b) and any additional information submitted in response to a written request, that the facility design does not conform to the requirements of the general permit or other applicable requirements of this Article, the Director shall notify the person of the decision not to issue a Construction Authorization. The notification shall include the information listed in subsections (D)(2)(d).
    - e. Construction.
      - i. A person shall complete construction within two years of receiving a Construction Authorization.
      - ii. Construction shall conform with the plans and documents approved by the Department in the Construction Authorization. A change in location, configuration, dimension, depth, material, or installation procedure does not require approval by the Department if the change continues to conform with the specific standard in this Article used as the basis for the original design.
      - iii. The person shall record all changes made during construction, including any changes approved under R18-9-A312(G) on the site plan as specified in R18-9-A309(C)(1) or on documents as specified in R18-9-A309(C)(2) or R18-9-E301(E), as applicable.
    - f. Completion of construction.
      - i. After completing construction of the facility, the person seeking to discharge shall submit any applicable documents specified in R18-9-A309(C) with the Request for Discharge Authorization form for an on-site wastewater treatment facility and the Engineer's Certificate of Completion specified in R18-9-E301(E) for a sewage collection system. Receipt of the documents by the Department initiates the post-construction review phase.
      - ii. If the Department does not receive the documentation specified in subsection (D)(1)(f)(i) by the end of the two-year construction period, the Notice of Intent to Discharge expires, and the person shall not continue construction or discharge.
      - iii. If the Notice of Intent to Discharge expires, the person shall submit a new Notice of Intent to Discharge under subsection (B) and the applicable fee under subsection (A)(4)(e) to begin or continue construction.
  2. Post-construction phase.
    - a. Inspection. The Department may inspect the facility before issuing a Discharge Authorization to determine whether:
      - i. The construction conforms with the design authorized by the Department under subsection (D)(1)(c) and any changes recorded on the site plan as specified in R18-9-A309(C)(1) or other documents as specified in R18-9-A309(C)(2) or R18-9-E301(E), as applicable; and

- ii. Terms of the general permit and applicable terms of this Article are met.
- b. Deficiencies. If the Department identifies deficiencies based on an inspection of the constructed facility or during the review of documents submitted with the request for the Discharge Authorization, the Director shall provide a written explanation of the deficiencies to the person.
- c. Discharge Authorization issuance.
  - i. Upon satisfactory completion of construction and documents required under R18-9-A309(C)(1), R18-9-A309(C)(2), or R18-9-E301(E), as applicable, the Director shall issue a Discharge Authorization.
  - ii. The Discharge Authorization allows a person to discharge under terms of the general permit and applicable requirements of this Article and the stated terms of the Construction Authorization.
- d. Discharge Authorization denial. If, after receiving evidence of correction submitted by the person seeking to discharge, the Department determines that the deficiencies are not satisfactorily corrected, the Director shall notify the person seeking to discharge of the Director's decision not to issue the Discharge Authorization and the person shall not discharge under the general permit. The notification shall inform the person of:
  - i. The reason for the denial with reference to the statute or rule on which the denial is based;
  - ii. The person's right to appeal the denial, including the number of days the applicant has to file a protest challenging the denial and the name and telephone number of the Department contact person who can answer questions regarding the appeals process; and
  - iii. The person's right to request an informal settlement conference under A.R.S. §§ 41-1092.03(A) and 41-1092.06.

#### R18-9-A302. POINT OF COMPLIANCE

The point of compliance is the point at which compliance with Aquifer Water Quality Standards is determined.

- 1. Except as provided in this Section or as stated in a specific general permit, the applicable point of compliance at a facility operating under a general permit is a vertical plane downgradient of the facility that extends through the uppermost aquifers underlying that facility.
- 2. The point of compliance is the limit of the pollutant management area.
  - a. The pollutant management area is the horizontal plane of the area on which pollutants are or will be placed.
  - b. If a facility operating under a general permit is located within a larger pollutant management area established under an individual permit issued to the same person, the point of compliance is the applicable point of compliance established in the individual permit.

#### R18-9-A303. RENEWAL OF A DISCHARGE AUTHORIZATION

- A. Unless a Discharge Authorization under a general permit is transferred, revoked, or expired, a person may discharge under the general permit for the authorization period as specified by the permit type, including any closure activities required by a specific general permit.
- B. An authorization to discharge under a Type 1 or Type 4 General Permit is valid for the operational life of the facility.
- C. A permittee authorized under a Type 2 or Type 3 General Permit shall submit an application for renewal on a form provided by the Department with the applicable fee established in 18 A.A.C. 14 at least 30 days before the end of the renewal period.
  - 1. The following are the renewal periods for Type 2 and Type 3 General Permit Discharge Authorizations:
    - a. 2.01 General Permit, five years;
    - b. 2.02 General Permit, seven years;
    - c. 2.03 General Permit, two years;
    - d. 2.04 General Permit, five years;
    - e. 2.05 General Permit, five years;
    - f. 2.06 General Permit, five years; and
    - g. Type 3 General Permits, five years.
  - 2. The renewal period for coverage under a Type 2 General Permit begins on the date the Department receives the Notice of Intent to Discharge.
  - 3. The renewal period for coverage under a Type 3 General Permit begins on the date the Director issues the written Discharge Authorization.
- D. If the Discharge Authorization is not renewed within the renewal period specified in subsection (B)(1), the Discharge Authorization expires.

#### R18-9-A304. NOTICE OF TRANSFER

- A. Transfer of authorization under a Type 1 General Permit.
  - 1. A permittee transferring ownership of a facility covered by a Type 1.01 through 1.08, or 1.10 through 1.12

- General Permit is not required to notify the Department of the transfer.
2. A permittee transferring ownership of an on-site wastewater treatment facility operating under a Type 1.09 General Permit shall follow the requirements under R18-9-A316.
  3. A permittee transferring ownership of a sewage treatment facility operating under a Type 1.09 General Permit shall submit a Notice of Transfer to the Department by certified mail within 15 days after the date that ownership changes.
- B. Transfer of authorization under a Type 2, 3, or 4.01 General Permit.
1. If a change of ownership occurs for a facility covered by a Type 2, 3, or 4.01 General Permit facility, the permittee shall provide a Notice of Transfer to the Department or to the health or environmental agency delegated by the Director to administer Type 4.01 General Permits, by certified mail within 15 days after the date that ownership changes. The Notice of Transfer, on a form approved by the Department, shall include:
    - a. Any information that has changed from the original Notice of Intent to Discharge,
    - b. Any other transfer requirements specified for the general permit, and
    - c. The applicable fee established in 18 A.A.C. 14.
  2. The Department may require a permittee covered by a Type 2, 3, or 4.01 General Permit to submit a new Notice of Intent to Discharge and to obtain a new authorization under R18-9-A301(A)(2), (3) and (4), as applicable, if the volume or characteristics of the discharge have changed from the original application.
- C. Transfer of a Type 4.02 through 4.23 General Permit. A permittee transferring ownership of an on-site wastewater treatment facility operating under one or more Type 4.02 through 4.23 General Permits shall follow the requirements under R18-9-A316.

#### R18-9-A305. FACILITY EXPANSION

- A. A permittee may expand a facility covered by a Type 2 General Permit if, before the expansion, the permittee provides the Department with the following information by certified mail:
1. An updated Notice of Intent to Discharge,
  2. A certification signed by the facility owner stating that the expansion continues to meet all the conditions of the applicable general permit, and
  3. The applicable fee established under 18 A.A.C. 14.
- B. A permittee may expand a facility covered by a Type 3 or Type 4 General Permit if the permittee submits a new Notice of Intent to Discharge and the Department issues a new Discharge Authorization.
1. The person submitting the Notice of Intent to Discharge for the expansion may reference the previous Notice of Intent to Discharge if the previous information is identical, but shall provide full and detailed information for any changed items.
  2. The Notice of Intent to Discharge shall include:
    - a. Any applicable fee established under 18 A.A.C. 14, and
    - b. A certification signed by the facility owner stating that the expansion continues to meet all of the requirements relating to the applicable general permit.
  3. Upon receiving the Notice of Intent to Discharge, the Department shall follow the applicable review and authorization procedures described in R18-9-A301(A)(3) or (4).

#### R18-9-A306. CLOSURE

- A. To satisfy the requirements under A.R.S. § 49-252, a permittee shall close a facility authorized to discharge under a general permit as follows:
1. If the discharge is authorized under a Type 1.01 through 1.08, 1.10, 1.11, 2.05, 2.06, or 4.01 General Permit, closure notification is unnecessary and clean closure is met when:
    - a. The permittee removes material that may contribute to a continued discharge; and
    - b. The permittee eliminates, to the greatest degree practical, any reasonable probability of further discharge from the facility and of exceeding any Aquifer Water Quality Standard at the applicable point of compliance;
  2. For a discharge authorized under a Type 2.02, 3.02, 3.05 through 3.07, or 4.23 General Permit, the facility meets clean closure requirements if the permittee provides notice and submits sufficient information for the Department to determine that:
    - a. Any material that may contribute to a continued discharge is removed;
    - b. The permittee has eliminated to the greatest degree practicable any reasonable probability of further discharge from the facility and of exceeding any Aquifer Water Quality Standard at the applicable point of compliance; and
    - c. Closure requirements, if any, established in the general permit are met;
  3. If the discharge is authorized under a Type 1.12, 2.01, 2.03, 2.04, 3.01, 3.03, or 3.04 General Permit, the permittee shall comply with the closure requirements in the general permit;
  4. If the discharge is from an on-site wastewater treatment facility authorized under a Type 1.09 or 4.02 through 4.22 General Permit, the permittee shall comply with the closure requirements in R18-9-A309(D); and

5. If the discharge is from a sewage treatment facility authorized under a Type 1.09 General Permit, the permittee shall comply with the closure requirements under subsection (A)(1).
- B. For a facility operating under a general permit and located at a site where an individual area-wide permit has been issued, a permittee may defer some or all closure activities required by this subsection if the Director approves the deferral in writing. The permittee shall complete closure activities no later than the date that the closure activities identified in the individual area-wide permit are performed.

#### R18-9-A307. REVOCATION OF COVERAGE UNDER A GENERAL PERMIT

- A. After notice and opportunity for a hearing, the Director may revoke coverage under a general permit and require the permittee to obtain an individual permit for any of the following:
  1. The permittee fails to comply with the terms of the general permit as described in this Article, or
  2. The discharge activity conducted under the terms of the general permit causes or contributes to the violation of an Aquifer Water Quality Standard at the applicable point of compliance.
- B. The Director may revoke coverage under a general permit for any or all facilities within a specific geographic area, if, due to geologic or hydrologic conditions, the cumulative discharge of the facilities has violated or will violate an Aquifer Water Quality Standard established under A.R.S. §§ 49-221 and 49-223. Unless the public health or safety is jeopardized, the Director may allow continuation of a discharge until the Department:
  1. Issues a single individual permit,
  2. Authorizes a discharge under another general permit, or
  3. Consolidates the discharges authorized under the general permits by following R18-9-107.
- C. If an individual permit is issued to replace general permit coverage, the coverage under the general permit allowing the discharge is automatically revoked upon issuance of the individual permit and notification under subsection (E) is not required.
- D. If the Director revokes coverage under a general permit, the facility shall not discharge unless allowed under subsection (B) or under an individual permit.
- E. If coverage under the general permit is revoked under subsections (A) or (B), the Director shall notify the permittee by certified mail of the decision. The notification shall include:
  1. A brief statement of the reason for the decision;
  2. The effective revocation date of the general permit coverage;
  3. A statement of whether the discharge shall cease or whether the discharge may continue under the terms of revocation in subsection (B);
  4. Whether the Director requires a person to obtain an individual permit, and if so:
    - a. An individual permit application form, and
    - b. Identification of a deadline between 90 and 180 days after receipt of the notification for filing the application;
  5. The applicant's right to appeal the revocation, the number of days the applicant has to file an appeal, and the name and telephone number of the Department contact person who can answer questions regarding the appeals process; and
  6. The applicant's right to request an informal settlement conference under A.R.S. §§ 41-1092.03(A) and 41-1092.06.

#### R18-9-A308. VIOLATIONS AND ENFORCEMENT FOR ON-SITE WASTEWATER TREATMENT FACILITIES

- A. A person who owns or operates an on-site wastewater treatment facility contrary to the provisions of a Type 4 General Permit is subject to the enforcement actions under A.R.S. § 49-261;
- B. A person who violates this Article or a specific term of a general permit for an on-site wastewater treatment facility is subject to enforcement actions under A.R.S. § 49-261.

#### R18-9-A309. GENERAL PROVISIONS FOR ON-SITE WASTEWATER TREATMENT FACILITIES

- A. General requirements and prohibitions.
  1. No person shall discharge sewage or wastewater that contains sewage from an on-site wastewater treatment facility except under an Aquifer Protection Permit issued by the Director.
  2. A person shall not install, allow to be installed, or maintain a connection between any part of an on-site wastewater treatment facility and a drinking water system or supply so that sewage or wastewater contaminates the drinking water.
  3. A person shall not bypass or release sewage or partially treated sewage that has not completed the treatment process from an on-site wastewater treatment facility.
  4. A person shall not use a cesspool for sewage disposal.
  5. A person constructing a new on-site wastewater treatment facility or replacing the treatment works or disposal works of an existing on-site wastewater treatment facility shall connect to a sewage collection system if:

- a. One of the following applies:
  - i. A provision of a Nitrogen Management Area designation under R18-9-A317(C) requires connection;
  - ii. A county, municipal, or sanitary district ordinance requires connection; or
  - iii. The on-site wastewater treatment facility is located within an area identified for connection to a sewage collection system by a Certified Area-wide Water Quality Management Plan adopted under 18 A.A.C. 5 or a master plan adopted by a majority of the elected officials of a board or council for a county, municipality, or sanitary district; or
- b. A sewer service line extension is available at the property boundary and both of the following apply:
  - i. The service connection fee is not more than \$6000 for a dwelling or \$10 times the daily design flow in gallons for a source other than a dwelling, and
  - ii. The cost of constructing the building sewer from the wastewater source to the service connection is not more than \$3000 for a dwelling or \$5 times the daily design flow in gallons for a source other than a dwelling.
6. The Department shall prohibit installation of an on-site wastewater treatment facility if the installation will create an unsanitary condition or environmental nuisance or cause or contribute to a violation of an Aquifer Water Quality Standard.
7. A person shall operate the permitted on-site wastewater treatment facility so that:
  - a. Flows to the facility consist of typical sewage and do not include any motor oil, gasoline, paint, varnish, solvent, pesticide, fertilizer, or other material not generally associated with toilet flushing, food preparation, laundry, or personal hygiene;
  - b. Flows to the facility from commercial operations do not contain hazardous wastes as defined under A.R.S. § 49-921(5) or hazardous substances;
  - c. If the sewage contains a component of nonresidential flow such as food preparation, laundry service, or other source, the sewage is adequately pretreated by an interceptor that complies with R18-9-A315 or another device authorized by a general permit or approved by the Department under R18-9-A312(G);
  - d. Except as provided in subsection (A)(7)(c), a sewage flow that does not meet the numerical levels for typical sewage is adequately pretreated to meet the numerical levels before entry into an on-site wastewater treatment facility authorized by this Article;
  - e. Flow to the facility does not exceed the design flow specified in the Discharge Authorization;
  - f. The facility does not create an unsanitary condition or environmental nuisance, or cause or contribute to a violation of either a Aquifer Water Quality Standard or a Surface Water Quality Standard; and
  - g. Activities at the site do not adversely affect the operation of the facility.
8. A person shall control the discharge of total nitrogen from an on-site wastewater treatment facility as follows:
  - a. For an on-site wastewater treatment facility operating under the 1.09 General Permit or proposed for construction in a Notice of Intent to Discharge under a Type 4 General Permit and the facility is located within a Nitrogen Management Area, the provisions of R18-9-A317(D) apply;
  - b. For an on-site wastewater treatment facility proposed for construction in a Notice of Intent to Discharge under R18-9-E323, the provisions of R18-9-E323(A)(4) apply;
  - c. For a subdivision proposed under 18 A.A.C. 5, Article 4, for which on-site wastewater treatment facilities are used for sewage disposal, the permittee shall demonstrate in the geological report required in R18-5-408(E)(1) that total nitrogen loading from the on-site wastewater treatment facilities to groundwater is controlled by providing one of the following:
    - i. For a subdivision platted for a single family dwelling on each lot, calculations that demonstrate that the number of lots within the subdivision does not exceed the number of acres contained within the boundaries of the subdivision;
    - ii. For a subdivision platted for dwellings that do not meet the criteria specified in subsection (A)(8)(c)(i), calculations that demonstrate that the nitrogen loading over the total area of the subdivision is not more than 0.088 pounds (39.9 grams) of total nitrogen per day per acre calculated at a horizontal plane immediately beneath the active treatment of the disposal fields, based on a total nitrogen contribution to raw sewage of 0.0333 pounds (15.0 grams) of total nitrogen per day per person; or
    - iii. An analysis by another means of demonstration showing that the nitrogen loading to the aquifer due to on-site wastewater treatment facilities within the subdivision does not cause or contribute to a violation of the Aquifer Water Quality Standard for nitrate at the applicable point of compliance.
9. Repairs.
  - a. A Notice of Intent to Discharge is not required for routine work that maintains a facility.
  - b. The following work is not considered routine work and a Notice of Intent to Discharge is required:
    - i. Converting a facility from operation only under gravity to one requiring a pump or other powered equipment for treatment or disposal;
    - ii. Modifying or replacing a facility operating under the 1.09 General Permit with a different type of



- flows used to calculate the design flow of the facility;
  - 4. A list of materials, components, and equipment for constructing the on-site wastewater treatment facility;
  - 5. Drawings, reports, and other information that are clear, reproducible, and in a size and format specified by the Department; and
  - 6. For a facility that includes treatment or disposal works permitted under R18-9-E303 through R18-9-E323:
    - a. Construction quality drawings that show the following:
      - i. Systems, subsystems, and key components, including manufacturer's name, model number, and associated construction notes and inspection milestones, as applicable;
      - ii. A title block, including facility owner, revision date, space for addition of the Department's application number, and page numbers;
      - iii. A plan and profile with the elevations of wastewater pipelines, and treatment and disposal components, including calculations justifying the absorption area, to allow Department verification of hydraulic and performance characteristics;
      - iv. Cross sections showing wastewater pipelines, construction details and elevations of treatment and disposal components, original and finished grades of the land surface, seasonal high water table if less than 10 feet below the bottom of a disposal works or 60 feet below the bottom of a seepage pit, and a soil elevation evaluation to allow Department verification of installation design and performance; and
      - v. Drainage pattern, drainage controls, and erosion protection, as applicable, for the facility; and
    - b. A draft operation and maintenance manual for the on-site wastewater treatment facility consisting of the tasks and schedules for operating and maintaining performance over a 20-year operational life;
- C. Additional requirements for a Discharge Authorization under a Type 4 General Permit.
- 1. If the entire on-site wastewater treatment facility, including treatment works and disposal works, will be permitted under R18-9-E302, the Director shall issue the Discharge Authorization if:
    - a. The site plan accurately reflects the final location and configuration of the components of the treatment and disposal works, and
    - b. The applicant certifies on the Request for Discharge Authorization form that the septic tank passed the watertightness test required by R18-9-A314(5)(d).
  - 2. If the on-site wastewater treatment facility is proposed under R18-9-E303 through R18-9-E323, either separately or in any combination of with each other or with R18-9-E302, the Director shall issue the Discharge Authorization if the following documents are submitted to the Department:
    - a. As-built plans showing changes from construction quality drawings submitted under subsection (B)(6)(a);
    - b. A final list of equipment and materials showing changes from the list submitted under subsection (B)(4);
    - c. A final operation and maintenance manual for the on-site wastewater treatment facility consisting of the tasks and schedules for operating and maintaining performance over a 20-year operational life;
    - d. A certification that a service contract for ensuring that the facility is operated and maintained to meet the performance and other requirements of the applicable general permits exists for at least one year following the beginning of the operation of the on-site wastewater treatment facility, including the name of the service provider, if the on-site wastewater treatment facility is permitted under:
      - i. R18-9-E304;
      - ii. R18-9-E308 through R18-9-E315;
      - iii. R18-9-E316, if the facility includes a pump; or
      - iv. R18-9-E318 through R18-9-E322;
    - e. Other documents, if required by the separate general permits in 18 A.A.C. 9, Article 3, Part E;
    - f. A Certificate of Completion signed by the person responsible for assuring that installation of the facility conforms to the design approved under the Construction Authorization under R18-9-A301(D)(1)(c);
    - g. The name of the installation contractor and the Registrar of Contractor's license number issued to the installation contractor; and
    - h. A certification that any septic tank installed as a component of the on-site wastewater treatment facility passed the watertightness test required by R18-9-A314(5)(d).
  - 3. The Director shall specify in the Discharge Authorization:
    - a. The permitted design flow of the facility,
    - b. The characteristics of the wastewater sources contributing to the facility, and
    - c. A list of the documents submitted to and reviewed by the Department satisfying subsection (C)(2).
- D. Closure requirements. A person who permanently discontinues use of an on-site wastewater treatment facility or a cesspool, or is ordered by the Director to close an abandoned facility, shall:
- 1. Remove all sewage from the facility and dispose of the sewage in a lawful manner;
  - 2. Disconnect and remove electrical and mechanical components;
  - 3. Remove or collapse the top of any tank or containment structure.
    - a. Punch a hole in the bottom of the tank or containment structure if the bottom is below the seasonal high groundwater table;
    - b. Fill the tank or containment structure or any cavity resulting from its removal with earth, sand, gravel,



- available for inspection at the Arizona Department of Environmental Quality, 1110 W. Washington, Phoenix, AZ 85007 or may be obtained from the American Society for Testing and Materials International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959:
- i. "Standard Practice for Subsurface Site Characterization of Test Pits for On-site Septic Systems, D5921-96(2003)e1 (2003)," published by the American Society for Testing and Materials; and
  - ii. "Standard Practice for Soil Investigation and Sampling by Auger Borings, D1452-80 (2000)," published by the American Society for Testing and Materials;
- b. Percolation testing as specified in subsection (F);
  - c. Seepage pit performance testing as specified in subsection (G); or
  - d. Another method of subsurface characterization, approved by the Department, that ensures compliance with water quality standards through proper system location, selection, design, installation, and operation.
2. Subsurface limiting conditions. The investigator shall determine whether any of the following limiting conditions exist in the primary and reserve areas of the on-site wastewater treatment facility within a minimum of 12 feet of the land surface or to an impervious soil or rock layer if encountered at a shallower depth:
    - a. The soil absorption rate determined under R18-9-A312(D)(2) is:
      - i. More than 1.20 gallons per day per square foot, or
      - ii. Less than 0.20 gallons per day per square foot;
    - b. The vertical separation distance from the bottom of the lowest point of the disposal works to the seasonal high water table is less than the minimum vertical separation specified in R18-9-A312(E)(1);
    - c. Seasonal saturation occurs within surface soils that could affect the performance of the on-site wastewater treatment facility;
    - d. One of the following subsurface conditions that may cause or contribute to the surfacing of wastewater:
      - i. An impervious soil or rock layer,
      - ii. A zone of saturation that substantially limits downward percolation from the disposal works,
      - iii. Soil with more than 50 percent rock fragments;
    - e. One of the following subsurface conditions that promotes accelerated downward movement of insufficiently treated wastewater:
      - i. Fractures or joints in rock that are open, continuous, or interconnected;
      - ii. Karst voids or channels; or
      - iii. Highly permeable materials such as deposits of cobbles or boulders; or
    - f. A subsurface condition that may convey wastewater to a water of the state and cause or contribute to an exceedance of a water quality standard established in 18 A.A.C. 11, Articles 1 and 4.
  3. Applicability of subsurface characterization methods. The investigator shall:
    - a. For a seepage pit constructed under R18-9-E302, test seepage pit performance using the procedure specified in subsection (G);
    - b. For an on-site wastewater treatment facility other than a seepage pit, characterize soil by using one or more of the ASTM methods specified in subsection (D)(1)(a) if any of the following site conditions exists:
      - i. The natural surface slope at the intended location of the on-site wastewater treatment facility is greater than 15 percent;
      - ii. Bedrock or similar consolidated rock formation that cannot be excavated with a shovel outcrops on the property or occurs less than 12 feet below the land surface;
      - iii. The native soil at the surface or encountered in a boring, trench, or hole consists of more than 35 percent rock fragments;
      - iv. The seasonal high water table occurs within 12 feet of the natural land surface as encountered in trenches or borings, or evidenced by well records or hydrologic reports;
      - v. Seasonal saturation at the natural land surface occurs as indicated by soil mottling, vegetation adapted to near-surface saturated soils, or springs, seeps, or surface water near enough to the intended location of the on-site wastewater treatment facility to have a connection with potential seasonal saturation at the land surface; or
      - vi. A percolation test yields results outside the limits specified in subsection (D)(2)(a).
    - c. Percolation testing. The investigator may perform percolation testing as specified in subsection (F):
      - i. To augment another method of subsurface characterization if useful to locate or design an on-site wastewater treatment facility, or
      - ii. As the sole method of subsurface characterization if a subsurface characterization by an ASTM method is not required under subsection (D)(3)(b).
- E. If an ASTM method is used for subsurface characterization, the investigator shall conduct subsurface characterization tests at the site to provide adequate, credible, and representative information to ensure proper location, selection, design, and installation of the on-site wastewater treatment facility. The investigator shall:
1. Select at least two test locations in the primary area and one test location in the reserve area to conduct the tests;
  2. Perform the characterization at each test location at appropriate depths to:

- a. Establish the wastewater absorption capacity of the soil under R18-9-A312(D), and
  - b. Aid in determining that a sufficient zone of unsaturated flow is provided below the disposal works to achieve necessary wastewater treatment; and
- 3. Submit with the site investigation report:
  - a. A log of soil formations for each test location with information on soil type, texture, and classification; percentage of rock; structure; consistence; and mottles;
  - b. A determination of depth to groundwater below the land surface by test trenches or borings, published groundwater data, subdivision reports, or relevant well data; and
  - c. A determination of the water absorption characteristics of the soil, under R18-9-A312(D)(2)(b), sufficient to allow location and design of the on-site wastewater treatment facility.
- F. Percolation testing method for subsurface characterization.
  - 1. Planning and preparation. The investigator shall:
    - a. Select at least two locations in the primary area and at least one location in the reserve area for percolation testing, to provide adequate and credible information to ensure proper location, selection, design, and installation of a properly working on-site wastewater treatment facility;
    - b. Perform percolation testing at each location at intervals in the soil profile sufficient to:
      - i. Establish the wastewater absorption capability of the soil under R18-9-A312(D), and
      - ii. Aid in determining that a sufficient zone of unsaturated flow is provided below the disposal works to achieve necessary wastewater treatment. The investigator shall perform percolation tests at multiple depths if there is an indication of an obvious change in soil characteristics that affect the location, selection, design, installation, or disposal performance of the on-site wastewater treatment facility;
    - c. Excavate percolation test holes in undisturbed soil at least 12 inches deep with dimensions of 12 inches by 12 inches, if square, or a diameter of 15 inches, if round. The investigator shall not alter the structure of the soil during the excavation;
    - d. Place percolation test holes away from site or soil features that yield unrepresentative or misleading data pertaining to the location, selection, design, installation, or performance of the on-site wastewater treatment facility;
    - e. Scarify smeared soil surfaces within the percolation test holes and remove any loosened materials from the bottom of the hole; and
    - f. Use buckets with holes in the sides to support the sidewalls of the percolation test hole, if necessary. The investigator shall fill any voids between the walls of the hole and the bucket with pea gravel to reduce the impact of the enlarged hole.
  - 2. Presoaking procedure. The investigator shall:
    - a. Fill the percolation test hole with clean water to a depth of 12 inches above the bottom of the hole;
    - b. Observe the decline of the water level in the hole and record time in minutes for the water to completely drain away;
    - c. Repeat the steps specified in subsection (F)(2)(a) and (b) if the water drains away in less than 60 minutes.
      - i. If the water drains away the second time in less than 60 minutes, the investigator shall repeat the steps specified in subsections (F)(2)(a) and (b).
      - ii. If the water drains away a third time in less than 60 minutes, the investigator shall perform the percolation test by following subsection (F)(3); and
    - d. Add clean water to the hole after 60 minutes and maintain the water at a minimum depth of 9 inches for at least four more hours if it takes 60 minutes or longer for the water to drain away. The investigator shall protect the hole from precipitation and runoff, and perform the percolation test specified in subsection (F)(3) between 16 and 24 hours after presoaking.
  - 3. Conducting the test. The investigator shall:
    - a. Conduct the percolation test before soil hydraulic conditions established by the presoaking procedure substantially change. The investigator shall remove loose materials in the percolation test hole to ensure that the specified dimensions of the hole are maintained and the infiltration surfaces are undisturbed native soil;
    - b. Fill the test hole to a depth of 6 inches above the bottom with clean water;
    - c. Observe the decline of the water level in the test hole and record the time in minutes for the water level to fall exactly 1 inch from a fixed reference point. The investigator shall:
      - i. Immediately refill the hole with clean water to a depth of 6 inches above the bottom and determine and record the time in minutes for the water level to fall exactly 1 inch,
      - ii. Refill the hole again with clean water to a depth of 6 inches above the bottom and determine and record the time in minutes for the water to fall exactly 1 inch, and
      - iii. Ensure that the method for measuring water level depth is accurate and does not significantly affect the percolation rate of the test hole;
    - d. If the percolation rate stabilizes for three consecutive measurements by varying no more than 10 percent,

- use the highest percolation rate value of the three measurements. If three consecutive measurements indicate that the percolation rate results are not stabilizing or the percolation rate is between 60 and 120 minutes per inch, the investigator shall use an alternate method based on a graphical solution of the test data to approximate the stabilized percolation rate;
- e. Record the percolation rate results in minutes per inch; and
  - f. Submit the following information with the site investigation report:
    - i. A log of the soil formations encountered for all percolation tests including information on texture, structure, consistence, percentage of rock fragments, and mottles, if present;
    - ii. Whether and which test hole was reinforced with a bucket;
    - iii. The locations, depths, and bottom elevations of the percolation test holes on the site investigation map;
    - iv. A determination of depth to groundwater below the land surface by test trenches or borings, published groundwater data, subdivision reports, or relevant well data; and
    - v. A determination of the water absorption characteristics of the soil, under R18-9-A312(D)(2)(a), sufficient to allow location and design of the on-site wastewater treatment facility.
- G. Seepage pit performance testing method for subsurface characterization. The investigator shall test seepage pits described in R18-9-E302 as follows:
1. Planning and Preparation. The investigator shall:
    - a. Identify the disposal areas at the sit and drill a test hole at least 18 inches in diameter to the depth of the proposed seepage pit, at least 30 feet deep, and
    - b. Scarify soil surfaces within the test hole and remove loosened materials from the bottom of the hole.
  2. Presoaking procedure. The investigator shall:
    - a. Fill the bottom 6 inches of the test hole with gravel, if necessary, to prevent scouring;
    - b. Fill the test hole with clean water up to 3 feet below the land surface;
    - c. Observe the decline of the water level in the hole and determine the time in hours and minutes for the water to completely drain away;
    - d. Repeat the procedure if the water drains away in less than four hours; If the water drains away the second time in less than four hours, the investigator shall conduct the seepage pit performance test by following subsection (G)(3);
    - e. Add water to the hole and maintain the water at a depth that leaves at least the top 3 feet of hole exposed to air for at least four more hours if the water drains away in four or more hours; and
    - f. Not remove the water from the hole before the seepage pit performance test if there is standing water in the hole after at least 16 hours of presoaking.
  3. Conducting the test. The investigator shall:
    - a. Fill the test hole with clean water up to 3 feet below land surface;
    - b. Observe the decline of the water level in the hole and determine and record the vertical distance to the water level from a fixed reference point every 10 minutes. The investigator shall ensure that the method for measuring water level depth is accurate and does not significantly affect the rate of fall of the water level in the test hole;
    - c. Measure the decline of the water level continually until three consecutive 10-minute measurements indicate that the infiltration rates are within 10 percent. If measurements indicate that infiltration is not approaching a steady rate or if the rate is close to a numerical limit specified in R18-9-A312(E)(1), the investigator shall use an alternate method based on a graphical solution of the test data to approximate the final stabilized infiltration rate;
    - d. Percolation test rate. Calculate the stabilized infiltration rate for a seepage pit determined by the test hole procedure specified in subsection (G)(1)(a) using the formula  $P = (15 / DS) \times IS$  to determine an equivalent percolation test rate. Once "P" is determined, the investigator shall use R18-9-A312(D)(2)(a) to establish the design SAR for wastewater treated under R18-9-E302 and to calculate the required minimum sidewall area for the seepage pit using the equation specified in R18-9-E302(C)(5)(k).
      - i. "P" is the percolation test rate (minutes per inch) tabulated in the first column of the table in R18-9-A312(D)(2)(a),
      - ii. "DS" is the diameter of the seepage pit test hole in inches, and
      - iii. "IS" is the seepage pit stabilized infiltration rate (minutes per inch) determined by the procedure specified in R18-9-A310(F)(3)(c);
    - e. Submit the following information with the site investigation report:
      - i. The results of the seepage pit performance testing including data, calculations, and findings on a form provided by the Department;
      - ii. The log of the test hole indicating lithologic characteristics and points of change;
      - iii. The location of the test hole on the site investigation map; and
      - iv. A determination of depth to groundwater below the land surface by borings, published groundwater data, subdivision reports, or relevant well data.
    - f. Fill the test hole so that groundwater quality and public safety are not compromised if the seepage pit is

- drilled elsewhere or if a seepage pit cannot be sited at the location because of unfavorable test results.
- H. Qualifications. An investigator shall not perform a site investigation under this Section unless the investigator has knowledge and competence in the subject area and is licensed in good standing or otherwise qualified in one of the following categories:
1. Arizona-registered professional engineer,
  2. Arizona-registered geologist,
  3. Arizona-registered sanitarian,
  4. A certificate of training from a course recognized by the Department as sufficiently covering the information specified in this Section, or
  5. Qualifies under another category designated in writing by the Department.

**R18-9-A311. FACILITY SELECTION FOR TYPE 4 ON-SITE WASTEWATER TREATMENT FACILITIES**

- A. A person shall select, design, and install an on-site wastewater treatment facility that is appropriate for the site's geographic location, setback limitations, slope, topography, drainage and soil characteristics, wastewater infiltration capability, depth to the seasonal high water table, and any surface or subsurface limiting condition.
1. A person may use on-site treatment and disposal technologies covered by a Type 4 General Permit alone or in combination with another Type 4 General Permit to overcome site limitations.
  2. An applicant may submit a single Notice of Intent to Discharge for an on-site wastewater treatment facility consisting of components or technologies covered by multiple general permits if the information submittal requirements of all the general permits are met.
  3. The Director shall issue a single Construction Authorization under R18-9-A301(D)(1) and a single Discharge Authorization under R18-9-A301(D)(2) for an on-site wastewater treatment facility that consists of components or technologies covered by multiple general permits.
- B. A person may install a septic tank and disposal works system described in R18-9-E302 as the sole method of wastewater treatment and disposal at a site if the site investigation conducted under R18-9-A310 indicates that no limiting condition identified under R18-9-A310(C) or R18-9-A310(D) exists at the site.
1. A person may install a seepage pit only in valley-fill sediments in a basin-and-range alluvial basin and only if the seepage pit performance test results meet the criteria specified in R18-9-A312(E).
  2. The person shall specify in the Notice of Intent to Discharge that no limiting conditions described in R18-9-A310(C) and (D) were identified at the site.
- C. If any surface or subsurface limiting condition is identified in the site investigation report, an applicant may propose installation of a septic tank and disposal works system described in R18-9-E302 only if:
1. The applicant submits information under R18-9-A312(G) that describes:
    - a. How the design of the septic tank and disposal works system specified in R18-9-E302 was modified to overcome limiting conditions;
    - b. How the modified design meets the criteria of R18-9-A312(G)(3); and
    - c. A site-specific SAR under R18-9-A312(D)(2)(a) or (b), as applicable; and
  2. None of the following surface or subsurface limiting conditions are identified at the site:
    - a. An outcropping of rock that cannot be excavated or will impair the function of soil receiving the discharge exists in the intended location of the on-site wastewater treatment facility, as described in R18-9-A310(C)(2)(e);
    - b. The vertical separation distance from the bottom of the lowest point of the disposal works to the seasonal high water table is less than the minimum vertical separation distance, as described in R18-9-A310(D)(2)(c); or
    - c. A subsurface condition that promotes accelerated downward movement of insufficiently treated wastewater as described in R18-9-A310(D)(2)(e).
- D. If a site can accommodate a septic tank and disposal works system described in R18-9-E302, the applicant shall not install a treatment works or disposal works described in R18-9-E303 through R18-9-E322 unless the applicant submits a statement to the Department with the Notice of Intent to Discharge acknowledging the following:
1. The applicant is aware that although a septic tank and disposal works system described in R18-9-E302 is appropriate for the site, the applicant desires to install a treatment works or disposal works authorized under R18-9-E303 through R18-9-E322; and
  2. The applicant is aware that a treatment works or disposal works authorized under R18-9-E303 through R18-9-E322 may result in higher capital, operation, and maintenance costs than a septic tank and disposal works system described in R18-9-E302.

**R18-9-A312. FACILITY DESIGN FOR TYPE 4 ON-SITE WASTEWATER TREATMENT FACILITIES**

- A. General design requirements. An applicant shall ensure that the person designing an on-site wastewater treatment facility:
1. Signs the design documents submitted as part of the Notice of Intent to Discharge to obtain a Construction Authorization, including plans, specifications, drawings, reports, and calculations; and
  2. Locates and designs the on-site wastewater treatment facility project using good design judgment and relies on

- appropriate design methods and calculations.
- B. Design considerations and flow determination. An applicant shall ensure that the person designing the on-site wastewater treatment facility shall:
1. Design the facility to satisfy a 20-year operational life;
  2. Design the facility based on the provisions of one or more of the general permits in R18-9-E302 through R18-9-E322 for facilities with a design flow of less than 3000 gallons per day, and R18-9-E323 for facilities with a design flow of 3000 gallons per day to less than 24,000 gallons per day;
  3. Design the facility based on the facility's design flow and wastewater characteristics as specified in R18-9-A309(B)(3);
  4. For on-site wastewater treatment facilities permitted under R18-9-E303 through R18-9-E323, apply the following design requirements, as applicable:
    - a. Include the power source and power components in construction drawings if electricity or another type of power is necessary for facility operation;
    - b. If a hydraulic analysis is required under subsection (E), perform the analysis based on the location and dimensions of the bottom and sidewall surfaces of the disposal works that are identified in the design documentation;
    - c. Design components, piping, ports, seals, and appurtenances to withstand installation loads, internal and external operational loads, and buoyant forces. Design ports for resistance against movement, and cap or cover openings for protection from damage and entry by rodents, mosquitoes, flies, or other organisms capable of transporting a disease-causing organism;
    - d. Design tanks, liners, ports, seals, piping to and within the facility, and appurtenances for watertightness under all operational conditions;
    - e. Provide adequate storage capacity above high operating level to:
      - i. Accommodate a 24-hour power or pump outage, and
      - ii. Contain wastewater that is incompletely treated or cannot be released by the disposal works to the native soil;
    - f. If a fixed media process is used, provide in the construction drawings the media material, installation specification, media configuration, and wastewater loading rate of the media at the daily design flow;
    - g. Provide a fail-safe wastewater control or operational process, if required by the general permit to prevent discharge of inadequately treated wastewater; and
    - h. Reference design. If using a reference design on file with the Department, indicate the reference design within the information submitted with the Notice of Intent to Discharge.
- C. Setbacks. The following setbacks apply unless the Department:
1. Specifies alternative setbacks under Article 3, Part E of this Chapter;
  2. Approves a different setback under the procedure specified in subsection (G); or
  3. Establishes a more stringent setback on a site- or area-specific basis to ensure compliance with water quality standards.

Features Requiring Setbacks	Setback For An On-Site Wastewater Treatment Facility, Including Reserve Area (In Feet)	Special Provisions
1. Building	10	Includes porches, decks, and steps (covered or uncovered), breezeways, roofed patios, carports, covered walks, and similar structures and appurtenances.
2. Property line shared with any adjoining lot or parcel not served by a common drinking water system* or an existing drinking water well	50	A person may reduce the setback to a minimum of 5 feet from the property line if: <ol style="list-style-type: none"> <li>a. The owners of any affected undeveloped adjacent properties agree, as evidenced by an appropriately recorded document, to limit the location of any new well on their property to at least 100 feet from the proposed treatment works and primary and reserve disposal works; and</li> <li>b. The arrangements and documentation are approved by the Department.</li> </ol>
3. All other property lines	5	None
4. Public or private water supply well.	100	None
5. Perennial or intermittent stream	100	Measured horizontally from the high water line of the peak streamflow from a 10-year, 24-hour rainfall event.



14. Easement (except drainage easement)	5	None
15. Earth fissures	100	None

\* A “common drinking water system” means a system that currently serves or is under legal obligation to serve the property and may include a drinking water utility, a well-sharing agreement, or other viable water supply agreement.

D. Soil absorption rate (SAR) and disposal works sizing.

1. An applicant shall determine the soil absorption area by dividing the design flow by the applicable soil absorption rate. If soil characterization and percolation test methods yield different SAR values or if multiple applications of the same approach yield different values, the designer of the disposal works shall use the lowest SAR value unless a higher SAR value is proposed and justified to the Department’s satisfaction in the Notice of Intent to Discharge.
2. The SAR used to calculate disposal works size for systems described in R18-9-E302 is as follows:
  - a. The SAR by percolation testing as described in R18-9-A310(F) is determined as follows:

Percolation Rate from Percolation Test (minutes per inch)	SAR, Trench, Chamber, and Pit (gal/day/ft <sup>2</sup> )	SAR, Bed (gal/day/ft <sup>2</sup> )
Less than 1.00	A site-specific SAR is required	A site-specific SAR is required
1.00 to less than 3.00	1.20	0.93
3.00	1.10	0.73
4.00	1.00	0.67
5.00	0.90	0.60
7.00	0.75	0.50
10.0	0.63	0.42
15.0	0.50	0.33
20.0	0.44	0.29
25.0	0.40	0.27
30.0	0.36	0.24
35.0	0.33	0.22
40.0	0.31	0.21
45.0	0.29	0.20
50.0	0.28	0.19
55.0	0.27	0.18
55.0+ to 60.0	0.25	0.17
60.0+ to 120	0.20	0.13
Greater than 120	A site-specific SAR is required	A site-specific SAR is required

- b. The SAR using the soil evaluation method described in R18-9-A310(E) is determined by answering the questions in the following table. The questions are read in sequence starting with “A.” The first “yes” answer determines the SAR.

Sequence of Soil Characteristics Questions	SAR, Trench, Chamber, and Pit gal/day/ft <sup>2</sup>	SAR, Bed gal/day/ft <sup>2</sup>
A. Is the horizon gravelly coarse sand or coarser?	A site-specific SAR is required	A site-specific SAR is required
B. Is the structure of the horizon moderate or strongly platy?	A site-specific SAR is required	A site-specific SAR is required
C. Is the texture of the horizon sandy clay loam, clay loam, silty clay loam, or finer and the soil structure weak platy?	A site-specific SAR is required	A site-specific SAR is required

D. Is the moist consistency stronger than firm or any cemented class?	A site-specific SAR is required	A site-specific SAR is required
E. Is the texture sandy clay, clay, or silty clay of high clay content and the structure massive or weak?	A site-specific SAR is required	A site-specific SAR is required
F. Is the texture sandy clay loam, clay loam, silty clay loam, or silty loam and the structure massive?	A site-specific SAR is required	A site-specific SAR is required
G. Is the texture of the horizon loam or sandy loam and the structure massive?	0.20	0.13
H. Is the texture sandy clay, clay, or silty clay of low clay content and the structure moderate or strong?	0.20	0.13
I. Is the texture sandy clay loam, clay loam, or silty clay loam and the structure weak?	0.20	0.13
J. Is the texture sandy clay loam, clay loam, or silty clay loam and the structure moderate or strong?	0.40	0.27
K. Is the texture sandy loam, loam, or silty loam and the structure weak?	0.40	0.27
L. Is the texture sandy loam, loam, or silt loam and the structure moderate or strong?	0.60	0.40
M. Is the texture fine sand, very fine sand, loamy fine sand, or loamy very fine sand?	0.40	0.27
N. Is the texture loamy sand or sand?	0.80	0.53
O. Is the texture coarse sand?	1.20	A site-specific SAR is required

3. For an on-site wastewater treatment facility described in a general permit other than R18-9-E302, the SAR is dependent on the ability of the facility to reduce the level of TSS and BOD<sub>5</sub> and is calculated using the following formula:

$$SAR_a = \left[ \left( \frac{11.39}{\sqrt[3]{TSS + BOD_5}} - 1.87 \right) SAR^{1.13} + 1 \right] SAR$$

- a. "SAR<sub>a</sub>" is the adjusted soil absorption rate for disposal works design in gallons per day per square foot,
  - b. "TSS" is the total suspended solids in wastewater delivered to the disposal works in milligrams per liter,
  - c. "BOD<sub>5</sub>" is the five-day biochemical oxygen demand of wastewater delivered to the disposal works in milligrams per liter, and
  - d. "SAR" is the soil absorption rate for septic tank effluent determined by the subsurface characterization method described in R18-9-A310.
4. An applicant shall ensure that the facility is designed so that the area of the intended installation is large enough to allow for construction of the facility and for future replacement or repair and is at least as large as the following:
- a. For a dwelling, a primary area for the disposal works sized according to subsection (D)(1) and a reserve area of 100 percent of the primary area, excluding the footprint of the treatment works. A reserve area is not required for a lot in a subdivision approved before 1974 if the lot conforms to its original approved configuration;
  - b. For other than a dwelling, a primary area for the disposal works sized according to subsection (D)(1) and a reserve area of 100 percent of the primary area, excluding the footprint of the treatment works.
5. An applicant shall ensure that the subsurface disposal works is designed to achieve the design flow established in R18-9-A309(B)(3) through proper hydraulic function, including conditions of seasonally cold and wet weather.
- E. Vertical separation distances.
- 1. Minimum vertical separation to the seasonal high water table for a disposal works described in R18-9-E302, receiving septic tank effluent. For a disposal works described in R18-9-E302 receiving septic tank effluent, the minimum vertical separation distance between the lowest point in the disposal works and the seasonal high water table is dependent on the soil absorption rate and is determined as follows:

Soil Absorption Rate (gallons per day per square foot)			Minimum Vertical Separation Between The Bottom Of The Disposal Works And The Seasonal High Water Table (feet)	
Trench and Chamber	Bed	Seepage Pit	Trench, Chamber, and Bed	Seepage Pit

1.20+	0.93+	1.20+	Not allowed for septic tank effluent	<b>Not Allowed</b>
0.63+ to 1.20	0.42 to 0.93	0.63+ to 1.20	10	60
0.20 to 0.63	0.13 to 0.42	0.36 to 0.63	5	60
Less than 0.20	Less than 0.13	Less than 0.36	Not allowed for septic tank effluent	Not Allowed

2. Minimum vertical separation to the seasonal high water table for treatment and disposal works described in R18-9-E303 through R18-9-E322. If the minimum vertical separation distance to the seasonal high water table for a disposal works receiving septic tank effluent specified in subsection (E)(1) is not met, the applicant shall comply with the following:

a. Employ one or more technologies described in R18-9-E303 through R18-9-E322 to achieve a reduced concentration of harmful microorganisms, expressed as total coliform in colony forming units per 100 milliliters (cfu/100 ml) delivered to native soil at the bottom of the disposal works. The applicant shall use the following table to select works that achieve a reduced total coliform concentration corresponding to the available vertical separation distance between the bottom of the disposal works and the seasonal high water table:

<b>Available Vertical Separation Distance Between the Bottom of The Disposal Works and the Seasonal High Water Table (feet)</b>		<b>Maximum Allowable Total Coliform Concentration, 95th Percentile, Delivered to Natural Soil by the Disposal Works (Log<sub>10</sub> of coliform concentration in cfu per 100 milliliters)</b>
<b>For SA R*, 0.20 to 0.63</b>	<b>For SAR *, 0.63+ to 1.20</b>	
5	10	8**
4	8	7
3.5	7	6
3	6	5
2.5	5	4
2	4	3
1.5	3	2
1	2	1
0	0	0***

\* Soil absorption rate from percolation testing or soil characterization, in gallons per square foot per day.

\*\* Nominal value for a standard septic tank and disposal field (10<sup>8</sup> colony forming units per 100 ml).

\*\*\* Nominally free of coliform bacteria.

b. Include a hydraulic analysis with the Notice Of Intent To Discharge, based on the dimensions of the absorption surfaces specified in R18-9-A312(B)(4)(b), showing that the soil is sufficiently permeable to conduct wastewater downward and laterally without surfacing for the site conditions at the disposal works.

3. Vertical separation from a subsurface limiting condition described in R18-9-A310(D)(2)(d) that may cause or contribute to surfacing of wastewater. If a subsurface limiting condition described in R18-9-A310(D)(2)(d) exists at the location of the disposal works, the applicant shall ensure that the design for the on-site wastewater treatment facility meets one of the following:

a. A zone of acceptable native soil with the following characteristics exists between the bottom of the disposal works and the top of the subsurface limiting condition:

- i. The zone of soil is at least 4 feet thick, and
- ii. The zone of soil is sufficiently permeable to conduct wastewater released from the disposal works vertically downward and laterally without causing surfacing of the wastewater as documented by a hydraulic analysis submitted with the Notice of Intent to Discharge that is



- Article.
2. Manufactured components. If manufactured components are used, an applicant shall design, install, and operate the on-site wastewater treatment facility following the manufacturer's specifications. The applicant shall ensure that:
    - a. Treatment and containment components, mechanical equipment, instrumentation, and controls have monitoring, inspection, access and cleanout ports or covers, as appropriate, for monitoring and service;
    - b. Treatment and containment components, pipe, fittings, pumps, and related components and controls are durable, watertight, structurally sound, and capable of withstanding stress from installation and operational service; and
    - c. Distribution lines for disposal works are constructed of clay tile laid with open joints, perforated clay pipe, perforated high density polyethylene pipe, perforated ABS pipe, or perforated PVC pipe if the pipe is suitable for wastewater disposal use and sufficient openings are available for distribution of the wastewater into the trench or bed area.
  3. Electronic components. When electronic components are used, the applicant shall ensure that:
    - a. Instructions and a wiring diagram are mounted on the inside of a control panel cover;
    - b. The control panel is equipped with a multimode operation switch, red alarm light, buzzer, and reset button;
    - c. The multimode operation switch operates in the automatic position for normal system operation; and
    - d. An anomalous condition is indicated by a glowing alarm light and sounding buzzer. The continued glowing of the alarm light after pressing the reset button shall signal the need for maintenance or repair of the system at the earliest practical opportunity.
  4. If a conflict exists between this Article and the manufacturer's specifications, the requirements of this Article apply. Except for the requirements in subsection (D) and (E), which always apply, if the conflict voids a manufacturer's warranty, the applicant may submit a request under subsection (G) justifying use of the manufacturer's specifications.
- G. Alternative design, setback, installation, or operational features. When an applicant submits a Notice of Intent to Discharge, the applicant may request that the Department review and approve a feature of improved or alternative technology, design, setback, installation, or operation that differs from a general permit requirement in this Article.
1. The applicant shall make the request for an improved or alternative feature of technology, design, setback, installation, or operation on a form provided by the Department and include:
    - a. A description of the requested change;
    - b. A citation to the applicable feature of technology, design, setback, installation, or operational requirement for which the change is being requested; and
    - c. Justification for the requested change, including any necessary supporting documentation.
  2. The applicant shall submit the appropriate fee specified under 18 A.A.C. 14 for each requested change. For purposes of calculating the fee, a requested change that is applied multiple times in a similar manner throughout the facility is considered a single request if submitted for concurrent review.
  3. The applicant shall provide sufficient information for the Department to determine that the change achieves equal or better performance compared with the general permit requirement, or addresses site or system conditions more satisfactorily than the requirements of this Article.
  4. The Department shall review and may approve the request for change.
  5. The Department shall deny the request for the change if the change will adversely affect other permittees or cause or contribute to a violation of an Aquifer Water Quality Standard.
  6. The Department shall deny the request for the change if the change:
    - a. Fails to achieve equal or better performance compared to the general permit requirement;
    - b. Fails to address site or system conditions more satisfactorily than the general permit requirement;
    - c. Is insufficiently justified based on the information provided in the submittal;
    - d. Requires excessive review time, research, or specialized expertise by the Department to act on the request; or
    - e. For any other justifiable cause.
  7. The Department may approve a reduced setback for a facility authorized to discharge under one or more of the general permits in R18-9-E303 through R18-9-E322, either separately or in combination with a septic tank system authorized under R18-9-E302, if the applicant demonstrates that:
    - a. The treatment performance is significantly better than that provided under R18-9-E302(B),
    - b. The wastewater loading rate is reduced, or
    - c. Surface or subsurface characteristics ensure that reduced setbacks are protective of human health or water quality.

**R18-9-A313. FACILITY INSTALLATION, OPERATION, AND MAINTENANCE FOR ON-SITE WASTEWATER TREATMENT FACILITIES**

- A. Facility installation. In addition to installation requirements in the general permit, the applicant shall ensure that the

following tasks are performed, as applicable:

1. The facility is installed as described in design documents submitted with the Notice of Intent to Discharge;
  2. Components are installed on a firm foundation that supports the components and operating loads;
  3. The site is prepared to protect native soil beneath the soil absorption area and in adjacent areas from compaction, prevent smeared absorption surfaces, minimize disturbances from grubbing, and otherwise preclude damage to the disposal area that would impair performance;
  4. Components are protected from damage at the construction site and installed in conformance with the manufacturer's instructions if consistent with this Article;
  5. Treatment media are placed to achieve uniform density, prevent differential settling, produce a level inlet surface unless otherwise specified by the manufacturer, and avoid introduction of construction contaminants;
  6. Backfill is placed to prevent damage to geotextile, liners, tanks, and other components;
  7. Soil cover is shaped to shed rainfall away from the backfill areas and prevent ponding of runoff; and
  8. Anti-buoyancy measures are implemented during construction if temporary saturated backfill conditions are anticipated during construction.
- B. Operation and maintenance. In addition to operation and maintenance requirements in the general permit or specified in the operation and maintenance manual, the permittee shall ensure that the following tasks are performed, as applicable:
1. Pump accumulated residues, inspect and clean wastewater treatment and distribution components, and manage residues to protect human health and the environment;
  2. Clean, backwash, or replace effluent filters according to the manufacturer's instructions, and manage residues to protect human health and the environment;
  3. Inspect and clean the effluent baffle screen and pump tank, and properly dispose of cleaning residue;
  4. Clean the dosing tank effluent screen, pump switches, and floats, and properly dispose of cleaning residue;
  5. Flush lateral lines and return flush water to the pretreatment headworks;
  6. Inspect, remove and replace, if necessary, and properly dispose of filter media;
  7. Rod pressurized wastewater delivery lines and secondary distribution lines (for dosing systems), and return cleaning water to the pretreatment headworks;
  8. Inspect and clean pump inlets and controls and return cleaning water to the pretreatment headworks;
  9. Implement corrective measures if anomalous ponding, dryness, noise, odor, or differential settling is observed;
  10. Inspect and monitor inspection and access ports, as applicable, to verify that operation and maintenance is within expected limits for:
    - a. Influent wastewater quality;
    - b. The pressurized dosing system;
    - c. The aggregate infiltration bed and mound system;
    - d. Wastewater delivery and the engineered pad;
    - e. The pressurized delivery system, filter, underdrain, and native soil absorption system;
    - f. Saturation condition status in peat and other media; and
    - g. Treatment system components;
  11. Inspect tanks, liners, ports, seals, piping, and appurtenances for watertightness under all operational conditions;
  12. Manage vegetation in areas that contain components subject to physical impairment or damage due to root invasion or animals;
  13. Maintain drainage, berms, protective barriers, cover materials, and other features; and
  14. Maintain the usefulness of the reserve area to allow for repair or replacement of the on-site wastewater treatment facility.

#### R18-9-A314. SEPTIC TANK DESIGN, MANUFACTURING, AND INSTALLATION FOR ON-SITE WASTEWATER TREATMENT FACILITIES

A person shall not install a septic tank in an on-site wastewater treatment facility unless the tank meets the following requirements:

1. The tank is:
  - a. Designed to produce a clarified effluent and provide adequate space for sludge and scum accumulations;
  - b. Watertight and constructed of solid durable materials not subject to excessive corrosion or decay;
  - c. Manufactured with at least two compartments unless two separate structures are placed in series. The tank is designed so that:
    - i. The inlet compartment of any septic tank not placed in series is nominally 67 percent to 75 percent of the total required capacity of the tank,
    - ii. Septic tanks placed in series are considered a unit and meet the same criteria as a single tank,
    - iii. The liquid depth of the septic tank is at least 42 inches, and
    - iv. A septic tank of 1000 gallon capacity is at least 8 feet long and the tank length of septic tanks of greater capacity is at least 2 times but not more than 3 times the width;
  - d. Manufactured with at least two access openings to the tank interior, each at least 20 inches in diameter. The tank is designed so that:
    - i. One access opening is located over the inlet end of the tank and one access opening is located

- over the outlet end;
    - ii. Whenever a first compartment exceeds 12 feet in length, another access opening is provided over the baffle wall; and
    - iii. Access openings and risers are constructed to ensure accessibility within 6 inches below finished grade;
  - e. Manufactured so that the sewage inlet and wastewater outlet openings are not smaller than the connecting sewer pipe. The tank is designed so that:
    - i. The vertical leg of round inlet and outlet fittings is at least 4 inches but not smaller than the connecting sewer pipe, and
    - ii. A baffle fitting has the equivalent cross-sectional area of the connecting sewer pipe and not less than a 4-inch horizontal dimension if measured at the inlet and outlet pipe inverts;
  - f. Manufactured so that the inlet and outlet pipe or baffle extends 4 inches above and at least 12 inches below the water surface when the tank is installed according to the manufacturer's instructions consistent with this Chapter. The invert of the inlet pipe is at least 2 inches above the invert of the outlet pipe;
  - g. Manufactured so that the inlet and outlet fittings or baffles and compartment partitions have a free vent area equal to the required cross-sectional area of the connected sewer pipe to provide free ventilation above the water surface from the disposal works or seepage pit through the septic tank, house sewer, and stack to the outer air;
  - h. Manufactured so that the open space extends at least 9 inches above the liquid level and the cover of the septic tank is at least 2 inches above the top of the inlet fitting vent opening;
  - i. Manufactured so that partitions or baffles between compartments are of solid durable material (wooden baffles are prohibited) and extend at least 4 inches above the liquid level. The open area of the baffle shall be between one and 2 times the open area of the inlet pipe or horizontal slot and located at the midpoint of the liquid level of the baffle. If a horizontal slot is used, the slot shall be no more than 6 inches in height;
  - j. Structurally designed to withstand all anticipated earth or other loads. The tank is designed so that:
    - i. All septic tank covers are capable of supporting an earth load of 300 pounds per square foot; and
    - ii. If the top of the tank is greater than 2 feet below finish grade, the septic tank and cover are capable of supporting an additional load of 150 pounds per square foot for each additional foot of cover;
  - k. Manufactured or installed so that the influent and effluent ends of the tank are clearly and permanently marked on the outside of the tank with the words "INLET" or "IN," and "OUTLET" or "OUT," above or to the right or left of the corresponding openings; and
  - l. Clearly and permanently marked with the manufacturer's name or registered trademark, or both, the month and year of manufacture, the maximum recommended depth of earth cover in feet, and the design liquid capacity of the tank. The tank is manufactured to protect the markings from corrosion so that they remain permanent and readable for the operational life of the tank.
- 2. Materials used to construct or manufacture septic tanks.
  - a. A septic tank cast-in-place at the site of use shall be protected from corrosion by coating the tank with a bituminous coating, by constructing the tank using a concrete mix that incorporates 15 percent to 18 percent fly ash, or by any other Department-approved means. The tank is designed so that:
    - i. The coating extends at least 4 inches below the wastewater line and covers all of the internal area above that point; and
    - ii. A septic tank cast-in-place complies with the "Building Code Requirements for Structural Concrete and Commentary ACI 318-02/318R-02 (2002)," and the "Code Requirements for Environmental Engineering Concrete Structures and Commentary, ACI 350/350R-01 (2001)," published by the American Concrete Institute. This material is incorporated by reference and does not include any later amendments or editions of the incorporated material. Copies of the incorporated material are available for inspection at the Arizona Department of Environmental Quality, 1110 W. Washington Street, Phoenix, AZ 85007 or may be obtained from American Concrete Institute, P.O. Box 9094, Farmington Hills, MI 48333-9094.
  - b. A steel septic tank shall have a minimum wall thickness of No. 12 U.S. gauge steel and be protected from corrosion, internally and externally, by a bituminous coating or other Department-approved means.
  - c. A prefabricated concrete septic tank shall meet the "Standard Specification for Precast Concrete Septic Tanks, C1227-03," published by the American Society for Testing and Materials. This information is incorporated by reference and does not include any later amendments or editions of the incorporated material. Copies of the incorporated material are available for inspection at the Arizona Department of Environmental Quality, 1110 W. Washington Street, Phoenix, AZ 85007 or may be obtained from the American Society for Testing and Materials.
  - d. A septic tank manufactured using fiberglass or polyethylene shall meet the "Material and Property Standards for Prefabricated Septic Tanks, IAPMO PS 1-2004," published by the International Association of Plumbing and Mechanical Officials. This information is incorporated by reference, does not include any later amendments or editions of the incorporated material, and may be viewed at the Arizona

Department of Environmental Quality, 1110 W. Washington Street, Phoenix, AZ 85007 or obtained from International Association of Plumbing & Mechanical Officials, 20001 E. Walnut Drive, South Walnut, CA 91789-2825.

3. Conformance with design, materials, and manufacturing requirements.
  - a. If any conflict exists between this Article and the information incorporated by reference in subsection (2), the requirements of this Article apply.
  - b. The Department may approve use of alternative construction materials under R18-9-A312(G). Tanks constructed of wood, block, or bare steel are prohibited.
  - c. The Department may inspect septic tanks at the site of manufacturing to verify compliance with subsections (1) and (2).
  - d. The septic tank sale documentation includes:
    - i. A certificate attesting that the septic tank conforms with the design, materials, and manufacturing requirements in subsections (1) and (2); and
    - ii. Instructions for handling and installation the septic tank.
4. The septic tank's daily design flow is determined as follows:
  - a. For a single family dwelling:
    - i. The design liquid capacity of the septic tank and the septic tank's daily design flow are determined based on the number of bedrooms and fixture count as follows:

Criteria for Septic Tank Size and Design Flow			
Number of Bedrooms	Fixture Count	Minimum Design Liquid Capacity (gallons)	Design Flow (gal/day)
1	7 or less	1000	150
	More than 7	1000	300
2	14 or less	1000	300
	More than 14	1000	450
3	21 or less	1000	450
	More than 21	1250	600
4	28 or less	1250	600
	More than 28	1500	750
5	35 or less	1500	750
	More than 35	2000	900
6	42 or less	2000	900
	More than 42	2500	1050
7	49 or less	2500	1050
	More than 49	3000	1200
8	56 or less	3000	1200
	More than 56	3000	1350

- ii. Fixture count is determined as follows:

Residential Fixture Type	Fixture Units	Residential Fixture Type	Fixture Units
Bathtub	2	Sink, bar	1
Bidet	2	Sink, kitchen (including dishwasher)	2
Clothes washer	2	Sink, service	3
Dishwasher (Separate from kitchen)	2	Utility tub or sink	2

Lavatory, single	1	Water closet, 1.6 gallons per flush (gpf)	3
Lavatory, double in master bedroom	1	Water closet, >1.6 to 3.2 gpf	4
Shower, single stall	2	Water closet, greater than 3.2 gpf	6

- b. For other than a single family dwelling, the design liquid capacity of a septic tank in gallons is 2.1 times the daily design flow into the tank as determined from Table 1, Unit Design Flows. If the wastewater strength exceeds that of typical sewage, additional tank volume is required.
  - c. A person may place two septic tanks in series to meet the septic tank design liquid capacity requirements if the capacity of the first tank is at least 67 percent of the total required tank capacity and the capacity of the second tank is at least 33 percent of the total required tank capacity.
5. The following requirements regarding new or replacement septic tank installation apply:
- a. Permanent surface markers for locating the septic tank access openings are provided for maintenance;
  - b. A septic tank installed under concrete or pavement has the required access openings extended to grade;
  - c. A septic tank effluent filter is installed on the septic tank. The filter shall:
    - i. Prevent the passage of solids larger than 1/8 inch in diameter while under 2 feet of hydrostatic head; and
    - ii. Be constructed of materials that are resistant to corrosion and erosion, sized to accommodate hydraulic and organic loading, and removable for cleaning and maintenance; and
  - d. The septic tank is tested for watertightness after installation by the water test described in subsections (5)(d)(i) and (5)(d)(ii) repaired or replaced, if necessary.
    - i. The septic tank is filled with clean water, as specified in R18-9-A310(A), to the invert of the outlet and the water left standing in the tank for 24 hours and:
      - (1) After 24 hours, the tank is refilled to the invert, if necessary;
      - (2) The initial water level and time is recorded; and
      - (3) After one hour, water level and time is recorded.
    - ii. The tank passes the water test if the water level does not drop over the one-hour period. Any visible leak of flowing water is considered a failure. A damp or wet spot that is not flowing is not considered a failure.

**R18-9-A315. INTERCEPTOR DESIGN, MANUFACTURING, AND INSTALLATION FOR ON-SITE WASTEWATER TREATMENT FACILITIES**

- A. Interceptor requirement. An applicant shall ensure that an interceptor as required by R18-9-A309(A)(7)(c) or necessary due to excessive amounts of grease, garbage, sand, or other wastes in the sewage is installed between the sewage source and the on-site wastewater treatment facility.
- B. Interceptor design. An applicant shall ensure that:
  - 1. An interceptor has not less than two compartments with fittings designed for grease retention and capable of removing excessive amounts of grease, garbage, sand, or other wastes. Applicable structural and materials requirements prescribed in R18-9-A314 apply;
  - 2. Interceptors are located as close to the source as possible and are accessible for servicing. The applicant shall ensure that access openings for servicing are at grade level and gas-tight;
  - 3. The interceptor size for grease and garbage from non-residential kitchens is calculated using the following equation: Interceptor Size (in gallons) =  $M \times F \times T \times S$ .
    - a. "M" is the number of meals per peak hour;
    - b. "F" is the waste flow rate from Table 1, Unit Design Flows.
    - c. "T" is the estimated retention time:
      - i. Commercial kitchen waste, dishwasher or disposal: 2.5 hours; or
      - ii. Single service kitchen with utensil wash disposal: 1.5 hours;
    - d. "S" is the estimated storage factor:
      - i. Fully equipped commercial kitchen, 8-hour operation: 1.0;
      - ii. Fully equipped commercial kitchen, 16-hour operation: 2.0;
      - iii. Fully equipped commercial kitchen, 24-hour operation: 3.0; or
      - iv. Single service kitchen, 1.5; and
  - 4. The interceptor size for silt and grease from laundries and laundromats is calculated using the following equation: Interceptor Size (in gallons) =  $M \times C \times F \times T \times S$ .
    - a. "M" is the number of machines;
    - b. "C" is the machine cycles per hour (assume 2);
    - c. "F" is the waste flow rate from Table 1, Unit Design Flows;
    - d. "T" is the estimated retention time (assume 2); and

- e. "S" is the estimated storage factor (assume 1.5 that allows for rock filter).
- C. The applicant may calculate the size of an interceptor using different factor values than those given in subsections (B)(3) and (4) based on the values justified by the applicant in the Notice of Intent to Discharge submitted to the Department for the on-site wastewater treatment facility.
- D. The Department may require installation of a sampling box if the volume or characteristics of the waste will impair the performance of the on-site wastewater treatment facility.

**R18-9-A316. TRANSFER OF OWNERSHIP INSPECTION FOR ON-SITE WASTEWATER TREATMENT FACILITIES**

- A. Conforming with this Section satisfies the Notice of Transfer requirements under R18-9-A304.
- B. Within six months before the date of property transfer, the person who is transferring a property served by an on-site wastewater treatment facility shall retain an inspector to perform a transfer of ownership inspection of the on-site wastewater treatment facility who meets the following qualifications:
  - 1. Possesses working knowledge of the type of facility and the inspection process;
  - 2. Holds a certificate of training from a course recognized by the Department as sufficiently covering the information specified in this Section by July 1, 2006; and
  - 3. Holds a license in one of the following categories:
    - a. An Arizona-registered engineer;
    - b. An Arizona-registered sanitarian;
    - c. An owner of a vehicle with a human excreta collection and transport license issued under 18 A.A.C. 13, Article 11 or an employee of the owner of the vehicle;
    - d. A contractor licensed by the Registrar of Contractors in one of the following categories:
      - i. Residential license B-4 or C-41;
      - ii. Commercial license A, A-12, or L-41; or
      - iii. Dual license KA or K-41;
    - e. A wastewater treatment plant operator certified under 18 A.A.C 5, Article 1; or
    - f. A person qualifying under another category designated by the Department.
- C. The inspector shall complete a Report of Inspection on a form approved by the Department, sign it, and provide it to the person transferring the property. The Report of Inspection shall:
  - 1. Address the physical and operational condition of the on-site wastewater treatment facility and describe observed deficiencies and repairs completed, if any;
  - 2. Indicate that each septic tank or other wastewater treatment container on the property was pumped or otherwise serviced to remove, to the maximum extent possible, solid, floating, and liquid waste accumulations, or that pumping or servicing was not performed for one of the following reasons:
    - a. A Discharge Authorization for the on-site wastewater treatment facility was issued and the facility was put into service within 12 months before the transfer of ownership inspection,
    - b. Pumping or servicing was not necessary at the time of the inspection based on the manufacturer's written operation and maintenance instructions, or
    - c. No accumulation of floating or settled waste was present in the septic tank or wastewater treatment container; and
  - 3. Indicate the date the inspection was performed.
- D. Before the property is transferred, the person transferring the property shall provide to the person to whom the property is transferred:
  - 1. The completed Report of Inspection; and
  - 2. Documents in the person's possession relating to permitting, operation, and maintenance of the on-site wastewater treatment facility.
- E. The person to whom the property is transferred shall complete a Notice of Transfer on a form approved by the Department and send the form with the applicable fee specified in 18 A.A.C. 14 within 15 calendar days after the property transfer to:
  - 1. The Department for transfer of a property with an on-site wastewater treatment facility for which construction was completed before January 1, 2001; or
  - 2. The health or environmental agency delegated by the Director to administer the on-site wastewater treatment facility program for transfer of a property with an on-site wastewater treatment facility constructed on or after January 1, 2001.
- F. If the Department issued a Discharge Authorization for the on-site wastewater treatment facility but the facility was not put into service before the property transfer, an inspection of the facility is not required and the transferee shall complete the Notice of Transfer form as specified in subsection (E).
- G. Effective date.
  - 1. The owner of an on-site wastewater treatment facility operating under a Type 4 General Permit shall comply with this Section by [effective date of this Section].
  - 2. The owner of any on-site wastewater treatment facility other than a facility identified in subsection (G)(1) shall comply with this Section by July 1, 2006.

**R18-9-A317. NITROGEN MANAGEMENT AREA**

- A. The Director may designate a new Nitrogen Management Area to control groundwater pollution by sources of nitrogen regulated by Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes and not covered under an individual permit, modify the boundaries or requirements of a Nitrogen Management Area, or rescind designation of a Nitrogen Management Area.
  - 1. If existing conditions or trends in nitrogen loading to an aquifer will cause or contribute to an exceedance of the Aquifer Water Quality Standard for nitrate at a point or points of current or reasonably foreseeable use of the aquifer, the Director shall use the following criteria to determine whether to designate the area as a Nitrogen Management Area:
    - a. Population of the area;
    - b. The degree to which the area is unsewered;
    - c. Gross areal nitrogen loading, calculated as the amount of nitrogen discharged into the subsurface by use of on-site wastewater treatment facilities, divided by the land area under consideration for designation as a Nitrogen Management Area;
    - d. Population growth rate of area;
    - e. Existing contamination of groundwater by nitrogen species;
    - f. Existing and potential impact to groundwater by sources of nitrogen other than on-site wastewater treatment facilities;
    - g. Characteristics of the vadose zone and aquifer;
    - h. Location, number, and areal extent of existing and potential sources of nitrogen;
    - i. Location and characteristics of existing and potential drinking water supplies; and
    - j. Any other information relevant to determining the severity of actual or potential nitrogen impact on the aquifer.
  - 2. The Director may modify the boundaries or requirements of a Nitrogen Management Area or rescind designation of a Nitrogen Management Area based on:
    - a. A material change to one or more criterion specified in subsection (A)(1); or
    - b. The adoption by a local agency of a master plan to substantially sewer the area as soon as possible, but with a completion deadline within 10 years, unless a completion deadline of more than 10 years is approved by the Director.
- B. Preliminary designation, modification, or rescission.
  - 1. The Director shall provide a report to the mayors and members of the Board of Supervisors of all towns, cities, and counties and the directors of all sanitary districts affected by the Department's proposed action to designate, modify, or rescind a Nitrogen Management Area as follows:
    - a. If the Department proposes to designate a Nitrogen Management Area, the Department shall provide a report discussing each criterion specified in subsection (A)(1).
    - b. If the Department proposes to modify the boundaries or requirements of a Nitrogen Management Area or rescind the designation of a Nitrogen Management Area, the Department shall provide a report discussing applicable criteria in subsections (A)(1) and (2).
  - 2. The town, city, county, or sanitary district receiving the Director's report may provide written comments to the Department within 120 days to dispute the factual information presented in the report and supply any information supporting the comments.
  - 3. The Director shall evaluate the comments and supporting information obtained under subsection (B)(2) and either designate, modify, or rescind the Nitrogen Management Area or withdraw the proposal.
- C. Final designation.
  - 1. If the Director designates or modifies the Nitrogen Management Area, the Department shall:
    - a. Issue or modify the Nitrogen Management Area designation and any special provisions established for the area to control groundwater pollution by sources of nitrogen regulated by Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes but not covered under an individual permit. The Department shall provide notice to the mayors and members of the Board of Supervisors of all towns, cities, and counties and the directors of all sanitary districts affected by the determination;
    - b. Maintain the designation and a map showing the boundaries of the Nitrogen Management Area at the Arizona Department of Environmental Quality, 1110 West Washington, Phoenix, Arizona 85007 and on the Department's website at [www.azdeq.gov](http://www.azdeq.gov); and
    - c. Provide, upon request, a copy of the Nitrogen Management Area designation and a map of the area.
  - 2. If the Director withdraws the preliminary Nitrogen Management Area designation or rescinds the Nitrogen Management Area designation, the Director shall issue a determination stating the decision and post it on the Department's website at [www.azdeq.gov](http://www.azdeq.gov).
- D. Nitrogen Management Area requirements. Within a Nitrogen Management Area:
  - 1. The Department shall issue a Construction Authorization, under R18-9-A301(D)(1)(c), for an on-site wastewater treatment facility only if the applicant proposes, in the Notice of Intent to Discharge, to employ one or more of the

technologies allowed under R18-9-E302 through R18-9-E322 that achieves a discharge level containing not more than 15 mg/l of total nitrogen.

2. An agricultural operation shall use the best control measure necessary to reduce nitrogen discharge when implementing the best management practices developed under 18 A.A.C. 9, Article 4. The Director may require the owner or operator to reassess the performance of the impoundment liner systems constructed under R18-9-403 before [the effective date of the rule].
3. A person shall comply with any special provision established for the Nitrogen Management Area, as applicable, for the person's facility.