

Septic Concept Review Checklist

General Criteria

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:

- 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, if non-compliant provide information per R18-9-R18-9-A309 (A)(8)(c)(ii) or (iii). **R18-9-A309 (A)(8)(c)(i)** [note see size of lots below for additional criteria]
- 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; **R18-9-A309 (A)(8)(c)(ii)**
- 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. **R18-9-A309 (A)(8)(c)(iii)**

Plan Elements

- Show subdivision, lot boundaries and north arrow. **R18-9-A309 (B)(2)(b)**
- Show topography. The contour intervals shall be such as to clearly identify all washes, watercourses, rocks, outcroppings and similar features. The maximum contour interval shall be: 0-5% Grade = 2 foot; 5-10% grade = 5 foot; >10% = 10 foot. **PCC 7.21.038 (H); R18-9-A309 (B)(2)(b)(iii)**
- Show cut banks, retaining walls, or other features that might affect the system. **R18-9-A309 (B)(2)(b)(i)**
- Show features less than 200 feet outside property line that constrain location. **R18-9-A309 (B)(2)(b)(ii)**
- Show surface limiting conditions, such as the presence of fill material or the 100-year floodplain. **R18-9-A311 (C), R18-9-A310 (C)(2)**
- Show primary area, reserve area, and all soil testing locations. **R18-9-A309 (B)(2)(b)(iv)**
- Septic System Locations: In areas of rough terrain or poor absorption, the location of the on-site disposal system and reserve area shall be shown for each lot on the final plat plan. **PCC 7.21.038 (I)**
- Show location of any public sewer if 400 feet or less from the property line **R18-9-A309 (B)(2)(b)(v)**

Sewer Connection Requirements

- On-site wastewater treatment is not allowed because a county, municipal, or sanitary district ordinance requires connection **R18-9-A309 (A)(5)(a)(ii)**
- On-site wastewater treatment is not allowed because 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; **R18-9-A309 (A)(5)(a)(iii)**
- Where a sewer service line extension is available at the property boundary, connection is required unless the service connection fee is more than \$6000 for a dwelling and the cost of constructing the building sewer from the wastewater source to the service connection is more than \$3000 for a dwelling. **R18-9-A309 (A)(5)(b)**
- If public sewer with adequate capacity is within 200 feet of property line submit [sewer connection waiver](#). **PCC 7.21.037 (D)**
- Subdivisions further than 200 feet from a public sewer using on-site disposal systems shall be required at the time of recordation to record permanent rights-of-way for future public sewer construction and covenants requiring connection within five years of public sewer availability. **PCC 7.21.037 (H)**

Size of lots

- Where both the water supply and sewage disposal system must be developed on the same lot, the minimum size shall be at least one acre, excluding streets, alleys and other rights-of-way **R18-5-404**
- Where water from a central system is provided for residential uses, the lot shall be sufficient to accommodate the sewage disposal system and provide for at least 100 percent expansion of the system based on a four-bedroom house within the bounds of the property allowing a minimum of five feet distance to the property lines. **R18-5-404**
- Where lots are zoned for commercial uses, the lot shall be sufficient to accommodate the sewage disposal system and provide for at least 100 percent expansion of the system within the bounds of the property allowing a minimum of five feet distance to the property lines. **R18-5-404**
- 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 **R18-9-A309 (A)(8)(i)**
- The minimum size for single-family residential lots shall be one acre, including easements and designated rights-of-way. In addition, each lot shall be of sufficient size to accommodate an on-site disposal system for a four-bedroom house and provide for at least one hundred percent expansion of the system within the bounds of the property, allowing a minimum of five feet distance to the property lines. **PCC 7.21.038 (C)**

Setbacks (Below are typical setbacks see http://www.azsos.gov/public_services/title_18/18-09.htm for additional)

- 10 foot building setback to an on-site wastewater treatment facility, including reserve area is required R18-9-A312 (C)
- 5 foot property line setback to an on-site wastewater treatment facility, including reserve area is required R18-9-A312 (C)
- 100 foot well setback to an on-site wastewater treatment facility, including reserve area is required R18-9-A312 (C)
- 50 foot wash or drainage easement setback to an on-site wastewater treatment facility, including reserve area is required where the wash or drainage area is more than 20 acres R18-9-A312 (C)
- 5 foot driveway setback to an on-site wastewater treatment facility, including reserve area is required R18-9-A312 (C)
- 5 foot easement setback to an on-site wastewater treatment facility, including reserve area is required R18-9-A312 (C)

Geological Report

- Geological report shall include a general description of the area. **PCC 7.21.038 (D)(1)**
- Geological report shall include a vicinity map having sufficient detail to enable a person unfamiliar with the area to find the site. **PCC 7.21.038 (D)(2)**
- Geological report shall include a description of methods used in making the soil profile and percolation tests. **PCC 7.21.038 (D)(3)**
- Geological report shall include a map giving location of soil profiles and percolation tests. **PCC 7.21.038 (D)(4)**
- Geological report shall include a boring log results. **PCC 7.21.038 (D)(5)**
- Geological report shall include a percolation test results. **PCC 7.21.038 (D)(6)**
- Geological report shall include a depth to groundwater. **PCC 7.21.038 (D)(7)**
- Geological report shall include a description of topography. **PCC 7.21.038 (D)(8)**
- Geological report shall include a detailed description of present and planned land uses adjacent to the proposed subdivision. **PCC 7.21.038 (D)(9)**

Percolation Tests and boring logs

- Percolation tests and boring logs shall be conducted sufficient to accurately depict soil conditions. The location of percolation test sites and the depth of boring logs shall be determined by the environmental officer. **PCC 7.21.038 (E)(1)**
- There shall be a minimum of one percolation test and one ten-foot boring log per acre, or one percolation test and boring log per lot for lots larger than one acre. **PCC 7.21.038 (E)(2)**
- In areas proposed for on-site disposal systems where the slope of the terrain is five percent or less, the depth to groundwater is greater than fifty feet and an impermeable strata is greater than fifteen feet below the existing ground surface, fewer percolation and boring log tests than one per acre may be approved by the environmental officer if the boring log test results indicate a uniform soil structure and percolation test results indicate that the percolation rate is uniform in the area and is between one and fifteen minutes per inch. **PCC 7.21.038 (E)(3)**
- The environmental officer may require additional tests when, based upon the geology and physical conditions of a particular site, the environmental officer deems it necessary. **PCC 7.21.038 (E)(4)**
- Boring Logs: Data on the types of soil strata, rock or impervious strata shall be obtained from boring logs to a depth to be determined by the environmental officer, but not less than four feet below the bottom of the proposed subsurface on-site disposal system using disposal trenches. Data on groundwater shall be obtained to fifty feet below the bottom of the subsurface on-site disposal system by borings or existing hydrogeological data. **PCC 7.21.038 (F)**
- Soil Depths: If impervious soil strata or bedrock is less than four feet below the bottoms of proposed subsurface disposal systems demonstrate that: 1) the bedrock is permeable, 2) the bedrock does not limit construction practices necessary to meet minimum design criteria; and 3) contamination of water supplies is improbable. **PCC 7.21.038 (G)**
- Septic System Locations: In areas of rough terrain or poor absorption, the location of the on-site disposal system and reserve area shall be shown for each lot on the final plat plan. **PCC 7.21.038 (I)**