

**Pima County Department of Environmental Quality
Alternative Wastewater On-Site Residential Treatment System Checklist
for Engineers, Designers, and Site Evaluators**

per Arizona Administrative Code Title 18, Chapter 9

R18-9-E321. 4.21 General Permit: Surface Disposal, Less Than 3000 Gallons Per Day Design Flow

General Permit

_____ Wastewater that is nominally free of coliform bacteria produced by the treatment works of an on-site wastewater treatment facility.

Performance

_____ Ensure that the treated wastewater distributed for surface application meets the following criteria:

- TSS of 30 milligrams per liter, 30-day arithmetic mean;
- BOD₅ of 30 milligrams per liter, 30-day arithmetic mean;
- Total nitrogen (as nitrogen) of 53 milligrams per liter, five-month arithmetic mean;
- Is nominally free of total coliform bacteria as indicated by a total coliform level of Log₁₀ 0 colony forming units per 100 milliliters, 95th percentile.

Restrictions

_____ Disposal works not be installed if weather records indicate that:

- Average minimum temperature in any month is 20°F or less, or
- Over 1/3 of the average annual precipitation falls in a 30-day period.

Design requirements

_____ The land surface application rate does not exceed the lowest application rate as determined under R18-9-A312(D) minus no greater than 50 percent of the evapotranspiration that may occur during the month with the least evapotranspiration in any soil zone within the top 5 feet of soil;

_____ The design incorporates sprinklers, bubbler heads, or other dispersal components that optimize wastewater loading rates and prevent ponding on the land surface;

_____ The design specifies containment berms:

- Compacted to a minimum of 95 percent Proctor;
- Designed to contain the runoff of the 10-year, 24-hour storm event in addition to the daily design flow; and
- Designed to remain intact in the event of a more severe rainfall event; and

_____ The design incorporates placement of signage on hose bibs, human ingress points to the surface disposal area, and at intervals around the perimeter of the surface disposal area to provide notification of use of treated wastewater and a warning against ingestion.

Installation requirements

_____ Ensure that installation of the wastewater dispersal components conforms to manufacturer's specifications that do not conflict with R18-9 and to the design documents specified in the Construction Authorization issued under R18-9-A301(D)(1)(c).

Operation and maintenance

_____ Meet the requirements specified in R18-9-A313(B),

_____ Operate and maintain the surface disposal works to:

- Prevent treated wastewater from coming into contact with drinking fountains, water coolers, or eating areas;
- Contain all treated wastewater within the bermed area; and
- Ensure that hose bibs discharging treated wastewater are secured to prevent use by the public.

Prepared by:

Date: