5.13 Total Nitrogen Reduction Approvals

Revision: December 7, 2017

On-site wastewater systems that qualify as best practical methods for the targeted nitrogen reduction amount appear in Table 5-14. Areas of concern, such as nitrate priority areas, areas with shallow soils over bedrock, or a shallow depth to ground water, may be required to use one of these best practical methods to reduce the development's or home's environmental impact. Values listed in the TN column should not be exceeded to ensure that the required TN reduction percentage is attained. These TN values may be used in NP evaluations to evaluate the impact on ground water resources. Products installed for reduction of TN less than 27 mg/L are subject to effluent testing (section 4.8).

Table 5-14. On-site wastewater systems approved for total nitrogen reduction.

System or Manufacturer Product and Model	Total Nitrogen Reduction[a] (%)	Total Nitrogen[a] (mg/L)	Minimum Source Water Alkalinity[b] (mg/L)
Public Domain Systems			
Intermittent Sand Filters (ISF)	15[c]	38	108
Recirculating Gravel Filters (RGF)	40[c]	27	189
Extended Treatment Package Systems			
Busse Innovative Systeme GmbH–MF-B-400	30	32	156
Delta–Ecopod	30	32	156
Delta–Whitewater	30	32	156
Nayadic	30	32	156
Southern Manufacturing	30	32	156
Jet Inc.	32[d]	31	163
SeptiTech	55[e,f]	20	180
Orenco–AdvanTex	65[e,f]	16	269
BioMicrobics	65[f]	16	269
Norweco–Singulair 960 series	65[d]	16	269
Norweco–Singulair TNT	65[d]	16	269

a. Quantifiable values (milligram per liter [mg/L]) will indicate compliance with the qualitative total nitrogen reduction limit expressed as a percentage (%) reduction.
b. Minimum recommended source water alkalinity to support nitrification in the denitrification process. Use of water softeners is not recommended due to potentially detrimental effects on the biological processes.
c. Literature value
d. Idaho testing
e. Third party (Environmental Technology Verification Program)
f. National Science Foundation data