

Virginia Performance Requirement Treatment Levels & Basis for Approval

Treatment Level	Effluent Quality BOD ₅ (mg/l)	Effluent Quality TSS (mg/l)	Effluent Quality Fecal Coliform (cfu/100ml)	Effluent Quality Total Nitrogen (mg/l)	Controlled Testing for Approval	In-Field Testing for Approval
Primary	200	100	≥2,000,000	40	No	No
Advanced Primary	≤60	≤60	≤200,000	40	3rd Party	-20 systems -9 months -Sampled quarterly
Secondary	≤30	≤30	≤20,000	% reduction credit based on testing & required alkalinity	NSF ETV BNQ CEN 3rd Party	-20 systems -1 year -Sampled quarterly
Advanced Secondary	≤10	≤10	≤2,000	% reduction credit based on testing & required alkalinity	NSF ETV BNQ CEN 3rd Party	-20 systems -2 years -Sampled quarterly

Notes:

1. 150 gallons per day per bedroom
2. 1.5 occupants per bedroom
3. BOD₅ loading is 0.17 pounds per person per day
4. TN loading is 0.033 pounds per person per day

Virginia Performance Requirement Treatment Levels & Reductions

Treatment Level	Dispersal Field Size Reduction	Vertical Separation	Horizontal Setback Reduction	Notes
Primary	None	18"	No	
Advanced Primary	Use 60/60 in SARa formula	15"	TBD	
Secondary	Use 30/30 in SARa formula	12"	TBD	Must incorporate fail-safe
Advanced Secondary	Use 10/10 in SARa formula	6" to 9"	TBD	Must incorporate fail-safe

$$SAR_a = \left[\left(\frac{1139}{\sqrt[3]{TSS + BOD_5}} - 1.87 \right) SAR^{1.13} + 1 \right] SAR$$