



May 1, 2023

Paradise Land Trust
Attn: John Packer
Via email

RE: #60 Kuffies Point Way, Assr. Pcl. 58-A-1
VLSE Job No. 1-3

Dear Mr. Packer,

The following report outlines the wastewater planning component of your project, and in specific, the compliance of the project with the Martha's Vineyard Commission's (MVC) Water Quality Policy. We have tabulated the pertinent information below:

Project area: 41.26 Acres
Watershed: Tashmoo Pond
Nitrogen loading limit: 1.6 (kg/Acre/Year)

MVC Water Usage (5 Bedroom House)		Allowable Water Usage	
Total Water Usage (Gallons/Year)	67,700	Area (Acres)	41.26
Water Usage from Effluent (Gallons/Year)	60,930 (90%)	Tashmoo Nitrogen Load Limit (kg/Acre/Year)	1.6
Usage Per Bedroom (Gallons/Year)	12,186	Total Nitrogen Load Limit (kg/Year)	66.02
Usage Per Bedroom (Liter/Year)	46,124	NitROE Waste Water Treatment System Effluent N concentration (mg/Liter)	11

Total Allowable Bedrooms = $TN\text{-allowable}/\text{vol wastewater}/\text{bedroom} * \text{Concentration N}$
= $66.02 \text{ KG N} / 12,186 \text{ Gal per bedroom} * 11 \text{ ppm N}$ (3.78 E-6 kg/gal)
= 130 Bedrooms

Total Proposed Bedrooms = 40

If you have any questions or comments regarding this matter, please give me a call.

Sincerely,

Reid G. Silva, PE
Professional Engineer