
APPENDIX E

TOTAL NITROGEN LOADING CALCULATIONS

Method 1: Residential Development when Impervious Surfaces NOT Shown

- Step 1: Determine area for each type of land use and enter in Column 2.
- Step 2: Total the areas for each type of land use and enter at the bottom of Column 2.
- Step 3: Determine the TN export coefficient associated with right-of-way using Graph 5.1.
- Step 4: Determine the TN export coefficient associated with lots using Graph 5.2.
- Step 5: Multiply the areas in Column 2 by the TN export coefficients in Column 3 and enter in Column 4.
- Step 6: Total the TN exports for each type of land use and enter at the bottom of Column 4.
- Step 7: Determine the export coefficient for site by dividing the total TN export from uses at the bottom of Column 4 by the total area at the bottom of Column 2.

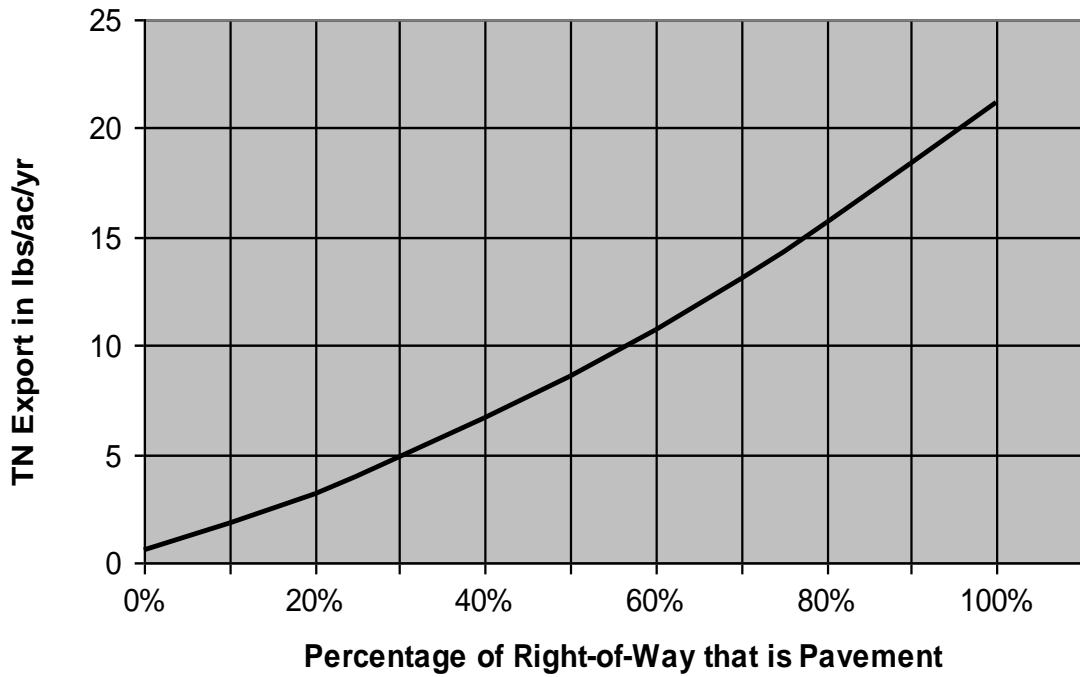
Table 5.1 – Method 1 for Residential Development when Impervious Surfaces Not Shown

(1) Type of Land Cover	(2) Area (Acres)	(3) TN Export Coeff. (lbs/ac/yr)	(4) TN Export from use (lbs/yr)
Permanently protected undisturbed open space (forest, un-mown meadow, etc.)		0.6	
Permanently protected managed open space (lawn, grass, landscaping, etc.)		1.2	
Right-of-way (read TN export from Graph 5.1)			
Lots (read TN export from Graph 5.2)			
TOTAL			

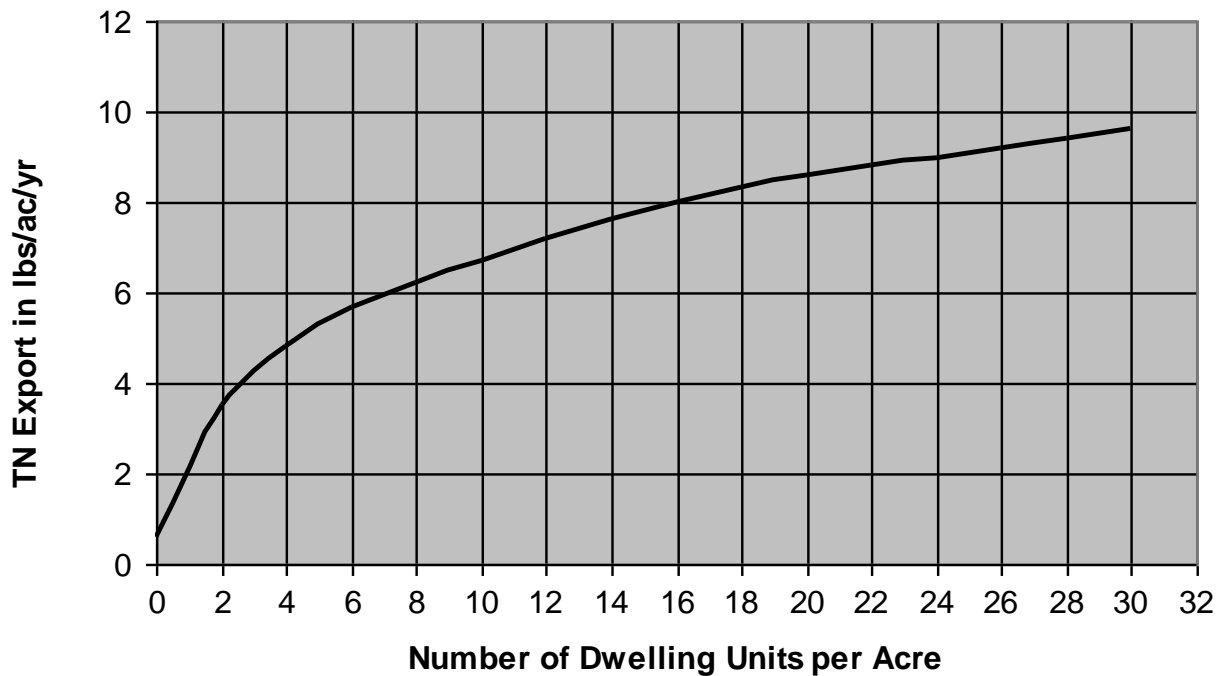
When using Method 1 to calculate the Total Nitrogen Export, the following guidelines should be adhered to when estimating the TN Export Coefficient from Graphs 5.1 and 5.2:

1. To determine the percentage of Right-of-Way that is pavement, the entire roadway surface within the Right-of-Way should be used.
2. To determine the Number of Dwelling Units per Acre, only the land area within the proposed single-family lots should be used. The area should also exclude all and that is already utilized as undisturbed or managed permanently protected open space.

Graph 5.1: Total Nitrogen Export from Right-of-Way



Graph 5.2: Total Nitrogen Export from Lots



Method 2: Residential/Non-Residential Developments where Impervious Surfaces Shown

- Step 1: Determine area for each type of land use and enter in Column 2.
- Step 2: Total the areas for each type of land use and enter at the bottom of Column 2.
- Step 3: Multiply the areas in Column 2 by the TN export coefficients in Column 3 and enter in Column 4.
- Step 4: Total the TN exports for each type of land use and enter at the bottom of Column 4.
- Step 5: Determine the export coefficient for site by dividing the total TN export from uses at the bottom of Column 4 by the total area at the bottom of Column 2.

Table 5.2 – Residential/Non-residential Developments where Impervious Surfaces Shown

(1) Type of Land Cover	(2) Area (Acres)	(3) TN Export Coeff. (lbs/ac/yr)	(4) TN Export from use (lbs/yr)
Permanently protected undisturbed open space (forest, un-mown meadow, etc.)		0.6	
Permanently protected managed open space (lawn, grass, landscaping, etc.)		1.2	
Impervious surfaces (roads, parking lots, driveways, roofs, paved storage areas, etc.)		21.2	
TOTALS			