

Appendix C: Nitrogen Export Calculations (see Neuse River Basin: Model Stormwater Program for Nitrogen Control)

Figure 2a: Method 1 for Quantifying TN Export from Residential Developments when Building and Driveway Footprints are 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 1.
- Step 4: Determine the TN export coefficient associated with lots using Graph 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).

(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, unmown meadow)		0.6	
Permanently protected managed open space (grass, landscaping, etc.)		1.2	
Right-of-way (read TN export from Graph 1)			
Lots (read TN export from Graph 2)			

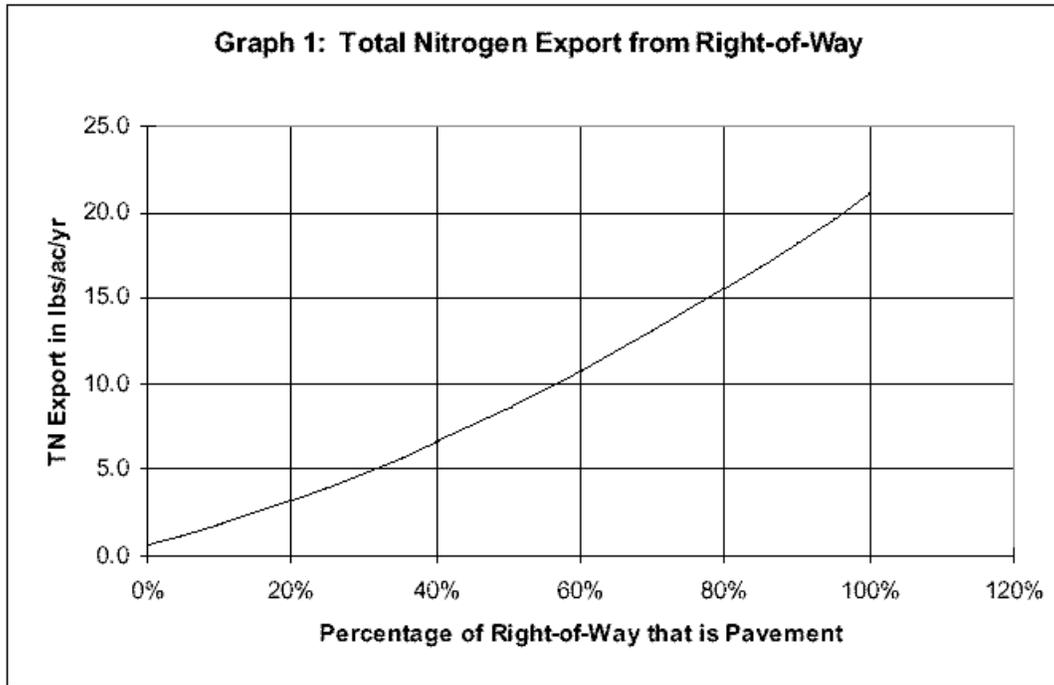
** see Graphs on following page **

Figure 2b: Method 2 for Quantifying TN Export from Residential / Industrial / Commercial Developments when Footprints of all Impervious Surfaces are 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).

(1) Type of Land Cover	(2) Area (acres)	(3) TN export coefficient (lbs/ac/yr)	(4) TN export from use (lbs/yr)
Permanently protected undisturbed open space (forest, unmown meadow)		0.6	
Permanently protected managed open space (grass, landscaping, etc.)		1.2	
Impervious surfaces (roads, parking lots, driveways, roofs, paved storage areas, etc.)		21.2	
TOTAL		-	

Graphs for use with Method 1: Residential Sites with no known building footprints.



Graph 2: Total Nitrogen Export from Lots

