

Nitrogen Control Plan – July 2009

Method 1: Residential Subdivisions with No Known Building Footprints

Project Name: _____
 Applicant: _____

Date: _____
 Telephone: _____

Part I. Riparian Buffers

Does site contain riparian buffers? No Yes (show on site plan) Exempt (attach basis for exemption)

Part II. Nitrogen Calculation

Item	Proposed Subdivision Information	
1	Total project acreage (acres)	
2	Total area of lots excluding Right-of-Way (R/W) and open space (acres)	
3	Number of lots	
4	Number of lots per acre [Item 3 ÷ Item 2] (use in Graph 1)	
5	Existing impervious area (prior to 3/9/01) (acres)	
6	Total proposed impervious surface in R/W (acres)	
7	New impervious area in R/W (acres) [Item 6 – Item 5]	
8	Total area of R/W (acres)	
9	Percentage of R/W that is impervious [Item 7 ÷ Item 8] x 100] (use in Graph 2)	
10	Permanently protected undisturbed open space (acres)	
11	Permanently protected managed open space (acres)	

Pre-Development Nitrogen Loading			
Type of Land Cover	Area (acres)	TN export coefficient (lbs/ac/yr)	TN export from use (lbs/yr)
Existing forest land		1.7	
Existing pasture		4.4	
Existing residential		7.5	
Existing cropland		13.6	
Existing commercial/industrial		13	
TOTAL			
Nitrogen Loading Rate^a (lbs/ac/yr)			

^a Nitrogen Loading Rate (lbs/ac/yr) = Total TN export from use (lbs/yr) ÷ Total Area (acres)

Post-Development Nitrogen Loading Before BMPs and/or Offset Payments			
Type of Land Cover	Area (acres)	TN export coefficient (lbs/ac/yr)	TN export from use (lbs/yr)
Permanently protected undisturbed open space (Item 10) (forest, unmown meadow, wetlands, buffers)		0.6	
Permanently protected managed open space (Item 11) (grass, landscaping, etc.)		1.2	
Lots (Item 4) (read TN export coefficient from Graph 1)			
Right-of-Way (Item 9) (read TN export coefficient from Graph 2)			
TOTAL			
Nitrogen Loading Rate^a (lbs/ac/yr)			

^a Nitrogen Loading Rate (lbs/ac/yr) = Total TN export from use (lbs/yr) ÷ Total Area (acres)

BMP Type	TN Removal Rate (%)	Check which apply
Wet Pond	25	
Stormwater Wetland	40	
Sand Filter	35	
Bioretention	35	
Grass Swale	20	
Vegetated Filter Strip w/Level Spreader	20	
50' Restored or Additional Riparian Buffer w/Level Spreader	30	
Dry Detention	10	

Post-Development Loading after BMPs and/or Offset Payments		
Item	Description	Nitrogen Loading Rate (lbs/ac/yr)
12	Nitrogen load after BMPs (show separately in detail)	
13	Nitrogen load offset by payments [Item 12 – 3.6]	

Amount of Offset (Pounds of Nitrogen) [Item 13 × (Item 1 – Item 5)] _____

*Please refer to the link below to determine the procedure for payment of the nitrogen offset payment. It is necessary for applicants to demonstrate compliance with SL 2009-337, which indicates that applicants must first purchase offset credits through private mitigation banks. If no such credits are available, applicants may then buy their offset credits from the NC EEP. These banks are listed by basin and further information regarding this session law can be found at the following link:
http://test.nceep.net/pages/ILF_Program_intro.html

Part III. Control of Peak Stormwater Flow

Calculated Pre-development Peak Flow (1-year) _____
 Calculated Post-development Peak Flow without Controls (1-year) _____
 Calculated Post-development Peak Flow with Controls (1-year) _____

Calculations and details showing control of nitrogen and peak stormwater runoff control must be included.

Part IV. Watershed Development Permit

1. Total project acreage (in Lake Benson Watershed) _____
2. Total proposed impervious surface (in Lake Benson Watershed)* _____
3. Existing impervious surface (in Lake Benson Watershed) ** _____
4. Equivalent project acreage (Item 1 – Item 3) _____
5. New impervious acreage (Item 2 – Item 3) _____
6. Percent impervious [(Item 5 ÷ Item 4) x 100] _____

* Total proposed impervious surface is determined by adding known impervious surfaces and estimated typical impervious surfaces for the individual lots.
 ** Limited to impervious surfaces existing before 7/1/93.

I, the undersigned, certify to the best of my knowledge that the above information is correct (affix seal).

_____ (sign)

To be filled in by staff

Project Watershed Protection Requirements

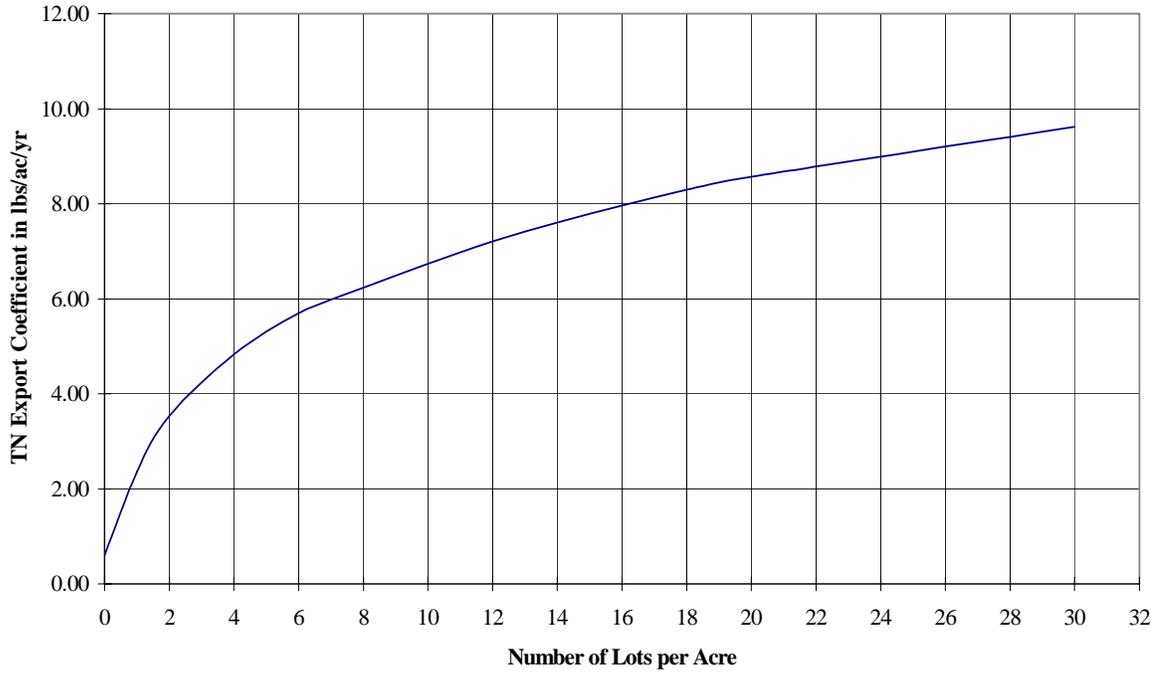
- Project Exempt: Explain _____
- Project Located in Lake Benson Conservation District – LBCD (Critical Area) Standards Apply
- Project Located Outside LBCD – On-site treatment required.
- Minor Variance Requested (WRB) Approved (date): _____ Disapproved (date): _____
- Major Variance Requested (EMC) Approved (date): _____ Disapproved (date): _____
- Recommended by WRB (circle one): YES NO

Comments (use additional sheet if necessary)

Approved by Watershed Administrator: _____ (sign)

Date: _____

Graph 1: Total Nitrogen Export from Lots



Graph 2: Total Nitrogen Export from Right-of-Way

