Method 2: Commercial/Industrial/Residential Sites with Known Impervious Area

Project Name: _____ Date: _____
Applicant: _____ Telephone: _____

Part I. Riparian Buffers

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

Part II. Nitrogen Calculation

Item	Proposed Site Information	Area (acres)
1	Total project acreage	
2	Total proposed impervious area	
3	Existing impervious area (prior to 3/9/01)	
4	New impervious area [**Item 2** – **Item 3**]	
5	Permanently protected undisturbed open space	
6	Permanently protected managed open space	

Pre-Development 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 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 (forest, unmown meadow, wetlands, buffers) (**Item 5**)		0.6	
Permanently protected managed open space (grass, landscaping, etc.) (**Item 6**)		1.2	
Impervious surfaces (roads, parking lots, driveways, roofs, paved storage areas, etc.) (**Item 4**)		21.2	
TOTAL	(Item 7)		(Item 8)
Nitrogen Loading Rate (lbs/ac/yr) (Equals Item 8 ÷ Item 7)			

BMP Type	TN Removal Rate (%)	Check which apply
Wet Pond	30	
Stormwater Wetland	40	
Sand Filter	35	
Bioretention	35	
Pollutant Removal (wet) swale	30	
Vegetated Filter Strip w/Level Spreader	30	
Permeable Pavement	30	
Dry Detention	10	

	Post-Development Loading after BMPs and/or Offset Payments	
Item	Description	Nitrogen Loading Rate (lbs/ac/yr)
9	Nitrogen load after BMPs (show separately in detail)	
10	Nitrogen load offset by payments [**Item 9 – 3.6**]	

Amount of Offset (Pounds of Nitrogen) [**Item 10 × (Item 1 – Item 3) × 30 years**]　　＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

*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 surface (Item 2 – Item 3)　　　　　　　　　　＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
6. Percent impervious [(Item 5 ÷ Item 4) x 100]　　　　　　　　　＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

    * Limited to impervious surface existing before 7/1/93

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

＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿(sign)

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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: ＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿