

**Table 1**  
**Wake County, North Carolina**  
**Stormwater Management Task Force**  
**Summary of Land Class Data for Wake County**

Land Class Name	# of Parcels	Total Acres	% of Total
<b>Residential (&lt; 10 ac.)</b>	<b>171,353</b>	<b>79,264</b>	<b>20.4%</b>
Agri-Farm	1,751	68,889	17.7%
<b>Vacant</b>	<b>27,105</b>	<b>55,254</b>	<b>14.2%</b>
Exempt	4,209	35,405	9.1%
Right-of-Way	n/a	34,560	8.9%
Farm approved for Forest	483	19,547	5.0%
State Assessed	250	18,089	4.7%
<b>Commercial</b>	<b>6,281</b>	<b>17,585</b>	<b>4.5%</b>
Residential (> 10 ac.)	658	13,456	3.5%
no label	3,713	13,286	3.4%
Home Owner Assoc	4,338	6,996	1.8%
<b>Apartment</b>	<b>665</b>	<b>5,323</b>	<b>1.4%</b>
<b>Industrial</b>	<b>363</b>	<b>4,374</b>	<b>1.1%</b>
Mfg. Home	2,685	4,314	1.1%
Golf Course	71	3,890	1.0%
AC-W/Imp	739	2,660	0.7%
Mobile Home Park	123	2,367	0.6%
<b>Condo</b>	<b>537</b>	<b>1,064</b>	<b>0.3%</b>
Farm approved for Hortic.	47	954	0.2%
Water/Sewer Sys	415	424	0.1%
Part Exempt	46	388	0.1%
Cemetery	12	296	0.1%
Ret. Home	29	151	0.0%
Historic	75	95	0.0%
Leased	16	60	0.0%
<b>Total</b>	<b>226,009</b>	<b>388,480</b>	<b>100%</b>

**NOTE:**  
*Does not include area inside the WSW*

**Table 2**  
**Wake County, North Carolina**  
**Stormwater Management Task Force**  
**Summary of Impervious Areas**

Property Type	# of Parcels	Total Acres
<b>Single Family Residential</b>	164,481	57,750
-- Roof Area (imper.)	n/a	<b>6,579</b>
-- Driveway Area (imper.)	n/a	<b>4,277</b>
-- Lawn Area (pervious)	n/a	46,877
<b>Non-Residential</b>	7,846	28,346
-- Impervious Fraction	n/a	<b>22,677</b>
-- Pervious Fraction	n/a	5,669
<b>Roads (4,505 miles)</b>	n/a	<b>13,891</b>
-- Primary Roads (impervious)	n/a	<b>1,964</b>
-- Secondary Roads (impervious)	n/a	<b>11,927</b>
<b>Total Impervious Area</b>	n/a	<b>47,424</b>
<b>Total Area</b>	n/a	<b>99,987</b>

**NOTE:**

**Does not include area inside the WSW**

**Assumptions:**

- 1) Only includes parcels NOT inside the WSWs (Total Parcel Count = 225,964)
- 2) For Residential:
  - Wake Land Class = "R", which includes residential parcels smaller than 10 acres (164,481)
  - Eliminated all parcels with "R" land class and greater than 1.5 acres
  - Total parcels remaining = 164,481
  - Total acres remaining = 57,750 acres
  - Average parcel size = 0.351 acres
  - Applied avg. roof (0.04 ac) & driveway (0.026 ac) to all residential properties
  - Assumed the difference per lot is lawn space (0.285 ac)
- 3) For Non-Residential:
  - Wake Land Class = C, D, G, N, O (commercial, industrial, apartment, condos)
  - Total # of "Non-Residential" parcels = 7,846; Total Area = 28,346 acres
  - Assumed 80% of all properties are impervious (based on previous work with database)
- 4) Roads
  - Sub-divided roads from NCDOT GIS coverage into primary and secondary
  - Length of primary roads = 405 miles (assumed 40 foot wide pavement)
  - Length of secondary roads = 4100 miles (assumed 24 foot wide pavement)

**Table 3**  
**Wake County, North Carolina**  
**Stormwater Management Task Force**  
**Summary of Exempt Parcels**

<b>Exempt Description</b>	<b># of Parcels<sup>1</sup></b>	<b>Total Acres<sup>1</sup></b>	<b>% of Total</b>
State Owned <sup>2</sup>	372	11,546	32.6%
Raleigh	1,021	6,529	18.4%
Wake County School System	140	3,317	9.4%
Wake County	148	3,069	8.7%
Religious	753	2,548	7.2%
Cary	96	1,234	3.5%
Public Housing Authority	449	1,032	2.9%
Educational	80	889	2.5%
Garner	29	736	2.1%
Dormitory	22	709	2.0%
Wake Forest	129	670	1.9%
Charitable/Fire Stations/Rescue Squads	165	382	1.1%
Wake Technical Community College	10	259	0.7%
Holly Springs	43	238	0.7%
Knightdale	30	225	0.6%
Fuquay Varina	86	216	0.6%
Zebulon	41	187	0.5%
Burial Property	227	179	0.5%
Educational, Scientific, Literary or Charitable	69	179	0.5%
RDU Airport	20	172	0.5%
Federal Owned	25	171	0.5%
Apex	56	170	0.5%
Wendell	33	135	0.4%
Morrisville	27	132	0.4%
Loyal Order of Moose, Odd Fellows, Etc	7	82	0.2%
Non Profit Parks	4	78	0.2%
American Legion, VFW, Etc	19	61	0.2%
Masons, Mystic Shrine, Etc	28	53	0.2%
Rolesville	8	52	0.1%
Charitable Hospital	14	49	0.1%
Protected Natural Area	3	38	0.1%
Triangle Transit Authority	8	35	0.1%
Goodwill Industries	9	11	0.0%
Wake County Board of Alcoholic Control	10	10	0.0%
Pollution Abatement or Recycling	6	7	0.0%
no description given	18	5	0.0%
Historic Preservation	3	1	0.0%
Home For The Aged, Sick or Infirm	1	0	0.0%
<b>Total</b>	<b>4,209</b>	<b>35,405</b>	<b>100%</b>

**NOTE:**

- 1) Does not include area inside the WSW or within public right-of-way
- 2) State owned property includes Umstead Park (5,700 acres)

**Table 4**  
**Wake County, North Carolina**  
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**Sample Runoff Calculation for Undeveloped & Developed Condition**

Property Type	# of Parcels	Total Acres
<b>Single Family Residential</b>	9,877	2,769
-- Roof Area (imper.)	n/a	372
-- Driveway Area (imper.)	n/a	245
-- Lawn Area (pervious)	n/a	2,152
<b>Non-Residential</b>	243	876
-- Impervious Fraction	n/a	701
-- Pervious Fraction	n/a	175
<b>Roads</b>	n/a	395
-- Primary Roads (impervious)	n/a	11
-- Secondary Roads (impervious)	n/a	384
<b>Total Area</b>		<b>4,040</b>

**Runoff Calculation Assumptions**

- 1) Use SCS Curve Number method
- 2) Assume 2-yr, 24-hour design storm (P = 3.6 in)
- 3) Assume original land was farm/pasture
- 4) Assume build-out is represented by data to the left
- 5) Assume soil type B for all areas
- 5) Use the following curve numbers for calcs (ref: TR-55)
  - Ag - Pasture for Grazing, fair condition - CN = 69
  - Open Space (lawns), fair condition - CN = 69
  - Impervious Surface - CN = 98

**Scenario 1: Pre-Development**

100% of Area is Farm/Pasture (4,040 acres)  
**Q (runoff) = 1.02 inches**

**Scenario 2: Developed/Build-Out**

Area is broken down according to table to the left  
Total Impervious Acres = 1,713  
Total Pervious Acres = 2,327  
Apply CN to each area and calculate weighted average  
Weighted CN = 81.3  
**Q (runoff) = 1.81 inches**

**Increase in runoff from development =**

**79%**