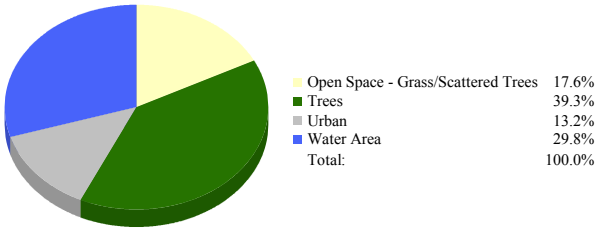
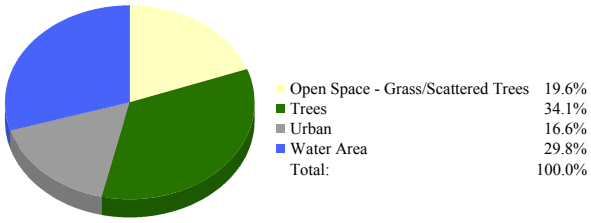
Analysis Report

Lake Norman of Catawba 1984 Landcover



Lake Norman of Catawba 2003 Landcover



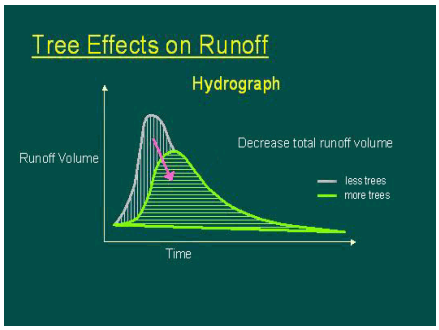
Air Quality Results

Pounds Removed per Year

Pollutant	1984	2003
Carbon Monoxide:	24,933	21,581
Nitrogen Dioxide:	43,632	37,767
Ozone:	255,561	221,209
Particulate Matter:	186,996	161,860
Sulfer Dioxide:	81,032	70,140
Total:	**592,155**	**512,558**

Stormwater Results

Storm Event Hydrograph



Benefits Summary

Landcover Change (acres)

Landcover	1984	2003	Change
Trees:	6,993	6,053	-13.4%
Open Space:	3,125	3,480	11.4%
Urban:	2,352	2,949	25.4%
Water:	5,304	5,291	-0.2%
Total Acres:	17,773		

Air Pollution Benefits

Pollutants Removed (lbs):	592,155	512,558	-79,597
$ Amount:	$1,374,202	$1,189,483	-$184,718
Carbon Stored (tons):	300,899	260,452	-40,446
Carbon Sequestered (lbs):	2,343	2,028	-315

Stormwater Benefits

Additional Storage Volume Needed:		57,400,608	4,386,367
Cost of Retaining Additional Volume of Runoff:		$114,801,215	$8,772,733

Stormwater Volume Change

2-yr, 24-hr Rainfall: 3.25 in.

**Curve Number reflecting conditions in 1984:* 80

**Curve Number reflecting conditions in 2003:* 81

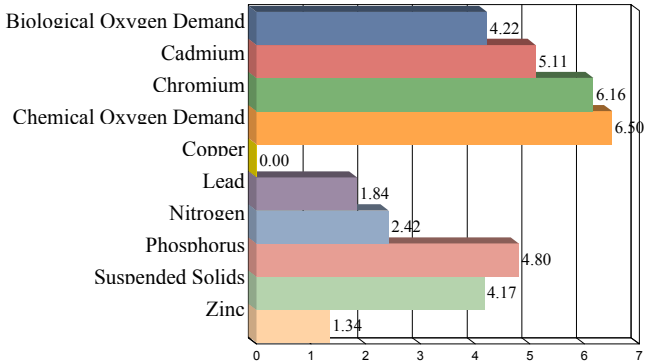
Additional Storage volume of stormwater generated due to change in landcover from 1984 to 2003: 4,386,367 cu. ft.

Construction cost of retention facilities per cu. ft.of stormwater: $2.00

Cost of the construction of retention facilities to store excess volume of stormwater: **$8,772,733**

Water Quality (Contaminant Loading)

Percent Change in Contaminant Loadings from 1984 to 2003 due to land cover change



*The stormwater calculations are based on curve number which is an index developed by the NRCS, to represent the potential for storm water runoff within a drainage area. Curve numbers range from 30 to 100. The higher the curve number the more runoff will occur. The change in curve number reflects the increase in the volume of stormwater runoff.