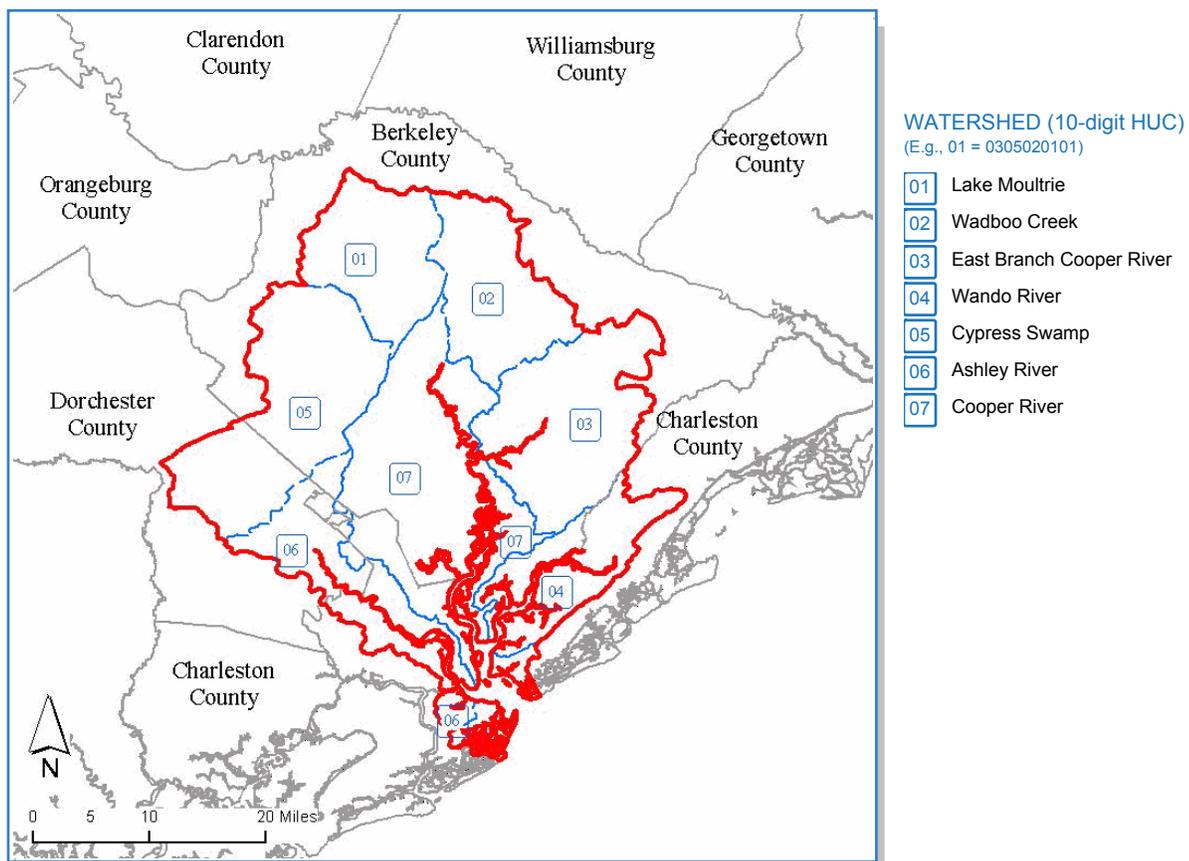


# COOPER Subbasin

August 31, 2007

## An Assessment of the Cooper Subbasin

Hydrologic Unit Code (8 Digit): 03050201

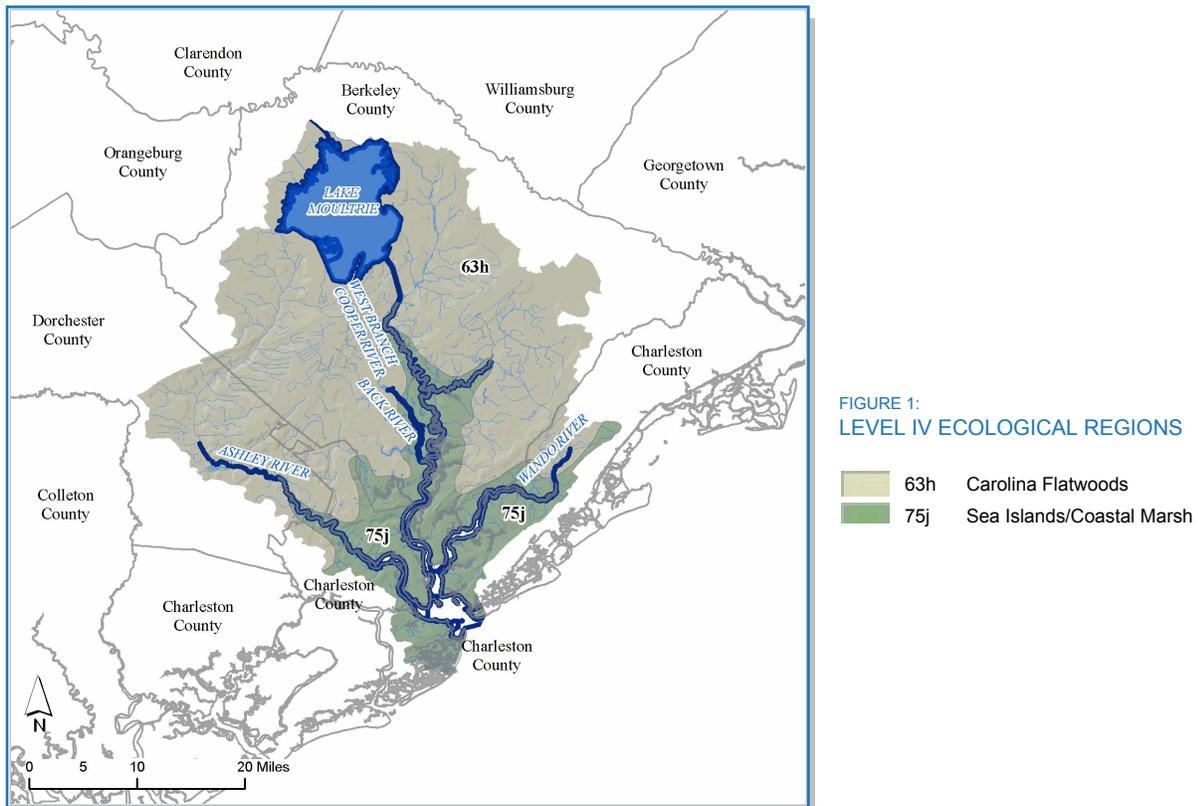


## EXECUTIVE SUMMARY

### Watershed Description

The West Branch of the Cooper River exits Lake Moultrie and flows due south towards Charleston Harbor. The Cooper River is joined from the *east* by the Wabdooc Creek, the East Branch Cooper River and the Wando River. The Ashley River rises from the Wassamassaw and Great Cypress Swamps in Berkeley County and widens into a brackish, tidal estuary just south of Fort Dorchester, entering Charleston Harbor from the *west* of the subbasin (Figure 1) .

The subbasin covers the Carolina Flatwoods (63) and the Southern Coastal Plain (75) ecoregions (Figure 1). A brief description of the Level III ecoregions in this watershed is available in this document's appendix. A more detailed description of the Level III and Level IV Common Resource Areas (Ecological Regions) is available online (See Griffith *et al.* 2002 in References section.).



# EXECUTIVE SUMMARY

## Land Use/Land Cover

The subbasin is dominated by Charleston and surrounding urban areas in the West and by Lake Moultrie (part of SCANA's Santee Cooper Hydroelectric Project) and the Francis Marion National Forest in the East (Figure 1). The small amount of agricultural land in the subbasin is mainly in Berkeley and Dorchester Counties - these lands are mostly under rowcrops (Table 2).

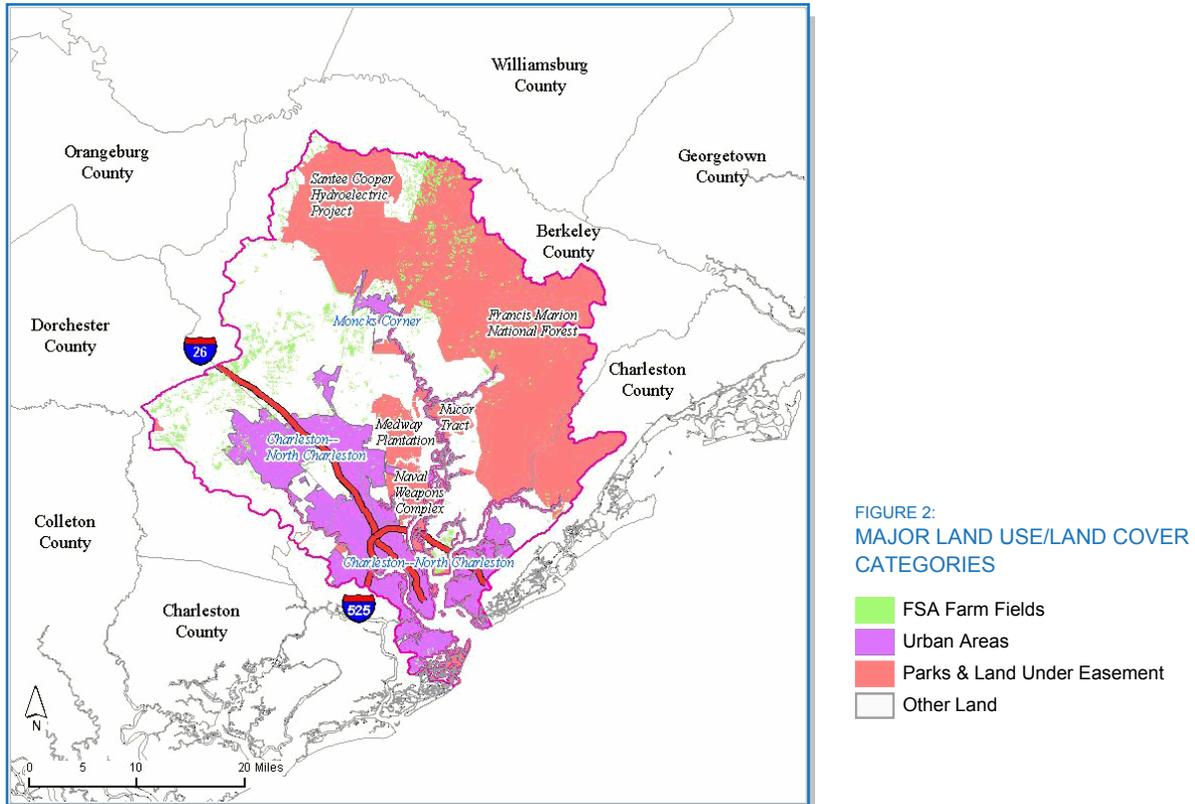


FIGURE 2: MAJOR LAND USE/LAND COVER CATEGORIES

Table 1: MAJOR LAND USE/LAND COVER CATEGORIES

	Acres	% of Watershed
Watershed (Total)	755,306	-
Urban Area	128,255	17%
Parks/Land Under Easement (not NRCS)	325,818	43%
Farm Service Agency Designated Farm Fields	30,185	4%

Table 2: AGRICULTURAL LAND USE: FSA ACREAGE AND ESTIMATED FARM FIELD USE FROM THE 2002 AG CENSUS (NASS Whole County Data Used. Cropland includes: Field Crops, Orchards, and Specialty Crops.)

County	FSA Fields (Acres)	% Pasture (Estimated)	% Cropland (Estimated)	% Hayland (Estimated)
Berkeley	22,799	16%	76%	9%
Charleston	1,433	18%	71%	11%
Dorchester	5,953	14%	78%	8%

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## EXECUTIVE SUMMARY

### Summary of Resource Concerns

The following is a summary of resource concerns for the watershed. Each resource concern has a more detailed analysis provided in its corresponding section.

#### *Soils*

Land capability limitations are dominated by wetness in this subbasin and are typical of an area within the Coastal Plain. Hydric soils or partially hydric soils comprise 79% of the subbasin and are the key resource concerns.

#### *Water Quantity*

Awaiting SCDNR's 2007 state water assessment.

#### *Water Quality*

Fecal coliform (shellfish and recreational) and dissolved oxygen.

#### *Plant Condition*

Forestry is of significant economic importance in Berkeley County; vegetables are grown closer to the coast. Chinese Tallow is a significant problem in the Charleston area.

#### *Fish, Wildlife and Native Plants*

According to SC DNR's "Comprehensive Wildlife Conservation Strategy: 2005 - 2010" (see SCDNR 2005 in References section), the following applies to this subbasin: Biologists have identified habitat protection as one of the most important actions to ensure the protection of South Carolina priority species. Loss and fragmentation of habitat have been identified as a major threat to many of the species listed as threatened and endangered in South Carolina.

#### *Domestic Animals*

Domestic animal populations are small in comparison to the human population.

#### *Economic and Social Factors*

The subbasin is dominated by Charleston and surrounding urban areas in the west and by Lake Moultrie (part of SCANA's Santee Cooper Hydroelectric Project) and the Francis Marion National Forest in the east.

## EXECUTIVE SUMMARY

### Progress on Conservation

Table 3:

#### A SUMMARY OF NRCS APPLIED CONSERVATION TREATMENTS (ACRES)

(See Appendix for NRCS Conservation Practices used for Conservation Treatment Categories.)

(Applied practice data is reported on a fiscal year basis commencing on October 1st)

Conservation Treatments	2004	2005	2006	Total
Buffers and Filter Strips	-	-	-	-
Conservation Tillage	-	-	-	-
Erosion Control	-	-	44	44
Irrigation Water Management	-	-	-	-
Nutrient Management	-	12	274	286
Pest Management	-	12	532	544
Prescribed Grazing	-	-	-	-
Trees and Shrubs	522	5,600	2,345	8,467
Wetlands	-	-	86	86
Wildlife Habitat	687	2,676	1,042	4,405

Table 4:

#### LANDS REMOVED FROM PRODUCTION BY FARM BILL PROGRAMS (WHOLE COUNTY DATA SHOWN)

County	Conservation Reserve Program (ac) 2005	Conservation Reserve Program (ac) 1986 - 2005	Grassland Reserve Program (ac) 2005	Farmland & Ranch Protection Program (ac) 2005	Wetland Reserve Program (ac) 2005
Berkeley	825	14,139	-	-	-
Charleston	547	9,565	-	-	46
Dorchester	1,698	29,720	-	-	6,200

Table 5:

#### APPROVED TOTAL MAXIMUM DAILY LOAD (TMDL)

(See SCDHEC 2007 (a) in Reference Section.) - SCDHEC Contact: Matt Carswell - (803) 898-3609

TMDL Document	Number of Stations	Parameter of Concern	Status	WQMS ID Standard Attained
Ashley River	2	Dissolved Oxygen	Completed & Approved	-
Charleston Harbor	1	Dissolved Oxygen	Completed & Approved	-
Dorchester Crk -Sawmill Br	2	Fecal Coliform	Completed & Approved	-

Table 6:

#### OTHER PLANS, ASSESSMENTS, AND PROJECTS IN THE WATERSHED

Organization	Description	Contact	Telephone
SCDNR	Ashley Scenic River Project	Lindsey White	843-953-9858
SCDHEC/OCRM	Charleston Harbor Project	Andy Miller	803-898-4031
SCDHEC/OCRM	Cooper River SAMP	Andy Miller	803-898-4031
SCDHEC/OCRM	Ashley River SAMP	Andy Miller	803-898-4031
NRCS	Moncks Corner Watershed Project	Stephen Henry	803-765-5350
USGS	Santee National Water Quality Assessment (NAWQA) project	Celeste A. Journey	803-750-6141
SCDHEC	Watershed Water Quality Assessment: Santee River Basin (2005)	Andy Miller	803-898-4031

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## EXECUTIVE SUMMARY

### Other Watershed Considerations

Urban growth and sprawl is one of the more pressing environmental issues in this subbasin. To see more on this issue, please refer to the South Carolina Sea Grant website at:

<http://www.scseagrant.org/Content/?cid=135>

In 1939, the Santee River was dammed, forming lakes Marion and Moultrie, and diverting the river's flow into the Cooper River. The intent of the project was to bring cheap electricity to rural South Carolina. One unintended consequence of this was the change in character of both the Cooper and Santee Rivers below the project. The Santee River, deprived of most its river flow, became much more saline, resulting in a changed ecosystem below the project. The Cooper River now receives much more freshwater and sediment loads that previously flowed into the Santee, resulting in increases in dredging costs in Charleston Harbor.

## RESOURCE CONCERNS

### Soils

A majority (73%) of land in this Coastal Plain subbasin has limitations due to wetness (Table 7). Much of the wetness is associated with hydric soils along streams in riparian areas and upland flats throughout the subbasin (Figure 5). Droughtiness is a concern in about 11% of the area (Table 7) and occurs mostly in the sandy soils on stream terraces (Figure 1). Low soil organic matter in these sandy soils is a soil health concern. Erosion is a resource concern only on about 7% of the subbasin (Figure 4, Table 9). Almost 63% of the land in the Cooper subbasin is either prime farmland (19%) or statewide important farmland (43%) and occurs throughout the subbasin (Figure 3, Table 8).

Table 7:  
LAND CAPABILITY CLASSES (See NRCS 2007 [a] and [b] in References section.)

Percentages are based on the whole watershed (755,306 ac).

Land Capability Class 1	Acres		Percent			
1 - Slight limitations	14,108		2%			
<b>% Land by Subclass Limitation</b>						
<b>Land Capability Classes 2-8</b>	<b>Erosion (e)</b>		<b>Wetness(w)</b>		<b>Droughtiness (s)</b>	
	<b>Acres</b>	<b>Percent</b>	<b>Acres</b>	<b>Percent</b>	<b>Acres</b>	<b>Percent</b>
2 - Moderate limitations	21,850	3%	201,462	27%	23,998	3%
3 - Severe limitations	-	-	168,359	22%	30,038	4%
4 - Very severe limitations	4,649	1%	92,148	12%	60	0%
5 - No erosion hazard, but other limitations	-	-	383	0%	-	-
6 - Severe limitations; unsuitable for cultivation; limited to pasture, range, forest	-	-	43,139	6%	-	-
7 - Very severe limitations; unsuitable for cultivation; limited to grazing; forest, wildlife habitat	-	-	5,291	1%	174	0%
8 - Miscellaneous areas; limited to recreation, wildlife habitat, water supply	-	-	39,180	5%	27,146	4%

# RESOURCE CONCERNS

## Prime Farmland

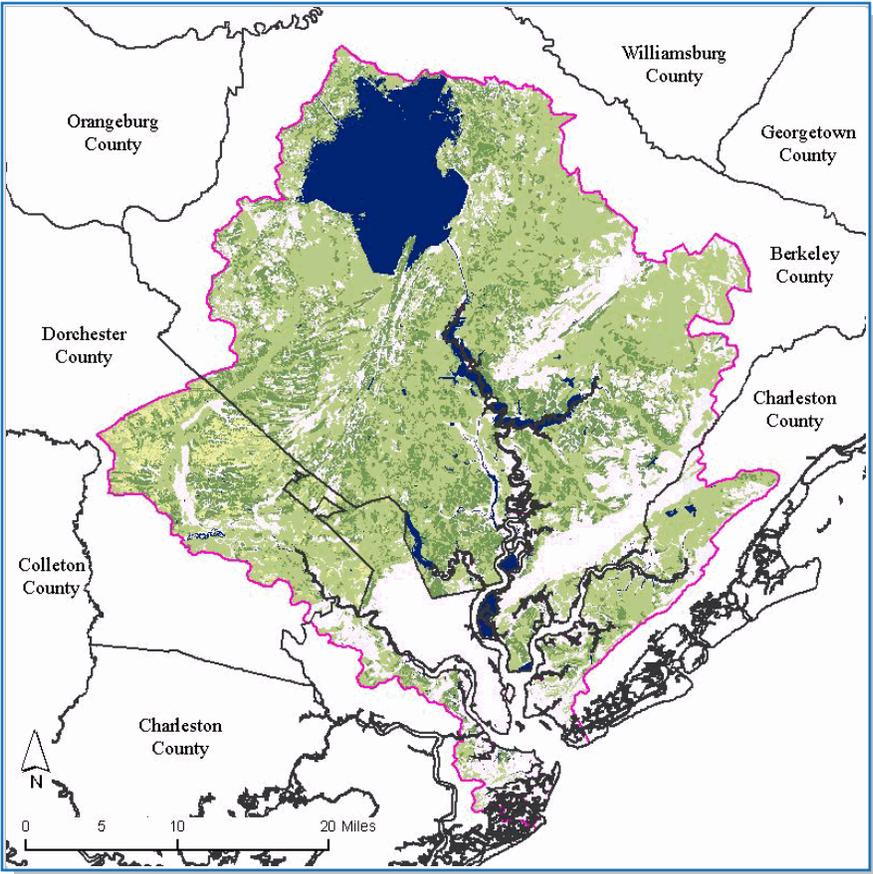


FIGURE 3:  
PRIME FARMLAND  
(See NRCS 2007 [a] and [b] in  
References section.)

Table 8:  
PRIME FARMLAND

Prime Farmland Categories	Acres	Percent of Land
All areas are prime farmland	130,305	17%
Farmland of statewide importance	328,022	43%
Not prime farmland	281,674	37%
Prime farmland if drained	15,305	2%
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season	0	0%
Prime farmland if irrigated	0	0%
Prime farmland if irrigated and drained	0	0%
Prime farmland if protected from flooding or not frequently flooded during the growing season	0	0%

# RESOURCE CONCERNS

## Highly Erodible Land

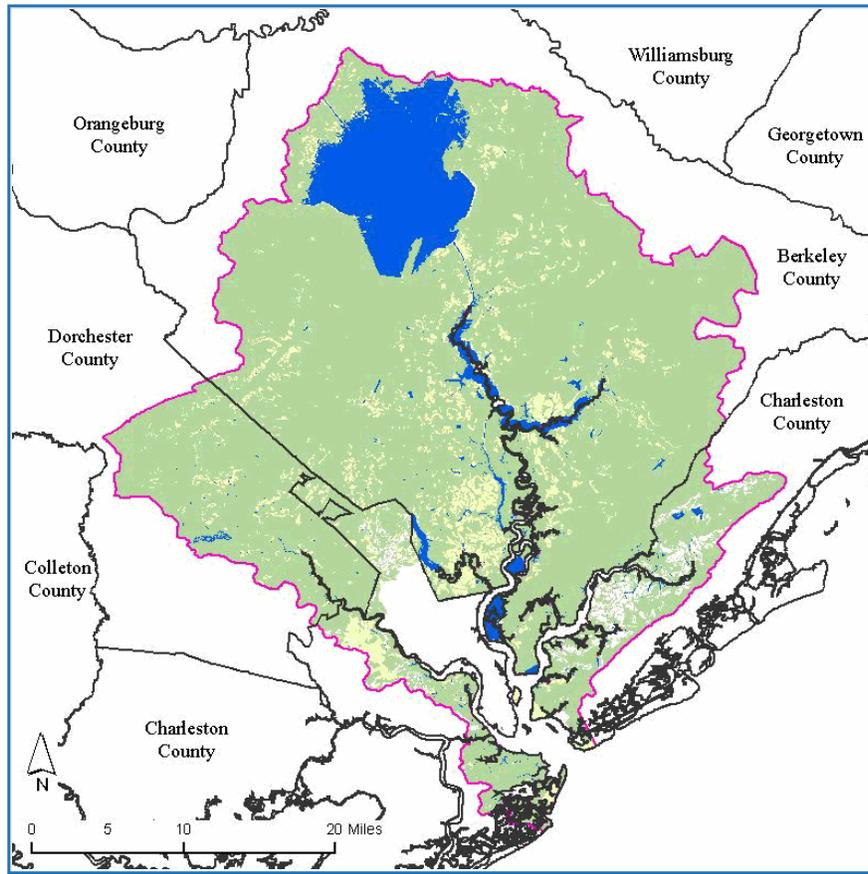


FIGURE 4:  
HIGHLY ERODIBLE LAND  
(See NRCS 2007 [a] and [b] in  
References section.)

Table 9:  
HIGHLY ERODIBLE LAND

Highly Erodible Land Categories	Acres	Percent of Watershed
Highly erodible land	0	0%
Not highly erodible land	593,005	79%
Potentially highly erodible land	49,691	7%

# RESOURCE CONCERNS

## Hydric Soils

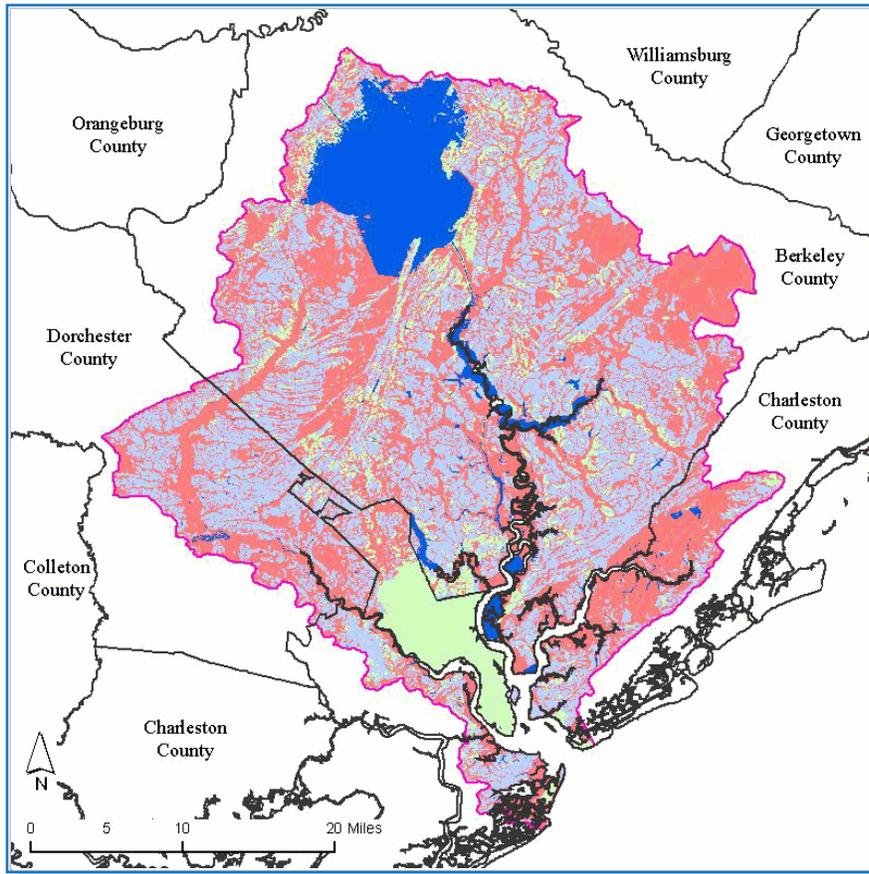


FIGURE 5:  
HYDRIC SOILS  
(See NRCS 2007 [a] and [b] in  
References section.)

Table 10:  
HYDRIC SOILS

Hydric Soils Categories	Acres	Percent of Watershed
All Hydric	320,936	42%
Not Hydric	154,023	20%
Partially Hydric	280,347	37%

# RESOURCE CONCERNS

## Water Quantity

Narrative awaiting SCDNR's new state water assessment.

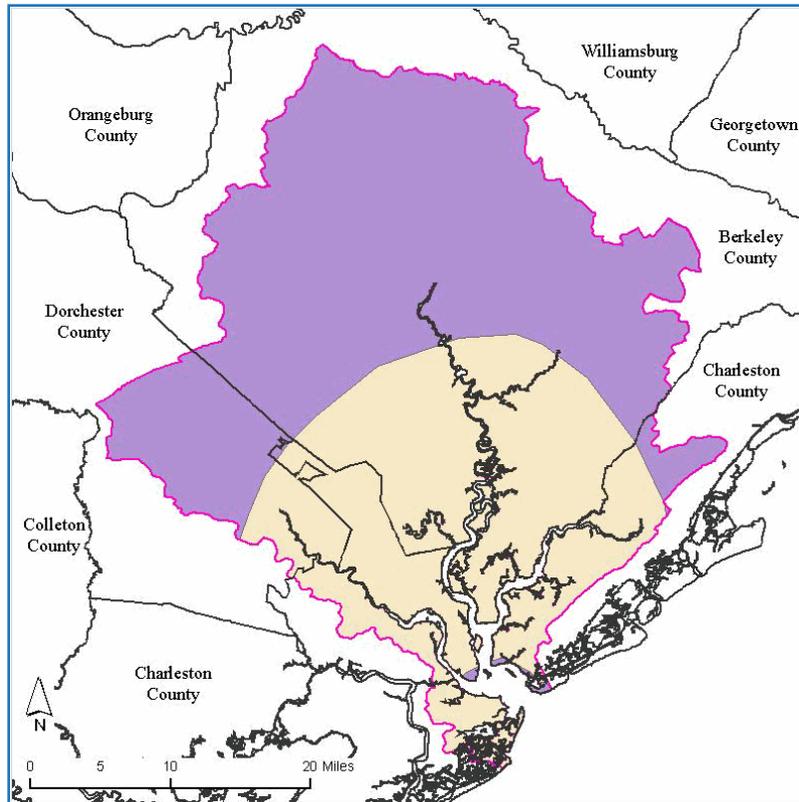


FIGURE 6:  
WATERSHED RELATIVE TO CAPACITY  
USE AREAS, NOTICE OF INTENT  
AREAS, AND CONES OF DEPRESSION

Table 11:  
CAPACITY USE, NOTICE OF INTENT, AND CONES OF DEPRESSION AREA IN WATERSHED  
(See SCDHEC 2007 [c] and SCDNR 2004 in References Section.)

Area	Percent of Watershed
 % Watershed in Cone of Depression and Capacity Use (CU) Area	40%
 % Watershed in SCDHEC Capacity Use (CU) Area	60%
 % Watershed in SCDHEC Notice of Intent (NOI) Area	0%

# RESOURCE CONCERNS

## Water Quantity Cont.

Table 12:  
INDICATORS OF IRRIGATION WATER USAGE (WHOLE COUNTY DATA ARE USED)  
(See NASS 2002 and SCDNR 2004 in References Section)

County	Total Irrigated Water Used MGD	Total NASS Cropland (ac)	Cropland Under Irrigation (ac)	Percent Cropland Under Irrigation	Water Use Gal/Ac/Day for Irrigated Land
Berkeley	1.83	17,389	602	3.5	3,040
Charleston	8.04	12,397	1,666	13.4	4,826
Dorchester	0.60	31,334	175	0.6	3,429

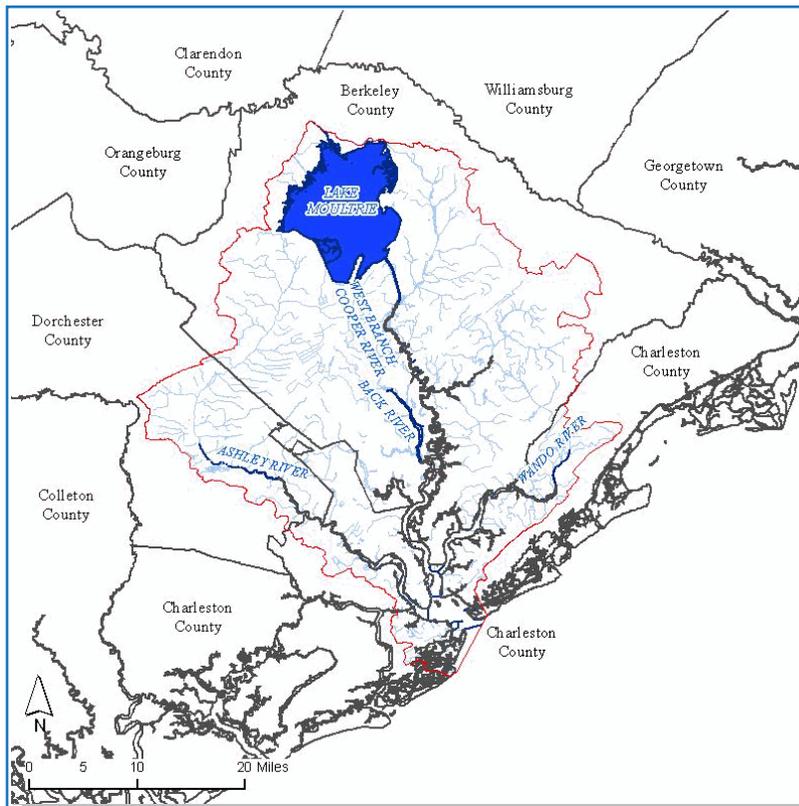


FIGURE 7:  
NRCS ASSISTED FLOOD CONTROL STRUCTURES IN WATERSHED

- Flood Control Structure
- Main River
- Hydrography

Table 13:  
NRCS IMPLEMENTED FLOOD CONTROL STRUCTURES

Number of Structures (in Watershed)	Maximum Storage (AcFt)	Number of Structures by Hazard Class			
		High	Low	Significant	Unclassified
0	-	0	0	0	0

# RESOURCE CONCERNS

## Water Quality

The number of surface water quality impairments is shown in Table 15 resulting in a "303(d)" listing of that Water Quality Monitoring Site (WQMS). Table 5 indicates what progress has been made to address surface water quality through the Total Maximum Daily Load (TMDL) process. Once a TMDL plan is approved, the WQMS is removed from the 303(d) list even though the standard may not have been attained. Note that standards for total nitrogen, total phosphorus, and chlorophyll-a only exist for lakes; therefore, no stream in the state can be listed for any of these three parameters

Impairments include fecal coliform (recreational use and shellfish harvesting), dissolved oxygen, total phosphorus, turbidity and chlorophyll-a (Table 15).

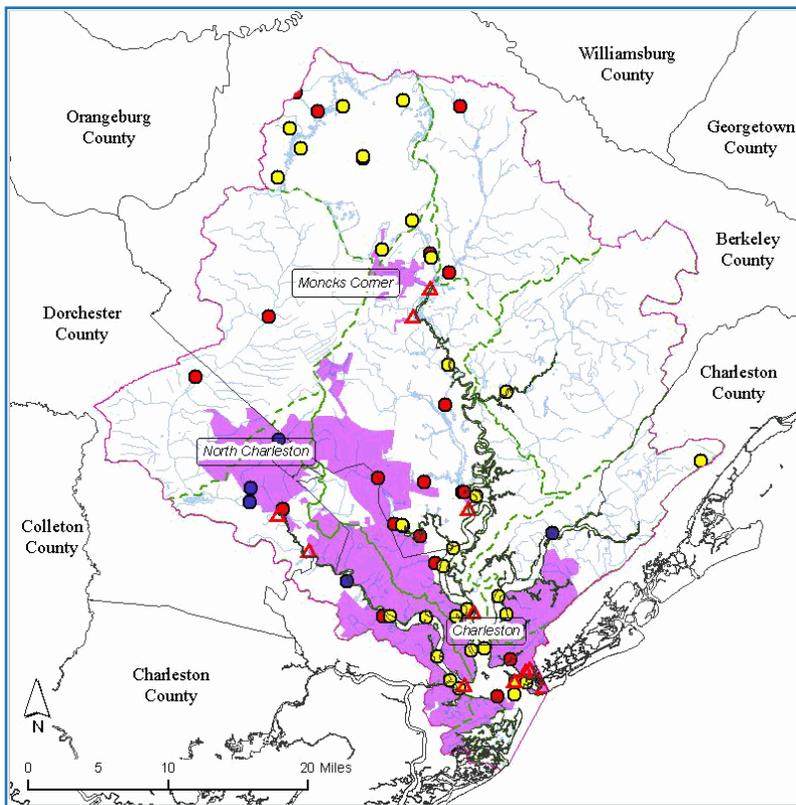


Table 14:  
**WATER QUALITY MONITORING SITES**

Permanent Water Quality Monitoring Sites (WQMS)	57
Random Water Quality Monitoring Sites (WQMS)	83

FIGURE 8:  
**PERMANENT WATER QUALITY MONITORING SITES**

- WQMS (No Impairment)
- WQMS (303d Listed)
- WQMS (Approved TMDL)
- ▲ Waste Water Treatment Plant
- Hydrography
- Hydrologic Unit Code 10 Boundary

Table 15:  
**NUMBER OF MONITORING SITES SHOWING SURFACE WATER QUALITY IMPAIRMENTS**  
(See SCDHEC 2006 in References for the state 303(d) list.)

Recreational Use Standard		Fish Tissue Standard		Shellfish Harvest Standard	
Parameter	Impairments	Parameter	Impairments	Parameter	Impairments
Fecal Coliform	15	Mercury	11	Fecal Coliform	22
		PCB's	0		
Aquatic Life Use Standard					
Parameter	Impairments	Parameter	Impairments	Parameter	Impairments
Biological	0	Dissolved Oxygen	8	Total Phosphorus	4
Chlorophyll A	3	Ammonia Nitrogen	0	pH	2
Chromium	0	Nickel	2	Turbidity	4
Copper	8	Total Nitrogen	0	Zinc	1

## RESOURCE CONCERNS

### Plant Condition

#### *Plants of Economic Importance*

Plants of economic importance are shown in Table 16. The crops shown in this table are from NASS data where the top five crops, by acres, in each county are displayed. The timber statistics (see Clemson Extension Forest Services 2003 in References) indicate the relative importance of the timber industry within the state and the importance of the timber industry compared to agriculture within the county.

Note that Charleston County is the second producer of tomatoes, and a top vegetable and sod producer in the state.

#### *Native Plant Species*

According to SC DNR's "Comprehensive Wildlife Conservation Strategy: 2005 - 2010" (see SCDNR 2005 in References section), the following applies to this subbasin: Coastal Plain pine and hardwood forests typically extend into the Coastal Zone, but vary due to coastal influences or land management practices that are characteristic of the Coast. The types of forest include Pine Woodland, Bottomland Hardwoods, Upland Oak-hickory forest, Southern Mixed Hardwood Forest, Marl Forest and Calcareous Cliff, and Cypress-tupelo swamp types. Cypress-tupelo swamps within the Coastal Zone may be influenced more by tidal activity than by river flows, but the water is typically fresh.

In the forests of the immediate Coastal Zone, barrier islands and inland dune systems, characteristic trees include live oak, laurel oak, cabbage palmetto, southern magnolia and southern red cedar. These evergreen-dominated forests are salt-tolerant and often support shrub thickets with yaupon holly, red bay and wax myrtle.

#### **Invasive Species**

Chinese Tallow is a significant problem in the Charleston area.

Table 16:

#### **WHOLE COUNTY DATA OF PLANTS OF ECONOMIC IMPORTANCE IN SUBBASIN** (See: USDA NASS 2002 & Clemson University Forest Extension Services 2003 in References section)

<b>Plant</b>	<b>Counties</b>
All Cotton	Dorchester
All Vegetables harvested	Charleston
Corn for grain	Charleston, Berkeley, Dorchester
Forage - land used for all hay and haylage, grass silage, and greenchop	Charleston, Berkeley, Dorchester
Short-rotation woody crops	Dorchester
Sod harvested	Charleston
Soybeans	Berkeley, Dorchester
Tomatoes	Charleston
Timber Revenues Exceed Ag. Revenues	Berkeley

## RESOURCE CONCERNS

Table 17:  
**FEDERALLY LISTED THREATENED AND ENDANGERED PLANT SPECIES IN WATERSHED**  
 (See USFW 2006 in References section.)

<b>Common Name</b>	<b>Latin Name</b>	<b>Status</b>
Canby's dropwort	<i>Oxypolis canbyi</i>	Endangered
Sea-beach amaranth	<i>Amaranthus pumilus</i>	Threatened
Pondberry	<i>Lindera melissifolia</i>	Endangered
Bog asphodel	<i>Nartheicum americanum</i>	Supported Proposals to List
Chaff-seed	<i>Schwalbea americana</i>	Endangered

## RESOURCE CONCERNS

### Fish and Wildlife

For additional information, the SC Department of Natural Resources has completed a "Comprehensive Wildlife Conservation Strategy: 2005 - 2010" (see SCDNR 2005 in References section).

In 2005, mercury advisories were issued for 57 water bodies in South Carolina. Higher concentrations of mercury in fish tissue tend to occur in the Coastal Plain of South Carolina with relatively lower concentrations (and therefore fewer advisories) in the Piedmont. For more details on fish advisories, please refer to the SCDHEC fish advisory website at:

<http://www.scdhec.gov/environment/water/fish/>

Table 18:

#### FEDERALLY LISTED THREATENED AND ENDANGERED WILDLIFE SPECIES IN WATERSHED

(See USFW 2006 in References section.)

Common Name	Latin Name	Status
Green sea turtle	<i>Chelonia mydas</i> *	Threatened
Wood stork	<i>Mycteria americana</i>	Endangered
West Indian manatee	<i>Trichechus manatus</i>	Endangered
Red-cockaded woodpecker	<i>Picoides borealis</i>	Endangered
Piping plover	<i>Charadrius melodus</i>	Threatened, Critical Habitat
Loggerhead sea turtle	<i>Caretta caretta</i>	Threatened
Leatherback sea turtle	<i>Dermochelys coriacea</i> *	Endangered
Bachman's warbler	<i>Vermivora bachmanii</i>	Endangered
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i> *	Endangered
Flatwoods salamander	<i>Ambystoma cingulatum</i>	Threatened
Kirtland's Warbler	<i>Dendroica kirtlandii</i>	Endangered

Table 19:

#### FEDERALLY LISTED THREATENED AND ENDANGERED AQUATIC SPECIES IN WATERSHED

(See USFW 2006 in References section.)

Common Name	Latin Name	Status
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	Endangered

# ECONOMIC & SOCIAL FACTORS

## Domestic Animals

Domestic animal populations are small (Table 20, 21), especially when compared to the human population in the Charleston urban area.

Table 20:  
**WHOLE COUNTY GRAZING ANIMAL POPULATION DATA FROM 2002 AG. CENSUS**  
 (See NASS 2002 in References section. "D" in table = "Cannot be disclosed".)

County	Cows/Calves	Grazing/Forage (ac)	County Rank in State
Berkeley	2,137	2,754	42
Charleston	1,750	2,195	(D)
Dorchester	4,310	4,373	31

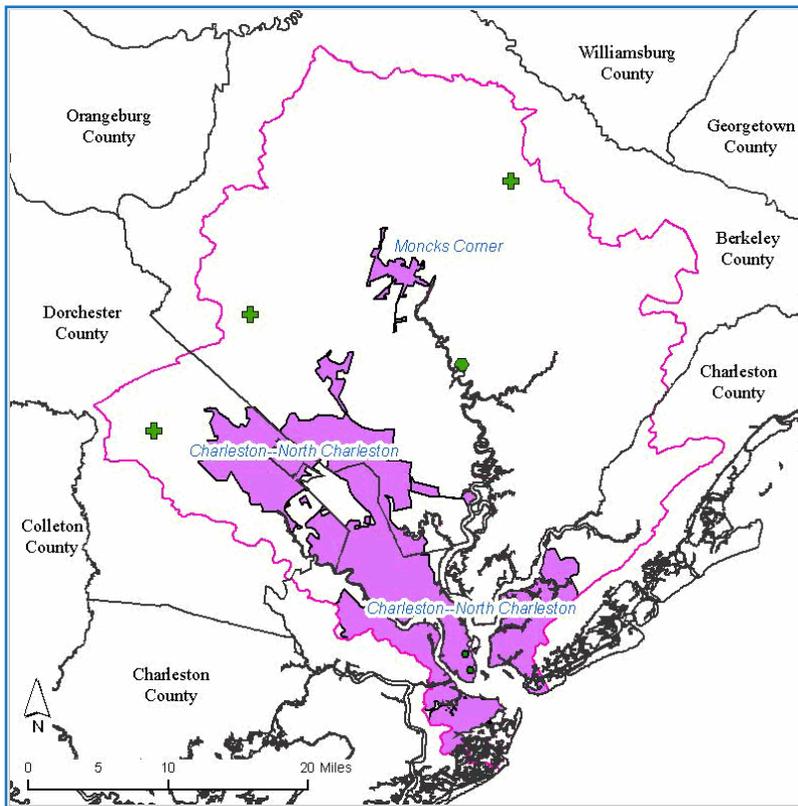


Table 21:  
**CONFINED ANIMAL POPULATION** [As given by SCDHEC] (Au = Animal Unit = 1,000 lbs)

Beef Live Weight (Au)	-
Dairy Live Weight (Au)	-
Horse Live Weight (Au)	24
Poultry Live Weight (Au)	76
Swine Live Weight (Au)	120
Turkey Live Weight (Au)	-

FIGURE 9:  
**TYPE AND SIZE OF CONFINED ANIMAL OPERATION**

Permit Design Count (Live Weight AU)	Animal Type
0 - 163	Beef
164 - 372	Dairy
373 - 680	Other
681 - 1360	Poultry
1361 - 7076	Swine
	Turkey

\* Weighted averages are estimated based on agricultural land use area.

## REFERENCES

The number of full-time farmers is the same as the state average; farm sizes are significantly *smaller* than the state average of 197 ac (Table 22); both parameters suggest average to below-average levels of participation in conservation programs in the subbasin. Farm sizes were *decreased* by an estimated 25% between 1997 and 2002, whereas on average farm sizes decreased by 13% across the state for the same period. Loss of cropland between 1997 and 2002 is estimated at 9%, similar to the SC average cropland loss estimated at 8%.



The relative importance of crop and livestock commodity groups in the watershed is shown in Tables 24 and 25; a *qualitative* indication of the relative importance of timber is provided on Table 16.

For more economic and farm information from the 2002 Agricultural Census, more detailed reports for all South Carolina counties can be found at:

<http://www.nass.usda.gov/census/census02/profiles/sc/index.htm>

Table 22:

2002 FARM CENSUS DATA (WHOLE COUNTY DATA SHOWN) (SC average farm size = 197 ac)

County	Total Number of Farms	% Full Time Farmers	% Farms > 180 (ac)	Average Farm Size (ac)
Berkeley	398	47%	18%	143
Charleston	417	42%	14%	114
Dorchester	365	47%	17%	158
<b>Weighted Avg*</b>	<b>396</b>	<b>47%</b>	<b>18%</b>	<b>146</b>

Table 23:

2002 FARM CENSUS ECONOMIC DATA (WHOLE COUNTY DATA SHOWN) (Results in \$1,000)

County	Market Value of Ag Products Sold	Market Value of Crops Sold	Market Value of Livestock, Poultry, and Their Products	Farms with sales < \$10,000
Berkeley	25,966	24,886	1,080	339
Charleston	18,068	15,983	2,085	321
Dorchester	12,660	2,634	10,025	300
<b>Weighted Avg*</b>	<b>23,170</b>	<b>20,239</b>	<b>2,930</b>	<b>334</b>



Table 24:

VALUE OF CROP COMMODITY GROUPS - COUNTY RANK IN STATE

(See NASS 2002 in References section. "D" in table = "Cannot be disclosed".)

County	Value of All Crops	Grains & Oilseeds	Tobacco	All Cotton	Vegetables & Melons	Fruits, Nuts, & Berries	Nursery, Etc.	Christmas Trees & Woody Crops	Hay & other Crops
Berkeley	8	(D)	(D)	(D)	37	29	(D)	-	41
Charleston	15	(D)	-	-	4	9	9	(D)	(D)
Dorchester	37	17	15	17	29	22	(D)	(D)	(D)

# REFERENCES

Table 25:  
**VALUE OF LIVESTOCK AND POULTRY COMMODITY GROUPS - RANK IN STATE**  
(See NASS 2002 in References section. "D" in table = "Cannot be disclosed".)

County	Value of						
	Livestock, poultry	Poultry, Eggs	Cattle & Calves	Milk & Dairy	Hogs & Pigs	Sheep & Goats	Horses, etc.
Berkeley	43	(D)	42	23	(D)	36	23
Charleston	37	39	(D)	-	37	26	(D)
Dorchester	23	20	31	(D)	(D)	33	31

## APPENDIX

Clemson University Extension Forest Service. 2001. *Cash Receipts from Timber Harvests - 2001 Ag and Timber Comparison*. Compiled by A. Harper. Available at:  
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## APPENDIX

### Level III Common Resource Area (Ecological Region) Descriptions

#### Middle Atlantic Coastal Plain (63)

The Middle Atlantic Coastal consists of low elevation, flat plains, with many swamps, marshes, and estuaries. Forest cover in the region, once dominated by longleaf pine in the Carolinas, is now mostly loblolly and some shortleaf pine, with patches of oak, gum, and cypress near major streams. Pine plantations for pulpwood and lumber are typical, with some areas of cropland. In South Carolina, the Middle Atlantic Coastal Plain is divided into three level IV ecoregions: Carolinian Barrier Islands and Coastal Marshes (63g), Carolina Flatwoods (63h), Mid-Atlantic Floodplains and Low Terraces (63n).

#### Southern Coastal Plain (75)

The Southern Coastal Plain extends from South Carolina and Georgia through much of central Florida, and further along the Gulf coast. It is a heterogeneous region also containing barrier islands, coastal lagoons, marshes, and swampy lowlands along the Gulf and Atlantic coasts. The South Carolina portion of the Southern Coastal Plain contains two level IV ecoregions: Floodplains and Terraces (75i), and Sea Islands/Coastal Marsh (75j).

### NRCS Conservation Practices used for Conservation Treatment Categories in Table 3

Report Category	Practice Codes
Buffer and Filter Strips	332, 391, 393, 412
Conservation Tillage	324, 329, 329A, 329B, 344, 484
Erosion Control	327, 328, 330, 340, 342, 561, 585, 586
Irrigation Water Management	441, 449
Nutrient Management	590
Pest Management	595
Prescribed Grazing	528, 528A
Trees and Shrubs	490, 612, 655, 656, 66
Wetlands	657, 658, 659
Wildlife Habitat	644, 645

### Hydrologic Unit Numbering System

In 2005, the NRCS in cooperation with the U.S. Geological Survey, the South Carolina Department of Health and Environmental Control, and the U.S. Forest Service updated the South Carolina part of the USGS standard hydrologic unit map series. The report, "Development of a 10- and 12- Digit Hydrologic Unit Code Numbering System for South Carolina, 2005", describes and defines those efforts. The following is from the Abstract contained in that report: "A hydrologic unit map showing the subbasins, watersheds, and subwatersheds of South Carolina was developed to represent 8-, 10-, and 12-digit hydrologic unit codes, respectively. The 10- and 12-digit hydrologic unit codes replace the 11- and 14-digit hydrologic unit codes developed in a previous investigation. Additionally, substantial changes were made to the 8-digit subbasins in the South Carolina Coastal Plain. These modifications include the creation of four new subbasins and the renumbering of existing subbasins." The report may be obtained at [http://www.sc.nrcs.usda.gov/technical/HUC\\_report.pdf](http://www.sc.nrcs.usda.gov/technical/HUC_report.pdf). See Table 2 in the report for a cross-reference of old to new 8-digit HUC.

This subbasin profile uses the new HUC 8 numbering system with its modified and newly created subbasins. The NRCS reports implemented practices by 8-digit Hydrologic Unit Code. All NRCS reported Conservation Practices were reported using the older numbering system. 2005 and 2006 data were converted to the new HUC 8 numbering system through the Latitude and Longitude data reported with the applied practice. The use of these differing numbering systems has resulted in some NRCS implemented practices being credited in this report to an 8-digit HUC as reported by the NRCS but not correctly credited in the new numbering system. Likewise, the newly created 8-digit HUC will not be credited with the 2004 applied practices.