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**Prepared by the
Berkeley Charleston Dorchester Council of Governments
5290 Rivers Avenue, Suite 400
North Charleston, South Carolina 29406
(843)529-0400 Fax: (843)529-0305
www.bcdcog.com**

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SECTION A. INTRODUCTION

The purpose of Volume II is to describe each basin and sub-basin in detail. SC DHEC has identified major watershed basins, watershed sub-basins, and watersheds for planning purposes. The BCD region is located in two major watershed basins; the Saluda-Edisto Watershed and the Catawba-Santee Watershed. The Saluda-Edisto Watershed covers the southwestern edge of Charleston County and the northern portion of Dorchester County. The Catawba-Santee Watershed covers the remaining portions of Dorchester and Charleston Counties and the entire area of Berkeley County (See Map 1). These major watershed basins have been subdivided into smaller sub-basins.

The portion of the BCD region that is in the Saluda-Edisto Watershed is entirely contained in the Edisto Watershed. This sub-basin is further subdivided into 4 smaller basins, 2 of which are partly located in the BCD region. These 2 basins are further divided into 15 watersheds, 10 of which are at least partly in this region. These 10 watersheds are numbered by the hydrologic units of 03050205 and 03050206. (See Map 2 and 3)

The portion of the BCD region that is in the Catawba-Santee Basin is divided into the Catawba, Santee, and Ashley-Cooper sub-basins. The Santee sub-basin is located partly in the region. This sub-basin is further subdivided into watersheds. The watersheds that are located in the BCD region are numbered by the hydrologic units of 03050111 and 03050112. The Ashley-Cooper sub-basin and its 15 sub-basins are entirely in this region. These 15 sub-basins are numbered by the hydrologic units of 03050201 and 03050202. (See Map 2 and 3)

Thirty-one (31) watersheds are at least partly located in the BCD region. All of these watersheds are described in detail in this volume. The following sources of information contributed to this section; DHEC. 1995. *Watershed Water Quality Management Strategy: Saluda-Edisto Basin*, DHEC. 1995. *Watershed Water Quality Management Strategy: Catawba-Santee Basin*, 1990 US Census Data, 201 Facilities Management Plan for the BCD area, and interviews with public sewer providers. Each description includes;

- A map showing the location of the watershed,
- A map showing landfill, industrial, and water intake sites,
- A map showing golf courses, marinas, boat landings, and cultural/historic resources,
- A map showing point source dischargers (if applicable),
- Existing Basin Inventory,
 - Location,
 - Surface Water Resources,
 - Point Source Contributors,
 - Land Use,
- Projected Growth,
 - Basin Projections,
 - Development Trends,
 - Needs Assessment and Projected Capacities,
- Water Quality Issues and Standards,
 - Nonpoint Source Contributions,
- Designated Point Source Management Agencies.

Appendix A of this volume contains a point source discharge map of the region. The map numbers listed in each basin description correlates with this map as well as the basin maps in each description. Appendix B of this volume contains service area maps for the region.

SECTION B. PUBLIC SEWER PROVIDERS

The following is a description of the public sewer providers in the region. It contains information about their service areas, service agreements with other providers, description of their wastewater treatment plants (if any), and a summary of 201 Facility Plans recommendations (if any).

Active Management Agency: Berkeley County
Agency Providing Treatment: Berkeley County W&S Authority
Jurisdiction: Unincorporated Area/City of Goose Creek/City of Hanahan [Minor Amendment Sept. 25, 2000]

Berkeley County currently operates 3 wastewater treatment facilities. Berkeley County W&S Authority contracted with North Charleston Sewer District to serve Eagle Landing and Otranto subdivisions before they were annexed into Hanahan. Berkeley County has retained the right to serve these areas.

Facility	NPDES #	Receiving Stream	Permitted Amount
Lower Berkeley (New)	0046060	Cooper River	15 MGD
Central Berkeley	0039764	Cooper River	0.35 MGD

Active Management Agency: Town of Moncks Corner
Agency Providing Treatment: Town of Moncks Corner CPW
Jurisdiction: Corporate Limits (has agreement with Berkeley Co. to serve a defined area outside corporate limits)

The Town of Moncks Corner currently operates 1 wastewater treatment facility.

Facility	NPDES #	Receiving Stream	Permitted Amount
Town of Moncks Corner	0021598	Cooper River	1.6 MGD

Active Management Agency: Town of St. Stephen
Agency Providing Treatment: Town of St. Stephen
Jurisdiction: Corporate Limits

The Town of St. Stephen currently operates 1 wastewater treatment facility.

Facility	NPDES #	Receiving Stream	Permitted Amount
Town of St. Stephen	0025259	Santee Rediversion Canal	0.9 MGD

Active Management Agency: City of Charleston
Agency Providing Treatment: Charleston CPW
Jurisdiction: Corporate Limits/St. Andrews

Charleston CPW currently operates 4 wastewater treatment facilities. CPW has agreements with James Island PSD, and the Town of Hollywood to treat their wastewater. A 1990 report, *Water and Wastewater Needs of Lower Johns Island and Water Distribution Need of St. Pauls Area*, by Wilbur Smith Associates, recommends that a sewage collection system is developed and wastewater treatment on lower Johns Island is provided using spray irrigation or a similar land application effluent disposal process. This report was never adopted by the area governments.

A 1986 report projects that by the year 2005 the wastewater flow for Plum Island should reach 28.6 MGD. The current capacity of the facility would not be able to treat that amount of wastewater. The report recommends that the plant be expanded immediately to 27 MGD and in the future to 56 MGD to meet future growth needs.

Facility	NPDES #	Receiving Stream	Permitted Amount
Plum Island	0021229	Charleston Harbor	27 MGD
Daniel Island	0047074	Unnamed Tributary to Cooper River	0.5 MGD
Savage Road	0026051	Stono River	1.5 MGD
Pierpont	0026069	Church Creek/Ashley River	1.5 MGD

Active Management Agency: City of Folly Beach
Agency Providing Treatment: Charleston CPW (Plum Island Wastewater Treatment Plant)
Jurisdiction: Corporate Limits

Portions of the City of Folly Beach are serviced by sewer lines. These areas include the downtown business district, Sunset Point subdivision, and Mariners Cay. The City of Folly Beach has an agreement with James Island PSD to transport the wastewater to Charleston CPW’s Plum Island plant. The remainder of the island relies on on-site wastewater treatment, mainly septic systems.

The 201 plan reports that on-site treatment on Folly Beach is judged inadequate to provide wastewater treatment. Groundwater and surface water pollution has resulted from the use of these systems. The plan recommends the construction of a low pressure sewer system to serve the island.

Active Management Agency: Town of Hollywood
Agency Providing Treatment: Charleston CPW (Plum Island Wastewater Treatment Plant)
Jurisdiction: Corporate Limits/Petersfield

The Town of Hollywood has partial sewer coverage. However, they have received grants to extend sewer service in the town. Once the projects are completed, the Town of Hollywood would be close to completely served by sewer. The town has an agreement with Charleston CPW to transport and treat their wastewater.

Active Management Agency: City of Isle of Palms
Agency Providing Treatment: City of Isle of Palms
Jurisdiction: Corporate Limits

Forest Trail currently operates 1 wastewater treatment facility. The subdivision Wild Dunes, located in Isle of Palms, privately operates a wastewater treatment plant. One of the suggested recommendations in the 1976 201 Facilities Plan of the area is that Mt. Pleasant Waterworks and Sewer Commission should provide wastewater treatment to the Isle of Palms when it is economically feasible. As of the 1990 census counts, out of the 3,053 housing units on the island 1,020 (about 33%) relied on septic tanks.

Facility	NPDES #	Receiving Stream	Permitted Amount
Forest Trail	0025283	Intracoastal Waterway	0.1 MGD

Active Management Agency: James Island PSD
Agency Providing Treatment: Charleston CPW (Plum Island Wastewater Treatment Plant)
Jurisdiction: District Limits

The following description of the James Island Public Service District is given by Holmes & Thomson, L.L.P., the law firm representing the James Island Public Service District:

James Island PSD has an agreement with Folly Beach to transport their wastewater to Charleston CPW for treatment. James Island PSD also has an agreement with Charleston CPW, the provider of treatment for wastewater for the area. A Consent Order dated October 23, 1995, provides:

1. The 1978 Agreement and the 1984 Agreement between the District and CPW continue to govern subject to certain amendments contained in the October 23, 1995, Consent Order Agreement;
2. The District and CPW will serve the tract of land annexed by the City of Charleston in 1977 commonly referred to the Ellis Properties, which include TMS #340-00-00-003, as they may later be subdivided or resubdivided. Customers within these annexed areas will connect to the District's and line existing on the area, and CPW will collect and pay the District the rates for treatment and transportation as established by the District in its Use and Rate Schedule, as amended from time to time;
3. Ownership of lines installed before and after April 11, 1980, will remain vested as they were on October 23, 1995, with each party responsible for maintenance and repair of lines owned by it;
4. CPW will not extend its transportation lines on James Island to serve new customers or to remove customers from the District's transportation lines with the exception that CPW has the right of first refusal to serve new customers connecting to existing CPW transportation lines going through CPW pump station #56 and not going through the master meter at CPW's Plum Island Treatment Plant; however the District has the right of first refusal to require all other new customers whose wastewater could flow through the master meter to connect to the District's transportation lines;
5. CPW may provide service to and bill the City of Charleston residents directly; provided that CPW will utilize the District's transmission lines to transport the wastewater to Plum Island.

Active Management Agency: Town of Kiawah
Agency Providing Treatment: Kiawah Island Utility
Jurisdiction: Town Limits

The Town of Kiawah Island currently operates 1 wastewater treatment plant. The facility treats by spray irrigation. The facility is currently in phase one of its plan. As part of phase one, the facility is planned to be expanded to 1.7 MGD. Phase two of the plan calls for the treatment facility to be ultimately expanded to 2.2 MGD. In 1991, the average daily flow to the treatment facility was 0.6 MGD.

Facility	NPDES #	Receiving Stream	Permitted Amount
Kiawah Island	ND0017361	Land Application	1.1 MGD

Active Management Agency: Town of Meggett
Agency Providing Treatment: Charleston CPW
Jurisdiction: Town Limits

The Town of Meggett has an agreement with Charleston CPW to treat the town's wastewater at Plum Island. Meggett has received a grant to build the necessary sewer lines to complete the project.

Active Management Agency: Town of Mt. Pleasant
Agency Providing Treatment: Mt. Pleasant W&S Commission
Jurisdiction: District Limits (Wastewater)

The Mt. Pleasant W&S Commission currently operates 2 wastewater treatment facilities. According to the 201 Facilities Plan, Mt. Pleasant W&S Commission should extend sewer service to Sullivan's Island and Isle of Palms when it becomes economically feasible.

Facility	NPDES #	Receiving Stream	Permitted Amount
Center Street	0040771	Charleston Harbor	3.7 MGD
Rifle-Range Road	0040771	Charleston Harbor	2.4 MGD

Active Management Agency: North Charleston Sewer District
Agency Providing Treatment: North Charleston Sewer District
Jurisdiction: District Limits

North Charleston Sewer District currently operates 1 wastewater treatment facility. Dorchester County has an agreement with North Charleston. North Charleston serves the KOA/Ladson area and the area around the intersection of Ashley Phosphate and Dorchester Road located in Dorchester County. Berkeley County W&S Authority contracted with North Charleston Sewer District to serve Eagle Landing and Otranto subdivisions before they were annexed into Hanahan. Berkeley County has retained the right to serve these areas. The sewer district also has contracts with the US Air Force Base, Naval Base, Naval Weapons Station Annex, and Naval Radar Station to treat their wastewater.

The 1994 201 Facilities Plan Update projects growth within the service area to be sluggish. The current treatment plant capacities should be adequate to accommodate the growth. However, four pump stations along the sewer trunk system need to be enlarged immediately and eight others will meet their capacities before the year 2020. The plan update recommends the enlargement of all twelve pump stations.

Facility	NPDES #	Receiving Stream	Permitted Amount
Felix C. Davis Plant	0024783	Cooper River	27 MGD

Active Management Agency: Town of Seabrook Island
Agency Providing Treatment: Seabrook Island
Jurisdiction: Town Limits

Wastewater needs are currently provided by a private company which operates one facility. The facility treats wastewater by spray application.

Facility	NPDES #	Receiving Stream	Permitted Amount
Heater of Seabrook	ND0063347	Land Application	1.1 MGD

Active Management Agency: Town of Sullivan’s Island
Agency Providing Treatment: Town of Sullivan’s Island
Jurisdiction: Corporate Limits

The Town of Sullivan’s Island currently operates 1 wastewater treatment facility. According to the 1990 census data, out of the 897 housing units, only 3 residences rely on septic treatment. One of the suggested recommendations in the 1976 201 Facilities Plan of the area is that Mt. Pleasant Waterworks and Sewer Commission should provide wastewater treatment to Sullivan’s Island when it is economically feasible.

Facility	NPDES #	Receiving Stream	Permitted Amount
Sullivan’s Island	0020052	Cove Creek	0.57 MGD

Active Management Agency: Dorchester County
Agency Providing Treatment: Dorchester County/N. Charleston Sewer District
Jurisdiction: Unincorporated Area

Dorchester County Public Works Department currently operates 1 wastewater treatment plant. There is one private wastewater facility, Teal on the Ashley, also operating in the county. This plant serves the unincorporated area of the lower portion of the county. Dorchester County has an agreement with the Town of Ridgeville. The county transports the wastewater from Ridgeville to the wastewater treatment plant to be treated. Some portions of the unincorporated areas of Dorchester County are served by Summerville CPW. Salisbury Acres and Indian Springs are both located in Dorchester County’s service area and serviced by the Town of Summerville.

Dorchester County has an agreement with North Charleston. North Charleston serves the KOA/Ladson area located in Dorchester County.

Dorchester County is planning a wastewater treatment facility to be located in the upper part of the county. The county will make agreements with the Towns of Harleyville and St. George to transfer some of their wastewater increases to the new regional treatment facility.

Facility	NPDES #	Receiving Stream	Permitted Amount
Lower Dorchester	003882	Coosaw Creek to Ashley River	4 MGD
Proposed Upper Dorchester	0074713	Land Application	0.55 MGD

Active Management Agency: Town of Harleyville
Agency Providing Treatment: Town of Harleyville
Jurisdiction: Corporate Limits

The Town of Harleyville operates 1 wastewater treatment facility which is near its treatment capacity. The town will tie into the Upper Dorchester wastewater treatment plant when it is completed which will provide treatment for increased flows..

Facility	NPDES #	Receiving Stream	Permitted Amount
Town of Harleyville	0038504	Tom and Kate Branch	0.12 MGD

Active Management Agency: Town of Ridgeville
Agency Providing Treatment: Dorchester County
Jurisdiction: Corporate Limits

The Town of Ridgeville has an agreement allowing Dorchester County to treat the town’s wastewater. Currently, the town’s wastewater is transported to the Lower Dorchester wastewater treatment plant. The town will tie into the Upper Dorchester wastewater treatment plant when it is completed.

Active Management Agency: Town of St. George
Agency Providing Treatment: Town of St. George
Jurisdiction: Corporate Limits

The Town of St. George operates 1 wastewater treatment facility which is near its treatment capacity. The town will tie into the Upper Dorchester wastewater treatment plant when it is completed.

Facility	NPDES #	Receiving Stream	Permitted Amount
Town of St. George	0025844	Polk Swamp	0.8 MGD

Active Management Agency: Town of Summerville
Agency Providing Treatment: Summerville CPW
Jurisdiction: Commission Limits

Summerville CPW currently operates 1 wastewater treatment facility. Summerville has an agreement with Dorchester County to serve areas outside the commission limits. The agreement includes Salisbury Acres and Indian Springs subdivisions.

Facility	NPDES #	Receiving Stream	Permitted Amount
Summerville CPW	0037541	Ashley River	10 MGD

SECTION C: SPECIFIC PLANNING CRITERIA CARRIED OVER FROM THE 1987 PLAN

The 1987 Water Quality Management Plan identified five river basins in the region and wrote specific plans for these areas. This current plan is only an update of past Water Quality Management Plans and does not nullify the information in those plans, however, it is important to restate some of the specific recommendations that were made in the previous plan. These recommendations are still relevant and should still affect present water quality planning decisions.

A. Lower Edisto River Basin:

1. Permits for the development or expansion of marina in the Lower Edisto River system (both North Edisto and South Edisto) should not be granted where activities associated with marina use would jeopardize the attainment and maintenance of Class ORW water quality standards in areas so classified, or Class SA water quality standards in areas so classified.
2. Charleston County, Colleton County, the Town of Seabrook Island, Hollywood, Meggett, local citizens, and development interests should work cooperatively to develop an administrative framework for stormwater management on a basin-wide basis.
3. Where feasible developments in the basin should tie into existing wastewater treatment systems - e.g., Charleston CPW - to provide wastewater treatment.

B: Stono River Basin:

1. Existing Johns Island discharges should connect to the Charleston CPW system at such time as such connection becomes available. Existing and new development on Johns Island should be served either by Charleston CPW or by re-use/land application systems.
2. Charleston CPW's Savage Road facility's discharge should be removed from the Stono River.
3. **Hollywood/Ravenel/Meggett Area** - Collection systems in this area should be expanded, with discharge either to the Charleston CPW system or via methods of re-use/land application.
4. **Lower Johns Island** - As environmentally and economically feasible, wastewater disposal systems in this area should expand existing or develop new re-use/land application systems. Charleston County should investigate the assumption of a coordinating role when multiple such systems are developed.
5. A basin wide stormwater management program, involving the active participation and cooperation of the City of Charleston, Charleston County and Dorchester County, is needed and should be established in order to control the deleterious environmental impacts associated with stormwater runoff in the Stono River basin. The Towns of Hollywood, Ravenel and Meggett, and the City of Folly Beach should also participate.
6. Agricultural runoff should be directed into holding areas, rather than being discharged into the river system.

C: Upper Ashley River Basin:

1. **Existing Dorchester County Service Area** - Assess the feasibility of transferring some or all flows to the North Charleston Sewer District System, on both short and long term basis.
2. **Summerville CPW Service Area** - Assess the feasibility of transferring some or all flows to the North Charleston Sewer District System or Berkeley County Water and Sewer Authority systems, on both short-term and long-term basis.
3. If the Ashley River downstream of Summerville CPW's discharge consistently fails to meet minimum state water quality standards, permitted pollutant loading from this source should not be increased regardless of the cause(s) of water quality problems.

D: Middle Ashley River Basin:

1. **City of Charleston** - Portions of the middle Ashley River basin located within the City of Charleston should be served by Charleston CPW, with discharge to Charleston Harbor.
2. **City of North Charleston** - Portions of the middle Ashley River basin located east of the Ashley River, whether located in the City of North Charleston or unincorporated Charleston County, should be served by North Charleston Sewer District, with discharge to the Cooper River. The small discharges currently permitted in this area should be eliminated at such time as connection to the North Charleston Sewer District system is reasonably available.

E: Wando River Basin:

1. **East Cooper** - All point sources in the Mt. Pleasant Designated Service Area shall connect to the Mt. Pleasant Waterworks and Sewer Commission's wastewater disposal system, as such connection becomes available.
2. **Daniel Island/Cainhoy** - New point source discharges associated with development in the Daniel Island/Cainhoy area will discharge to a water body other than the Wando River, or its tributaries, if an environmentally preferable and economically feasible alternative exists.