Draft Supplemental Document

Prepared For: Middle Ocmulgee Water Planning Council and
Georgia Environmental Protection Division

Prepared By: Jacobs JJG Planning Team

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Subject: **Existing Plans for Middle Ocmulgee Water Planning Region**
Section 6 Supplemental Data
Middle Ocmulgee Regional Water Plan

Section 6 of the Middle Ocmulgee Water Development and Conservation Plan (Regional Water Plan) presents the water management practices recommended by the Middle Ocmulgee Water Planning Council. The practices were selected to meet the Council's Vision and Goals stated in Section 1 and to address resource shortfalls or gaps identified and described in Section 5. Plans already developed within the Middle Ocmulgee Region were reviewed and, when possible, successful management practices already planned for and/or in use in the region formed the basis for the water management practices selected by the Council. Plans reviewed included local and regional water and wastewater master plans, Total Maximum Daily Load (TMDL) implementation plans, watershed assessment/management plans, and comprehensive plans. The following tables summarize the existing local plans considered for the development of this Regional Water Plan.

List of Tables

Abbreviations

BMP	*Best Management Practice*
CSO	*Combined Sewer Overflow*
DNR	*Department of Natural Resources*
EPA	*Environmental Protection Agency*
EPD	*Environmental Protection Division*
GFC	*Georgia Forestry Commission*
LAS	*Land Application System*
MGD	*Millions of Gallons per Day*
NPDES	*National Pollutant Discharge Elimination System*
NRCS	*Natural Resources Conservation Service*
OSSMS	*Onsite Sewage Management Systems*
PCB	*Polychlorinated Biphenyl*
TMDL	*Total Maximum Daily Load*
USGS	*U.S. Geological Survey*
WPCP	*Water Pollution Control Plant*
WRF	*Water Reclamation Facility*
WSA	*Water and Sewer Authority*
WTP	*Water Treatment Plant*
WWTP	*Wastewater Treatment Plant*

Table 6-1a: Water/Wastewater Plans Considered When Selecting Water Management Practices				
Plan Type or Specific Title	**Regional Resource(s) Impacted (Watershed/ Aquifer)**	**Organization or Entity Associated With Plan**	**Date of Plan**	**Description of Relevant Plan Content (i.e. practices currently planned for and/or in use in the Region to form the basis for the Council's selected water management practices)**
Alcovy River Watershed Plan	Alcovy River Ocmulgee River	Gwinnett, Walton, Newton & Jasper Counties	1999	Protection & implementation plan for the Alcovy River watershed, including considerations of development, stormwater, site design, erosion, agricultural practices, wastewater management, water conservation, and stream restoration
Northeast Georgia Regional Water Resources Study	Alcovy River, South River, Yellow River, Ocmulgee River	Banks, Barrow, Clarke, Elbert, Franklin, Greene, Hall, Hart, Jackson, Jasper, Madison, Morgan, Newton, Oconee, Oglethorpe, Putnam, Stephens, and Walton Counties	2004	At the time of this study, Jasper County had a planned 7-MGD intake at Bear Creek Reservoir in a partnership with Newton County. Newton County plans to use 28 MGD from the same new reservoir. Newton County also has plans for 2.9 MGD of additional treatment capacity. The Newton County Water and Sewer Authority has ongoing contract to transfer 0.3 mgd derived from the Ocmulgee Basin to Jasper County. It also transfers 0.04 mgd to the Alcovy Shores Water Authority. Alcovy Shores is served by septic tanks and drains back to the Ocmulgee Basin through Jackson Lake. It appears that most of the water distributed by the Jasper County WSA will also be discharged via septic tanks and ground water to the Ocmulgee Basin for the foreseeable future. Future increases in transfer to Jasper County could end up in the Oconee Basin as much of the county drains to Murder Creek and the Little River in that basin.
Ocmulgee River Basin Management Plan	Ocmulgee River	Georgia EPD	2004	Dominant water quality issues include sediment, fecal coliforms, metals, pH, and PCB residues in fish tissue. Watershed assessments, fish consumption guidelines, source water protection criteria, and TMDLs are being used by EPD to improve water quality. Local governments and resource management agencies use non-point source BMPs to reduce pollution, such as limits on impervious surface density and setbacks/buffers.

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Ocmulgee River Watershed Management Plan	Ocmulgee River	Georgia Department of Community Affairs	2003	Recommends the following BMPs specific to sub-basins in the Ocmulgee River watershed: 1) Non-structural - public education, volunteer programs, incentive programs, riparian buffers, dedicated greenways, federal, state, and local policies and regulations; 2) Structural - on-site and regional detention and retention basins, constructed, restored, and enhanced wetlands, sand filters, oil and grease separators, precast stormwater drainage system units, grassed swales, stream bank restoration, porous pavement, and energy dissipators. 3) Alternative - Post-construction runoff controls/Land development provisions, public education and outreach, public participation/involvement, illicit discharge detection and elimination, construction site runoff, pollution prevention and housekeeping for municipal operations, riparian area and wetland protection, enhancement, and restoration, and other related activities/volunteer activities.
50-yr Water and Wastewater Master Plan	Ocmulgee River	Butts County	2005	Supply alternatives include expansion of the Ocmulgee WTP and a reactivation and expansion of the Towaliga WTP as surface-water sources at a combined 40 MGD by 2040. Wastewater plans include expansion of sewer systems and obtaining a commitment from the City of Jackson to provide sufficient capacity from its Southside WPCP to the county. If the commitment cannot be obtained, a new WPCP in the Indian Springs area will be investigated. Two septage handling facilities should also be constructed.
Watershed Protection Ordinance For Still Branch Reservoir & Flint River Intake Water Supply Watershed	Flint River	City of Griffin	2003	Ordinance includes restrictions on impervious area for new development and land use. Note this watershed is not in the Middle Ocmulgee Region, but the City of Griffin does supply drinking water to Lamar and Butts County.
Water Conservation Plan	Flint River	City of Griffin	2003	The City of Griffin is not in the Middle Ocmulgee Region, it supplies drinking water to parts of Lamar and Butts County. Unaccounted for water reduction, system maps, leak detection, meter maintenance, overflow prevention, line flushing, and regulation of unmetered uses, as well as improvements to in-plant water management and rate structure policies

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Draft Regionally Important Resources Plan	Ocmulgee River, Flint River, Oconee River	Middle Georgia Regional Development Commission	2009	Identification of regionally important resources (including water) for coordination of governments & agencies for their protection. Recommended protection measures include: More compact urban development, preservation of environmentally sensitive areas, protection and maintenance of trees in all new developments, promoting low impact development , developing infrastructure networks to steer new development away from areas containing sensitive natural resources, green infrastructure, public education, transfer of development rights, conservation easements, fee simple acquisition, conservation tax credits. Also, agricultural and forestry BMPs, TMDL Implementation Plans for those streams listed on the EPD 303(d) list.
Bond Swamp National Wildlife Refuge Comprehensive Conservation Plan and Environmental Assessment	Ocmulgee River	Bond Swamp National Wildlife Refuge	2009	Recommended management practices include: Improved signage, expansion of conservation efforts, and land acquisition for additional buffer, water quality surveys, setting minimum instream flows, staff involvement with regional watershed management issues for protection of wetland and bottomland communities.
TMDL Implementation Plan Status Report	Alcovy River	Walton County	2008	Common BMPs include: Stream Sampling & Stream Monitoring Implementation of NRCS and Ag Extension BMPs, the Georgia Water Quality Control Act, the Metropolitan North Georgia Water District Management Plans, the Ocmulgee River Basin Management Plan, & NPDES Phase II Stormwater Management Ordinances, Stormwater Utility and Stormwater Enterprise Funds, Stormwater Management System Comprehensive Maps/Inventory, Comprehensive inventories of industries and businesses with stormwater discharges, I/I Inspection & Repair, & Stormwater Credits Programs
TMDL Implementation Plan Status Report	Big Flat Creek	Walton County	2008	
TMDL Implementation Plan Status Report	Little Haynes Creek	Newton, Rockdale, & Walton Counties	2008	

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TMDL Implementation Plan Status Report	Snapping Shoals Creek	Newton & Rockdale Counties	2008	Floodplain Mapping, Management & Damage Prevention Ordinances Watershed Management Plans, Watershed Protection Zoning, & Erosion and Sedimentation Control Illicit Discharge Ordinances, Sewer Use Ordinances, Grease Trap Ordinances, Stream Buffer Protection Ordinances, Dry Weather Screen Programs, Septic System Maintenance Standards, Land Disturbance Activities Training and Certification Programs, Litter Control Ordinances, Wetlands Protection Ordinances, Stream Buffer Protection Ordinances, & Street Sweeping Programs
TMDL Implementation Plan Status Report	South River	Newton, Rockdale, & Henry Counties	2008	
TMDL Implementation Plan Status Report	Yellow River	Newton County	2008	
TMDLs for Fecal Coliform in Upper Ocmulgee River Basin	Ocmulgee River	Gwinnett, DeKalb, Walton, Fulton, Clayton, Rockdale, Newton, Henry, Spalding, Butts, Jasper, Lamar, Monroe, Jones, Crawford, and Bibb Counties	2002	TMDL report for numerous stream segments in the Ocmulgee River basin for Fecal Coliform violation. The Hydrologic Simulation Program FORTRAN (HSPF) watershed model was used to develop these TMDLs. Possible non-point sources include wildlife, land application of agricultural manure, livestock grazing, leaking septic systems, urban development (including leaking sewer collection lines), animals having access to streams Possible point sources include numerous permitted discharges in the drainage areas of the listed streams.
TMDL Development for Toxicity in the Tributary to Tobesofkee Creek	Tobesofkee Creek	Lamar County	2002	An unnamed tributary to Tobesofkee Creek, from the headwaters to the tributary's confluence with Tobesofkee Creek, was identified on Georgia's 2000 Section 303(d) list as not supporting its designated use for the parameter toxicity. The listing of the tributary to Tobesofkee Creek for toxicity was based on whole effluent toxicity tests conducted on effluent discharged from the William Carter Company. The TMDL established for this water requires that effluent from the point source as well as waters originating from nonpoint sources shall not exhibit any toxicity.

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TMDL for Sediment in Tobesofkee Creek	Tobesofkee Creek	Bibb, Lamar, & Monroe Counties	2002	The calculated allowable load of sediment that may come into the identified segments of the Tobesofkee Creek Watershed without exceeding the water quality target is an annual loading of 0.54 tons/acre/year. EPA interpreted the State of Georgia's narrative water quality standard for fish and wildlife for the protection of aquatic life to determine the applicable water quality target. Based on a current estimated annual loading for the listed segment of 0.41 tons/acre/year, no reduction in sediment loading is needed for the identified segments of the Tobesofkee Creek Watershed to meet the applicable water quality target. The sediment problem is due to historic land use practices and migration of sediment from the headwater areas via tributaries to the main stream segments that caused high instream bed load sediment volume.
TMDL for Mercury in Jackson Lake and Ocmulgee River	Jackson Lake, Ocmulgee River	Butts, Jasper & Newton Counties	2002	This TMDL is for total mercury for Jackson Lake and two listed segments of the Ocmulgee River. Jackson Lake and Ocmulgee River are included on the State of Georgia's 2000 Section 303(d) list of impaired waters because mercury in certain species of fish tissue exceeds the Georgia DNR Fish Consumption Guidelines. Possible sources include a number of upstream point discharges.
TMDLs for Fecal Coliform in Lower and Little Ocmulgee River Basin	Ocmulgee River	Houston, Pulaski & Twiggs Counties	2002	The objective of this study is to develop fecal coliform TMDLs for Bay Creek, House Creek, Big Indian Creek, and Ocmulgee River in the Lower Ocmulgee River Basin and Alligator Creek and Turnpike Creek in the Little Ocmulgee River Basin. Possible sources include non-point sources such as wildlife, land application of agricultural manure, livestock grazing, leaking septic systems, urban development (including leaking sewer collection lines), animals having access to streams. In addition, point sources include eight permitted discharges in the drainage areas of the listed streams.
GA-PCBs TMDL Development Final Agency Action Feb. 19,1998 For Jackson Lake	Jackson Lake	Butts, Jasper & Newton Counties	1998	The TMDL for this waterbody is zero (point or nonpoint source loading) for PCB, recognizing the fact that historic sediment background concentrations of PCBs will contribute to the water column and fish tissue contamination until the sediments are buried or flushed out of the system. The state DNR will continue a progressive sampling program to protect public health.
Chlordane TMDL Development - Jackson Lake	Jackson Lake	Butts, Jasper & Newton Counties	1998	The TMDL for this waterbody is zero (point or nonpoint source loading) for chlordane, recognizing the fact that historic sediment background concentrations of chlordane will contribute to the water column and fish tissue contamination until the sediments are buried or flushed out of the system. Georgia DNR continues a progressive sampling program to protect public health.

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PCBs TMDL Development - High Falls Lake	High Falls Lake	Monroe County	1998	The TMDL for this waterbody is zero (point or nonpoint source loading) for PCBs, recognizing the fact that historic sediment background concentrations of PCBs will contribute to the water column and fish tissue contamination until the sediments are buried or flushed out of the system. Georgia DNR will continue a progressive sampling program to protect public health.
TMDL Development for Toxicity in Cabin Creek	Cabin Creek	Spalding and Butts Counties	2002	This TMDL identifies Cabin Creek, from the headwaters to its confluence with the Towaliga River, as not supporting its designated use for the parameter toxicity. The listing of Cabin Creek for toxicity was based on the results of whole effluent toxicity tests conducted on treated effluent from the City of Griffin's Cabin Creek WPCP and Springs Industries.
Big Creek Dissolved Oxygen TMDL	Big Creek	Dooly, Houston, and Pulaski Counties	2002	Big Creek flows to the east into the Ocmulgee River near Hawkinsville, Georgia. The major tributaries to Big Creek are Elko Creek, Burnham Branch, Camp Creek, South Prong Creek, and Cedar Creek. A 33-mile segment of Big Creek is listed for dissolved oxygen impairment. Likely causes are a service station and rest area for point sources, and surface runoff and litter leaf decay as non-point sources.
Total Maximum Daily Load Evaluation for Four Segments of the South River in the Ocmulgee River Basin (PCBs)	South River	Fulton, DeKalb, Rockdale, Henry and Newton Counties	2002	This TMDL identifies the following segments in the Ocmulgee River Basin as partially supporting their designated use due to the issuance of fish consumption guidelines because of PCB contamination. Possible sources include urban runoff from metropolitan Atlanta and CSOs, contaminated bed load sediment, soil erosion, air deposition, and other nonpoint source discharges. • South River –16 miles- from Atlanta to Flakes Mill Road (Fulton/DeKalb Counties) • South River – 9 miles - from Flakes Mill Road to Pole Bridge Creek (DeKalb County) • South River –15 miles – from Pole Bridge Creek to Highway 20 (Rockdale/Henry Counties) • South River-11 miles – from Highway 20 to Snapping Shoals Creek (Newton County)

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Total Maximum Daily Load Evaluation for Three Stream Segments of the Ocmulgee River for PCBs in Fish Tissue	Ocmulgee River	Bibb, Twiggs and Houston Counties	2007	This TMDL identifies identified the following segments in the Ocmulgee River Basin as partially supporting their designated use due to the issuance of fish consumption guidelines because of PCB contamination. Possible sources include contamination from urban runoff from metropolitan Macon, movement of contaminated bed load sediment, soil erosion, air deposition, and other nonpoint source discharges. • Ocmulgee River –11 miles- from Walnut Creek to Tobesofkee Creek (Bibb County) • Ocmulgee River – 7 miles - from Tobesofkee Creek to Echeconnee Creek (Bibb/Twiggs Counties) • Ocmulgee River –10 miles – from Echeconnee Creek to Sandy Run Creek (Twiggs/Houston Counties)
TMDLs For Fecal Coliform In 303(d) Listed Streams in The Ocmulgee River Basin	South River	Butts, Newton, Dekalb, Fulton, Clayton, Henry & Rockdale Counties	2002	The 303(d) list identifies numerous water bodies for the Ocmulgee River basin as either not supporting or partially supporting designated use classifications, due to exceedance of water quality standards for fecal coliform bacteria. Likely point sources include several wastewater treatment facilities and three CSO facilities. Possible non-point sources include: wildlife, land application of agricultural manure,• livestock grazing, leaking septic systems, urban development (including leaking sewer collection lines), and animals having access to streams
TMDL Evaluation for Seventy- Four Stream Segments in the Ocmulgee River Basin for Fecal Coliform	Ocmulgee River	All counties in Upper and Lower Ocmulgee River watersheds	2007	This TMDL identifies twelve (12) stream segments located in the Ocmulgee River Basin as water quality limited due to fecal coliform. All but one (Alcovy River - drinking water) are listed as primarily used for fishing. Likely sources include 52 permitted wastewater facilities, and non-point sources such as wildlife, agricultural livestock (animal grazing, access to streams, application of manure to pastureland and cropland) and urban development (potential leakage from sanitary sewer lines, septic systems, LAS and landfills)
Ocmulgee River Basin Dissolved Oxygen TMDLs	Cabin Creek	All counties in Upper and Lower Ocmulgee River watersheds	2002	USGS water quality data collected in 1999 identified dissolved oxygen (DO) impairments for ten Ocmulgee stream segments. Probable point sources include stabilization ponds, a nursing home, industrial discharges, and a number of permitted discharges. Probable non-point sources include surface runoff and leaf litter decay.

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TMDL Evaluation for Seven Stream Segments in the Ocmulgee River Basin for Dissolved Oxygen	Ocmulgee River	All counties in Upper and Lower Ocmulgee River watersheds	2007	This TMDL identifies seven (7) stream segments, located in the Ocmulgee River Basin, as water quality limited due to DO. Probably sources include 26 permitted discharges, and the non-point sources such as adjacent wetlands, swamps, and marshes with organically rich bottom sediments; direct leaf litter fall onto water surfaces and adjacent floodplains and LAS's.
TMDL Evaluation for Sandy Run Creek in the Ocmulgee River Basin for Copper	Ocmulgee River	All counties in Upper and Lower Ocmulgee River watersheds	2007	This TMDL identifies five miles of the Sandy Run Creek, from Bay Gall Creek to its confluence with the Little Ocmulgee River near the City of Warner Robins in Houston County, as not supporting its designated uses for the parameter copper. Possible sources include the Warner Robins WPCP and Robins Air Force Base.
TMDL Evaluation for Forty-One Stream Segments in the Ocmulgee River Basin For Sediment (Biota Impacted)	Ocmulgee River	All counties in Upper and Lower Ocmulgee River watersheds	2002	This TMDL identifies forty-one (41) stream segments located in the Ocmulgee River Basin as 303(d) listed as Biota impaired due to sedimentation. Possible sources include 10 permitted discharges and non-point sources such as agriculture, silviculture, grazing areas, mining sites, roads, and urban development.
TMDL Evaluation for Seventy Stream Segments in the Ocmulgee River Basin For Sediment (Biota Impacted)	Ocmulgee River	All counties in Upper and Lower Ocmulgee River watersheds	2007	This TMDL identifies seventy (70) stream segments located in the Ocmulgee River Basin impaired for Biota due to sedimentation. Possible sources include 12 permitted discharges, 820 industrial facilities who have submitted letters of intent to be covered under Georgia's General Storm Water NPDES Permit Associated with Industrial Activities, and the following non-point sources: silviculture, agriculture, grazing areas, mining sites, roads, and urban development.

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Watershed Assessment, Watershed Monitoring, & Watershed Protection Plan for Unincorporated Peach County	Bay Creek, Mossy Creek, Ocmulgee River	Peach County	2004	Peach County's watershed protection plan identified potential areas of water quality impairment and recommended strategies for watershed improvement, such as: revision of local zoning ordinances to protect sensitive areas; establishing an Adopt-a-stream program; training County employees in erosion & sedimentation control; enforcing erosion & sedimentation compliance; encouraging local participation in NRCS farm programs; investing in public education programs; and long term chemical and biological monitoring.
Watershed Protection Plan for Yellow River (Newton County) Watershed Assessment	Yellow River	Newton County/City of Covington	2005	Newton County/Covington's watershed protection plan identified potential areas of water quality impairment and recommended strategies for watershed improvement, such as: public education activities; outreach programs like Adopt-a-stream and Keep Covington - Newton County Beautiful; encouraging participation in stream walks and Rivers Alive cleanups; performing septic tank surveys; illicit discharge detection programs; maintenance of the City/County stormwater systems; and erosion and sedimentation control inspections.
Watershed Protection Plan: Sanitary Sewer Service Area	Big Indian Creek	City of Perry	2006	Perry's watershed protection plan identified potential areas of water quality impairment and recommended strategies for watershed improvement, such as: stormwater management; stormwater funding feasibility analysis; localized drainage master planning with drainage improvement recommendations; development/adoption of a local stormwater design manual; and developing ordinances to guide land development, soil and erosion control, tree protection, flood damage prevention, water resources protection and stormwater management. Additional BMPs include continued investment in the City's Greenspace program, development of environmental planning criteria, and wastewater collection system upgrades.
Watershed Protection Plan: Bucksworth Ranch LAS, Towaliga Watershed	Towaliga River	Butts County	2008	Butts County's watershed protection plan identified potential areas of water quality impairment and recommended strategies for watershed improvement, such as: development standards for sensitive areas; illicit discharge enforcement; inventory of existing septic systems; inventory of agricultural activities, erosion and sediment control; NPDES discharge monitoring; Cabin Creek clean-up days; landscape & tree ordinance; forestry & water quality programs; agricultural management practices; and water quality monitoring.

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City of Jeffersonville Watershed Assessment & Protection Plan	Lower Oconee River	City of Jeffersonville	2007 (Revised 2008)	Jeffersonville's watershed protection plan identified potential areas of water quality impairment and recommended strategies for watershed improvement, such as: re-vegetation of riparian areas; inspection of septic tank systems up gradient of the LAS site; assist in performing maintenance & repair; providing public education/information; continued compliance with NPDES permits; implementation of GFC best management practices; adoption of NRCS conservation practices; proper maintenance of unpaved roads; erosion and sedimentation control activities for land disturbing activities; and mitigation and prevention of stream bank erosion.
Watershed Assessment	Ocmulgee River	Macon Water Authority	In progress	Macon Water Authority completed a watershed assessment that identified pollutants and their potential sources in the watershed. MWA is currently working on a watershed protection plan that will identify its selected water management strategies.
Watershed Assessment	Ocmulgee River	City of Warner Robbins	In progress	The City of Warner Robins completed a watershed assessment that identified pollutants and their potential sources in the watershed. City is currently working on watershed protection plan that will identify its selected water management strategies.
Watershed Assessment	Ocmulgee River	City of Byron	In progress	The City of Byron completed a watershed assessment that identified pollutants and their potential sources in the watershed. City is currently working on its watershed protection plan.
Watershed Assessment	Big Indian Creek	City of Fort Valley	In progress	The City of Fort Valley completed a watershed assessment that identified pollutants and their potential sources in the watershed. City is currently working on its watershed protection plan.
Watershed Assessment	Ocmulgee River	Twiggs County	In progress	Twiggs County is currently performing a watershed assessment. Because it was not finalized at the time of plan preparation, it was not available during the management practice selection process.
Source: Water & Wastewater Master Plan research conducted by planning contractor; watershed assessment and protection plans information provided by Georgia EPD. Note: The Management Practices and relevant plan content listed in the table are based on information described at the time of the study and may be outdated in some cases.				

Table 6-1b: Comprehensive Plans Considered When Selecting Water Management Practices				
Plan Type or Specific Title	**Regional Resource(s) Impacted (Watershed/ Aquifer)**	**Organization or Entity Associated With Plan**	**Date of Plan**	**Description of Relevant Plan Content (i.e. practices currently planned for and/or in use in the Region to form the basis for the Council's selected water management practices)**
Comprehensive Plan: 2030 Shared Visions - Planning Smart Choices - our Comprehensive Planning Process	Lucas Lake, Ocmulgee River	Macon-Bibb County	2005	Section 4 of the Community Assessment discusses watersheds, wetlands, groundwater recharge areas, river corridor protection, water quality, water monitoring/impaired streams and TMDLs, Source Water Assessment Plans, 303(d) listed impaired streams, stormwater management program, floodplains, soils. No immediate expansion plan of water infrastructure.
Joint Comprehensive Plan for Houston County and the cities of Centerville, Perry and Warner Robins: Community Agenda	Upper Ocmulgee River, Lower Ocmulgee River, Middle Flint	Houston County & cities of Centerville, Perry and Warner Robins	2006	City of Perry - Proposed expansion of WWTP from 3 to 6 MGD with in next 5 years (from 2006). Management practices opportunities considered include: public education on the importance of Groundwater Recharge Areas, promoting growth in areas already utilizing public sewer systems, developing conservation subdivision ordinance to mitigate environmental impact of development, development of county-wide stormwater management program financed with user fees, updates to the water system master plan, expansion of municipal wastewater treatment facilities, discourage the proliferation of private septic systems, installing pretreatment facilities at city WWTPs to treat septage collected from septic tanks in unincorporated Houston County.
Lake Tobesofkee Recreation Area Public Opinion and Marketing Assessment		Bibb County	2009	Professional survey and market research for the Lake Tobesofkee Recreation Area, with the goal of formulating a development or capital improvement strategy based on citizen input and market potential. Mentioned water quality as a significant concern of survey participants.
2008-2028 Comprehensive Plan	Upper Oconee, Upper Ocmulgee	Newton County	2008	Cornish Creek WTP (Lake Varner WTP) has a permitted treatment capacity of 11 MGD; however, the design capacity is 15 MGD, and the WTP can ultimately be expanded to 24 MGD. Plans for expansion are currently being developed. - New 4-MGD WTP located at a proposed new Bear Creek Reservoir (SE Newton County). - Covington WRF recommended to be expanded to 7.5 MGD - Newton County WSA's plant has been expanded from 1.8 to 3.2 MGD. Also, plans for further expansion to add 1 MGD (to 4.2 MGD) currently being prepared.

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Comprehensive Plan		City of Covington	2007	River Protection Policies listed include: floodplain preservation, sensitive land protection, use of floodplains for recreation (pervious trails/passive recreation), conservation subdivisions, riparian buffers along watercourses, septic tank setbacks, set aside land for greenways, provide best management practices for stormwater management, and exceed all state and local standards for protection of wetlands, streams, lakes, ponds, and aquifer recharge areas. Watershed Protection Policies include: sensitive land (water supply watersheds) protection, management of recreational activities on existing reservoirs, adoption of wide natural buffer standards, enforcement of strict erosion and sedimentation controls, encourage redevelopment/infill, discouraging LAS's in the future to reduce consumptive use, requiring additional sewer infrastructure. Actions to improve water quality: Adopt-A-Stream expansion, protection plans for impaired waters (Yellow River, Snapping Shoals Creek, Little River), water quality monitoring program, stormwater utility feasibility study, septic tank monitoring/repair program, construction of sewer infrastructure to replace septic tanks.
City of Covington Urban Redevelopment Plan		City of Covington	2009	Measures for water quality protection include: seeking federal and state funding to develop programs designed to improve water quality, monitoring sources of water pollution and institute remedial actions aimed toward a regional policy for combating sources of environmental pollution, support rigorous enforcement of state health laws and adequate treatment measures to ensure safe drinking water, provide an adequate water delivery system to meet both present and foreseeable water needs in accordance with safe drinking water standards, develop an annual program for the cleaning and maintenance of water pipes, develop and implement a comprehensive water conservation program throughout the community that includes implementing standards for plumbing fixtures, landscape design, metering, and pricing.

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Comprehensive Plan: Envisioning our Future 2009-2029	Edie Creek, Little Towaliga	Lamar County	2009	Mentions protection of sensitive lands around High Falls Lake, tributaries, water recharge areas. Current County Zoning Plan has 40% (per lot) limit on impervious area, increased to 80% in environmentally sensitive areas. County has existing ordinances for flood protection, watershed protection, stormwater management. Lamar County WSA has current water purchase agreements to purchase potable water (combined total of 1.5 MGD) from the City of Barnesville, City of Milner, City of Griffin, Butts County and North Monroe County Water System for distribution in Lamar County. Predicts the current maximum allowable supply will be adequate for the next 25 years. The City of Barnesville has the capacity to more than double its current daily output of potable water. States that The Lamar County WSA is in the process of researching potential reservoir site to meet demands beyond 25-yr projections.
Comprehensive Plan: Partial Plan Update		City of Barnesville and City of Aldora	2009	Mentions wetland protection, watershed management, expansion of water/sewer to accommodate industrial growth, recognizes need for improvements to water and wastewater treatment facilities. Specific projects listed in the plan include: construction of new 1.2 MGD WWTP (received waste load allocation, engineering design in progress as of date of plan), upgrade/repair conventional WTP (completed equipment upgrade/repairs), design and concept report for extensive water treatment plan upgrade already completed.
Comprehensive Plan	Barnesville Reservoir	City of Milner	2009	Stream corridor protection a major component of Community Agenda including the following measures: protecting environmentally sensitive areas; protect open space and stream corridor areas; enact environmental protection ordinances that limit development.
Regionally Important Resources Plan - Middle Georgia	Towaliga River, Flint River, Lake Juliette, Lake Tobesofkee, Ocmulgee River, Lucas Lake	11 County Plan (Bibb, Monroe, Twiggs, Crawford, Peach, Houston, Pulaski)	2009	Bringing segments of Ocmulgee River with TMDLs back into compliance (expanding feral hog population is source of concern for water quality); sensitive lands to be protected include Bond Swamp National Wildlife Refuge, Oconee National Forest, Piedmont National Wildlife Refuge. Management practices mentioned include: large-lot suburban residential development with all structures served by OSSMS, preservation of sensitive areas, aquatic buffers beyond the state minimum; also low impact development measures (impervious percentage of lot limitations, porous pavement, rain gardens, vegetated swales, bio-retention areas, general reduction of impervious surfaces), public education, assess OSSMS, source water protection plans.

Table 6-1b: Comprehensive Plans Considered When Selecting Water Management Practices				
Plan Type or Specific Title	**Regional Resource(s) Impacted (Watershed/ Aquifer)**	**Organization or Entity Associated With Plan**	**Date of Plan**	**Description of Relevant Plan Content (i.e. practices currently planned for and/or in use in the Region to form the basis for the Council's selected water management practices)**
Comprehensive Plan	Ocmulgee River, Lake Jackson, Towaliga Water Supply Watershed	Butts County	2007	Protection of floodplains, water supply watersheds and groundwater recharge areas by discouraging development in these areas. Additional management practices mentioned include: conservation subdivisions, green space requirements for large developments, conservation easements, transfer of development rights, discourage septic systems in water supply watersheds, update water and sewer master plans, capital improvement program development, stormwater management plan development, TMDL development. Butts County WSA owns and operates a 4 MGD WTP on the Ocmulgee River (permit to withdraw 9.7 MGD). There were concerns with wastewater treatment capabilities limiting possibility for growth in County (current system is 0.55 MGD LAS).
Comprehensive Plan		City of Flovilla	2005	City needs additional water supply sources to meet projected future demands. Additional needs identified include: maintaining wetland inventory, and inventory of development around these areas including enhanced land use mapping, depiction of structures and impervious surfaces and more detailed information on potential pollution sources, developing regulations to prevent development within floodplains and/or minimize intrusion in the floodplain.
Comprehensive Plan Update	Upper Ocmulgee River, Lower Ocmulgee, Upper Flint	Crawford County and the City of Roberta	2006	Consider establishing a local green space preservation ordinance to protect agricultural and forestry land; consider priority for extension of water & sewer services for area with high rate of failure of septic systems and a large amount of individual wells; develop strategies and pursue funding for financing water and wastewater infrastructure in undeveloped areas; extend water lines in the County; establish incentives to make land preservation attractive to sellers and owners of agricultural property.
1992-2012 Comprehensive Plan	Upper Oconee	Jasper County and the City of Monticello	1992	Recommendations of the plan include: preventing erosion and sedimentation by practicing good land management in area with floodplains, steep slopes, shallow depth to bedrock and unsuitable soils; promoting and protecting vital natural resources such as wetlands, possible groundwater recharge areas, water supply watersheds, agricultural land and forest areas; adhering to all environmental planning criteria established by the Georgia DNR; encouraging the county to become a member of the National Flood Insurance Program.

Table 6-1b: Comprehensive Plans Considered When Selecting Water Management Practices				
Plan Type or Specific Title	**Regional Resource(s) Impacted (Watershed/ Aquifer)**	**Organization or Entity Associated With Plan**	**Date of Plan**	**Description of Relevant Plan Content (i.e. practices currently planned for and/or in use in the Region to form the basis for the Council's selected water management practices)**
1992-2012 Comprehensive Plan		City of Jeffersonville	1992	Opportunities include: floodplains mapping within city limits, groundwater protection ordinance, public education on importance of protecting groundwater resources WWTP capacity is 250,000 gallons per day. City anticipates having ample sewage treatment capacity for the future. City anticipates current water withdrawal capacity of 200,000 to 300,000 gallons per day is enough to supply the city into the future.
1993-2013 Comprehensive Plan Partial Update	Ocmulgee	Twiggs County, City of Danville, City of Jeffersonville	2008	Opportunities for natural resource protection include: public education, establishing a national heritage corridor to promote, enhance, and conserve the natural and cultural resources of the Ocmulgee River and adjacent lands. Infrastructure opportunities include: development of the county water system to provide residents with a reliable source of safe drinking water and for fire protection services.
2005-2025 Comprehensive Plan	Upper Ocmulgee River	City of Jenkinsburg	2005	Needs identified include: develop agreement with Butts County WSA to ensure City's water needs are met in future (current 5 MGD capacity estimated to double by 2050); identify additional water supply sources; develop water resource conservation policy and plan; maintain wetlands inventory as well as land use surrounding wetlands, including impervious surface and other potential pollution sources.
2007-2027 Comprehensive Plan	Ocmulgee River	Jones County and the City of Gray	2007	Opportunities include: protection of groundwater sources; encourage new development in suitable locations to protect natural resources, environmentally sensitive areas, or valuable historic, archeological, or cultural resources from human encroachment through land development regulations and/or incentives; encourage more compact development and preservation of open space. Planned projects include: implement Jones County/City of Gray water system enhancement project; expand of City of Gray's wastewater treatment capacity; establish long term water & sewer master plan; investigate feasibility of water authority; conduct stormwater master plan

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2006-2026 Comprehensive Plan	Upper Ocmulgee River	Monroe County and the Cities of Culloden and Forsyth	2007	Opportunities include: preserve cultural and natural resources of the county in the unincorporated areas, particularly those in Bolingbroke and High Falls, which are facing increasing development pressures; guide development and protect forestry, farmland, and open space areas through the adoption of tree ordinances, agriculture preservation incentives, and conservation easements; promote a County-wide preservation plan that takes into account Juliette, Culloden, Forsyth, Bolingbroke, Smarr, and other historic and natural resources in the County; continue preservation and promotion of the County's parks and recreation areas, such as Lake Juliette, Rum Creek Wildlife Management Area, and High Falls State Park.
2008-2028 Comprehensive Plan		City of Oxford	2007	Oxford plans to meet the projected future demand by continuing to purchase water from Newton County WSA. Oxford does not operate a wastewater treatment facility; however, the city owns 0.135 million gallons per day capacity in the Yellow River Treatment Plant; 0.075 MGD in the Covington Treatment Plant; and 0.210 MGD in the LAS Facility. The City maintains a water distribution system and a wastewater collection system.
2006-2026 Comprehensive Plan: A Vision for Payne City's Renaissance		Payne City	2006	Minimal Plan level update - town of 169 people in 2004. No water sources within town boundary of approximately 26 acres. Plan focuses on development/enhancement only; no water resources issues mentioned.
2006-2026 Comprehensive Plan	Upper Ocmulgee River, Mossy Creek, Bay Creek	Peach County and the Cities of Byron and Fort Valley	2006	Initiate corrective measures and employ future mitigation efforts for 303(d) listed stream improvement; protect and preserve existing wetlands that protect water quality and provide habitat for various forms of plant and animal life; improve stormwater management efforts; limit development in flood-prone areas, any development in the floodplain should be in the form of parks or other recreational uses. Other opportunities include: future development of Big Indian Creek Reservoir; development of other new reservoir or water supply sources; protect and preserve agricultural areas as open space through appropriate planning and zoning initiatives. An additional option is to encourage individuals who sell off farming acreage to establish conservation easements to protect these lands from encroaching development.

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Plan Type or Specific Title	**Regional Resource(s) Impacted (Watershed/ Aquifer)**	**Organization or Entity Associated With Plan**	**Date of Plan**	**Description of Relevant Plan Content (i.e. practices currently planned for and/or in use in the Region to form the basis for the Council's selected water management practices)**
2008-2013 Partial Plan Update	Lower Ocmulgee	Pulaski County and the City of Hawkinsville	2007	Opportunities include: adoption of tree ordinances, agriculture preservation incentives, and conservation easements; acquire and protect green space adjacent to the Ocmulgee River between the City and County boat docks; establish additional land protection measures (such as: adoption of tree ordinances, agriculture preservation incentives, and conservation easements) and incentives that will make land preservation more attractive and feasible for owners and sellers of agricultural and forestry land.
1992-2012 Comprehensive Plan	Lower Ocmulgee	Pulaski County and the City of Hawkinsville	1992	Management practices considered included establishment of land use and/or zoning plans that ensure the safety of groundwater recharge areas, protecting wetlands and floodplains from permanent destruction due to uncontrolled or inappropriate development, addressing failing septic tanks issues (most of the county is on septic)
1994-2014 Comprehensive Plan	Upper Oconee	City of Shady Dale	1994	City is a bedroom community for Monticello, Covington, Macon, Madison, and Eatonton and does not expect a growth surge in the foreseeable future.
The Joint Partial Update to the Comprehensive Plan for Twiggs County, City of Danville, and City of Jeffersonville	Upper Oconee, Ocmulgee River	Twiggs County and the City of Danville and Jeffersonville	2008	Protection of significant groundwater recharge areas, the Ocmulgee River corridor and wetland areas, as well as other environmentally sensitive areas (floodplains, steep slopes, unsuitable soils and bird/fish/plant habitats). Coordinate with neighboring counties to bring the segments of the Ocmulgee River on the EPA 303 (d) list into compliance with water quality regulations. Protection of other natural resources, such as prime agricultural and forestry lands, and recreation and conservation areas. Other opportunities include: public education efforts related to existing environmental regulations and importance of protecting these vital natural resources; establish a national heritage corridor to promote, enhance, and conserve the natural and cultural resources of the Ocmulgee River and adjacent lands; develop county water system to provide residents with a reliable source of safe drinking water, fire protection services and to open up this sections of the county to new residential development, which until now have been static due to the lack of a suitable water supply. Improvements to the City of Jeffersonville's water system, including new wells and refurbishing or replacing existing water lines.
Source: Comprehensive Plan research conducted by planning contractor Note: The Management Practices and relevant plan content listed in the table are based on information described at the time of the study and may be outdated in some cases				