



Macon-Bibb County Planning & Zoning Commission

COMPREHENSIVE PLAN Community Assessment



February 2006

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Our Comprehensive Planning Process

Macon-Bibb County Planning and Zoning Commission

Macon-Bibb County Comprehensive Plan 2030

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“The opinion, findings, and conclusions in this publication are those of the author(s) and not necessarily those of the Department of Transportation, State of Georgia, or the Federal Highway Administration.

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Introduction

The Community Assessment is the first step in the development of the Comprehensive Plan and is intended to be an objective review and analysis of data and information concerning certain aspects or elements of the community. These elements include: population, economic development, housing, natural and cultural resources, community facilities and services, intergovernmental coordination, transportation, and land use. A brief description of each element and its relation to the plan is described below.

Population

This element provides the foundation for the plan. In order to plan for the future, cities and counties must have a general idea of approximately how many people to plan for. This section will identify trends and issues in population growth and significant demographic characteristics of the community including total population, Age distribution, race and ethnicity, and income.

Economic Development

This element provides an inventory and assessment of the community's economic base and its labor force. An analysis of the past trends of a community's economic base and its labor force, as well as an analysis of regional comparisons in these areas, will provide insight into the community's economic health. An understanding of the community's economy is necessary in order to develop goals, objectives, and policies for the community's future economic development.

Housing

This element provides an inventory and assessment of a community's housing and basically evaluates the adequacy and suitability of existing housing stock. More specifically an evaluation will be made concerning:

- Housing types and housing mix and how they have changed over time;
- The condition and occupancy of the housing in the community;
- The cost of housing both for owners and renters;
- The needs of households that are cost burdened;
- Special housing needs such as housing for the elderly, homeless, victims of domestic violence, and the disabled;
- The Jobs-housing balance.

Natural and Cultural Resources

This element provides an inventory and assessment of a community's natural and cultural resources that include:

- Water supply watersheds, wetlands, ground water recharge areas;
- Protected rivers, scenic areas, prime agricultural or forest land;
- Major parks, recreation areas, and conservation areas;
- Other environmentally sensitive areas such as public water supply sources, steep slopes, floodplains, soil, plant and animal habitats, and any other sensitive areas that are of significance to the area;
- *Significant cultural resources such as historic and cultural landmarks and archeological sites.*

Community Facilities and Services

This element provides an inventory and assessment of the various services that are provided by the City and County. Major public facilities and services will be evaluated and will include:

- Distribution and treatment of the water system, collection and treatment of wastewater;
- Services such as fire protection, public safety;
- Parks and recreation, storm water management, and solid waste management.

Intergovernmental Coordination

This element will identify existing coordinating mechanisms and processes for the local governments and agencies such as independent, authorities, boards, and development organizations.

Transportation

The transportation element will evaluate the adequacy of several components of the transportation system for serving the needs of the community throughout the planning period. Specifically the following issues will be addressed:

- Road network including roads, highways, bridges, connectivity, and signalized intersections.
- Alternative modes of transportation including bicycle, pedestrian facilities, and public transportation.
- Parking and the adequacy of parking facilities in the downtown area.

- Railroads, trucking, and airport facilities including freight and passenger lines, intermodal facilities, commercial and general purpose air terminals.
- Significant traffic congestion and its connection to land use.

Land Use

This element provides an inventory and assessment of how land is used in the community and how the future growth and development will affect land use. Issues such as future employment, new growth demand for residential and nonresidential land uses, land area, and land consumption will be considered. The land use section also includes the proposed character area map which subdivides the community into planning sub-areas based on the structure of the Visual Preference Survey which is the basis for the Community Agenda portion of the Comprehensive Plan.

Chapter 1

General Population Overview

Overall, Bibb County has experienced flat residential growth for quite some time now. The unincorporated areas of Bibb County are experiencing new residential growth. Between 1990 to 2000, the Bibb County population increased by 3,920 (2.6% increase) and the unincorporated portions of Bibb County increased by 13,291 (30.6% increase). On the other hand, the City of Macon has been losing population. Between 1990 to 2000, the City of Macon population decreased by 9,357 persons (7.3% decrease). While the City of Macon and Bibb County remain major employment and economic centers, the residential population is moving to the suburbs. This is occurring both within Bibb County and the Macon-Warner Robins SMA. Between 1990 to 2000 the SMA population increased by 41,446 persons (14.7% increase). The movement of residential development to the suburbs has been and will continue to be the trend.

See Table 1–1.

According to the 2000 Census, Bibb County's population is 50.1% white, 47.3% black, 0.2% American Indian, 1.1% Asian and 1.3% other races. The percentage of the population that is black has been steadily increasing since the 1960's when 33.4% of the community's population was black. In 1990 and 2000, it was 41.7% and increased to 47.3% respectively. As this trend continues, the percentage of the population that is black is projected to reach 57.6% in 2025. See Table 1-2 At the same time the percentage of the white population is going down. It went from 57.6% in 1990 to 50.1% in 2000. See Table 1-1.

Within Bibb County, there appears to be a net out migration of whites and a net in migration of blacks. The white population decreased by 9,105 persons, a 10.6% decrease from the 1990 Census to the 2000 Census. The black population increased by 10,292, a 16.5% increase, from the 1990 Census to the 2000 Census. See Table 1-1.

Table 1-1
Population and Race Data 1990 Census

Jurisdiction	Total Popu- lation	Total	White	Total	Black	Total	American Indian	Total	Asian & Pa- cific Islander	Other	
Bibb County	149,967	86,252	57.5%	62,526	41.7%	190	0.1%	791	0.5%	208	0.3%
Unincorporated Bibb County	43,163	35,800	82.9%	6,877	15.9%	62	0.1%	347	0.8%	77	0.2%
City of Macon	106,612	50,265	47.1%	55,645	52.2%	127	0.1%	444	0.4%	131	0.2%
Payne City	192	187	97.4%	4	2.1%	1	0.5%	0	0.0%	0	0.0%
Macon-Warner Robins SMA	281,103	180,383	64.2%	97,294	34.6%	571	0.2%	1,941	0.7%	914	0.9%
Similar Counties											
Chatham County	216,935	130,607	60.2%	82,608	38.1%	461	0.2%	2,352	1.1%	907	0.4%
Dougherty County	96,311	47,034	48.8%	48,387	50.2%	250	0.3%	452	0.5%	188	0.2%
Floyd County	81,251	69,338	85.3%	11,106	13.7%	138	0.2%	409	0.5%	260	0.3%
Houston County	89,208	68,097	76.3%	19,376	21.7%	277	0.3%	1,030	1.2%	428	0.5%
Lowndes County	75,981	50,566	66.6%	24,241	31.9%	230	0.3%	647	0.9%	297	0.4%
Muscogee County	179,278	105,762	59.0%	68,161	38.0%	569	0.3%	2,510	1.4%	2,276	1.3%
Richmond County	189,719	104,612	55.1%	79,639	42.0%	529	0.3%	3,317	1.7%	1,622	0.9%
Georgia	6,478,216	4,600,148	71.0%	1,746,565	27.0%	13,348	0.2%	75,781	1.2%	42,374	2.4%

Table 1-1 Continued
Population and Race Data 2000 Census

Jurisdiction	Total Popu- lation	Total	White	Total	Black	Total	American Indian	Total	Asian & Pa- cific Islander	Other	
Bibb County	153,887	77,147	50.1%	72,818	47.3%	272	0.2%	1,694	1.1%	1,955	1.3%
Unincorporated Bibb County	56,454	42,513	75.3%	12,054	21.4%	84	0.1%	1,038	1.8%	766	1.4%
City of Macon	97,255	34,482	35.5%	60,740	62.5%	188	0.2%	656	0.7%	1,188	1.2%
Payne City	178	152	85.4%	24	13.5%	0	0.0%	0		1	0.6%
Macon-Warner Robins SMA	322,549	190,999	59.2%	121,107	37.5%	787	0.2%	3,756	1.2%	5,899	1.8%
Similar Counties											
Chatham County	232,048	127,873	55.1%	94,398	40.7%	495	0.2%	4,174	1.8%	5,108	2.2%
Dougherty County	96,065	36,277	37.8%	57,967	60.3%	141	0.1%	715	0.7%	965	1.0%
Floyd County	90,565	73,249	80.9%	11,889	13.1%	234	0.3%	1,290	1.4%	3,903	4.3%
Houston County	110,765	78,091	70.5%	27,044	24.4%	415	0.4%	1,947	1.8%	3,268	3.0%
Lowndes County	92,115	57,185	62.1%	31,681	34.4%	287	0.3%	869	0.9%	2,093	2.3%
Muscogee County	186,291	93,928	50.4%	80,509	43.2%	1,048	0.6%	3,368	1.8%	7,438	4.0%
Richmond County	199,775	91,181	45.6%	98,824	49.5%	596	0.3%	3,235	1.6%	5,939	3.0%
Georgia	8,186,453	5,327,281	65.1%	2,349,542	28.7%	21,737	0.3%	177,416	2.2%	310,476	3.8%

Table 1-1 Continued
Change between 1990 to 2000 Census

Jurisdiction	Total Popu- lation	Total White	Total Black	Total American Indian	Total Asian & Pa- cific Islander	Other
Bibb County	3,920	-9,105	10,292	82	903	1,747
Unincorporated Bibb County	13,291	6,713	5,177	22	691	689
City of Macon	-9,357	-15,783	5,095	61	212	1,057
Payne City	-14	-35	20	-1	0	1
Macon-Warner Robins SMA	41,446	10,616	23,813	216	1,815	4,985
Similar Counties						
Chatham County	15,113	-2,734	11,790	34	1,822	4,201
Dougherty County	-246	-10,757	9,580	-109	263	777
Floyd County	9,314	3,911	783	96	881	3,643
Houston County	21,557	9,994	7,668	138	917	2,840
Lowndes County	16,134	6,619	7,440	57	222	1,796
Muscogee County	7,013	-11,834	12,348	479	858	5,162
Richmond County	10,056	-13,431	19,185	67	-82	4,317
Georgia	1,708,237	727,133	602,977	8,389	101,635	268,102

Table 1-1 Continued
Percentage Change between 1990 to 2000 Census

Jurisdiction	Total Popu- lation	Total White	Total Black	Total American Indian	Total Asian & Pa- cific Islander	Other
Bibb County	2.6%	-10.6%	16.5%	43.2%	114.2%	839.9%
Unincorporated Bibb County	30.8%	18.8%	75.3%	35.5%	199.1%	894.8%
City of Macon	-8.8%	-31.4%	9.2%	48.0%	47.7%	806.9%
Payne City	-7.3%	-18.7%	500.0%	-100.0%	0.0%	0.0%
Macon-Warner Robins SMA	14.7%	5.9%	24.5%	37.8%	93.5%	545.4%
Similar Counties						
Chatham County	7.0%	-2.1%	14.3%	7.4%	77.5%	463.2%
Dougherty County	-0.3%	-22.9%	19.8%	-43.6%	58.2%	413.3%
Floyd County	11.5%	5.6%	7.1%	69.6%	215.4%	1401.2%
Houston County	24.2%	14.7%	39.6%	49.8%	89.0%	663.6%
Lowndes County	21.2%	13.1%	30.7%	24.8%	34.3%	604.7%
Muscogee County	3.9%	-11.2%	18.1%	84.2%	34.2%	226.8%
Richmond County	5.3%	-12.8%	24.1%	12.7%	-2.5%	266.2%
Georgia	26.4%	15.8%	34.5%	62.8%	134.1%	632.7%

Table 1-2
Racial Composition for Bibb County - Census Data

Year	Total Population	Total White		Total Black		Total Ameri- can Indian		Total Asian & Pacific Islander		Other	
1980	150,256	91,460	60.9%	58,069	38.6%	109	0.1%	446	0.3%	172	0.1%
1985	149,813	88,856	59.3%	60,298	40.2%	150	0.1%	319	0.2%	190	0.1%
1990	149,967	86,252	57.5%	62,526	41.7%	190	0.1%	791	0.5%	208	0.1%
1995	151,928	81,700	53.8%	67,672	44.5%	231	0.2%	1,243	0.8%	1,082	0.7%
2000	153,887	77,147	50.1%	72,818	47.3%	272	0.2%	1,694	1.1%	1,956	1.3%
2005	154,795	73,569	47.5%	76,505	49.4%	313	0.2%	2,006	1.3%	2,402	3.5%
2010	155,704	69,991	45.0%	80,193	51.5%	354	0.2%	2,318	1.5%	2,848	1.8%
2015	156,619	66,421	42.4%	83,880	53.6%	394	0.3%	2,630	1.7%	3,294	2.1%
2020	157,518	62,834	39.9%	87,567	55.6%	435	0.3%	2,942	1.9%	3,740	2.4%
2025	158,426	59,256	37.4%	91,254	57.6%	476	0.3%	3,254	2.1%	4,186	2.6%

Table 1-3
Age 1990 Census

Age	Bibb County	Unincorporated Bibb County	City of Macon	Payne City	Macon-Warner Robins SMA	Georgia
<5	11,341	2,993	8,338	10	21,742	495,535
5-9	10,943	3,190	7,745	8	21,390	483,952
10-14	10,899	3,236	7,657	6	20,831	466,614
15-17	6,680	2,136	4,540	4	12,635	281,202
18-19	5,027	1,170	3,852	5	9,381	215,950
20	2,329	515	1,810	4	4,395	109,209
21	2,212	518	1,692	2	4,159	103,347
22-24	6,685	1,700	4,977	8	12,554	310,078
25-29	12,398	3,591	8,789	18	24,463	589,952
30-34	12,648	3,981	8,659	8	24,474	584,944
35-39	11,543	3,961	7,573	9	21,874	531,619
40-44	10,407	3,732	6,661	14	20,036	484,079
45-49	7,901	2,869	5,023	9	15,657	374,918
50-54	6,640	2,334	4,299	7	13,422	294,033
55-59	6,502	1,897	4,596	9	12,494	259,735
60-61	2,494	652	1,839	3	4,455	96,499
62-64	3,998	947	3,041	10	6,842	142,280
65-69	6,325	1,368	4,945	12	10,571	218,078
70-74	5,079	1,020	4,041	18	8,006	169,973
75-79	3,802	694	3,092	16	5,738	128,526
80-84	2,418	367	2,042	9	3,502	80,449
>85	1,696	292	1,401	3	2,482	57,244
Total	149,967	43,163	106,612	192	281,103	6,478,216

Table 1-3 continued
Age 2000 Census

Age	Bibb County	Unincorporated Bibb County	City of Macon	Payne City	Macon- Warner Robins SMA	Georgia
<5	11,434	3,838	7,583	13	22,942	595,150
5-9	11,666	4,059	7,590	17	25,028	615,584
10-14	11,394	4,268	7,114	12	25,111	607,759
15-17	6,386	2,457	3,923	6	14,448	350,741
18-19	4,872	1,332	3,536	4	10,289	245,536
20	2,433	630	1,802	1	5,032	125,148
21	2,100	586	1,513	1	4,469	117,767
22-24	6,093	1,951	4,134	8	12,574	349,281
25-29	10,943	3,901	7,028	14	22,123	641,750
30-34	10,358	4,134	6,211	13	22,294	657,506
35-39	11,553	4,791	6,746	16	26,286	698,735
40-44	11,704	4,972	6,717	15	25,834	654,773
45-49	10,833	4,479	6,348	6	22,658	573,017
50-54	9,586	3,985	5,594	7	20,093	506,975
55-59	7,197	3,059	4,129	9	15,075	375,651
60-61	2,337	963	1,371	3	5,106	122,259
62-64	3,378	1,325	2,052	1	7,304	163,546
65-69	5,264	1,823	3,436	5	4,524	236,634
70-74	4,960	1,508	3,447	5	15,457	199,061
75-79	4,243	1,184	3,048	11	7,419	157,569
80-84	2,837	684	2,148	5	4,774	104,154
>85	2,316	525	1,785	6	3,709	87,857
Total	153,887	56,454	97,255	178	322,549	8,186,453

Table 1-3 continued
Change between 1990 & 2000 Census

Age	Bibb County	Unincorporated Bibb County	City of Macon	Payne City	Macon- Warner Robins SMA	Georgia
<5	93	845	-755	3	1,200	99,615
5-9	723	869	-155	9	3,638	131,632
10-14	495	1,032	-543	6	4,280	141,145
15-17	-294	321	-617	2	1,813	69,539
18-19	-155	162	-316	-1	908	29,586
20	104	115	-8	-3	637	15,939
21	-112	68	-179	-1	310	14,420
22-24	-592	251	-843	0	20	39,203
25-29	-1,455	310	-1,761	-4	-2,340	51,798
30-34	-2,290	153	-2,448	5	-2,180	72,562
35-39	10	830	-827	7	4,412	167,116
40-44	1,297	1,240	56	1	5,798	170,694
45-49	2,932	1,610	1,325	-3	7,001	198,099
50-54	2,946	1,651	1,295	0	6,671	212,942
55-59	695	1,162	-467	0	2,581	115,916
60-61	-157	311	-468	0	651	25,760
62-64	-620	378	-989	-9	462	21,266
65-69	-1,061	455	-1,509	-7	-6,047	18,556
70-74	-119	488	-594	-13	7,451	29,088
75-79	441	490	-44	-5	1,681	29,043
80-84	419	317	106	-4	1,272	23,705
>85	620	233	384	3	1,227	30,613
Total	3,920	13,291	-9,357	-14	41,446	1,708,237

Table 1-4
Bibb County/City of Macon Compared to Urbanized Counties in the Atlanta Region
Ages 15-19 & 20-14 in 1990 to Ages 25-29 & 30-34 in 2000

Age	Bibb County	City of Macon	Bartow County	Cherokee County	Clayton County	Cobb County	Dekalb County	Douglas County	Fayette County	Forsyth County	Fulton County	Gwinnett County	Henry County	Paulding County	Georgia
1990 Census 15-19	11,707	8,392	4,200	6,114	14,051	29,284	37,841	5,551	4,915	3,132	46,403	23,243	4,092	3,050	497,152
2000 Census 25-29	10,943	7,028	5,889	9,797	21,864	54,921	65,523	6,708	3,505	6,583	78,488	49,192	8,617	7,318	641,750
2000 Minus- 1990	-764	-1,364	1,689	3,683	7,813	25,637	27,682	1,157	-1,410	3,451	32,085	25,949	4,525	4,268	144,598
Percent Change	-6.5%	-16.3%	40.2%	60.2%	55.6%	87.5%	73.2%	20.8%	-28.7%	110.2%	69.1%	111.6%	110.6%	139.9%	29.1%
1990 Census 20-24	11,226	8,479	4,370	5,934	15,593	34,696	47,209	5,272	3,277	3,099	56,317	25,270	4,028	3,247	522,634
2000 Census 30-34	10,358	6,211	6,389	12,822	21,747	55,362	64,350	7,683	5,006	9,940	73,046	55,496	10,827	8,840	657,506
2000 Minus- 1990	-868	-2,268	2,019	6,888	6,154	20,666	17,141	2,411	1,729	6,841	16,729	30,226	6,799	5,593	134,872
Percent Change	-7.7%	-26.7%	46.2%	116.1%	39.5%	59.6%	36.3%	45.7%	52.8%	220.7%	29.7%	119.6%	168.8%	172.3%	25.8%

Table 1-5
1990 Households & Income

Census Tracts	1990 Households	Persons per Occupied Housing Units	1989 Median Household Income	1989 Per Capita Income
Bibb County	56,155	2.58	\$25,813	\$13,017
Unincorporated Bibb County	14,837	N/A	N/A	N/A
City of Macon	41,227	2.5	\$21,038	\$11,502
Payne City	91	1.92	\$11,691	\$7,300
Macon-Warner Robins SMA	102,886	2.65	\$28,153	\$12,878
Similar Counties				
Chatham County	81,111	2.59	\$26,721	\$12,983
Dougherty County	34,163	2.72	\$23,587	\$10,888
Floyd County	30,528	2.55	\$25,536	\$12,121
Houston County	30,518	2.71	\$31,229	\$12,939
Lowndes County	26,311	2.72	\$23,295	\$10,919
Muscogee County	65,858	2.61	\$24,056	\$11,949
Richmond County	68,675	2.61	\$25,265	\$11,799
Atlanta Area Counties				
Bartow County	20,091	2.76	\$27,554	\$11,748
Cherokee County	31,309	2.86	\$39,052	\$14,849
Clayton County	65,523	2.75	\$33,472	\$13,577
Cobb County	171,288	2.60	\$41,297	\$19,166
DeKalb County	208,690	2.57	\$35,721	\$17,115
Douglas County	24,277	2.90	\$37,138	\$14,096
Fayette County	21,054	2.96	\$50,167	\$19,025
Forsyth County	15,938	2.75	\$36,642	\$15,763
Fulton County	257,140	2.44	\$29,978	\$18,452
Gwinnett County	126,971	2.77	\$43,518	\$17,881
Henry County	20,012	2.91	\$37,550	\$14,167
Paulding County	14,326	2.88	\$33,085	\$12,322
Georgia	2,366,575	2.66	\$29,021	\$13,631

Table 1-5 Continued
2000 Households & Income

Jurisdiction	2000 Total Households	Persons per Occupied Housing Units	1999 Median Household Income	1999 Per Capita Income
Bibb County	59,667	2.49	\$34,532	\$19,058
Unincorporated Bibb	21,139	N/A	N/A	N/A
City of Macon	38,444	2.44	\$27,405	\$16,082
Payne City	84	2.12	\$20,313	\$15,109
Macon-Warner Robins	121,505	2.58	\$38,565	\$18,840
Similar Counties				
Chatham County	89,865	2.49	\$37,752	\$21,152
Dougherty County	35,552	2.58	\$30,934	\$16,645
Floyd County	34,028	2.55	\$35,615	\$17,808
Houston County	40,911	2.65	\$43,638	\$19,515
Lowndes County	32,654	2.61	\$32,132	\$16,683
Muscogee County	69,819	2.54	\$34,798	\$18,262
Richmond County	73,920	2.55	\$33,086	\$17,088
Atlanta Area Counties				
Bartow County	27,176	2.76	\$43,660	\$18,989
Cherokee County	49,495	2.85	\$60,896	\$24,871
Clayton County	82,243	2.84	\$42,697	\$18,079
Cobb County	227,487	2.64	\$58,289	\$27,863
DeKalb County	249,339	2.62	\$49,117	\$23,968
Douglas County	32,822	2.78	\$50,108	\$21,172
Fayette County	31,524	2.88	\$71,227	\$29,464
Forsyth County	34,565	2.83	\$68,890	\$29,114
Fulton County	321,242	2.44	\$47,321	\$30,003
Gwinnett County	202,317	2.88	\$60,537	\$25,006
Henry County	41,373	2.87	\$57,309	\$22,945
Paulding County	28,089	2.89	\$52,161	\$19,974
Georgia	3,006,369	2.65	\$42,433	\$21,154

1999 Median Household Income By Census Tracts

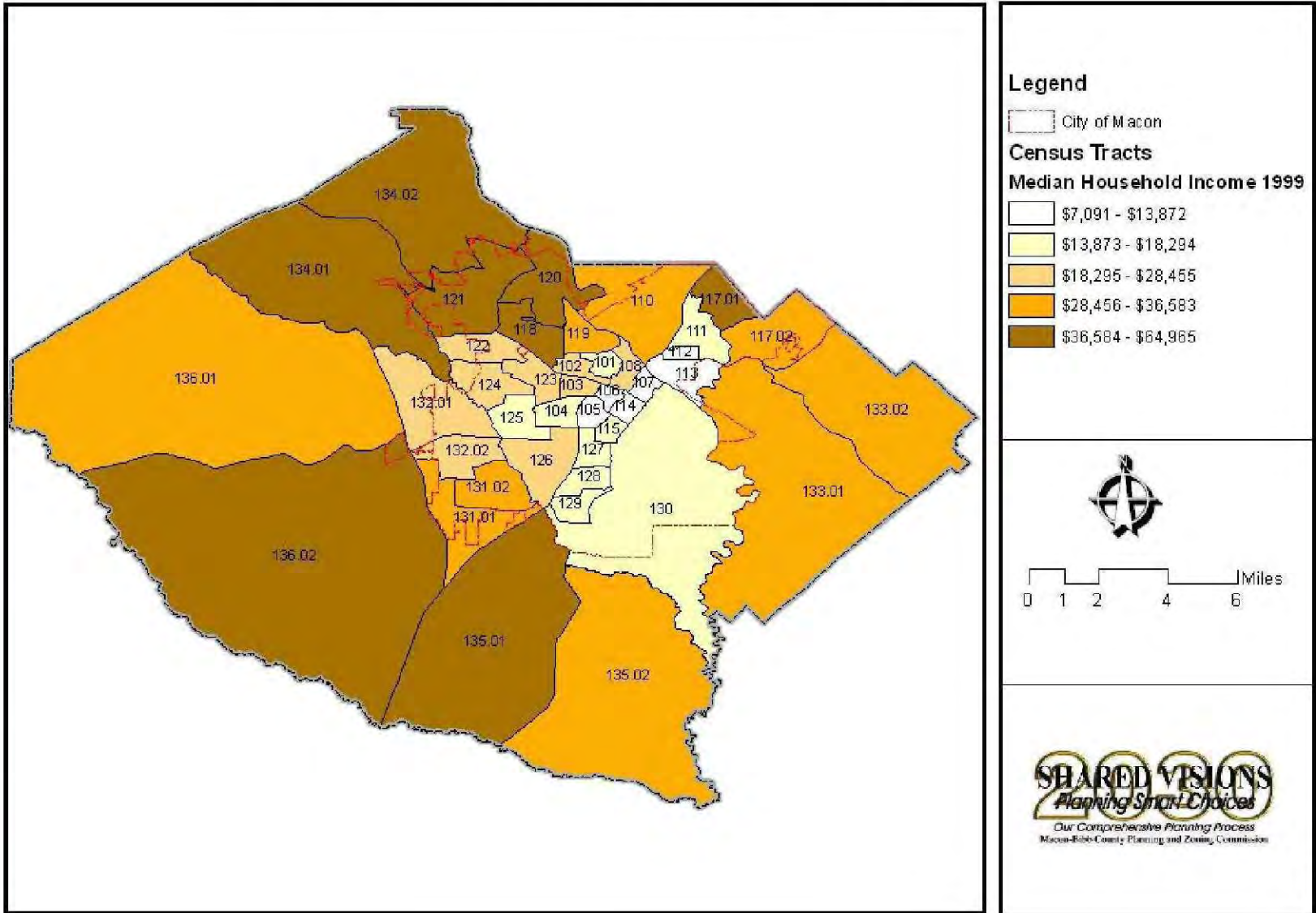


Figure 1-1

The per capita income and median household income is increasing for Bibb County. In 1989 the per capita income and median household income for the State of Georgia was 12% and 4% higher respectively than for Bibb County. In 1999 the per capita income and median household income for the State of Georgia was 22% and 11% higher respectively than for Bibb County. Per capita and median household income is increasing at a faster rate for the state of Georgia than it is for Bibb County. The incomes for the counties in the Atlanta area are increasing more rapidly than in the smaller urbanized and rural areas of the State. See Table 1-5.

Income distribution within Bibb County shows that the per capita incomes and median household incomes are lower in the older urban core in and around the downtown and are higher in the surrounding suburbs and rural areas. This is a common trend that is found in most communities. The distribution pattern in Bibb County is very similar for both median household income and per capita income for both 1989 and 1999. Figure 1-1 shows only the median household income distribution for 1999 since there is no significant difference in the relative distribution of median household income and per capita income between 1989 (1990 Census) and 1999 (2000 Census).

*** Insert under Table 1-2 page 6

The largest percentage increases in population were in the categories that consists mainly of Asians and Hispanics. While the increase in numbers is not that high, the percentage increase certainly is. In Jones County, this was an increase of 313 or an increase of 368.2%. In Bibb County, this was an increase of 3,920 or an increase of 262.1%. This is a trend that demographers have predicted will continue for quite some time. See Table 1-1.

In age categories between 21 to 34 from the 1990 Census to the 2000 Census, Bibb County lost 4,449 persons (a 13.2% decrease), the City of Macon lost 5,231 persons (a 21.7% decrease) while the unincorporated Bibb County gained 782 persons (a 7.8% increase) and the State of Georgia gained 177,983 persons (an 11.2% increase). See Table 1-3.

This is not only a percentage loss, but is a loss in actual numbers as well. In 1990 in the age category 15 to 19, there were 11,707 persons in Bibb County and 8,392 persons in the City of Macon. In 2000 in the age category 25 to 29, there were 10,943 persons (a 6.5% decrease) in Bibb County

and 7,028 persons (a 16.3% decrease) in the City of Macon. There is a serious out migration of the young adults. Many appear to be moving to the Atlanta area. See Table 1-4.

CHAPTER 2 – Economic Development

Introduction

In order to plan for future growth, an understanding of the local economy is important. This section will discuss the major employers, labor force, and other resources that comprise the local economy. In addition, a discussion of future economic trends will be presented. As a result of this information, better conclusions can be reached regarding the economic growth of the community.

Economic Base

An analysis of the employment sectors by industry is important in evaluating the economy of Macon/Bibb Co. This analysis will show if there is a specific sector of the economy on which the community is dependent. Table 2-1 below shows the employment levels by industry sector for Macon/Bibb Co. from 1980 - 2000. For this section, the 2000 data is used as the base year and represents the most current figures unless otherwise indicated.

**TABLE 2-1
EMPLOYMENT BY INDUSTRY FOR MACON/BIBB CO.**

INDUSTRY	1980	1990	2000
Agriculture, Forestry, Fishing, hunting & mining	977	929	501
Construction	3,839	3,518	3,698
Manufacturing	10,525	9,553	7,265
Wholesale Trade	3,055	2,850	2,338
Retail Trade	10,315	11,810	7,884
Transportation, warehousing, and utilities	4,709	4,708	3,072
Information	---	---	1,468
Finance, Insurance, & Real Estate	4,475	4,755	6,077
Professional, scientific, mng., admin., & waste mng. services	1,750	2,299	4,570
Educational, health, & social services	10,198	12,723	14,468
Arts, entertainment, rec., accommodation & food service	2,913	682	5,251
Other services	2,478	6,391	3,351
Public Administration	6,416	5,536	4,479
TOTAL	61,650	65,754	64,422

Source: Georgia Dept. of Community Affairs

According to the data in Table 2-1, the largest employment sector in 2000 was the education, health and social services industry which employed 14,468 workers or 22.5% of the total employment. The next largest employers were in the retail trade followed by the manufacturing sector. In terms of trends, the education, health and social services industry experienced the largest gain in employment with an increase of 4,270 jobs from 1980 thru 2000. However, there were significant decreases in the manufacturing and retail trade sectors over this time period.

In Table 2-2 below, employment by industry is shown for the state of Georgia and the entire country from 1990 thru 2000. For both the state and the nation in 2000, the largest industry in terms of employment was the education, health, & social services sector which was similar to the Macon/Bibb Co. economy. This industry also experienced a significant increase in employment from 1990 thru 2000 in both the state and nation which was also reflected in the employment data for Macon/Bibb County. Subsequently, the employment figures show a substantial decrease in the manufacturing and retail trade sectors for the state and nation which was also comparable to the local economy.

TABLE 2-2
EMPLOYMENT BY INDUSTRY FOR GEORGIA AND U.S.A. 1990-2000

Category	1990 GA	2000 GA	1990 USA	2000 USA
Agriculture, Forestry, Fishing, hunting & mining	82,537	53,201	3,838,795	2,426,053
Construction	214,359	304,710	7,214,763	8,801,507
Manufacturing	585,423	568,830	20,462,078	18,286,005
Wholesale Trade	156,838	148,026	5,071,026	4,666,757
Retail Trade	508,861	459,548	19,485,666	15,221,716
Transportation, warehousing, and utilities	263,419	231,304	8,205,062	6,740,102
Information	---	135,496	---	3,996,564
Finance, Insurance, & Real Estate	201,422	251,240	7,984,870	8,934,972
Prof.,scientific,mgm.,admin.,& waste mgm. services	151,096	362,414	9,246,158	12,061,865
Educational, health, & social services	461,307	675,593	19,316,187	25,843,029
Arts, entertainment., rec., accomm. & food services	31,911	274,437	1,636,460	10,210,295
Other services	266,053	181,829	7,682,060	6,320,632
Public Administration	167,050	193,128	5,538,077	6,212,015
TOTAL	3,090,276	3,839,756	115,681,202	129,721,512

Source: Georgia Dept. of Community Affairs & U.S. Census Bureau

Labor Force

In this section the characteristics of the local labor force are analyzed. In Table 2-3, the employment status of the labor force is shown from 1990 to 2000. The total labor force decreased from 1990 to 2000 even though the total population actually increased. The number of males in the labor force decreased significantly during the decade in the amount of 1,780 or 5% of the total. Subsequently, the number of females in the work force increased in the amount of 640 or 2% of the total. In 2000, the female work force comprised the majority (51%) of the total work force. Overall, the local economy remains strong. The unemployment rate was only 4.5% in 2000 which was close to the 1990 level shown in Table 2-3.

TABLE 2-3
EMPLOYMENT STATUS 1990-2000

CATEGORY	1990	2000
Total Population	114,367	117,052
In Labor Force	71,076	69,936
Not In Labor Force	43,291	47,116
Civilian Labor Force	70,687	69,676
In Armed Forces	389	260
Total Males	51,667	52,151
Males In Labor Force	36,197	34,417
Males Not In Labor Force	15,470	17,734
Male Civilian Labor Force	35,861	34,199
Males in Armed Forces	336	218
Total Females	62,700	64,901
Females In Labor Force	34,879	35,519
Females Not In Labor Force	27,821	29,382
Female Civilian Labor Force	34,826	35,477
Females in Armed Forces	53	42
Unemployment % (total)	4.3%	4.5%

Source: Georgia Dept. of Community Affairs

The local labor force is composed of a wide array of occupations. Table 2-4 on the following page shows the types of jobs for the area labor force and the number of employees in those jobs as well as the percentage. The two occupations with the most employees in Macon and Bibb County were in the health care/social services and government sector. The health care/social service area comprised 16% of the local occupations and the government sector constituted 13% of the total. The occupations with the least amount of employees were in the agriculture, fishing & forestry and the utilities sectors. Each of these occupations had less than 1% of the total employees in Macon-Bibb County.

TABLE 2-4
LOCAL OCCUPATIONS

OCCUPATION	# EMPLOYEES	% OF TOTAL
Professional, Technical services	2,422	3%
Management: co./enterprises	1,496	2%
Wholesale Trade	2,688	3%
Retail Trade	11,161	13%
Transportation & Warehousing	2,639	3%
Information	2,026	2%
Finance/Insurance	6,384	7%
Real Estate	1,436	2%
Administration & waste services	6,377	7%
Educational services	2,287	3%
Health care & social services	13,927	16%
Art, entertainment, & recreation	471	.5%
Accommodation/Food Service	7,220	8%
Other or Unclassified	2,350	3%
Agriculture, forestry & fishing	152	.2%
Government	11,332	13%
Construction	3,304	4%
Manufacturing	8,490	10%
Utilities	269	.3%

Source: Georgia Dept. of Labor 2004

In terms of income, the annual per capita income on the local level for 2000 was \$19,058 as shown in Table 2-5. The per capita income more than tripled in the time period from 1980 to 2000. In Macon-Bibb County, there are various categories of personal income that exist. Table 2-6 presents the total amount for each personal income category as well as the percentage amount for households. The percentage amount of salary income for households remained close for the time period from 1990 thru 2000.

**TABLE 2-5
LOCAL PER CAPITA INCOME**

CATEGORY	1980	1990	2000
Per Capita Income	6,095	13,017	19,058

Source Georgia Dept. of Community Affairs

**TABLE 2-6
PERSONAL INCOME BY TYPE**

TYPE OF INCOME	1990	%	2000	%
Total salary income for households	\$ 1,420,467,364	74%	\$ 2,120,905,100	73%
Total other types of income for households	\$ 24,513,479	1%	\$63,405,900	2%
Total self employment income for households	\$117,733,762	6%	\$147,368,200	5%
Total interest, dividends, or net rental income	\$132,521,318	7%	\$169,127,700	6%
Total social security income for households	\$107,643,863	6%	\$162,770,500	6%
Total public assistance income for households	\$22,206,244	1%	\$26,242,000	1%
Total retirement income for households	\$102,396,567	5%	\$201,406,400	7%
TOTAL	\$1,927,482,597	100%	\$2,891,225,800	100%

Source: Georgia Dept. of Community Affairs

The commuting patterns of a municipality are important in regards to job availability, land use patterns, traffic capacity, and overall growth. Macon-Bibb County is the employment center for the Middle Georgia region. The majority of the workforce in the county also resides in the county. This is important for a community because of the economic impact that members of the workforce have in terms of money that is kept in the local area.

Table 2-7 contains the statistics on commuting patterns in Bibb County. In the year 2000, 86% of the local workforce lived in the county as shown below. The amount of workers that reside in the county actually decreased during the time period from 1990 to 2000 as a result of the migration of the labor force to areas outside of the county.

**TABLE 2-7
COMMUTING PATTERNS**

EMPLOYEES	1990	2000
Work in County of Residence	56,169	54,125
Percent	87%	86%
Work Outside County of Residence	8,725	9,104
Percent	13%	14%
Total	64,894	63,229

Source: Georgia Dept. of Community Affairs

Economic Resources

In order to promote economic development, it is important to know what organizations exist to aid local industry. The following is a list of organizations that are involved in promoting economic development in Macon & Bibb County.

1. Macon Economic Development Commission
2. Macon-Bibb Co. Urban Development Authority
3. Greater Macon Chamber of Commerce
4. NewTown Macon
5. Macon-Bibb Co. Industrial Authority
6. City of Macon Economic & Community Development Dept.
7. Middle Georgia Regional Development Center
8. Macon-Bibb Economic Opportunity Council

Some of the above organizations are centrally located at the Greater Macon Chamber of Commerce office located adjacent to the Macon Coliseum. In addition, the Chamber of Commerce sponsors a number of committees and programs that promote economic development in the area. Macon NOW is a five year economic development program created by the Greater Macon Chamber of Commerce last year. The initiatives of the Macon NOW

program are: 1) Existing business retention and expansion 2) New business development 3) Develop an awareness campaign. This program will address the needs of existing businesses and help bring quality jobs and capital investment to the region. As a result of Macon NOW, there will be better coordination between local economic development organizations. One of the organizations involved in promoting economic development is a public-private partnership. NewTown Macon was created in 1997 and is a privately organized Community Development Corporation. This organization is involved with downtown revitalization and has developed an urban design plan and economic development strategy.

There are programs in existence that are offered by the various organizations to promote economic development. These programs are listed below.

1. Tax Credits – There are numerous tax credits available for companies that exist. These tax credits exist for such areas as new jobs, investments, and research and development.
2. Special Tax Schedules – This is a special discount on a company's new real and personal property tax.
3. Financing – Various financing alternatives exist for businesses such as Industrial Revenue Bonds, SBA programs, and the Revolving Loan Fund.
4. Business/Industry Incubators – The business incubator is a facility designed to assist businesses to become profitable during their initial start up phase.
5. Discounted Land Costs – Sites that exist in Industrial Parks can be acquired at a discount.
6. Infrastructure Assistance – Aid in developing sites (i.e. grading, roads, etc.) is available at a reduced cost.

Macon and Bibb County have several institutions that offer an opportunity for higher education. The major institutions are Mercer University, Wesleyan College, and Macon State College. Currently, 77.2 % of the residents in Bibb Co. who are 25 years old and over have a high school degree or higher. In addition, 21.3% who are 25 years old and over have a bachelors degree or higher.

In addition, there are education and training tools available for industry in the community. Employees have access to training programs for new and expanding industries through the state of Georgia. This program is called Quick Start and it provides job specific training to client companies at no cost. This service is an important incentive for the recruitment of new jobs into the state. Also there is education available for workers through the Intellectual Capital Partnership Program (ICPP). This is a program involving local colleges in order to meet the human resource needs of businesses. This program provides training for employees in specialized areas to satisfy workforce requirements. On the local level, the Mayor's Office of Workforce Development provides job training and education to adults, dislocated workers, and youths. The goal of this organization is to ensure that employers

have the skilled workers that are needed and to enable individuals to achieve their highest potential.

Economic Trends

By looking at local employment projections, an understanding of future economic trends can be developed. Table 2-8 contains future employment projections by industry type. According to these projections, there are several industries that will experience considerable growth by the year 2030. The industry with the most significant increase in employment in 2030 will be in the professional, scientific, management, etc. sector of the economy with an estimated 93% increase in employment. It is also projected that there will be considerable increases in employment in the arts, entertainment, recreation, etc. sector and the education/health services industry by the year 2030 in Macon-Bibb County. However, there will be a significant decrease in employment in the manufacturing and retail trade areas.

**TABLE 2-8
INDUSTRY EMPLOYMENT PROJECTIONS**

Industry	2000	2010	2020	2030
Agriculture, Forestry, Fishing, hunting & mining	501	263	25	0
Construction	3,698	3,628	3,557	3,487
Manufacturing	7,265	5,635	4,005	2,375
Wholesale Trade	2,338	1,980	1,621	1,263
Retail Trade	7,884	6,669	5,453	4,238
Transportation, warehousing, and utilities	3,072	2,254	1,435	617
Information	1468	NA	NA	NA
Finance, Insurance, & Real Estate	6,077	6,878	7,679	8,480
Prof., scientific, mgm., admin., & waste mgm. services	4,570	5,980	7,390	8,800
Educational, health, & social services	14,468	16,603	18,738	20,873
Arts, entertainment, rec., accomm. & food services	5,251	6,420	7,589	8,758
Other services	3,351	3,788	4,224	4,661
Public Administration	4,479	3,511	2,542	1,574
TOTAL	64,422	65,808	67,194	68,580

Source: Georgia Dept. of Community Affairs

In terms of major employers, the ten largest employers in Macon-Bibb Co. are as follows:

1. Medical Center of Central Georgia – 4,631 employees
2. Bibb County Board of Education – 3,700 employees
3. Government Employees Insurance Company (GEICO) – 3,300 employees
4. City of Macon – 1,635 employees
5. Columbia Coliseum Medical Centers – 1,500 employees
6. Mercer University – 1,290 employees
7. Wal Mart Super Store – 832 employees
8. Ikon Office Solutions – 815 employees
9. United State Postal Service – 807 employees
10. Boeing Company – 799 employees

Source: Greater Macon Chamber of Commerce, 2002

In regards to new developments, Macon will be the location for a regional distribution and retail center for Bass Pro shops that will open in 2006. This development will be located at I-75 & Bass Rd. and will serve as a catalyst for additional retail development in this area. Subsequently, this could potentially result in the overall creation of up to 1,000 new jobs for Macon and Bibb County.

Unfortunately, in the past decade Macon-Bibb County has lost a significant amount of jobs due to closings at YKK, GE Capital, and Keebler. Therefore, the Chamber of Commerce in conjunction with the Industrial Development Authority and the Macon Economic Development Commission has started an existing business and industry program. This program will involve direct contact with existing companies that will result in increased business retention and expansion. Through increased involvement with companies, barriers to success can be identified and more new companies will locate to Macon-Bibb County. The Chamber of Commerce has a goal to conduct 200 existing business visits annually. In addition, there are plans to conduct an existing business and industry needs assessment that will aid in developing a support program. Also, there are plans to develop new business in the area also. The Chamber of Commerce has a goal to create 4,000 new primary jobs over the next five years.

Overall, Macon and Bibb County has a diversified economy that can support a wide variety of industry. A leading consulting firm has identified Macon as an especially ideal location for the following types of industry: 1) Aerospace 2) Distribution 3) High end back office. With a concentrated effort, the local economy can continue to grow.

CHAPTER 3

Housing

Introduction

The Housing element provides local governments the opportunity to inventory the existing housing stock and its condition, occupancy and affordability characteristics. This element also helps to assess its adequacy and suitability for serving current and future population and economic development needs. Once an inventory is completed a community may begin to articulate community housing goals; and to formulate an associated implementation program for adequate provision of housing for all sectors of the population.

The Population element of the Comprehensive Plan tends to have the greatest impact on the conclusions that will be reached on the needs of housing in Bibb County as a whole in the years to come. While the population changes of the past and future are important indicators of the future needs of housing; equal attention must be given to issues such as existing housing conditions, age and cost.

This element will explore these issues as they relate to the housing stocks of the City of Macon, Payne City, unincorporated Bibb County and Bibb County as a whole. Included within this element will be conclusions on where the housing stock currently is expected to be in the future and recommendations will be made for future actions to help facilitate appropriate housing growth.

Inventory of Existing Conditions

This section will provide a description of the existing, and historical trends in housing along with providing information on future housing demand. Trend data will be based upon figures obtained from the 1980, 1990, and 2000 U.S. Census and data provided by the Georgia Department of Community Affairs (DCA). In some cases housing data will be supplemented with data from complimentary studies.

Housing Characteristics

Housing Stock Description

Bibb County. Table 3-1 provides an analysis of the housing units in all of Bibb County from 1980 to 2005. Throughout the 25 year timeframe, single-family conventionally

Table 3-1
Total Housing Trends for Bibb County 1980 to 2005

Type of Structure	1980	1990	2000	2005*	1980 to 2005 % Change
Single Family Detached	38,170	39,794	43,737	45,129	18%
Single Family Attached	2,027	1,539	1,991	1,982	-2
Duplex	4,345	5,105	4,574	4,631	7%
Multi-Family Units	9760	12,228	14,669	15,896	63%
Mobile Homes	1,266	2,111	2,205	2,440	93%
Other**	0	685	18	23	-97%***
Total Housing Units	55,568	61,462	67,194	70,101	26%

Sources:

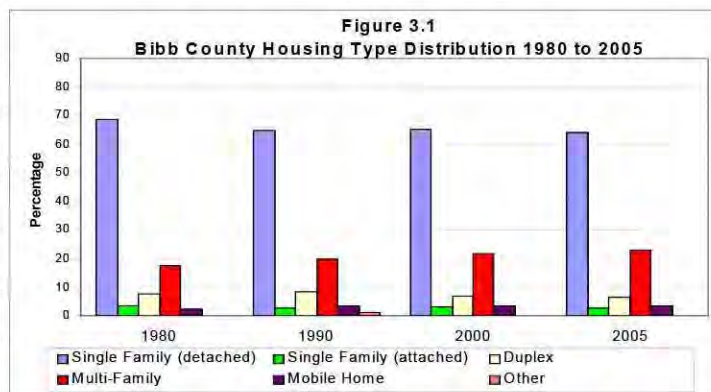
Characteristics, 1980 U.S. Census Bureau
 tion and Housing, Summary Population and Housing Characteristics, Georgia
 2000 Summary File 3 (SF 3)
 nity Affairs. Original source was the Bureau of the Census (SF3)

**Other is defined as seasonal or migrant housing units

***This figure is derived from 1990 to 2005 data.

General Housing
 1990 U.S. Census of Popula-
 2000 U.S. Census of Population, Census
 *Estimate provided by the Georgia Department of Commu-
 Notes:

built detached housing units remained to be the dominant housing type in Bibb County. Figure 3-1 indicates that in 1980 this housing type made up approximately 70 % of all housing types in the county. However, from 1980 to 2005 there has been a slight decline in this type of housing. Attached single-family housing remained to make up a small percentage of the total housing stock in the county along with duplexes and mobile homes. During this time frame multi-family housing units have increased. In 1980 multi-family family housing units made up approximately 18 percent of all housing types. From 1980 to 2005 the percentage that multi-family housing units made up in the county increased by 5 percent to 23 percent.



City of Macon. The composition of housing in the City of Macon is very similar to the housing composition discussed in relation to Bibb County as a whole. This is due to the fact that the City of Macon contains about 63 percent of the housing stock in the county.

Table 3-2
City of Macon Housing Trends 1980 to 2005

Type of Structure	1980	1990	2000	2005*	1980 to 2005 % Change
Single Family Detached	28,805	27,833	27,567	27,258	-5%
Single Family Attached	1,912	1,133	1,432	1,312	-31
Duplex*	4,219	4,969	4,336	4,365	3%
Multi-Family Units (Apts)	9,230	10,653	10,788	11,177	21%
Mobile Homes	218	329	334	363	67%
Other**	0	582	18	23	-96%***
Total Housing Units	44,384	45,499	44,475	44,498	.25%

Sources:

General Housing Characteristics, 1980 U.S. Census Bureau

1990 U.S. Census of Population and Housing, Summary Population and Housing Characteristics, Georgia

2000 U.S. Census of Population, Census 2000 Summary File 3 (SF 3)

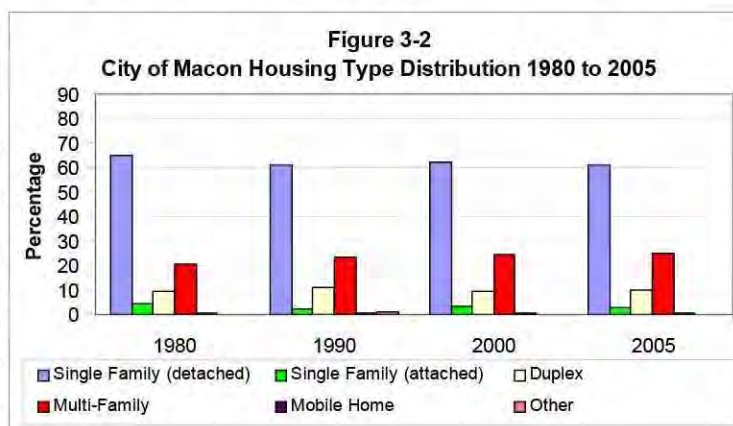
*Estimate provided by the Georgia Department of Community Affairs. Original source was the Bureau of the Census (SF3)

Notes:

**Other is defined as seasonal or migrant housing units

***This figure is derived from 1990 to 2005 data.

Figure 3-2 indicates that single family detached housing has historically been the dominant form of housing in the City of Macon since 1980 and is expected to continue to be in the future. Single family detached housing made up approximately 65% of the housing stock in the City of Macon in 1980. This percentage decreased slightly to 61% in 2005. Multi-family developments have increased from about 21% in 1980 to about 25% in 2005. Macon has the highest percentage of multi-family developments in the county. This is not surprising due to Macon being urban in character. The other types of housing units have remained fairly constant during this time frame.



Payne City. A brief history of this city is appropriate in order to better understand its uniqueness in Bibb County in terms of its size and population. Figure 3-3 on the following page displays Payne City in relation

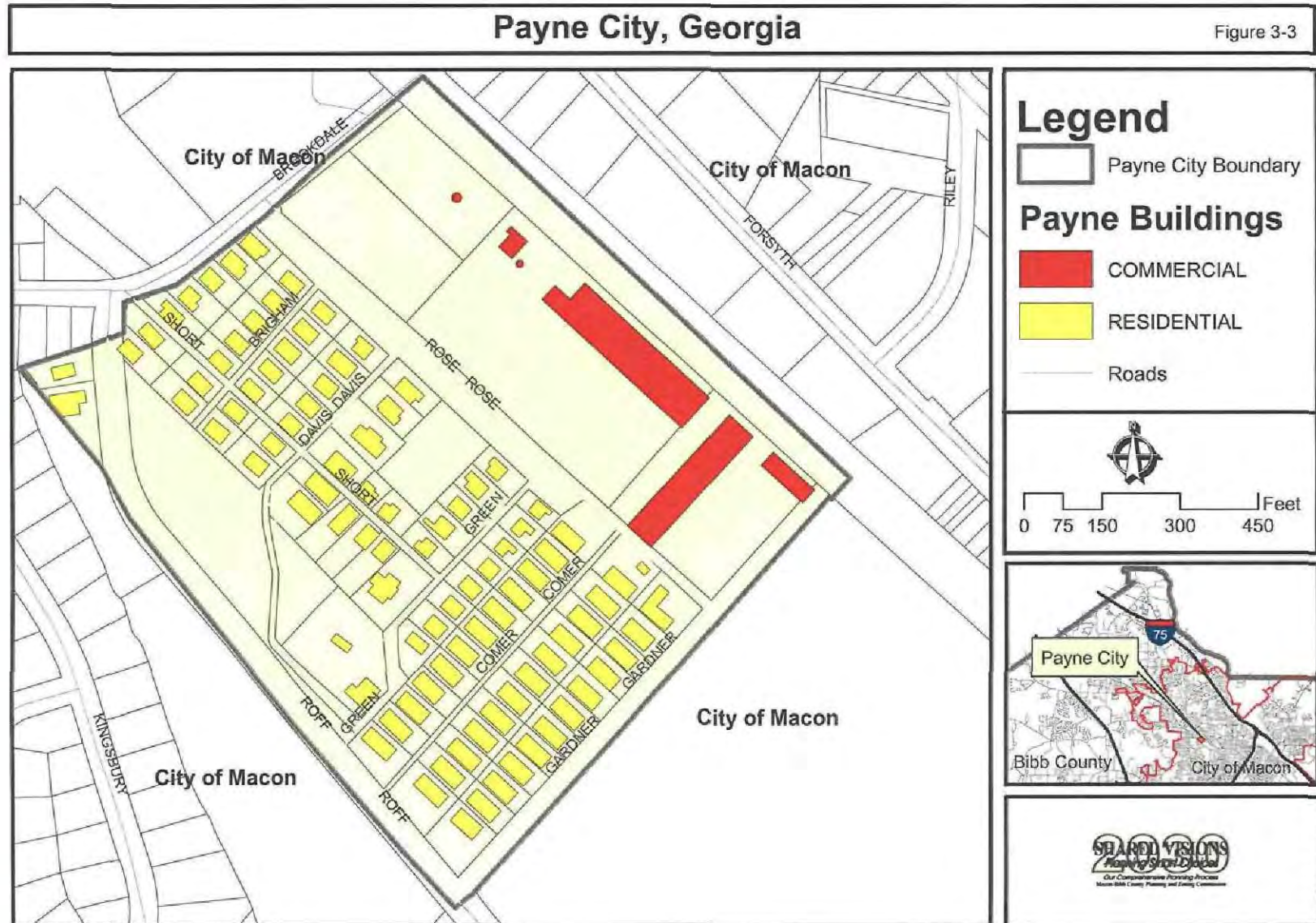


Figure 3-3

to the City of Macon and Bibb County. The following historical abstract is taken from, “Payne City, 1919 – 1989: The First 70 Years¹”.

The area of Bibb County known as Payne City was founded by owners and employees of the Payne Cotton Mill, which was a subsidiary of the Bibb Manufacturing Company of Macon, Georgia. Families working at the textile mill built houses near the plant. In 1919 Payne City was officially incorporated as a city. Over the years as the textile industry in Bibb County began to wane; there were unsuccessful attempts by the City of Macon to incorporate this roughly 27 acre city in 1950, 1958, and again in 1968. Today the City of Macon still completely surrounds this sovereign City of Georgia.

There is a limited amount of published demographic data available on Payne City because of its small size in population and land area. Due to this Payne City will be grouped into data representing unincorporated Bibb County unless otherwise stated. However, basic housing count data from the 1990 and 2000 censuses was available. Table 3-3 indicates that single family structures are the dominant housing types in the city. The table also indicates that there has been a decrease in the amount of housing, particularly in the number of duplexes. Overall, the amount of housing has decreased 9% from 1990 to 2000.

Table 3-3
Payne City Housing Trends 1990 to 2000

	1990	2000	1990 to 2000 % Change
Type of Structure			
Single Family Detached Including Mobile Homes	78	80	3%
Duplex	14	7	-50%
Multi-Family Units (Apts)	5	6	20%
Other*	5	0	-
Total Housing Units	102	93	-9%

Sources:

1990 U.S. Census of Population and Housing, Summary Population and Housing Characteristics, Georgia

2000 U.S. Census of Population, Census 2000 Summary File 3 (SF 3)

Notes:

*Other is defined as seasonal or migrant housing units

¹Pollard, Jack: Payne City, 1919-1989, The First Seventy Years,

Unincorporated Bibb County. Unincorporated Bibb County includes all the areas of the county outside the City of Macon. The data presented in this section also excludes Payne City. Much of the unincorporated areas are suburban to rural in character, therefore;

Table 3-4
Housing Trends for Unincorporated Bibb County 1980 to 2005

Type of Structure	1980	1990	2000	2005*	1980 to 2005 % Change
Single Family Detached	9,365	11,961	16,170	17,871	91%
Single Family Attached	115	406	559	670	483%
Duplex	126	136	238	266	111%
Multi-Family Units (Apts)	530	1,575	3,881	4,718	790%
Mobile Homes	1,048	1,782	1,871	2,077	98%
Other**	0	98	0	0	-
Total Housing Units	11,184	15,963	22,719	25,602	129%

Sources:

General Housing Characteristics, 1980 U.S. Census Bureau

1990 U.S. Census of Population and Housing, Summary Population and Housing Characteristics, Georgia

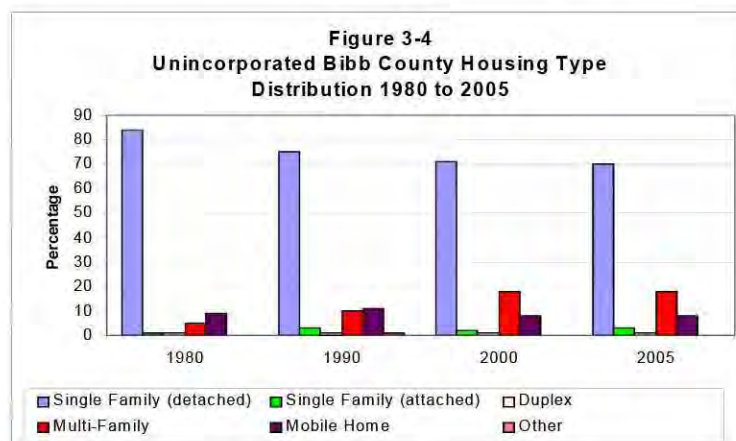
2000 U.S. Census of Population, Census 2000 Summary File 3 (SF 3)

*Estimate provided by the Georgia Department of Community Affairs. Original source was the Bureau of the Census (SF3)

Notes:

**Other is defined as seasonal or migrant housing units

It is not surprising that the predominant housing type would be single family detached. The unincorporated area of the county has the highest percentage of single family detached housing. In 1980 single family detached comprised approximately 84 percent of all housing in the unincorporated area of the county. Over the years the percentage of single family detached housing has been on the decline. In 2005 single family detached housing was estimated to make up 70 percent of all housing types. This is still quite a significant share of the total housing stock but a reduction none the less. Multifamily developments increased from 5% in 1980 to 15% in 2005. The unincorporated area not surprisingly has the highest percentage of mobile homes.



Housing Conditions and Age

Housing Conditions. The following will focus on the conditions of the housing stock currently occupied by residents of Bibb County. For comparison, the conditions of the housing stocks for the Macon MSA² and the State of Georgia are provided. The factors that will be examined to assist in defining housing conditions will be: (1) provision or lack of plumbing facilities and (2) provision or lack of kitchen facilities. These two factors are very basic and minimum standards to judge the condition of the housing stock in Bibb County.

Table 3-5 below displays the percentage of housing units that lack plumbing and kitchen facilities. According to the table the housing stock of Bibb County and its municipalities appear to be in line with regional and state levels, in regards to having complete plumbing and kitchen facilities.

Table 3-5						
Housing Conditions By Presence of Plumbing and Kitchen Facilities						
	Bibb County	City of Macon	Payne City	Unincorporated Bibb County	Macon MSA	State of Georgia
Plumbing Facilities						
Total Housing Units	67,194	44,475	93	22,626	134,359	3,281,737
Complete Plumbing Facilities	66,486	43,826	93	22,567	133,057	3,252,197
/Percentage	99%	99%	100%	99%	99%	99%
Lacking Complete Plumbing Facilities	708	649	0	59	1,302	29,540
/Percentage	1%	1%		1%	1%	1%
Kitchen Facilities						
Total Housing Units	67,194	44,475	93	22,626	134,359	3,281,737
Complete Kitchen Facilities	66,237	43,567	93	22,577	132,768	3,250,020
/Percentage	98%	98%	100%	99%	98%	99%
Lacking Complete Kitchen Facilities	957	908	0	49	1,591	31,717
/Percentage	2%	2%		1%	2%	1%
Source: 2000 U.S. Census, Summary File (SF 3)						

²The Macon Metropolitan Statistical Area consists of Bibb, Houston, Peach, Twiggs, and Jones counties.

Tenure. This section will examine the tenure relationship of housing units in Bibb County. Tenure data on the regional and state levels will be provided to offer a relative comparison with Bibb County. In general tenure is defined as the condition of a housing unit in terms of the status of it being owned or rented by the primary occupant(s).

Table 3-6
Ownership/ Renter Ratios of Occupied Housing Units

Owner Occupied						
	1980	% Owner	1990	% Owner	2000	% Owner
Bibb County	31,131	59	32,442	58	35,086	59
City of Macon	22,381	53	20,441	50	19,277	50
Payne City	n/a	n/a	62	61	47	55
Unincorporated Bibb	8,750	83	11,939	79	15,762	75
Macon MSA	54,979	64	64,598	63	79,479	65
State of Georgia	1,216,459	65	1,536,829	65	2,029,293	67
Renter Occupied						
	1980	% Renter	1990	% Renter	2000	% Renter
Bibb County	21,449	41	23,865	42	24,581	41
City of Macon	19,664	47	20,730	50	19,336	50
Payne City	n/a	n/a	40	39	39	45
Unincorporated Bibb	1,785	17	3,095	21	5,206	25
Macon MSA	31,192	36	38,584	37	42,026	35
State of Georgia	655,193	35	829,786	35	977,076	33

Sources: General Housing Characteristics, 1980 U.S. Census Bureau
1990 U.S. Census of Population and Housing, Summary Population and Housing Characteristics, Georgia
2000 U.S. Census of Population, Census 2000 Summary File 3 (SF 3)

Bibb County as whole has historically had a lower percentage of homeowners than the region and the state. During that same time period the City of Macon decreased in the percentage of home owners from 53% in 1980 to 50% in 2000. Unincorporated Bibb County experienced a more drastic decrease in the percentage of home owners during this time period than the City of Macon, the region and the state. In 1980 unincorporated Bibb County had an 83% homeownership rate; however, this rate decreased by 8% to 75% in 2000. Figure 3-5 illustrates home ownership percentages by 2000 U.S. Census Tracts.

Bibb County Home Ownership By Census Tracts

Figure 3-5

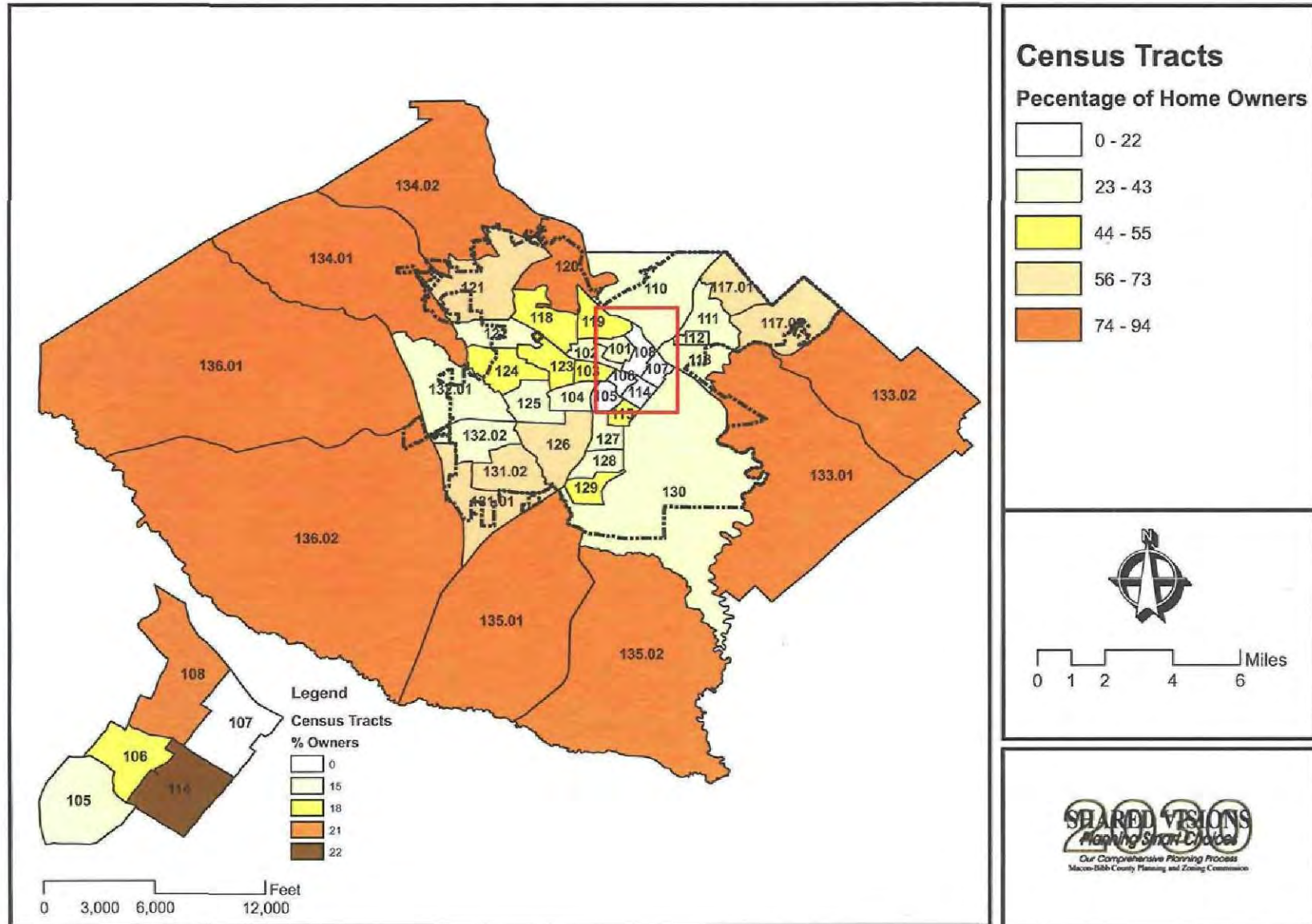


Figure 3-5

The housing unit analysis section gives some explanation to the trends in home ownership exhibited by the City of Macon and unincorporated Bibb County. The historic housing distribution percentages of unincorporated Bibb County indicated that there has been a steady increase in multi-family housing for the past 20 years. This type of housing is usually renter oriented. During this same time frame, the distribution percentages remained relatively stagnant for the City of Macon. It is most likely that there has been an increase in the conversion of owner occupied single family housing units to renter units. This would help to explain the low percentages of owners in many census tracts within Macon.

Vacancy Rates. According to the U.S. Census, a housing unit is vacant if no one is living in it at the time of inventory, unless its occupants are only temporarily absent. New units not yet occupied are classified as vacant housing units if construction has reached a point where all exterior windows and doors are installed and final usable floors are in place.

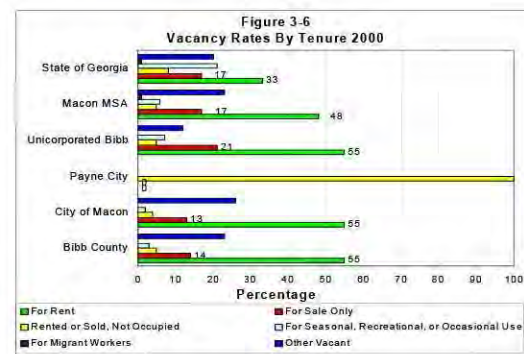
Table 3-7 displays vacancy rates for all municipalities in Bibb County and compares them with vacancy rates from the Macon MSA, and the State of Georgia. The overall vacancy rate for Bibb County stands at 11%, while the vacancy rates for Macon, Payne

Table 3-7 Vacancy Rates 2000						
	Bibb County	City of Macon	Payne City	Unincorp Bibb County	Macon MSA	State of Georgia
Housing Unit Total	67,194	44,475	93	22,626	134,359	3,281,737
Occupied	59,667	38,613	86	20,968	121,505	3,006,369
Vacant	7,527	5,862	7	1,658	12,854	275,368
Vacancy %	11	13	8	7	10	8

Source: 2000 U.S. Census, Summary File (SF 3)

City, and unincorporated Bibb County stand at 13%, 8%, and 7% respectively. The overall rate for Bibb County and the rate for the City of Macon are higher than the regional and state vacancy rates.

The relationship that tenure has on vacancy rates was examined. Figure 3-6 examines the Vacancy Rates by Tenure according to the 2000 U.S. Census. Housing units that are classified on a for rent basis were found to have the highest vacancy rates of all tenure categories. This was found to be the case on all geographical levels. This analysis also revealed that all vacant housing in Payne City is classified as being in a rent to own status.



It is not atypical that older central cities would have higher vacancy rates than that of the county, region or state. Higher vacancy rates in central cities such as Macon many times stem from the presence of older dilapidated vacant housing stock rather than new units that were not occupied at the time inventory. The age of the housing stock will be discussed in more detail in a later section. Figure 3-7 displays the vacancy rates for Bibb County by 2000 U.S. Census Tracts. The figure indicates that the majority of vacant housing is located in Census Tracts that are within the City of Macon. Pictured to the left is an abandoned structure in Census Tract 112. There are Census Tracts within the City of Macon where vacancy rates are as high as 33%. However, there have been various neighborhood redevelopment efforts in the City of Macon in recent years to infill many neighborhoods where dilapidated vacant housing was once very prevalent.



Abandoned Housing Complex

Housing Age. An additional way to assess the housing stock is to examine its age. Table 3-8 displays the various timeframes in which housing located in Bibb County and its

Table 3-8
Housing Age

	Bibb County	City of Macon	Payne City	Unincorporated Bibb County	Macon MSA	State of Georgia
Total	67,194	44,475	93	22,626	134,359	3,281,737
Built 1999 to March 2000	1,316	163	0	1,153	3,545	130,695
Built 1995 to 1998	4,381	868	0	3,513	13,745	413,557
Built 1990 to 1994	4,620	1,391	0	3,229	12,092	370,878
Built 1980 to 1989	10,385	4,373	4	6,008	24,657	721,174
Built 1970 to 1979	12,457	8,195	0	4,262	26,480	608,926
Built 1960 to 1969	11,453	9,473	2	1,978	21,533	416,047
Built 1950 to 1959	10,735	9,443	5	1,287	16,342	283,424
Built 1940 to 1949	5,644	4,982	15	647	7,841	144,064
Built 1939 or earlier	6,203	5,587	67	549	8,124	192,972

Source: 2000 U.S. Census, Summary File (SF 3)

Bibb County Vacancy Rates By Census Tracts

Figure 3-7

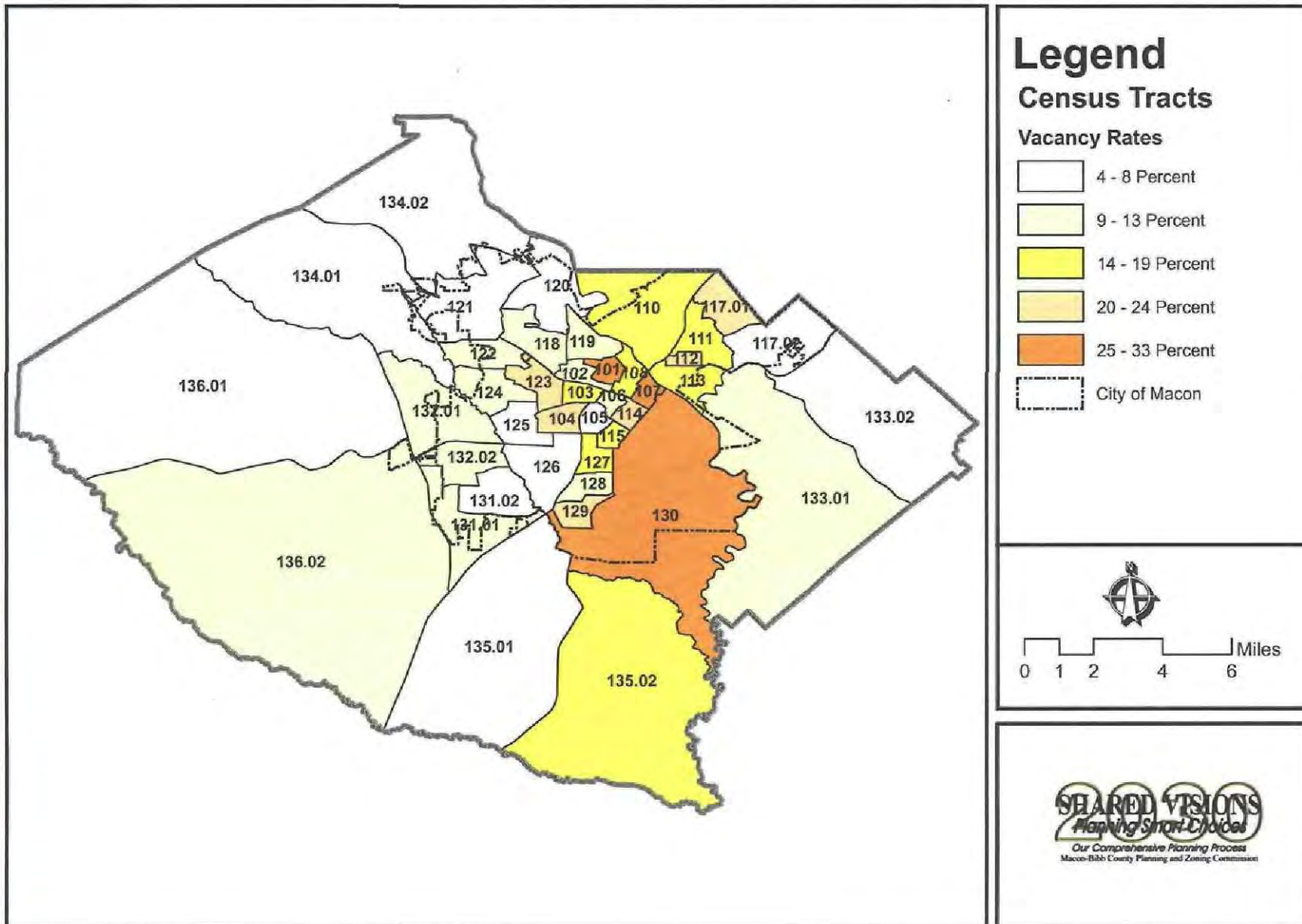
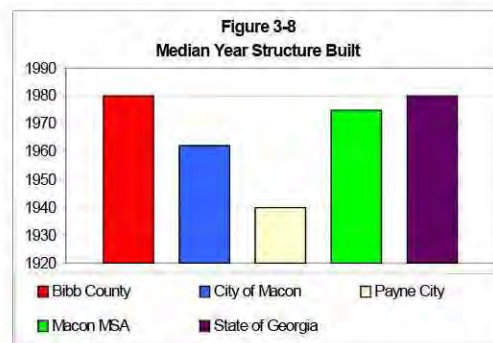


Figure 3-7

municipalities were built. For comparison purposes, the number of homes and the years in which they were built are provided for the region and the State of Georgia.

Not surprisingly much of the housing stocks in the City of Macon and Payne City are over 40 years old. Figure 3-8 illustrates that the median year that structures were built in the City of Macon was 1962 and for Payne City it was prior to 1939. These cities experienced a good portion if not the majority of their development prior to 1939 until about 1970. Unincorporated Bibb County started to experience increased development after 1970 therefore the housing stock is significantly newer. Figure 3-9 displays the age of housing units by census tract. The map visually indicates this pattern. Due to relatively new growth in unincorporated Bibb County, Bibb County as a whole compares well with the region and the state.



The median year that housing units were built on the MSA or regional level was 1975. It is highly likely that in the next census; the median year figure will rise due to the rapid new housing developments in the City of Warner Robins, Houston and Jones counties that were built after the 2000 Census. Another factor that will have a positive growth effect on new housing in the region is the successful completion of the Base Realignment and Closure (BRAC) process for the Robins Air Force Base. This will likely bring more people to the region and cause a greater demand for new housing.

Substandard housing is many times a function of housing age, upkeep, and various other factors. As aforementioned, the older housing stock is primarily found in the municipalities. Twenty percent of the housing stock in the City of Macon is considered substandard (City of Macon Consolidated Plan, 2000). This means that about 20% of the housing stock has two or more major defects of primary components such as the (roof, foundation, and etc.) or one critical defect of and two major defects of primary components or one that is deteriorated or dilapidated.

Age of Housing in Bibb County by Census Tract

Figure 3-9

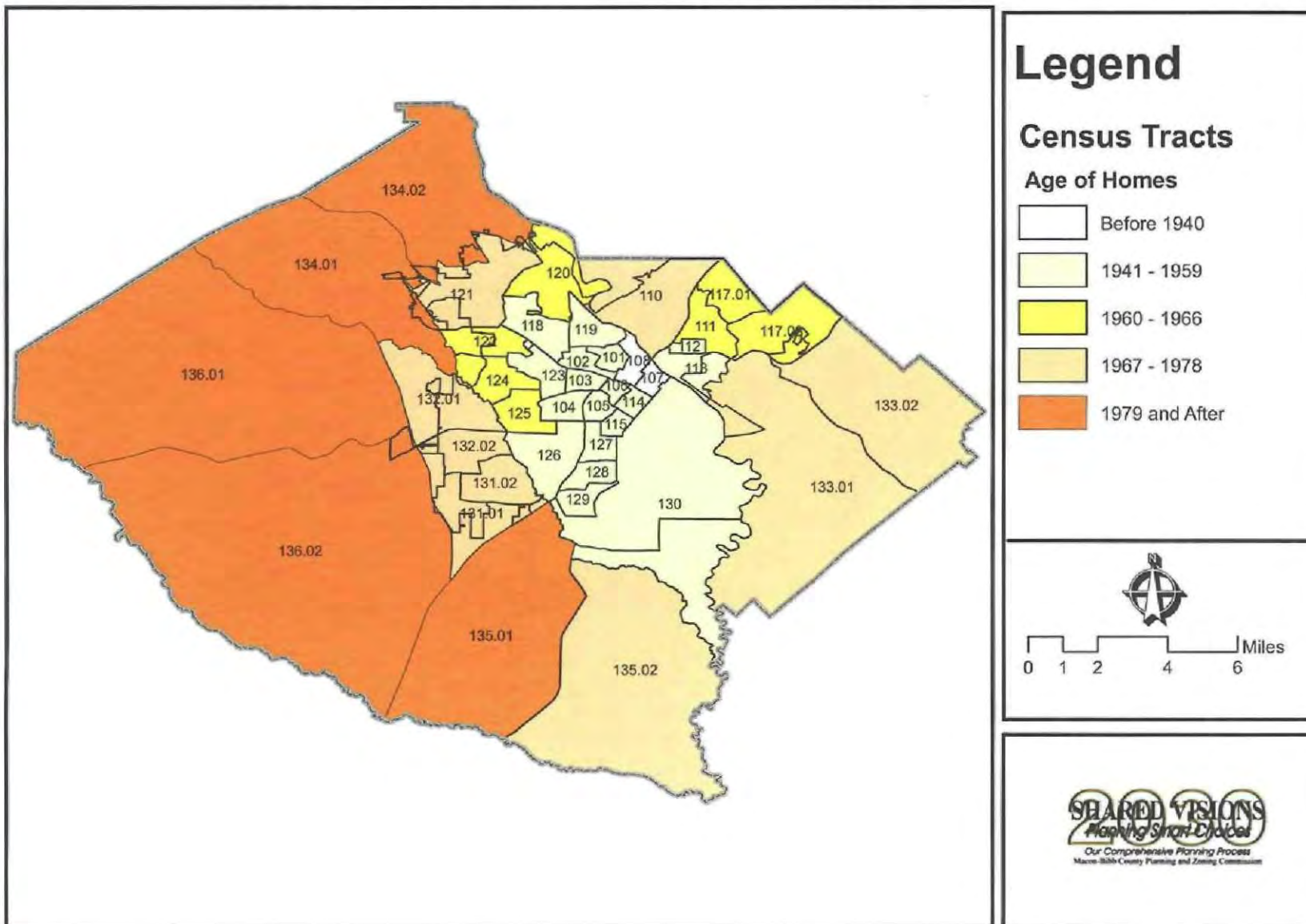


Figure 3-9

Cost of Housing. Table 3-9 displays what the median costs are for both owner and renter occupied housing units from 1980 to 2000. Bibb County as a whole maintained higher

Table 3-9
Housing Cost 1980 to 2000

	1980	1990	2000
Bibb County			
Median Property Value	\$32,300	\$57,300	\$82,700
Median Gross Rent	\$118	\$352	\$474
City of Macon			
Median Property Value	\$32,700	\$48,700	\$67,900
Median Gross Rent	\$163	\$336	\$444
Payne City			
Median Property Value	n/a	\$20,900	\$27,300
Median Gross Rent	n/a	\$350	\$438
Unincorporated Bibb			
Median Home Value	n/a	\$67,076	\$126,450
Median Gross Rent	n/a	\$455	\$562
Macon MSA			
Median Property Value	\$33,700	\$59,300	\$86,100
Median Gross Rent	\$163	\$364	\$492
State of Georgia			
Median Property Value	\$36,900	\$70,700	\$100,600
Median Gross Rent	\$153	\$433	\$613

Sources: Sources: General Housing Characteristics, 1980 U.S. Census Bureau
1990 U.S. Census of Population and Housing, Summary Population and Housing Characteristics, Georgia
2000 U.S. Census of Population, Census 2000 Summary File 3 (SF 3)

median property values than what was observed in the municipalities.

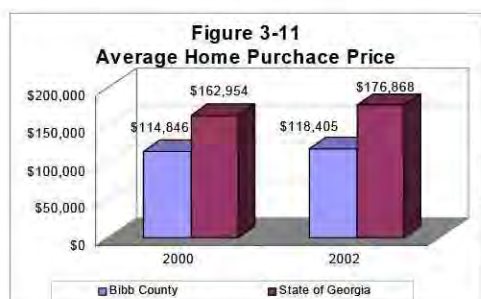
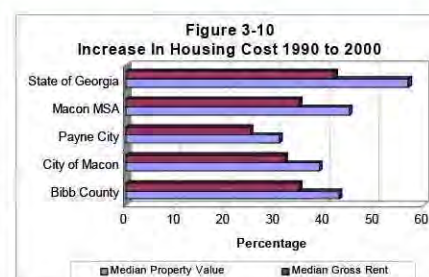
This is supported by higher housing costs in the unincorporated area.

Over the past 20 years, the median costs for shelter have been slightly

below regional and levels but significantly lower than State levels.

Also the percent increases in costs have lagged behind regional and

State levels.



The purchase price for a home

is a different measure than the median value. Many times the purchase prices for property are usually higher than actual values. The average home purchase price in 2000 was significantly lower than the State average. This continued to be the case in 2002.

Cost Burden. Although the overall housing costs in Bibb County appear to be affordable and are more affordable than the state average; true affordability is measured against a households ability pay for a mortgage or rental costs. This section will analyze the extent to which owner and renter households are cost burdened. A household is considered to be cost burdened if they are paying more than 30% of their income for housing. A person or household is considered to be severely cost burdened if they pay more than 50% of their income for housing. For comparison purposes, data is included for the region and State.

Table 3-10
Cost Burdened Comparison

Jurisdiction	Rental Units		Owner Occupied	
	30% to 49%	50% and Over	30% to 49%	50% and Over
Payne City	10%	3%	6%	15%
City of Macon	18%	21%	12%	9%
Bibb County	18%	19%	12%	8%
Macon MSA	17%	17%	12%	7%
Georgia	19%	16%	13%	7%

Source: 2000 U.S. Bureau of the Census file SF3

Table 3-10 indicates that the household cost burden in Bibb County and its municipalities is comparable to regional and state levels. There appears to be a slightly higher cost burden for the renters in the City of Macon. This may indicate a need for additional housing subsidies programs for certain renters. This analysis also reveals that renters generally tend to be at a higher cost burden than home owners. Suggested strategies to alleviate cost burden will be discussed in latter sections.

Community Characteristics and Housing

Population is the primary factor that has an effect on housing demand. However, it is very important to have an understanding on many specific characteristics of the population to adequately plan for the demand for housing. Once characteristics such as the age of the population, the available income of the population, and the special needs of the population are examined a more detailed needs analysis can be formulated.

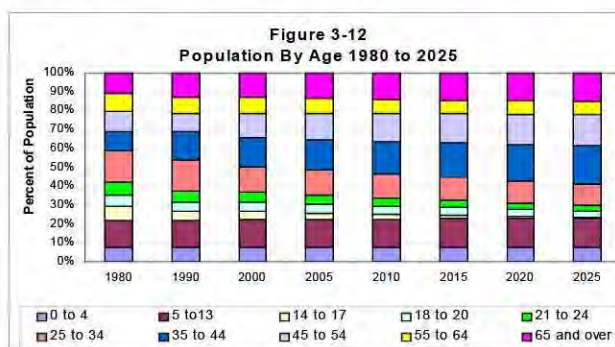
Age Distribution. The age of the population and how it is distributed has a bearing on the housing demand and the demand for specific types of housing. In general terms, the typical new first time home buyer will be in the 25 to 44 year age group. This age group generates the highest demand for housing. Table 3-11 displays the population by age distribution in Bibb County from 1980 to 2025.

Table 3-11
Bibb County Population by Age 1980 to 2025

	1980	1990	2000	2005	2010	2015	2020	2025
0-4 Years Old	11,100	11,341	11,434	11,518	11,601	11,685	11,768	11,852
5-13 Years Old	21,912	21,842	23,060	23,347	23,634	23,921	24,208	24,495
14-17 Years Old	11,037	6,680	6,386	5,223	4,061	2,898	1,735	572
18-20 Years Old	8,592	7,356	7,305	6,983	6,662	6,340	6,018	5,696
21-24 Years Old	11,055	8,897	8,193	7,478	6,762	6,047	5,331	4,616
25-34 Years Old	24,308	25,046	21,301	20,549	19,798	19,046	18,294	17,542
35-44 Years Old	16,033	21,950	23,257	25,063	26,869	28,675	30,481	32,287
45-54 Years Old	15,351	14,541	20,419	21,686	22,953	24,220	25,487	26,754
55-64 Years Old	14,720	12,994	12,912	12,460	12,008	11,556	11,104	10,652
65 and Over	16,148	19,320	19,620	20,488	21,356	22,224	23,092	23,960

Source: Georgia Department of Community Affairs.

Figure 3-12 provides a means by which to better analyze the age distribution of the population information provided in the table above. Figure 3-12 disaggregates the typical new home buyer age group into two sub groups: 1) 25 to 34 and 2) 35 to 44. The 25 to 34 subgroup has been in decline since 1980 and is expected to continue to do so. However, the 35 to 44 subgroup has shown a steady increase and is expected to continue to increase into the future. The 25 to 44 year age made up about



30% of the population in 2000. This percentage share of the population is expected to be maintained at least until 2025. Therefore it is expected that a steady demand for housing in the future will exist.

Available Income. When assessing where the future of housing will be, it is necessary to look at components of the local economy. The health and vitality of the economic sector has a direct impact on the demand for housing. Good wages can enable persons to purchase or lease housing.

Table 3-12 chronicles the growth of average wages in Bibb County over a three year period from 2001 to 2003.

Data on the regional and state level is also included for comparison purposes.

In 2001 the average wage in Bibb County was \$30,647. This average wage was about \$4,500 lower than the state average but slightly higher than the regional average. The average wage

	Table 3-12 Average Wages of Jobs 2001 to 2003			
	2001	2002	2003	Percent Change 2001 to 2003
Bibb County	\$30,647	\$31,843	\$31,662	3%
Macon MSA	\$30,109	\$31,307	\$31,259	4%
State of Georgia	\$35,136	\$35,734	\$36,626	4%

Source: U.S Department of Labor, Bureau of Labor Statistics

for Bibb County has grown by 3 percent since 2001. Bibb County continued to have a higher average wage than the region but grew at a slower growth rate. Bibb County's position as the central economic county in the region is expected to continue.

Table 3-13 supports the notion of Bibb County being a destination for employment. The total number of persons coming into the county to work has increased by 25% from 1990 to 2000. The significance this may have on the housing market is that it buttresses the notion that Bibb County is an economic attractant for the region and therefore presents potential opportunities for new housing to accommodate workers.

**Table 3-13
Bibb County Daytime Population**

	1990	2000	% Change
Daytime population inside county	166,143	175,922	6%
Number of people leaving the county during the day to work	8,370	8,761	5%
Number of people coming into the county during the day to work	24,546	30,796	25%
Total number of workers during the day	80,715	84,921	5%

Source: Georgia Department of Community Affairs. Original source was the Bureau of the Census (SF3)

Household Size. Household size can have an affect on the demand on housing in terms of type and sizes of housing units. The term household is used to describe all persons living within a housing unit. There are two types of household which are family and non-family households. Family households are generally composed of a married couple with or without children. A non-family household may be a cohabitation arrangement with persons that are not related. Family and non-family households may have different housing needs.

Table 3-14 displays data that reflects both family and non-family households combined in Bibb County. Data from the State of Georgia is included for comparison purposes.

Table 3-14
Household Size, 1990-2000

	Bibb County			State of Georgia		
	# of Households 2000	%	% Change 1990 - 2000	# of Households 2000	%	% Change 1990 - 2000
Total Households	59,667	100	6	3,006,369	100	27
1-person	16,834	28.2	13	710,523	23.6	32.1
2-person	18,982	31.8	10	963,782	32.1	29.8
3-person	10,548	17.7	3	550,858	18.3	20.3
4-person	7,895	13.2	4	460,639	15.3	20.2
5-person	3,378	5.7	-5	199,642	6.6	27.5
6-person	1,209	2	-7	72,511	2.4	34.6
7 or more	821	1.4	-5	48,414	1.6	38.8
Average Household Size	*2.67/2.49			*2.73/2.69		

Sources: 1990 U.S. Census of Population and Housing, Summary Population and Housing Characteristics, Georgia
2000 U.S. Census of Population, Census 2000 Summary File 3 (SF 3)

* Represents 1990 Average Household Size

The highest percentage of households in Bibb County is 2 person households. Two person households make up a little more than a third of all households. This is comparable to the State level. However, 1 person households experienced the fastest growth from 1990 to 2000 on the both the County and State levels.

Special Needs Housing

A comprehensive study of housing in Bibb County must include an analysis that takes into consideration individuals with special needs and circumstances. The availability of housing for residents that are elderly, homeless, victims of abuse and have serious health issues to name a few, should be inventoried to assess housing needs in this area. Also the availability of housing for persons of low to moderate incomes will be examined in this section.

Seniors and Disabled. According to the Age Distribution section, the population cohort that is over 65 increased from 11% of the total County population in 1980 to 13% in 2000. The estimate provided for the year 2005 still places the 65 years and over cohort at about 13% of the total population of the County. The historic data and estimates provided by the census offer some insight to the future needs as it relates to housing of this population.

It is important to realize that as seniors' ability to live independently diminishes, they often need to move to housing that provides support services. Table 3-15 lists the various establishments and organizations that provide housing and other services for elderly and/or disabled persons in Bibb County. Standard data on the aforementioned populations is usually unavailable. The information provided in the table is not an all exhaustive list due to the lack of response of various service providers.

Table 3-15
Support Service for Elderly and Disabled Persons in Bibb County

Organization	Category	Number of Units
Carlyle Place	Elderly	306
McAfee Towers	Elderly/Disabled	199
The Gables	Elderly	80
Autumn Manor	Elderly/Disabled	24
Dempsey Apartments	Elderly/Disabled	194
Magnolia Manor	Elderly	120
S.E. Methodist Home for Aging	Elderly	24
St. Paul Village	Elderly	48
Vineville Christian Towers	Elderly	196
Clisby Towers Apartments	Elderly	52
MARC Resources	Disabled	46

Sources: Macon-Bibb County Planning and Zoning Commission, 2005
City of Macon Consolidated Plan, 2000

The majority of the establishments and organizations listed in the table cater to the elderly. Most of the establishments are privately held but there are a few that are publicly held and operated. A range of congregate and group care housing options for seniors exists in the County offering various levels of support and services.

Acute Care. Acute care includes nursing homes, hospices and other special care facilities. Bibb County has ten privately owned nursing home facilities with over 1,300 beds available.

Congregate Assisted Living. Congregate assisted living units are generally rental or condominium apartments that do not have full kitchens. Residents have a meal plan and both health and daily living support services. Bibb County has over eight privately and semi privately owned facilities.

Retirement Communities. Retirement communities are generally apartments or traditional stick built housing structure communities specifically designed for seniors. They offer special care for seniors while also offering independence. There are three retirement communities in Bibb County.

Other Special Needs Persons in Bibb County

Homeless Persons

No standard tally exists concerning the number of homeless in a locality. Quantifying the homeless has not been an easy task. The Census Bureau has determined that it is impossible to accurately count homeless people who live outside traditional shelters (Georgia Department of Community Affairs, 2005). This population has generally not been specifically planned for in the past.

According to the U.S. Conference of Mayors 16th “Status Report on Hunger and Homelessness in American Cities” Some of the causes of homelessness were cited to be caused due to the lack of affordable housing, substance abuse, mental illness, domestic violence, poverty, low paying jobs, and changes in public assistance. The U.S. Conference of Mayors also stated that nearly every city reported that the lack of affordable housing as the primary cause of homelessness.

In Bibb County there are various organizations that provide temporary housing or shelter for homeless persons. One of the largest providers of shelter for homeless persons is the Salvation Army. In addition, there are many religious organizations that provide shelter and outreach services to homeless in the Bibb County.

Victims of Abuse

Domestic violence is a very common form of abuse. Domestic violence survivors can have trouble finding housing since they may have poor credit, rental, and employment histories due to abuse. Domestic violence appears to increase as household income decreases. In 2000 there were 1,082 incidences of domestic violence reported by police in Bibb County.

Many times domestic violence survivors can find themselves homeless. One of the primary organizations that provide temporary housing for persons in this situation is the Macon Rescue Mission. There are various other private organizations such as church affiliated organizations that provide similar services.

Substance Abuse

Many times a relationship exists between chronic homelessness and substance abuse. In 2001 7,678 people or 4.9% of the population of Bibb County was in need of some sort of substance abuse treatment. Locally, River Edge Behavior Health Center provides services for persons with substance abuse problems. The role housing has on this issue is that stable housing appears to be a key ingredient in the successful treatment of addictive disorders.

Persons Living With AIDS

There were 542 reported cases of persons with AIDS in Bibb County from 1981 to 2000. By 2003 this number increased to 648 reported cases. Bibb County had an AIDS infection rate in 2003 of 21.4%. This is somewhat higher than the State rate of 15.4%. The significance that the infection rates have on housing is that many times these individuals are in need of specialized services due to a possible inability to work to pay housing expenses.

Housing for Persons of Low to Moderate Incomes

The provision of housing and the dream of home ownership should not be out of reach to persons of low to moderate income levels. Very often, low to moderate income persons tend to be renters with limited choices. Persons in the low to moderate economic category many times are under the impression that home ownership is unattainable. The physical lack of affordable housing should not be the primary reason for this impression.

The primary provider of rental housing for persons of low to moderate income in Bibb County is the Macon Housing Authority (MHA). MHA operates 2,282 low rent apartment style units. MHA also administers the Section 8 program. This program allows persons of low to moderate incomes to reside in privately owned

residential structures by subsidizing a portion of the rental cost. These residential structures range from apartments to traditionally built stick homes. There are 2,368 units that are funded through Section 8 throughout Bibb County.

Table 3-16
Support Service for Other Special Needs Persons in Bibb County

Organization	Category	Number of Units
Macon Rescue Mission	Homeless, abuse victims, and substance abusers.	6
Homeless Services Coordination Station	Homeless and near homeless service providers	17 transitional homes
Loaves and Fishes Ministries	Homeless and near homeless service providers	3 transitional homes
Friendship Ministries	Provider of shelter for persons with AIDS	6 beds
Lighthouse Ministries	Provider of shelter for recently released prisoners	-
Nazareth Home Ministries	Provides shelter for single parent women	-
The Yellow Ribbon Home	Provider of shelter for persons with AIDS	6 beds
The Rainbow Center	Provider of shelter for persons with AIDS	14 beds
Salvation Army	Homeless And Near Homeless	38
Macon Housing Authority	Low to Moderate Income Public Housing	2,282

Sources: Macon-Bibb County Planning and Zoning Commission, 2005;
City of Macon Consolidated Plan, 2000.

There are programs available from various agencies to assist low to moderate income persons with buying a home. Many are offered at the state and local levels. There are some offered by non-profit organizations.

The Georgia Department of Community Affairs through the City of Macon's Economic & Community Development Department offers programs such as the DreamMacon Homeownership Program. This program enables an applicant access to three home buyer assistance programs such as Georgia Dream First Mortgage, Georgia Dream Down Payment and Closing Cost Financing, and the Home Purchase Program. The Georgia Dream First Mortgage Program helps persons with low to moderate incomes by allow access to a below market rate, 30 year fixed rate loan from the Georgia Department of Community Affairs. The Georgia Dream Down Payment and Closing Cost Financing and the Home Purchase Program will assist buyers with down payment and closing costs.

The Macon Middle Georgia Housing Counseling Center is one of the primary non-profit organizations that assist low to moderate income persons become homeowners. The center provides prospective homebuyers with the educational information on home buying such as credit preparation, mortgage acquisition, and post home acquisition issues. The center also partners with other local agencies such as the City of Macon's Economic and Community Development Department, MHA, and Mercer University.

Assessment of Current and Future Needs

Housing Stock Analysis

From 1980 to 2005, the total number of housing units in Bibb County has increased by 26%. However, the total population for Bibb County increased only by 3%. The housing growth rate was less than half the state average of 62%. The statewide population increased by 50% during this time period, which is somewhat in tandem with the growth rate increase in housing. The increase in housing in Bibb County far outpaces the increase in population.

An examination of the various jurisdictions of the county such as the municipalities and the unincorporated areas of Bibb County revealed a more detailed explanation of where growth in housing in Bibb County is taking place. The unincorporated areas of Bibb County are primarily fueling the increase in housing. From 1980 to 2005, the percentage of growth in housing in the unincorporated areas of Bibb County increased by 129%. During this same time period, the percent growth of housing in the City of Macon increased by less than 1% to only .3%. From 1990 to 2000, Payne City decreased in the number and percentage growth in housing.

The composition of the housing stock is in principle varied but it is skewed toward traditional types of housing. On a county-wide basis, stick built detached and attached single family housing units combined make up the vast majority (67%) of the housing stock. Of the single family stick built units, detached units were overwhelmingly the dominant type in all jurisdictions. Attached single family housing units, which make up about 3% of the housing stock, have not historically made up a sizable percentage of the housing stock in Bibb County as a whole. However, the percentage share that stick built housing has made up in the county has been in decline.



City of Macon Stick Built Residential

Duplex housing is primarily concentrated within the City of Macon. This housing type has been relatively flat since 1980. It would appear that there has not been very much demand for this housing type in the community.

Mobile homes are most prevalent in the unincorporated portions of the county. This is primarily due to



Mobile Home in Unincorporated Bibb

zoning regulations that generally prohibit them within the urbanized areas. Between 1990 and 2000, mobile homes increased in absolute numbers in the unincorporated areas, however, their percentage share of the housing stock of the unincorporated areas decreased. Mobile homes currently make up about 8% of the housing stock in the unincorporated areas of Bibb County.

Multi-family housing is the only sector of the housing stock in all regions that has both grown in absolute numbers and percentage share from 1980 to 2005. The majority of the growth in multi-family housing is concentrated in the unincorporated areas. However, the City of Macon maintains the highest absolute numbers of multi-family units in the county. The City of Macon's multi-family units make up about 25% of the housing stock; versus 6% for Payne City and 18% for the unincorporated areas.

Housing Stock Assessment in Relation to Household Size. A closer study of the housing stock composition revealed some trends that have a correlation to population and give some indications on the future needs in housing for Bibb County. The numerical amount of single family stick built housing in Bibb County as a whole and the unincorporated areas have increased since 1980 but the percentage share that this type of housing has decreased since 1980. The numerical and percentage share of single family stick built homes have decreased slightly in the City of Macon since 1980. The City of Macon is the only jurisdiction of the county that has this type of relationship. This mirrors the fact that the City has lost population over the same time period.

There appears to be a gradual shift away from stick built single family units. This is derived by the fact that there has been a decrease in percentage share that stick built housing makes up and the increase of the percentage share of multi-family units in the county as whole. This shift is more pronounced in the unincorporated areas. This does not signal the beginning of the end of traditional stick built units but merely indicates an increased demand for various housing choices.

The shift in housing types parallels the data indicated in section of the housing chapter that discusses household size. Table 3-14 indicated that one-person household experienced the most growth of all family types from 1990 to 2000 and that the average household size decreased from 2.67 to 2.49. This lends an explanation to the shift to multi-family housing. Many times multi-family housing is more conducive in size to one person families than single family stick built housing. Housing choices have become more diverse.

Housing Stock Assessment in Relation to Income & Affordability. The affordability of housing is subject to a favorable relationship between housing costs and available income. Median property values and median rental rates in Bibb County were presented in table 3-9. The table indicated that median property values and median rental rates in Bibb County as whole was slightly below the MSA; but significantly lower than the State figures. Also the average Bibb County home purchase price of \$118,405 was below the State average of \$176,868.

The data presented thus far indicates that housing costs in Bibb County may be considered affordable; however, cost must be contrasted with income to provide a better conclusion to this hypothesis. Using a generally accepted lending standard that a household can qualify to purchase a home valued at 2.5 times its annual income, Table 3-16 below illustrates the correlation between median home/property values in Bibb County and median incomes.

Table 3-16 indicates that Median Family incomes at all jurisdictional levels do indeed reach the thresholds required to purchase a home. Table 3-17 further details the comparison of incomes to housing values. The Units column represents the percentage of housing units in each jurisdiction priced within the defined range. The Household column represents the percentage of households that can afford housing within each of the identified ranges. The household percentages are calculated by using family income data from the U.S. Census and the 2.5 rule discussed in the previous paragraph.

Table 3-16
Income Required To Afford Median Value Home

Jurisdiction	Median Home Values 2000 and % Change 1990-2000	Median Family Income 2000 and % Change 1990 - 2000	Required Median Income 2000		
Bibb County	\$84,400	47%	\$43,479	36%	\$33,760
City of Macon	\$68,000	40%	\$33,699	28%	\$27,200
Payne City	\$27,300	31%	\$28,333	62%	\$10,920
Unincorp. Bibb	\$126,450	89%	\$67,076	30%	\$50,580
MSA	\$81,400	37%	\$46,279	39%	\$32,560
Georgia	\$100,600	42%	\$49,280	47%	\$44,480

Sources: 2000 U.S. Census of Population;
Macon-Bibb Co. Planning and Zoning Commission

Table 3-17
Housing Affordability

Bibb County		
Available Units	House Value Range	Households
21.2%	<\$50,000	22.8%
42.1%	\$50,000 - \$99,999	22.6%
20.2%	\$100,000 - \$149,999	20.5%
8.1%	\$150,000 - \$199,999	22.1%
4.8%	\$200,000 - \$299,999	5.2%
2.6%	\$300,000 - \$499,999	6.5%
1%	\$500,000>	.3%
City of Macon		
Units		Households
28.4%	<\$50,000	30.6%
50%	\$50,000 - \$99,999	25.7%
12.7%	\$100,000 - \$149,999	19.8%
4.6%	\$150,000 - \$199,999	16.1%
2.4%	\$200,000 - \$299,999	3%
1.4%	\$300,000 - \$499,999	4.5%
.5%	\$500,000>	.3%
Payne City		
Units		Households
100%	<\$50,000	35.2%
-	\$50,000 - \$99,999	29.4%
-	\$100,000 - \$149,999	17.6%
-	\$150,000 - \$199,999	11.7%
-	\$200,000 - \$299,999	6.1%
-	\$300,000 - \$499,999	0%
-	\$500,000>	0%
Unincorporated Bibb County		
Units		Households
11.7	<\$50,000	9.1%
32.4	\$50,000 - \$99,999	16.3%
30.4	\$100,000 - \$149,999	22.5%
12.8	\$150,000 - \$199,999	32.6%
7.6	\$200,000 - \$299,999	9.5%
3.8	\$300,000 - \$499,999	9.8%
1.3	\$500,000>	.2%

Sources: 2000 U.S. Census Bureau;
Macon-Bibb County Planning and Zoning Commission

Owner occupied housing appears to be affordable to the majority of residents in Bibb County and throughout the county's jurisdictions. However, it should be noted that the data presented in the table above represents the ability to afford new and older owner occupied housing. New housing, which averages at a starting price in the mid to upper \$90,000, will not be as affordable to as many households presented in the table above. This point is illustrated in the family incomes of Payne City and the City of Macon. In both of these municipalities, at least 30.6% of households could not afford a new home at market rate.

Future Growth in Households

Information dealing with future growth in households is discussed in detail in Chapter 8 (Land Use). However, excerpts from that chapter will be revisited in this section in order to provide an understanding of the expected future growth in housing in Bibb County. Once again, it should be noted that the estimate and projection data from that chapter comes from a complementary report entitled, “Development Trends and Land Demand Analysis”, by Ross+associates for the Macon Area Transportation System’s (MATS) Long Range Transportation Plan (LRTP).

Data Clarification. For the sake of clarifications it should be noted that some of the numbers used in the companion report are slightly different from standard census numbers. There is a discrepancy between the Census population estimates and projections and the Macon Area Transportation Study population estimates. Both the 1990 and the 2000 Census counts for Bibb County were low.

The 1990 Census problems were well documented. In fact, there was debate in Congress as to whether or not a statistical adjustment should be done for many urban areas throughout the country. The 1990 Census missed approximately 6,000 persons in Bibb County. It was apparently much easier for Census enumerators to count a dwelling unit as vacant rather than keep going back trying to get a count from someone who probably did not want to be counted. It was documented by the local government that the 1990 Census vacancy rates were way too high. This was done through utility billing information for water and for electric. Other indicators are that the vacancy rate doubled for Bibb County from 1980 Census to the 1990 Census and that residential building permits did not show a decline in the 1980’s. Bibb County has had steady consistent population growth of approximately 1/2% per year since the 1960’s.

The 2000 Census was supposed to have dealt with this problem. However, there is no indication that this problem was fully corrected. While the same problems existed with 2000 Census, it never generated the debate that the 1990 Census did. Since it was the same problem that existed previously in the 1990 Census, it was doubtful that debating these problems would change anything. The 1990 and 2000 vacancy rate remain relatively the same. In fact, the vacancy rate between 1990 and 2000 more than likely did increase some but not nearly as much as the 2000 Census indicates. The 2000 Census undercounted Bibb County by approximately 6,000 persons again.

The population 2002 base year estimates in the Macon Area Transportation Study's 2030 Long Range Transportation Plan are based on the 2000 Census and residential permitting data. The base data between MATS and the Census is pretty close. It is the Census projections that are way low. The methodology and the data that the Census uses to arrive at projections works well at the national and state levels. It does not always work at the local level. Bibb County is a prime example. The projections in the 2030 Long Range Transportation Plan are very low and very conservative even though higher than Census projections.

The 2030 Long Range Transportation Plan projections are even lower than the projections in the previous update of the transportation plan for the 2025 Long Range Transportation Plan adopted in June, 2000. This is due in part to the fact that both the 1990 Census and the 2000 Census undercounted the population and overstated the residential vacancy rate for Bibb County. In the long run, the projections for 2025 LRTP to be much more accurate than the 2030 LRTP projections. Both the 2025 LRTP and 2030 LRTP projections will prove to be more accurate than Census projections.

Residential Growth to 2030. Table 3-18 on the following page forecasts population and households to the year 2030 and for each of the benchmark year increments. The forecasts are based on the projections prepared by Woods & Poole for the county to 2025, adjusted to reflect updated household and population estimates for 2002. The adjusted forecasts are then projected to 2030 using "best fit" regression analysis, with the population in households smoothed to a continuous regression curve. The population in group quarters is derived as the difference between the total population and those residing in households.

Table 3-18
Population And Household Forecast 2002 to 2030

Bibb County

	2002	2009	2015	2022	2025	2030	Increase 2002-2030
Woods & Poole							
Total Population	154,181	155,454	157,155	159,681	161,005		
Number of Households	60,088	61,342	62,144	62,419	62,352		
Persons per Household	2.47	2.44	2.43	2.45	2.47		
Population in Households	148,417	149,674	151,010	152,927	154,009		
Population in Group Quarters	5,764	5,780	6,145	6,754	6,996		
MATS Adjustment							
		Percent Differ- ence					
Total Population	156,136	101.268%					
Number of Households	60,524	100.726%					
Persons per Household	2.4920	100.891%					
Population in Households	150,826						
Population in Group Quarters	5,310						
Adjusted Forecasts							
Total Population	156,136	157,425	159,148	161,706	163,047		
Number of Households	60,524	61,787	62,595	62,872	62,804		
Persons per Household	2.49	2.46	2.45	2.47	2.49		
Population in Households	150,826	152,103	153,461	155,409	156,508		
Population in Group Quarters	5,310	5,322	5,687	6,297	6,539		
Revised Forecasts (Regressions)							
Total Population	156,136	157,425	159,148	161,706	163,047	165,551	9,415
Number of Households	60,524	61,787	62,595	62,872	62,804	62,539	2,015
Persons per Household	2.49	2.46	2.45	2.47	2.49	2.53	
Population in Households	150,826	151,921	153,360	155,503	156,483	158,081	7,255
Population in Group Quarters	5,310	5,504	5,788	6,203	6,564	7,470	2,160
Occupancy Rate	88.59%	88.59%	88.59%	88.59%	88.59%	88.59%	
Total Dwelling Units	68,323	69,749	70,661	70,974	70,897	70,598	2,275

Source: Ross+associates, Development Trends & Land Demand Analysis, 2004.

Table 3-18 estimates the future number of households by structure type. The net number of new households added between each benchmark year is allocated to single- family houses and multifamily buildings using the same proportions that were experienced between 1990 and 2002. It is assumed that, on average, there is no more than a six-month lag between permit issuance and the completion of construction. Thus, units issued building permits through December of one year would be completed and available for occupancy prior to July 1 of the next year. As noted above, the upper limit of household growth is achieved in 2022 according to the Woods & Poole projections for the county.

Table 3-19
Household Growth 2000-2030

Macon-Bibb County								Increase
	2000	2002	2009	2015	2022	2025	2030	2002-30
Total Households	59,667	60,524	61,787	62,595	62,872	62,804	62,539	
Net New Households								
Increase over Previous	Increment*	857	1,263	808	277			3,205
Growth Share by Type								
Single-Family	53.81 %		53.81 %	53.81%	53.81 %	53.81 %	53.81%	
Duplex**	0.00%		0.00%	0.00%	0.00%	0.00%	0.00%	
Multi-Family	46.19%		46.19%	46.19%	46.19%	46.19%	46.19%	
Net New Households by Type								
Single-Family		461	680	435	149			1,725
Duplex								
Multi-Family		396	583	373	128			1,480
Source: Ross+associate s, Develop- ment Trends & Land De- mand Analysis, 2004.								

*No net increases after 2022; decreasing number of households will result in vacancy rate increases.

**No future duplex construction anticipated; growth allocated to single-family and multi-family in same proportions as 1990-2002.

Table 3-19 indicates that by 2030 there will be a net increase in new households of about 5.3% or 3,205. This rate of growth is in line with the expected population growth to the year 2030. The population is expected to grow by another 7.5% or 11,664³. By 2030 the average household size will be about 2.64 persons, which would be near the current average household size.

³MATS Population projections by Traffic Analysis Zones to the year 2030.

Assessment of Special Needs Housing

Elderly. The largest population of special needs persons in Bibb County is the elderly. The projections previously presented in the Age Distribution and Special Needs sections do not indicate a drastic increase in the elderly population in Bibb County. This cohort is expected to continue to make up about 13% of the population throughout the planning horizon. Therefore; it is anticipated that the current supply of housing and facilities that cater to the elderly and disabled should continue to be adequate. Also, there should be more emphasis placed on programs that help the elderly maintain their independence as homeowners if they so choose. This is especially true with low income elderly homeowners that may lack the resources to make needed repairs to their homes.

Persons with AIDS. The percentage of persons infected with AIDS in Bibb County has risen by nearly 20% from 2000 to 2003 and the infection rate for Bibb County is 6% higher than the State average. If the rate of infections continues to increase at current levels, this will present challenges in providing specialized housing options. Strategies to address this issue are discussed in the Goals and Objective section.

Assessment of Barriers to Housing for the Resident and the Non-Resident Workforce

Available Land. Bibb County is expected to maintain its place as the employment engine for the Middle Georgia region and it has steadily increased its percentage of non-resident workers since 1990. Since 2000 the Macon-Bibb County Planning and Zoning Commission rezoned approximately 2,400 acres of land throughout the county for residential purposes. Much of this land was rezoned from agriculturally zoned land. There is still an abundant supply of land that can be used for residential purposes for many years to come. This is due to the fact there is not much land in Bibb County that is still used exclusively for agricultural purposes. Therefore, there does not appear to be a barrier in terms of the availability of land that is zoned for residential development. It is physically possible for non-residents to reside in Bibb County to be closer to their jobs.

Supporting Infrastructure. One of the primary supporting infrastructure components for residential development is water and sewer. The Macon Water Authority (MWA) has increased its coverage of water by 3% and sewer by 40% since 2000. MWA is looking to continue to expand its coverage in Bibb County in an effort to replace its largest customer Brown & Williamson Tobacco Company. Therefore,

⁴MWA: Annual Report for Year Ended September 30, 2004

additional housing would be amenable to this end.

Housing Cost Compatibility with Employment and Income. The Available Income section indicated that the average wages of jobs on the county and regional levels have been on the increase since 2000. Table 3-12 depicted the average wage that one individual could receive. In many cases, a two person household may report dual incomes when buying a home. Using the average wage figure for one person, it can be assumed that a two person household with two adults and no children or a four person household with two adults and two children may report a household income in the \$31,662 to \$63,324 range. A two person household could qualify to purchase a home in the \$79,000 to \$158,310 range using the 2.5 factor. The average starting price for the most affordable new starter homes typically begin in the mid \$90,000 to low \$100,000 range in Bibb County and in the region. The image to the right depicts an example of a starter home that can be found in Bibb County in this price range.

Low Income and Housing. Although there appear not to be many physical and regulatory barriers to obtaining housing for most of the population, there are still some barriers that hinder low income workers and residents of Bibb County. As previously mentioned one program that assists low income persons in obtaining housing is Section 8. The Macon Housing Authority (MHA) identified the major barrier it faces in providing housing under Section 8. According to MHA, the primary obstacle is the lack of good rental housing at affordable prices. This shortage has generated a waiting list of approximately 3,300 families. The typical wait is about 1.5 to 2 years. This will no doubt continue to be a problem in the future due to the fact that the vast majority of rental properties are privately held and pricing is controlled by the free market.



Typical New Starter Home

There is usually significant difficulty by home builders to make a profit by building homes that retail below the \$90,000 mark. Using the average wage as an example, there are portions of the workforce that cannot afford new housing using conventional lending methods. However; there are new homes available that start below the \$90,000 mark. These homes are typically built by way of public/private partnerships. These homes are built to provide housing opportunities for low to moderate income families and to facilitate infill housing and redevelopment efforts in the City of Macon.

The Macon Home Purchase Plan is a result of efforts made by the various public/private partnerships to provide housing to lower income families in the community. Table 3-20 displays the income limits that a perspective home buyer must meet to qualify for the program. The \$44,000 dollar maximum is in range of the average wage figure for a family of four. This program provides another tool to assist in the provision of housing. Lastly, the program allows for a maximum purchase price not to exceed \$155,368.

Table 3-20		
Income Limits for Macon Home Purchase Plan		
Income Group	% of Median	Income
Extremely Low Income	30% of Median	\$16,500
Very Low Income	31% to 50%	\$27,500
Low Income	51% to 80%	\$44,000
Moderate Income		
FYI 2005 Median Family Income \$55,000 Macon MSA		
* Based upon four person Household		
Source: Georgia Department of Community Affairs: Income Limits		

Contrasting Housing Costs to the Prevalence of Cost Burdened Households. Table 3-10 indicated that rental housing contains the highest percentage of cost burdened individuals. The table also revealed that the City of Macon was found to contain the highest percentage of individuals paying a minimum of 50% of their income for housing. A very significant portion of the rental property in the city is either single family or duplex structures.

One major contributing factor to the relatively higher percentage of individuals paying at least 50% of their income for housing is the cost it takes to build and rehabilitate existing rental housing. Privately held rental housing that is rehabilitated to meet or exceed Section 8 Housing Quality standards and local housing code standards make it difficult for property owners to offer a monthly rental price that does not exceed 30% of the renter's monthly income.

The Economic and Community Development Department of the City of Macon (ECDD) is the primary agency that administers programs to target housing rehabilitation, encourages community redevelopment and code enforcement. According to the City of Macon's Consolidated Plan used by ECDD, it is estimated that the cost of rehabilitating inner city rental housing frequently ranges between \$25,000 and \$35,000 per unit. It would be hard for property owners to cover the debt service on these repairs and charge a renter no more than 30% of their income for rent without Section 8 rental assistance and with Community Development Block Grant or other similar home improvement loans.

Special Circumstances Impacting the Price of Housing. There has been a significant effort to build homes in an affordable price range in Bibb County and the region. A major contributing incentive for this effort is that it is considered to be a favorable asset to Robins Air Force Base. Robins Air Force Base employs 2,210 persons in Bibb County and 17,320 persons in the MSA. The availability of affordable housing in the region is important to the base because it is an important issue in having a favorable BRAC review. One of the criteria of the BRAC states that a community should have, “The ability of the infrastructure of both the existing and potential receiving communities to support forces, missions, and personnel.” Affordable housing is a quality of life issue that adds valuable support to base personnel and the region. An unfavorable BRAC review could cause the closing of the base, which is the largest employer in the region and in the State of Georgia.

⁵City of Macon ECDD City of Macon: Consolidated Plan, Program Years 2000 – 2005, pg.57.

⁶Macon Telegraph, May 4, 2005, pg. 8A.

⁷United States General Accounting Office, 2004.

Identification of Problems with the Existing Local Housing Market That Could be Addressed by Local Government

Community Visioning. In 2001 the Macon-Bibb County Planning and Zoning Commission initiated a visioning process for Bibb County via the Visual Preference Survey (VPS). The VPS asked nearly 1,300 persons from every cross section of the community a series of questions and presented images of development options that existed and some that could exist in the future. Although the VPS placed more emphasis on the overall character of the community than individual housing types, it provided good insights and direction to craft a community vision on the desired course of development in regards to housing, neighborhood design, and development. The VPS is an example on how the housing market could be improved by design characteristics.

The VPS methodology dissected the county into three distinct regions; Downtown, Neighborhoods, and Rural/Suburban Areas. In each region, the study focused on seven subcategories: street type/character, development options, pedestrian realm, parks/open space, parking options, signs, and mobility/transportation options. Participants were asked to rate images that represented options in each subcategory and rate how appropriate each option was in relation to each region. If a person thought the image was appropriate for the community it would be given a positive rating that ranged from +1 to +10. If a person thought the image was inappropriate for the community it would be given a negative rating that ranged from -1 to -10. The findings were then compiled and analyzed and policy recommendations were developed in the *2030 Vision and Action Plan*.

The following are findings and suggestions in regards to housing, neighborhood development, and design in the *Downtown, Neighborhood, and Rural/Suburban* sections of the VPS report.

Downtown- According to the VPS, the perception of downtown in regards to residential could be enhanced if the local government would adhere to the following suggestions:

- Redevelopment should be at higher densities.
- Single use residential should range from 2 to 4 stories.
- The community should infill mixed-use buildings with retail and or/ services on the ground floor to provide a range of housing types and sizes to accommodate young professionals and retiring baby boomers.

- A semi-public edge should separate urban housing from sidewalks.
- All parking should be under buildings, in rear lots accessed from residential lanes.
- Residential streets should be lined with street trees and appropriate street lighting.

Examples of desired residential development:



Source: Macon-Bibb County VPS Results and Recommendations

Neighborhood- The neighborhood realm could be enhanced if the local government would adhere to the following suggestions:

- The redevelopment of marginalized housing should be a priority
- Provide a range of housing types
- A semi-public edge (hedge/fences) should define the property edge from sidewalks
- On street parking and/or parking on rear residential lanes
- 2 to 2 ½ story homes with pitched roofs
- a net density of 4 to 5 units per acre

Examples of desired residential development:



Rural/Suburban- Survey respondents indicated that the rural/suburban regions of the county could be enhanced if the local government would adhere to the following suggestions:

- Create new neighborhoods in rural and suburban areas with a range of residential building types, with higher densities located in the center of the neighborhood, decreasing density towards the periphery with the large lots located on the periphery
- Surround new neighborhoods in the suburban and rural areas with very large lot farms
- Infill empty lots as a first priority

Example of desired residential development



Other Local Studies. There have been various other studies in the community that have identified problems with the existing local housing market and offer suggested strategies on alleviating these issues. These studies offer insight on steps the local government can address to improve housing for residents. The following is a brief review of these studies and their findings. The strategies/recommendations presented therein may become a part of the goals and objective section.

East Macon & West Macon I & II Housing Market Study⁸ – Significant portions of East and West Macon are considered economically depressed. This study was sanctioned by ECD to examine housing trends and preferences of current and prospective homeowners and to propose development recommendations for housing development in those areas. The summaries of findings and recommendations are the following:

⁸City of Macon ECDD and Asset Property Disposition, Inc.: East Macon & West Macon I & II Housing and Market Study: Trends Analysis & Development Recommendations, March 2004, pgs 1-9.

East Macon Findings

- Median household income ranges from \$13,000 to \$21,000. This has increased very little in the past ten years.
- Household size has decreased in the last ten years.
- The East Macon area has very large female-headed household population.
- According to the Census, median asking price for a vacant for-sale home ranges from \$10,000 to \$60,000. However, MLS data reveals that homes typically sell for the high \$80s to the mid \$100s.
- Residents have rated their community very low in satisfaction due to the number of abandoned homes and high crime in the area.
- Most residents are low to moderate income homeowners.

East Macon Recommendations

- The most likely market of buyers for new single family homes are female heads of households who have historical or family links to the neighborhood. Specific target market marketing should be launched to determine the depth of this market.
- Alternative living accommodations must be provided for older heads of households as a potential market for occupying new multi-family developments. Historically, these households turn over infrequently and often contribute to deterioration of housing stock because of deferred maintenance. Conversely, many of the existing homes provide resale opportunity for younger families interested in homes that offer historic architectural features.
- Every effort should be made to assemble a large tract of land and buildings as the initial development site in East Macon. The Fort Hawkins site and other similar sites located within the study area offer the opportunity to integrating new homes at several price points, introduce a variety of architectural types, plan infrastructure improvements such as street paving new sidewalks, lighting, and most importantly create a “theme” development that makes a major statement regarding design and sense of place.

West Macon I (Cherokee Heights) and West Macon II (Unionville) Findings

- Median household income for West Macon I range from \$17,000 to \$30,000. This has increased very little in the last ten years. Median household income for West Macon II is \$12,000 to \$20,000.
- The West Macon II area has a large female-headed household population.
- Median asking price for a vacant for-sale home ranges \$27,000 to \$70,000. However, MLS data reveals that homes typically sell for the high \$80s to the mid \$100s.
- Residents have rated their community very low in satisfaction due to the abandoned homes and high crime in the area.
- Most of the residents were low to moderate income homeowners.

West Macon I and II Recommendations

- Westwood Apartments is a catalyst project for West Macon. It is large project that could be assembled, demolished, and re-plated as a mixed income, mixed density development. If this project is approached like a “Hope VI” project and features new infrastructure as well as new housing, the surrounding neighborhood could be integrated into the site planning as subsequent development phases.
- Lizzie Chapel Baptist Church should be encouraged as a potential non-profit development housing provider. The expansion of the church and the acquisition of land adjacent to the church could be developed and linked with the Westwood Apartments project. Design guidelines should be introduced as a condition of assistance to insure that both the Lizzie Chapel housing development and the Westwood Apartment development have the appearance of one large development project linked by both architectural theme and key transportation/pedestrian links.
- Cherokee Heights would benefit from the introduction of a façade program to encourage homeowners and investors to address deferred exterior maintenance and a requirement that all interior code violation be addressed. A programmatic approach similar to this should prevent long term deferred maintenance.

nance from moving this community beyond the “tipping point” to a neighborhood that requires the application of an extensive redevelopment strategy.

East Bibb Reconnaissance Survey⁹- East Bibb County as a whole has traditionally lagged behind the rest of the county in several vital areas. This study examined economic development along with housing issues in the portion of the county that lies east of the Ocmulgee River. Specifically, the study area encompassed portion of the City of Macon and the unincorporated portion of the county east of the river. The findings and recommendations below will only address the portions of the report that deal with housing. There were two complimentary studies entitled, “East Bibb Action Plan¹⁰” and “Executive Summary East Bibb County¹¹” that provided an action strategy for the area.

East Bibb Reconnaissance Findings

- East Bibb County has a number of beautiful neighborhoods; however, vacant unkempt lot, homes in need of repair (especially rental units), and other factors work together to discourage new investment and frustrate community residents that are working to improve the area.
- There appears to be an increasing level of “predatory” investor activity in the Fort Hill area. Investor-owned units are frequently poorly maintained with out-of-town owners whose primary goal is to obtain rental income with a minimum of upkeep and improvements.
- There is a general perception of blight and high crime that has stifled development of new residential in many portion of east Bibb County.
- Residential development has mostly been limited to the southern half of East Bibb in recent years, including the entry-level subdivision, Apple Valley.

East Bibb Reconnaissance Recommendations

- Create a maintenance code for the unincorporated portions of the county, similar to the one adopted by the City of Macon to address property maintenance issues plaguing some parts of the study area.
- Create an East County Coordinating Organization (ECCO) through which the coordination of redevelopment, revitalization, and planning activities in East Bibb will take place.

⁹City of Macon ECDD City of Macon: Consolidated Plan, Program Years 2000 – 2005, pg.57.

¹⁰Macon Telegraph, May 4, 2005, pg. 8A.

¹¹United States General Accounting Office, 2004.

Macon Region Job Access Reverse Commute Plan JARC¹²- The JARC study dealt more specifically with access to transportation for Temporary Assistance to Needy Families (TANF) recipients and low income individuals to obtain and keep employment. A common factor that many economically depressed neighborhoods with substandard housing have is difficulty with transportation to employment opportunities. The relation with housing is that higher incomes afford individuals to purchase better housing and can enable home owners to rehabilitate existing housing if needed.

JARC Findings

- There are a large number of jobs clustered within the city limits of Macon including the central core. Approximately 40% of TANF recipients live within a reasonable walking distance (1,500') of at least some job sites. However, 60% of TANF recipients do not.
- In general, transit routes are located in close proximity to low-income population. 63% of all TANF recipients live within a reasonable walking distance of a bus stop. This does not, however address whether or not operating hours and schedules are convenient.
- 54% of target jobs are located within a reasonable walking distance of an existing bus stop.

JARC Recommendations

The study indicated that the long term, most cost effective and permanent solution to the problem of job access for low-income citizens from a transportation perspective is a more robust, flexible, and financially stable public transit system. The recommended steps and projects that the local government should take to fulfill this end are:

- Hire a JARC coordinator
- Implement a Job Access WorkPass to be used on the transit system for unlimited usage
- Provide transportation to Ocmulgee Industrial Park
- Provide transportation to Robins Air Force Base
- Implement a new MTA Southwest Macon Route
- Implement late night and Sunday Transit Service

¹²PEQ, Inc. Planning Consultants, Manuel Padron & Associates, and DW & Associates.: Macon Region Job Access Reverse Commute Plan, May 2004.,

Evaluation of Jurisdictional Decisions Regarding Land Use Patterns and Zoning on Housing Needs

As previously discussed in the *Assessment of Barriers to Housing for the Resident and the Non-Resident Workforce*, the Macon-Bibb County Planning & Zoning Commission and the Macon Water Authority have instituted actions that have encourage growth in housing. Much of this new housing has developed in the more affluent unincorporated portions of Bibb County. Since 1991, 80% of the residential rezonings have occurred in unincorporated Bibb County¹³. According to the Macon-Bibb County Department of Inspections and Fees, in 2001 there were 82 residential building permits issued within the City of Macon and 375 issued in the unincorporated portions of the county. This equates to about 83% of the building permits being issued to areas in unincorporated Bibb County.

Although the majority of new development has occurred in the unincorporated areas; there are zoning incentives in place by the Macon-Bibb County Planning and Zoning Commission to help spur and assist existing redevelopment efforts in the inner city. The Comprehensive Land Development Resolution is the primary document that guides zoning and subdivision regulations throughout the county. The Macon-Bibb County Planning and Zoning Commission has as a part of the Comprehensive Land Development Resolution to recognize areas that are defined as “Target Areas” by ECDD.

Target Areas are portions of the City that are characterized as being economically depressed with an abundance of low to moderate income families. These 11 areas are targeted by ECDD in order to improve community conditions. The Macon-Bibb County Planning and Zoning Commission assists ECDD by reducing minimum development standards that would otherwise be applicable for the zoning district. Public and private entities can take advantage of the relaxed development standards in these areas. These efforts have had a positive effect on city redevelopment efforts.

One such successful example in redevelopment has been a Hope VI project called Beall’s Hill. The Beall’s Hill project is located in the Tindall Heights Target Area. The project entailed the demolition of a public housing project that was built in the 1940’s called Oglethorpe Homes. When completed, Beall’s Hill will offer a mixture of new housing at market rate pricing and some housing for low to moderate income persons. The image to the right depicts the current construction status of the project. This project, with its proximity to downtown and Mercer University, will provide a much needed synergy to the area.



Beall’s Hill Neighborhood

¹³Macon-Bibb County Planning & Zoning Commission: *The Cost of Growth in Bibb County*, 2002. pg. 7

Articulation of Community Goals and Associated Implementation Program

Housing Goals and Objectives

The Housing element of the 2030 Comprehensive Plan has thus far inventoried the current housing stock and provided an assessment. At this point it is prudent to contrast the findings with our vision for Bibb County in 2030. The housing goals and objectives will be crafted to meet the stated vision of the community, which was derived from the VPS.

VISION STATEMENT

In the year 2030 Macon and Bibb County Georgia will be a dynamic community encouraging balanced growth with sensitivity to quality of design while ensuring environmental safeguards. We will embrace our diverse population, providing a full range of employment, cultural and economic choices. Our neighborhoods, commerce and mobility will reflect an interconnection that promotes continuity and wise transitions. The foundation and spirit of our public involvement activities will draw strength from unity and a civic-minded approach which inspires, instills and sustains a true stewardship of community.

The issues dealing with housing have been studied by various agencies in Bibb County over the years. There are a myriad of studies that have identified strategies to improve housing in the community. Moreover, most of the studies have dealt with housing issues within the incorporated areas of the county only. This is largely due to many factors that were discussed in the inventory and analysis that include but are not limited to: 1) the presence of a much older housing stock, 2) greater numbers of low income families, 3) a significantly higher percentage of renters, and 4) typically lower residential property values. The VPS was a gigantic step in addressing housing issues on a countywide scale. The following goals and objectives will draw upon various studies, including the VPS that are most conducive to the vision statement for the entire county.

STRATEGY 1 Create affordable housing opportunities to insure that all that work and reside in the community have a viable choice or option to live in the community. (Vision Nugget- *Embracing Our Diverse Population*)

Goal 1: *Continue to provide a balance of zoning district classification and policies that will accommodate and encourage a range of housing alternatives.*

Objectives

1. Increase design flexibility in residential zoning districts to allow for a greater range of housing choices based on pricing and design.
2. Conduct a series of meetings with all community housing agencies and organizations to have a unified assessment of housing needs in the community and determine needed actions. Examples could be the enactment of specialized overlay districts, changes in land use, and etc.
3. Develop measures to streamline the permitting process that will make it easier for developers and the general public to obtain appropriate permits. An example is to develop a one stop permitting location.

Goal 2: *Provide an adequate supply of housing facilities and support services for special needs residents.*

Objectives

1. Group homes, foster care facilities, adult congregate living facilities, halfway houses, and similar special needs housing facilities should be treated fairly in their distribution throughout the community.
2. The community should apply to become eligible to administer the Housing Opportunities for Persons with HIV/AIDS (HOPWA) program such as the City of Atlanta, the City of Augusta, and the City of Savannah have. This will provide housing assistance and related support services for persons afflicted with this disease.
3. Increase awareness of programs such the Home Improvement Program offered by ECDD by way of public access television or other forms of media. This program can allow access to funds to help elderly and handicapped residents make home repairs and improvements.

Goal 3: *Increase home ownership rates in census tracts dominated by rental tenure, where possible, by 10 to 15% over the next five years by encouraging local lending institutions to lend money to those qualified for housing purchases without redlining certain neighborhoods and by other pertinent means.*

Objectives

1. Develop a network of banking institutions that are willing to lend money without redlining certain neighborhoods.
2. Provide seminars for renters on the basics on how to purchase and manage the responsibility of home ownership.
3. Mobilize organizations that assist renters in finding affordable, single-family housing.

STRATEGY 2 **Eliminate substandard and dilapidated housing where they exist in the community and to encourage infill housing and neighborhood redevelopment. (Vision Nugget- *True Stewardship of the Community*)**

Goal 1: *Improve the physical neighborhood environment and facilitate the development of a safe living atmosphere in the community.*

Objectives

1. Continue aggressive housing abatement code enforcement with in the City of Macon Target Areas and other areas as needed. Also create more financial incentives for landlords to upgrade and maintain rental housing.
2. Increase awareness of programs such the Home Improvement Program offered by ECDD by way of public access television or other forms of media. This program can allow access to funds to help elderly and handicapped residents make home repairs and improvements.
3. Expand Ameri-Corps neighborhood policing stations in economically depressed neighborhoods that are on the cusp of redevelopment to help deter the perception of crime by potential developers and investors.

4. Adopt housing abatement codes in the unincorporated portions of the county that are similar to the codes used in the city.
5. Integrate suggested development guidelines and policy recommendations from the “Downtown Realm” section of the Visual Preference Survey.

Goal 2: *Encourage neighborhood redevelopment activities by non governmental entities and support related economic activities that will improve housing acquisition.*

Objectives

1. Encourage the creation of non-profit Community Development Corporations (CDC) that are tied to neighborhood religious institutions or other private institutions.
2. Assist CDCs in data gathering, grant preparation, and other neighborhood redevelopment activities.
3. Increase awareness of the incentives offered by ECDD and the Macon-Bibb County Planning and Zoning Commission for redeveloping in Target Areas by way of public access television, seminars or other forms of media. This can help spur neighborhood infill development.
4. Implement JARC recommendations.

STRATEGY 3 **Improve the overall neighborhood character by careful planning, design, and quality of life features. (Vision Nugget- *Our neighborhoods, commerce and mobility will reflect an interconnection that promotes continuity and wise transitions.*)**

Goal 1: *Adhere to VPS recommendations as they relate to neighborhood environments in the Downtown areas.*

Objectives

1. Map and document all vacant structures, deteriorated or marginalized commercial and residential buildings in a Susceptibility to Change Map.

2. Develop and adopt an Urban Design Plan for the inevitable redevelopment of all marginalized and/or deteriorated commercial and residential properties not meeting the full potential of Downtown Macon.
3. Integrate other elements of the Downtown Realm section of the VPS such as street types, commercial development, pedestrian options, mobility options, and etc into new development or redevelopment that is in the downtown area.

Goal 2: *Adhere to VPS recommendations as they relate to neighborhood environments in the Neighborhood areas.*

Objectives

1. Map and document all vacant, deteriorated or marginalized residential buildings in a Susceptibility to Change Map.
2. Institute property maintenance standards.
3. Develop a phased plan to remove and redevelop all marginalized and/or deteriorated housing in Macon-Bibb County neighborhoods.
4. Develop and adopt a Design Plan for the redevelopment of all marginalized and/ or deteriorated residential properties not meeting the full potential of Macon-Bibb County neighborhoods.
5. Adopt Hope VI basic standards for subsidized housing.
6. Integrate other elements of the Neighborhood Realm section of the VPS such as street types, commercial development, pedestrian options, mobility options, and etc into new development or redevelopment that is in the neighborhood areas.

Goal 3: *Adhere to VPS recommendations as they relate to neighborhood environments in the Rural/Suburban areas.*

Objectives

1. Create new neighborhoods in rural and suburban areas with a range of residential building types, with higher densities located in the center of the neighborhood, decreasing in density towards the periphery with the large lots located on the periphery.
2. Infill empty lots as a first priority.
3. Integrate other elements of the Rural/Suburban Realm section of the VPS such as street types, commercial development, pedestrian options, mobility options, and etc into new development or redevelopment that is in the rural/suburban areas.

Chapter 4

NATURAL AND CULTURAL RESOURCES

INTRODUCTION

The City of Macon and Bibb County, Georgia are fortunate to have a rich assortment of natural and historic resources available. These resources provide citizens an abundance of economic and recreational opportunities and have played a large part in defining and maintaining the cultural aspect of the area. Both the natural environment and cultural resources are vulnerable to man's actions, and at the same time, they can hinder the way in which land is developed. It is the purpose of this element to examine the historical, current, and occasionally, future conditions of the natural and historic resources within Macon and Bibb County; address the important issues related to these resources; to identify those which are sensitive or significant and to develop ways to best protect and manage them. According to the Georgia Department of Natural Resources (DNR), the term "natural resources" refers to the state's air, soil, and water; all game species of animals, birds, and fish; all non-game species of animals, birds and fish; all plants, whether common, endangered or protected; and every cultural, historic or recreational resource within the state.

The following analysis examines the historical, current and occasionally, future conditions of the natural and historic resources within Macon and Bibb County. The contents of each analysis include information on the evolution of that element as it relates to the community's development. Once all the applicable elements are presented, an assessment of those elements is made. This assessment introduces what is necessary to improve or continue the quality of the natural and historic resources within Macon and Bibb County. Goals and objectives for the continued improvement of the natural and historic resources of the community are presented in the Goals and Objectives Chapter of this document.

TOPOGRAPHY & GEOLOGY

The topography (land forms) in Bibb County exhibits significant variation between the northern and southern parts of the county. The northern one-third of Bibb County lies in the physiographic province known as the Piedmont Plateau. This system is characterized by hilly terrain, steep-sloped creek banks, and well-defined stream channels. The southern two-thirds of Bibb County is located in the Atlantic coastal plain physiographic

province. Relief in this region tends to be less hilly and creeks generally have wide, flat floodplains with ill-defined stream channels.

Major differences in relief in combination with variation in slope and width of floodplains can have significant effects on water quality relationships. In general, the piedmont area above the fall line tends to exhibit a greater response to rainfall events. With greater slopes and outcroppings of impermeable rock, runoff ratios are higher for this region. As a result of this greater response, the ability of water to transport suspended soils increases, resulting in greater sediment loads especially in areas of exposed soil. The geology of Bibb County lies within two physiographic provinces, the piedmont province and the coastal plain province. The piedmont province covers the northern one-third of the county, while the coastal plain province covers the southern two-thirds. Between the two provinces is a transitional area called the fall-line. Distinct differences exist in the geologic character between the two provinces. The piedmont province is characterized by hilly terrain, shallow soil, steep-banked creeks, and fast-flowing streams. The surface consists of crystalline rocks (igneous and metamorphic rocks). Primary rock types in this province include hornblende gneiss, biotite gneiss, schist and phyllites. Outcrops (rock that is exposed at the land surface) occur in the Ocmulgee River and some creeks. The coastal plain province is primarily composed of the Tuscaloosa formation. The sediments are Cretaceous in age and may be over 65 million years old. This formation forms a sedimentary wedge which thickens southward. A thickness of approximately 500 feet is reached in the southern part of the county. The Tuscaloosa formation is composed of unconsolidated sediment consisting of light-colored fine to coarse sand, sandy clay, and masses of clay (kaoline). The formation is not well-bedded and the clay masses appear as lenses. As a consequence, individual beds can not be traced very far.

East of the Ocmulgee River, young sediments of Eocene age (40 million years old) occur. These sediments make up the Barnwell formation and consist of massive deep red clayey sand, beds of fuller's earth, and limited beds of limestone. The youngest sediments (Pleistocene age, 0.5 million to 2.5 million years old; and Recent age, last 5,000 years) exist as alluvial deposits bordering the Ocmulgee River and some of the larger creeks. They consist of unsorted clay, sand and gravels, extending up to two miles on each side of the river, and are generally less than 40 feet thick.

Source: Environmental Baseline Inventory for Macon-Bibb County 208 Study Area, January 1978

ENVIRONMENTAL PLANNING CRITERIA

WATER SUPPLY WATERSHEDS

Watersheds are geographically defined land areas which form basins where all of the water that lies beneath or drains over it reaches the same place. Often the receiving areas include surface water bodies (e.g. lakes, reservoirs, streams or rivers). In addition, underground aquifers and the movement of water through them are considered in the watershed identification process. Water supply watersheds, as defined by the Georgia Department of Natural Resources (DNR), are land areas which serve as a gathering place for a river or stream which is used as a supplier of public water.

Bibb County is fortunate to have adequate water supply to provide for the needs of the area, as well as, neighboring counties. Bibb County contains all or part of two watersheds which are currently being used for water supply. These include the Lucas Lake and the Ocmulgee River water supply watersheds. DNR approved, Source Water Assessment Plans (SWAPs) have been developed for each of the Bibb County water supply watersheds. These reports are available through the DNR and at the Middle Georgia Regional Development Center. In conducting the SWAPs, an inventory and analysis of water quality data is performed, potential sources of contamination are identified, and a susceptibility or threat of potential pollution determination is made. The following descriptions summarize the SWAPs for each of the water supply watersheds.

Lucas Lake Intake

The Lucas Lake Intake is located in Bibb and Jones Counties area of the Middle Georgia region and serves the residents of the City of Macon. The water source for this intake is the Ocmulgee River. This community intake provides potable water for drinking purposes and other uses for an estimated 128,378 persons. The permit capacity is 110 mgd (million gallons/day). Portions of the water supply watershed extend into Bibb and Jones Counties, both located within the Middle Georgia region. No stream segments in this water supply watershed have been listed as impaired streams by the State of Georgia. The overall rated water susceptibility score is listed as 'medium' in the SWAP due to the potential impact of subdivision lift stations and sewerage areas. Continued residential development in the watershed poses a possible risk of future contamination to this water supply.

Ocmulgee River Intake

The Ocmulgee River Intake is located in Bibb and Jones Counties area of the Middle Georgia region and serves the residents of the City of Macon. The water source for this intake is the Ocmulgee River. This community

intake provides potable water for drinking purposes and other uses for an estimated 128,378 persons. The permit capacity is 110 mgd (million gallons/day). Portions of the water supply watershed extend into Bibb and Jones Counties, both located within the Middle Georgia region. The nine-mile segment of Falling Creek from Little Falling Creek to the Ocmulgee River has been placed on the Georgia list of impaired water bodies and is considered non-supporting for its designated use as a fishable stream. A TMDL implementation plan has been developed by the Middle Georgia RDC for this stream. The overall rated water susceptibility score for the intake is listed as 'low' in the SWAP. Potential contaminant sources receiving highest priority status are subdivision lift stations and sewerage areas. Continued residential development in the watershed poses a possible risk of future contamination of this water supply.

Source: Middle Georgia Regional Plan

WETLANDS

Wetlands, as defined by the U.S. Environmental Protection Agency, generally are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface (Cowardin, December 1979). Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors, including human disturbance. Wetlands normally fall into four general categories – marshes, swamps, bogs and fens. Marshes are wetlands dominated by soft-stemmed vegetation, while swamps have mostly woody plants. Bogs are freshwater wetlands, often formed in old glacial lakes, characterized by spongy peat deposits, evergreen trees and shrubs, and a floor covered by a thick carpet of sphagnum moss. Fens are freshwater peat-forming wetlands covered mostly by grasses, sedges, reeds and wildflowers.

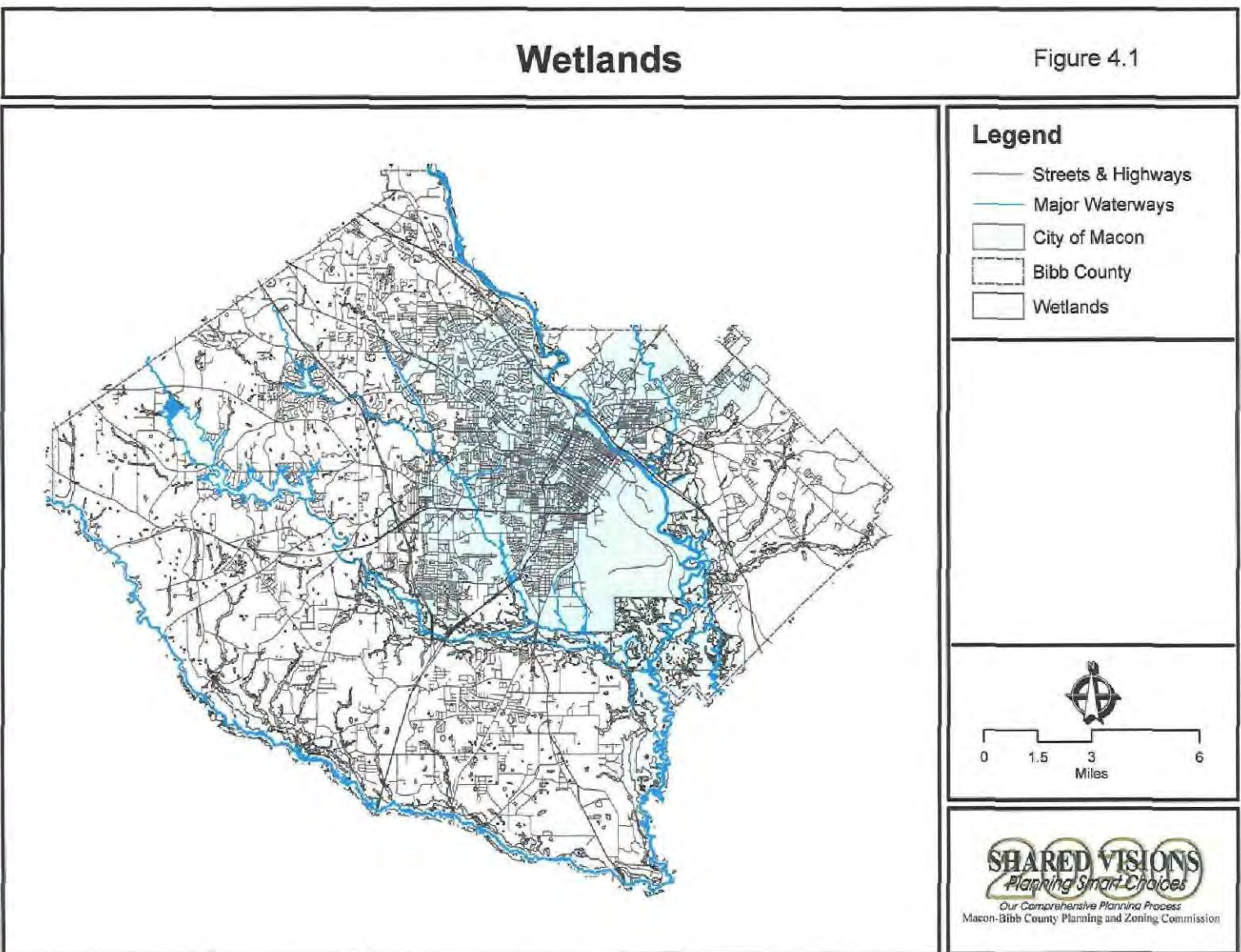
In an effort to protect wetlands throughout the U.S., EPA has a number of programs for wetland conservation, restoration, and monitoring. EPA, along with the U.S. Army Corps of Engineers (Corps), establishes environmental standards for reviewing permits for discharges that affect wetlands, such as residential development, roads, and levees. Under Section 404 of the Clean Water Act, the Corps issues permits that meet environmental standards (after allowing the public to comment). Wetlands in Bibb County were identified by the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency (EPA). Besides identifying the wetlands in the County, these two agencies also developed the protective legislation for them. While the aim of these agencies is for the preservation of wetlands, it is also a concern of the Macon-Bibb County Planning & Zoning Commission. The Commission is committed to protecting these areas so that they remain in their natural state for the enjoyment of future generations. The wetlands in the City of Macon and Bibb County, Georgia are indispensable and

fragile natural resources with significant development constraints due to flooding, erosion, and soils limitations. In their natural state, wetlands serve man and nature. They provide habitat areas for fish, wildlife and vegetation; water quality maintenance and control; flood control; erosion control; natural resource education; scientific study; and open space and recreational opportunities. In addition, the wise management of forested wetlands is essential to the economic well being of many communities within the state of Georgia.

Nationally, a considerable number of these important resources have been lost or impaired by draining, dredging, filling excavating, building, pollution and other acts, piecemeal or cumulative losses will, over time, destroy additional wetlands damaging or destroying wetlands threatens public safety and the general welfare. Within Macon and Bibb County, numerous wetlands provide many benefits. The wetlands not only act as filters for runoff pollution before it reaches the water supply, but also provide a habitat for many animal species. The existing wetlands are typically the last homes in the south for endangered wildlife and plant life.

Figure 4.1 is a generalized map of Bibb County's existing wetlands.

Figure 4.1



GROUNDWATER RECHARGE AREAS

Recharge area is defined as any portion of the earth's surface, where water infiltrates into the ground to replenish an aquifer. An aquifer means any stratum or zone of rock beneath the surface of the earth capable of containing or producing water from a well. Significant recharge areas are those areas mapped by the Department of Natural Resources in Hydrologic Atlas 18 (1989 edition). Mapping of recharge areas is based on outcrop area, lithology, soil type and thickness, slope, density of lithologic contacts, geologic structure, the presence of karst, and potentiometric surfaces. Significant recharge areas are as follows:

- (i) In the Piedmont, rocks have little primary porosity, with most groundwater being stored in the overlying soils. The significant recharge areas are those with thicker soils. Field mapping indicates that thick soils in the Piedmont and Blue Ridge are characterized by a density of two (2) or more geologic contacts per four (4) square miles (Source: 1976 1:500,000 Geologic Map of Georgia and slopes lower than eight (8) percent.)
- (ii) In the Coastal Plain, the significant recharge areas are the surface outcroppings of the large and extensively used drinking water aquifers (e.g., the Floridian, the Clayton, etc.) and soils having permeability according to the 1976 1:750,000 Soils Association Map of Georgia.

The following criteria pursuant to O.G.C.A. 12-2-8 shall apply in significant recharge areas such as:

- a) No permits for new sanitary landfills not having synthetic liners and leachate collection systems shall be issued;
- b) No permits for the land disposal of hazardous wastes shall be issued;
- c) Permanent stormwater infiltration basins shall not be constructed in areas having high pollution susceptibility.

The groundwater and aquifer conditions vary significantly within the Macon-Bibb County area. These variations are closely related to the geological and hydrological environments.

Water in the northern part of Bibb County is obtained from wells sunk into the underlying crystalline rocks. These wells are generally 30 inches in diameter and up to 60 feet deep. The quality of the water is good and yields do not greatly exceed 20 gallons per minute. In the area immediately surrounding Macon, good aquifer conditions for the withdrawal of groundwater are limited. This is primarily due to local thin sand beds that cannot store significant quantities of water. Southward through Bibb County, these sand beds thicken and good aquifer conditions are abundant, resulting in an increased availability of water. These wells may be greater than 100 feet deep and may yield from 50 to many hundreds of gallons of water per minute. Some wells that are only 2 inches in diameter are less than 70 feet deep supply the few gallons of water per minute yields needed for do-

mestic requirements. The recharge areas will be protected in the future through the intended expansion of the Macon Water Authority's sewer system throughout the County. By providing more sewer lines in all portions of the County, there will be a limited need for new developments with private water wells and septic systems. This in turn will protect the ground water recharge areas from potential septic tank seepage. Figure 4.2 displays the Groundwater Recharge area for Macon-Bibb County.

Source: Georgia Dept. of Natural Resources

Groundwater Recharge Areas

Figure 4.2

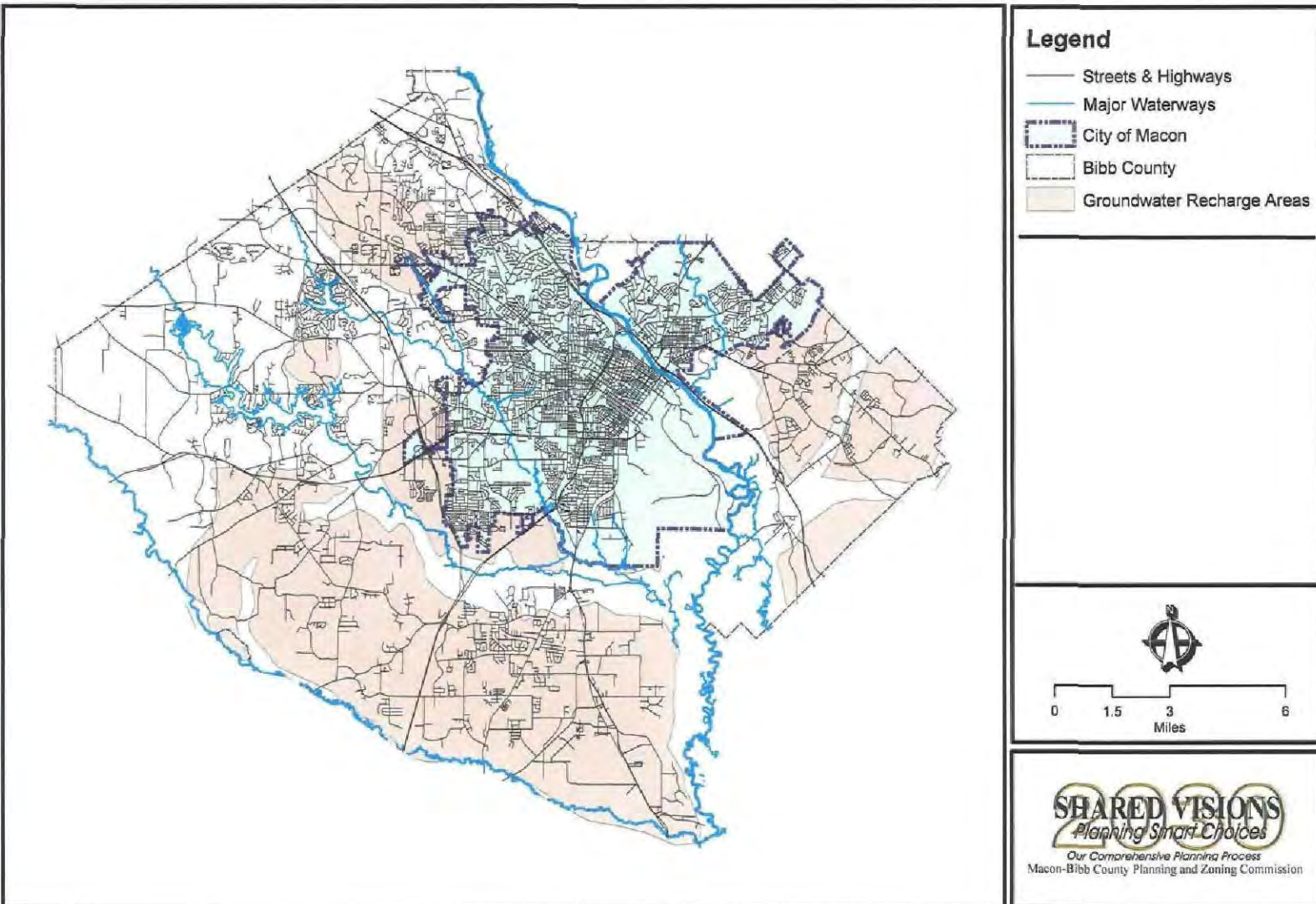


Figure 4.2

RIVER CORRIDOR PROTECTION

The Georgia Department of Natural Resources developed the Mountain and River Corridor Protection Act that requires local governments to address river corridor protection criteria in their comprehensive plans. These criteria apply to all perennial rivers and streams having an average annual flow of at least 400 cubic feet per second. Within Macon and Bibb County, only the Ocmulgee River is subject to the river protection criteria. The Ocmulgee River is a valuable natural resources in the Middle Georgia area. It flows north to south through the County and supplies the area with most of its drinking water. It is also a source for outdoor recreation and provides homes for much of the local wildlife and endangered species. The Ocmulgee River is described as a "protected river," as defined by the Mountain and River Corridor Protection Act, and therefore preserving it is important as a natural resource.

The land area on either side of a river is often called the "buffer" and is important in preserving and protecting the quality of the river. The buffer is a designated section along the riverbank where the natural vegetation is left untouched. The act defines a buffer of 100 feet on either side of the river, beginning at the top of the river banks. This buffer helps to maintain water quality by acting as a filter between the river and storm water runoff, which may contain pollutants that would be detrimental to the health, safety and well being of the community at large. In February 1994, the City of Macon and Bibb County adopted a river corridor protection plan. Included in this plan was the recommendation that the Comprehensive Land Development Resolution be amended to provide the needed protection of the river corridor. In November 1996 the Commission approved an amendment to the Comprehensive Land Development Resolution to provide for a river protection overlay district for certain areas adjacent to that portion of the Ocmulgee River that traverses Bibb County. Figure 4.3 displays the river protection area commencing at the Spring Street Bridge, running south to the northern portion of Central City Park.

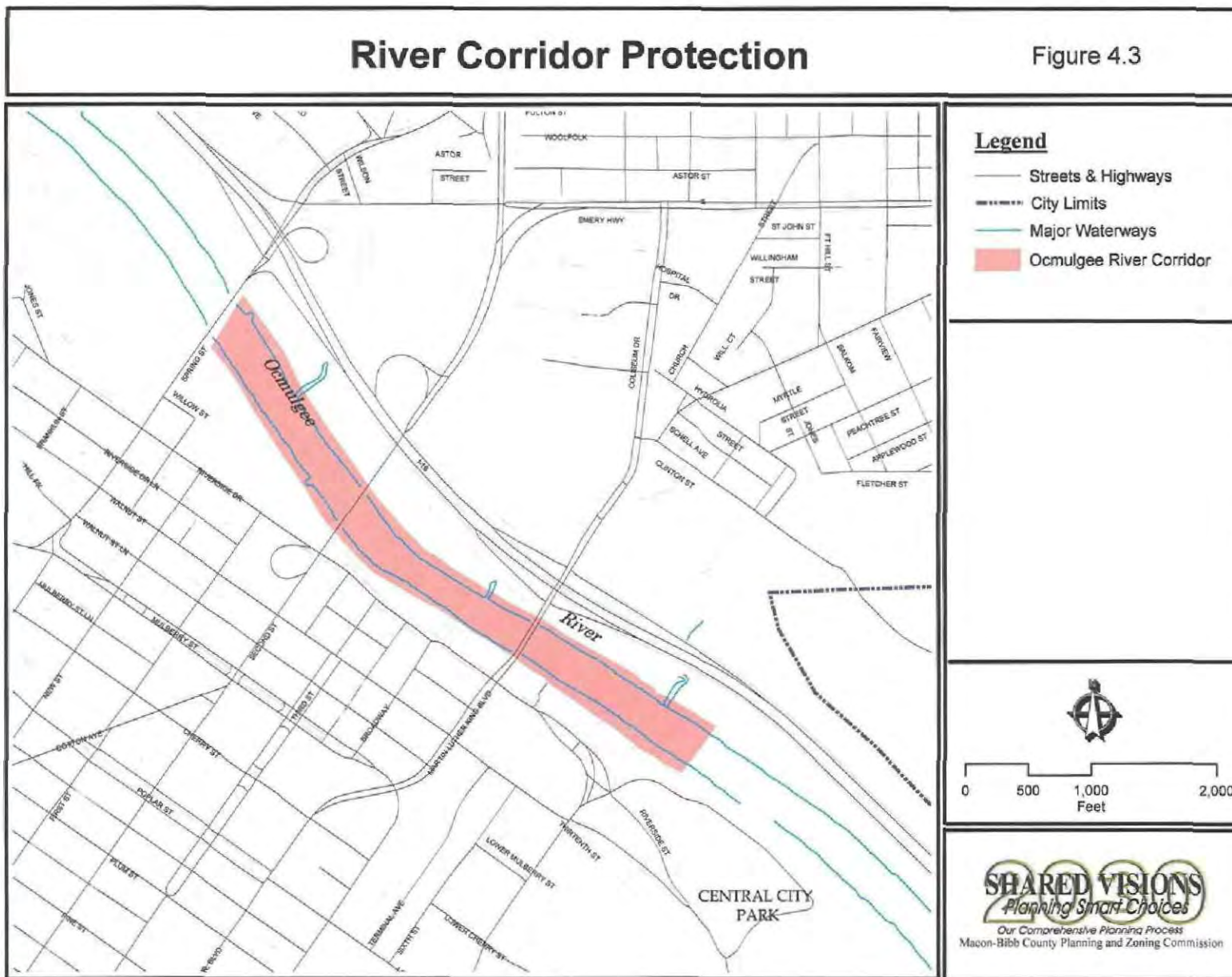


Figure 4.3

PROTECTED MOUNTAINS

Bibb County contains no mountains that are protected under the Georgia Mountain and River Corridor Protection Act of 1991.

OTHER ENVIRONMENTALLY SENSITIVE AREAS

WATER QUALITY

When we turn on our faucet and fill a glass of water, we expect that what comes out will be clean. Do we ever wonder where the water comes from and what it took to make it clean enough to drink? Many of us remember when we could go to a local stream or river and jump in and swim, or sit at the river's edge and throw in our fishing pole and brag when we got home of how many fish we caught. Would we do that today? Many of us would have to answer no. However, we have a desire for our children and grandchildren to have the same opportunity to enjoy these same waters to fish and swim like we did when we were younger. Below is an overview of what is being done at the state and local levels to help make the waters in our region safe for drinking, fishing, and swimming.

Water Monitoring/Impaired Streams and TMDLs

On an every five-year cycle, the State of Georgia Department of Natural Resources-Environmental Protection Division conducts chemical and biological testing in the various watershed basins in the State. Within the Macon/Bibb County Area, there is one major region, which is called the Ocmulgee. The Department of Natural Resources also accepts water quality monitoring data from various other state and federal agencies and universities provided DNR's stringent water quality monitoring standards are met. The State of Georgia has specific quality standards for over 100 different chemicals, nutrients and pathogens that can be found in the State's streams. To test the biotic life of the stream, the DNR-Wildlife Resources Division has devised an "index" to determine the stream's ability to support biotic life. When a stream fails one or more of these standards or the biotic index is either poor or very poor, the stream is considered "impaired" and is placed on the U.S. Environmental Protection Agency's "303 (d) list." There are two classifications of impairment; partially supporting and non-supporting the use of the stream.

Table 4.1 lists those streams on the final 2002 303 (d) list.

The Clean Water Act requires that for any impaired stream, a TMDL must be prepared. TMDL (Total Maximum Daily Load) means that a stream can only handle a certain amount of pollutant in order for it to meet state water quality standards. If it is handling too much, then that pollutant must be reduced. In some cases, such as sediment, no more load can enter into the stream. TMDLs have been completed for all the impaired stream segments in the Ocmulgee and Oconee River Basins that were on the 2000 303 (d) list. TMDLs will have to be prepared for any new stream segment added in 2002 and 2004.

TMDLs done for the Biota impacted streams indicate that the cause of the biota problem is sediment. Possible sources of sediment are: erosion from crop and pasture land, unpaved roadways, timber harvesting, land disturbance activities from urban activity, and legacy sediment caused by poor farming and timber activities of the past. TMDLs completed for fecal coliform violations indicate the following possible sources: wildlife, illegal dumping of animal waste in the streams, livestock grazing, misapplication of manure applied to pastureland and cropland, failure of septic systems, and urban development. Following the development of the TMDLs, implementation plans were prepared by the Georgia Department of Natural Resources or the Middle Georgia Regional Development Center under contract with DNR. These implementation plans outlined the existing regulatory and voluntary actions in place, new regulatory and voluntary actions to be enacted by the stakeholders, a timetable to enact the new actions, and a stream monitoring plan. This is intended to meet the pollutant load reduction targets set forth in the TMDL.

Source Water Assessment Plans

The Amendments to the Federal Safe Drinking Water Act has brought about a new approach to ensuring safe and clean drinking water served by public water supplies--advocating prevention of contamination. The U.S. EPA is requiring all states to develop and submit comprehensive source water assessment plans for all source water intakes. The Georgia Department of Natural Resources-Environmental Protection Division contracted with the Middle Georgia RDC to prepare SWAPs for five water source intakes in the Middle Georgia region--Milledgeville-Lamar Ham and James E. Baugh, Eatonton-Little River, and Forsyth-Rocky Creek and Tobesofkee Reservoir. In addition to these SWAPs, the Middle Georgia RDC was contracted by the Macon Water Authority to prepare SWAPs for their Ocmulgee River and Lucas Lake intakes and by the Sinclair Water Authority for their proposed intake on Lake Sinclair. The SWAP study area includes an inner-management zone (seven-mile radius of the intake) and an outer-management zone (20-mile radius of the intake). The SWAP process is divided into three sections: (1) inventory and analysis of water quality data; (2) identification of potential sources of contamination; and (3) establishment of overall water supply watershed susceptibility rankings. For the identification of

potential sources of contamination, the State DNR-EPD provides a list to be inventoried and includes dairy, poultry, hog and cattle operations, airports, fuel facilities/underground storage tanks, mines/quarries, power plants, oil and gas pipelines, railways adjacent to or crossing over streams, roads adjacent to or bridges crossing streams, to name a few.

Table 4.1

Streams in the Macon/Bibb County Area on the Final 2002 303 (d) List					
Waterbody Name	Location	Basin	Water Use Classification	Criterion Violated	Violation Designation (Partially or Non-Supporting Use)
Colaparchee Creek	Upstream Lake Wildwood (Monroe/Bibb Co.)	Ocmulgee	Fishing	Biota	Partially Supporting
Ocmulgee River	Walnut Creek to Tobesofkee Creek (Bibb Co.)	Ocmulgee	Fishing	Fish Consumption Guidelines	Partially Supporting
Ocmulgee River	Tobesofkee Creek to Echeconnee Creek (Bibb/Twigg Co.)	Ocmulgee	Fishing	Fecal Coliform, Fish Consumption Guidelines	Partially Supporting
Rocky Creek	Upstream Lake Wildwood (Monroe/Bibb Co.)	Ocmulgee	Fishing	Biota	Partially Supporting
Rocky Creek	1 mi. u/s Rocky Creek Rd. to Tobesofkee Creek, Macon (Bibb Co.)	Ocmulgee	Fishing	Fecal Coliform	Partially Supporting
Tobesofkee Creek	Lake Tobesofkee to Rocky Creek	Ocmulgee	Fishing	Fecal Coliform	Partially Supporting
Walnut Creek	Headwaters to Ocmulgee River (Jones/Bibb Co.)	Ocmulgee	Fishing	Biota, Fecal Coliform	Not Supporting

Using a methodology developed by the State DNR-EPD, each potential contaminant source was ranked based on its susceptibility of impacting the water source intake. Using these rankings, the overall susceptibility rankings were derived. Below is the overall intake susceptibility for the eight intakes.

1. Lamar Ham (Milledgeville) – Medium
2. James E. Baugh (Milledgeville) – Medium
3. Little River (Eatonton) – Low
4. Rocky Creek (Forsyth) – Medium
5. Tobesofkee Reservoir (Forsyth) – Low
6. Ocmulgee River (MWA) – Low
7. Lucas Lake (MWA) – Medium
8. Lake Sinclair (SWA) – Low

There were several potential contaminant sources that received a high susceptibility rating and they were:

1. Ham Intake - Eatonton East WPCP, Eatonton West WPCP; City of Eatonton sewer area, City of Milledgeville sewer lines along Tobler Creek and Oconee River
2. Baugh Intake - Same as Ham intake
3. Little River Intake - Green Gable Dairy Farm
4. Rocky Creek Intake - George Green Dairy Farm and MP Poultry
5. Tobesofkee Reservoir Intake – None
6. Ocmulgee River Intake - River North Subdivision lift stations and sewer area
7. Lucas Lake Intake - Same as Ocmulgee River intake
8. Lake Sinclair Intake - Eatonton East WPCP, Eatonton Sewer Area

Georgia's Environmental Planning Criteria

In 1989, the Georgia General Assembly passed into law the Georgia Planning Act. In Part V of the Act, the Georgia Department of Natural Resources was given the responsibility of developing minimum standards and procedures for the protection of the following natural resources: wetlands, groundwater recharge areas, and water supply watersheds. Protected river corridors, such as the Ocmulgee, Oconee, and Flint and mountains were added in 1991. The Planning Act mandates that every local government comply with these minimum protection standards that apply to the five resources that are located in their jurisdiction in order to maintain the local government's Qualified Local Government certification. Every local government in the region has adopted their respective environmental criteria ordinance with the exception of Monroe County and the City of Warner Robins. These two jurisdictions must adopt their ordinances by October 2006 and June 2005, respectively.

Georgia NPDES Stormwater Management Program

The Georgia Department of Natural Resources established a NPDES construction storm water general permit system that became effective August 2003. There are three types of permittees involved in this process: (1) Primary - owners, general contractors and operators of a project; (2) Secondary - individual builders, utility companies, and utility contractors within common developments; and (3) Tertiary - individual builders within a surface water drainage area where the primary permittee has submitted a notice of termination for the surface water area. There are also three types of general stormwater permits: (1) Stand Alone - intended for sites that have no secondary permittees that are infrastructure projects, i.e. convenience stores, strip malls; (2) Infrastructure - intended for linear projects constructed by utilities or infrastructure contractors, i.e. road construction; transmission of electricity, gas, water, and sewer; and (3) Common Development - intended for construction activities with secondary and tertiary permittees, i.e. residential subdivisions, malls without parcels. To be covered under a general construction storm water permit, several items are needed from the permittees: (1) complete Notice of Intent (NOI); (2) develop and implement an Erosion, Sedimentation, and Pollution Control Plan; and (3) submit a Notice of Termination when the project is completed and site meets the definition of final stabilization. The general

storm water permits apply to all sites or common developments which disturb 1.0 acre of ground or greater, including smaller tracts within a common development that is larger than one acre where storm water may leave the site. There is \$80 per disturbed acre fee that is charged by EPD if the project is not regulated by a Local Issuing Authority. If a Local Issuing Authority (City or County) is involved in the permitting process, \$40 per disturbed acre goes to the City or County and \$40 per disturbed acre goes to EPD.

Bibb County and the City of Macon participate in the Federal Phase 1 NPDES (National Pollutant Discharge Elimination System) Municipal Stormwater (MS4-Municipal Separate Storm Sewer Systems) Permitting Program. The primary objective of this Program is to control and monitor stormwater pollutant discharge in the streams with the City of Macon and Bibb County. In their permit application to the Georgia Department of Natural Resources-Environmental Protection Division, the City and County identified the measures they would undertake to meet this objective.

There are several communities in the Middle Georgia region that have been required to participate in the Federal Phase II NPDES Small Municipal Stormwater (MS4s) Permitting Program. These communities are: Centerville, Payne City, Warner Robins, Houston County, Jones County, and Peach County. Each community is required to develop, implement, and enforce a Storm Water Management Program (SWMP) for the portion of their jurisdiction that is within the MS4s program area. SWMP must address the following six “minimum control measures.

- Public Education and Outreach on Storm Water Impacts,
- Public Participation/Involvement,
- Illicit Discharge Detection and Elimination,
- Construction Site Storm Water Runoff Control,
- Post Construction Storm Water Management in New Development and
- Redevelopment, and
- Pollution Prevention/Good Housekeeping for Municipal Operations.

For these six minimum control measures, the community identifies any storm water problems known to exist within its jurisdiction. Once this is completed, best management practices (BMPs) are selected and measurable goals set to address each problem.

Source: Middle Georgia Regional Plan

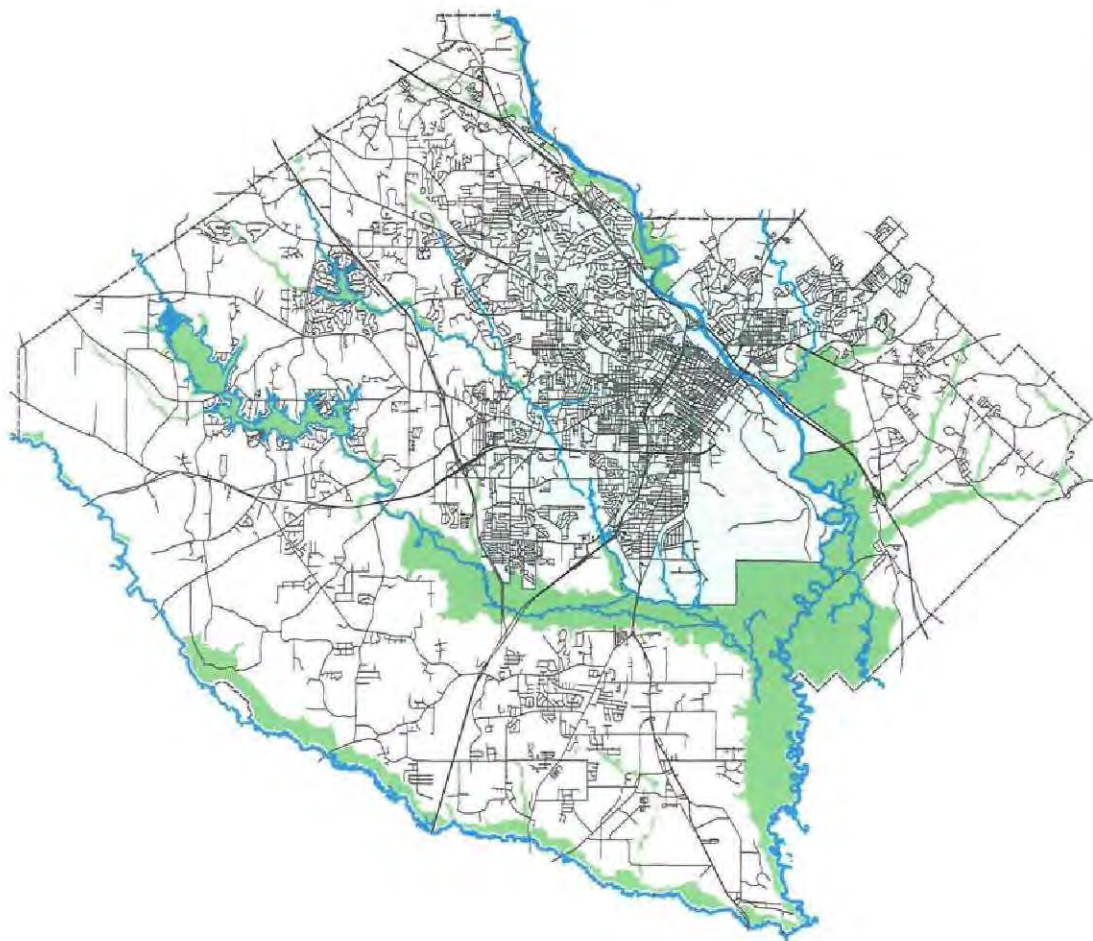
STEEP SLOPES

*Description:***COASTAL RESOURCES***Description:***FLOOD PLAINS**

Floodplains are generally considered areas of normally dry land bordering a river or stream, which has a probability of flooding. The Flood Hazard areas are often called the 100-year floodplain, which is that part of the floodplain that has a one-percent chance of a flood in any given year. Development in the flood hazard areas should be limited for several reasons. First, the restriction of development in such areas protects life and property. This was illustrated during the flood of 1994. Second, flood hazard areas provide a natural storage area for storm water in times of heavy runoff. This limits the severity of flooding in areas that are important within the study area. Flood hazard areas present the greatest constraints for development in areas along Tobesofkee Creek. The Industrial, Cochran Short Route, Airport, Hartley Bridge, and Lizella/Fulton Mill Sectors also face great constraints upon their development. This is a result of large areas of land lying in the flood hazard area. The main limitation of development in the 100-year flood plain is the adoption of flood plain regulations by the City and County. These regulations do not necessarily prohibit development but do greatly increase the cost of development in the 100-year flood plain. Neither the City nor the County has prohibited development entirely from the floodplain. Neither the City nor County has overtly encouraged development in the floodplain. However, if a development can meet the stringent requirements of the local, state and federal governments, the Water Authority in all probability would be able to provide service. An example would be the two relocations of Rocky Creek north and south of Eisenhower Parkway to allow for expansion of the Macon Mall and the new shopping center next to Macon V 0 Tech. Figure 4.4 displays the 100-year floodplain for Macon—Bibb County.

100 Year Floodplain

Figure 4.4



Legend

- Streets & Highways
- Major Waterways
- City of Macon
- Bibb County
- 100 Year Floodplain



SHARED VISIONS
Planning Smart Choices
Our Comprehensive Planning Process
Macon-Bibb County Planning and Zoning Commission

Figure 4.4

SOILS

Soil plays a vital role in sustaining human welfare and assuring future agricultural productivity and environmental stability. Specific soils may act as a limiting factor for certain land uses. There are 11 (eleven) different soil associations within Bibb County. These associations classify the soils into major groups within similar characteristics. Within each soil association, the soils are mapped in more refined units called soil series. The land area of Bibb County (approximately 162,000 acres) contains 41 different soil series identified in the Soil Conservation Study. These soil series are characteristic of piedmont and coastal plain areas. The characteristics of the soils have an influence on development; soils and their characteristics can increase construction costs, create drainage problems, cause erosion and sedimentation problems, and prevent the use of septic tanks. The impact that the soils have on development will be taken into account when developing future land uses for the County. Soil associations in Macon-Bibb County having high suitability for urban development are the Norfolk-Orangeburg, Orangeburg-Faceville, and Vacluse-Cowarts-Ailey associations. These associations present no major problems to development. Soil associations having intermediate suitability for urban development are Vaclus-Lakeland, Lakeland-Ailey, Cowarts-Norfolk-Fuquay, Cecil-Davidson, and Wilkes-Vance. These associations have moderate to severe erosion problems. Larger lots are needed for septic tanks due to slow subsoil percolation; however, such problems can usually be overcome through proper engineering techniques. Soil associations having low suitability for urban development are Cecil-Vance and Vance-Helena-Wilkes. These associations have moderate to severe erosion problems, slow subsoil percolation, and shrink-well problems. These problems, especially those of shrink-well, are more difficult to overcome even with proper engineering practices. The Chewacla-Congaree-Hydraquents association is located in the floodplain areas of Macon-Bibb County. Development on this association should be extremely limited because of potential severe flooding conditions. Macon-Bibb County has many different types of soil of which some are very consistent and safe to build on and others are not. A list of soils in the City and County are included on the following pages, their classifications and recommended uses. Following the soil classification and building site development Table 4.2, is a table that shows the acres and proportion of soil types commonly found within Bibb County, Table 4.3.

Below is the key for the terms used within the Soil Classifications and Building Site Development.

- Slight—Limitation indicates that soil properties generally are favorable for the specified use; any limitations are minor and easily overcome.
- Moderate—Limitations indicate that soil properties and site features are unfavorable for the specified use, but the limitations can be overcome or minimized by special planning and design.
- Severe—Limitations indicate that one or more soil properties or site features are so unfavorable or difficult to overcome that a major increase in construction effort, special design, or intensive maintenance is required.

Source: 2015 Macon—Bibb County Comprehensive Plan

**Areas of water greater than 40 acres total 2,375 acres. These areas are not included in the table. Source: The soil survey of Bibb County, Georgia
Source: 2015 Macon – Bibb County Comprehensive Plan*

PLANT AND ANIMAL HABITATS

Flora

Bibb County is very fortunate to have an abundance of trees that are important for several environmental reasons. They help to prevent erosion by breaking the velocity of falling raindrops. Their root system holds the soil together to prevent further erosion and they act as a physical barrier to reduce the velocity runoff. The leaf matter on the ground increases the absorption capacity of the soil by holding excess water until the soil can absorb the water. The trees provide shade to reduce temperatures. They release oxygen, carbon dioxide and water vapor into the atmosphere. The leaves act as filters for dust and help to absorb noise. Trees provide the essential habitat for many birds and animals.

The tree species are the only plants listed within the Table 4.4 because they are the largest and most permanent plants. Though smaller flora species are important in the natural environment, they can be replaced much more quickly than trees. The smaller flora species are so numerous that a list of all flora species would be an entire report. A complete list of the tree species that exist in Bibb County is shown below. Only one known species of endangered plants is found in the region. This is a small fern that has been found on Brown's Mountain.

Table 4.2

Soil Classifications and Building Site Development

Soil Name	Shallow Excavations	Dwellings w/o Basements	Dwellings w/ Basements	Small Commercial Buildings	Local Roads and Streets
AgB-Ailey	Slight	Slight	Slight	Moderate Slope	Slight
CeB-Cecil	Moderate Too Clayey	Slight	Slight	Moderate Slope	Moderate Low Strength
CeC, CeD-Cecil	Moderate Too Clayey	Moderate Slope	Moderate Slope	Severe Slope	Moderate Low Strength
CeuC	Moderate	Slight	Slight	Moderate Slope	Moderate Low Strength
CK	Severe Floods	Severe Floods	Severe Floods	Severe Floods	Severe Floods
CO	Severe Floods	Severe Floods	Severe Floods	Severe Floods	Severe Floods
CwB	Moderate Wetness	Moderate Wetness	Moderate Wetness	Slight	Slight
CwC	Moderate Wetness	Moderate Wetness	Moderate Wetness	Moderate Slope	Slight
DgB	Moderate Too Clayey	Slight	Slight	Moderate	Moderate Low Strength
DhC2, DhD2	Moderate too Clayey	Moderate Slope	Moderate Slope	Severe Slope	Moderate Low Strength
FdA, FdB	Moderate Too Clayey	Slight	Slight	Slight	Moderate Low Strength
FdC	Moderate Too Clayey	Slight	Slight	Moderate Slope	Moderate Low Strength
FsB	Slight	Slight	Slight	Slight	Slight
FsC	Slight	Slight	Slight	Moderate Slope	Slight
Gr	Severe Floods	Severe Floods	Severe Floods	Severe Floods	Severe Floods
HyB	Severe Too Clayey	Severe Shrink	Severe	Severe	Severe
HyC	Severe Too Clayey	Severe	Severe	Severe	Severe
HZ	Severe	Severe	Severe	Severe	Severe
LaC	Severe	Slight	Slight	Moderate Slope	Slight
LaD	Severe Cutbanks	Moderate Slope	Moderate Slope	Severe Slope	Moderate Slope
NhA, NhB	Slight	Slight	Slight	Slight	Slight
OcA, OcB	Slight	Slight	Slight	Slight	Slight
OcC	Slight	Slight	Slight	Slight	Slight
OcuC	Slight	Slight	Slight	Moderate Slope	Slight
Os	Severe Floods	Severe Floods	Severe Floods	Severe Floods	Severe Floods
VaB	Severe Too Clayey	Severe Low Strength	Severe Low Strength	Severe Low Strength	Severe
VaC, VBD2	Severe Too Clayey	Severe Low Strength	Severe Low Strength	Severe Slope	Severe
VeC	Slight	Slight	Slight	Moderate Slope	Slight
VeD	Moderate Slope	Moderate Slope	Moderate Slope	Moderate Slope	Moderate Slope
VuC	Slight	Slight	Slight	Slight	Slight
WvC	Moderate Depth to Rock	Slight	Moderate Depth to Rock	Moderate Slope	Slight
WvD	Moderate Depth to Rock	Moderate Slope	Moderate Slope	Severe Slope	Moderate Slope

Table
4.3

ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS IN BIBB COUNTY*			
Map Symbol	Soil Name	Acres	Percent
AgB	Ailey loamy sand, 2 to 6% slopes	5,160	3.2
CeB	Cecil sandy loam, 2 to 6% slopes	4,490	2.8
CeC	Cecil sandy loam, 6 to 10% slopes	5,865	3.6
CeD	Cecil sandy loam, 10 to 17% slopes	6,460	4.0
CeuC	Cecil-Urban land complex, 2 to 10% slopes	4,890	3.0
CK	Chewacla association	23,965	14.7
Co	Congaree silt loam	4,630	2.8
CwB	Cowarts sandy loam, 2 to 5% slopes	6,965	4.3
CwC	Cowarts sandy loam, 5 to 8% slopes	3,400	2.1
DgB	Davidson loam, 2 to 6% slopes	1,760	1.1
DhC2	Davidson clay loam, 6 to 10% slopes	1,865	1.1
DhD2	Davidson clay loam, 10 to 17% slopes, eroded	845	0.5
FdA	Faceville sandy loam, 0 to 2% slopes	720	0.4
FdB	Faceville sandy loam, 2 to 5% slopes	1,050	0.6
FdC	Faceville sandy loam, 5 to 8% slopes	200	0.1
FsB	Fuquay loamy sand, 1 to 5% slopes	2,420	1.5
FsC	Fuquay loamy sand, 5 to 8% slopes	665	0.4
Gr	Grady sandy loam	510	0.3
HyB	Helena sandy loam, 2 to 6% slopes	2,080	1.3
HyC	Helena sandy loam, 6 to 10% slopes	2,900	1.8
HZ	Hydraquents	2,575	1.6
LaC	Lakeland sand, 2 to 8% slopes	4,560	2.8
LaD	Lakeland sand, 8 to 17% slopes	1,540	0.9
NhA	Norfolk sandy loam, 0 to 2% slopes	2,740	1.7
NhB	Norfolk sandy loam, 2 to 5% slopes	7,415	4.6
OeA	Orangeburg sandy loam, 0 to 2% slopes	895	0.6
OeB	Orangeburg sandy loam, 2 to 5% slopes	3,860	2.4
OeC	Orangeburg sandy loam, 5 to 8% slopes	1,090	0.7
OeD	Orangeburg sandy loam, 8 to 12% slopes	625	0.4
OeuC	Orangeburg-urban land complex, 0 to 8% slopes	3,360	2.1
Os	Osier loamy sand	3,110	1.9
Pt	Pits	1,010	0.6
UD	Urban Land	3,675	2.3
VaB	Vance sandy loam, 2 to 6% slopes	2,790	1.7
VaC	Vance sandy loam, 6 to 10% slopes	4,500	2.8
VbD2	Vance sandy clay loam, 10 to 17% slopes, eroded	6,575	4.0
VeC	Vaughan loamy sand, 4 to 8% slopes	2,215	1.4
VeD	Vaughan loamy sand, 8 to 17% slopes	10,250	6.4
VuC	Vaughan-Urban land complex, 2 to 8% slopes	9,245	5.7
VuD	Vaughan-Urban land complex, 8 to 15% slopes	2,615	1.6
WvC	Wilkes gravelly sandy loam, 5 to 10% slopes	2,030	1.2
WvD	Wilkes gravelly sandy loam, 10 to 17% slopes	4,955	3.0
Total		162,560	100

Common Name	Scientific Name	Common	Habitat
Ash, Green	Fraxinus Pennsylvannia		Fertile Moist Soils
Ash, White	Fraxinus Americana		Fertile Moist Soils
Baldcypress	Taxodium distichum		River Swamps
Beech, American	Fagus Grandifolia		Along Swamps
Birch, River	Betula Nigra	C	Stream Banks
Boxelder	Acer Nequundo		Along Stream
Catalpa, Southern	Catalpa Bignonoides		Along Streams
Cedar, Eastern Red	Juniperus Virginiana		Limestone Ridges
Cherry, Black	Prunus Serotina		Deep Rich Soils
Chinkapin, Allegheny	Castanea Pumila		Dry Sandy Soils
Cottonwood, Eastern	Populus Deltoides		Along Streams
Crab Apple	Malus Coronaria		
Dogwood, Flowering	Cornus Florida	C	Fertile Well Drained Soils
Elm, American	Ulmus Americana		Fertile Soils Along Streams
Elm, Slippery	Ulmus Rubra		Stream Banks
Elm, Winged	Ulmus Alta		Dry Gravelly Uplands
Hackberry, Common	Celtis Tenuifolia		Hillsides
Hawthorne	Crataegus		Along Streams & Open Field
Hickory, Bitternut	Carya Cordiformis		Along Streams & Swamps
Hickory, Carolina	Carya Carolinae		Flat Woods
Hickory, Mockernut	Carya Tomentosa	C	Well Drained Soils
Hickory, Pignut	Carya Glabra	C	Poor Soils
Hickory, Red	Carya Ovalis	C	Fertile Soils on Hillsides
Hickory, Sand	Carya Pallida		Sandy Soils
Hickory, Shagbark	Carya Ovata		Along Streams
Holly, American	Ilex Opaca		Fertile Moist Soils
Hophornbeam, Eastern	Ostrya Virginiana		Stream Banks
Hornbeam, American	Caprinus Caroliniana		Along Streams
Locust, Black	Robinia pseudoacacia		Hillsides
Locust, Honey	Gleditsia Triacanthos		Along Streams
Magnolia, Big leaf	Magnolia Macrophylla		Moist Soils
Magnolia, Southern	Magnolia Grandiflora		Streams & Swamps
Magnolia, Sweetbay	Magnolia Virginiana		Moist Soils
Magnolia, Umbrella	Magnolia Tripetula		Along Streams

Maple, Chalk	Acer Leucoderme		Highsides
Maple, Florida	Acer Barbatum		Hardwood Stands
Maple, Red	Acer Rubrum		
Mimosa	Albizia Julibrissen	C	
Mulberry, Red	Morus Rubra		Fertile Soils
Oak, Laurel	Quercus Laurifolia		Along Streams
Oak, Black	Quercus Velutina		Uplands
Oak, Blackjack	Quercus Marilandica		Poor Dry Soils
Oak, Northern	Quercus Rubra		Fertile Soils
Oak, Overcup	Quercus Lyrata		Streams & Swamps
Oak, Post	Quercus Stellate		Dry Sandy Soils
Oak, Scarlet	Quercus Coccinea		Dry Sandy Soils
Oak, Shumard	Quercus Shumardii		Fertile Soils
Oak, Southern Red	Quercus Falcata		Uplands
Oak, Swamp Chestnut	Quercus Michauxii		Streams & Swamps
Oak, Water	Quercus Nigra		Stream Banks
Oak, White	Quercus Alba		Rich Moist Soils
Oak, Willow	Quercus Phellos		Flats on Coastal Plain
Peach	Pranus Persica		Orchards
Pecan	Carya Illinoensis		Orchards
Persimmon	Diospyros Virginiana		Well Drained Soils
Pine, Loblolly	Pinus Taeda	C	Uplands
Pine, Longleaf	Pinus Palustris		Dry Sandy Soil
Pine, Pond	Pinus Serotina		Swamps
Pine, Shortleaf	Pinus Echinata	C	Clay Soils
Pine, Slash	Pinus Elloittii		Moist Sandy Soils
Pine, Spruce	Pinus Glabra		Wet Sandy Soils
Poplar, Yellow	Liriodendron Tulipifera	C	Deep Fertile Moist Soils
Redbud, Eastern	Cercis Canadensis		Fertile Soils
Sassafras	Sassafras Albidum		Dry Soil
Serviceberry, Downy	Amelanchier Arborea		Along Streams
Silverbell, Carolina	Halesia Carolina		Stream Banks & Hillsides
Sourwood	Oxydendrum Arboreum		Fertile Soils
Sugarberry	Celtis Lavigata		Swamps
Sweetbay	Magnolia Virginiana		Streams & Swamps
Sweetgum	Liquidambar Styraciflua	C	Along Streams & Swamps
Sycamore, American	Platanus Occidentalis		Stream Bank
Tulip Tree, Yellow Poplar	Liriodendron Tulipifera	C	Deep Fertile
Tupelo, Swamp	Nyssa Sylvatica Biflora		Along Streams
Tupelo, Black	Nyssa Sylvatica		Swamps
Walnut, Black	Juglans Nigra		Fertile Soils
Willow, Black	Salix Nigra		Steam Banks

Table 4.4 TREES
Wildlife In Macon-Bibb County

Bibb County is fortunate in having many species of mammals, birds, reptiles, amphibians and fish. Bibb County contains a variety of habitats due to the Fall Line running through it. The habitat varies, from the upland pines and hardwood commons to the Piedmont, to the extensive Ocmulgee River Swamp common to the Coastal Plain.

Because Bibb County is a transitional area for the natural habitats, the extremes in habitats afford a greater diversity of species than can be found either farther north into the Piedmont or farther south into the Coastal Plain. Consequently, it is important that each habitat type be preserved so that future generations can enjoy the natural wildlife that now exists in the County.

Mammals

Mammals are abundant in Bibb County due in part because no open hunting season is permitted within the County. Migration, by the larger mammals, in and out of the County to adjacent counties where hunting is permitted, stabilizes the mammal population. The mammal species list, Table 4.5 on the following page, was compiled with the assistance of Professor T.P. Haines (Biology Department, Mercer University and Mr. Wayne Thomaston (Georgia Fish and Game Commission). Both Professor Haines and Dr. Thomaston have lived and worked in the Macon-Bibb area for years and are extremely familiar with the area's fauna. The latest possible addition to the list is the coyote.

Table 4.5 MAMMAL HABITATS

Species	Common	Open Fields	Upland Fields	Pure Pine	Bottomland Hardwood	Field Succession	Water	Pine Hardwood	Human Habitation	Forest/Field Edges
Opposum	C	X	X	X	X	X	X	X	X	X
Southeastern Shrew		X				X		X		
Shorttail Shrew	C	X		X	X			X		
Least Shrew		X			X	X		X		
Eastern Mole	C	X	X	X	X	X		X	X	X
Little Brown Myotis Bat		X					X			X
Mississippi Mvotis Bat		X					X			X
Silver Haired Bat		X					X			X
Eastern Pipistrel Bat		X					X			X
Red Bat		X	X		X		X			X
Bi Brown Bat	C	X	X		X		X			X
Hoary Bat		X	X		X		X			X
Seminole Bat		X	X		X		X			X
Evening Bat		X	X		X		X			X
Eastern Yellow Bat		X					X			
Eastern Big-eared Bat		X					X			
Mexican Freetail Bat	C	X					X			
Raccoon	C	X	X	X		X	X	X	X	X
Longtail Weasel					X		X			
Mink					X		X			
River Otter							X			
Spotted Sunk			X	X	X	X	X	X	X	
Striped Sunk	C		X		X	X	X			
Red Fox	C	X	X	X	X	X		X		X
Gray Fox	C		X		X		X		X	X
Bobcat		X	X	X	X		X		X	
Eastern Chipmunk	C		X	X		X	X		X	X
Eastern Gray Squirrel	C		X		X					
Eastern Fox Squirrel		X		X			X			
Southern Flying Squirrel	C		X	X	X					
Beaver	C		X	X						
Eastern Harvist Mouse		X			X	X	X	X		X
Cotton Mouse	C		X		X	X	X	X		
Golden Mouse				X	X		X			
Eastern Woodrat		X				X	X			
Rice Rat	C	X					X	X		
Hispid Cotton Rat	C	X				X	X			X
Pine Vole			X		X					
Muskrat	C							X		
Norway Rat	C	X			X	X	X			
House Mouse	C	X	X		X		X	X	X	X
Wood Mouse		X	X				X	X	X	X
Eastern Cottontail	C			X	X	X	X	X	X	X
Rabbit										
Swamp Rabbit					X	X	X	X		
Marsh Rabbit					X	X	X			
Wild Pig		X	X	X	X		X	X	X	
Whitetail Deer	C	X	X		X	X		X		X
Black Bear							X	X		
Covpu (Nutria)							X	X	X	

Source: 2015 Macon-Bibb County Comprehensive Plan

Birds

Numerous species of birds are present in Macon-Bibb County due to the variety of habitat and abundance of trees. Many birds are able to coexist with humans where other animals cannot because of their ability to fly and achieve a safe domain. The following bird species list was compiled with the assistance of Professor Haines of the Biology Department of Mercer University. **Table 4.6 BIRD HABITAT**

Species	Common	Migratory	Open Fields	Upland Hardwood	Pure Pine	Bottomland Hardwood	Field Succession	Water	Pine/Hardwood	Human Habitation	Forest & Field
Common Loon								X			
Horned Grebe								X			
Pied-billed Grebe	C							X			
Great Blue Heron								X			
Green Heron	C							X			
Little Blue Heron	C							X			
Cattle Egret	C		X					X			
Common Egret								X			
Yellow-cr. N Heron								X			
Mallard								X			
Black Duck								X			
Gadwall								X			
Pintail Duck								X			
Blue-winged Teal								X			
American Widgeon								X			
Shoveller								X			
Wood Duck	C					X		X			
Redhead								X			
Ringnecked Duck								X			
Canvasback								X			
Lesser Scaup								X			
Common Goldeneye		M						X			
Bufflehead								X			
Ruddy Duck								X			
Hooded Merganser								X			
Turkey Vulture	C		X				X			X	X
Black Vulture	C		X				X			X	X
Sharp-shinned Hawk				X	X	X	X		X		X
Cooper's Hawk				X	X	X	X				X
Redtail Hawk	C		X				X				X
Red-shouldered Hawk			X				X				X
Marsh Hawk			X				X	X			
Osprey								X			
Sparrow Hawk			X				X				X
Bobwhite	C		X				X				X
Turkey				X		X					X
American Coot		M						X			
Killdeer			X								
American Woodcock	C		X			X	X	X			X
Common Snipe			X				X	X			X
Spotted Sandpiper								X			
Pectoral Sandpiper								X			
Herring Gull								X			
Common Tern								X			
Black Tern								X			
Rock Dove (Pigeon)	C		X				X			X	
Mourning Dove	C		X		X		X		X	X	X

Ground Dove	C		X				X			X
Yellow-billed Cuckoo				X		X	X		X	X
Screech Owl				X	X	X			X	X
Great Horned Owl				X		X			X	X
Barred Owl	C					X		X		X
Chuck-will's-widow			X		X		X		X	X
Whip-poor-will			X		X		X		X	X
Common Nighthawk			X		X		X		X	X
Chimney Swift	C			X		X				X
Ruby-th. Hummingbird	C			X		X				X
Belted Kingfisher	C							X		
Flicker	C				X				X	X
Pileated Woodpecker				X	X	X			X	
Red-bellied Woodpecker	C			X	X	X			X	
Red-headed Woodpecker				X	X	X			X	
Yellow-bellied Sapsucker	C			X	X	X			X	
Hairy Woodpecker				X	X	X			X	
Downy Woodpecker				X	X	X			X	
Eastern Kingbird			X				X			X
Great-crested Flycatcher				X		X			X	
Eastern Phoebe			X				X			X
Acadian Flycatcher						X				
Eastern Wood Pewee				X	X	X			X	
Horned Lark		M	X							
Tree Swallow	C				X			X	X	X
Bank Swallow								X		
Rough-winged Swallow								X		
Barn Swallow			X				X			X
Cliff Swallow			X					X		
Purple Martin	C		X							X
Blue Jay	C			X	X	X			X	X
Common Crow	C		X	X		X	X		X	X
Carolina Chickadee		M		X		X			X	X
Tufted Titmouse		M		X		X		X		X
White-breasted Nuthatch				X		X				X
Red-breasted Nuthatch				X		X			X	
Brown-headed Nuthatch					X				X	
Brown Creeper				X	X	X			X	
House Wren	C					X				X
Winter Wren						X	X			X
Carolina Wren	C					X	X			X
Mockingbird	C						X			X
Catbird	C						X			X
Brown Thrasher	C					X	X			X
Robin	C	M	X				X			X
Wood Thrush						X			X	X
Hermit Thrush						X			X	
Swainson's Thrush					X	X			X	
Gray-Cheeked Thrush					X	X			X	
Veery						X			X	
Eastern Bluebird			X				X			X
Blue-gray Gnatcatcher						X				
Golden Crowned Kinglet		M			X				X	X
Ruby Crowned Kinglet					X				X	X
American Pipit			X				X			
Cedar Waxwing		M		X		X	X		X	X
Loggerhead Shrike			X				X			X
Starling	C		X				X		X	X
White-eyed Vireo	C			X		X	X		X	X

Yellow-throated Vireo				X		X		X	X		X
Solitary Vireo				X		X			X		
Red-eyed Vireo				X		X				X	
Philadelphia Vireo				X		X			X		
Black & White Warbler				X		X					
Prothonotary Warbler	C					X		X			
Worm-eating Warbler						X					
Tennessee Warbler						X			X		
Orange-crowned Warbler						X					
Parula Warbler				X	X	X		X	X		
Yellow Warbler	C					X	X			X	
Magnolia Warbler						X					
Cape May Warbler						X					
Black-throated Blue Warbler				X	X	X			X		
Myrtle Warbler	C	M				X					
Blackburnian Warbler				X		X					
Yellow-throated Warbler					X	X			X		
Chestnut-sided Warbler						X	X				X
Bay Breasted Warbler					X				X		
Blackpoll Warbler					X				X		
Pine Warbler					X				X		
Prairie Warbler					X		X		X		X
Palm Warbler							X	X			X
Louisiana Warbler								X			
Kentucky Warbler						X					
Yellow-throat							X				X
Yellow-breasted Chat				X		X					
Hooded Warbler						X					
American Redstart						X					
House Sparrow	C						X			X	
Bobolink			X				X				X
Eastern Meadowlark	C		X				X			X	
Red-winged Blackbird	C		X				X	X		X	
Orchard Oriole		M					X			X	X
Baltimore Oriole										X	X
Rusty Blackbird		M				X		X			
Common Grackle	C		X		X		X		X	X	X
Brown-headed Cowbird		M	X				X			X	X
Scarlet Tanager				X		X			X		
Summer Tanager				X					X		
Cardinal	C						X			X	X
Rose-breasted Grosbeak							X			X	X
Blue Grosbeak							X				X
Indigo Bunting	C						X				X
Purple Finch				X		X				X	X
Pine Siskin					X				X		
American Goldfinch			X				X				X
Rufus-sided Towhee	C					X	X		X	X	X
Savannah Sparrow			X				X				
Vesper Sparrow			X				X				
Bachman's Sparrow			X				X				
Slate-coloured Junco		M				X	X			X	X
Chipping Sparrow		M	X				X			X	
White-throated Sparrow		M		X		X			X	X	
Field Sparrow			X				X				
Fox Sparrow				X		X			X		X
Swamp Sparrow		M					X	X			X
Song Sparrow			X				X			X	X
Total Bird Species 165											

Source: 2015 Macon – Bibb County Comprehensive Plan

Reptiles

Numerous reptile species are found within Macon-Bibb County. The variety in habitat plus the warm mild climate create conditions favorable to the reptilians. The initial list was compiled from Amphibians and Reptiles of Georgia by Bernard S. Martof. The final list was compiled with the assistance of Professor Haines of the Biology Department of Mercer University.

Table 4.7 REPTILES

Common Name	Scientific Name	Common	Piedmont	Coastal Plain	Comments
Snapping Turtle	Chelydra serpentine serpentine	C	P	C	
Musk Turtle	Sternotherus odoratus		P	C	
Dark-striped Must Turtle	Sternotherus carinatus peltifer		P		
Dark-spotted Musk Turtle	Sternotherus carinatus minor			C	
Mud Turtl	Kinosternon subnubrum	C	P	C	
Box Turtle	Terrapene Carolina Carolina	C	P	C	
Eastern Painted Turtle	Pseud emys picta picta		P	C	
Cooter (Coastal plain turtle)	Pseud emys floridana floridana			C	
Yellow-bellied Turtle	Pseud emys scripta scripta	C	P	C	
Southern soft-shelled Turtle	Trionys ferox ferox	C		C	
Agassiz's soft-shelled turtle	Trionys ferox agassizi			C	
American Alligator	Alligator mississippiensis	C		C	Endangered Species
Carolina Anole	Anolis carolinensis carolinensis		P	C	
Southern Fence Lizard	Scelopours undulatus undulatus	C		C	
Northern Fence Lizard	Sceloporus undulatus hyacinthinus				
Eastern Glass Lizard	Ophisaurus ventralis	C		C	
Slender Glass Lizard	Ophisaurus attenuatus longicauctus		P	C	
Brown Skink	Lygosoma laterale	C	P	C	
Five-lined Skink	Eumeces fasciatus	C	P	C	
Greater-five lined Skink	Eumeces laticeps		P	C	
Florida five-lined Skink	Eumeces inexpectatus		P	C	
Striped red-tailed Skink	Eumeces egregius egregius			C	
Queen Water Snake	Regina septemvittata	C	P	C	
Florida Green Water Snake	Natrix cyclopion floridana			C	
Red-bellied Water Snake	Natrix erythrogaster erythrogaster	C	P	C	
Midwestern Banded Water Snake	Natrix siepedon pleuralis	C	P		
Florida Banded Water Snake	Natrix fasciata pictiventris			C	
Brown Water Snake	Natrix taxispilota	C	P	C	
Wright's Brown Snake	Storeria dekayi wrightorum	C	P	C	
Florida Brown Snake	Storeria dekayi victa			C	
Red-bellied Snake	Storeria occipitomaculata occipitomaculata		P		
Eastern Ribbon Snake	Thamnophis sauritus sauritus		P	C	

Eastern Garter Snake	Thamnophis sirtalis sirtalis	C	P	C	
Rough Earth (Southern Ground)	Haldea striatula	C	P	C	
Smooth Earth (Eastern Ground)	Haldea valeriae valeriae		P	C	
Eastern Hog-nosed Snake	Heterodon platyminos		P	C	
Southern Hog-nosed Snake	Heterodon simus			C	
Southeastern Ring-necked Snake	Diadophis punctatus punctatus	C	P	C	
Eastern Worm Snake	Carphophis amoenus amoenus		P	C	
Rainbow Snake	Abastor erythrogrammus				
Eastern Mud Snake	Farancia abacura abacura			C	
Black Racer	Coluber constrictor constrictor	C	P	C	
Eastern Coachwhip	Masticophis flagellum flagellum	C	P	C	
Keeled Green Snake	Opheodrys aestivus	C	P	C	
Corn Snake	Elaphe guttata guttata		P	C	
Black Rat Snake	Elaphe obsoleta obsoleta	C	P	C	
Four-lined Rat Snake	Elaphe obsoleta quadrivittata	C			
Brown King Snake	Lampropeltis calligaster rhombomaculata		P	C	
Eastern King Snake	Lampropeltis getulus getulus		P		
Scarlet King Snake (milk)	Lampropeltis triangulum doliata	C	P	C	
Scarlet Snake	Cemophora coccinea	C	P	C	
Crowned Snake	Tantilla coronata coronata	C	P	C	
Eastern Coral Snake	Micruis fulvius fulvius		P	C	
Southern Copperhead	Agkistrodon contortrix contortrix	C	P	C	
Eastern Cottonmouth	A. piscivorus piscivorus	C		C	
Carolina Pigmy Rattlesnake	Sistrurus miliarius miliarius		P	C	
Southeastern Pigmy Rattlesnake	Sistrurus miliarius barbouri		P	C	
Canebrake Rattlesnake	Crotalus horridus aticaudatus	C		C	
Eastern Diamondback Rattlesnake	Crotalus adamanteus			C	
Total Species 59					

Source: 2015 Macon – Bibb County Comprehensive Plan

Amphibians

A lack of information exists on the amphibians of Macon-Bibb County. Because of this, the amphibian species list was compiled using Martof's Amphibians and Reptiles of Georgia. The amphibian species list is complete – that is, in that all of the amphibians that exist in Macon-Bibb County are listed through the list may contain species that are not present in Macon-Bibb County. **Table 4.8 AMPHIBIANS**

Common Name	Scientific Name	Common	Piedmont	Coastal Plain	Comments
Southern Mudpuppy	Necturus punctatus			C	
Great Siren	Siren lacertian			C	
Eastern Dwarf Siren	Siren intermedia intermedia			C	
Broad-striped Mudsiren	Pseudobranchius striatus striatus			C	
Eastern Reticulated Salamander	Ambystoma cingulatum cingulatum			C	
Mabee's Salamander	Ambystoma mabeei			C	
Spotted Salamander	Ambystoma maculatum		P	C	
Marbled Salamander	Ambystoma Opacum	C	P	C	
Eastern Tiger Salamander	Ambystoma tigrinum tigrinum	C		C	
Newt (Red Spotted)	Diemictylus viridescens viridescens	C	P	C	
Two-toed Congo El	Amphiuma means means	C	P	C	
Northern Dusky Salamander	Desmognathus fuscus fuscus	C	P		
Southern Dusky Salamander	Desmognathus auriculatus fuscus			C	
Brimley's Dusky Salamander	Desmognathus fuscus brimleyorum	C		C	
Green-sided Slimy Salamander	Plethodon glutinosus chlorobryonis	C	P	C	
Northern Red Salamander	Pseudotriton ruber ruber	C	P		
Southern Red Salamander	Pseudotriton ruber vioscai	C		C	
Southern Two-lined Salamander	Eurycea bislineata cirrigera	C	P	C	
Southern Two-lined Salamander	Eurycea longicauda guttolineata	C	P	C	
Dwarf Four-toed Salamander	Manculus quidridigitatus	C		C	
Eastern Spadefoot Toad	Scaphiopus holbrookii holbrookii	C		C	
Oak Toad	Bufo quercicus	C		C	
Southern Toad	Bufo terrestris	C		C	
American Toad	Bufo terrestris americanus	C	P		
Fowler's Toad	Bufo woodhousei fowleri	C		C	
Southern Cricket Frog	Acris gryllus gryllus	C		C	
Cricket Frog	Acris crepitans gryllus	C	P		
Green Tree Frog	Hyla cinerea cinerea	C		C	
Spring Peeper	Hyla crucifer crucifer	C	P	C	
Bird-voiced Tree Frog	Hyla phaeocrypta			C	
Squirrel Tree Frog	Hyla squirella			C	
Common Tree Frog	Hyla versicolor versicolor	C	P	C	
Easter Chorus Frog	Pseudacris nigrita ferarum	C	P	C	
Southern Chorus Frog	Pseudacris nigrita nigrita	C		C	
Ornate Chorus Frog	Pseudacris ornate	C		C	
Eastern Narrow-mouthed Toad	Microphya carolinensis		P	C	
Bull Frog	Rana catesbeiana	C	P	C	
Southern Green Frog	Rana clamitans clamitans	C		C	
Northern Green Frog	Rana clamitans melanota	C	P		
Pig Frog	Rana grylio	C		C	
Southern Leopard Frog	Rana sphenoccephala pipiens	C	P	C	
Total Species 39					

Source: 2015 Macon – Bibb County Comprehensive Plan

Fish

The Ocmulgee River, its tributaries, Lake Tobesofkee, and the small ponds throughout the County provide habitats for many fish. As a result, sufficient sport fishing on the Ocmulgee River, both north and south of the City of Macon, is an important recreational activity for community residents. Some game species frequently caught are largemouth bass, white bass, striped bass, channel catfish, chain pickerel (jacks) and the sun-fishes (bream). Except for the game species, very little identification of the fish species native to Macon and Bibb County has occurred. The initial fish species list came from Michael D. Dahlberg's and Donald Scott's 1971 publication, "The Freshwater Fishes of Georgia." Minor revisions were made to the list with the assistance of Wayne Thomaston of the Georgia Fish and Game Commission and by using Samuel Eddy's *How to Know Freshwater Fishes*. The fish species list probably contains all of the species that exist in Macon and Bibb County, though a few species on the list are probably not found in Macon and Bibb County. Table 4.9 on the following pages shows what fish can be found in Bibb County. **Table 4.9 FISH**

Common Name	Scientific Name	Common	Ocmulgee	Tobesofkee	Rocky	Savage	Walnut
Longnose Gar	Lepisosteus osseus						
Florida Gar	Leovisostus vlatvrihincus						
Bowfin/Black Fish	Amia Calva	C	X	X			
Blueback Herring	Alosa aestivalis						
American Shad	Alosa sapidissima						
Gizzard Shad	Dorosoma cepedianum						
Threadfin Shad	Dorosoma petenense						
Redfin Pickerel	Esox americanus	C	X				
Chain Pickerel	Esox niger	C	X				
Stoneroller	Camptostoma anomalum						
Gold Fish	Carassius auratus						
Common Crap	Cyprinus carpio						
Silvery Minnow	Hybognathus nuchalis						
Redeye Chub	Hybopsis harperi						
Rosyface Chub	Hybopsis rubrifrons						
Bluehead Chub	Nocomis leptcephalus						
Golden Shiner	Notemigonus crvsoleucas						
Ocmulgee Shiner	Notropis callisema						
Troncolor Shiner	Notropis chalybaeus						
Dusky Shiner	Notropis cummingsae						
Spottail Shiner	Notropis hudsonius						
Sailfin Shiner	Notropis hypselopterus						
Ohoopee Shiner	Notropis leedsii						
Yellow Fin Shiner	Notropis lutipinnis						
Taillight Shiner	Notropis maculatus						
Coastal Shiner	Notropis petersoni						
Alstnaha Shiner	Notropis xaenurus						
Highfin Carpsucker	Carpiodes sp. fvelifer						
Creek Chubsucker	Erimyzon oblongus						
Lake Chubsucker	Erimyzon sucetta						
Spotted Sucker	Minytrema melanops						
Siliver Red Horse	Moxostoma anisurum	C					
Striped Jumprock	Moxostoma rupiscartes						
Green Bullhead	Ictalurus brunneus						

Yellow Bullhead	Ictalurus natalis						
Brown Bullhead	Ictalurus nebulosus						
Flat Bullhead	Ictalurus platycephalus						
Channel Catfish	Ictalurus punctatus	C	X				
Tadpole Madtom	Noturus gyrinus						
Speckled Madtom	Noturus leptacanthus						
Swamp Fish	Chologaster cotnuta						
Pirate Perch	Aphredoderus sayanus						
Golden Top Minnow	Fundulus chrysotus						
Starhead Top Minnow	Fundulus notti						
Mosquito Fish	Gambusia affinis	C	X			X	X
Least Killfish	Heterandria formosa						
Brook Silversides	Labidesthes						
White Bass	Rocco chrysops		X				
Striped Bass	Foccus saxatilis		X				
Mud Sunfish	Acantharchus pomotis						
Flier	Centrarchus macropterus						
Everglades Pygmy Sunfish	Elassoma evergladei						
Banded Pygmy/Dwarf Sunfish	Elassoma Zonatum	C	X		X	X	
Blue Spotted Sunfish	Enneacanthus Gloriosus						
Banded Sunfish	Enneacanthus Obesus						
Red Breast Sunfish	Lepomis Auritus	C	X				
Blue Gill	Lepomis macrochirus	C	X				
Dollar Sunfish	Lepomis marinatus						
Redear Sunfish	Lepomis microlophus	C					
Largemouth Bass	Micropterus salmoides	C	X				
White Crappie	Promoxis annularis	C	X				
Black Crappie	Pomoxis nigromaculatus						
Swamp Darter	Etheostoma Fusiforme						
Christmas Darter	Etheostoma Hopkinsi						
Pineswoods Darter	Etheostoma inscriptum						
Tessalated Darter	Etheostoma olmstedti						
Goldstripe Darter	Etheostoma parvipinne						
Yellow or American Perch	Perca Flavescens						
Blackbanded Darter	Percina nigrofasciata						
American Eel	Anguilla rostrata	C	X		X		
Johnnv Darter	Etheostonia nigrum						
White Mullet	Mugil curema						
Striped Mullet	Mugil cephalus						
Warmouth	Chaendryttus gulosus	C	X				

Source: 2015 Macon – Bibb County Comprehensive Plan

Endangered Animal Species

The only endangered animal species known to exist in Bibb County is the American Alligator that has made a remarkable comeback since the sale and possession of alligator skins were made illegal. The alligator is now common on the Ocmulgee River in the Coastal Plain and in the brickyard ponds south of downtown Macon. Other animals on the endangered species list that were at once present in Bibb County include the Ivory-billed and Red-cockaded Woodpecker. Yet due to the destruction of their habitat - old mature stands of timber - they were forced to migrate elsewhere. Additionally, the Eastern Cougar was probably present not too long ago but has not been common since the early 1800's. A few of the endangered species occurred infrequently in Bibb County or only during migration. See Table 4.10.

Table 4.10—Protected Species of Plants and Animals Potentially Present in Macon-Bibb County

Common Name	Scientific Name	Habitat	Present	Potentially	Not likely to be present	Status
MAMMALS						
Indiana Bat	Myotis Sodalis	Limestone caves and hollow trees			X	Endangered
Eastern Cougar	Felis concolor	Large unmolested swamps with available deer			X	Endangered
BIRDS						
Southern Bald Eagle	Haliaeetus leucocephalus	Along rivers and lakes during migration		X		Endangered
American Peregrine Falcon	Falco peregrinus anatum	Coastal plain swamps and bayous			X	Endangered
Ivory-billed Woodpecker	Campephilus principalis principalis	Overmature bottomland hardwoods (No sightings for years in Ga.)			X	Endangered
Red-cockaded Woodpecker	Dendrocopos borealis	Overmature pine infested with Red Heart Disease		X		Endangered
Kirtland's Warbler	Dendroica kirtlandii	Migration only		X		Endangered
Bachman's Warbler	Vermivora bachmanii	Migration only			X	Endangered
FISH						
Shortnose Sturgeon	Acipenser brevirostrum	Major rivers along the coast			X	Endangered
Southern Cave Fish	Typhlichthys subterraneus	Underground streams – mainly in Northwest Georgia			X	Endangered
AMPHIBIANS & REPTILES						
American Alligator	Alligator mississippiensis	Rivers, river swamps, ponds and lakes	X			Endangered
Georgia Blind Cave Salamander	Haideotriton wallacei	Underground streams and caves known only in the upland limestone karst system in the Dougherty Plain Region			X	Unusual
Pine Barrens Tree Frog or Anderson's Tree Frog	Hyla andersoni	Pine barren swamps		X		
Indigo Snake	Drymarchon corais couperi			X		Endangered

Source: 2015 Macon – Bibb County Comprehensive Plan

OTHER SIGNIFICANT SENSITIVE AREAS

AIR QUALITY

Through funding received from the Georgia General Assembly, beginning in the summer of 2000, a team of researchers from Georgia Institute of Technology conducted a four-year study to: (1) assess urban and regional air pollution; (2) identify the sources of pollutants; and (3) recommend solutions to improve air quality in metropolitan areas of along Georgia's Fall Line--Augusta, Macon and Columbus. The primary focus of the Fall Line Air Quality Study (FAQS) was to address ground-level ozone. The study revealed that Macon failed to meet the Environmental Protection Agency's eight-hour ozone ambient air quality standard. As a result, on April 15, 2004, the City of Macon and portions of Monroe County were placed on EPA's non-attainment list for failing to meet this standard. To give some background, ground-level ozone is formed by volatile organic compounds (VOCs), such as fuels, paints, solvents, and vegetation. According to the FAQS, a total of 373 tons per day of VOCs emitted, of which, approximately 78% came from biogenic sources (vegetation). Since there is not much that can be done to reduce VOCs, the attention moves to the sources of nitrogen oxides (automobiles, factories/power plants, off-road equipment). Figure 4.5 provides a chart showing VOC sources in the Macon MSA.

VOC Sources in Macon MSA (2000)

Total: 373 tons per day

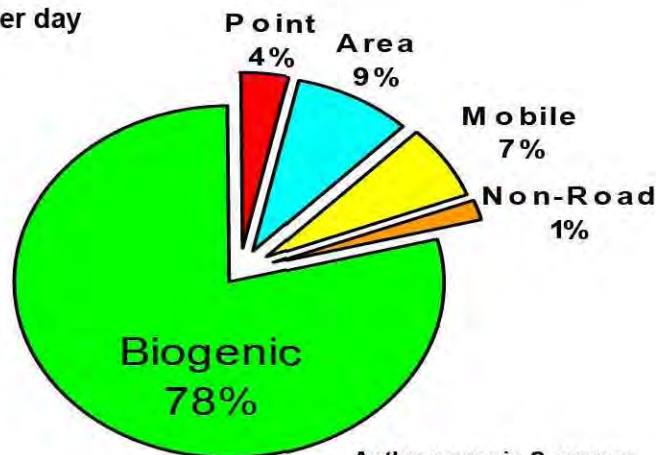


Figure 4.5

Anthropogenic Sources:

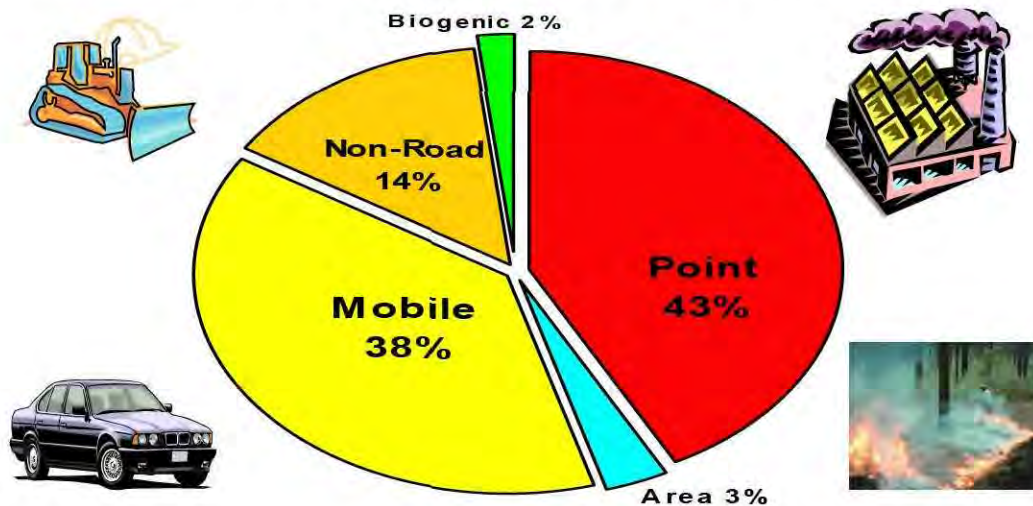
- Cars
- Solvents (Paints, Automotive Products, Adhesives, etc.)
- Gasoline Stations
- Tobacco curing
- Paper manufacture

Source: Middle Georgia Air Quality: Opportunities for Change; Presentation to the Middle Georgia Clean Cities Coalition, May 11, 2004; Georgia Institute of Technology

The Fall Line Air Quality Study estimated that in the year 2000 for the Macon MSA, there was a total of 78 tons per day of nitrogen oxides emitted. Of that total, 43% of the nitrogen oxides (NOX) came from point sources, such as factories and power plants; 38% was derived from mobile sources (automobiles and trucks); 14% from non-road sources (tractors, construction equipment); 3% from area sources (open burning); and 2% from biogenic sources (vegetation). Figure 4.6 provides a chart showing NOX sources in the Macon MSA.

NO_x Sources in Macon MSA (2000)

Figure 4.6



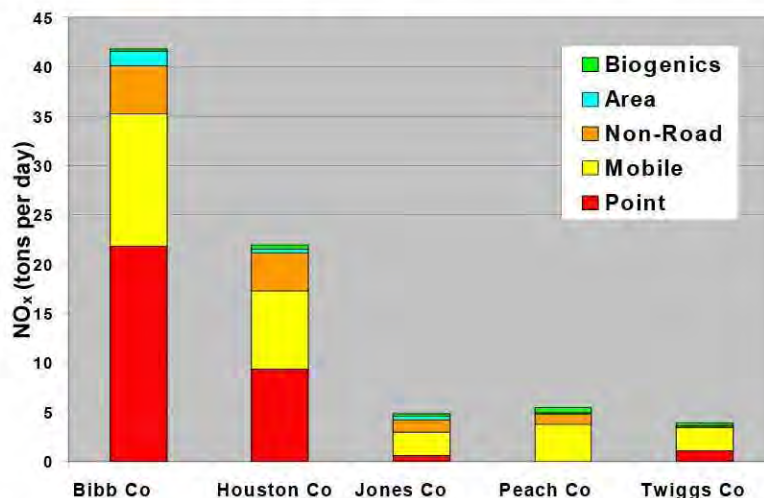
Total: 78 tons per day

Source: Middle Georgia Air Quality: Opportunities for Change; Presentation to the Middle Georgia Clean Cities Coalition, May 11, 2004; Georgia Institute of Technology

Looking at the five counties in the Macon MSA for year 2000 (Bibb, Houston, Jones, Peach, and Twiggs—has since changed as result of 2000 Census) individually, Bibb County produced the largest amount of nitrogen oxides, approximately twice the amount as the next highest county, Houston County. Jones, Peach, and Twiggs Counties produced less nitrogen oxides collectively than Houston County. Taking into consideration the impact of the various sources on nitrogen oxide levels, the percent attributed to point, mobile and non-road sources in Bibb and Houston Counties were relatively equal and near the percentage totals noted above for the Macon MSA as a whole. In the other three counties, mobile sources contributed to the majority of the nitrogen oxides emissions, with point and non-road sources accounting for most of the remaining emissions output. Figure 4.7 provides a chart showing NOX sources by the five counties in the Macon MSA.

NO_x Sources by County: Year 2000

Figure 4.7



Source: Middle Georgia Air Quality: Opportunities for Change; Presentation to the Middle Georgia Clean Cities Coalition, May 11, 2004; Georgia Institute of Technology

Another important observation that came from the FAQs is the nitrogen oxide emissions from the neighboring counties to the 2000 Macon MSA. Figure 4.8 provides a chart comparing NOX emissions for surrounding counties. In Putnam County, nitrogen emissions were approximately 110 tons per day, or 29% higher than the five-county Macon MSA, while Monroe County had nitrogen oxide emissions around 120 tons per day or 36% higher than the Macon MSA. The reason for this is the presence of Plant Branch in Putnam County and Plant Scherer in Monroe County. Both accounted for over 95% of the nitrogen oxide emissions. Since 2000, Georgia Power Company has been required to install equipment to both plants to reduce the nitrogen oxide emissions to meet tougher air quality requirements. Though these improvements will help, both power plants will still be major sources of nitrogen oxide emissions, and may be required to make further improvements to both facilities. Decisions will have to be made as to how much further improvement can be made to air quality without becoming cost prohibitive.

Neighboring County NO_x Emissions (2000)

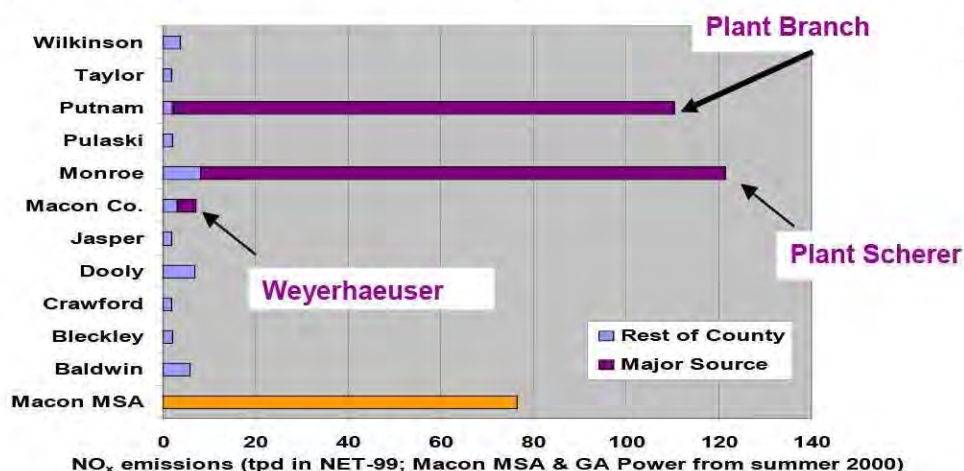


Figure 4.8

Source: Middle Georgia Air Quality: Opportunities for Change; Presentation to the Middle Georgia Clean Cities Coalition, May 11, 2004; Georgia Institute of Technology

Part of the Fall Line Air Quality Study involved modeling for the sensitivity of the eight-hour ozone at the Sandy Beach park FAQS site and the Macon EPD site in east Macon for year 2007. The modeling looked at nitrogen oxide levels for eight days in August and an eight-day average and proportioning the nitrogen oxide emissions to the various sources. The model factored in the various growth factors and all changes to the sources (decommissioning of power plants, added air quality equipment to the power plants, factory shutdowns, etc.). In addition, the model determined how much the emissions would be reduced (in parts per billion) by source (mobile, area and nonroad, point, Atlanta, Plant Scherer, and Plant Branch) and location (Sandy Beach Park and Macon EPD sites) with every change of ten tons of nitrogen oxide emissions. Ozone is not the only air quality problem that the Macon area faces. Levels of particulate matter are also above EPA's national ambient air quality standard. It is likely that the Macon area will also be classified as non-attainment for particulate matter when EPA issues the final designations in December 2004. Table 4.11 compares particulate matter levels for major cities in Georgia.

Table: 4.11—PM_{2.5} Levels for Georgia Cities

Metro Area	PM _{2.5} Annual NAAQS Design Value, 2001-2003 (ug/m ³)
Atlanta	18.1
Augusta	15.2
Macon	15.2
PM _{2.5} NAAQS	15.0
Savannah	13.8
Columbus	14.7

Two organizations have recently been formed to address the air quality issue in the Middle Georgia region. The first is the Middle Georgia Clean Cities Coalition, Inc. Designated by the U.S. Department of Energy in 2003, the Middle Georgia Clean Cities Coalition is one of 80 coalitions throughout the country given the responsibility through their approved program plan to help facilitate alternative fuel vehicle purchase and conversion, advance technology vehicle purchase (such as the hybrids), expanding alternative fuels and fuel blends infrastructure, promoting idle reduction and increasing vehicle fuel economy. This is all intended to meet the Clean Cities Program mission to improve air quality, reduce the dependence on foreign energy resources, and create new jobs and commercial opportunities. Formed officially by charter in May 2004, the Middle Georgia Clean Air Coalition (MGCAC) is a partnership of the city and county governments of Bibb, Crawford, Houston, Jones, Monroe, Peach, and Twiggs Counties. The MGCAC has three main principles: (1) accepts and supports the national air quality standards and advocates immediate community action to attain those goals; (2) believes air quality is a regional issue that defies political boundaries and that collaboration is essential for solutions; and (3) recognizes all actions must be based on objective scientific data. The MGCAC has identified several short-term strategies which it hopes will make an immediate positive impact on air quality in the region. These strategies are: truck stop electrification; commuter strategies; open burning ban during high ozone days; alternative fueled school bus fleets; and public education and awareness. In addition, the Coalition is also reviewing strategies with more long-term impact, such as, developing public-private partnerships, smart growth planning, etc. and examining new funding sources for clean air projects.

Source: Middle Georgia Regional Plan

SIGNIFICANT NATURAL RESOURCES

SCENIC VIEWS AND SITES

The City of Macon and Bibb County is a beautiful and intrinsic element of Georgia. Rich in history and culture, the area is considered a tourist destination point for thousands of visitors every year. There are several scenic areas throughout the area, such as Brown's Mount located in Southeast Bibb County. This area is locally important and the property that encompasses Brown's Mount is owned by the Museum of Arts and Sciences and by the U.S. Government. There is one specific scenic area that is considered regionally significant such as the Ocmulgee River Plain Corridor. While there has long been grassroots' interest in highlighting and providing protective enhancements to this area, it is only recently that a concerted effort amongst various stakeholders has begun to take shape.

Ocmulgee River Plain Corridor

The recently released Ocmulgee River Basin Management Plan 2003 provides an excellent resource for those seeking more information on this vital resource. A copy of the plan is available at the offices of the Middle Georgia RDC. The plan provides relevant information on the characteristics of the Ocmulgee River Basin, identifies present and future water resource demands, describes implementation of water quality protection efforts in an effort to enhance stakeholder understanding and involvement in the basin planning effort.

Identified objectives for the area include:

- Protecting water quality;
- Providing adequate water supply;
- Preserving habitat;
- Protecting human health; and
- Ensuring opportunities for economic growth, development, and recreation in the region.

The implementation strategies are not especially specific. The plan calls for increased monitoring, coordination among stakeholders in order to improve communication, a blending of voluntary and regulatory approaches, and suggests future data collection activities. One very active group concerned with the Ocmulgee River Plain Corridor is the Macon Blueprints for Successful Communities Committee. Made up of a wide variety of stakeholders working closely with NewTown Macon and the Georgia Conservancy, a steering committee has been meeting since early 2002. According to the representatives, the vision of the steering committee is to increase understanding and raise awareness of the Ocmulgee River and the adjacent cultural and natural resources. The local steering committee agreed that this vision can best be achieved through pursuing a National Heritage Corridor (NHC) designation for the Ocmulgee River area. The feasibility of NHC designation is currently being studied, and actual designation will be pursued in 2004. The concept for the Ocmulgee National Heritage Corridor is an outgrowth of multiple, ongoing efforts by the citizens of Macon, Bibb County, and the surrounding area to promote, enhance, and conserve the natural and cultural resources of the Ocmulgee River and adjacent lands. The purpose of seeking National Heritage Corridor designation is to increase understanding and raise awareness of the Ocmulgee River and the adjacent cultural and natural resources. It is an effort to rediscover and reconnect people with the river after decades of neglect. Several recent initiatives converge in the heritage corridor concept. Over the past seven years, a public-private effort has been underway to develop the Ocmulgee Heritage Trail, a proposed tenmile path along the river, now under construction. Since 1997, NewTown Macon has been working to revitalize downtown Macon and key areas along the Ocmulgee River. Recently, the National Trust for Historic Preservation has become involved with the City in a project to reconnect Macon's historic neighborhoods with the downtown and the river via a series of pedestrian walk-

ways and corridors. Each of these efforts provides synergy for the others and contributes to the strength of a NHC.

Stated goals of the proposed Ocmulgee National Heritage Corridor include:

- Design and implement approaches to education and interpretation that promote the natural and cultural heritage of the Ocmulgee River;
- Offer implementation strategies for the protection of the Ocmulgee River resources; and
- Promote economic development that incorporates the natural, cultural, and historic resources of the Ocmulgee River corridor.

Identified themes of the proposed Ocmulgee National Heritage Corridor include:

- Native American History and Culture,
- Transportation, and
- Architecture and Urban Fabric.

While current emphasis is being placed on areas of the corridor proximate to the City of Macon, parallel efforts and interest is beginning to develop in the adjacent counties. Representatives from these other areas are meeting to discuss the feasibility of extending the proposed boundaries of the NHC or possibly pursuing alternative methods for obtaining similar goals at a large-scale watershed level. It is not likely that currently or in the future, the Ocmulgee River Corridor will be affected by inappropriate land uses and other human activity. The partnership of local governments and other stakeholders noted above, along with the regulatory and voluntary measures currently in place are adequate to manage and protect this regionally significant scenic area. The implementation of the source water protection plans for the Ocmulgee River and Lucas Lake water source intakes and other regulatory/voluntary measures identified in the TMDL plans will further strengthen this protection effort. In addition, there are policies or activities recommended in other parts of this Technical Staff Report which support this effort to protect and effectively manage this corridor. Within the Land Use element, the projected land use patterns map identifies the area along the Ocmulgee River from Lake Juliette in Monroe County to Hawkinsville as being a future conservation area. Public improvements identified in the Public Facilities and Infrastructure Element that will be financed by federal funds will require an environmental assessment to be completed as mandated by federal law. This assessment requires that impacts to water quality be examined including to the Ocmulgee River.

The scenic view from Bond Street in front of Mercer University's Law School and above Coleman Park could be impacted by the development of the one remaining vacant lot. However, Coleman Park and building height restrictions protect most of this scenic view.

PRIME AGRICULTURAL AND FOREST LAND

Very little prime agricultural and forest land remains in the County. Most has already been rezoned for other land uses. Some prime agricultural land still exists along the Southern rim of the County. Lands that were once considered prime agricultural are now broken into small land tracts. Much of the prime agricultural has already become residential. As this trend is most likely to continue, information is available at the Middle Georgia RDC which identifies all prime farm land by county. The conversion of agricultural lands mirrors population growth statistics and transportation corridors as expected. In addition to residential, commercial, and industrial development, it was noted that former field crop land is now being used to grow forest crops, primarily single species stands of Loblolly pine. Few orchard crops are being newly established in the region. Although in some cases, existing orchards are being replanted. Over the past three decades, agriculture has continued to diminish in its importance to the overall economy of Middle Georgia. While there is an expressed interest on the part of residents to maintain, at least to some extent, the rural character and nature of the area, the Greenspace Program is an attempt to address those issues. Figure 4.9 displays the agricultural zones within Macon-Bibb County.

Agricultural Zones

Figure 4.9

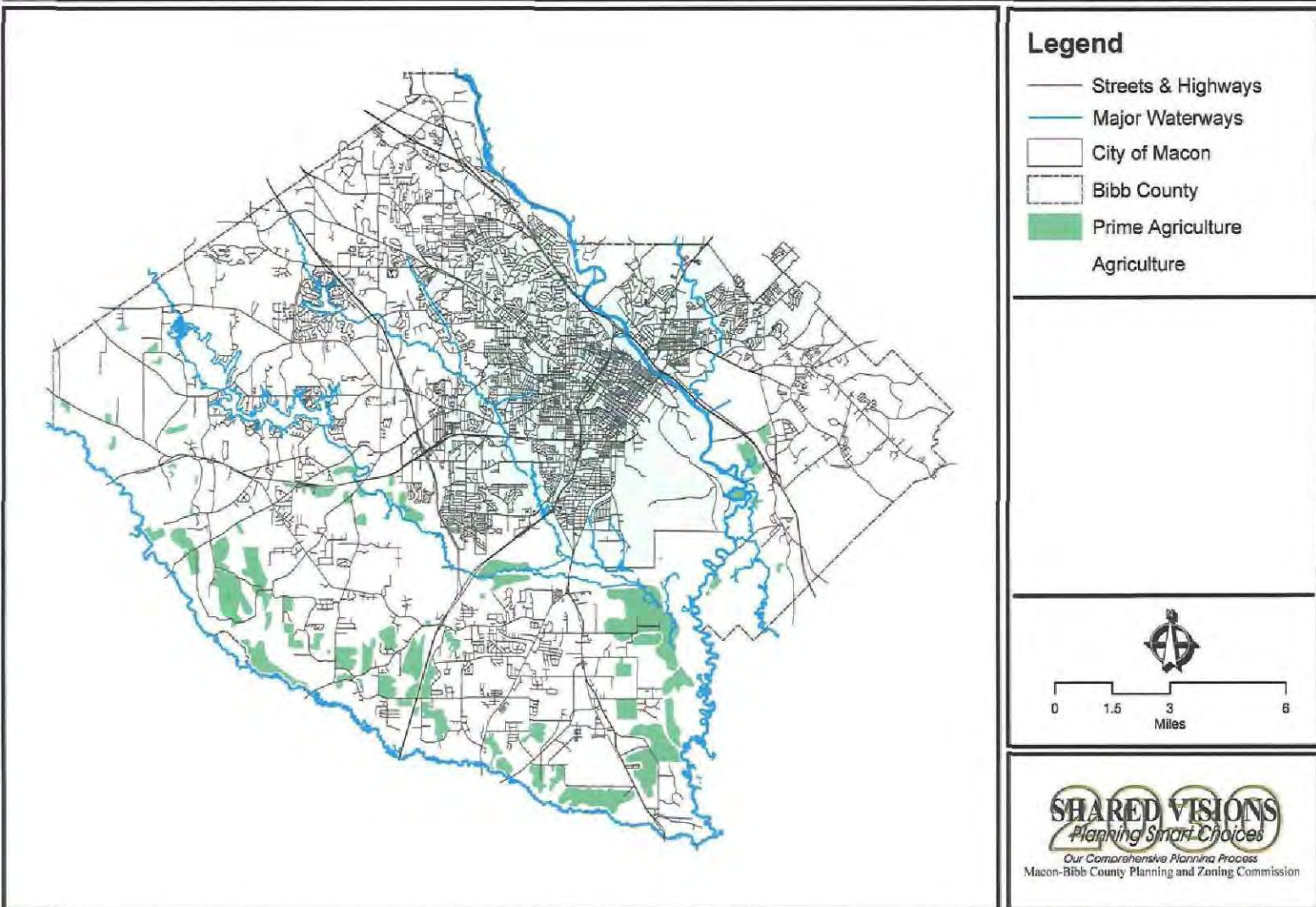


Figure 4.9

MAJOR PARK, RECREATION AND CONSERVATION AREAS

The City of Macon and Bibb County has an abundance of parks, recreational and conservation areas throughout, one of which is Lake Tobesofkee. Construction of the lake was begun under the direction of the Bibb County Board of Commissioners and the U.S. Conservation Service in the early 1960's and was completed in 1969. Constructed in 1969, Lake Tobesofkee is a man-made recreational lake covering 1,750 acres and is six miles long with a shoreline of 35 miles. Upon completion, Lake Tobesofkee was developed four recreational parks: Flintrock, opened in June 1969; Claystone, opened in June 1969; Arrowhead, opened in June 1970; and Sandy Beach which was opened on July 4, 1975. Currently, The Tobesofkee Recreation Area has three public parks namely Claystone, Sandy Beach and Arrowhead Park. Claystone Park is located on Mosley Dixon Road near I-475 and Arrowhead Park is located on Columbus Road near U.S. 80. Arrowhead and Claystone Parks are open year round and offer clean, spacious campsites that can accommodate tent or RV campers. Both campgrounds offer full electrical and water hook-ups, as well as disposal stations for sanitary purposes. Lake-front or lakeview sites are available along with boat ramps, clean bath facilities, coin operated laundries and a full-time staff of park rangers for your convenience and safety. The campgrounds also offer permanent charcoal grills and picnic tables for campers. All campsites in Claystone Park are paved and half the campsites are paved in Arrowhead Park. Each campground can handle any size recreational vehicle. Sandy Beach has lighted tennis courts and a softball field.

At Lake Tobesofkee you will be able to enjoy fishing, camping, boating, picnicking, tennis and swimming from one of three white sand beaches. This unique recreation facility is located only three miles from Interstate 475 and is less than ten minutes from middle Georgia's largest shopping complex, the modern Macon Mall. Lake Tobesofkee serves people not only from Macon and Bibb County, but from several Middle Georgia counties which qualifies it to be called a major regional park. Figure 4.10 shows the park location that is located within the western portion of the County. Additional regional recreation areas and places of interest within Bibb County are covered in the Archaeological Sites section of this document.

Lake Tobesofkee Area

Figure 4.10

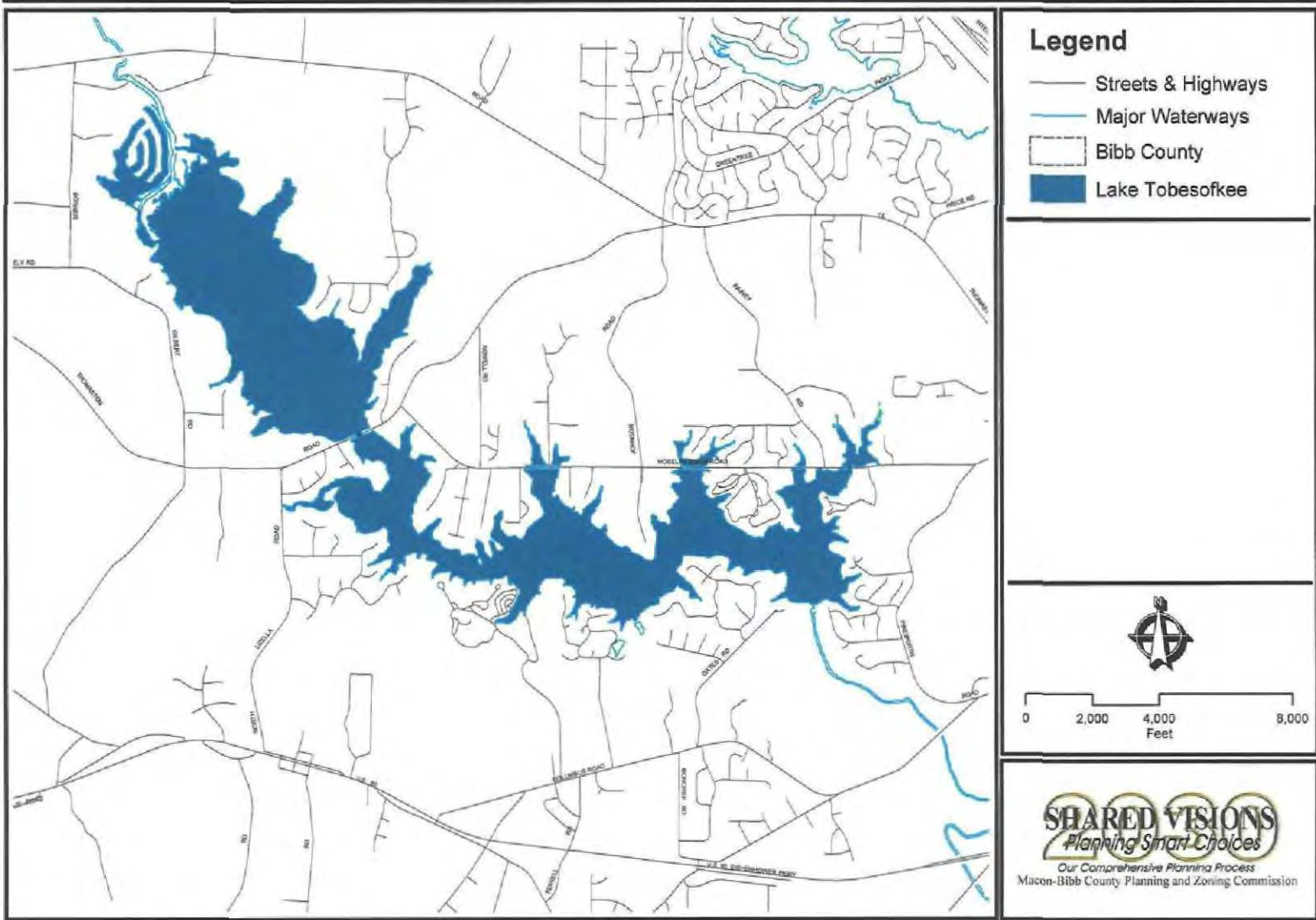


Figure 4.10

The Ocmulgee Mounds National Monument

The Ocmulgee Mounds National Monument is located adjacent to the City of Macon in Bibb County. Established by Congress in 1934, the Ocmulgee National Monument encompasses 702 acres of forested uplands, open fields, year-round wetlands and thickly wooded river floodplain. A relatively undeveloped greenway extends along the river between Ocmulgee National Monument and Bond Swamp National Wildlife Refuge about five miles downstream. Because of its Fall Line location, numerous habitats, and connections to a larger ecosystem, Ocmulgee is home to a wide variety of plant and wildlife species. The Monument consists of two units, the Main Unit and the isolated Lamar Mounds and Village Unit. The two units are separated by two miles of riverine wetlands along the Ocmulgee River. The Main Unit is open year round to visitors, and the Lamar Mounds and Village Unit can be visited by special permit. The Main Unit houses a major archeological museum. Exhibits describe the human habitation of the area from 10,000 BC to the present, the history of the area, and the formation of the park.

Five miles of trails, including the Opelofa, Loop, Bartram, McDougal and Mound Village Trails, connect the major features of the park. During the Early Mississippian Period (AD 900-1150), a thriving culture flourished here on the Macon Plateau. A two-mile road allows easy access to several earthen mounds including the Great Temple Mound, the largest of the seven mounds rising 50 feet from the base, and the Funeral Mound which was the burial place for the leaders of this complex society. Issues of opportunity and concern relate to the park's proximity to Bond Swamp National Wildlife Refuge, the establishment of the Ocmulgee Heritage Trail, and the intended widening and extension of highway systems proximate to the park.

Central City Park

In 1826, just three years after Macon became a city, Central City Park was given to the city by the state legislature. Throughout the history of Macon, this park has played a central role in recreation. Central City Park is a 120 acre site that is home to the City of Macon's Parks and Recreation Department, Georgia Department of Motor Vehicle Safety and the Historic Luther Williams Baseball field. In addition, events such as horse racing, political rallies, military drills, picnics, fairs, reunions, automobile racing, baseball and football games have taken place in this park over the years.

THE OCMULGEE GREENWAY

The Ocmulgee River is a vital resource running through Macon-Bibb County. The Ocmulgee Greenway is a proposed park along sections of the River. The creation of the Greenway would be in response to Governor Zell Miller's River Care 2000 initiative to create greenways along Georgia's rivers. The purpose of these greenways is to provide increased public access to the river for recreational purposes and protect the habitat along the rivers. The Ocmulgee Greenway will consist of a series of public access sites to allow for boating, hiking, observing wildlife and other activities along the Ocmulgee River. The trail will be a ten-mile river walk from the Ocmulgee Mounds to the "Old Waterworks Park" upon completion. Modeled upon the river-city efforts, the river walk will attract both locals and tourists alike to enjoy the Ocmulgee River, the source of ancient and modern civilizations. Charles H. Jones Gateway Park opened in the spring of 2001, and the first mile of the trail opened in the spring of 2002. A statue of Otis Redding "sittn' on the dock" overlooking the Ocmulgee was unveiled in the Gateway Park in the fall of 2002. A second mile of river walk was completed in the Summer of 2003. An Ocmulgee Heritage Trail Interpretive Center is under development, where the history, culture, environment, and recreation along the Ocmulgee River will be celebrated. Construction continues on trails to connect Central City Park and the Ocmulgee National Monument, WaterWorks Park and Riverfront Development.

Bond Swamp National Wildlife Refuge

The Bond Swamp National Wildlife Refuge was established in 1989. It is located six miles south of the City of Macon in Bibb and Twiggs Counties and situated along the Ocmulgee River. The stated mission and purpose of the Refuge is to preserve and protect a diverse, threatened wetland ecosystem and its associated values.

Specifically, the stated goals are:

- To preserve, protect, re-establish, and manage for endangered and threatened species of wildlife;
- To manage for migratory birds with emphasis on providing optimum habitat for wintering waterfowl and neotropical migrants, and enhancing nesting and brood habitat for wood ducks;
- To manage for native wildlife species and their associated habitats; and
- To provide opportunities for compatible public educational, interpretive, and recreational opportunities associated with wildlife and their habitats.

The Refuge first opened to the public for general use on October 21, 2000. Recreational opportunities include hiking trails, wildlife observation, hunting, and fishing. The Refuge includes 6500 acres of bottomland hardwoods, swamp forests, and upland pines. Interspersed throughout the area are creeks, tributaries, beaver swamps, and oxbow lakes. The refuge provides habitat for a diversity of wildlife including bald eagles, wood ducks, migratory waterfowl, wading birds, song birds, white-tailed deer, turkeys, black bears, and alligators. Bond

Swamp is part of the Ocmulgee Heritage Greenway, and is an active Greenway partner. Refuge managers are currently involved with Greenway planners to ensure quality recreational opportunities without infringing on wildlife resources or private property rights.

GREENSPACE PROGRAM

The effort to preserve greenspace in Bibb County is being undertaken by the Bibb County and the City of Macon Greenspace Committee. This committee is made up of citizens, elected and non-elected public officials, and staff of the City of Macon and Bibb County. The elected officials, citizens, committee members and others in the community are of the opinion that Greenspace preservation and establishment is an imperative step in ensuring a good quality of life in Bibb County in the present and future. The Bibb County Commission, Macon City Council, and Payne City have determined that a minimum of 20% (32,437 acres) of Bibb County should be set aside as permanently protected Greenspace. The Macon-Bibb County Parks and Recreation Department has been designated as the Greenspace Coordinator for both Bibb County, City of Macon, and Payne City. The County/City criteria that was agreed upon by the committee parallels that of the State criteria but with some additional measures. The County/City criteria to preserve Greenspace are areas that:

1. Adjoin water sources and provides water quality protection for rivers, streams and lakes
2. Provide floodplain protection
3. Provide wetland protection
4. Reduce erosion through protection of steep slopes, areas with erodible soils, and stream banks
5. Protecting buffers and other areas that serve as natural habitat and corridors for native plant and animal species
6. Protect scenic areas
7. Provide for the enhancement of historical, cultural and archeological areas
8. Provide for recreation in the form of boating, hiking, camping, fishing, hunting, equestrian, running, jogging, biking, walking, roller skating, observing or photographing nature, picnicking, playing non-organized sports or engaging in free play.
9. Provide county-wide connectivity

Summary of County's approach to achieve the 20% goal

To achieve the County greenspace goal of 20 percent or 32,437 acres the county and municipalities will use various methods of the strategic plan to ensure the minimum goal is obtained. Currently, the county has 4,625 acres of protected greenspace within its geographical borders. To achieve the additional 27,811 acres to meet the County Greenspace goal it is anticipated that the majority of the land to be protected will mostly fall within or around the floodplain and wetlands of Bibb County. This is because most of the county's greenspace criteria, such as, riparian buffers, archeological sites, scenic areas, and water resources are within the boundaries of the

floodplain and wetlands. To this end, it is estimated that over 70 percent of the goal will be achieved using areas within the floodplain and wetlands. The following is the estimate of how the various county criteria will assist in meeting the County Greenspace Program goal:

- Floodplain/Wetlands.....6,800-7,800 acres
- Water quality, riparian buffers, and erosion areas.....10,200 acres
- Scenic areas and cultural/historic/archeological areas.....6,800-7,000 acres
- Passive recreation.....2,000-2,500 acres
- County connectivity.....720 acres or 200 miles

Source: The Bibb County Greenspace Grant Application, November 2000

SIGNIFICANT CULTURAL RESOURCES

HISTORIC RESOURCES

The City of Macon contains approximately 55 square miles of land, of which 7% is in one of the ten historic districts. Three of these historic districts, Macon (Intown), Vineville and Cherokee Heights have historic zoning protection.

The Macon Historic District is the most prominent, and includes nearly all of the former area known as the Intown Historic District and the downtown business district. The original town parcels are found within this district. This development pattern extends from the early years of the City until 1942. The district contains 600 acres and was the first local district to be listed on the National Register of Historic Places in 1974. The area contains a range of architectural styles, from Greek Revival to Italian Renaissance Revival, with shotgun type housing found throughout the district.

Residential examples can be found at the follow locations: Greek Revival- 1261 Jefferson Terrace; Second Empire - 1144 Georgia Avenue; Queen Anne - 1085 Georgia Avenue; Folk Victorian - 991 Magnolia Street; Classic Revival- 233 College Street; and Italian Renaissance Revival- 934 Georgia Avenue.

Commercial buildings are found downtown in an area bounded approximately by Walnut Street, Martin Luther King, Jr. Blvd., Poplar Street, and First Street. Institutional buildings are found throughout the district, such as: the Grand Opera House at 639 Mulberry Street, the Federal Building at 475 Mulberry Street and City Hall at 700 Poplar Street.

Numerous churches are in the district, with one of the oldest structures being Christ Episcopal Church, constructed around 1852, located at 538 Walnut Street. The district also contains the only two structures in Macon designated by the U.S. Department of the Interior as National Historic Landmarks: the Carmichael House at 1183 Georgia Avenue and Hay House at 934 Georgia Avenue. The Greek Revival Carmichael House was built around 1848, and is noted for its rotunda. Plans of the house are on file at the Library of Congress. The Hay House was built between 1855 and 1859 and contains 16,000 square feet on four levels. Major original features of the house are the existence of bathrooms and the ventilation system. In 1995 the Hay House had more than 40,000 visitors as it is a main draw for tourists to the City. Other particular points of interest are the Cannonball House at 856 Mulberry Street and the Sidney Lanier Cottage at 935 High Street. The Greek Revival Cannonball House, known for being struck during the Civil War's battle for Dunlap's Hill, is open to the public. The Cottage, also open to the public, was the home of Sidney Lanier, a famous poet. In 1995, 13,593 people visited his home. However, the largest tourist attraction is the Ocmulgee National Monument. The site had approximately 114,544 visitors in 1995, less than in previous years.

Macon boasts 11 Historic Districts listed on the National Register of Historic Places. Macon has more listed historic districts than any other city in Georgia.

Cherokee Brick Historic District

Location: 3250 Waterville Road, Macon - approximately 4000 acres. The brick company was developed between 1877 (Stratton Brick Company) and 1949 (the company name was changed to Cherokee Brick and Tile Company). The prehistoric archaeological sites date from 8000 BC - 150 A.D. The Cherokee Brick and Tile Company historic district represents the entire brick making process from the mining and transportation of clay to the manufacture and shipping of brick. The two principal brick-making buildings at the main plant are the combined Plant Nos 1 and 2 (1920 -22 and 1960s) and Plant No. 3 (1947 - 1949). A large, gambrel-roofed clay storage building (1926) sends clay to both main plant building by overhead conveyors. Finished bricks ready for shipping are stacked along a spur line on the site of earlier kilns. The two straight kilns can produce 100,000 bricks every twenty-four hours; over 130 million bricks are produced annually. The district also includes networks of roads and rail lines, several surviving rail cars, and a plate-girder turntable bridge (1928) across the Ocmulgee River. Archaeological survey and testing on the tract have resulted in the discovery of nine prehistoric sites, seven of which have been recommended eligible. These sites range in age from the Early Archaic period (8000 - 6000 BC) to a previously unreported Mississippian Period Lamar mound complex (A.D. 1450 - 1550) which appears to include a central ceremonial mound and approximately sixteen house mounds.

Cherokee Heights Historic District

The Cherokee Heights Historic District is the smallest historic zoning district with only 67 acres. Roy Street forms the northern boundary, Napier Avenue the southern boundary, Pio Nono Avenue the eastern boundary and Inverness Avenue the western boundary. The area was added to the National Register of Historic Places in 1982, and is the last district to have zoning regulations. The subdivision began around 1909 and experienced construction until the 1950's. The district is mostly residential with a few non-significant commercial structures along Pio Nono Avenue. Such architectural styles as Georgian Revival, English Tudor, Spanish Mission, and Craftsman can be found in this district. The neighborhood is made up of two parts: the original subdivision of 1909 and the subdivision annex of Suwanee Avenue in 1923. Houses in the latter sections were built from the mid 1930s to the 1950s. Macon's Cherokee Heights was placed on the National Register of Historic Places because it was one of the first planned residential and suburban communities in Macon. Developed from 1909 - 1923, the homes are primarily built in the styles of Georgian Revival, English Tudor, Spanish Mission, Craftsman and Bungalow, including many homes designed by Georgian architect, Neel Reid. Cherokee Heights was developed by a real estate developing company, the Vineville Improvement Company. This company provided the first suburban development of its kind in Macon. The area was developed in two phases, the first from 1909 to 1911, and the second in 1923. Businessmen, managers, and other professionals of the early Twentieth Century middle class resided in Cherokee Heights. Location: Bounded by Pio Nono Avenue, Napier Avenue, Inverness Avenue and Suwanee Avenue. Developed: 1909 to 1923. Approx. 67 acres. Planned residential suburban community. Architectural Styles: Georgian Revival, English Tudor, Spanish Mission, Craftsman/Bungalow. Good collection of architect Neil Reid houses.

East Macon Historic District

The East Macon Historic District developed from around 1870 through 1940 and contained approximately 90 acres. The boundaries are Emery Highway, Coliseum Drive, Clinton, Fletcher, and Fairview streets. This section was once part of a larger area known as East Macon. The houses in the district are predominantly wood framed with styles including Queen Anne, Italianate, Neoclassical Revival, and Craftsman. This section was occupied by the white upper-middle class as well as mill workers. This area was listed on the National Register of Historic Places in 1993. East Macon Historic District, located one mile east of the central business district, consists of mid-nineteenth through early twentieth century residential, commercial, and educational development. East Macon's historical significance lies in the architecture of the homes and buildings in the area, as well as the obvious community planning and development. In the 1920's, land in East Macon was sold for settlement and was further developed into the present pattern of large homes on large lots. Beginning in the Twentieth Century,

smaller, more modest homes were incorporated, developing the neighborhood that is still visible today. Architectural Styles: Italianate, Folk Victorian, Neoclassical Revival and Craftsman.

Fort Hill Historic District

Approximately one mile east of Macon's central business district is the Fort Hill Historic District. The Fort Hill District was part of the area known as East Macon mentioned above. The district is roughly bounded by Emery Highway, Second Street Extension, Mitchell, Morrow, and Schaeffer Place. The district covers approximately 140 acres and began developing around 1870. Most of the houses are modest, with styles ranging from Queen Anne, Folk Victorian, Craftsman, to no distinguishable style. A replica of Ft. Hawkins, the early fortification, is within the district. This section of Macon was listed on the National Register of Historic Places in 1993. Fort Hill Historic District is built on land that was sold for settlement in the 1820's and continued development well into the Twentieth Century. This district also includes the Historic Fort Hawkins, which is also listed on the National Register. A reproduction of the Fort is also located within the district. Fort Hill was accepted onto the National Register of Historic Places due to the area's significance in historic architecture and community planning representing the 1870's through the 1940's. Adding to the district's antiquity are a church, numerous corner stores and two schools built in the 1930's. Developed: 1870-1941 Acreage: Approx. 140 acres

Macon Historic District

The Macon Historic District is the historic commercial, residential, and institutional development that grew out of Macon's original town plan and forms the city's historic core. The district's development began in 1823 when the town plan was first laid out and continued into the 1940's. The district is significant in the areas of architecture, commerce, community planning and development, politics/government, landscape architecture, education, and transportation. The historic Terminal Station is an exceptional example of monumental architecture in downtown Macon. The former railroad station was designed in the Beaux Arts style and with Beaux Arts planning principles. Historic community institutional buildings are another group of prominent freestanding buildings located throughout the district. Christ Church, Mulberry Street United Methodist Church and First Presbyterian Church are all over 175 years old. They are examples of Gothic Revival, Richardson Romanesque, and High Victorian Gothic. The majority of Mercer University's buildings are variations of the Academic Gothic Revival style and Victorian Gothic and Neoclassical Revival. The district contains a significant and varied collection of residential buildings that range from landmark mansions to small worker homes. There are three distinct neighborhoods within the district that depict the various styles of architecture: Intown Neighborhood, Huguenin Heights, and Tatnall Square Heights. Part of the Intown neighborhood includes College Hill where Macon's up-

per class citizens constructed a number of landmark houses. These houses are very large and generally date from the 19th century; many are the work of prominent Macon architects. There are several historic landscaped parks in the district, including Coleman Hill Park in the College Hill neighborhood and the four-block Tatnall Square Park. Location: Roughly bounded by Walnut, Broadway, Oglethorpe, Central of Georgia Railroad, Edgewood, Interstate 75, and Madison Avenue. Developed: 1823 (the date of the original town plan) through 1942. Architectural Styles: Folk Victorian, Queen Anne, Italianate, Neoclassical Revival, Bungalow/Craftsman, Classical Revival, Colonial Revival, Greek Revival, Commercial Style, Tudor Revival, Italian Renaissance, Late Gothic Revival, Romanesque, Skyscraper, Moderne, Art Deco, Gothic, and Beaux Arts.

Huguenin Heights:

Huguenin Heights was the first neighborhood revitalization project by Macon Heritage Foundation. Begun in 1994, a total of 16 houses were restored for single-family owners. Bounded by Tatnall Square Park, I-75, Oglethorpe Street and Coleman Avenue and adjacent to Mercer University Campus, the neighborhood features two-story Queen Anne houses averaging 2300 square feet, most of which were built in the late 1800's. The objectives of the project were to restore the neighborhood to predominately owner-occupied residential status and to create an environment where residents' pride in their neighborhood would reduce crime and maintain the properties. The project has been a tremendous success. In 1992, the neighborhood had 189 police calls recorded in seven months. In the same seven month period in 1997, only 29 calls were reported. That is a reduction of 85%. Property values have more than doubled since the revitalization has been completed. The project has garnered national acclaim in that it was a featured tour of the National Trust of Historic Preservation in 1998 and it was on "Restore America" on the HGTV channel. In 2001 the Georgia Trust awarded its Excellence in Rehabilitation award to MHF for Huguenin Heights.

Tatnall Square Heights:

Tatnall Square Heights is Macon Heritage Foundation's second neighborhood revitalization project. The area was developed between 1890 and 1925 and is located adjacent to Tatnall Square Park and is bounded by Adams Street, the Central of Georgia Railroad, College Street and Oglethorpe Street. The neighborhood consists of eighty-two properties including 18 owner-occupied houses, 36 non-owner occupied houses, 24 vacant lots and 4 commercial structures. Many of the houses are Queen Anne cottages with 2-3 bedrooms and 2 baths. It is anticipated that the Foundation will rehabilitate or construct at least 14 residences for single families to bring homeownership above 60%. Christmas in April has focused on the neighborhood in April 2000 assisting many of the existing homeowners with necessary repairs. This project builds on Macon Heritage's success in the Huguenin

Heights area where 16 houses have been rehabilitated for single-family homeownership. Twelve houses have been sold, four are available and one is currently under construction - creating 50% home ownership in the area. For information on purchasing houses in the Tatnall Square Heights neighborhood, please call MHF at 742-5084.

North Highlands District

The North Highlands District began developing around 1890 and continued until approximately 1941. This District's boundary lines include Nottingham Drive, Boulevard Avenue, and Clinton Road. Planned residential development covers approximately 130 acres and includes such architectural styles as Queen Anne, Colonial Revival, Neoclassical Revival, and Craftsman. In 1993 the neighborhood was listed on the National Register. North Highlands, one mile from Macon's central business district, is recognized by the National Register of Historic Places because of its architecture, community planning and development. North Highlands was originally one plantation, owned by Thomas Woodfolk, who in the 1830's parceled and sold the land as farming and plantation land. The region then developed as a suburb in the late nineteenth and early twentieth centuries. A wide variety of architectural style is seen in North Highland. Homes range from the older and larger Greek Revival, Queen Anne, Shingle Colonial Revival, Classic Revival, and Craftsman styles to the more economical one-story bungalows and early ranch style homes. The earliest house in the district is the Melrose-Barton House circa 1850, which exemplifies the Greek Revival style. Queen Anne style homes with their doric columned porches dominate at the intersection of Summit and North Avenue while English Vernacular Revival cottages are present on North Avenue. Nottingham Drive and the Curry Place/Clay Street section have many bungalows and brick ranch houses. Whereas North Highlands began with a residential and agricultural emphasis, it is now used by residents, limited businesses, and schools. North Highlands has a very active neighborhood association. For more information visit their website. Location: One mile northeast of central business district. Bounded by Nottingham Drive, Boulevard and Clinton Road. Developed: 1870-1936. Acreage: Approx. 130 acres. Architectural Styles: Queen Anne, Colonial Revival, Neoclassical Revival, English Vernacular Revival, Greek Revival and Craftsman.

Pleasant Hill Historic District

Macon's most significant historic black community is the **Pleasant Hill Historic District**. The housing stock dates from the 1870's through the 1930's, with single story wood frame predominating, such as the "shotgun" and the ell shaped cottages. This neighborhood grew rapidly and by 1925, most of the historic buildings had been constructed. The Pleasant Hill Historic District documents a black residential area that developed over the years into a community representing a cross section of the City's black population and encompassing around 200 acres. The community was listed on the National Register in 1986. Macon's Pleasant Hill Historic District is significant

due to its function as a historic black community. Developed from the 1870's until the 1930's, Pleasant Hill residents consisted of property owners, doctors, dentists, educators, attorneys, businessmen, grocers, and ministers. Lewis Williams, a principal of numerous Macon schools, and Albert B. Fitzpatrick, manager of the black-organized Peoples Health & Life Insurance company represent just a few of the influential black residents of Pleasant Hill. Pleasant Hill consists of mostly one-story homes with simple porches reflecting the "L-shaped" Victorian cottages. Many homes in the area show the influence of other styles such as Neoclassical columns and Craftsman-style porches. Included in the area are several corner stores, a Masonic Lodge, one small wood-framed church, and the St. Peter Claver Church and School in a late Victorian brick style. Location: Bounded by Madison Street, north of Vineville Avenue, east of Rogers Avenue, south of Neal Avenue. Bisected by I-75. Developed: 1870-1936 Acreage: Approx. one square mile. Architectural Styles: Queen Anne, Neoclassical and Craftsman cottages and "shotgun" style houses. First African-American neighborhood. Linwood cemetery included within boundaries of district.

Railroad Historic District

The Railroad Historic District developed between the years of 1844 and 1936. The boundary is formed by Broadway, 5th, 6th and 7th streets and the railroad tracks. Most buildings are brick, but some are made of corrugated metal, tile or wood framed exteriors. The area was listed on the National Register in 1987. The district contains approximately 260 acres and is the only industrial district listed. Windows and roofs are the main architectural features. Unlike other historical districts in Macon, the Macon Railroad Industrial District is valued by the National Register of Historic Places as a commercial and industrial district rather than residential. The historical architecture includes industrial and commercial buildings from the late nineteenth and early twentieth centuries. The Macon Railroad Industrial District symbolizes the importance of business to Macon's economic base. Businesses such as the Dixie Works, c. 1895, Adams Brothers Wholesale Grocery, c. 1894, The Macon Cabinet Company, c. 1895, and The Atlantic Compress Company, c. 1908, helped to start Macon's growth. The growth of Macon paralleled the growth of the railroad as depots received, stored, and shipped freight. Location: Area around Broadway, 5th, 6th and 7th Streets and Central Georgia Southern and Seaboard railroad tracks.

Shirley Hills Historic District

The Shirley Hills Historic District developed between 1922 and 1941 and covered approximately 300 acres. This residential section of Macon was listed on the National Register in 1989. The boundary includes generally the area bounded by Nottingham Drive, Curry Drive, Parkview Drive, Jackson Springs Road, Oakcliff Road, Jaques Road, Twin Pines Drive and Jackson Springs Park. The styles of the houses represent early 20th century architecture.

Developed between 1922 and 1941, Shirley Hills was placed on the National Register of Historic Places for its architecture, both in homes and landscape. As a twentieth century planned residential subdivision, the lots are comprised of large homes and landscaped yards. Historically, Shirley Hills has been the home of many prominent business and professional leaders in Macon. A majority of the land was owned by A.O. Bacon, a Georgia legislator and United States Senator. Homes in Shirley Hills represent many different styles of early 20th century architecture including: Colonial Revival, Classical Revival, Tudor Revival, Georgian Revival, Italian Renaissance, French Renaissance, Mission and Spanish Colonial Revival, Bungalow, Craftsman, Neoclassical Revival and English Vernacular. Notable Macon Architects, Elliot Dunwoody and Ellamae Ellis League, designed homes in Shirley Hills. Specifically, 1161 Nottingham Drive, a Georgian Revival by Elliot Dunwoody and 1435 Twin Pines Drive, a Neoclassical Revival by Ellamae Ellis League. The designers of this planned community insisted that the area should radiate a picturesque and park-like feeling. The landscaped yards in Shirley Hills adds to this natural appearance. Jackson Springs Park, originally believed to be a camping site of Andrew Jackson adds to the natural atmosphere of Shirley Hills. Location: Northeast section of city, one mile from the central business district. Includes portions of Nottingham Drive, Curry Drive, Parkview Drive, Jackson Spring Road, Oakcliff Road, Jaques Road, Twin Pines Drive and Jackson Spring Park. Developed: 1922-1941 Acreage: Approx. 300 acres. Architectural Styles: Early 20th century Classic Revival, bungalows, Tudor Revival, Mediterranean. Developed as a planned residential subdivision of large residences from the estate of Senator A. O. Bacon.

Tindall Heights Historic District

The Tindall Heights Historic District is located in south Macon bounded by Oglethorpe, Broadway, Eisenhower Parkway, Felton, Nussbaum, and the railroad that covers approximately 400 acres. The development dates from 1870 to around 1942 with most houses being wood framed. The types include Cottage and Shotgun. This southern neighborhood of Macon was listed on the National Register in 1993. Although all of the districts are listed on the National Register, more than 5,500 properties are listed in the Nation Register in Macon-Bibb County, either in districts or individually. The following are a few of the public/semi-public sites on that list: Rose Hill Cemetery, Ft. Hawkins Archeological Site, Municipal Auditorium, St. Joseph's Catholic Church, the Old U.S. Post Office and Federal Building, Mercer University Administration Building, and the Central City Park Bandstand. Some private residences applications for certificates of appropriateness for compliance concerning the construction, alteration, modification, rehabilitation, or demolition of structures or other land features within the border of the three districts. The Historic Review Board then makes recommendation to the Planning & Zoning Commission. Tindall Heights was listed on the National Register of Historic Places in 1993. It is historically significant because it was developed between 1870 and 1940 as a white, middle class community with housing for work-

ers and includes churches, stores, homes and a school. It contains one of the largest and most intact collections of urban Georgia house types from that period. Tindall Heights consists mainly of framed houses in the Queen Anne, Craftsman, Italianate, Classic Revival, Bungalow, Romanesque, Colonial Revival and Folk Victorian styles. The commercial properties are one and two story buildings with first floor storefronts. The churches are built in the Romanesque Revival and Colonial Revival styles. A unique feature of this historic district is the large, two story brick Colonial Revival neighborhood school. Location: One mile southwest of central business district within Oglethorpe, Broadway, Eisenhower Parkway, Felton, and Nussbaum Streets and the railroad. Developed: c. 1870-1942 Acreage: Approx. 400 acres. Architectural Styles: Queen Anne cottages, shotgun-style houses, folk Victorian, Craftsman, Classic Revival, Colonial Revival, Romanesque

Vineville Historic District

Vineville could be classified as the first suburban neighborhood of Macon and is predominantly residential. The area contains approximately 525 acres. The general boundaries are 1-75 to the north, Carolina Avenue to the south, Central of Georgia Railroad to the east, and anywhere from one parcel facing Vineville Avenue to three blocks off to form the west. In 1837 the village had approximately 500 residents among the 40 families, making up 12% of the total population. In 1880 the large rural tracts of land began to be subdivided as the pressure of new housing increased for the workers of the cotton mills and as the trolley system expanded. The growth slowed during the Depression and the structures built were within the existing neighborhood boundary. By the 1960's commercial land uses had appeared replacing some residences. Apartments also were constructed, reducing the single-family residential character of the neighborhood. Late nineteenth and twentieth century revival styles such as Greek Revival, Georgian Revival, Italianate Revival, Queen Anne, and Craftsman predominate the architecture. The neighborhood was added to the National Register of Historic Places in 1980 and is also one of the three historic zoning districts. The Vineville Historic District, one and one half miles northwest of downtown Macon, was accepted into the National Register of Historic Places in 1975. This district includes not only residential but also commercial buildings incorporating a wide variety of architectural designs from the 1830's to 1930's. Represented in the 700 homes, churches, and businesses are Plantation Plain, Victorian, Neoclassical, and Bungalow styles. The district also features extraordinary examples of the Spanish Villa, English Tudor, Italian Renaissance, Federal Georgian and Jacobean styles. Prominent residents of this historical district included Reverend G.F. Pierce, the first president of Macon's Wesleyan College, George M. Logan, mayor of Macon in 1839, and the Honorable Thomas Hardeman, a United States congressional representative in the late 1850's who developed the "stars and bars" on Georgia's previous state flag.

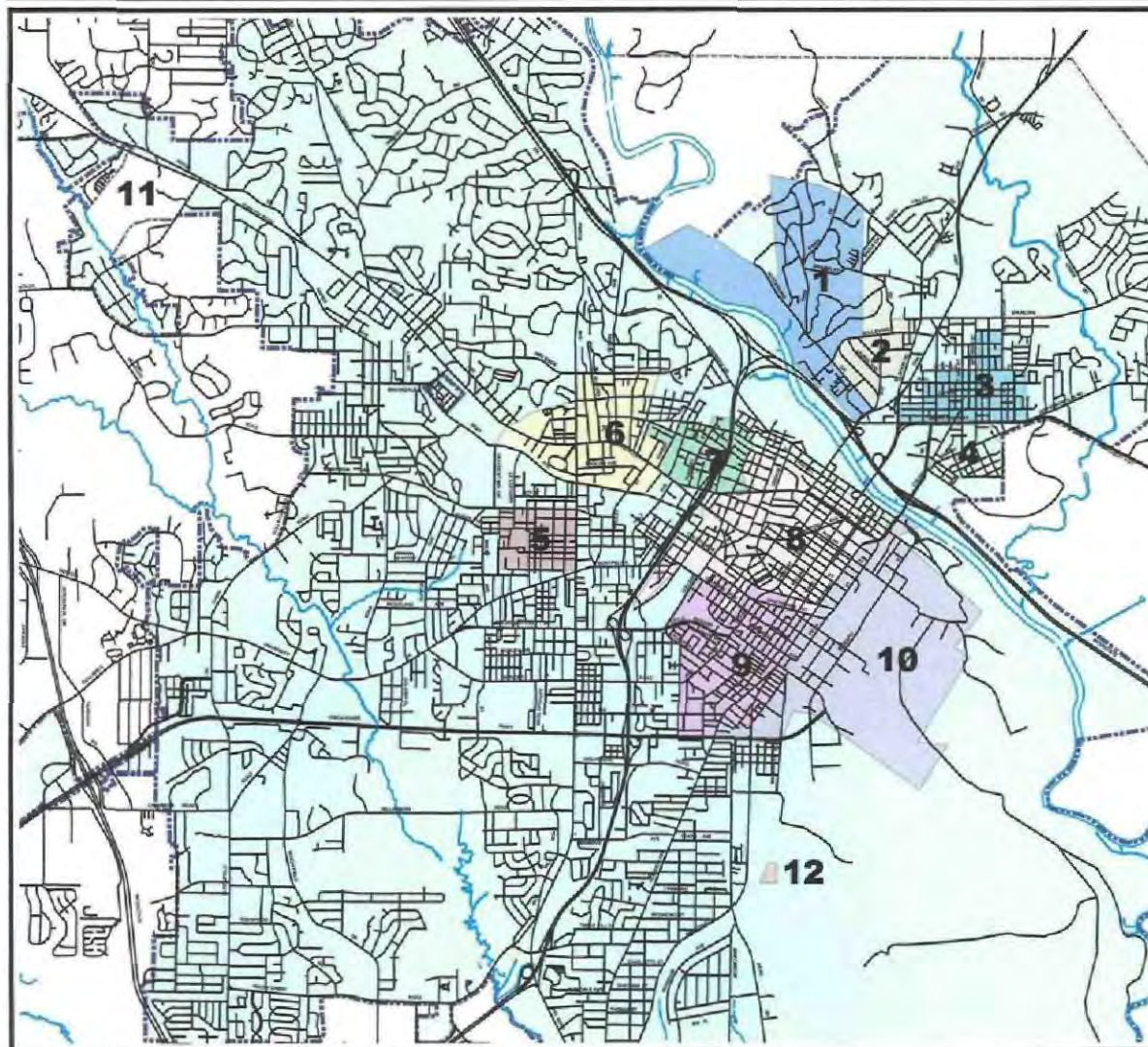
Beginning as an area full of large plantation estates, the Vineville Historic District boasts many large Plantation Plain homes, such as the Solomon-Smith house at 2619 Vineville Avenue. The Greek Revival architectural style is represented in the Napier-Small house built in 1846 at 156 Rogers Avenue which is nationally recognized as a prototypical example. Notable architect, Neel Reid designed the Max Morris house in 1915 at 2084 Vineville Avenue in the Colonial Revival style. Other significant homes include 172 Cleveland, circa 1836 and 201 Clisby, which was built in the 1830's by Samuel T. Bailey and sold to Joseph Clisby, the first President of the Board of Education, in 1858. Clisby School was named in his honor. As the Vineville area became more suburbanized, the addition of churches such as Vineville Presbyterian and Vineville Baptist Church complimented the district with unique and grand architecture. Vineville has a very active neighborhood association. For more information about Vineville Neighborhood Association and its functions, see their website. Location: Along Vineville Avenue from I-75 to Georgia Academy for the Blind and including side streets such as Pierce Avenue, Hines Terrace, Cleveland Avenue, Buford Place and Rogers Avenue. Adjacent to Pleasant Hill Historic District.. Developed: c. 1830 - 1935. Acreage approx. 525 acres. Architectural Styles: Classic Revival, Queen Anne, Craftsman/Bungalows, Plantation Plain, Victorian, Neoclassical, Spanish Villa, English Tudor, Italian Renaissance, Federal Georgian, and Jacobean.

Figure 4.11 displays the historic districts within the City of Macon. The following table 4.12 displays additional historic sites that are listed on the National Register of Historic Places within Macon-Bibb County.

Source: www.historicmacon.org

Historic Districts

Figure 4.11



Legend

- Streets & Highways
- Major Waterways
- City of Macon
- Bibb County

1. Shirley Hills
2. North Highlands
3. Fort Hill
4. East Macon
5. Cherokee Heights
6. Vineville
7. Pleasant Hill
8. Macon
9. Tindall Heights
10. Railroad Industrial
11. Wesleyan College
12. Cherokee Brick



SHARED VISIONS
Planning Smart Choices
Our Comprehensive Planning Process
Macon-Bibb County Planning and Zoning Commission

Figure 4.11

Table 4.12

National Register of Historic Places: Macon-Bibb County					
State	County	Resource Name	Address	City	Listed
GA	Bibb	Anderson, Capt. R. J., House	1730 West End Ave.	Macon	1971-05-27
GA	Bibb	Anderson, Judge Clifford, House	642 Orange St.	Macon	1971-07-14
GA	Bibb	Baber, Ambrose, House	577--587 Walnut St.	Macon	1973-08-14
GA	Bibb	Burke, Thomas C., House	1085 Georgia Ave.	Macon	1971-06-21
GA	Bibb	Cannonball House	856 Mulberry St.	Macon	1971-05-27
GA	Bibb	Central City Park Bandstand	Central City Park	Macon	1972-03-16
GA	Bibb	Cherokee Brick and Tile Company	3250 Waterville Rd.	Macon	2002-04-11
GA	Bibb	Cherokee Heights District	Pio Nono, Napier, Inverness, and Su-	Macon	1982-07-08
GA	Bibb	Christ Episcopal Church	538--566 Walnut St.	Macon	1971-07-14
GA	Bibb	Collins--Odom--Strickland House	1495 2nd St.	Macon	1979-01-22
GA	Bibb	Cowles House	988 Bond St.	Macon	1971-06-21
GA	Bibb	Cowles, Jerry, Cottage	4569 Rivoli Dr.	Macon	1971-06-21
GA	Bibb	Dasher-Stevens House	904 Orange Ter.	Macon	1972-10-18
GA	Bibb	Davis-Guttenberger-Rankin	134 Buford Pl.	Macon	1973-11-30
GA	Bibb	Domingos House	1261 Jefferson Ter.	Macon	1971-06-21
GA	Bibb	East Macon Historic District	Roughly bounded by Emery Hwy., Coliseum Dr., and Clinton, Fletcher and Fairview Sts.	Macon	1993-04-01
GA	Bibb	Emerson-Holmes Building	566 Mulberry St.	Macon	1971-06-21
GA	Bibb	Findlay, Robert, House	785 2nd St.	Macon	1972-01-20
GA	Bibb	First Presbyterian Church	690 Mulberry St.	Macon	1972-09-14
GA	Bibb	Fort Hawkins Archeological Site	Address Restricted	Macon	1977-11-23
GA	Bibb	Fort Hill Historic District	Roughly bounded by Emery Hwy., Second St. Ext., Mitchell and Morrow Sts. and Schaeffer Pl.	Macon	1993-04-16
GA	Bibb	Goodall House	618 Orange St.	Macon	1971-05-27
GA	Bibb	Grand Opera House	651 Mulberry St.	Macon	1970-06-22
GA	Bibb	Green-Poe House	841--845 Poplar St.	Macon	1971-07-14
GA	Bibb	Hatcher-Groover-Schwartz	1144--1146 Georgia Ave.	Macon	1971-06-21
GA	Bibb	Holt-Peeler-Snow House	1129 Georgia Ave.	Macon	1971-06-21
GA	Bibb	Johnston-Hay House	934 Georgia Ave.	Macon	1971-05-27

GA	Bibb	Lanier, Sidney, Cottage	935 High St.	Macon	1972-01-31
GA	Bibb	Lassiter House	315 College St.	Macon	1972-04-11
GA	Bibb	Lee, W. G., Alumni House	1270 Ash (Coleman) St.	Macon	1971-07-14
GA	Bibb	Lustron House at 3498 McKenzie Drive	3498 McKenzie Dr.	Macon	1996-03-18
GA	Bibb	Macon Historic District	Roughly bounded by Riverside Dr., Broadway, Elm, and I-75	Macon	1974-12-31
GA	Bibb	Macon Historic District (Boundary Increase)	Roughly, Adams St. and Linden Ave. S, W and N of Tattnall Sq. and Broadway and Third Sts. between Poplar and Pine Sts.	Macon	1995-07-27
GA	Bibb	Macon Railroad Industrial District	Roughly bounded by Fifth, Sixth, and Seventh Sts., Central of Georgia, Southern, and Seaboard RR tracks	Macon	1987-06-12
GA	Bibb	McCrary, DeWitt, House	320 Hydrolia St.	Macon	1974-03-22
GA	Bibb	Mechanics Engine House No. 4	950 Third St.	Macon	1990-09-13
GA	Bibb	Mercer University Administration Building	Coleman Ave.	Macon	1971-08-26
GA	Bibb	Militia Headquarters Building	552--564 Mulberry St.	Macon	1972-04-11
GA	Bibb	Monroe Street Apartments	641--661 Monroe St.	Macon	1972-03-16
GA	Bibb	Municipal Auditorium	415--435 1st St.	Macon	1971-06-21
GA	Bibb	Munroe-Dunlap-Snow House	920 High St.	Macon	1971-07-14
GA	Bibb	Munroe-Goolsby House	159 Rogers Ave.	Macon	1972-01-20
GA	Bibb	Napier, Leroy, House	2215 Napier Ave.	Macon	1971-05-27
GA	Bibb	North Highlands Historic	Roughly bounded by Nottingham Dr.,	Macon	1993-11-22
GA	Bibb	Ocmulgee National Monument	1207 Emory Hwy., E of Macon	Macon	1966-10-15
GA	Bibb	Old Macon Library	652--662 Mulberry St.	Macon	1973-11-26
GA	Bibb	Old U.S. Post Office and Federal Building	475 Mulberry St.	Macon	1972-01-20
GA	Bibb	Pleasant Hill Historic District	Roughly bounded by Sheridan Ave. and Schofield St., Madison, Jefferson and Ferguson, and Galliard Sts.	Macon	1986-05-22
GA	Bibb	Railroad Overpass at Ocmulgee	Off GA 49	Macon	1979-12-18
GA	Bibb	Raines-Carmichael House	1183 Georgia Ave.	Macon	1971-06-21
GA	Bibb	Randolph-Whittle House	1231 Jefferson Ter.	Macon	1972-02-01
GA	Bibb	Riverside Cemetery	1301 Riverside Dr.	Macon	1983-04-28
GA	Bibb	Rogers, Rock, House	337 College St.	Macon	1972-01-20
GA	Bibb	Rose Hill Cemetery	Riverside Dr.	Macon	1973-10-09

GA	Bibb	Shirley Hills Historic District	Roughly Senate Pl., Parkview Dr., Curry Dr., Briarcliff Rd., Nottingham Dr., and the Ocmulgee River	Macon	1989-08-17
GA	Bibb	Slate House	931--945 Walnut St.	Macon	1974-01-21
GA	Bibb	Small House	156 Rogers Ave.	Macon	1971-05-27
GA	Bibb	Solomon-Curd House	770 Mulberry St.	Macon	1971-05-27
GA	Bibb	Solomon-Smith-Martin House	2619 Vineville Ave.	Macon	1971-07-14
GA	Bibb	St. Joseph's Catholic Church	812 Poplar St.	Macon	1971-07-14
GA	Bibb	Tindall Heights Historic District	Roughly bounded by Broadway, Eisenhower Pkwy., Felton and Nussbaum Aves., Central of Georgia RR tracks and Oglethorpe St	Macon	1993-07-01
GA	Bibb	Villa Albicini	150 Tucker Rd.	Macon	1974-05-16
GA	Bibb	Vineville Historic District	GA 247 and U.S. 41	Macon	1980-11-21
GA	Bibb	Wesleyan College Historic District	4760 Forsyth Rd.	Macon	2004-04-02
GA	Bibb	Williams, Luther, Field	225 Willie Smokey Glover Blvd., Central City Park	Macon	2004-06-24
GA	Bibb	Willingham-Hill-O'Neal Cottage	535 College St.	Macon	1971-07-14

Source: www.nr.nps.gov

Archeological Sites in Macon - Bibb County

Waterworks - There were major occupations by people making Mossy Oak or Vining (Early Mississippian) Simple Stamped pottery; also occupied during Late Mississippian (Lamar) and historic Creek (Ocmulgee Fields) Periods. This site has been disturbed, but is probably still partially intact. A surface survey was conducted in the late 1930's. Later, it was partially excavated and reported by a collector who uncovered a human burial associated with the simple stamped pottery. The collector sent the remains to the University of Georgia.

Waterworks #2 - Aerial photos taken in 1938 show large areas of dark stains and surface survey by a U.S. Forest Services archeologist in 1944 indicate a village site (probably Creek), covering much of the bulldozed summit of a hill in a horseshoe bend of the river owned by the Macon Municipal Waterworks. Several years ago, artifact collectors found almost one-third of a historic Creek (Walnut Roughened) vessel and other large shreds eroding out of a bank along an old river channel on the east side of this site. Simple Stamped and Etowah Complicated Stamped shards were also found at this large site.

Ocmulgee National Monument - This great, nationally significant, site has features and artifacts representing the entire cultural continuum, including Ice Age Paleo Indians, Archaic Period hunter-gatherers, Woodland Period horticultural bands, an Early Mississippian Period town, an historic Muscogee (Creek) town and colonial British trading post, the Old Ocmulgee Fields Reserve, the Civil War and the Great Depression when it became the cradle of Southeastern Archeology. It is the type of site for the Early Mississippian Period Macon Plateau culture, the widespread Late Mississippian Lamar culture, the historic Creek Ocmulgee Fields culture and for a number of Southeastern pottery types. President Franklin Roosevelt's 1936 Proclamation authorized Ocmulgee National Monument to include 2,000 acres of "lands commonly known as the Old Ocmulgee Fields, upon which are located Indian mounds of great historical importance." This acreage includes a portion of the 3 x 5 - mile Old Ocmulgee Field Reserve. The Muscogee (Creek) people retained ownership of this strip until they gave up their last lands in Georgia in 1926 and were moved to Oklahoma. The park presently encompasses 702 acres of the reserve. Almost 300 additional acres of the reserve, located along the park's Walnut Creek boundary, were recently donated and are now owned by the Archeological Conservancy pending passage of legislation to incorporate them into the park. Approximately, 110,000 to 120,000 people from all over the world visit the Ocmulgee National Monument annually. Citizens from the Muscogee (Creek) Nation, head-quartered in Okmulgee, Oklahoma maintain ancestral ties to the Old Ocmulgee Fields mentioned in the park's enabling legislation. The entire park is listed on the National Register of Historic Places, with separate listings for a number of features and structures. The Lamar Mounds and Village have been nominated for separate National Archeological Landmark status.

Main Unit - Macon Plateau - During the period A.D. 90-1150, the plateau was the site of the largest town in the Southeast. Still visible features include eight pyramidal, flat-topped temples, domiciliary and burial mounds. The Great Temple Mound, situated on an artificially terraced extension of the "South Plateau," is 50' high on the plateau side, sloping 90' on its other side to the Walnut Creek/Ocmulgee River Floodplain. The "West Platform" may have been associated with an earlier mound level. The Lesser Temple Mound, partially destroyed by excavation for the first railroad into Macon in 1843, is nearby. The Cornfield Mound covers two low original mounds and the rows of an ancient agricultural field. The Funeral Mound was constructed in seven distinct levels made of contrasting brightly colored clays. Burials were placed in each level, some in large log-lined tombs. A number of these individuals wore garments or wrappings adorned with thousands of marine shell beads, and one wore a "headdress" decorated with two oval, repose copper "sun disks" and copper-covered puma jaws. A unique earth-lodge or "Ceremonial Council Chamber," protects a 1,000-year-old clay floor featuring a collared fire pit, peripheral benches with molded seats and "receptacles" and a platform in the shape of a raptorial bird with a forked or weeping eye. During the late 1600's and early 1700's, a Muscogee (Creek) town was located on the site, along with a British colonial trading post. It was from here that Col. James Moore, with a group of men from Charlestown and 1,000 Creek Warriors, launched a raid that broke the Spanish stronghold in Florida and South Georgia. Naturalist William Bartram, traveling the Lower Creek Trading Path in the 1780's, noted that the Creeks revered the site as the place where their ancestors first "sat down" when they came into the Southeast.

In 1805, when the Creeks ceded the ownership of lands between the Oconee and Ocmulgee Rivers, they refused to give up these lands referred to as the Old Ocmulgee Fields Reserve. They agreed to the construction of U.S. Military Fort Hawkins on the Reserve and to improvement of the old Lower Creek Trading Path, which became part of the Federal Road from Washington to New Orleans. After Indian Removal when the reserve was divided and sold, the land eventually became part of a farm owned by the Dunlap family whose antebellum home became the headquarters of Union General George Stoneman when he tried to capture Macon. The Battle of Dunlap Farm took place partially within the park and one of the area's two remaining gun emplacement is located behind the Dunlap House.

In the 1930's during the Great Depression, archeological exploration began on the Macon Plateau under the auspices of the Smithsonian Institution. This was followed by a federal relief project that put hundreds of men to work on what was then the largest excavation ever undertaken in this country. Many Southeastern cultural periods and pottery types were first recognized and defined here. Later, much of the park's landscaping was done by

young men stationed at the Civilian Conservation Corps camp on the Plateau. Scholars are researching and publishing books about this now-historical era.

Salvage excavations were conducted in the floodplain prior to construction of Interstate 16 along the park's mile-long river boundary in the early 1960's. These excavations uncovered evidence of Archaic, Woodland, Mississippian and historic Creek Cultures. In some pits, prehistoric artifacts were buried under up to 12 feet deep under sediment containing modern materials. Several Creek burials were found during this work. Jessup's Bluff, a Woodland occupation site, is also known to exist within park boundaries on Walnut Creek between I-16 and the river.

Lamar Units - Lamar Mounds and Village: This unit of Ocmulgee National Monument is located on 45 acres of forested floodplain approximately 2 1/2 miles downstream from the Macon Plateau Unit. It is a large, palisade Late Mississippian Period town featuring two mounds, one with a spiral ramp (the only one of its kind to exist). A protohistoric culture, covering much of the Southeast and several pottery types were named for the site. Some scholars, including Dr. Charles Hudson, University of Georgia, believe this site may have been the town of Ichisi visited by Hernando DeSoto's expedition in 1540. Other sizable occupations occurred during Early Mississippian (Macon Plateau) and historic (Ocmulgee Fields Creek) periods. There is also evidence of Late Archaic (Stallings Island), Woodland (Deptford), Swift Creek, Napier, Woodstock, Weeden Island, Mature Mississippian Etowah, Savannah, Rood, Lake Jackson-like and other later Mississippian Irene, Dallas cultures.

Napier - This large village is the type site for a widespread Late Woodland Period culture and an intricate complicated stamped pottery. It was a multi component village site with Middle/Late Woodland (Swift Creek, Napier), Mississippian (unidentified simple stamp, Etowah and Lamar) and historic Creek (Ocmulgee Fields) pottery. Napier Village is now partially covered by the Corps of Engineer's Macon levee.

New Pond - This site is located in the Ocmulgee River floodplain near the Ocmulgee National Monument boundary on Walnut Creek. In the 1960's, it was used as a borrow area for fill dirt during the construction of I-16. Late Archaic (Stallings Island Fiber Tempered pottery and steatite vessel fragments), Woodland (Swift Creek, Napier, Weeden Island) and Mississippian (Bibb Plain, Etowah) components were found during surface surveys following extensive damage from soil removal.

Gledhill #1 - A large amount of topsoil was removed from this site during construction of I-16. Surface surveys indicated occupations occurred here during the Early and Late Archaic Periods.

Gledhill #2 - A Paleo-Indian (Clovis) spear point was found at this significant site by an artifact collector after the area was used as a borrow location for dirt during construction of I-16. Much of the site may still be intact. Other artifacts span the entire Archaic Period, minor amounts of material may represent use during the Mississippian Period.

Gledhill #3 - A transitional Paleo-Indian (Hardaway Dalton) point was found here, along with other chipped stone artifacts. Though a small amount of topsoil was removed during I-16 construction, the site is largely intact.

Gledhill #4 - Early Archaic (Big Sandy, Palmer), Middle Archaic (Morrow Mountain) and Late Woodland (Napier) artifacts were found during surface surveys. This site's present condition is unknown.

Gledhill #5 - This multi-component site, located on the first terrace above the Boggy Branch drainage near the three previously described Gledhill sites, was discovered during archeological testing of the corridor for the proposed Eisenhower Parkway Extension. It was recommended as eligible for listing on the National Register of Historic Places.

Horseshoe Bend - The overwhelming majority of pottery at this site dates from the Lamar Cultural period, with minor amounts of Late Woodland Napier, Early Mississippian (Bibb Plain and an unidentified simple stamp design on Bibb Plain paste and Etowah pottery). This site is partially covered by the Corps of Engineer's Macon Levee.

Mickey's Brickyard - Artifacts suggest major occupation during Middle Woodland (Swift Creek) times, with an indication of some occupation during Early Woodland (Deptford) Period. The site is known from surface surveys only and its present condition is unknown.

Chambers Site - Also mentioned in literature for Bibb County, this site's location is also unknown. According to notes, it was probably a campsite. Artifacts span from Early Archaic (Dalton Projectile points through Stallings Island Fiber Tempered pottery) to Early Woodland (Deptford).

Mead Road - This is a primarily a Middle Woodland (Swift Creek) site with some indication of Late Archaic Pottery and steatite fragments. Its present condition is unknown.

Tuft Springs #1 - This site, appearing as a small mound, was partially excavated during the 1930's. It appeared as a small mound that was apparently a heavy midden (occupation) deposit roughly 100 feet in diameter relatively rich in archeological materials, including mussel shell, human and animal bones, as pottery, projectile points, drills, scrapers, blades, hammer stones, and steatite vessel fragments. The main occupation seems to have occurred during the Late Archaic Period, although some Early and Middle Woodland shreds were found. The site is believed to have been totally destroyed by strip mining prior to 1981.

Tuft Springs #2 - This was a small village or camp with major occupation during the transition from Late Archaic to Early Woodland. Much of the pottery was a unique, unidentified fiber-grit tempered ware, some of which was simple stamped. Other ceramics included Late Archaic (Stallings Island Fiber Tempered), Early Woodland (Deptford) and Middle/Late Woodland (Swift Creek and Napier) wares. The site has probably been destroyed by strip mining.

Adkins Mound - This low conical mound, possible an erosional remnant some 200' in diameter, was located in the Swift Creek bottom lands. It was probably part of the larger Swift Creek Village complex. Artifacts were found dating from the entire span of the Archaic and Woodland Periods (Savannah River, Stallings Island, Deptford Simple Stamped and Check Stamped). The mound was partially excavated in 1936, and then destroyed by construction of the I-16/Ocmulgee East Blvd. interchange in the 1960's.

Willis Farm - This site was occupied periodically from Late Archaic through Early Mississippian times (Stallings Island Plain and decorated, Deptford, Swift Creek, Napier and Macon Plateau Bibb Plain pottery). It is located near the base of Brown's Mount in gently rolling farm fields and wooded lowlands at the edge of the Ocmulgee floodplain.

Brown's Mount - Located approximately six miles from Macon off Ocmulgee East Boulevard, Brown's Mount is an erosional remnant, with limestone cliffs and outcrops, rising some 270 feet above the Ocmulgee River Floodplain. It has an almost flat 60-acre summit with limestone bluffs overlooking the City of Macon and Bond Swamp National Wildlife Refuge. On the Mount, the Early Mississippian Macon Plateau culture who built

the mounds and ceremonial center protected by Ocmulgee National Monument constructed their second largest settlement. A small mound, an earthlodge similar to the reconstructed lodge on the Macon Plateau and a square building with extended entrance way, four large interior posts and raised rim fire pit (yielding a Carbon 14 date ca. A.D. 1000) were excavated at the site. Historical documentation describes a stone wall surrounding much of the summit, "covered way" extending to springs down the hillside and a stone-paved water reservoir. The wall was removed during the 1870's for railroad construction, but below ground level evidence for its location may still exist. Several stone/earth mounds once existed on a terrace on the western slope of the Mount, including Myrtle's Mound still very visible on a projection between two very large erosional gullies about halfway down the hill. At some time in the past, it was partially gutted by looters. The site was partially excavated during the 1930's. The WPA collection from Brown's Mount contains steatite vessel fragments, minor amount Swift Creek, major occupation by the Macon Plateau Culture (Bibb Plain, Halstead Plain, McDougal Plain, Brown's Mount Plain, Macon thick), minor amounts of Etowah pottery, a number of Archaic projectile points, a large stone bead, a clear glass bead and shell-edge ceramic from the late 1700's to early 1800's. Also known from the site is at least one Dalton point, a small Mississippian triangular point, portions of a chunky stone, and part of a large polled celt. A large portion of the Mount was protected by the Nature Conservancy, then purchased by the Peyton Anderson Foundation and donated to Macon's Museum of Arts and Sciences. It will be utilized in the future for natural and cultural study.

Shellrock Cave - Major occupation during the Middle Woodland (Napier) Period, with a few Early Archaic projectile points suggesting the possibility of an earlier occupation; however, a prehistoric rockfall at the site prevented excavation into deeper levels during tests in 1935. This rock shelter, located .7 miles East-Southeast of Brown's Mount, sat at the head of a small ravine cut by a tributary of Stone Creek. It was destroyed by construction of I-16.

Cherry Bluff - This probable village site, with artifacts including Napier, Etowah and Lamar ceramics, is known only from surface surveys. No archeological excavations have been conducted there. The area is presently forested and the site's condition is unknown.

Mossy Oak - This Woodland Period village is the type for Mossy Oak Simple Stamped pottery. It is a relatively large site with Mossy Oak (or Vining - possibly Early Mississippian) and Lamar ceramics. Limited excavations were conducted in the 1930's by WPA crews. The material partially analyzed and reported (NPS contract with FSU). Its present condition is unknown.

Southern Railway Drawbridge - This site was most heavily occupied by the Lamar culture, but also included Mossy Oak Simple Stamped Pottery and historic Ocmulgee Fields (Creek) material. It is located in a presently overgrown field. No excavations have been conducted.

Stubbs Mound and Village - This site is located near the confluence of Tobesofkee Creek and the Ocmulgee River. An early phase of the Lamar Culture in this area was named for this large Late Mississippian Period early village with a mound, a rectangular earthlodge and other structures. Several human burials were recovered. An impressive number of projectile points, covering a wide time range, were also found at the site that is currently in an open farm field. The site was partially excavated and reported. Its present condition is unknown.

Fort Hawkins - The fortification was constructed in 1806 as a U.S. Army Post on the 3 x 5-mile Old Ocmulgee Fields Reserve retained by the Creek Confederacy after the territory between the Oconee and Ocmulgee rivers were ceded. The Fort also housed a post office, a "factory" for trade with the Indians and gathering place for treaty payments to the Creeks. It became the linchpin for a series of Forts constructed at ten-mile intervals downstream to protect pioneer settlements along the Ocmulgee frontier. The Fort was a rendezvous point for troops and supplies during the War of 1812. The Fort was officially closed in 1821. It is considered the birthplace of Macon. Portions of the Fort were used for 50 years and still stood in the late 1800's, but no above ground evidence of the Fort presently remains. The site is located ¼ of a mile from the boundary of the Ocmulgee National Monument. The old Fort Hill Elementary School on Emery Highway (near Ocmulgee National Monument) stood on the site for over 50 years. It was partially demolished in 1992. A blockhouse, accurately constructed by the WPA from old photographs, presently stands on the site of the original blockhouse. This structure and a small area around it are owned by the City of Macon. The remainder of the site is now privately owned. The site was partially excavated and the location of much of the stockade wall is known. One line of the Forts walls was obliterated by Woolfolk Street. Old Army records indicate that three mounds were once located on the hill near the site of the Fort.

Goat Field Site - Primarily Archaic Period points and tools, along with a minor amount of unidentified grit tempered, plain pottery were found washing out of the ditch along Lamar Mounds Road across from the Crooms property. At least one bell-shaped pit feature was observed before the visible portion of the site was destroyed by pot hunters. The site was reported in writing and has been assigned a state site number.

Sylvia's Slough - This Woodland Period village or campsite (Deptford, Swift Creek, Weeden Island-like, Napier pottery; possible hearth) is located on the first terrace above a slough of Stone Creek at the base of Brown's Mount. The site's size is unknown. Some disturbance has been caused by field road traffic, but there is a good possibility that much of the site is intact. It has been reported and assigned a state site number.

Confederate Way - This site may be part of the Swift Creek Village - Adkins Mound Complex since it is located in the woodline between the former locations of these two important sites. A few shards of Late Archaic fiber tempered pottery was found on the back dirt of large holes dug by looters, but most of the material is from Woodland Period (Swift Creek). The site has been assigned a state site number.

Black Lake - Shreds of Lake Archaic (Stallings Island Fiber Tempered) and Early Woodland (Deptford) pottery, along with large amount of lithic debris were found around holes dug by pothunters. Cultural affiliation and the condition are unknown. The site is located immediately across Black Lake from the Lamar Village. The site has been assigned a state site number.

Cowart's Landing - A late phase of the Lamar Culture was named for this site which is a fairly large village constructed during the "Classic" Lamar time period. Structures and human burials were found at the site that has been partially excavated and reported. Its present condition is unknown.

Hawkins Point - This site produced primarily Lamar culture ceramics. It is presently in pasture land adjacent to a residence. It was primarily excavated and reported.

Eagles Landing - Artifacts from the site include Late Archaic (Stallings Island Fiber Tempered), Swift Creek and unidentified grit tempered, plain pottery, with Late Archaic (Savannah River) and Woodland Period (Tallahassee, Baker's Creek) projectile points. The site has been partially disturbed by construction, but much of it may still be intact.

Camp Oglethorpe - This was a Confederate prison camp for Union officers captured during the Civil War. After the Battle of Dunlap Farm and General George Stoneman's surrender at Sunshine Church in Jones County, he was imprisoned here.

Old Arkwright Theater - Collectors report a rich deposit of artifacts, including large numbers of food

processing implements (Nutting stones, stone mortars and manos) and lithic debris probably dating to the Archaic Period. The site has been completely leveled for till during construction of the Cigna Insurance Co. office building and other structures on Arkwright Road and Tom Hill Sr. Boulevard.

Arthur Tarver (Town Creek) - This important town site, located on the Ocmulgee River at the mouth of Town Creek, was tested in 1930's. More extensive excavations have been conducted prior to construction of the new Bibb-Jones County water reservoir. Archaic, Woodland, Mississippian and Historic Creek features and artifacts are recorded.

Red Bluff - The site is mentioned in literature concerning archeological sites in Bibb County, but its location is uncertain. A small collection of artifacts from this site is stored with the WPA materials at Ocmulgee National Monument. It is thought to have been primarily occupied by people of the Lamar culture. Reportedly, there are "house mounds" (similar to those at Bullard) in the vicinity of this site. The site was destroyed by sand/gravel mining. Former employees of Cornell-Young Co. reported finding whole pots during operations there.

Figure 4.12 shows the locations of the above mentioned archaeological sites.

Archaeological Areas

Figure 4.12

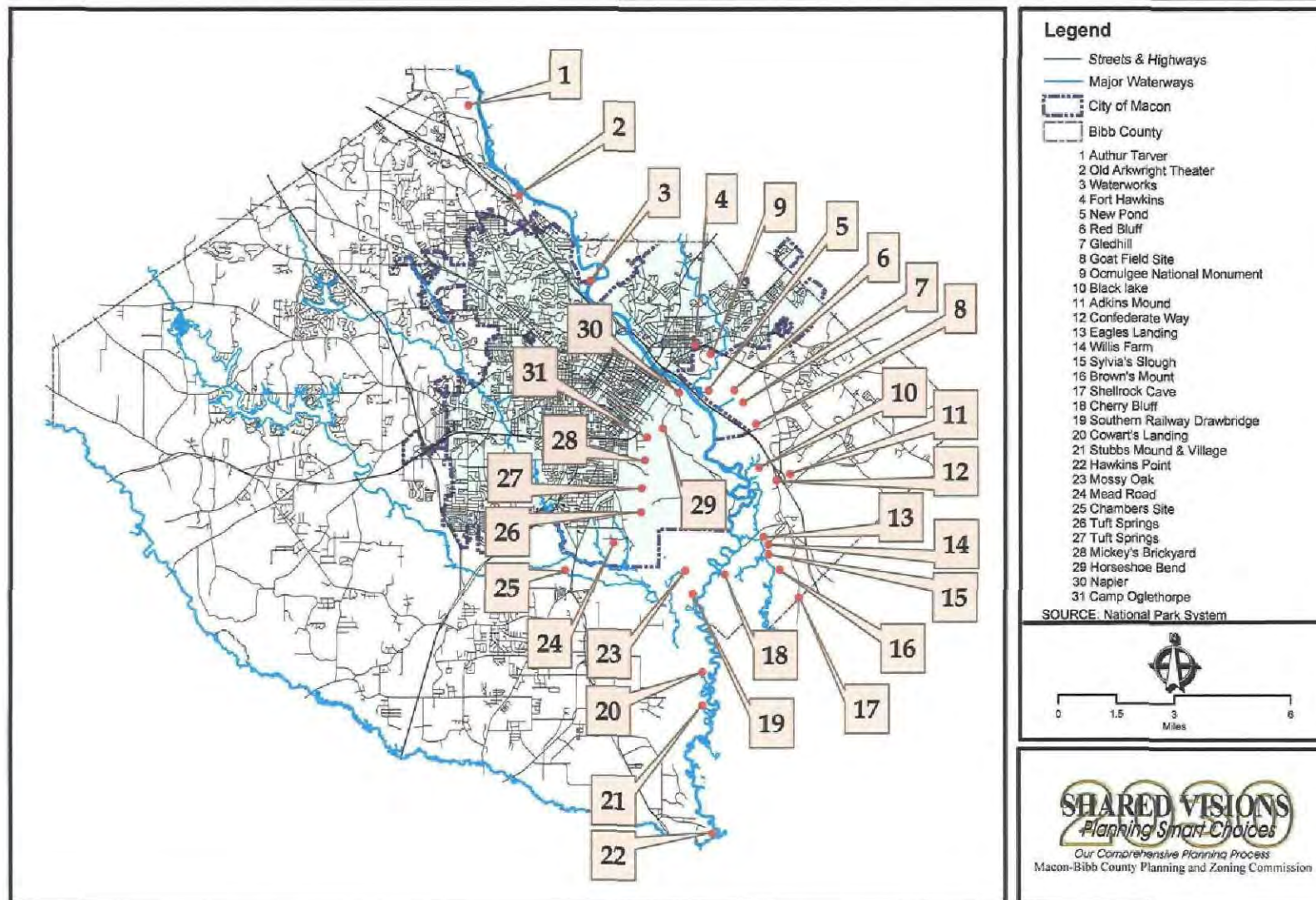


Figure 4-12

TOURISM

Tourist activities available within the City of Macon and Bibb County draw a vast number of people into this area each year. Because of this, the continued maintenance and marketing of these activities is very important in economic terms. Tourism trends for the City and County over the last five years have shown a steady increase. The table on the following page shows the expenditures by tourists who have visited the City or County over those years.

The Macon-Bibb County Convention and Visitors Bureau (CVB) is one of the agencies responsible for marketing the City and County to the public. Most of their operating budget is derived for the hotel/motel bed tax; therefore, it is to their best interest to continue to market area as one that can cater to the interest of a diverse population. The CVB's job of marketing the City and County to tourists is made somewhat easier by the fact that the area is endowed with many tourist attractions. Tourists to Bibb County come to visit numerous historic sites that include the Lanier Cottage, Hay House, Cannonball House and other historically significant sites or areas. They also come to visit our museums, such as the Tubman Museum that specializes in African-American history, the Museum of Arts and Sciences, the Douglass Theater, the Georgia Music Hall of Fame, the Georgia Sports Hall of Fame, the Childrens Museum and the Macon Coliseum & Centreplex. Probably the largest tourist draws are the park facilities that are in the City and the County. Tourists wanting to experience our parks will visit the Ocmulgee National Park or Lake Tobesofkee.

CHAPTER 5

COMMUNITY FACILITIES AND SERVICE - Section One INVENTORY OF EXISTING CONDITIONS

INTRODUCTION

Community facilities are diverse. They include the streets, highways, expressways, public transit, rail line, passenger stations, freight yards, airports, parking lots and structures, and even bicycle and pedestrian paths of a community's circulation system, as well as signage and signalization. They include utilities: water collection, treatment, and distribution; wastewater collection and treatment; and sometimes electrical distribution. They include schools, parks, fire and police stations, jails, libraries, convention centers, and solid waste treatment and storage facilities. They may include hospitals, clinics, community centers, shelters, and other public and quasi-public facilities.

WATER SUPPLY AND TREATMENT

The agency responsible for water and sewer treatment to the county is the Macon Water Authority (MWA). MWA was created by an act of the General Assembly of the State of Georgia which became effective March 23, 1992 (Georgia Law 1992, P.4991) (the "Act"), which amended an act known as the "Macon-Bibb County Water and Sewerage Authority Act," approved March 2, 1966 (Georgia Law 1966, P.2737 as amended). The Act was enacted to provide a consolidated charter for MWA, to change the name of the Authority to the Macon Water Authority, and to reapportion and revise the boundaries of the five electoral districts provide for the MWA, and for other purposes. The MWA is a public corporation created to secure for Bibb County a satisfactory and reliable water and sanitary sewer system at the most reasonable cost possible and to make such system and the services available to public and private consumers in Bibb County.

MWA has had a continuing program for improving and expanding its water and wastewater system over all the years of its existence. The program has had two significant changes in recent years. The first was a result of major flooding in 1994 from tropical storm Alberto. The flooding completely submerged the MWA water treatment plant causing it to be lost from service for over two weeks. As a result of this, MWA with the assistance of state and federal agencies, embarked on the task of constructing a new replacement water plant at the Town Creek facility which is out of the Ocmulgee River's flood impact area in neighboring Jones County. The Town Creek facility contains the Lucas Lake Reservoir.

The second major project undertaken by MWA is the extension of both water and sewer to areas currently not served and the installation of feeder lines which will allow services to adjacent counties. These activities will improve the opportunity for development in those areas by having in place the necessary water and wastewater infrastructure.

Facilities

The primary source of water comes from the Ocmulgee River; however, it is augmented by the Lucas Lake Reservoir. The water is treated by the new Amerson Water Treatment Plant located at Town Creek. This treatment plant replaces the Macon Water Works site that was taken off line in 2001. This site is being demolished and will become a part of the Ocmulgee Heritage Greenway. Table 5-1 describes the water supply and treatment facilities operated by MWA. Figure 5-1 displays the locations of these various facilities in the community.

Table 5-1
MWA Water Supply and Treatment Facilities

Facility Name	Capacity	Treatment Performance	Contact Person
Lucas Lake Reservoir	6.5 billion Gallons		Gary McCoy
Amerson Water Treatment Plant		60 MGD	Gary McCoy
Lwr. Poplar Street Water Pollution Control Plant		20 MGD	Terry Forest
Rocky Creek Water Pollution Control Plant		24 MGD	Terry Forest

Source: Macon Water Authority

* MGD= Million Gallons Per Day

Table 5-2
General System Statistics

Water System

Miles of Water Mains and Lines	1,630
Number of Water Treatment Facilities	1
Maximum gallons of water permitted to withdraw from Ocmulgee River per day (when river is above 6.33 feet)	110,000,000
Maximum gallons of water permitted to withdraw from Ocmulgee River per day (when river is below 6.33 feet)	35,000,000
Maximum gallons of water existing water treatment facility is capable of treating daily	60,000,000
Average annual volume of gallons treated per day	29,930,000
Peak number of gallons treated in one day during the year	43,280,000
Maximum gallons of water storage	35,430,000
Number of water users	54,201
Average daily volume of water consumed by users	26,785,833

Sewerage System

Miles of sanitary sewer lines	650
Miles of interceptor lines	220
Number of sewerage treatment facilities	2
Number of major pumping stations	7
Combined maximum gallons daily capacity of wastewater treatment facilities	44,000,000

Sewerage System

Average daily utilization (in gallons) at the Poplar Street WPCP	15,830,000
Average daily utilization (in gallons) at the Rocky Creek WPCP	21,460,000
Number of sewerage users	44,237
Average daily volume of sewage treated	37,290,000

Source: Macon Water Authority

STORMWATER MANAGEMENT

According to the Georgia Environmental Protection Division, a stormwater collection system is defined as a conveyance of system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, other public body, designed or used for collecting or conveying storm water runoff and is not a combined sewer or part of a Publicly Owned Treatment works. Currently, neither Bibb County nor the City of Macon has a complete inventory of their of stormwater facilities. However, the City of Macon is expecting to have a complete inventory of all storm water facilities in the central business district by summer 2006. Bibb County is expected to have a complete update and inventory of the unincorporated portions of the county soon thereafter.

There are stormwater facilities such as detention ponds that are inventoried and regularly maintained by both governments respectively. Currently, there are a total of eleven detention ponds that are publicly maintained. Three are maintained by the Bibb County government and eight by the City of Macon. The ponds maintained by Bibb County are maintained at frequency of no less than three times a year. The city maintains at least two per year and the others are maintained on a at need basis. The ponds, with routine maintenance, are expected to provide service many years to come. The locations of the publicly maintained detention pond facilities are displayed in Figure 5-2. In addition to publicly maintained detention ponds, there are 337 private detention ponds, 2773 catch basins and 690 miles of ditches.

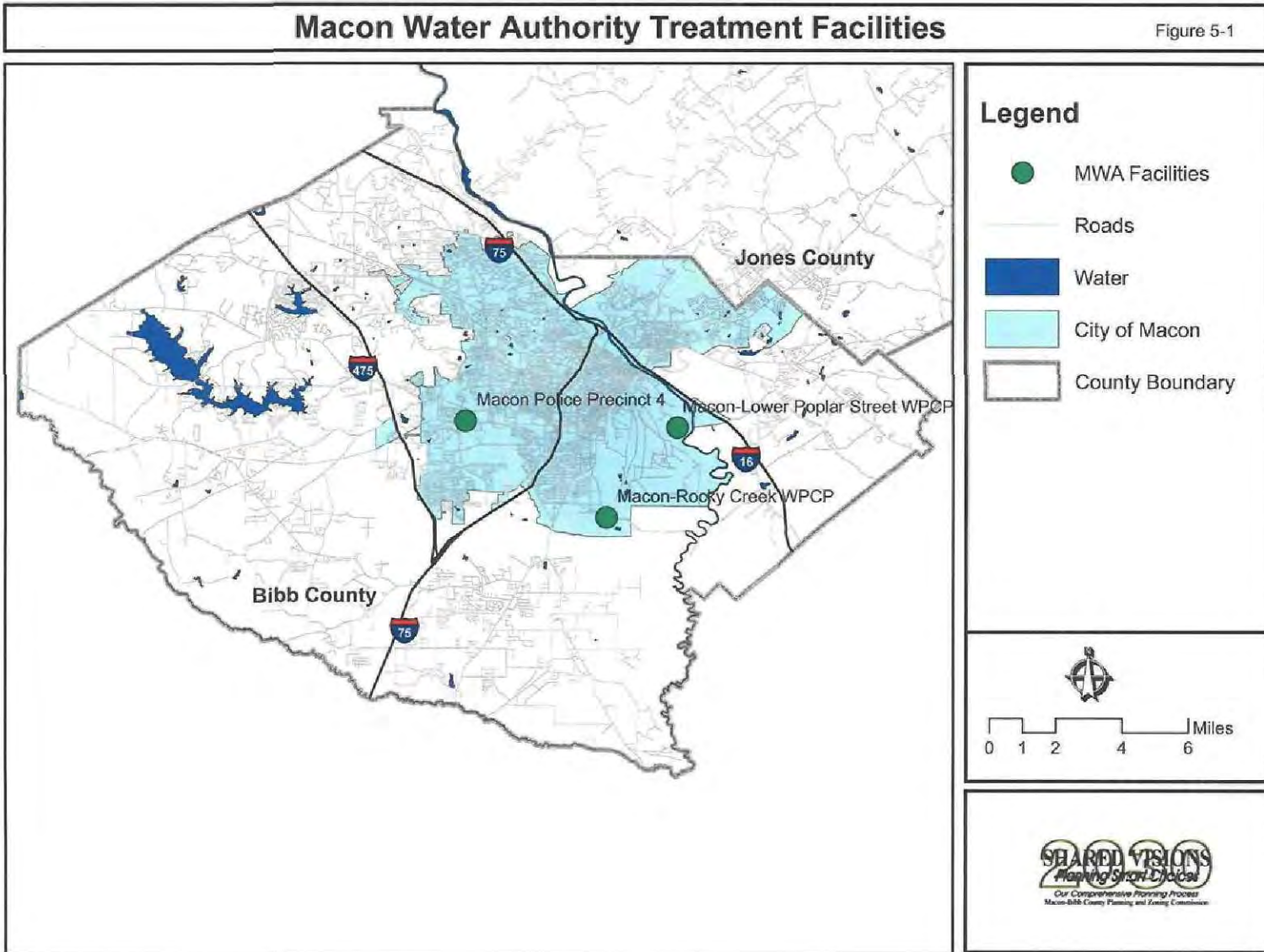


Figure 5-1

Bibb County Detention Ponds

Figure 5-2

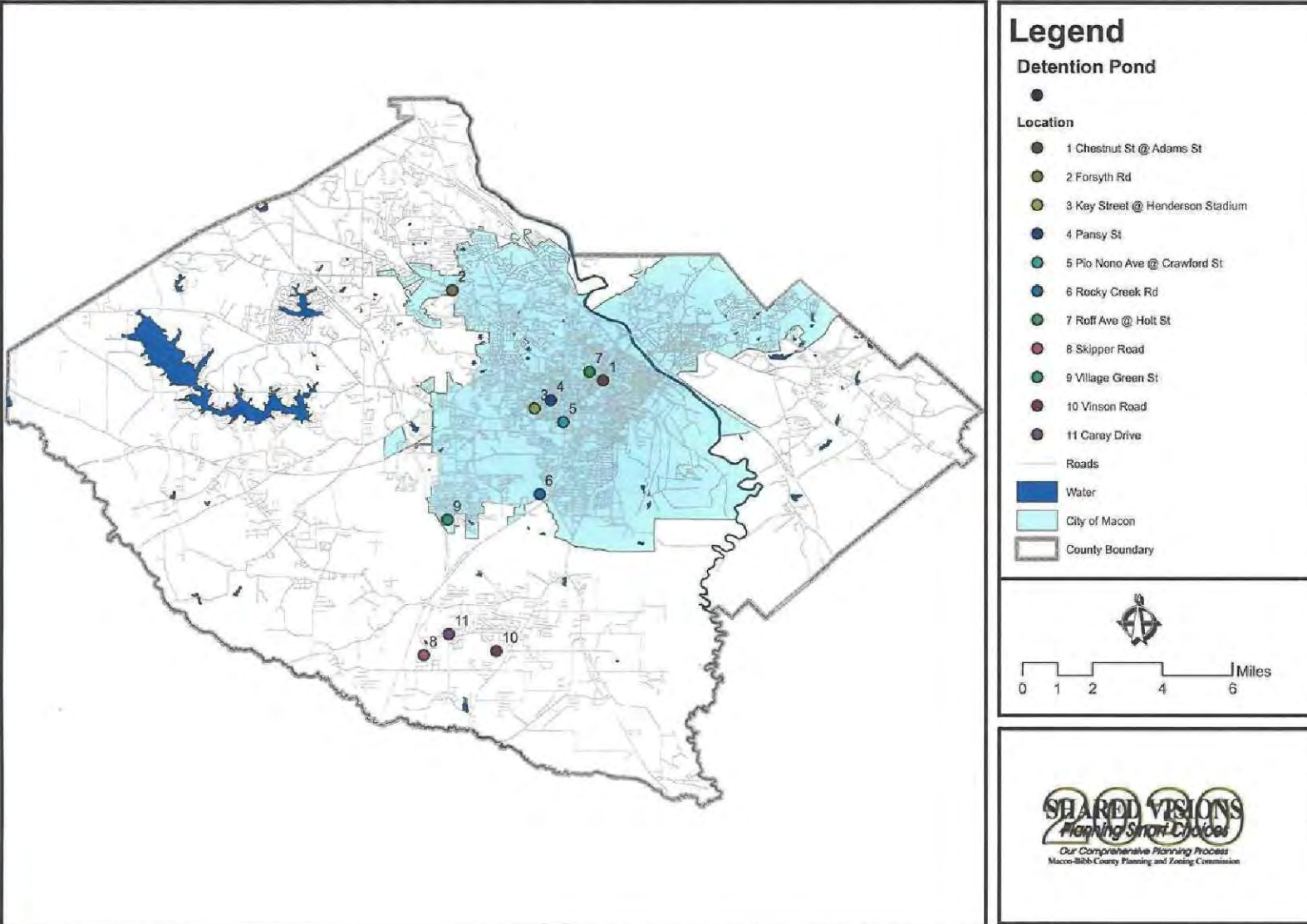


Figure 5-2

SOLID WASTE MANAGEMENT

Currently, an approved solid waste management plan exists for Bibb County the City of Macon, and Payne City. It is administered and updated by the Middle Georgia Regional Development Center (MGRDC). This plan meets the solid waste management planning requirements for the State of Georgia. This plan was approved by the Department of Community Affairs in 1993.

MGRDC has completed the required five year update to the Short-Term Work Program of the plan. The Short Term Work Program for Bibb County, City of Macon, and Payne City from 2003 to 2008 is displayed in Tables 5-3 through 5-5. This is the most current data available concerning solid waste management.

Table 5-3
Bibb County Solid Waste Plan Update

Description		STWP Year				Likely Project Involvement	Estimated Cost	Possible Funding Sources	
		03-04	04-05	05- 06	07-08				
Collection									
1	(Underway) Implement existing weekly curbside collection of residential waste collection company.	X	X	X	X	Bibb County, Private Waste Collection Company	\$1,750,000/yr.	Garbage Fees	
2	(Underway) Implement existing bi-weekly curbside collection of recyclables by a private waste company.	X	X	X	X	Bibb County, Private Waste Collection Company	\$330,000/yr.	Garbage Fees	
3	(Underway) Implement existing bi-weekly curbside collection of yard waste by a private waste collection company.	X	X	X	X	Bibb County, Private Waste Collection Company	\$250,000/yr.	Garbage Fees	
4	(Underway) Implement existing on-call collection of white goods by a private waste collection company.	X	X	X	X	Bibb County, Private Waste Collection Company	Included in Waste Collection Costs Noted Above	Garbage Fees	
5	(Underway) Perform annual evaluation of the county garbage fees to assure that adequate funds will be available to meet the future waste collection needs.	X	X	X	X	Bibb County	Staff Time in Budget	County General Fund	
6	(Underway) Evaluate current solid waste collection system to determine if it meets the needs of the County.	X	X	X	X	Bibb County	Staff Time in Budget	County General Fund	
Disposal									
1	(Underway)Implement existing contract with private waste collection company who disposes the County’s household waste in the Swift Creek Environmental Subtitle D Landfill.	X	X	X	X	Private Waste Collection Company, Private Land-fill Operator	Included in Waste Collection Costs Noted Above	Garbage Fees	
2	(Underway)Implement existing contract with private waste collection company who markets and transports the recyclables collected from curbside pick-up to various recycling processing locations.	X	X	X	X	Private Waste Collection Company, Recycling Processors	Included in Recycling Collection Costs Noted Above.	Garbage Fees	
3	(Underway)Implement existing contract with private collection company to dispose of the yard waste at Swift Creek Environmental inert landfill.	X	X	X	X	Private Waste Collection Company, Private Land-fill Operator	Included in Yard Waste Collection Costs Noted Above	Garbage Fees	
4	(Underway)Implement existing contract with private waste collection company to dispose the white goods collected from the curbside pick-up at various locations.	X	X	X	X	Private Waste Collection Company, White Goods Processors	Included in Waste Collection Costs Noted Above	Garbage Fees	
Waste Reduction									
1	Enforce existing scrap tire regulations that require their proper handling and disposal.	X	X	X	X	Bibb County	\$103,505/yr.	Bibb County, DNR & Enforcement Grant	
2	Implement existing white paper recycling program with in county government operations.	X	X	X	X	Bibb County	\$2,000/yr.	Bibb County	
3	Evaluate methods to further reduce waste within county government operations.	X	X	X	X	Bibb County	Staff Time in Budget	County General Fund	
Public Education									
1	Rent four roving billboards in the City/County to promote recycling.	X	X	X	X	Keep Macon-Bibb Beautiful Comm, Bibb County, City of Macon.	\$6,000/yr.	KMBBC, Bibb County, City of Macon	
2	Conduct educational workshops in the schools using the enviroscape demonstration models.	X	X	X	X	Keep Macon-Bibb Beautiful Comm, Bibb County, City of Macon, Public & Private Schools	\$6,000/yr.	KMBBC, Bibb County, City of Macon	
3	Conduct 2 teacher workshops using the following tools: “Waste in Place” for elementary schools; “Waste: A Hidden Resource”, “Graffiti Hurts”, and “Get a Grip” for middle and high schools; and EPA’s “Let’s Reduce and Recycle” Curriculum.	X	X	X	X	Keep Macon-Bibb Beautiful Comm, Bibb County, City of Macon, Public & Private Schools	\$6,000/yr.	KMBBC, Bibb County, City of Macon	
4	Conduct outreach programs, demonstrations, and exhibits to educate the general public on a variety of environmental issues, such as, scrap tires, recycling, watershed run-off, and modern landfill systems.	X	X	X	X	Keep Macon-Bibb Beautiful Comm, Bibb County, City of Macon.	Staff Time in Budget	KMBBC, Bibb County, City of Macon	

5	Prepare bi-weekly newspaper columns in the Macon Telegraph ("Down to Earth") including information on recycling, grasscycling, mulching, and composting.	X	X	X	X	Bibb Service	Co.	ExtensionStaff	Time in Budget	University of Georgia
6	Conduct community classes including information on recycling, grasscycling, mulching, and composting.	X	X	X	X	Bibb Service	Co.	ExtensionStaff	Time in Budget	University of Georgia, Class Attendees
7	Prepare weekly television segments ("Anything Grows" on WMAZ Channel 13's Weekend Morning) including information on recycling, grasscycling, mulching, and composting.	X	X	X	X	Bibb Service	Co.	ExtensionStaff	Time in Budget	University of Georgia
8	Make research-based literature available to the public available at the Bibb County Extension Service office and via the internet.	X	X	X	X	Bibb Service	Co.	ExtensionStaff	Time in Budget	University of Georgia

Source: Middle Georgia RDC

**Table 5-4
City of Macon Solid Waste Plan Update**

Description		STWP Year				Likely Project Involvement	Estimated Cost	Possible Funding Sources
		03-04	04-05	05-06	07-08			
Collection								
1	(Underway) Operate and maintain weekly collection of residential waste by the City of Macon.	X	X	X	X	City of Macon	\$3 Million/yr.	City of Macon
2	(Underway) Operate and maintain weekly collection of recyclables by the City of Macon.	X	X	X	X	City of Macon	\$500,000/yr.	City of Macon
3	(Underway) Operate and maintain weekly collection of yard waste by the City of Macon.	X	X	X	X	City of Macon	\$450,000/yr.	City of Macon
4	Operate and maintain the collection of bulk items by the City of Macon on an on-call basis.	X	X	X	X	City of Macon	\$100,000/yr.	City of Macon
5	(Underway) Perform annual evaluation of the city's garbage fees to assure that adequate funds will be available to meet the future waste collection needs.	X	X	X	X	City of Macon	Staff Time in Budget	City of Macon
6	(Underway) Evaluate current solid waste collection system to determine if it meets the needs of the city.	X	X	X	X	City of Macon	Staff Time in Budget	City of Macon
7	(Underway) Evaluate recycling frequency and determine efficiency.	X	X	X	X	City of Macon	Staff Time in Budget	City of Macon
Disposal								
1	(Underway)Perform annual evaluation of the landfill tipping fee to insure that it is adequate to meet the future landfill needs and closure costs.	X	X	X	X	City of Macon	Staff Time in Budget	Garbage Fees
2	(Underway)Periodically review totals for the amount of waste being disposed of in the landfill to evaluate any changes in the estimated life of the landfill.	X	X	X	X	City of Macon	Staff Time in Budget	Garbage Fees
3	Operate and maintain the City's existing MSW landfill.	X	X	X	X	City of Macon	1.2 Mill./yr.	Tipping Fees
4	(Underway) Operate and maintain existing inert landfill for yard waste and inert waste.	X	X	X	X	City of Macon	\$300,000/yr.	Tipping Fees
5	Conduct a study on the options available for a regional approach to solid waste management.	X	X	X	X	City of Macon, Other Local Gov't's	\$25,000/yr.	City of Macon
6	Monitor methane gas at the current landfill on a monthly basis.	X	X	X	X	City of Macon	\$50,000/yr.	City of Macon
7	Monitor groundwater at the current landfill on a bi-annual basis.	X	X	X	X	City of Macon	\$30,000/yr.	City of Macon
Waste Reduction								
1	Operate existing home composting program that involves selling bins to homeowners and training homeowners how to compost.	X	X	X	X	City of Macon, KMBCC	\$3,000/yr.	City of Macon, DCA
2	Operate the City's recycling program (Recycling Coordinator, Bucks for your Bin Program, Education)	X	X	X	X	City of Macon, KMBCC	\$465,000/yr.	City of Macon
Public Education								
1	Rent four roving billboards in the City/County to promote recycling.	X	X	X	X	Keep Macon-Bibb Beautiful Comm., City of Macon, and Bibb County.	\$6,000/yr.	KMBBC, City of Macon, Bibb County,
2	Conduct educational workshops in the schools using the enviroscape demonstration models.	X	X	X	X	Keep Macon-Bibb Beautiful Comm., City of Macon, Bibb County	\$6,000/yr.	KMBBC, City of Macon, Bibb County,
3	Conduct 2 teacher workshops using the following tools: "Waste in Place" for elementary schools; "Waste: A Hidden Resource", "Graffiti Hurts", and "Get a Grip" for middle and high schools; and EPA's "Let's Reduce and Recycle" Curriculum.	X	X	X	X	Keep Macon-Bibb Beautiful Comm., City of Macon, Bibb County	\$6,000/yr.	KMBBC, City of Macon, Bibb County,
4	Conduct outreach programs, demonstrations, and exhibits to educate the general public on a variety of environmental issues, such as, scrap tires, recycling, watershed run-off, and modern landfill systems.	X	X	X	X	Keep Macon-Bibb Beautiful Comm, City of Macon, Bibb County,	Staff Time in Budget	KMBBC, City of Macon, Bibb County
5	Prepare bi-weekly newspaper columns in the Macon Telegraph ("Down to Earth") including information on recycling, grasscycling, mulching, and composting.	X	X	X	X	Bibb Co. Extension Service	Staff Time in Budget	University of Georgia

6	Conduct community classes including information on recycling, grasscycling, mulching, and composting.	X	X	X	X	Bibb Co. Extension Service	Staff Time in Budget	University of Georgia, Class Attendees
7	Prepare weekly television segments ("Anything Grows" on WMAZ Channel 13's Weekend Morning) including information on recycling, grasscycling, mulching, and composting.	X	X	X	X	Bibb Co. Extension Service	Staff Time in Budget	University of Georgia
8	Make research-based literature available to the public available at the Bibb County Extension Service office and via the internet.	X	X	X	X	Bibb Co. Extension Service	Staff Time in Budget	University of Georgia

Source: Middle Georgia RDC

Table 5-5
Payne City Solid Waste Plan Update

Description		STWP Year				Likely Project Involvement	Estimated Cost	Possible Funding Sources
		03-04	04-05	05-06	07-08			
Collection								
1	(Underway) Implement existing weekly curbside collection of residential and business waste by a private collection company.	X	X	X	X	Payne City, Private Waste Collection Company	\$7,680/yr.	Garbage Fees
2	(Underway) Implement existing curbside collection of yard waste by the City which is then deposited into a dumpster for future collection by a private waste collection company.	X	X	X	X	Payne City, Private Waste Collection Company	\$1,020/yr.	Garbage Fees
Disposal								
1	(Underway)Dispose residential and business waste in the Swift Creek Environmental Subtitle D landfill.	X	X	X	X	Private Collection Company, Private Landfill Operator	Included in Collection Costs Above	Garbage Fees
2	(Underway)Dispose yard waste that is collected from a dumpster in the City into Swift Creek's Environmental inert landfill.	X	X	X	X	Private Collection Company, Private Landfill Operator	Included in Collection Costs Above	Garbage Fees
Waste Reduction								
1	(Postponed) Implement a program with local volunteer group to collect and market selected recyclable items.	X	X	X	X	City of Macon, KMBCC	\$3,000/yr.	City of Macon, DCA
Public Education								
1	(Postponed) Develop materials to encourage volunteer participation in the recycling program.	X	X	X	X	City of Payne City	\$250 Plus Staff Time	General Fund
2	Prepare bi-weekly newspaper columns in the Macon Telegraph ("Down to Earth") including information on grasscycling, mulching, and composting.	X	X	X	X	Bibb Co. Extension Service	Staff Time in Budget	University of Georgia
3	Conduct community classes including information on recycling, grasscycling, mulching, and composting.	X	X	X	X	Bibb Co. Extension Service	Staff Time in Budget	University of Georgia, Class Attendees
4	Prepare weekly television segments ("Anything Grows" on WMAZ Channel 13's Weekend Morning) including information on recycling, grasscycling, mulching, and composting.	X	X	X	X	Bibb Co. Extension Service	Staff Time in Budget	University of Georgia
5	Make research-based literature available to the public at the Bibb County Extension Service office and via internet.	X	X	X	X	Bibb Co. Extension Service	Staff Time in Budget	University of Georgia

Source: Middle Georgia RDC

Table 5-6 provides a listing of landfills in Bibb County. The City of Macon and the residents of the city are the users of the City of Macon Landfill. Bibb County and Payne City residents are users of the Swift Creek landfill. The Mead Road landfill is primarily used by industry in the Mead Road area.

Table 5-6
Landfills Located in Bibb County

Site	Owner	Contact	Location
Macon Landfill	City of Macon Landfills, Inc.	Dexter White	920 11 th Street
Swift Creek	Swift Creek Env. Services	Don Kindig	4200 Davis Road
Mead Road Landfill	Mead Road Environmental	Eberhardt Industries	4300 Mead Road

Source: MBP&Z

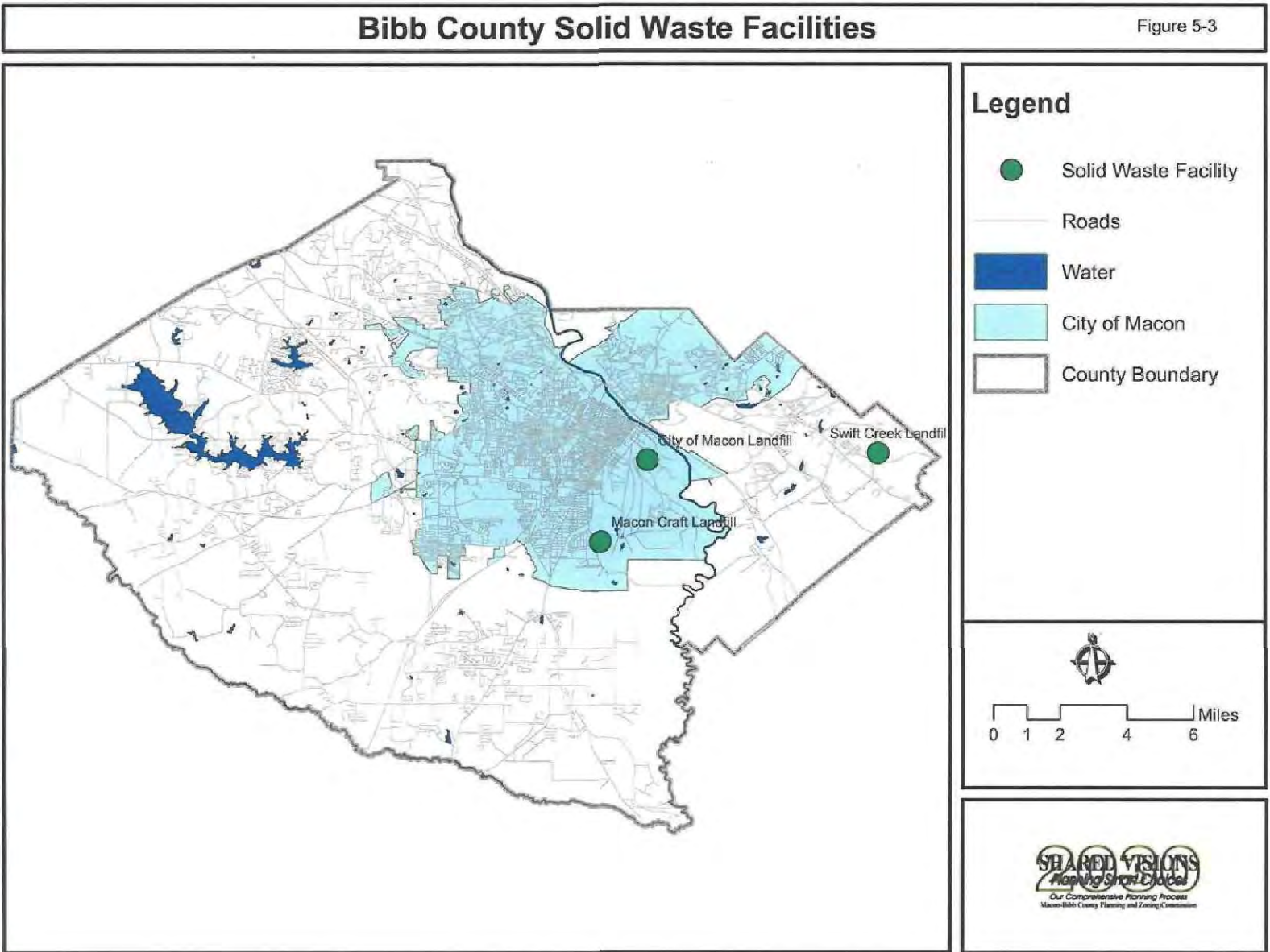


Figure 5-3

PUBLIC SAFETY

Public safety generally consists of fire protection, law enforcement, emergency medical services, corrections, courts, and emergency management services. The various agencies and facilities providing these diverse public safety functions are presented in this section in order to provide a basis for evaluating the current levels of service, segments of the community served, ability of services to meet future needs of the community, and utilization of services provided.

Fire Protection

Community fire protection is primarily the responsibility of the Macon-Bibb County Fire Department. The department services 226 square miles of territory that encompasses all of Bibb County. The department serves the unincorporated areas of Bibb County and the municipalities with a sworn and civilian staff of 386 full-time employees. The department also has a major role in responding to non-fire related emergency calls that come into the E-911 center.

The department's service area is broken into two fire chief districts, allowing for division of the fire fighting and rescue responsibilities. There are 19 response/ rescue districts scattered throughout the county. The Department operates 19 fire stations, of which 11 are in the City of Macon and 8 are in the county. The locations of these districts are displayed in Figure 5-4.

The Department's ability to service the local population in an efficient manner has resulted in it receiving a distinguished honor. The City's Insurance Services Office or ISO rating is nationally recognized. It is determined by looking at the available water supply, communication network, fire fighter training, workforce, and equipment. Due to the excellence in these areas, the ISO rating for the City of Macon is Class 1 and the unincorporated area of the County is Class 3. Class 1 represents the best public protection, and class 10 indicates no recognized protection. Therefore, Bibb County as a whole has facilities and personnel in place to offer good fire protection.

The department has a vigorous capital improvement program designed to maintain and update its equipment. .

The list below indicates the vehicles the department currently has

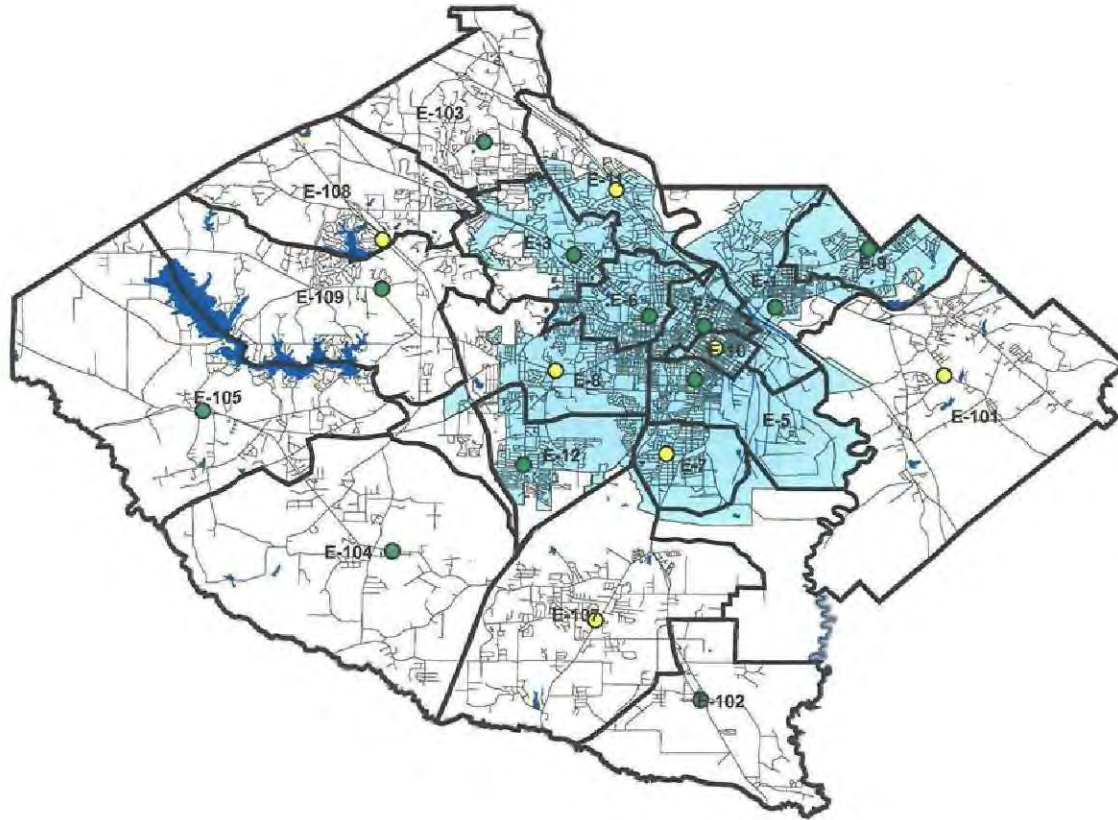
Table 5-7
Macon-Bibb County Fire Department Vehicles

Make	Model	Year	Make	Model	Year
Small Fleet Vehicles			Large Fleet Vehicles		
Ford	Crown Vic	1995	Ford	F-450	1995
Mercury	Marquis	1999	Ford	F-450	1998
Ford	Taurus	1999	Ford	F-450	2001
Ford	Crown Vic	1995	Mack	Pumper	1949
Ford	Crown Vic	1995	Amer. LA France	Pumper	1917
Ford	Taurus	1994	Sutphen	Pumper	1995
Ford	Van	1995	Sutphen	Pumper	1997
Chevy	Pick-Up	1994	Ferrara	Pumper	1993
Ford	Crown Vic	1991	Ford-Grumman	Pumper	1985
Ford	CV	1994	Sutphen	Pumper	1998
Chevy	Caprice	1992	Ford (E-One)	Pumper	1989
Ford	Taurus	1994	Grumman	Pumper	1990
Ford	Taurus	1994	E-One	Pumper	1994
Ford	Taurus	1994	Ferrara	Pumper	1994
Ford	Taurus	1994	Ford-Grumman	Pumper	1988
Dodge	Van	1994	Ford-Grumman	Pumper	1989
Chevy	Astro Van	1994	Pierce	Aerial	2001
Ford	CV	1994	Grumman	Aerial	1986
Ford	CV	1999	Federal	Aerial	1990
Ford	CV	1999	Pierce	Aerial	2000
Ford	F-150	2000	Ford	Air Craft Rescue	2004
Ford	F-150	2001	Ward La France	Pumper	1975
Chevy	C-10	1991	Ward La France	Pumper	1975
Ford	F-150	2000	Gruman	Pumper	1990
Chevy	Lumina	1995	E-One	Pumper	2000
Ford	CV	2001	Gruman	Pumper	1992
Ford	Pick-Up	1992	E-One	Pumper	2003
			Ferrara	Pumper	2001
			Gruman	Pumper	1990
			HME	Pumper	1993
			Ferrara	Pumper	2001
			Ford	Air Craft Rescue	1974
			Pierce	Aerial	1973
			Seagrave	Aerial	1976
			Seagrave	Pumper	1977
			Ford (E-One)	Pumper	1980
			Seagrave	Aerial	1982
			GMC-Brigade	Tanker	1980
			GMC	Tanker	1983
			F-Lin	Truck	1998
			Hacky	Trailer	1981

Source: Bibb County Fire Department

Macon-Bibb County Fire Stations and Engine Response and Rescue Districts

Figure 5-4



Legend

Fire Stations

Ladder Truck Equipped

- Yes
- No

- Roads
- 1st Call Territory For Engines
- Water
- City of Macon
- County Boundary

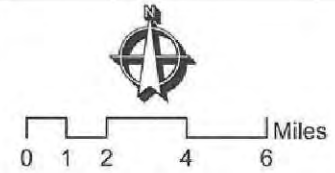


Figure 5-4

Macon-Bibb County Fire Department District Chief Zones

Figure 5-5

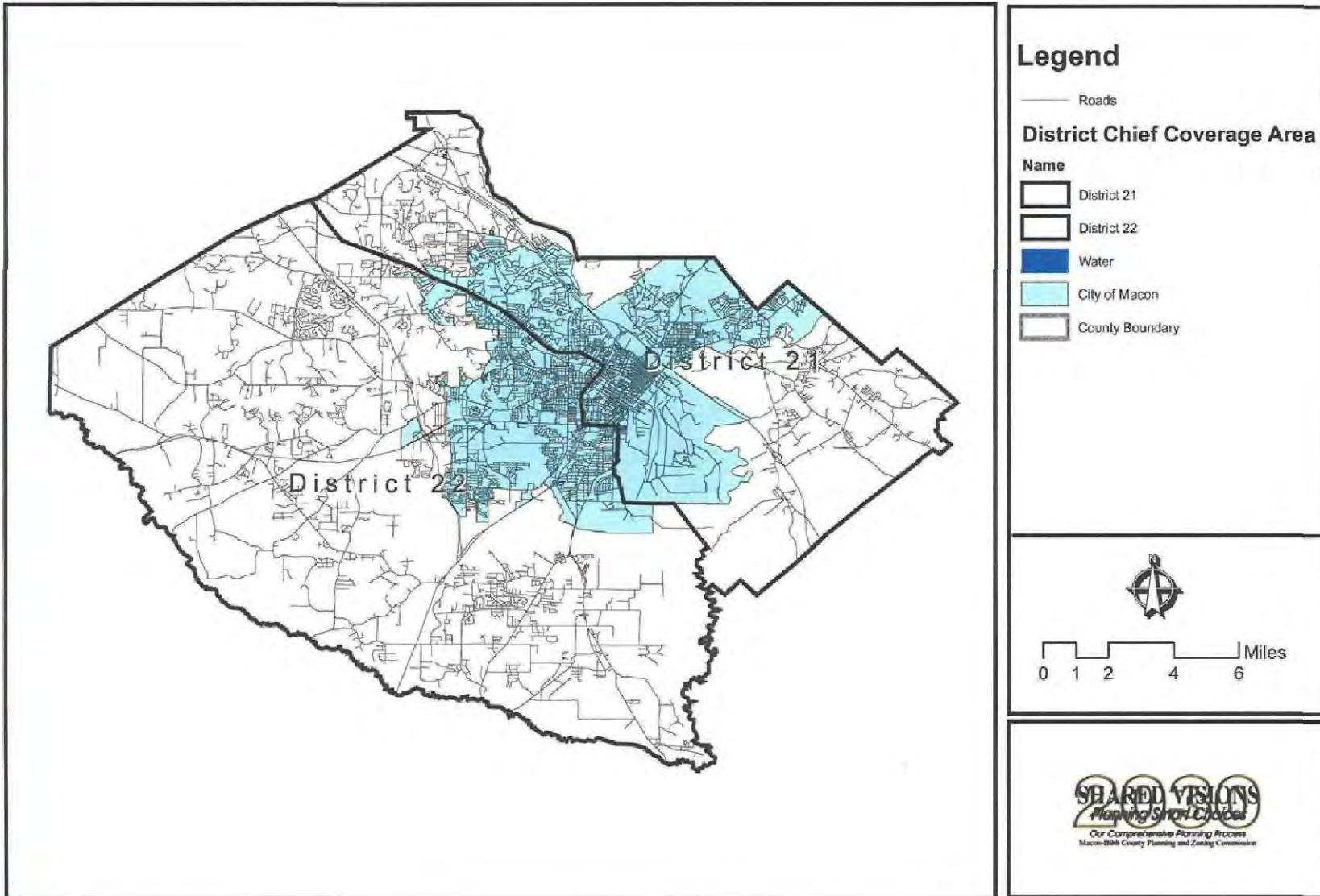


Figure 5-5

Police Protection

Police protection is the primary responsibility of two agencies in the County; the Bibb County Sheriff's Department and the City of Macon Police Department.

Bibb County Sheriff's Department

The Bibb County Sheriff's Department is responsible for the safeguard of the County's residents in the unincorporated areas and Payne City. The department maintains the 585 bed Bibb County Law Enforcement Center that is located in downtown Macon. Inmates from both the City and County are housed at this facility.

To efficiently operate, the department employs approximately 250 sworn officers that make up the patrol force, investigations force, and jail personnel. There are 90 part-time bailiffs that aid in court administration and 40 full time civilian employees that assist with the day to day operations of the department. There are 150 cars that patrol on an average of four million miles per year. These cars are replaced about every four to five years. The patrol districts are displayed in Figure 5-6. The Department logs about 15 to 17 thousand arrests per year.

Bibb County Sheriff Patrol Districts

Figure 5-6

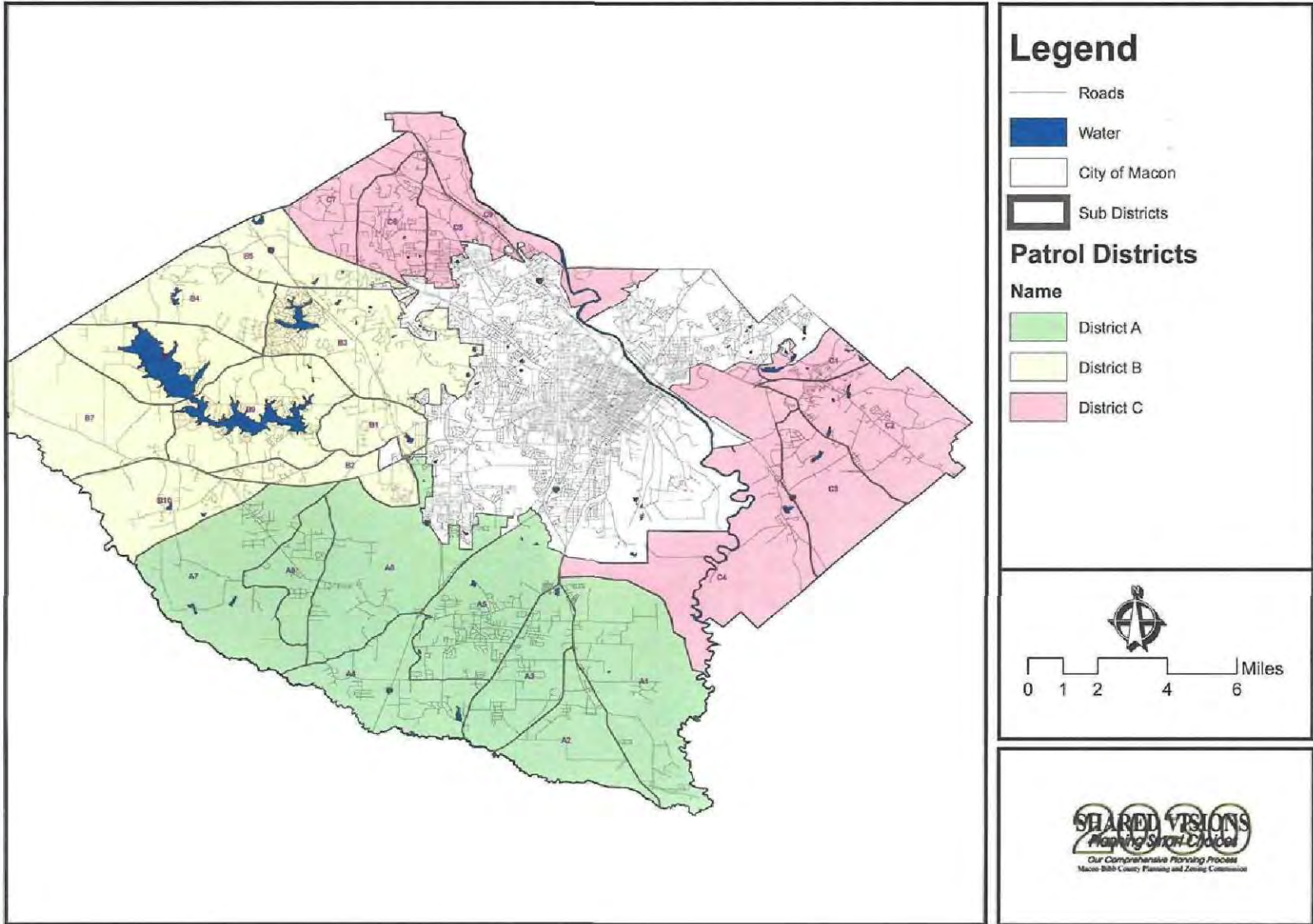


Figure 5-6

Macon Police Department

The Macon Police Department operates with a staff of 401 sworn and civilian staff members and is headquartered in downtown Macon. The department serves Macon by dividing the city into four precincts. Each precinct has a precinct office and a commander. The table below indicates the locations of the precinct offices and the commanders of each. Figure 5-7 displays the boundaries of each city precinct.

Table 5-8
Macon Police Department Precinct Stations

Precinct	Address	Commander
Precinct 1	1765 Shurling Drive	Capt. Chuck Reynolds
Precinct 2	2654 Houston Avenue	Capt. Robert Fuller
Precinct 3	400 Pio Nono Avenue	Capt. Charles Stone
Precinct 4	3001 Eisenhower Parkway	Capt. Jimmy Rogers

Source: Macon Police Department

The Department has a very aggressive crime prevention program that goes out into the City to teach the need for preventative measures. The other preventative service offered is the interaction program that goes into public and private schools to educate the students on many police related issues. The crime preventions programs appear to be bearing fruit, as indicated by an overall decrease in crime in the city. The table below displays various

Table 5-9
Macon Police Department Offence Summary 2002 -2003

Crime	2002	2003	Percent Change	Numerical Change
Homicide	18	16	-11%	-2
Rape	87	50	-43%	-37
Robbery	250	254	2%	4
Aggravated Assault	347	452	30%	105
Arson	79	60	-24%	-19
Burglary	2,324	1,954	-16%	-370
Larceny	6,698	6,661	-1%	-37
Auto Theft	1,242	1,055	-15%	-187
Drug Offenses	1,125	1,049	-7%	-76
Other Offenses	15,730	15367	-2%	-363
Grand Total	27,900	26,918	-4%	-982

Source: Macon Police Department

crimes committed in the City from the 2002 to 2003.

The addition of Ameri-Corp Offices in traditionally high crime areas, has also contributed to the reduction in crime over the years. These stations act as a way of having a constant police presence in needed areas and many times serve as the staging area for many of the crime prevention programs. There are six throughout the city and they are also displayed in Figure 5-7.

Table 5-10

Macon Police Department Ameri-Corps Stations Ameri-Corp Station Address Coordinator

Fort Hill	1103 Eastview Avenue	Sergeant Sarita Thomas
Lymore Estates	3775 Houston Avenue	Sergeant Sarita Thomas
Village Green	2636 Bloomfield Way	Sergeant Sarita Thomas
Unionville	1996 Mallard Avenue	Sergeant Sarita Thomas
Pleasant Hill	295 Monroe Avenue	Sergeant Sarita Thomas
Bellevue	3617 Earl Street	Sergeant Sarita Thomas

Source: Macon Police Department

City of Macon Police Stations

Figure 5-7

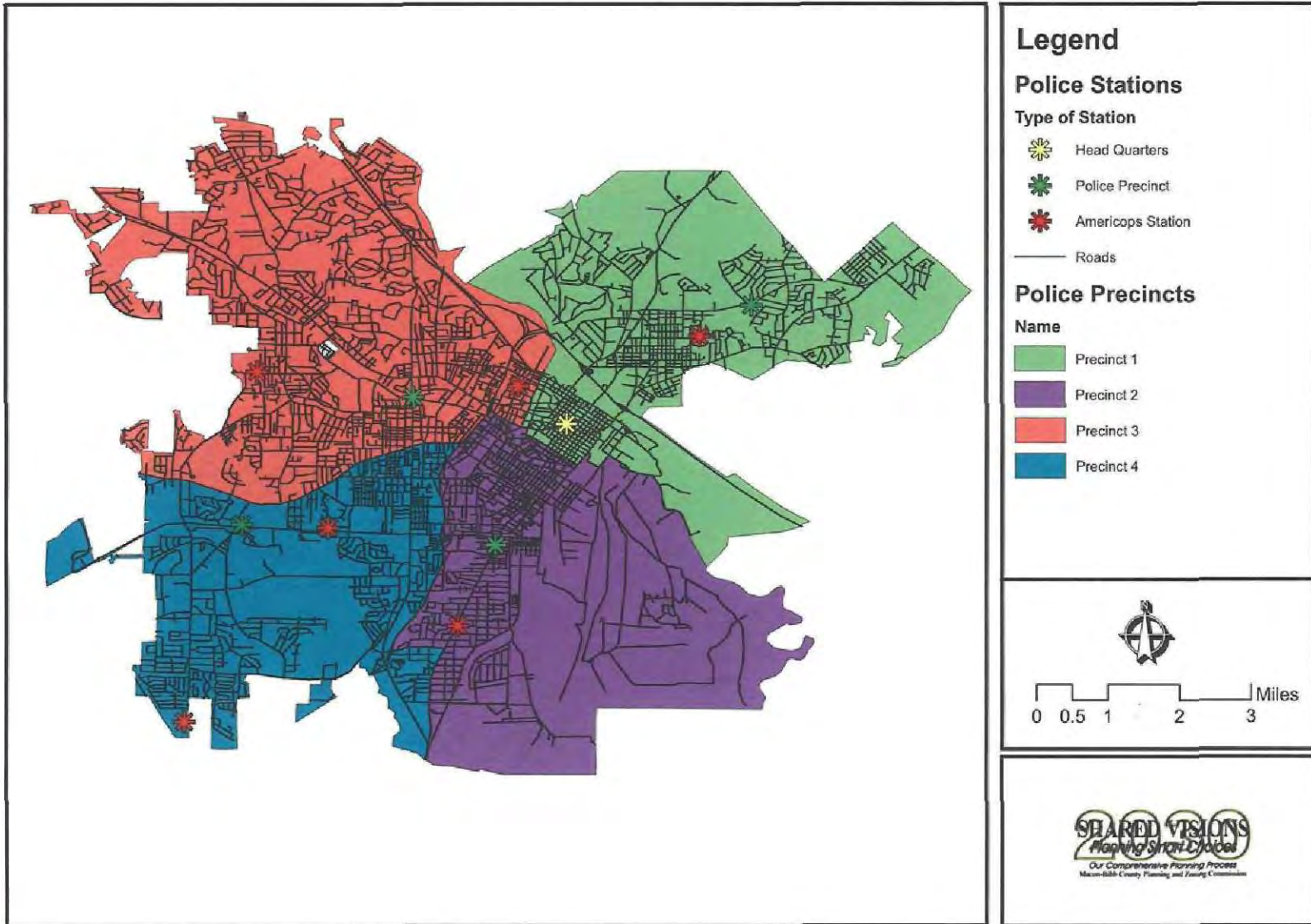


Figure 5-7

Emergency Management Administration

The Macon-Bibb County Office of Emergency Management has been serving the City of Macon and Bibb County for over forty years. The mission of the agency is to prepare for, respond to, and recover a host of potential hazards and threats whether natural or manmade that may affect the citizens of Macon-Bibb County.

The agency accomplishes this mission by primarily working along with the City of Macon Police Department, Bibb County Sheriff's Department and the Macon-Bibb Fire Department. The agency implements the Emergency Operation Plan by coordinating all emergency response and the appropriate organizations. The agency will assist all local agencies in the development of emergency plans and training programs.

Highlights of this agency include:

- ⇒ State Certified full-time staff employees
- ⇒ 24 Hour On-Call support
- ⇒ 54 Emergency Sirens operational in Macon and Bibb County as of May 2000
- ⇒ Provides over 300 hours of staff assistance to civic events annually
- ⇒ Assist utility companies with storm and accident recovery
- ⇒ Search for missing persons
- ⇒ Staff members licensed as Federal Communications Commission Amateur Radio Operators
- ⇒ Monitor and alert citizens of inclement or threatening weather

HEALTH SERVICES

The Macon-Bibb County area has a very strong health system. The major hospitals in the County are nationally

ranked as health care providers. These hospitals have a total of 1,132 beds to serve not only the county but the Middle Georgia region. Table 5-11 below provides statistics about the hospitals in the county. Figure 5-8 illustrates the locations for the hospitals listed below.

In addition to major hospitals, Bibb County is the home to the District 5-2: North Central District of the Georgia Department of Public Health. This district serves 13 Middle Georgia Counties. Bibb County residents may use the Bibb County Health Department, which is located on Emery Highway. The Bibb County Health Department offers services in Adult Health, Children's Health, Dental Health, Sickle Cell Clinics, Travel Clinics, Women's Health, Early Intervention, and Environmental Health.

Table 5-11
Hospitals of Macon-Bibb County

Statistics	Coliseum Medical Center	Coliseum Psychiatric	Macon Northside	Medical Center*	HealthSouth Rehab Hospital
Bed Capacity	250	92	103	637	50
Emergency Room Visits	25,887	0	15,517	54,660	0
Non-Emergency Room Visits	51,266	254	16,006	390,761	18,370
Medical Staff	374 606	18 36	270 395	476 983	6 50
Administrator	Allen Golson	Edward Ruffin	Bud Costello	Don Faulk	Elbert McQueen

Source: Georgia Department of Community Health, 2003

*Figures represents a combined total from The Medical Center of Central Georgia and Middle Georgia Hospital

Note: Bold numerical figures represent the number of physicians on staff.

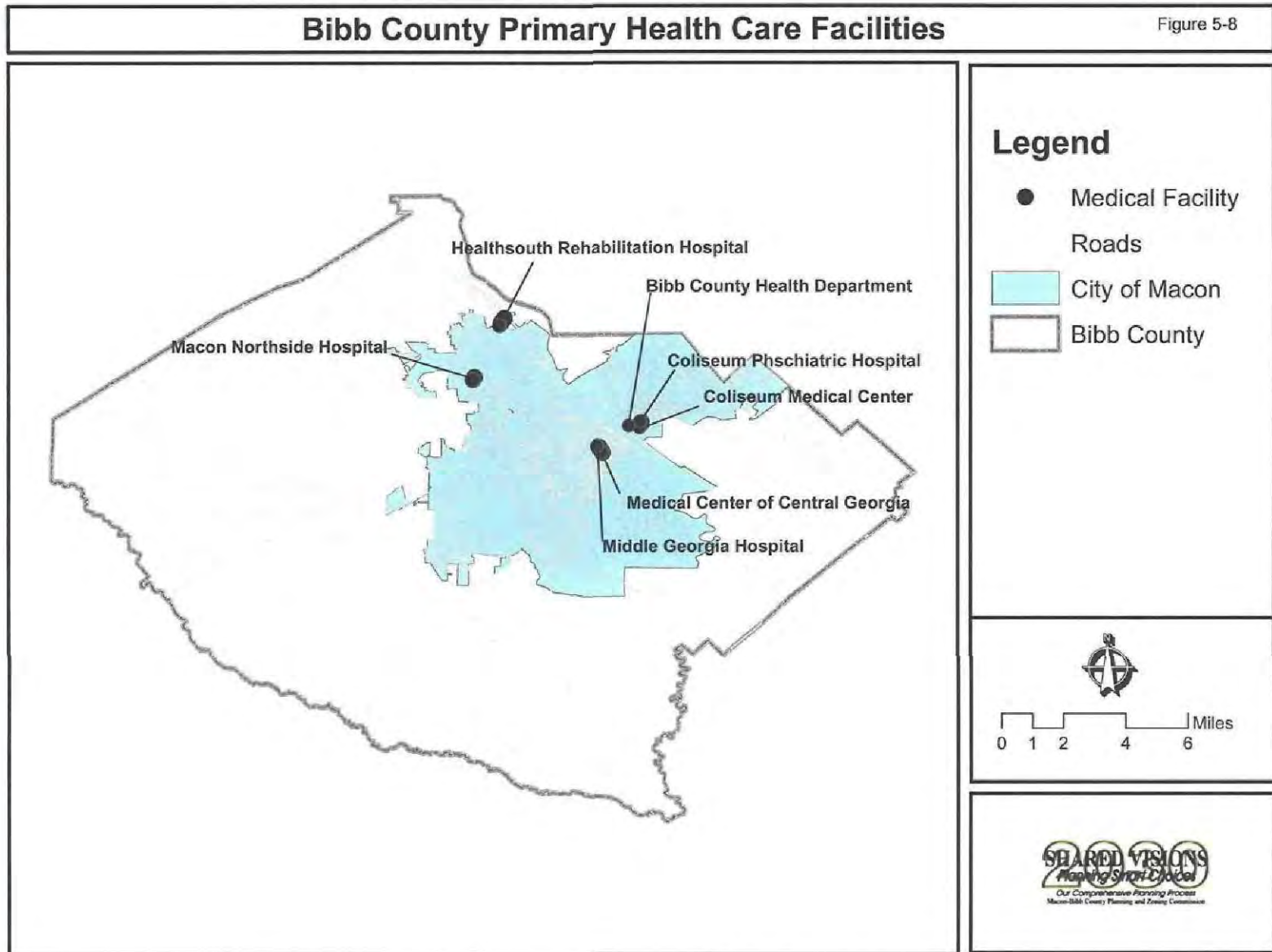


Figure 5-8

RECREATION FACILITIES

Parks provide open space and enhance the appearance of a community for residents and visitors alike. Likewise, recreational programs and facilities provide residents with opportunities to enjoy the community with their neighbors. Facilities provided may include parks, playgrounds, gyms, paths, picnic areas, swimming pools, tennis centers, ball fields, classrooms, and special facilities. Some sites may include more than one of these facilities.

Macon-Bibb County Parks and Recreation Department

The Macon-Bibb County Parks and Recreation Department is the primary local agency responsible for recreation in the City of Macon, Payne City and unincorporated Bibb County. The Department has recently completed a Parks and Recreation Master Plan for Bibb County. With this new master plan the department will have the needed direction to further enhance the quality of life for all citizens of the county. The Department oversees 75 parks, recreational facilities, and other properties throughout the county.

The department provides various types of parks and facilities to accommodate a wide range of needs. The types of parks and facilities that are provided are; Community Parks, Neighborhood Parks, Special Use Facilities, Urban Open Spaces, Sidewalks, Bikeways, and Natural Lands. A description of each type of park is discussed along with a table that lists the recreational and other facilities that are maintained by the department. Figure 5-9 displays the locations of these facilities throughout the County.

Community Parks

Community parks are generally between 20 and 50 acres in size, and serve residents within a 3-mile radius. These parks provide a balance of active and passive recreation opportunities including community centers, play structures, tennis courts, game courts, multi-purpose play fields and open space, swimming pools, facilities for cultural activities such as concerts and performances, picnic areas, internal trails, and natural study areas. These parks are not intended to be used extensively for programmed athletic use and tournaments, and should only be 40%-60% developed with the remaining balance to be preserved as multi-purpose open space or as natural areas.

Neighborhood Parks

Neighborhood parks include both active and passive recreation activities geared specifically for residents living within a 10 minute walk of the park. Ease of access and walking distance are critical factors in the location of neighborhood parks. These parks range in size from 5 to 10 acres.

Special Use Facilities

Special use facilities are dedicated to one specialized recreation function, such as an aquatics center, softball/baseball complex, tennis center, and etc. These facilities will vary in size due to their intended use.

Urban Open Spaces

Urban open spaces are generally found in downtown settings. These spaces provide safe pedestrian access, are generally one acre or less in size, and include monuments, medians, urban plazas, gateways and small urban parks. Some of these small parks may have parks furnishings, such as park benches, picnic tables and play equipment.

Sidewalks, Bikenways, Trails, and Greenways

These facilities will include a county-wide interconnected system of pedestrian-friendly facilities such as shaded sidewalks in neighborhoods, striped bike lanes along major roadways, bike paths and multi-use trails within greenway corridors.

Natural Lands and Waterways

These lands include individual sites with sensitive natural resources, utility easements, surface water management areas, and shorelines along waterways. The preservation of these lands enhances the livability and character of a region by preserving its natural amenities.

**Table 5-12
Existing Recreational Facilities**

Facility Name	Address	Contact Name	Title
COMMUNITY PARKS			
Freedom Park	3301 Roff Avenue	Daniel Thompson	Director
West Macon Park	5018 Mercer University Drive	Larry Fortson	Asst. Director/Operations
North Macon Park	815 North Macon Park Drive	James Hand	Director
Bloomfield Park	4115 Lions Place	Octavia Battle	Director
South Macon Park	468 Guy Paine Road	Reginald Tabor	Asst. Director/Grounds
East Macon Park	3326 Ocmulgee East Boulevard	Dona Moore	Director
Frank Johnson Park	2227 Mercer University Drive	Kelvin Middleton	Director
Memorial Park	2465 Second Street	Richard Madison	Director
Rosa Jackson Community Center	1211 Maynard Street	James Smith	Director
Central City Park	150 Willie "Smokey" Glover Boulevard	Michael Anthony	Director/Parks & Rec
Pierce Avenue Waterworks	Pierce Avenue		
Sandy Beach Park at Lake Tobesofkee	6600 Moseley Dixon Road		
Creekside Park at Lake Tobesofkee	6600 Moseley Dixon Road		
Sub-South/South Bibb Detention Pond			
NEIGHBORHOOD PARKS			
Hillcrest Park	Hillcrest Avenue	Reginald Tabor	Asst. Director/Grounds
Tattnall Square Park	College Street	Benjamin Hamrick	Business Mgr.
Mattie Jones Park	1975 1st Avenue	Reginald Tabor	Asst. Director/Grounds
Willingham Court Park	Willingham Court	Reginald Tabor	Asst. Director/Grounds
Kings Park	Kings Park Circle	Reginald Tabor	Asst. Director/Grounds
Henry Burns Park	3298 Ingleside Avenue	Reginald Tabor	Asst. Director/Grounds
Village Green			
Lynmore Estates			
Murphy Park	Ingleside Avenue	Reginald Tabor	Asst. Director/Grounds
Flintrock Park at Lake Tobesofkee	7700 Moseley Dixon Road		
Becky Cummings Park	Atkins Drive	Reginald Tabor	Asst. Director/Grounds
Dandy Park			
Daisy Park	Forsyth Street	Reginald Tabor	Asst. Director/Grounds
South Macon/Ormond Terrace	Ormond Terrace	Reginald Tabor	Asst. Director/Grounds
Antioch Area			
West Central/Bellevue Area			
Key Street (Detention Pond)	Key Street		
Tindall Heights Area			
Ft. Hill Area			
Crosskeys Area/Millerfield Road	Millerfield Road		
SPECIAL USE FACILITIES			
John Drew Smith Tennis Center	3280 North Ingle Place	Carl Hodge	Pro/Manager
Bowden Golf Course	3111 Millerfield Road	Jim Hickman	Pro/Director
Tattnall Square Tennis Center	1155 College Street	Carl Hodge	Pro/Manager
Senior Center	1283 Adams Street	Larry Wright	Supervisor
Centreplex		Regina Middleton	Director
Luther Williams Baseball Stadium		Benjamin Hamrick	
Softball Complex/Central City Park		Nancy Dixon	

Georgia State Fair/Central City Park	150 Willie "Smokey" Glover Boulevard	Benjamin Hamrick	Business Manager
R.V. Facility/Central City Park	180 Willie "Smokey" Glover Boulevard	Lori Walker	Manager
Sanctuary Skate Park/Central City Park			
URBAN OPEN SPACES			
Mamie Carter Park	Thomaston Rd/Columbus Road	Reginald Tabor	Asst. Director/Grounds
Ross/Ash Park			
Kennedy Park			
Rose Park	Columbus Street/Orange Terrace	Reginald Tabor	Asst. Director/Grounds
Washington Park	Magnolia Street	Benjamin Hamrick	Business Manager
Coleman Hill Park	Georgia Avenue	Benjamin Hamrick	Business Manager
High Street Parks (2)	High Street	Reginald Tabor	Asst. Director/Grounds
Anita Park			
Briarcliff Park			
Jackson Springs Park	Nottingham Drive	Reginald Tabor	Asst. Director/Grounds
Riverview Park	Riverview Drive	Reginald Tabor	Asst. Director/Grounds
Stanislaus Park	Stanislaus Place/Stanislaus Circle	Reginald Tabor	Asst. Director/Grounds
B.F. Merritt Park	Vineville Avenue & Pio Nono Avenue	Reginald Tabor	Asst. Director/Grounds
Poplar Street Parks	Cotton Avenue to M.L.K. Jr.	Reginald Tabor	Asst. Director/Grounds
Third Street Parks	Third Street	Reginald Tabor	Asst. Director/Grounds
Mulberry Street Park	Georgia Avenue & 5th Street	Reginald Tabor	Asst. Director/Grounds
Confederate Monument	Second Street & Cotton Avenue	Reginald Tabor	Asst. Director/Grounds
Tower Park	High Street & Forsyth Street	Reginald Tabor	Asst. Director/Grounds
Hydrolia Park	Hydrolia Street & Olive Street	Reginald Tabor	Asst. Director/Grounds
Riverwalk Park/Spring Street Boat Landing	Spring Street	Reginald Tabor	Asst. Director/Grounds
Prado	The Prado	Reginald Tabor	Asst. Director/Grounds
G. Bernd Park	Magnolia Street	Reginald Tabor	Asst. Director/Grounds
Moore Park	Oglethorpe and Jackson Streets	Reginald Tabor	Asst. Director/Grounds
James Park			
Cherry Street Plaza	Cherry Street	Reginald Tabor	Asst. Director/Grounds
Music Plaza			
City Hall Civic Plaza			
HISTORIC PUBLIC OPEN SPACES			
Ft. Hill Cemetery	Short Street	Ben Hamrick	Manager
Old 7th Street Cemetery	7th Street	Ben Hamrick	Manager
Evergreen Cemetery	St. James Street	Ben Hamrick	Manager
Rose Hill Cemetery	Riverside Drive	Ben Hamrick	Manager
Ft. Hawkins	Maynard Street		
SIDEWALKS, BIKEWAYS, TRAILS AND GREENWAYS			
Ocmulgee Greenway			
NATURAL LANDS AND WATERWAYS			
Bond Swamp National Wildlife Refuge			
Ocmulgee National Monument			
Arrowhead Park at Lake Tobesofkee			
Claystone Park at Lake Tobesofkee			
Ocmulgee River			

Source: Macon-Bibb County Parks and Recreation Department

Macon-Bibb County Parks and Recreation Master Plan

Figure 5-9

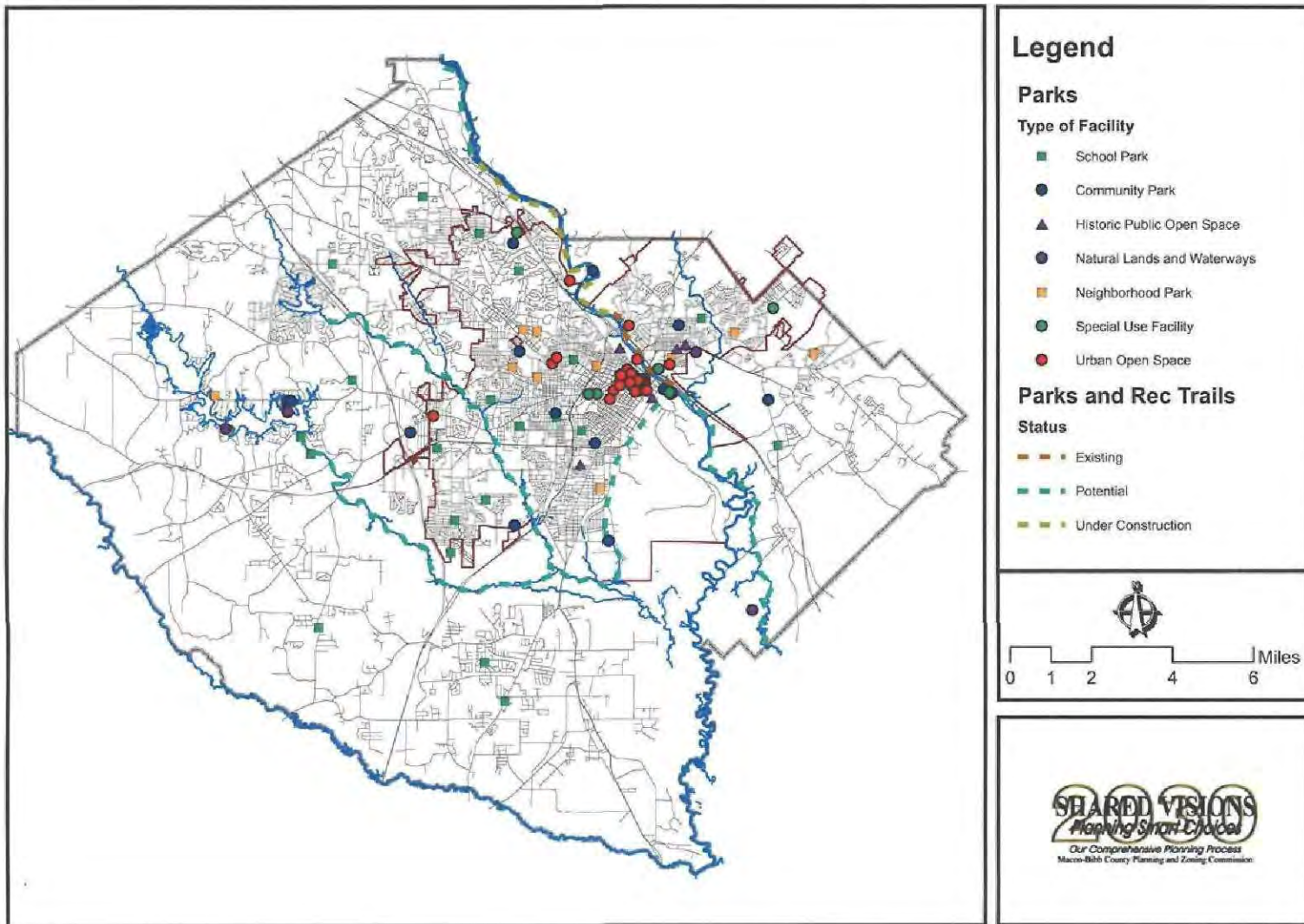


Figure 5-9

LOCAL GOVERNMENT

There are two forms of government in Bibb County, County government and City government. There are two city governments, the City of Macon and Payne City.

Bibb County

The County government has five County Commissioners of which one is elected to the post of Chairman. The Chairman's position is full time. The current County Commissioners are:

Charles W. Bishop, Chairman

Samuel F. Hart, Vice Chairman

Bert Bivins, III

Elmo A. Richardson, Jr.

Joe Allen

Figure 5-10 displays the sections of the county that each Commissioner represents. Also on the County level are four other elected officials which are the Sheriff, Tax Collector, Clerk of Court, and the Coroner.

The County government utilizes the Bibb County Courthouse as its primary administrative facility. The present courthouse is the fifth to have been built for the county. In 1910 the Grand Jury recommended that a \$500,000 bond issue be approved for the construction of a new courthouse. The bond issue was voted down in the election of November 1914. Finally, in 1919 a bond issue was once again proposed and approved. In 1924, County Commission Chairman, Charles W. Stroberg accepted the four-story building. Approximately one year after the courthouse was occupied, the Commissioners accepted plans to construct a jail on the top floor. The total courthouse was completed in 1926.

City of Macon

The City of Macon has a Mayor and Council form of government. The Mayor and City Council are elected to four-year terms that coincide with each other. The Mayor is the Chief Executive of the City and has line-item veto power over all measures passed by the City Council. The Council is responsible for all appropriation to City Departments or for City projects. Should the Mayor veto an action of Council, it has the ability to override his veto. A mandatory vote of 10 members of the Council is required to override the Mayor's veto.

Bibb County Commission Districts

Figure 5-10

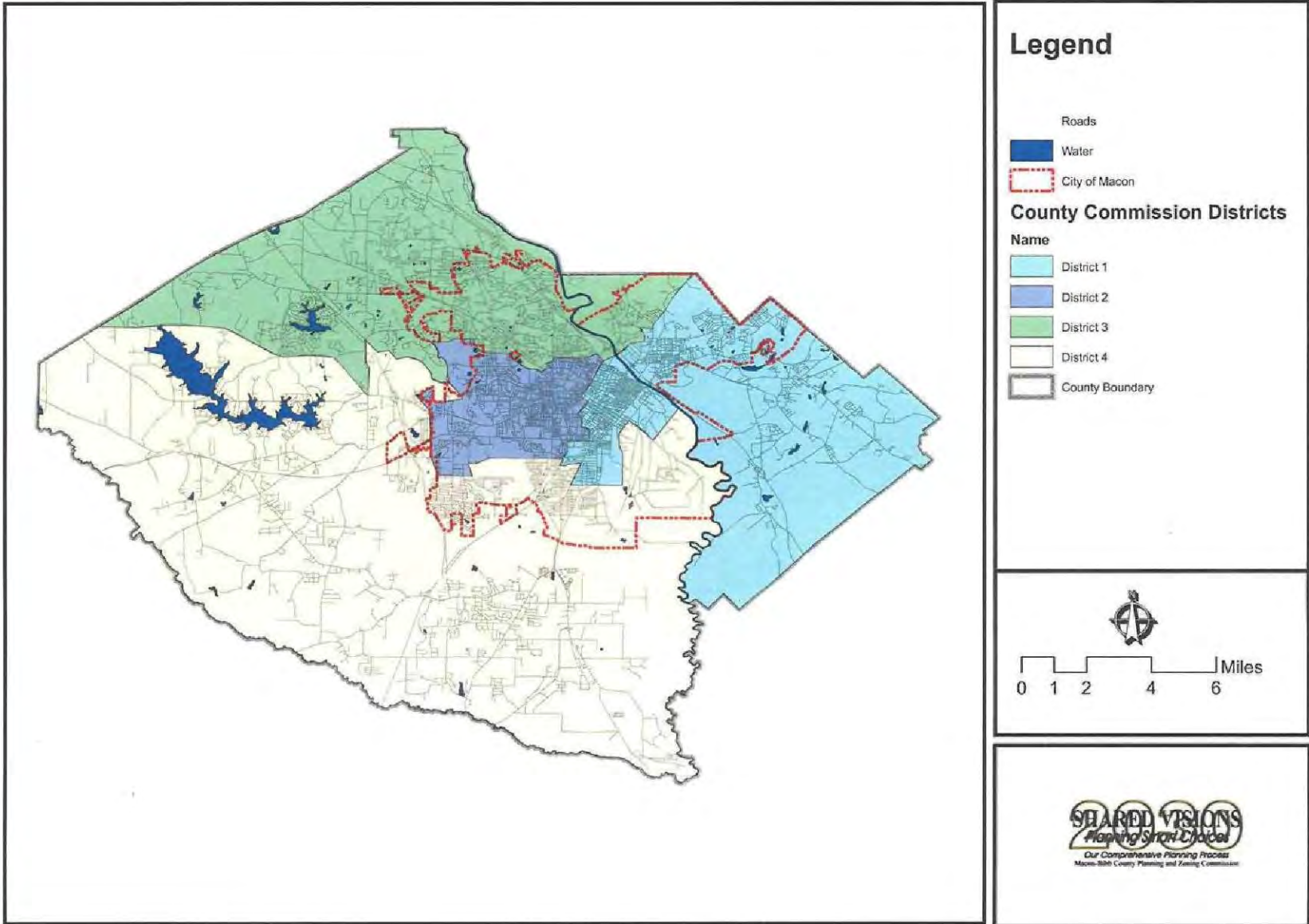


Figure 5-10

If the Mayor is unable to complete a full term, the President of City Council takes the office. If this happens in the first three years, the President of City Council would hold office until a special election could be called to replace the Mayor. If this happens in the last year of the term, the President of City Council serves out the remainder of the term of the Mayor.

There are a total of fifteen members of Council in Macon. Each Council member represents one of five Wards. There are three members per Ward that consist of a Post One Official, Post Two Official, and a Post Three Official. The Post One Official is elected at large and the two other officials are elected from inside the Ward. The Post Two and Three Officials must reside in the Ward from which they are elected. Figure 5-11 displays the Wards that each Council member represents. The current members of the Mayor/ City Council government are:

C. Jack Ellis, Mayor	Mike Cranford, Ward 2
Anita Ponder, Ward 3	Elaine Lucas, Ward 1
President of City Council	Charles Jones, Ward 4
James Timley, Ward 2	Filomena Mullis, Ward 5*
Alveno Ross, Ward 3	Willette Hill-Chambliss, Ward 4
Ed DeFore, Ward 2	Brenda C. Youmas, Ward 1
Rick Hutto, Ward 1	Cole Thomaston, Ward 5
Henry Ficklin, Ward 3	Stebin Horne, Ward 5*
Charles Dudley, Ward 4*	

* Vacancy was not filled or seeking another office at time of report composition.

Payne City

Payne City also has a Mayor and Council form of government. The government is composed of a Mayor, five City Council members, and a City Clerk. There is currently a vacant council seat. City Hall is a 1,200 to 1,300 square foot facility located on Green Street in Payne City. The election schedule is every four years. The current Mayor and City Council Members are:

Kenneth Thompson, Mayor	Johnny Evans
Joan Evans	
Linda Holley	
Maria Gutierrez	

City of Macon Council Wards

Figure 5-11

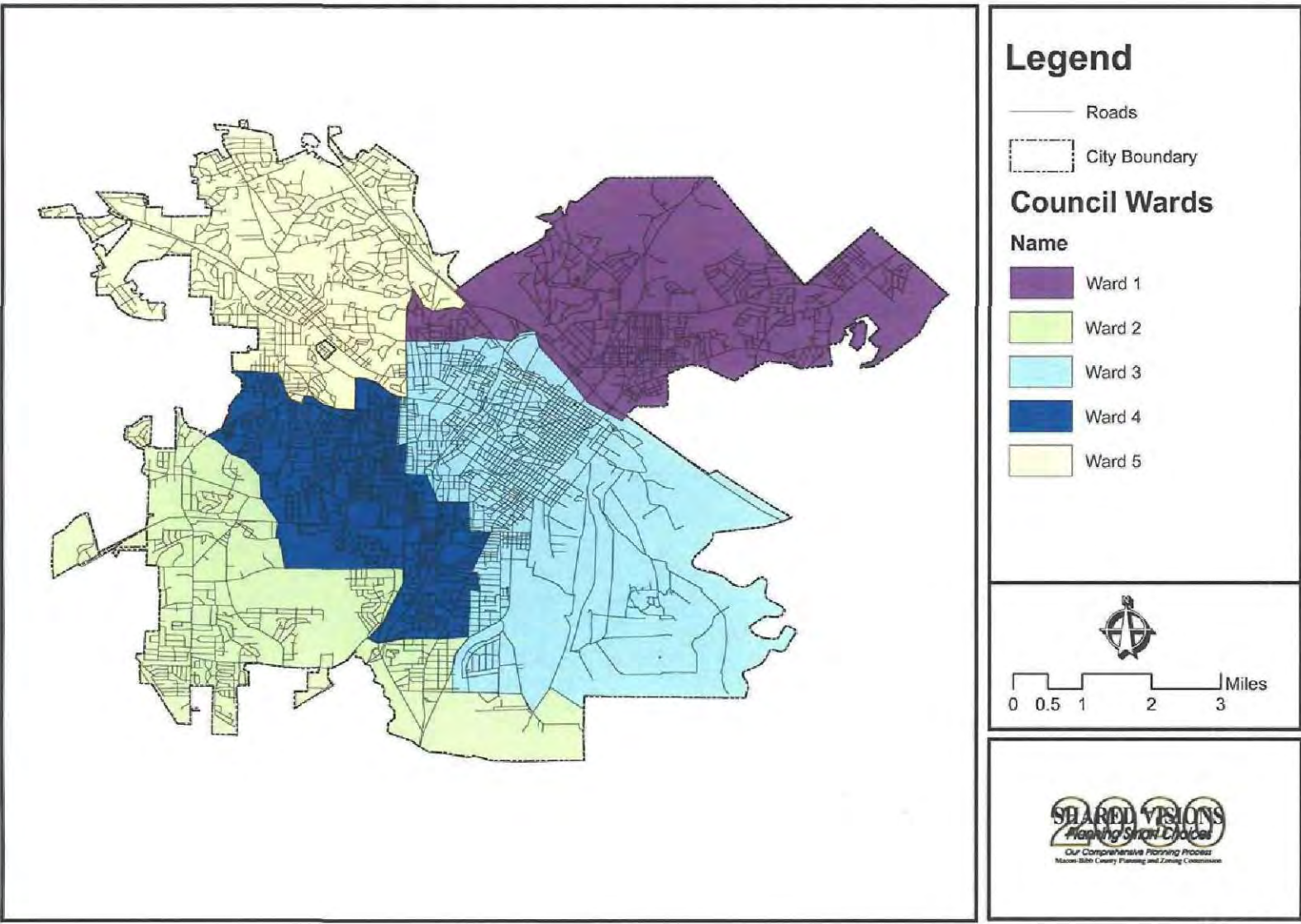


Figure 5-11

EDUCATIONAL INSTITUTIONS

Elementary, Middle, and High School Education

Bibb County offers its residents a choice of both public and private school education. There are 49 public schools that serve nearly 25,000 students and 16 private schools that serve over 6,000 students. The combination of educational choices afforded to the residents of the Bibb County can assure a high quality education. Figure 5-12 displays locations of all public, private, and higher education educational facilities in the county.

Bibb County Public Schools

The public school system in Bibb County serves pre-kindergarten through twelfth grade students from Macon and Bibb County. The school system is managed by an elected Bibb County Board of Education and an appointed Superintendent of Schools. The Board meets on the third Thursday of each month at 6:00 p.m.

To meet the growing demand for new and upgraded educational facilities for the community, Bibb County voters recently approved a comprehensive five year, 150 million dollar school facilities improvement program. The plan calls for the building of new elementary, middle, and high school facilities in rapidly growing areas of the county. Several existing schools within county have or will undergo either extensive renovation or new additions. This also resulted in the closure of older school facilities and consolidations of other facilities to help meet governmental mandates. A system wide Career Center has been constructed to train students for highly skilled, highly paid occupations in the Middle Georgia area with partnerships between local industry and the school system. These steps taken by the school board will no doubt help maintain and improve the overall quality of the school system. The schools and their enrollments are listed in Table 5-13.

Private schools in the county offer education on the elementary, middle, and high school levels. Many of these institutions offer residents an opportunity to send children to a religious based educational environment that can not be attained in the public system. This adds to the quality of life of the county in that various educational choices are offered. The schools and their enrollment are listed in Table 5-13.

Higher Education

Bibb County has a total of four institutions of higher learning to choose from which include three four-year colleges and a technical college. The wide variety of course offerings affords not only residents of Bibb County excellent educational opportunities but also residents of the Middle Georgia area as well. These institutions bolster

the high quality of life found in Bibb County.

Macon State College

Macon State College is a four-year institution with a special focus on professionally oriented degree programs that are compatible to the needs of today's workforce. The college is a part of the University of Georgia System that allows transfers to other University of Georgia System schools with relative ease. The college is recognized for its strength in information technology, its continued focus on a strong foundation for its students in the arts & science and its success in connecting with the region through innovative partnerships with area business, industry, and government. The college offers over 30 areas of study that include studies in business, communications, health information management, health services administration, information technology and applied sciences to name a few.

Wesleyan College

Founded in 1836, Wesleyan College is the first college in world that was established to grant degrees to women. Today, Wesleyan carries this distinction with pride and is regarded as one of the nation's finest colleges. Wesleyan is a four-year liberal arts college that is affiliated with the Methodist Church.

The college offers a wide-range of liberal arts education. There are over 30 majors and 24 minors available. Areas of concentration include art, biology, chemistry, physics, communication, education, education, history, religious studies, and theatre to name a few.

Mercer University

Mercer University is a Georgia Baptist Convention affiliated school. The university seeks to achieve excellence and scholarly discipline in the fields of liberal learning and professional knowledge. The university is guided by the historic principles of religious and intellectual freedom, while affirming religious and moral values that arise from the Judeo-Christian understanding of the world.

The university is a bright star in Middle Georgia that has several nationally recognized programs. The School of Medicine, which has received for 10 consecutive years a Silver Award from the American Academy of Family Physicians, is major supplier of doctors to rural and underserved areas of Georgia. The Walter F. George School of Law, founded in 1873, is one of the oldest law schools in county. The university provides a wide range of academic programs that range from liberal arts, business, education and theology to name a few.

Central Georgia Technical College

Central Georgia Technical College (CGTC) is a member of the State System of Technical Institutes and an institution of higher education. The school was founded in 1962 and opened its doors in 1966. The school originally opened with 3 Macon locations with two located downtown along Forsyth Street and Second Street while the third was located along Anthony Road.

The strong demand for technical education in Bibb County and Middle Georgia necessitated a much larger campus. The school is now located in one central location along Eisenhower Parkway that allows it to effectively offer a wide range of programs. Programs of study include health technology, business technology, and trade and industrial technology to name a few.

Bibb County Schools

Figure 5-12

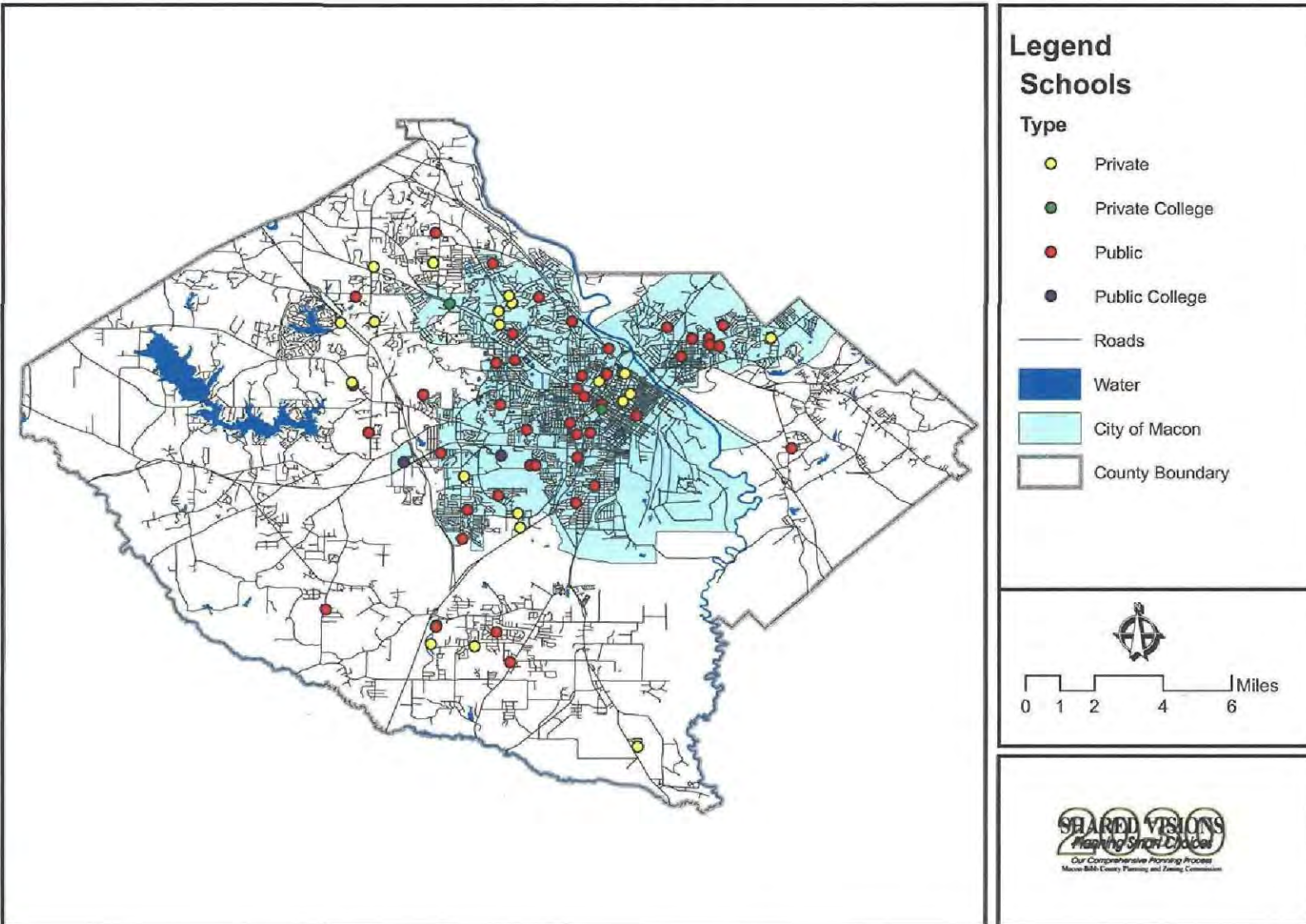


Figure 5-12

Table 5-13

Bibb County Educational Institution Enrollment 2003-2004 School Year

Elementary Schools	Bibb County Public Schools		Private Schools	Enrollment
	Enrollment	Middle Schools	School	
Alexander II	461	Appling	Bethany Jr. Academy	16
Barden	508	McEvoy	Central Fellow.	650
Bernd	537	Miller	Covenant Academy	169
Brookdale	522	Rutland	1st Presbyterian	940
Bruce	283	Weaver	Gilead Academy	217
Hunt/Burdell	536	TOTAL	Mid GA Christian Academy	1,706
Burghard	518	High Schools	Montessori of Macon	84
Burke	511	Central	Mount DeSales	601
Carter	623	Hutchings Career Center	Progressive Christian Academy	471
Danforth	237	Northeast	St. Andrew Montessori	82
Hamilton	360	Renaissance	St. Joseph Catholic School	322
Hartley	383	Rutland	St. Peter Claver	248
Heritage	941	Southwest	Strafford Academy	949
Heard	483	Westside	Tattnall Square Academy	816
Ingram/Pye	415	Total	Windsor Academy	280
Jones	463	Specialty Schools	Woodfield Academy	40
King	296	Neel Academy	Total	6,055
Lane	468	Elam Alexander	Higher Education	
Morgan	465	Teen Parent Center	School	
Porter	443	Total	Macon State	5,347
Rice	497	Grand Total	CGTC	7,346
Riley	429		Mercer University	3,483
Skyview	660		Wesleyan	1,280
Springdale	824		Total	17,456
Taylor	560			
Union	508			
Vineville Academy	427			
Weir	309			
Williams	448			
Butler ECC	131			
PRE-K	346			
TOTAL	14,592			

Source: Bibb County Board of Education and the Various Institutions Listed

THE PUBLIC LIBRARY SYSTEM

The library system in Bibb County has had a long existence in the community. The Macon-Bibb County Public Library System began in 1836 and operated under the guidance of the Macon Lyceum and Library Society. In 1874, the Macon Public Library and Historical Society was organized and operated a public library on Mulberry Street in a former Knights of Columbus building. A new building was constructed in 1889 on Mulberry Street across from the Grand Opera House. Today the location at Washington Avenue and College Street, which was opened to the public in 1922, is the current location of the Macon-Bibb County/ Middle Georgia Regional Library.

The Macon-Bibb County Public library is the headquarters for the Middle Georgia Regional Library System. This system serves five other counties in Middle Georgia which are Crawford, Jones, Macon, Twiggs, and Wilkinson counties. This association underscores the importance of the Macon-Bibb County library not only to the citizens of Macon-Bibb County, but also to the Middle Georgia area.

To serve Macon-Bibb County, the library operates five libraries throughout the county. The Washington Memorial Library and the Shurling Branch are owned by the City of Macon. The other three branch libraries are located within shopping centers that are privately owned. Tables 5-14 and 5-15; display additional information about these facilities.

Table 5-14
Macon-Bibb County Library Facilities

Facility	Location/ Zip Code	Ownership	Square Footage
Washington Memorial	1180 Washington Ave./ 31201-1762	City of Macon	56,000
Riverside Branch	110 Holiday North Dr./ 31210-1802	Ocmulgee Fields	8,100
Shurling Branch	1762 Shurling Dr./ 31221-2125	City of Macon	8,180
Rocky Creek Branch	1504 Rocky Creek Rd./ 31206-3579	Ocmulgee Fields	5,280
West Bibb Branch	5580 Thomaston Rd./ 31220-8106	Northwest Commons LLC.	8,464
		Total Square Footage	86,024

Source: Macon Bibb County Public Library, 2003

Table 5-15
Macon-Bibb County Library Statistics

	Washington	Riverside	Rocky Creek	Shurling	West Bibb
Size	56,043 sqft	8,100 sqft	5,280 sqft	8,180 sqft	8,464 sqft
Public Seating	221	37	14	33	42
IT Workstations	81	14	11	18	20
Total Volumes	138,547	52,559	45,222	39,000	51,935
Annual Circulation	1,057,299	233,397	145,769	146,299	182,663
Reference Questions	435,655	85,795	48,463	84,248	77,454
Total Visits	219,872	75,996	58,536	54,045	70,613

Source: Macon-Bibb County Public Library, 2003

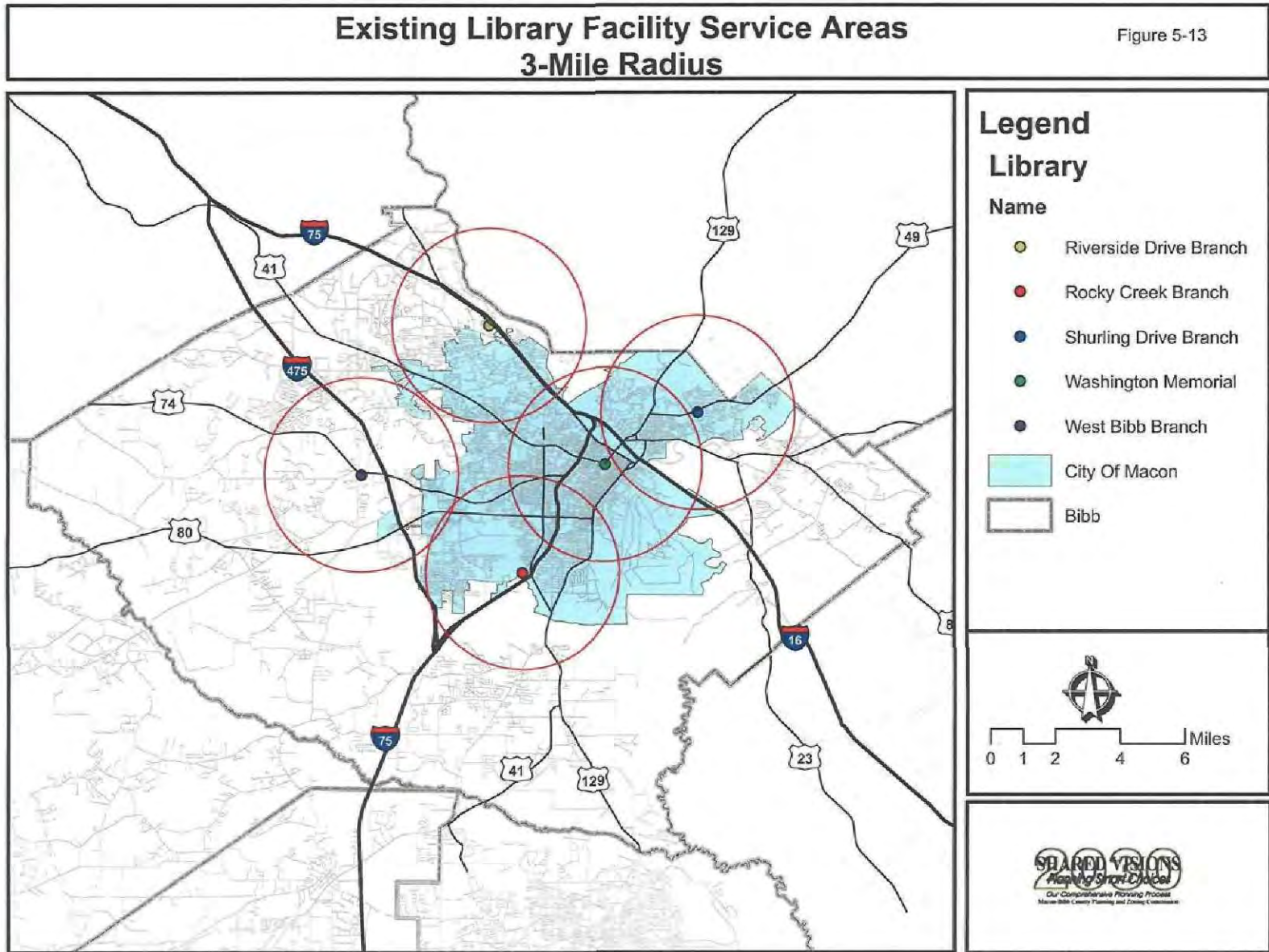


Figure 5-13

OTHER CULTURAL FACILITIES

Many facilities that are available in Macon-Bibb County have been covered in this chapter. However, several others are worth mentioning which enhance the quality of life in the community. These facilities round out and provide additional cultural activities to those who live in and visit Macon-Bibb County. The following list contains the additional cultural facilities not previously mentioned

Museum of Arts and Sciences	The Tubman African American Museum
The Georgia Music Hall of Fame	Theatre Macon
Macon Little Theatre	The Douglas Theatre
The City Auditorium/ Centreplex	Porter Auditorium
The Grand Opera House	The Fine Arts Center
Middle Georgia Art Association	Terminal Station & Welcome Center
The Cannonball House	Georgia Music Hall of Fame
Georgia Sports Hall of Fame	Georgia Forestry Museum
Museum of Arts and Sciences	Ocmulgee National Monument
The Hay House	Sidney Lanier Cottage
Woodruff House	Rose Hill Cemetery
Capital Theater	

Organizations that perform include:

The Macon Symphony Orchestra	Chorale Society of Middle Georgia
MidSummer Macon	Macon State Humanities Department
The Nutcracker of Middle Georgia	Heart of Georgia Barbershop Chorus
Jazz Association of Macon	Macon Concert Association
Macon Moving Dance Company	Middle Georgia Youth Ballet

WATER SUPPLY AND SEWERAGE

Water Supply

According to the Georgia Department of Community Affairs, typical water demand in the United States is 150 gallons per capita per day (GPCD): fifty-five in residential use, twenty in commercial uses, fifty in industrial uses, and twenty-five in public and unaccounted uses. GPCD can vary from 50 to 250 GPCD based upon climate, per capita income, annual rain, and types of industries. Bibb County's GPCD in the year 2000 was calculated to be 196 by using the population figure of 153,887 and the average daily volume of water consumed by user figure of 30,541,420. At current MWA water treatment capacity, a GPCD of 384 is possible.

Table 5-16
Comparison of General System Statistics 2000 & 2003

	2000	2003	% Change
Water System			
Miles of Water Mains and Lines	1,592	1,630	2.4
Number of Water Treatment Facilities	1	1	0
Maximum gallons of water permitted to withdraw from Ocmulgee River per day (when river is above 6.33 feet)	Not Re-ported	110,000,000	-
Maximum gallons of water permitted to withdraw from Ocmulgee River per day (when river is below 6.33 feet)	35,000,000	35,000,000	0
Maximum gallons of water existing water treatment facility is capable of treating daily	60,000,000	60,000,000	0
Average annual volume of gallons treated per day	33,139,300	29,930,000	-9
Peak number of gallons treated in one day during the year	50,380,000	43,280,000	-14
Maximum gallons of water storage	39,100,000	35,430,000	-9
Number of water users	52,086	54,201	4
Average daily volume of water consumed by users	30,541,420	26,785,833	-12
Sewerage System			
Miles of sanitary sewer lines	628	650	3
Miles of interceptor lines	200	220	0
Number of sewerage treatment facilities	3	2	-33
Number of major pumping stations	7	7	0
Combined maximum gallons daily capacity of wastewater treatment facilities	45,000,000	44,000,000	-2
Average daily utilization (in gallons) at the Poplar Street WPCP	20,000,000	15,830,000	-20
Average daily utilization (in gallons) at the Rocky Creek WPCP	24,000,000	21,460,000	-11
Number of sewerage users	42,548	44,237	4
Average daily volume of sewage treated	32,964,163	37,290,000	13

Source: Macon Water Authority

By 2030 the population of Bibb County is expected to increase by six percent to 165,551. By using an assumption of a static average daily volume of water consumed by user figure of 30,541,420 and the expected growth, the GPCD could be assumed that it should not exceed 208 GPCD. However, consumption and water treatment were down by fourteen and twelve percent respectively from 2000 to 2003. This was probably due to drought conditions. The reduction in consumption is expected to continue in the near future thus the demand should not exceed capacity in the next thirty years. This assumption is due in part to the recent loss of a major industry which was its number one water customer and second largest sewer customer. This major industry purchased 54% of all water sold to principle non-residential customers in 2002.

MWA is positioned to meet the future demand for water in the community. The recently completed 6.5 billion gallon Lucas Lake Reservoir and the continued system expansions support this assumption. Table 5-17 outlines the MWA work program for FY 2004 to 2009. The work program indicates the aggressive efforts to upgrade and expand the water distribution and sewerage collection systems.

Sewerage

One method of estimating future wastewater demand is to base wastewater generation on water use. According to the Georgia Department of Community Affairs, local governments can generally multiply water demand by a coefficient of .60 to .80 to obtain wastewater demand. By using the average daily volume of water consumed by user figure of 26,785,833 gallons and a high coefficient range of .60 to .80, the current wastewater demand ranges from 16,071,499 to 21,428,666 gallons.

Forecasting future needs for wastewater collection and treatment involves projecting population and employment. The population of Bibb County is expected to increase by 6% by 2030. Multiplying the wastewater demand figures by 6% respectively would yield a wastewater demand range of 17,035,788 to 22,714,385 by 2030. This range is manageable at the current combined capacity of the wastewater treatment plants. As previously noted, MWA lost its second largest sewerage customer thus the demand should not exceed capacity in the next thirty years.

Table 5-17
Macon-Bibb County/MWA Annual Work Program
Fiscal Years 2004 to 2009

Year	Project Description	Assigned	Funding	Costs	Goal Area	Status
2004	Hartley Bridge Road Water Relocation	Water Authority	Local	\$90,000	Facilities	Ongoing
2004	Hartley Bridge Road Sewer Relocation	Water Authority	Local	\$102,000	Facilities	Ongoing
2004	Install Water Mains-Old Club Road/Old Tucker Road	Water Authority	Local	\$30,000	Facilities	Ongoing
2004	Saxon-Lumpkin Sewer Relocation	Water Authority	Local	\$26,000	Facilities	Ongoing
2004	Houston Road Water Main Extension-12"	Water Authority	Local	45000	Facilities	Ongoing
2004	Install Sewer Lift Station-Indian Mounds & Main Street	Water Authority	Local	\$200,000	Facilities	Ongoing
2004	Lamar Road - Install Sewer	Water Authority	Local	\$800,000	Facilities	Ongoing
2004	Clear Sewer Easement	Water Authority	Local	\$500,000	Facilities	Ongoing
2004	Install Sewer Lift Station-Forsyth Road School	Water Authority	Local	\$200,000	Facilities	Ongoing
2004	Install Sewer Lift Station-Indian Mounds & Main Street	Water Authority	Local	\$1,700,000	Facilities	Ongoing
2004	Install Sewer To Chandler Downs Subdivision	Water Authority	Local	\$100,000	Facilities	Ongoing
2004	Install Water Mains And Fire Hydrants On Un-watered Streets In Bibb County	Water Authority	Local	\$500,000	Facilities	Ongoing
2004	Install Water & Sewer For Hope VI Project	Water Authority	Federal, Local	\$600,000	Facilities	Ongoing
2004	Miscellaneous Maintenance and Improvements (Tanks)	Water Authority	Local	\$180,123	Facilities	Ongoing
2004	Replace 4" And Smaller Water Mains With 6" Water Mains And Fire Hydrants	Water Authority	Local	\$100,000	Facilities	Ongoing
2004	Pierce Avenue WTP De-Commission Contract 1	Water Authority	Federal, State, Local	\$30,000	Facilities	Ongoing
2004	Pierce Avenue WTP De-Commission Contract 2	Water Authority	Federal, State, Local	\$388,750	Facilities	Ongoing
2004	Rehabilitate Sewer Collection System	Water Authority	Local	\$7,000,000	Facilities	Ongoing
2004	Reline Water Mains	Water Authority	Local	\$500,000	Facilities	Ongoing
2004	Replace Shaft Water Treatment Plant Intake Building	Water Authority	Federal, State, Local	\$167,208	Facilities	Ongoing
2004	Replace Small Water Mains With Larger Water Mains & Install Fire Hydrants	Water Authority	Local	\$200,000	Facilities	Ongoing
2004	Sanitary Sewer Evaluation Study	Water Authority	Local	\$1,000,000	Facilities	Ongoing
2004	Source Water Assessment Plan	Water Authority	Local	\$35,000	Facilities	Ongoing
2004	Various Water Extensions	Water Authority	Local	\$50,000	Facilities	Ongoing
2005	Sardis Church Road-12" Water Main-Skipper Rd. To Barfield Rd.	Water Authority	Local	\$250,000	Facilities	Ongoing
2005	East Macon Transmission Water Main-Phase II -Scope Change Required	Water Authority	Federal, State, Local	\$2,900,000	Facilities	Ongoing
2005	Install Sewer Lift Station-South Pierce Drive	Water Authority	Local	\$200,000	Facilities	Ongoing
2005	Install Sewer To Bass Road At St. Croix Subdivision	Water Authority	Local	\$220,000	Facilities	Ongoing
2005	Install Sewer I-75 Industrial Park	Water Authority	Local	\$286,000	Facilities	Ongoing
2005	Install Water Overflow Protection-Forsyth Road Re-pumping Station	Water Authority	Local	\$150,000	Facilities	Ongoing

2005	Zebulon Road 16" Water Main	Water Authority	Local	\$116,397	Facilities	Ongoing
2005	Clear Sewer Easement	Water Authority	Local	\$500,000	Facilities	Ongoing
2005	Install Stand-by Generators & Rehabilitate Sewer Lift Stations	Water Authority	Local	\$100,000	Facilities	Ongoing
2005	Install Water Mains And Fire Hydrants On Un-watered Streets In Bibb County	Water Authority	Local	\$500,000	Facilities	Ongoing
2005	Replace 4" And Smaller Water Mains With 6" Water Mains And Fire Hydrants	Water Authority	Local	\$100,000	Facilities	Ongoing
2005	Miscellaneous Maintenance and Improvements (Tanks)	Water Authority	Local	\$186,174	Facilities	Ongoing
2005	Rehabilitate Sewer Collection System	Water Authority	Local	\$3,000,000	Facilities	Ongoing
2005	Reline Water Mains	Water Authority	Local	\$500,000	Facilities	Ongoing
2005	Replace Small Water Mains With Larger Water Mains & Install Fire Hydrants	Water Authority	Local	\$200,000	Facilities	Ongoing
2005	Various Water Extensions	Water Authority	Local	\$50,000	Facilities	Ongoing
2005	Water Storage Improvements	Water Authority	Local	\$100,000	Facilities	Ongoing
2006	Calaparchee Road 12" Water Main	Water Authority	Local	\$45,000	Facilities	Ongoing
2006	Forsyth Road-Water Storage Improvements	Water Authority	Local	\$150,000	Facilities	Ongoing
2006	Install Sewer Lift Station-Clearwater Subdivision	Water Authority	Local	\$150,000	Facilities	Ongoing
2006	Sewer Lift Station Upgrade-Corbin Ave. & Riverside Cemetery	Water Authority	Local	\$200,000	Facilities	Ongoing
2006	Relocate Water and Sewer Mains On Riverside Drive	Water Authority	Local	\$150,000	Facilities	Ongoing
2006	Rehabilitate Forsyth Road Re-Pump Station	Water Authority	Local	\$50,000	Facilities	Ongoing
2006	Sardis Church Road-12" Water Main-Skipper Rd. To Goodall Mill Rd.	Water Authority	Local	\$80,000	Facilities	Ongoing
2006	Sewer Lift Station Upgrade-Corbin Ave. & Riverside Cemetery	Water Authority	Local	\$1,700,000	Facilities	Ongoing
2006	Rehabilitate Breezy Hill Reservoir	Water Authority	Local	\$100,000	Facilities	Ongoing
2006	Clear Sewer Easement	Water Authority	Local	\$500,000	Facilities	Ongoing
2006	Install Stand-by Generators & Rehabilitate Sewer Lift Stations	Water Authority	Local	\$100,000	Facilities	Ongoing
2006	Install Generators & Upgrade Sewer Lift Station	Water Authority	Local	\$300,000	Facilities	Ongoing
2006	Install Water Mains And Fire Hydrants On Un-watered Streets In Bibb County	Water Authority	Local	\$500,000	Facilities	Ongoing
2006	Replace 4" And Smaller Water Mains With 6" Water Mains And Fire Hydrants	Water Authority	Local	\$100,000	Facilities	Ongoing
2006	Miscellaneous Maintenance and Improvements (Tanks)	Water Authority	Local	\$192,448	Facilities	Ongoing
2006	Miscellaneous Expenditures	Water Authority	Local	\$250,000	Facilities	Ongoing
2006	Rehabilitate Sewer Collection System	Water Authority	Local	\$3,000,000	Facilities	Ongoing
2006	Reline Water Mains	Water Authority	Local	\$500,000	Facilities	Ongoing
2006	Various Water Extensions	Water Authority	Local	\$50,000	Facilities	Ongoing
2006	Water Storage Improvements	Water Authority	Local	\$100,000	Facilities	Ongoing
2007	Rehabilitate Second Street Ground Storage Tank	Water Authority	Local	\$15,000	Facilities	Ongoing
2007	Rocky Creek WPCP-Millennium Study	Water Authority	Local	\$4,171,000	Facilities	Ongoing
2007	Rehabilitate Rubin Drive Re-Pump Station	Water Authority	Local	\$100,000	Facilities	Ongoing
2007	Rocky Creek WPCP-Millennium Study	Water Authority	Local	\$5,000,000	Facilities	Ongoing
2007	Clear Sewer Easement	Water Authority	Local	\$500,000	Facilities	Ongoing
2007	Install Generator & Upgrade Sewer Lift Station	Water Authority	Local	\$100,000	Facilities	Ongoing
2007	Install Stand-by Generators & Rehabilitate Sewer Lift Stations	Water Authority	Local	\$100,000	Facilities	Ongoing

2007	Install Water Mains And Fire Hydrants On Un-watered Streets In Bibb County	Water Authority	Local	\$500,000	Facilities	Ongoing
2007	Replace 4" And Smaller Water Mains With 6" Water Mains And Fire Hydrants	Water Authority	Local	\$100,000	Facilities	Ongoing
2007	Miscellaneous Maintenance and Improvements (Tanks)	Water Authority	Local	\$200,000	Facilities	Ongoing
2007	Miscellaneous Expenditures	Water Authority	Local	\$250,000	Facilities	Ongoing
2007	Rehabilitate Sewer Collection System	Water Authority	Local	\$3,000,000	Facilities	Ongoing
2007	Reline Water Mains	Water Authority	Local	\$500,000	Facilities	Ongoing
2007	Various Water Extensions	Water Authority	Local	\$50,000	Facilities	Ongoing
2007	Water Storage Improvements	Water Authority	Local	\$100,000	Facilities	Ongoing
2008	Hartley Bridge Road-Water Storage System	Water Authority	Local	\$1,500,000	Facilities	Ongoing
2008	Rehabilitate Camp Wheeler Re-Pump Station	Water Authority	Local	\$100,000	Facilities	Ongoing
2008	Clear Sewer Easement	Water Authority	Local	\$500,000	Facilities	Ongoing
2008	Install Generator & Rehabilitate Sewer Lift Station	Water Authority	Local	\$100,000	Facilities	Ongoing
2008	Install Sewer Mains	Water Authority	Local	\$1,000,000	Facilities	Ongoing
2008	Install Stand-by Generators & Rehabilitate Sewer Lift Stations	Water Authority	Local	\$100,000	Facilities	Ongoing
2008	Install Water Mains And Fire Hydrants On Un-watered Streets In Bibb County	Water Authority	Local	\$500,000	Facilities	Ongoing
2008	Replace 4" And Smaller Water Mains With 6" Water Mains And Fire Hydrants	Water Authority	Local	\$100,000	Facilities	Ongoing
2008	Rehabilitate Bloomfield Re-Pump Station	Water Authority	Local	\$100,000	Facilities	Ongoing
2008	Rehabilitate Sewer Collection System	Water Authority	Local	\$3,000,000	Facilities	Ongoing
2009	Millennium Project (Upgrade Plants)	Water Authority	Federal, State, Local	\$11,000,000	Facilities	Ongoing
2009	Rehabilitate Bowden Repump Station	Water Authority	Local	\$100,000	Facilities	Ongoing
2009	Clear Sewer Easement	Water Authority	Local	\$500,000	Facilities	Ongoing
2009	Install Generator & Upgrade Sewer Lift Station	Water Authority	Local	\$100,000	Facilities	Ongoing
2009	Install Stand-by Generators & Rehabilitate Sewer Lift Stations	Water Authority	Local	\$100,000	Facilities	Ongoing
2009	Install Water Mains And Fire Hydrants On Un-watered Streets In Bibb County	Water Authority	Local	\$500,000	Facilities	Ongoing
2009	Replace 4" And Smaller Water Mains With 6" Water Mains And Fire Hydrants	Water Authority	Local	\$100,000	Facilities	Ongoing
2009	Miscellaneous Maintenance and Improvements (Tanks)	Water Authority	Local	\$200,000	Facilities	Ongoing
2009	Miscellaneous Expenditures	Water Authority	Local	\$250,000	Facilities	Ongoing
2009	Rehabilitate Sewer Collection System	Water Authority	Local	\$3,000,000	Facilities	Ongoing
2009	Reline Water Mains	Water Authority	Local	\$500,000	Facilities	Ongoing
2009	Various Water Extensions	Water Authority	Local	\$50,000	Facilities	Ongoing
2009	Water Storage Improvements	Water Authority	Local	\$100,000	Facilities	Ongoing

SOLID WASTE MANAGEMENT

The community does not presently have an updated solid waste management plan. The plan was scheduled to be fully updated in 2003 by the Middle Georgia Regional Development Center; however, the update has been indefinitely postponed. According to the 1993 plan completed by MGRDC, the maximum life expectancy of the Macon landfill was projected to be about 11 years as of January 1990 and the private landfill used by the County was listed as having a 10 life expectancy as of April 1993. According to city officials, the city landfill has recently undergone modifications to extend the life expectancy another 10 to 13 years. The landfill used by the County is also projected to have another 10 years of life.

A new comprehensive solid waste plan is drastically needed for the community. The current life expectancies of the community landfills are short and indicate the need for a new facility within the county. The city and county governments may want to consider contracting with surrounding counties to accept Bibb County waste if no suitable sites are found within the county.

PUBLIC SAFETY

Fire Protection

The Macon-Bibb County Fire Department operates 19 fire stations of which eleven are in the City and seven are in the County and one is a joint City/County station. As previously mentioned the Department currently provides good fire protection to the community. The good fire protection that is afforded to the community is evident due to the outstanding Class 1 and Class 3 ISO ratings for the City and County respectively. To maintain these levels into the future, the Department should look into increasing staff; continue to update equipment and facilities. The Department should also look into establishing additional stations in the faster growing areas of the county. The area known as Sub-South and the northwestern portion of the County are expected to continue to be growth centers into the future.

Police Protection

Bibb County Sheriff's Department

The increased population in the unincorporated areas of the county has underscored the increased need of police protection. According to the U.S. Census, the population of the unincorporated portion of the county grew by 25% from 1990 to 2003. In just three years from 2000 to 2003 the U.S. Census estimates indicated a 4% increase in population. The unincorporated portion of the county is expected to continue grow in the future.

To provide police protection to the unincorporated portion of the county, the Bibb County Sheriff's Department dissects the county into three patrol districts (refer to Figure 5-6). According to the Bibb County Sheriff's Department, there are a minimum of 9 cars assigned to patrol the county for each shift. This equates to an average of 3 cars per patrol district. This also equates to a minimum ratio or level of service of 1 car per 6,557 residents. This ratio may indicate that the department is understaffed. However, it should be kept in mind that population figures alone do not necessarily dictate an adequate distribution of police forces. Many times the distribution patterns are influenced by the frequencies of crimes in particular areas. It is recommended that the Department adopt new level of service standards to meet the needs of the growing unincorporated areas.

Macon Police Department

The City of Macon has undergone a decrease in population during the past decade. According to the U.S. Census, the City of Macon has decreased in population by 11% from 1990 to 2003. In just three years from 2000 to 2003 the U.S. Census estimates indicated a 2% decrease in population. While the City is expected to continue to decrease in population, police protection must remain strong.

As previously mentioned, the Department divides the city into four precincts to provide police protection (refer to Figure 5-7). The Department requires that a minimum of 5 cars patrol each precinct per shift. This equates to a ratio or level of service of 1 car per 4,763 residents. It should be noted that five cars are a minimum; however, some precincts patrol with up to nine cars if needed. The increases in patrol cars are usually dictated by higher occurrences of crime. In addition, the Ameri-Corp stations augment police patrols by providing a neighborhood police presence.

Emergency Management Administration

The Emergency Management Administration has recently embarked on upgrading its equipment to more efficiently respond to emergencies. The EMA will soon be installing and training personnel in a Computer Aided Dispatch (CAD) system. This will allow for a more efficient way a plotting out the shortest routes to an emergency. This information is essential to fire, police, and general emergency calls.

HEALTH SERVICES

The Macon-Bibb County area has a very strong health system. There are 1,144 physicians serving the county. Based upon a 2003 U.S. Census Population Estimate count of 154,287, Bibb County has a physician to patient ratio of 1 to 135. This ratio is much lower than the state ratio of 1 to 530. This is primarily due to the fact that

the hospitals were designed to serve the Middle Georgia region rather than just the county.

The health care system in the county is primarily privately funded; however, some facilities are augmented with public funds. The Medical Center of Central Georgia is the only publicly funded hospital in the county. The hospital is bound to provide medical treatment to all citizens of Bibb County regardless of their ability to pay. The hospital's Indigent Care is funded by the Bibb County government. The Indigent Care funding from FY 2002 to FY 2004 remained stable. The Bibb County Health Department is another agency charged with the health and welfare of the community. The Health Department's budget has also remained stable during this same period.

LOCAL GOVERNMENT FACILITIES

One method of assessing government facilities is to consider the type of services provided and how far do citizens have to travel in order to receive these services. Many local governments have begun to implement what is commonly known as one-stop shopping. The City of Macon and Bibb County does not have a complete one-stop shopping system in place.

Steps have been put in place to put government services on the path of one-stop shopping. For example, the Macon City Hall Annex, also known as the Southern Trust Building, houses many of the needed city services. This building contains more city departments than any other local government building. Departments range from the Macon Police Department to Planning & Zoning. Planning & Zoning and the Inspections & Fees department serve both the city and unincorporated county residents. All other city and county government departments and offices are located within a mile of each other in the downtown core.

EDUCATIONAL INSTITUTIONS

The analysis of public and private k-12 grade education revealed some interesting findings. Currently, only 10% of Bibb County schools are over their capacity. By 2030 this figure is expected to increase 46% if schools remain at their current capacity levels. Private schools did not fare as well in terms of current and future capacity levels. The analysis revealed that 57% of all private schools in Bibb County were currently over capacity. This figure increases to 69% in 2030 if the schools remain at current capacity levels. Each school system should look into increasing capacity to meet future needs.

Table 5-18
Bibb County Public/Private School Systems Capacity Analysis 2030

Elementary Schools	Bibb County Public Schools			Elementary Schools	Private Schools			School	Enrollment 2004/Current Capacity		
	Enrollment 2004/Current Capacity	2004	2030*		Enrollment 2004/Current Capacity	2004	2030*		2004	Cap	2030*
Alexander II	461	358	480	Springdale	824	746	859	Bethany Acad.	16	50	17
Barden	508	514	529	Taylor	560	564	584	Central Fellowship	650	775	677
Bernd	537	462	560	Union	508	858	529	Covenant Academy	169	175	176
Brookdale	522	620	544	Vineville Academy	427	n/a	n/a	1st Presbyterian	940	960	980
Bruce	283	716	295	Weir	309	688	322	Gilead Acad.	217	475	226
Hunt/Burdell	536	688	n/a	Williams	448	678	467	MGA Christian Acad.	170	15	88
Burghard	518	560	540	Middle Schools				Montessori of Macon	84	55	88
Burke	511	728	533	Appling	566	775	590	Mt. DeSales	601	500	626
Carter	623	800	649	McEvoy	755	1225	843	Progressive Christian Academy	471	400	491
Danforth	237	628	247	Miller	809	1275	843	St. Andrew Montessori	82	45	85
Hamilton	360	608	375	Rutland	965	n/a	n/a	St. Joseph Catholic School	322	300	336
Hartley	383	688	399	Weaver	1048	n/a	1092	St. Peter Claver	248	300	258
Heritage	941			High Schools				Strafford Academy	949	n/a	989
Heard	483	536	503	Central	1207	1258	2100	Tattnall Sq. Academy	816	850	850
Ingram/Pye	415	822	433	Northeast	854	1375	1375	Windsor Academy	280	426	292
Jones	463	n/a	n/a	Renaissance	113	n/a	n/a	Woodfield Academy	40	13	42
Lane	468	536	488	Southwest	1082	1225	1500				
Morgan	465	608	485	Westside	1599						
Porter	443	444	462								
Rice	497	546	518								
Riley	429	514	447								
Skyview	660	n/a	n/a								

Source: Bibb County Public Schools, Macon-Bibb P&Z, and the Various Private Institutions Listed

* Indicates 2030 LRTP Enrollment Projection

RECREATION FACILITIES

The following analysis is taken from the Macon-Bibb County Parks and Recreation Master Plan. This plan was adopted by both the City of Macon and Bibb County.

Community Parks Analysis

Based on analysis of the existing parks and open space system, the following information characterizes the existing community parks in Macon-Bibb County:

- Central City Park is the “crown jewel” of the community parks in Macon-Bibb County.
- Existing community centers are in urbanized areas, located along major roads, and serve a large number of residents within existing neighborhoods.
- Many existing community parks have maintained an appropriate balance between development and preservation of open space and natural resources.
- Numerous, year-round recreation programs are currently offered at the existing community parks and receive high levels of participation.
- Most of the community centers are in need of renovation and modernization, namely Bloomfield, Unionville and Memorial.
- New development in unincorporated areas of the county is out-pacing the development of new community park sites.

Needs Analysis

Based on numerous techniques used to identify recreation needs for the future Macon-Bibb County parks and open space system, several needs relating to community park facilities and programs were identified. The following is a summary of the top priority needs regarding community parks:

1. *Additional facilities at existing community parks:* Comparison of existing County facilities to adopted recreation facility standards show that the County is currently deficient in all recreation facilities except for pools and water activities. The highest deficiencies are for trails and greenways, and active court/field facilities for baseball, football, basketball and tennis. Based on population projections and the existing recreation facility inventory, the County will be deficient in all recreation facilities, including pools by 2015 if no new facilities are developed. In addition to applying guidelines, meetings with recreation user groups identified the need for additional tennis facilities, aquatic facilities and more practice fields. A majority of these current and future needs could be met by developing, improving and expanding existing community parks.
2. *Additional youth programs:* A 1998 recreation user survey of county residents revealed that one of the top priorities included additional youth sport programs, specifically baseball, basketball, swimming, softball and football. Recreation user groups also named youth programs as a top priority. Furthermore, community meetings held from February 24th 1998 – March 19th 1998, indicated that the highest priority need within the county was additional/improved after school programs, educational programs and youth sports programs. Many of the needs for additional youth programs could be met at community park facilities.
3. *New parks:* Based on a 3-mile service area analysis, some residents in the West, Southwest, South Bibb and portions of East Bibb are not adequately served by community parks. Based on population distribution throughout the County, 77% of all residents live outside of the 3-mile service area radius of existing community parks, indicating a need for additional parkland.

Neighborhood Parks Analysis

Based on the analysis of the existing parks and open space system, the following information characterizes neighborhood parks in Macon-Bibb County.

- Many older, existing neighborhoods have access to a neighborhood park.
- Recently renovated neighborhood parks such as Kings Park have seen a resurgence of activity due to improved quality and safety of the facilities.
- The majority of neighborhood parks have maintained an appropriate balance between development of recreation facilities and preservation of open space.
- Some existing neighborhood parks are underutilized due to safety concerns. Parks such as Village Green are difficult to police due to limited accessibility into the park.
- New development in unincorporated areas of the County generally does not include the construction of neighborhood parks or play areas.
- Elementary school recreation facilities, such as playgrounds and ballfields, are not currently accessible to the general public.

Needs Analysis

Based on numerous techniques used to identify recreation needs for the future Macon-Bibb County parks and open space system, several needs relating to neighborhood park facilities and programs were identified. The following is a summary of the top priority needs regarding neighborhood parks:

1. *Additional facilities at existing neighborhood parks:* Community meetings held from February 24th 1998 – March 19th 1998, identified the need for picnic areas and playgrounds. Comparison of existing County facilities to adopted standards show that the County is deficient by 6 playgrounds, with the deficiency growing to 8 play areas by 2015. These facility needs could be met by improving or expanding existing neighborhood parks.
2. *New Parks:* Based on the 1/2-mile service area analysis, most residents in the unincorporated portions of the County are not served by neighborhood parks, indicating a need for additional park land.

Special Use Facilities Analysis

Based on the analysis of the existing parks and open space system, the following information characterizes special use facilities in Macon-Bibb County.

- Existing special use facilities are generally well maintained, well-attended facilities.
- The JDS Tennis Center is a tournament quality facility and Bowden Golf Course is a high quality public golf facility.
- The senior center needs to be renovated and modernized.
- The Centreplex is a tremendous asset that fills the need of a major indoor venue for competitive sports, as well as cultural events and conventions.
- There is a drainage problem at the Softball Complex that must be addressed.

- Sanctuary Skate Park is an asset; however it is currently housed within structures that are typically used for the fair causing a potential conflict.
- The R.V. Facilities could use some additional renovation.

Needs Analysis

Based on numerous techniques used to identify recreation needs for the future Macon-Bibb County parks and open space system, several needs relating to special use facilities and programs were identified. The following is a summary of the top priority needs regarding special use facilities:

1. *Additional/ new facilities:* Comparison of existing County facilities to adopted standards, the 1998 user survey, community meetings, a special interest survey and a vision workshop all confirm that active recreation facilities are a high priority need in Macon-Bibb County. New facilities such as a sports stadium, a skate rink and an additional golf course were noted as needs, but were not high priorities.

Urban Open Spaces Analysis

Based on the analysis of the existing parks and open space system, the following information characterizes urban open spaces in Macon-Bibb County.

- Many medians downtown need renovation/upgrading. Some plantings are overgrown, old and woody (areas of Mulberry Street), while some areas need additional landscaping (Poplar Street).
- Washington Park is a magnificent example of high quality urban open space.
- Urban open spaces generally require a high level of maintenance due to their visibility.

Needs Analysis

Based on numerous techniques used to identify recreation needs for the future Macon-Bibb County parks and open space system, several needs relating to urban open spaces were identified. The following is a discussion of the top priority needs regarding urban open spaces:

1. *Preservation and maintenance of urban open spaces:* Based on analysis of some individual urban open spaces, it was identified that the existing system of urban open spaces needs upgrading, pruning and “cleaning out.” In addition, there is a need to create urban design guidelines to help establish a framework for future improvements – creating a cohesive, unified “look” to downtown Macon.
2. *Construction of new urban open spaces/gateways:* The City of Macon currently lacks identifiers - or gateways - along the perimeter of the urban center.

Sidewalks, Bikeways, Trails, and Greenways Analysis

Based on the analysis of the existing parks and open space system, the following information characterizes sidewalks, bikeways, trails and greenways in Macon-Bibb County:

- An interconnected system of sidewalks is present within the downtown area.
- Many sidewalks along major (wide) roadways within downtown are not shaded – some sidewalks are in disrepair
- Many new developments do not have sidewalks present within the residential neighborhoods

- There are no bike lanes or bike paths within Macon/Bibb County
- Many major roadways within portions of the County do not include sufficient pedestrian / bike facilities – pedestrian connections between residential areas and commercial/office areas are often not present

Needs Analysis

Based on numerous techniques used to identify recreation needs for the future Macon-Bibb County parks and open space system, several needs relating to sidewalks, bikeways, trails and greenways were identified. The following is a discussion of the top priority needs regarding these facilities:

1. *Pedestrian / bicycle facilities:* Comparison of existing County facilities to adopted standards, the 1998 user survey, community meetings, a special interest survey and a vision workshop all confirm that trails, bikeways and sidewalks are a top priority for residents.

Natural Lands and Waterways Analysis

Based on the analysis of the existing parks and open space system, the following information characterizes natural lands and waterways in Macon-Bibb County:

- Macon-Bibb County has done an excellent job of preserving some sensitive natural resources in the County.
- Macon-Bibb County provides some public access to its natural lands.
- Numerous natural resource sites are slated for acquisition by Macon-Bibb County.
- In areas of development, there is evidence of clear-cutting with a lack of erosion control measures.
- Outside of Macon/Bibb County's efforts, very little preservation of natural land is required by current land development regulations.

Needs Analysis

Based on numerous techniques used to identify recreation needs for the future Macon-Bibb County parks and open space system, several needs relating to natural lands were identified. The following is a summary of the top priority needs regarding these facilities:

1. *Additional Facilities:* Based on input received during the user survey and public meetings, there is a need to develop and manage public access to natural lands and waterways.
2. *Access / preservation of other natural lands:* Based on input received during the user survey and public meetings, there is a need to preserve Bibb County's character for future generations, and mitigate the impact of new development in the County by placing additional natural lands in public ownership.

THE PUBLIC LIBRARY SYSTEM

Space Standards

The Georgia Public Library Services adopted a policy that is known as the State Space Standards for Public Library Buildings. The policy states that:

“For a public library system to be eligible for State capital outlay funds for public library construction, the proposed building must meet minimum state space standards based on Office of Planning and Budget population projections for the service area. In recognizing that communities in the State of Georgia are developing library services at different rates, the Georgia Board of Education supports the following graduate scales of public library space standards.”

Table 5-19
State Space Standards for Public Library Buildings

Service Area Population	Minimum Recommended Spaces for Georgia Libraries
0- 24,999	.7 sqft Per Cap
25,000 – 49,999	17,5000 sqft or .6 sqft Per Cap which ever is greater
50,000 – 149,999	30,000 sqft or .5 sqft Per Cap which ever is greater
150,000 – 299,999	75,000 sqft or .4 sqft Per Cap which ever is greater
300,000 – 499,999	120,000 sqft or .35 sqft Per Cap which ever is greater
500,000+	175,000 sqft or .3 sqft Per Cap which ever is greater

Source: Macon-Bibb County Public Library, 2003

According to these space standards and the U.S. Census estimated 2003 Bibb County population figure of 154,287, Bibb County must have at a minimum of 75,000 sqft of space. Bibb County currently exceeds the minimum with 86,024 sqft. However, the median standards are not quite met. These standards should still apply for Bibb County for the next 10 years. This is due to the fact that Bibb County’s population is not expected to reach the 300,000 population threshold that would require more space.

Table 5-20
Median Georgia Public Library Standards

Service Area Population	Median Recommended Space for Georgia Public Libraries
0- 24,999	.9 sqft Per Cap
25,000 – 49,999	22,500 sqft or .8 sqft Per Cap which ever is greater
50,000 – 149,999	40,000 sqft or .7 sqft Per Cap which ever is greater
150,000 – 299,999	105,000 sqft or .6 sqft Per Cap which ever is greater
300,000 – 499,999	180,000 sqft or .5 sqft Per Cap which ever is greater
500,000+	250,000 sqft or .4 sqft Per Cap which ever is greater

Source: Macon-Bibb County Public Library, 2003

Library Service Area and Usage

For many people in Bibb County, library patronage is still one of the primary ways of conducting research and

spending quality time with children. This section will analyze the library service area in relation to the spatial distribution of library patrons according to active library cards by zip code. This analysis should offer ideas on where new facilities may be needed in the future.

The Macon-Bibb County Library branch facilities operate an optimal three-mile service area. Figure 5-14 illustrates this information. While the majority of card holders are served within the service area system, some deficiencies become evident. One example is zip code 31216 in the fast growing area known as Sub-South. This zip code has a substantial number of active card holders; however, it is well out of the service area of the closet branch which is Rocky Creek. The placement of a new branch should be considered in this area along with some western areas of the county.

Table 5-21
Active Library Cards by Zip Code

Area	Zip Code	Total
Northwest Bibb County	31210	6,198
Near North Macon	31204	5,040
South Macon	31206	4,129
North Bibb County	31211	2,727
Southeast Bibb County	31217	2,422
Southwest Bibb County	31216	2169
In-Town Macon	31201	1,740
Lizella	31052	1,410

Source: Macon-Bibb County Public Library, 2003

Library Usage According To Zip Code

Figure 5-14

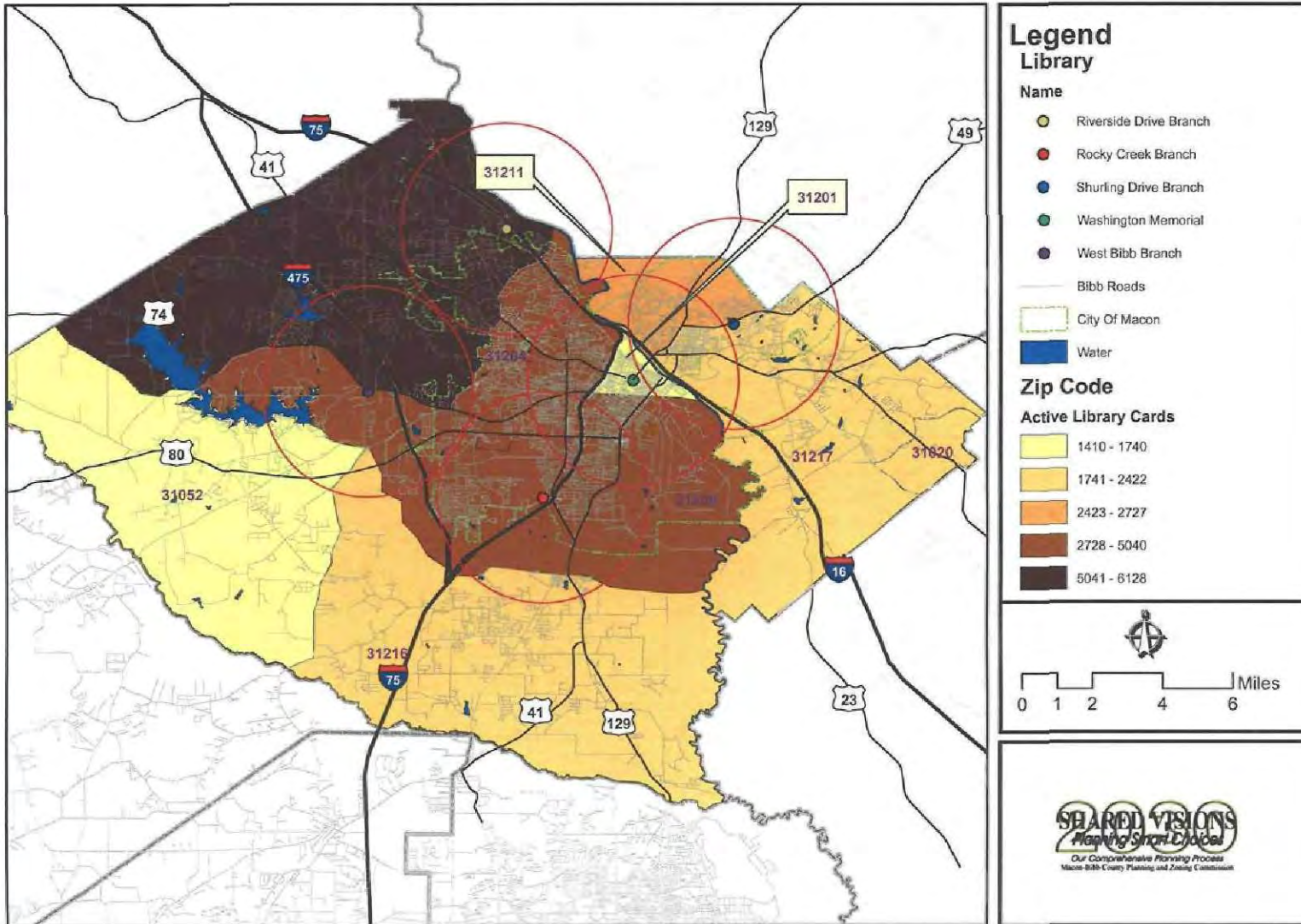


Figure 5-14

STORMWATER MANAGEMENT

As previously mentioned, neither the Bibb County nor the City of Macon has a complete inventory of their stormwater facilities. The need for a complete inventory of stormwater facilities has recently come to the forefront for both the city and county governments. The City of Macon and Bibb County have entered into contracts with private firms to inventory all the stormwater facilities in the city and unincorporated areas of the county.

Table 5-22

Community Facilities Contact Information

Facility	Street #	Street Name	City	Phone	First Name	Last Name	Title	Type
Central State Prison	4600	Fulton Mill Road	Macon	471-2906	Steve	Benton	Warden	State Prison
Sheriffs' Department Substation	8097	Lower Thomoston Rd	Macon	935-8479	Willie	Waiters	Lieutenant	Sheriffs' Office
Macon City Hall	700	Poplar Street	Macon	751-7258	Jack	Ellis	Mayor	City Hall
Macon Police Department	700	Poplar Street	Macon	751-7575	Mike	Burns	Chief	Police Station
Macon Police Precinct 2	2654	Houston Avenue	Macon	751-9171	Robert	Fuller	Captain	Police Station
Macon Police Precinct 4	3661	Eisenhower Parkway	Macon	751-9191	Jimmy	Rogers	Captain	Police Station
Macon Police Precinct 3	400	Pio Nono Avenue	Macon	751-9276	Charles	Stone	Captain	Police Station
Macon Police Precinct 1	1765	Shurling Drive	Macon	751-9116	Chuck	Reynolds	Captain	Police Station
Macon-Bibb County Fire Department	800	Oglethorpe Street	Macon	751-9214	Jimmy	Hartley	Fire Chief	Fire Station
Macon-Bibb Station 8	3611	Mercer University Dr	Macon	751-9208	Joe	Clemmons	District Chief	Fire Station
Macon-Bibb Station 3	4065	Forsyth Road	Macon	751-9203	Don	Braswell	District Chief	Fire Station
Macon-Bibb Station 2	491	Monroe Street	Macon	751-9202	Don	Braswell	District Chief	Fire Station
Macon-Bibb Station 5	2285	Second Street	Macon	751-9205	Don	Braswell	District Chief	Fire Station
Macon-Bibb Station 6	525	Pio Nono Avenue	Macon	751-9206	Joe	Clemmons	District Chief	Fire Station
Macon-Bibb Station 7	1111	Rocky Creek Road	Macon	751-9207	Joe	Clemmons	District Chief	Fire Station
Macon-Bibb Station 9	2303	Shurling Drive	Macon	751-9209	Don	Braswell	District Chief	Fire Station
Macon-Bibb Station 11	3020	Riverside Drive	Macon	477-5234	Don	Braswell	District Chief	Fire Station
Macon-Bibb Station 12	5565	Bloomfield Road	Macon	751-9212	Joe	Clemmons	District Chief	Fire Station
Macon-Bibb Station 101	2303	Weaver Road	Macon	742-4653	Don	Braswell	District Chief	Fire Station
Macon-Bibb Station 102	0	Middle Georgia Regi	Macon	788-3795	Joe	Clemmons	District Chief	Fire Station
Macon-Bibb Station 103	5077	Northside Drive	Macon	471-0182	Don	Braswell	District Chief	Fire Station
Macon-Bibb Station 104	5898	Mt. Pleasant Church	Macon	785-8707	Joe	Clemmons	District Chief	Fire Station
Macon-Bibb Station 105	8456	Eisenhower Pkwy	Macon	935-2920	Joe	Clemmons	District Chief	Fire Station
Macon-Bibb Station 106	7099	Price Road	Macon	474-5931	Joe	Clemmons	District Chief	Fire Station
Macon-Bibb Station 107	3410	Jones Road	Macon	784-8780	Joe	Clemmons	District Chief	Fire Station
Macon-Bibb Station 108	7100	Peake Road	Macon	474-1863	Joe	Clemmons	District Chief	Fire Station
Macon-Bibb Station 1	195	Coliseum Street	Macon	751-9201	Don	Braswell	District Chief	Fire Station
Bibb County Jail	668	Oglethorpe Street	Macon	621-5687	Jerry	Modena	Sheriff	County Jail
Sheriffs' Office	668	Oglethorpe Street	Macon	621-5687	Jerry	Modena	Sheriff	Sheriffs' Office
Payne City Hall	112	Green Street	Payne City	743-4904	Lynn	Holmes	City Clerk	City Hall
Federal Building & U.S. Courthouse	475	Mulberry Street	Macon	752-3503	Melvin	Keith	Buildings Manager	Courthouse
Bibb County Courthouse	601	Mulberry Street	Macon	749-6400	Barbara	Wood	Commis Secretary	Courthouse
Wesleyan College	4760	Forsyth Road	Macon	757-5212	Ruth	Knox	President	Private Four-Year College
Central Georgia Technical College	3300	Macon Tech Drive	Macon	757-3400	Melton	Palmer	President	Public Vocational Tech School
Macon State College	100	College Station Drive	Macon	471-2700	David	Bell	President	Public College
Mercer University	1400	Coleman Avenue	Macon	752-2700	William	Underwood	President	Private Four-Year College
Northeast High School	1646	Upper River Road	Macon	751-6787	Ella	Carter	Principal	High School, Public
Southwest High School	1730	Canterbury Road	Macon	784-5466	Gail	Fowler	Principal	High School, Public
Westside High School	2851	Heath Road	Macon	751-5520	Patricia	Coxsey	Principal	High School, Public
Central High School	2155	Napier Avenue	Macon	751-6770	Pamela	Wacter	Principal	High School, Public
Joseph Neel Academy (Alternative Schoc	2840	Hollis Road	Macon	784-3121	Jessie	Mays	Principal	High School, Public
Rutland High School	6250	Skipper Road	Macon	784-3120	Kathy	Reese	Principal	High School, Public
Career Center	2011	Riverside Drive	Macon	621-2535	Ty	Ford	Principal	High School, Public Voc
Stratford Academy	6010	Peake Road	Macon	477-8073	Dave	Wahl	Headmaster	Private School
First Presbyterian Day School	5671	Calvin Drive	Macon	477-6505	Gregg	Thompson	Headmaster	Private School
Saint Andrews Montessori	501	Bass Road	Macon	474-4451	Karen	Mangham	Director	Private School

Tatnall Square Academy	760	Lake Crest Drive	Macon	477-6760	Barney	Hester	Headmaster	Private School
Hephzibah Academy	6601	Zebulon Road	Macon	477-3383	Larry	Freels	Director	Private School
Covenant Academy	4652	Ayers Road	Macon	471-0285	Melia	Foworth	Headmaster	Private School
Montessori of Macon	436	Forest Hill Road	Macon	757-8927	Elizabeth	Irwin	Director	Private School
Bethany Junior Academy	2742	Millerfield Road	Macon	746-7499	Janice	Stevenson	Director	Private School
Mount De Sales Academy	851	Orange Street	Macon	751-3240	Kathleen	Prebble	Principal	Private School
Saint Joseph Catholic School	905	High Street	Macon	742-0636	Nan	Gillespie	Principal	Private School
Progressive Christian Academy	151	Madison Street	Macon	742-3134	Betty	Tolbert	Headmaster	Private School
Saint Peter Claver	131	Ward Street	Macon	743-3985	Ellen	Hagar	Headmaster	Private School
Ernest Saloom Academy	1441	Williamson Road	Macon	781-0807	Ernest	Saloom	Headmaster	Private School
Gilead Christian Academy	1931	Rocky Creek Road	Macon	788-0606	Doug	Richardson	Principal	Private School
Windsor Academy	4150	Jones Road	Macon	781-1621	J	Cranford	Headmaster	Private School
Gospel Tabernacle	4451	Houston Avenue	Macon	788-9473	Edna	Velie	Administrator	Private School
M A Evans Grade School	345	Edwards Avenue	Macon	745-0333	Miriam	Madison	Principal	Private School
Central Fellowship Christian Academy	8460	Hawkinsville Road	Macon	788-6909	Truitt	Franklin	Administrator	Private School
Washington Memorial Library	1180	Washington Avenue	Macon	744-0800	Joan	Anderson	Director	Library
Riverside Branch Library	110	Holiday Drive	Macon	757-8900	Judith	Jurgensen	Director	Library
Rocky Creek Branch Library	1504	Rocky Creek Road	Macon	744-0880	Dorothy	Wood	Director	Library
West Bibb Branch	5580	Thomaston Road	Macon	744-0818	Iona	Forman	Director	Library
Shurling Branch	1769	Shurling Drive	Macon	744-0875	Suzy	McColloug	Director	Library
Middle Georgia Hospital	888	Pine Street	Macon	751-1111	Richard	McConahy	Administrator	Hospital, Admissions Entrance
Macon Northside Hospital	400	Charter Boulevard	Macon	757-8200	Bud	Costello	Administrator	Hospital, Admissions Entrance
Coliseum Medical Center	350	Hospital Drive	Macon	765-7000	Allen	Golson	CEO	Hospital, Admissions Entrance
Coliseum Psychiatric Hospital	340	Hospital Drive	Macon	741-1355	Edward	Ruffin	Administrator	Hospital, Admissions Entrance
Medical Center of Central Georgia	777	Hemlock Street	Macon	633-1000	Don	Faulk	CEO	Hospital, Admissions Entrance
Healthsouth Central Georgia	3351	Northside Drive	Macon	471-3500	Elbert	McQueen	Administrator	Hospital, Admissions Entrance
Georgia Academy for the Blind	2895	Vineville Avenue	Macon	751-6083	Dorothy	Arensman	Director	Hospital, Emergency Entrance
Macon-Lower Poplar Street WPCP	0	Poplar Street	Macon	464-5680	Terry	Forest	Supervisor	Wastewater Treatment Plant
Macon Water Authority Facility	1044	Broadway	Macon	464-5620	Tony	Rojas	Exec. Dir.	Equipment Station
Middle Georgia Regional Airport	1000	Terminal Drive	Macon	788-3760	Rex	Elder	Aviation Director	Airport
Herbert Smart Airport	0	Herbert Smart Road	Macon	754-4794	Rex	Elder	Aviation Director	Airport
Macon Transitional Center	1100	Second Street	Macon	751-6090	Ben	Combes	Warden	State Prison
Macon Diversion Center	200	Henry Street	Macon	751-6197	William	Powell	Superintendent	State Prison
Bellevue AmeriCorps	3617	Earl Street	Macon	405-0774	Sarita	Thomas	Coordinator	Police Station
Lymore Estates AmeriCorps	3775	Houston Avenue	Macon	788-9836	Sarita	Thomas	Coordinator	Police Station
Fort Hill AmeriCorps	1103	Eastview Avenue	Macon	751-9141	Sarita	Thomas	Coordinator	Police Station
Pleasant Hill AmeriCorps	295	Monroe Street	Macon	751-7626	Sarita	Thomas	Coordinator	Police Station
Village Green AmeriCorps	2636	Bloomfieldway	Macon	784-8842	Sarita	Thomas	Coordinator	Police Station
Unionville AmeriCorps	1996	Mallard Avenue	Macon	784-9258	Sarita	Thomas	Coordinator	Police Station
Macon-Rocky Creek WPCP	4705	Mead Road	Macon	750-4444	Terry	Forest	Supervisor	Wastewater Treatment Plant

Chapter 6

Transportation

Introduction

The Macon Area Transportation Study (MATS) is responsible for conducting the metropolitan transportation planning process for the study area. MATS is comprised of local elected officials and representatives from significant transportation providers and stakeholders, such as the Georgia Department of Transportation, Macon-Bibb County Transit Authority, the Macon-Bibb County Water Authority and interested citizens. Staff from the Macon-Bibb County Planning and Zoning Commission provides the ongoing support needed to execute and coordinate transportation planning in the Macon area. The study area covered by MATS is shown in Figure 6-2. It includes the City of Macon, Payne City, Bibb County and the southern portion of Jones County.

The MATS Planning Process

MATS was established on February 21, 1964, in response to the Federal Aid Highway Act of 1962. As a result of this act, all urban areas with populations exceeding 50,000 people were required to maintain a “continuing, cooperative, and comprehensive” transportation planning process. The City of Macon, Payne City, Bibb County and the Georgia State Highway Department (now the Georgia Department of Transportation), and the Macon-Bibb County Planning and Zoning Department entered into an agreement to establish the Macon Area Transportation Study in response to the legislation. Over the years, the study area has expanded to include the southern portion of Jones County as a result of the region’s growth and the Middle Georgia Regional Development Center (RDC) as an active participant in the planning process.

While the Transportation Improvement Program (TIP) and Long Range Transportation Plan (LRTP) are the best known documents derived from the transportation planning process, the process includes many other activities. Intermittently, transportation studies are done by local governments or transportation providers like Bibb County, the City of Macon, Macon-Bibb County Transit Authority and the Georgia Department of Transportation. Results from these studies become part of the process. Another major planning initiative, the regional land use plan prepared by the Middle Georgia RDC, is coordinated with the metropolitan MATS planning process.

Participation from the general public, major stakeholders and elected officials in the transportation planning process is a very important element. This is reflected in the committee structure. From the inception, MATS has always had a Citizens Advisory Committee (CAC), Technical Coordinating Committee (TCC) and a Policy Committee (PC). The CAC is used to gauge community values and public attitudes in the planning process. The TCC brings its technical knowledge to bear in the planning process while the PC is the decision making body that adopts long range transportation plans and transportation improvement programs, as well as policies that help guide their development.

MATS and Federal Transportation Objectives

In 1998, Congress enacted a new law governing the disbursement of federal funds to local transportation projects. It is called TEA-21, for the Transportation Equity Act of the 21st Century. This act stipulates that seven factors must be included in the decision making process leading to development of a transportation plan. Overall, the factors must guide development of the long range plan that specifies a framework for the future transportation system, and must also be used in decisions about the implementation of individual projects that will move forward in the plan. The factors are:

- ◆ Support the Economic Vitality of the Metropolitan Area
- ◆ Increase Safety and Security
- ◆ Increase Accessibility and Mobility Options for People and Freight
- ◆ Protect the Environment, Conserve Energy, and Improve Quality of Life
- ◆ Enhance Integration and Connectivity of the Transportation System
- ◆ Promote Efficiency
- ◆ Emphasize Preservation of the Existing Transportation System

A new Federal Transportation Act is now under consideration by Congress and is expected to be adopted in 2005. A major consideration in this Act is safety planning. In addition to the seven planning factors, this document also undertakes this initiative in the development of this Plan

Summary

The following sections in this chapter of the document will provide a discussion of:

- ◆ Goals and objectives of the Comprehensive and Transportation planning process;
- ◆ Transportation Data - Socio – economic information used in the development of the plan;
- ◆ Streets and Highways;
- ◆ Parking in the Downtown;
- ◆ Public Transportation;
- ◆ Bicycle and Pedestrian Facilities;
- ◆ Aviation and Rail– Freight and Goods Movement;
- ◆ Costs and Revenues; and
- ◆ Plan considerations in reference to Title VI, environmental justice, ADA, planning factors, and safety.

In addition to the items above, a conformity analysis is provided in a separate document. This report will demonstrate that the LRTP 2030 for the Macon Area Transportation Study conforms to the requirements of the 8-hour ozone and fine particulate matter PM 2.5 standards and the Clean Air Act..

Goals and Objectives

This section documents the goals and objectives established to guide the land use and transportation planning process for the Macon Area Transportation Study (MATs) planning area. Using past goals and objectives, matched with the wealth of data gleamed from our recently completed *Visual Preference Survey*, we have been able to meld the collective ideas of over 1,250 citizens. The Visual Preference Survey has led to the development of comprehensive planning initiatives that are outlined in the Plan Recommendation section of this document.

The visioning process involved massive partnerships throughout the City and County which set into motion an extraordinary public involvement campaign. To assist in guiding this effort, a Blue Ribbon Steering Committee was appointed. The group was requested to oversee the development of the *Visual Preference Survey*, assist in establishing a network of people to help distribute and promote it, interpret the tabulated results and formulate recommendations. Due to the nature of this project, it was crucial to appoint individuals who possess a genuine commitment to our community, a thorough knowledge of middle Georgia, and the time and talent needed to make the project a success.

In mid-2003, the results of this massive public involvement activity were unveiled in a highly publicized public hearing held at the Douglass Theatre in downtown Macon. The well attended event served to brief over one hundred citizens on the survey and sought additional input on the formulation of related planning strategies. In June, 2004 over seventy citizens attended another public forum where our 2030 Vision and Action Plan was presented. The document was prepared to provide guidance for MATs and our Comprehensive Planning Process. The event spurred a healthy public involvement dialogue which served to further expand citizen input in establishing highly focused actions plan that were based on the following reaffirmed goals and objectives.

Growth & Facility Goal

Encourage growth in areas that have access to existing and planned facilities

Objectives

1. Support the use of existing roads, sewers and buildings, and focus future development where public infrastructure is planned.
2. Promote efficiency in land development by planning future land uses and higher densities where extension of water and sewer would be appropriate.
3. Encourage residential densities that would make transit service financially feasible in accessible locations.
4. Encourage, through incentives, redevelopment and infill opportunities in existing communities.
5. Provide opportunities for appropriately planned shopping and employment growth near and in scale with existing communities

Growth & Environment Goal

Minimize intrusions into wetlands, natural habitats, flood plains, prime farmland, cultural and historic areas

Objectives

1. Direct urban development away from environmentally sensitive areas.
2. Encourage development to locate outside of the 100-year floodplain.
3. Promote land uses along the Ocmulgee River Greenway Corridor that enhance and protect it.
4. Identify approaches for maintaining viable rural land uses.
5. Encourage development that enhances and protects the cultural heritage of the community.

Commercial/Industrial Goal

Foster a strong, diverse and well designed commercial & industrial environment which provides for a full range of employment and economic choices

Objectives

1. Establish appropriate regional growth targets developed with community participation in the planning process.
2. Balance Macon and Bibb County's role as a regional employment and service center with environmental and historic resources, neighborhood stability and economic vitality.
3. Focus future locations of major commercial and industrial growth on interstate interchanges and major thoroughfares appropriately buffered from existing residential.
4. Promote revitalization of existing commercial and industrial sites by utilizing existing vacant industrial land instead of developing agricultural lands for such use.
5. Encourage new and revitalized commercial development to include new residential land uses.
6. Strengthen compatibility between commercial/industrial activities and neighborhoods through appropriate scale of design and transition of land use intensities.

Transportation Connectivity Goal

Provide a transportation network that enhances interconnections between activity centers and neighborhoods

Objectives

1. Provide better utilization of the arterial system and its relationship to the freeway system.
2. Provide transportation improvements that address internal circulation, as well as cross-community circulation.

3. Improve Jones County's transportation access to major inter-county roadways.
4. Encourage interconnection of the neighborhood street network with design characteristics that discourage use as throughways.
5. Continuously update Major Thoroughfare Plans to reflect transportation interconnection, safety and efficiency needs precipitated by land use changes.

Mobility Goal

Enhance the ability to travel within the metropolitan area regardless of mode of transportation

Objectives

1. Develop a financially feasible, coordinated transportation system that integrates thoroughfares, transit, air, rail, bike and pedestrian facilities (intermodal connectivity).
2. Expand transit service to key residential, employment, retail and educational centers throughout the community.
3. Identify transportation and land use measures to make transit a viable alternative to driving.
4. Establish a network of walkways and bikeways within the urban and non-urban areas.
5. Provide increased mobility opportunities for older and transit-dependent citizens.
6. Identify opportunities to use abandoned rail line rights-of-way for bike paths and walkways.
7. Enhance roadway safety.

Roadway Character Goal

Provide a roadway network that enhances the scenic beauty of the community

Objectives

1. Design street improvements that reflect community character and utilize a functional classification system based on actual use of the road.
2. Look at future land use and proposed roads to recognize impact on the existing street system classification.
3. Adopt consistent, neighborhood-friendly, land-use efficient thoroughfare design standards and objectives.
4. Consider aesthetic and noise impact of transportation improvement projects.
5. Develop an approach for enhancing historic character and scenic beauty of roadway corridors.

Air Quality Goal

Reduce vehicular emissions that pollute our air

Objectives

1. Encourage higher density residential development near centers of employment, shopping and services.
2. Encourage mixed-use developments of residential and employment uses where appropriate.
3. Promote ride sharing, vanpooling and other commute options to reduce vehicular trips.
4. Improve traffic flow to reduce congestion.
5. Incorporate the use of non-motorized transportation in roadway improvements.
6. Expand transit service and ridership.
7. Promote vehicle maintenance in order to reduce emissions.

Communication and Participation Goal

Establish, promote and sustain strong public involvement

Objectives

1. Provide regular opportunities and information for the community to be informed of and participate in land use, transportation and air emission planning issues.
2. Allow flexibility in the planning process that will accept new valid information that may be used to revise plans.
3. Provide educational opportunities for public officials and the general public to learn about land use and transportation issues and innovations.
4. Increase community participation in governmental Capital Improvements Planning and fully coordinate it with transportation and land use planning.

Downtown Goal

Enhance the image, economic vitality, and sense of community identity of Downtown

Downtown Macon will become the heart of Bibb County and the region. Growth in a traditional downtown pattern will be encouraged, using major development and mixed-use buildings - including housing.

Objectives

1. Promote opportunities for the Downtown to function as a major player in the region's economic and cultural activities.
2. Improve the appeal of Downtown for shopping, living and cultural activities.
3. Encourage residential development within the Downtown.
4. Encourage local, state, and federal facilities to locate within the Downtown.
5. Fully incorporate the Coliseum and East Macon commercial area into the Downtown.

6. Enhance the Ocmulgee River's connection to the Downtown.
7. Create enhanced gateways into the Downtown.
8. Create pedestrian flow and comfortable people oriented public places with appropriately located safe parking.
9. Enhance the community's natural features and create additional landmarks.

Neighborhoods Goal

Promote development of community-oriented neighborhoods

Neighborhoods will have a defined size, have a center and have access to a range of uses. The maximum size of a neighborhood will be defined as a five minute walk from the center or a maximum radius of 1,500 feet.

Objectives

1. Provide for a variety of housing types and development densities to maximize housing choice while maintaining compatibility between new development and existing neighborhoods.
2. Promote walkable/bikable/transit-friendly neighborhoods
3. Incorporate “public gathering spaces”, such as parks, into neighborhood development.

Rural & Suburban Areas Goal

Promote development at a higher design and planning standard

A pro-active planning approach will be used to guide future development. New street networking plans and urban design concepts will be developed specifically for the rural and suburban areas. Additional sewer extensions or street improvements will be favored only in rural land and un-built suburban areas where traditional neighborhoods with high walkability are encouraged.

Objectives

1. Discourage strip-commercial development by establishing new “Main Street” commercial areas in the center of new traditional neighborhoods. The centralized commercial hub would be designed to cater to the specific needs of the neighborhood, consequently, these carefully planned environments would serve as gathering places for personalized commercial and social interaction.
2. Promote and locate new office blocks adjacent to “Main Street” centers.
3. Promote the redevelopment of older commercial areas into mixed-use centers.
4. Allow limited out-parcels.
5. Create new neighborhoods with a range of residential building types, with personalized commerce and higher densities located in the center of the neighborhood, decreasing towards the periphery with large lots located on the periphery.
6. Surround new neighborhoods with lower density land uses.
7. Infill empty lots as a first priority.
8. Establish a higher standard for pedestrian realms, parks/open space, parking options, signage, mobility choices.

Transportation Data

The socioeconomic data and projections of future socioeconomic data contained in the Population Section is used for the basis of Comprehensive Growth Management Planning.. This data is vital in planning for economic development, housing, natural and cultural resources, community facilities and services, and land use. Population, households and employment are the key variables and the driving forces in determining future needs of the community. It is important to have the best base data available and to analyze this data to determine what are the current and future trends in the community. It is the purpose of this section to demonstrate the current status of the community and to illustrate what the current and future trends in the community.

The linkage between land use and transportation planning activities is provided through estimates of the existing socioeconomic data and projections of future socioeconomic data. These estimates of existing and future socio-economic data, such as population, households and employment, provide linkage between the land use and transportation planning activities. Estimates of population, households and several categories of employment are key variables used in estimating current travel demand and projecting future levels of travel demand. Levels of current and future travel demand are computed by the Macon Area Transportation Study MATS's travel model which combines socioeconomic data forecasts, mathematical travel behavior data and transportation system networks. The MATS's travel demand model is the primary tool used to identify potential projects that will address future transportation system deficiencies. It is also valuable in identifying those areas projected to have deficient levels-of-service, but where no improvement projects or strategies have been developed sufficiently for inclusion into the plan. Descriptions of model data and travel relationships that comprise the travel forecasting model will be in the full set of Long Range Transportation Plan documentation.

Land Use Projections

Future year projections of socioeconomic data were based on a 2002 inventory of existing land uses including vacant land, as well as region wide forecasts of population, households and employment. Along with an allocation model that was developed for the MATS as part of the land use plan, future year 2030 estimates of socio-economic data were projected for small areas called traffic analysis zones. There were 403 traffic analysis zones in the MATS region for this plan update. A more thorough explanation of the procedure and information used to forecast socioeconomic data to a horizon year of 2030 is contained in two companion documents. These are titled, *Development Trends and Land Demand Analysis* and *Growth Allocations By Traffic Analysis Zone*. The 2030 MATS Land Use Plan map is displayed in ** Chapter 4 on Map 4-6. A total of thirteen different land use categories are depicted on the maps with the entire Macon area shown on the land use map

Bibb County is now a non-attainment area for ground level ozone and for fine particulate matter PM 2.5. This means that the 2030 Long Range Transportation Plan for the Macon Area Transportation Study must meet the transportation conformity requirement of the Clean Air Act. As part of the conformity requirements, an interagency consultation committee was created with members from US EPA, FHWA, FTA, GA DOT, GA EPD, GRTA, MATS, and WRATS. The methodologies and procedures used to arrive at the 2030 estimates are to be reviewed by this interagency committee.

The same basic methodology is being used for the 2030 projections that was used in the previous update for 2025. In January 2004, the interagency consultation committee reviewed this methodology, the base data, and the projected data that was used for 2025 Long Range Transportation Plan. The basic methodology was approved to be used as the basic methodology for 2030 projections.

Population and household data for both the base year 2002 and the projected year 2030 are lower than the 1998 base data and the 2025 projected data in the last update. The 1990 Census has the vacancy rate too high. Local data proved that the 1990 Census vacancy rate was in error. A statistical adjustment was proposed but was never approved by Congress. The 2000 Census was to make corrections so that the vacancy rate would be corrected. Based on local information, it

would appear that the 2000 Census contains the same basic error that was in the 1990 Census. Now that we have two incorrect Census counts in a row for 1990 and 2000, the base estimates and the projections for population and households are very low. The trend that the City of Macon is losing population and households is being overstated because of the vacancy rate error in the 1990 and 2000 Census. In other words, the 2002 and 2030 population and household base estimates and 2030 projections are very conservative.

During the 2025 update, a city growth scenario was modeled, and it proved to have little impact on the need for transportation improvements. The 2030 update of population and household growth is lower than in the 2025 update so that there is no need to run a city growth scenario.

Employment data has increased over the last update. Employment grew at a higher rate between 1998 and 2002 than was expected. It appears that Bibb County is still a viable growing employment center, especially along the I-75/Riverside/Arkwright/Bass area. While the suburbanization of residential development continues to move from Bibb County to the surrounding counties, Bibb County remains the employment center for the region.

Existing 2002 and future year 2030 socio-economic data estimates are summarized in terms of population, households and total employment in this report. The purpose of this section is to show the relative amount of residential and commercial growth that is anticipated for the Macon metropolitan area during the next 25 years. Moreover, it points out generally where that growth is anticipated to occur.

The travel demand model, however, uses more demographic variables than just those three. As a practical matter, different types of households generate varying numbers of trips per day (i.e. high income, four person households make many more trips per day than low income, single person households – on average). Similarly, different employment categories attract varying numbers of trips per day (i.e. retail establishments generate many more trips per day than do manufacturing facilities – on average). Due to these properties that characterize different land uses, the MATS travel model is sensitive to the following demographic variables:

Variables used to project travel in the model are:

- Number of Households by Size and
- Autos Available;

- Population;
- School Enrollment;
- Retail Employment;
- Service Employment;
- Industrial/Manufacturing Employment;
- Wholesale Employment;

Areawide Projections

The 2030 update has minimal residential growth forecasted for the area. The 2002 base household data is less than the 1998 base. The 2030 projections are less than the 2025 projections. The residential growth rate for Jones County remains high with a 40% increase between 2002 and 2030. Bibb County will continue to have a steady residential growth in the outlying areas between 4% to 15% increase. The City of Macon has little or no growth projected. When comparing the 2030 data to 2025 data, the increase in residential growth was severely reduced in Bibb County in the outlying areas. In addition, both the 2025 and 2030 updates show little residential growth in the City of Macon.

The 2030 update shows an increase in employment over the 2025 update both in the base year 2002 and in the projected year 2030. The 2030 update shows a growth of 31% for employment between 2002 and 2030. Employment increased at a greater rate than expected between 1998 and 2002. Bibb County will continue to be an employment center. New employment growth is expected to continue to in the I-75/Riverside/Arkwright/Bass Rd area. This is Bibb County's fastest growing area for new employment.

For the 2030 update, the entire MATS planning region was forecasted to have slow growth for residential variables like population and households while employment growth was expected to be robust in comparison. Forecasts of population, households and total employment for the entire MATS region are illustrated on a bar chart in Figure 6-1 for the base year 2002 and at 5-year increments between the years 2005 and 2030. The level of growth forecasted for population and households is similar. The number of households was forecasted to grow 5% between 2002 and 2030, changing from 64,774 in 2002 to 68,491 in 2030. Population was projected to increase by 8.6% during that same period, changing from 167,677 in 2002 to 182,044 in 2030. In contrast, the pro-

jected 2002 to 2030 increase in total employment was 31%. Baseline 2002 employment was 110,222 and the estimated year 2030 figure was 145,119. Over 34,000 new jobs are predicted in the Macon area during this period.

The relatively large increase in total employment during the 2002 to 2030 timeframe underscores Macon's continuing role as a regional hub in middle Georgia. The land use and transportation plans are predicated on this principle which is based on current trends and is consistent with countywide projections made by independent demographic consultants. It is anticipated that the existing transportation system, the location of institutions of higher learning, the presence of cultural attractions and shopping opportunities will make the MATS area a desirable place for new jobs. The disproportionate number of new jobs in comparison with new households suggests that many of the persons who will be working inside of the MATS study area will choose to locate their residences in surrounding counties. This is not a new phenomenon. Collar counties surrounding Macon have experienced residential growth during recent years and that trend is expected to continue in the future.

Growth Allocations inside the MATS Region

In this section, a description of where the 2,000 extra households and 34,000 additional jobs are likely to locate is described in general terms. A map of the MATS area, carved into 25 planning sectors, is shown in Figure 6-2 to help in illustrating where the growth is anticipated to occur. First, the allocation of where future residential development is expected to happen is explained.

Changes in the number of households by planning sector that were projected for the period between 2002 and 2030 are shown on a bar chart in Figure 6-3. The majority of residential growth is projected to occur in south and west Bibb County and in South Jones County. The South Jones County Sector is expected to receive the highest number of new households during the 2002 to 2030 timeframe when compared to the other MATS Sectors. Slightly more than 1,702 additional households are foreseen in the Jones County portion of the MATS region. There are six other relatively high growth sectors in the study area, at least in terms of households. In each of the sectors listed below, approximately 150 to 350 new households are anticipated during the time span covered by the plan.

- 1 – Wildwood (222 new households);
- 2 – Tobesofkee (254 new households);
- 6 – Hartley Bridge/Sardis Church (326 new households);
- 7 – Airport (176 new households);
- 9 – North Macon (368 new households);
- 10 – Idle Hour (183 new households);

Those areas in the older urban core which have already been built-out are not expected to receive a substantial amount of residential growth during the next 25 years. This includes much of the City of Macon. Marginal household growth is anticipated for many of these in-town sectors as a result of infill and loft-type conversions, but land for a lot of new housing simply is not available. These sectors are identified by number and name, below:

Changes in where new total employment will occur during the 2002-2030 time frame are illustrated on the bar chart shown in Figure 6-4 by planning sector. Seven of the 25 planning sectors are forecasted to gain approximately 1,000 or more new jobs. Employment gains appear to be spread across the MATS region more widely in comparison with new households. One of these sectors,

- 5 – Ocmulgee East Blvd (12 new households);
- 13 – Historic District (4 new households);
- 14 – Pleasant Hill/Riverside (19 new households);
- 15 – Pierce/Vineville (4 new households);
- 21 – South Macon (47 new households);
- 22 – Montpelier (0 new households);
- 17 – West Macon (26 new households);
- 16 – Westgate (10 new households);
- 18 – Cherokee Hts. (17 new households);
- 19 – Industrial (0 new households);
- 20 – Edgewood (21 new households);
- 23 – Unionville (0 new households); and
- 24 – CBD Area (0 new households);
- 4 – Cochran Short (0 new households);

number 9 in the North Macon area of northwest Bibb County, was projected to get approximately 16,000 of the new jobs. This equates to approximately 48% of the total employment increase for the entire MATS region. Two sectors, number 3 called the Lizella/Fulton Mill area and number 16 named the Westgate area, were forecasted to gain around 2,600 new jobs each. The other areas,

where around 400 to 1500 or more additional jobs were forecasted to locate include the following planning sectors:

- | | |
|---|------------------------------|
| 1 – Wildwood 1,211; | 11 – East Macon 607; |
| 5 – Ocmulgee East/SR57 1,826; | 20 – Edgewood 540; |
| 6 – Hartley Bridge/Sardis Church 1,402; | 19 – Industrial 448; |
| 7 – Airport 929; | 24 – Downtown Macon 514; and |
| 10 – Forsyth/Rivoli 1529; | 25 – South Jones County 639. |

Figure 6-1 Areawide Growth Forecasts

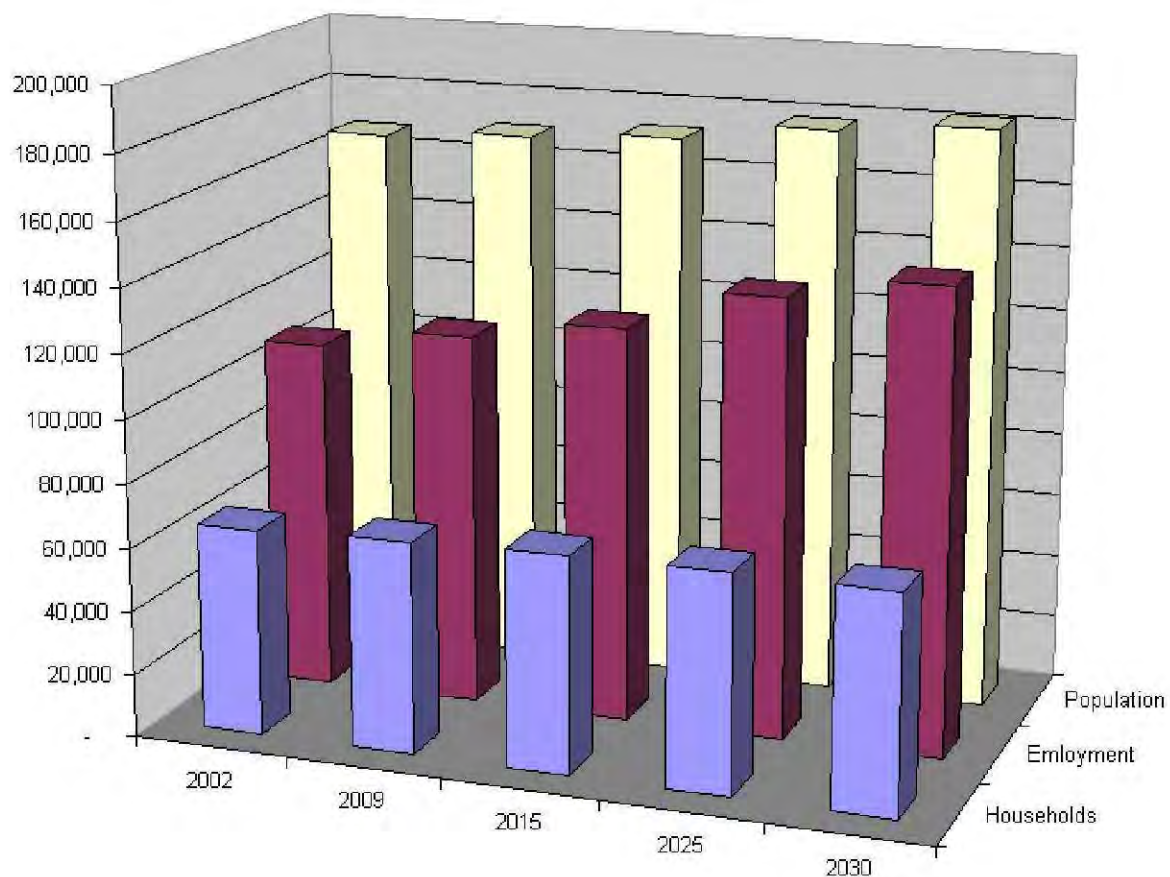


Figure 6-2
Planning Sectors Boundaries

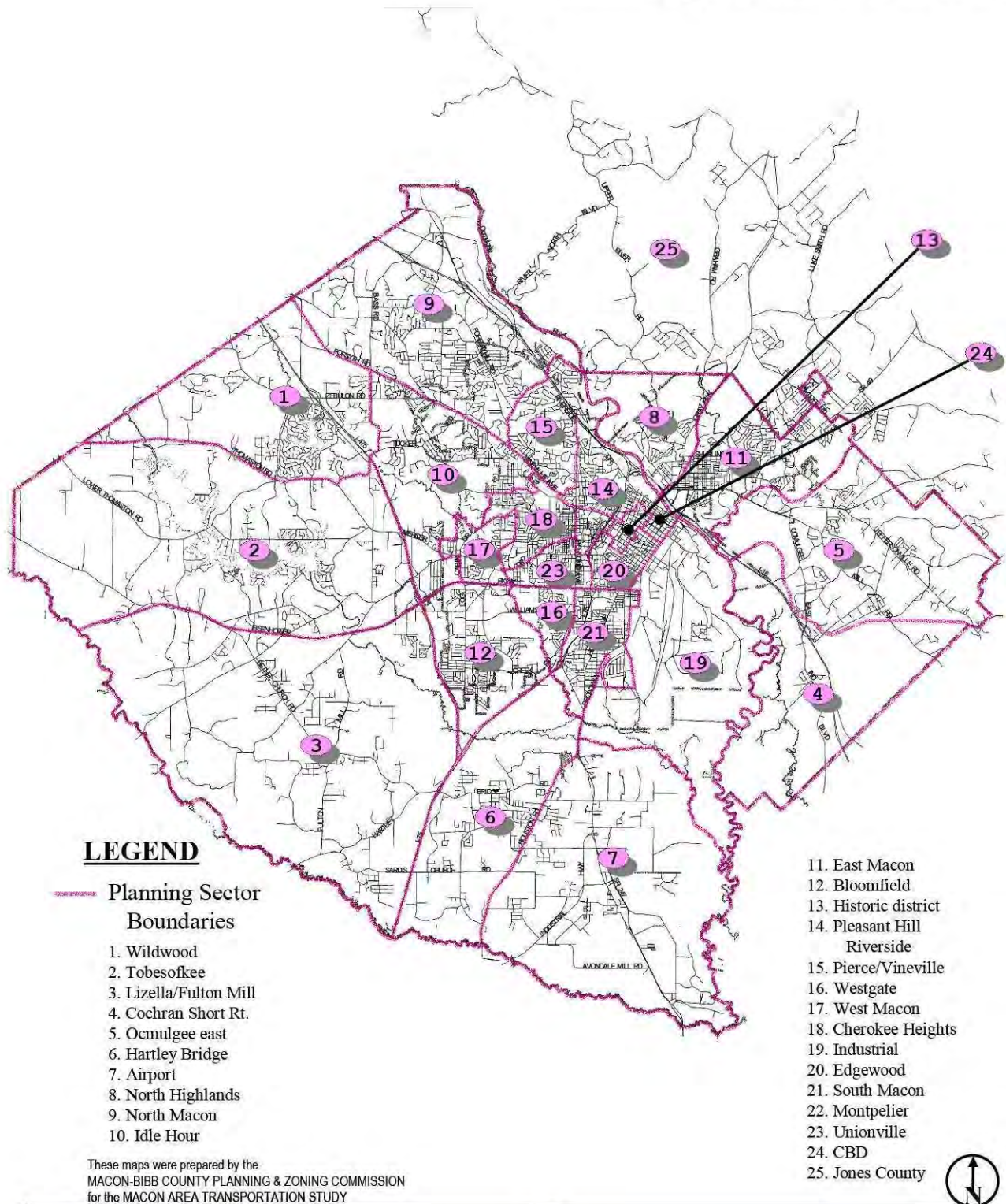


Figure 6-3 Changes in Households

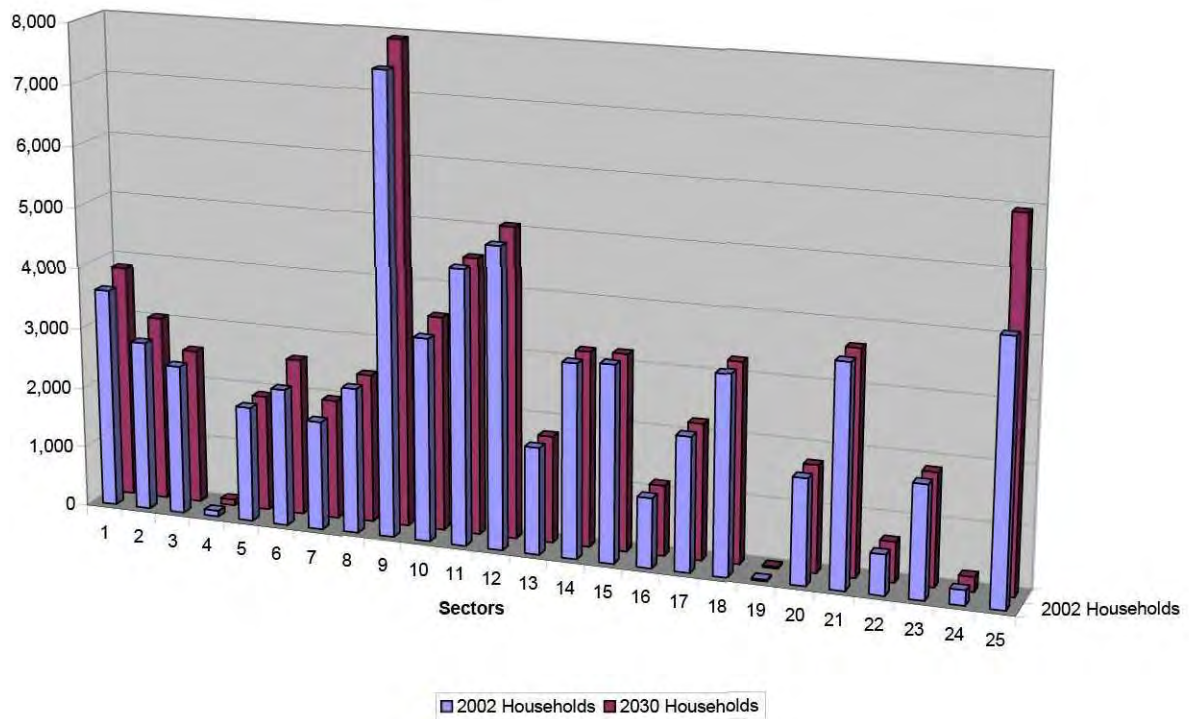
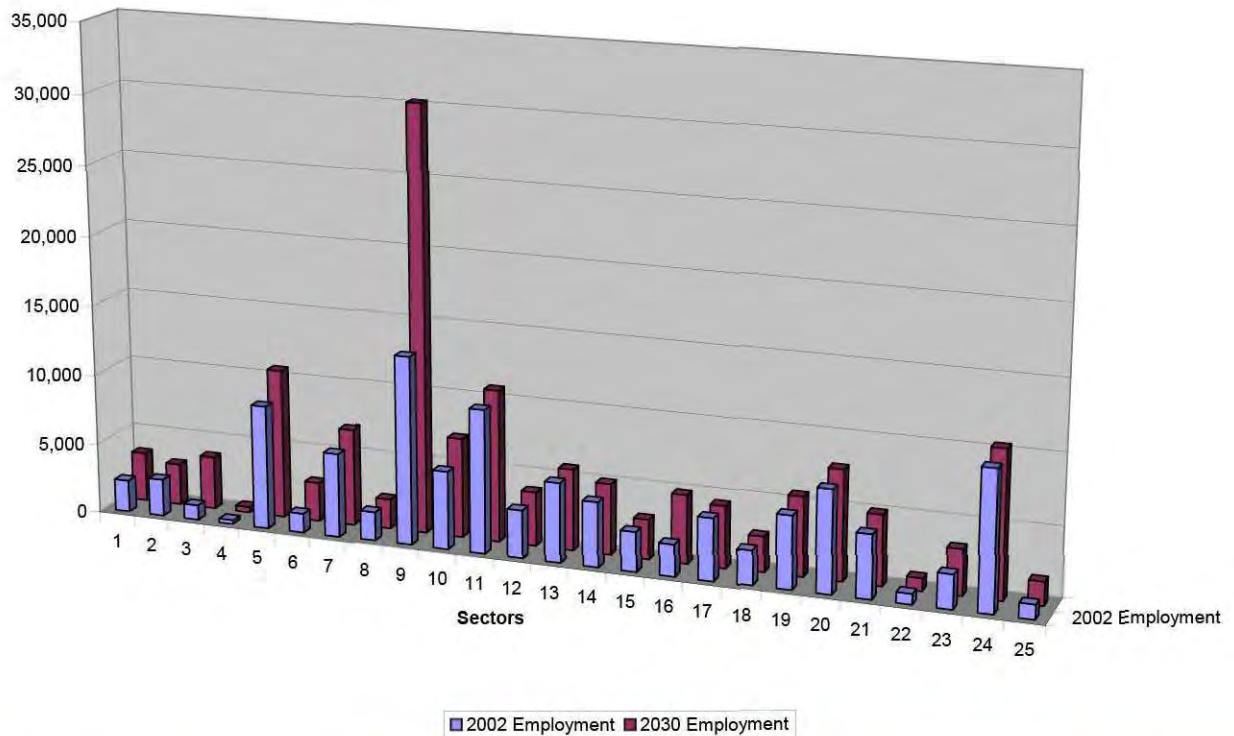


Figure 6-4 Changes in Employment



Streets & Highways

Street Functional Classification

The MATS network contains 42.76 miles of highway classified as interstate in Bibb County. There are 164.38 miles of highway in the official state highway system. Bibb County has 143.24 miles and Jones County has 21.4 miles in the state highway system. The Georgia Department of Transportation may expend monies for projects not on the system, but right-of-way acquisition with state funds can be used only on the state highway system.

All roads have been classified into the following categories: interstate, principal arterials, minor arterials, collectors, and local. The interstate is a controlled access highway that is devoted entirely to traffic movement. Arterials handle trips of more than one mile, serve major movements of traffic between different areas of the community, serve as access to adjoining land, although this access is preferably only to major facilities such as shopping centers. Collectors serve as connectors between local streets and arterials and handle traffic movements within an area of the larger community. Collectors are not designate to serve as paths for long through trips and generally provide some access to adjacent land. Local streets are designed solely to provide access to land. Most streets within residential areas are classified as local streets.

Streets and highways are dependent upon each other and form an interrelated highway system and/or network. The functional classification map (Figure 6-5) reflects this relationship and the travel patterns of the community. The proposed projects of the 2030 Long Range Transportation Plan are aimed at maintaining this highway network so that future travel demand and needs of the community are met.

The transportation data that contains the socio-economic data and the street and highway network are utilized by the transportation planning model for the Macon Area Transportation Study. This provides an estimate of existing traffic counts and projected counts on possible future networks. Estimates of existing congestion on the 2002 network is shown on Figure 6-6. Projected congestion for two 2030 network alternative are also shown. The 2030 “Do Nothing Alternative” is shown on Figure 6-7. The 2030 “Adopted Plan” is shown on Figure 6-8.

Figure 6-5
2002 HPMS Functional Classification

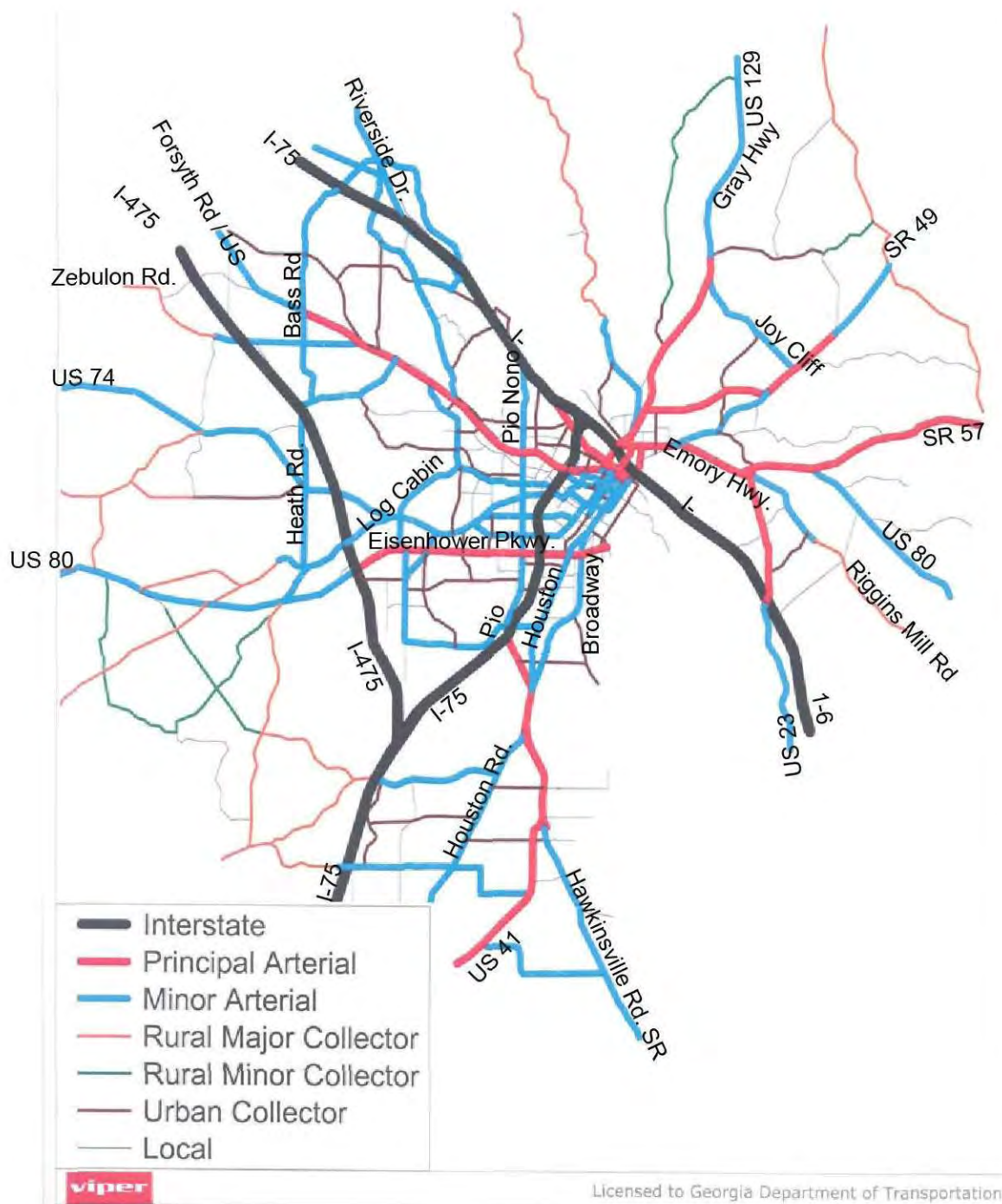


Figure 6-6

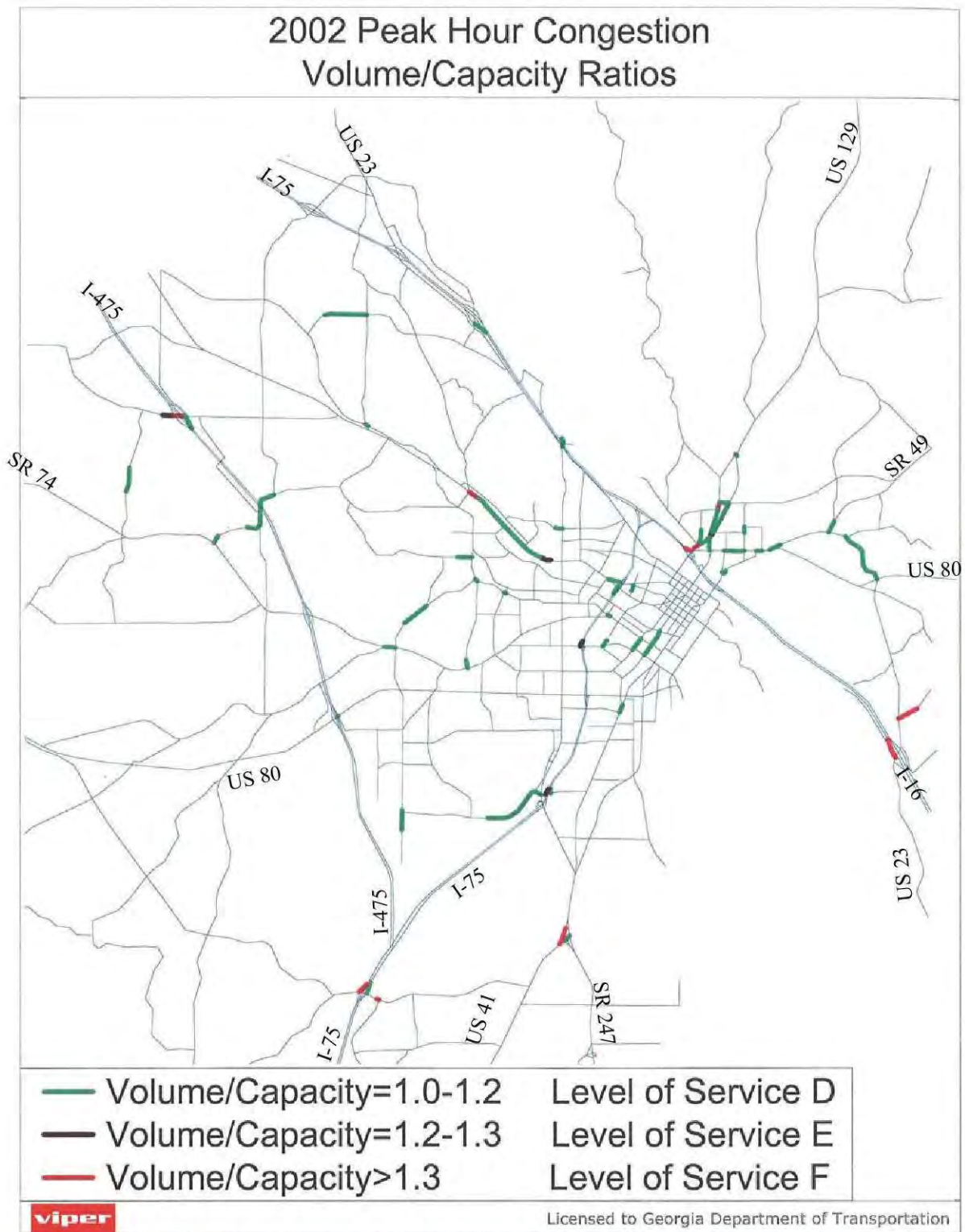


Figure 6-7

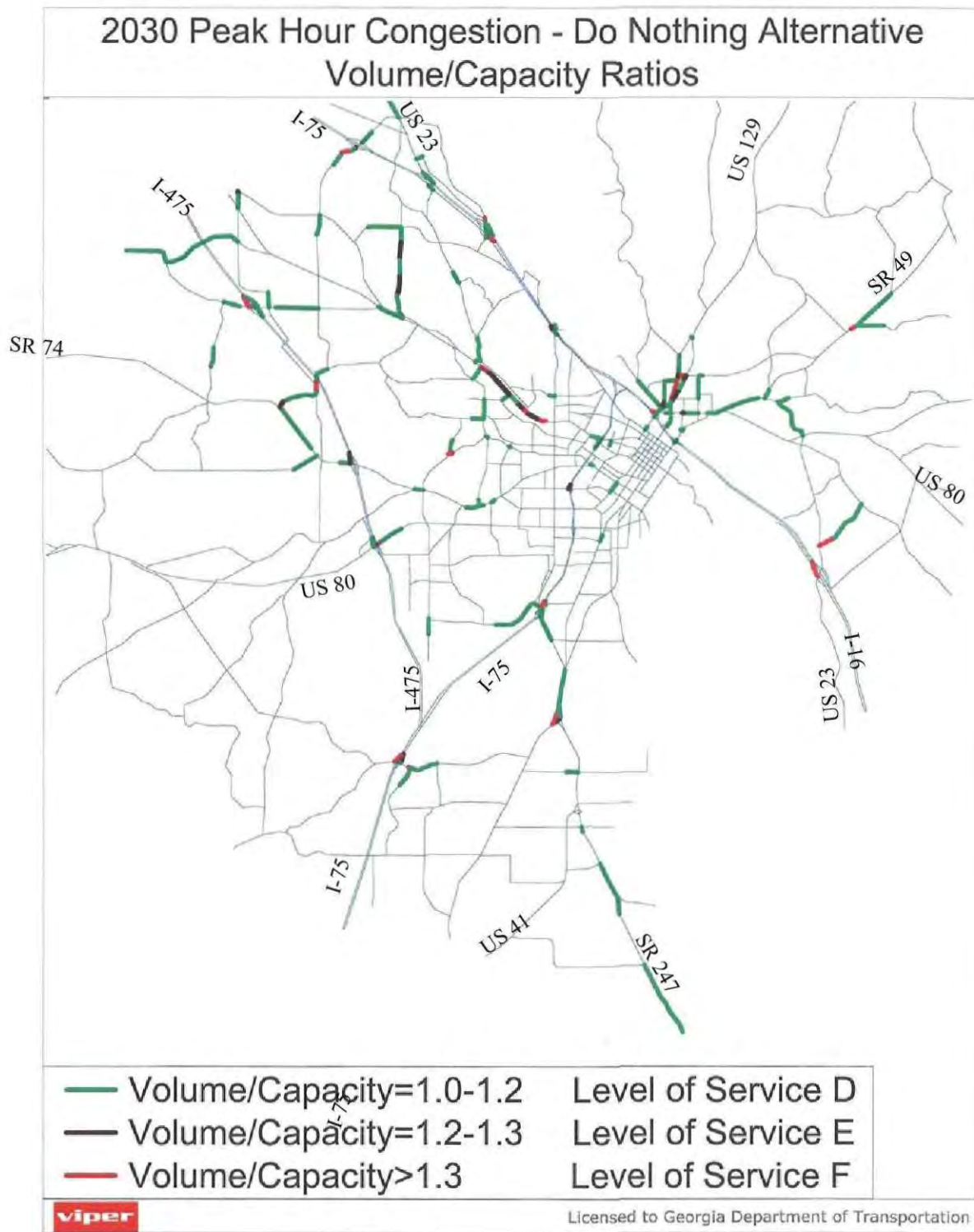
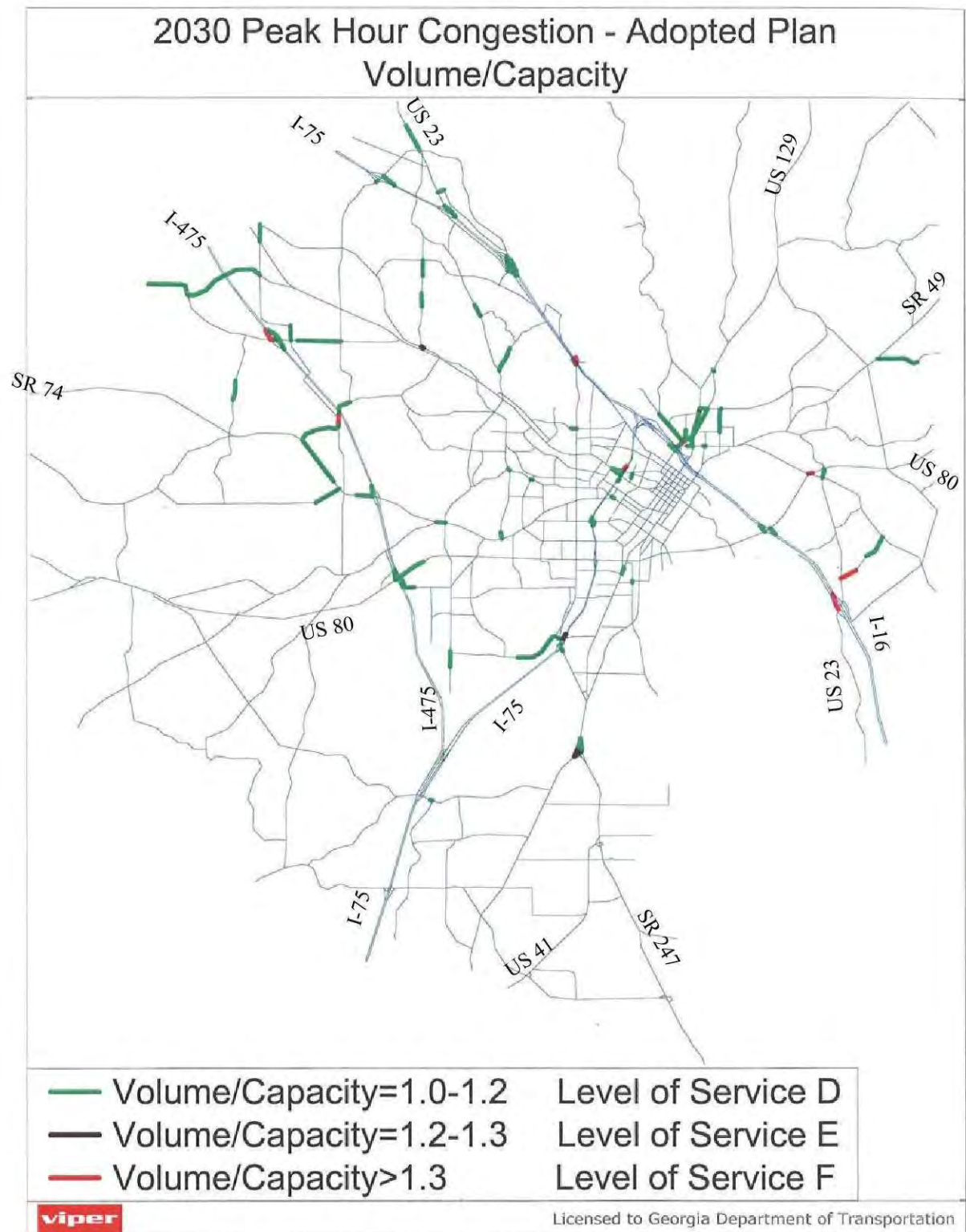


Figure 6-8



Project List

The list of road improvement projects and programs that are being recommended for inclusion in the 2030 plan is contained in Table 6-1 and are shown in Figure 6-9.

Since Bibb County has been designated as non-attainment area for ground level ozone and for fine particulate matter PM 2.5, this requires an air quality conformity determination for the following years: 2009, 2015, 2025, and 2030. This means that the proposed networks for each of these years have to be established in the plan. Table 6-1 lists projects by network years.

The proposed network for the 2009 have been established based on the current Transportation Improvement Program and Tier II funding schedules. Projects in the 2009 network may be moved back, but it is very unlikely that any other projects can be added to the 2009 network due to funding limitations.

Initially, it was not possible to know if all the projects desired by the MATS Policy Committee by the 2015 network year could be scheduled even if funding was to be available. This was not known until the first model runs for both the network and off system projects were completed. The outputs from these runs provided inputs into Mobile 6.2 which is the officially adopted model of US EPA. The outputs from Mobile 6.2 determined if a network violates air quality. If Mobile 6.2 indicated that a network year violates air quality, projects would be removed from that particular network year and moved to a later network year.

Initially, projects will be evaluated against roadway emissions developed for the 2002 model year, referred to as the base emission year. All future roadway networks will be compared to this base year assuring that scheduled projects will not worsen air quality. This will be the standard until Georgia EPD prepares a SIP (State Implementation Plan) that includes the Bibb County non-attainment area. The SIP has an inventory of air pollution sources that includes stationary sources such as power plants and factories and mobile sources which are mainly traffic on the streets and highways. This inventory data is used to run air quality models that are used to evaluate future air quality under different possible scenarios. The end result of all this analysis and evaluation will be a SIP that allocates the allowable amount of pollutants that each individual stationary source can emit

and total amount that can be emitted by all the mobile sources.

In the past, the MATS Policy Committee in coordination with the Georgia Department of Transportation determined what projects were to be included in the plan. This is no longer true. Any proposed plan by the MATS Policy Committee must have an Air Quality Determination Report that can be approved by Interagency Consultation and must comply with the Clean Air Act. Those agencies who are involved with the Interagency Consultation are the Macon Area Transportation Study, Macon Transit Authority, Georgia Department of Transportation, Environmental Protection Division of the Georgia Department of Natural Resources, Georgia Regional Transportation Agency, US Environmental Protection Agency, Federal Highway Administration, and the Federal Transit Administration.

Once the Macon Area Transportation Study has an approved plan and an Air Quality Conformity Determination Report approved by the Interagency Consultation, few revisions to the plan will be possible until the next update of the plan. Previously, the MATS Policy Committee could amend the plan at a any meeting of the Committee. This is no longer possible with any project that will increase capacity to the street and highway network. Revisions to the plan that included projects that increased capacity would require a new Air Quality Determination Report and the approval of the Interagency Consultation. Instead of the plan being updated every five years, a plan update and conformity report are now required every three years because of the non-attainment designation.

There are more than \$908 million of improvements in the list of recommendations. This does include expenditures that could be classified as maintenance and repair, but the overwhelming majority of it consists of legitimate improvements to the road, sidewalk and bicycle networks. Routine safety, maintenance, and repair expenditures will be reported in the next section, covering the financial feasibility of the plan.

Two of the projects are being coordinated with other planning areas. The Ocmulgee East Blvd. (SR87) project from I-16 to SR96 is being developed in concert with Twiggs County. In South Bibb County, the Hawkinsville Rd. (SR247) widening project from Watson Blvd in Houston County to US 41 (Houston Road) in Bibb County is being planned jointly with the Warner Robins Area Transportation Study.

Table 6-1

2009 Network - Projects under construction in 2007 - assumed completed by 2009 - are added to 2002 Network

Road/Project Name	Description/ Location	Regionally Significant Project	State Project ID #	Construction Scheduled GDOT/RIP	Air Quality Conformity Determination Requirements	Network Year	2030 LRTP Total Plan Cost
ITS Architecture Advanced Transportation Management Systems	Operations 2006 to 2009. State Traffic Engineering.	No		2006 - 2009	Exempt	2009	\$ -
ITS Architecture Advanced Transportation Management Systems	Maintenance for 2006 to 2009	No	323015	2006 - 2009	Exempt	2009	\$ 600,000
ITS Architecture Advanced Transportation Management Systems	Equipment upgrades. Replace existing outdated equipment. Every signal would have updated equipment by the end of 2009.	No		2007	Exempt	2009	\$ 400,000
ITS Architecture Advanced Transportation Management Systems	Equipment installation for 55 locations. Traffic Engineering to write contracts and do design in house.	No		2007	Exempt	2009	\$ 60,000
ITS Architecture Advanced Transportation Management Systems	Provide additional optic fiber to the existing optic fiber network.	No		2009	Exempt	2009	\$ 200,000
ITS Architecture Advanced Transportation Management Systems	Phase IV. Consultant to prepare plans for communication and surveillance.	No		2009	Exempt	2009	\$ 300,000
Bass Pro Road	New Road on site with no through traffic.	No	Local	2005	Exempt	2009	\$ 2,600,000
Bass Road/Bass Pro Entrance	Signalize entrance. Add right & left turn lanes into site on Bass Road.	No	Local	2005	Exempt	2009	\$ 400,000
I-75/Bass Road Interchange	Signalize ramps. Add right turn lane to northbound exit ramp.	Yes	Local	2005	Exempt	2009	\$ 1,000,000
New Forsyth Road	Add turn lanes Bass Pro Entrance.	No	Local	2005	Exempt	2009	\$ 250,000
Telfair Street/Jeff Davis Street	Realign and add turn lanes from Felton Ave to South Downtown Connector	No	Local	2005	Exempt	2009	\$ 1,331,000
Tucker Road	Resurfacing, striping, standardization, turn lanes, multi-use path from Foster Road to Forsyth Road.	No	Local	2005	Exempt	2009	\$ 698,000
Wesleyan Drive	Intersection improvements at Tharpe Drive and Trojan Trail.	No	Local	2005	Exempt	2009	\$ 995,000

Table 6-1 continued

2009 Network - Projects under construction in 2007 - assumed completed by 2009 - are added to 2002 Network

Road/Project Name	Description/ Location	Regionally Significant Project	State Project ID #	Construction Scheduled GDOT/RIP	Air Quality Conformity Determination Requirements	Network Year	2030 LRTP Total Plan Cost
Houston Ave	Resurfacing, striping, turn lanes from Pio Nono Ave to Broadway. Project is in three phases.	No	Local	2005-2007	Exempt	2009	\$ 3,631,000
Bloomfield Road/Log Cabin Drive	Widen from 2 to 4 lanes with center turn lane from Rocky Creek Road to Eisenhower Parkway/US 80.	No	351120	2006	Non-Exempt	2009	\$ 6,805,000
Hartley Bridge/ I-75/I-475 Interchange	Reconstruct Interchange Phase II. Reconstruct I-475/ I-75 Interchange with Collector Distributor System.	Yes	311465	2006	Non-Exempt	2009	\$ 55,000,000
Industrial Highway	Add turn lanes from Avondale Mill Road to Walden Road.	Yes	0004455	2006	Exempt	2009	\$ 220,000
Riverside Drive/SR 87	Widen from 2 to 4 lanes with turn lanes from Northside Drive to Hall Road.	Yes	322000	2006	Non-Exempt	2009	\$ 7,250,000
Riverside Drive/SR 87	Reconstruct bridge at Sabbath Creek.	Yes	322005	2006	Non-Exempt	2009	\$ 1,000,000
Forest Hill Road/CR723	Widen from 2 to 3 lanes from Wimbish Road to Northside Drive.	No	351130	2007	Non-Exempt	2009	\$ 6,210,000
Forest Hill Road	Replace & Widen bridge @ Sabbath Creek.	No	351135	2007	Exempt	2009	\$ 370,000
I-16 & MLK Drive	Bridge replacement at MLK Drive. Widen MLK at I-16.	Yes	311005	2007	Non-Exempt	2009	\$ 20,356,000
Sardis Church Road/ I-75 Interchange	New Interchange includes approaches.	Yes	311910	2007	Non-Exempt	2009	\$ 10,516,000
Hero Operations		No	771307	2008	Exempt	2009	\$ 1,440,000

2015 Network - Projects under construction in 2013 - assumed completed by 2015 - are added to 2009 Network

Road/Project Name	Description/ Location	Regionally Significant Project	State Project ID #	Construction Scheduled GDOT/RIP	Air Quality Conformity Determination Requirements	Network Year	2030 LRTP Total Plan Cost
ITS Architecture Advanced Transportation Management Systems	Operations 2010 to 2015. State Traffic Engineering.	No		2010 -2015	Exempt	2015	\$ -
ITS Architecture Advanced Transportation Management Systems	Maintenance for 2010 to 2015.	No		2010 -2015	Exempt	2015	\$ 1,000,000
ITS Architecture Advanced Transportation Management Systems	Miscellaneous minor improvements from 2010 to 2015.	No		2010 -2015	Exempt	2015	\$ 4,000,000
ITS Architecture Advanced Transportation Management Systems	Phase IV. Implementation of plans for communication and surveillance.	No		2010	Exempt	2015	\$ 3,000,000
Forest Hill Road	Widen from 2 to 4 lanes from Vineville Ave/Forsyth Road to Wimbish Road.	No	350520	2008	Non-Exempt	2015	\$ 6,799,000
I-75	Widen from 4 to 6 lanes from Pierce Ave to Arkwright Road.	Yes	312090	2008	Non-Exempt	2015	\$ 49,913,000

Table 6-1 continued

2015 Network - Projects under construction in 2013 - assumed completed by 2015 - are added to 2009 Network

Road/Project Name	Description/ Location	Regionally Significant Project	State Project ID #	Construction Scheduled GDOT/RIP	Air Quality Conformity Determination Requirements	Network Year		
Jeffersonville Road	Widen from 2 to 4 lanes from Recreation Road to Fall Line Freeway/US80.	Yes	351080	2009	Non-Exempt	2015	\$	5,603,000
Jeffersonville Road	Replace bridge at Norfolk Southern Rail Road.	Yes	0000835	2009	Non-Exempt	2015	\$	2,260,000
Jeffersonville Road	Widen from 2 to 4 lanes from Emery Highway to Walnut Creek Bridge.	Yes	351090	2009	Non-Exempt	2015	\$	5,182,000
Jeffersonville Road	Widen & replace bridge at Walnut Creek.	Yes	351095	2009	Non-Exempt	2015	\$	2,500,000
Jeffersonville Road	Widen from 2 to 4 lanes from Walnut Creek to Recreation Road & widen Millerfield Road from 2 to 4 lanes from Jeffersonville Road to Bristol Drive.	Yes	342080	2009	Non-Exempt	2015	\$	5,370,000
Log Cabin Drive	Widen from 2 to 4 lanes from Mercer University Drive to Hollingsworth Road	No	351100	2009	Non-Exempt	2015	\$	9,082,000
Log Cabin Drive	Widen & replace bridge at Rocky Creek.	No	351105	2009	Non-Exempt	2015	\$	1,997,000
Northwest Parkway	Construction of a new roadway from Vineville Ave to Log Cabin Drive along Park Street with 4 lanes to new location west of Hollingsworth Road with 4 lanes, turn lanes, and a raised median.	No	351140	2009	Non-Exempt	2015	\$	11,273,000
Ocmulgee East Blvd/ SR 87	Provide additional turn lanes on SR 87/Ocmulgee Blvd & widen western part of Weaver Road to White Elk Springs Road.	Yes	333055	2009	Non-Exempt	2015	\$	5,313,000
Sardis Church Extension	Widen from 2 to 4 lanes from I-75 to SR 247. This includes existing Sardis Church Road from I-75 to east of Goodall Mill Road, new location from east of Goodall Mill Road to southern portion of Avondale Mill Road, and Avondale Mill Road from new location to SR 247.	No	0000566	2009	Non-Exempt	2015	\$	38,673,000
Tucker Road	Replace bridge at Rocky Creek.	No	331870	2009	Exempt	2015	\$	557,000
I-16/I-75 Interchange	Interchange modifications including collector distributor system.	Yes	311410	2010	Non-Exempt	2015	\$	97,230,000
Riverside Drive/SR 87	Reconstruct bridge at Beaverdam Creek.	Yes	333152	2012	Exempt	2015	\$	2,101,000

Table 6-1 continued

2015 Network - Projects under construction in 2013 - assumed completed by 2015 - are added to 2009 Network

Road/Project Name	Description/ Location	Regionally Significant Project	State Project ID #	Construction Scheduled GDOT/RIP	Air Quality Conformity Determination Requirements	Network Year		
Bass Road	Widen Bass Road from two to four through lanes from I-75 to New Forsyth Road. Add dual left turns from Bass Road to Bass Pro Entrance. Add dual right and left turns from Bass Pro Exit.	No		2013	Non-Exempt	2015	\$	1,800,000
Bass Road	Widen from two to four lanes from New Forsyth Road to Riverside Drive & Intersection Improvements.	No		2013	Non-Exempt	2015	\$	900,000
I-75/Riverside Drive Interchange	Signalize Interchange. Modify ramps to add turn lanes & storage. Run fiber optic.	Yes		2013	Exempt	2015	\$	150,000
I-75/Bass Road Interchange	Increase capacity of the interchange. Major problem is trips southbound on Bass turning left to go southbound on I-75. Add lanes to exit ramps for storage. Widen bridge over I-75 from 2 to 4 lanes with turn lanes.	Yes		2013	Non-Exempt	2015	\$	16,000,000
New Forsyth Road	Widen from two to four lanes with turn lanes as needed from Bass Road to Riverside Drive with major intersection reconfiguration with Bass Road, Wesleyan Drive, and Riverside Drive.	No		2013	Non-Exempt	2015	\$	2,000,000
Riverside Drive	I-75 to Bass Road. A safety project to add turn lanes.	Yes		2013	Exempt	2015	\$	2,000,000
Columbus Road	Replace bridge at Echeconnee Creek	No	0007029	Long Range	Exempt	2015	\$	347,000
Emery Highway	Jeffersonville Road to Ocmulgee Blvd. A safety project to add turn lanes.	Yes		Long Range	Exempt	2015	\$	1,500,000
Emery Highway	Reconstruct bridges at Walnut Creek.	Yes	333150	Long Range	Exempt	2015	\$	2,225,000
Hawkinsville Road SR 247	Widen from 4 to 6 lanes from Watson Blvd to Houston Road/US 41. This includes major improvements to Liberty Church Road intersection.	Yes	322960	Long Range	Non-Exempt	2015	\$	11,826,612
Hawkinsville Road SR 247	Reconstruct & widen bridge at Norfolk Southern RR.	Yes	323045	Long Range	Non-Exempt	2015	\$	1,114,000
Hawkinsville Road SR 247	Reconstruct & widen bridge at Echeconnee Creek.	Yes	0003089	Long Range	Non-Exempt	2015	\$	444,000
Houston Road	Widen from 2 to 4 lanes from north of the Sardis Church Road Extension (approximately South Walden Road) to existing Sardis Church Road/ North Walden Road.	No	0006689	Long Range	Non-Exempt	2015	\$	1,950,000
I-16	Widen from 4 to 6 lanes from SR 11 to SR 87 with collector/distributor system as needed.	Yes	311000	Long Range	Non-Exempt	2015	\$	50,465,000
I-75	Widen from 4 to 6 lanes from Pierce Ave to I-16.	Yes	311400	Long Range	Non-Exempt	2015	\$	18,196,000

Table 6-1 continued

2015 Network - Projects under construction in 2013 - assumed completed by 2015 - are added to 2009 Network

Road/Project Name	Description/ Location	Regionally Significant Project	State Project ID #	Construction Scheduled GDOT/RIP	Air Quality Conformity Determination Requirements	Network Year		
Peake Road Bridge Replacement	Replace Bridge at Rocky Creek	No	0006659	Long Range	Exempt	2015	\$	1,182,000
South Downtown Connector	Telfair/First Street from Richard Penneman Blvd to Oglethorpe Street	No	350595	Long Range	Non-Exempt	2015	\$	2,367,000
Thomaston Road	Replace bridge at Tobesofkee Creek	Yes	0007024	Long Range	Exempt	2015	\$	233,000
Western Loop	Bass Road/Foster Road/Tucker/Heath Road from I-75 to Fulton Mill Road. Bridge replacement on Tucker Road @ Rocky Creek. Concept is not finalized.	No	371430	Long Range	Non-Exempt	2015	\$	4,435,000
Western Loop A	Bass Road widened from 2 to 4 lanes from Zebulon Road tol-75.	No	371430	Long Range	Non-Exempt	2015		
Western Loop B	Foster/Tucker Roads widened from 2 to 3 lanes.	No	371430	Long Range	Non-Exempt	2015		
Western Loop C	Heath Road standardize lanes with turn lanes as needed.	No	371430	Long Range	Non-Exempt	2015		

2025 Network - Projects under construction in 2023 - assumed completed by 2025 - are added to 2015 Network

Road/Project Name	Description/ Location	Regionally Significant Project	State Project ID #	Construction Scheduled GDOT/RIP	Air Quality Conformity Determination Requirements	Network Year	2030 LRTP Total Plan Cost
ITS Architecture Advanced Transportation Management Systems	Operations 2016 to 2025. State Traffic Engineering.	No		2026 -2030	Exempt	2009	\$ -
ITS Architecture Advanced Transportation Management Systems	Maintenance for 2016 to 2025.	No	323015	2026 -2030	Exempt	2009	\$ 1,800,000
ITS Architecture Advanced Transportation Management Systems	Miscellaneous minor improvements from 2016 to 2025.	No		2026 -2030	Exempt	2009	\$ 7,200,000
Edgewood Ave	Widen from two to four lanes with turn lanes as needed from Broadway to Eisenhower Extension.	No	Local	Long Range	Non-Exempt	2025	\$ 1,936,000
Eisenhower Parkway	Extension (SR540) on new location with 4 lanes from I-16 to US 80/Emery Highway.	Yes	362695	Long Range	Non-Exempt	2025	\$ 35,764,000
Eisenhower Parkway	Extension (SR 540) on new location with 4 lanes from Lower Boundary Street to I-16.	Yes	363630	Long Range	Non-Exempt	2025	\$ 44,060,000
Eisenhower Parkway Extension/I-16 Interchange.	Construct Interchange at I-16 and Eisenhower Parkway Extension.	Yes	310980	Long Range	Non-Exempt	2025	\$ 33,584,000

Table 6-1 continued

2025 Network - Projects under construction in 2023 - assumed completed by 2025 - are added to 2015 Network

Road/Project Name	Description/ Location	Regionally Significant Project	State Project ID #	Construction Scheduled GDOT/RIP	Air Quality Conformity Determination Requirements	Network Year	2030 LRTP Total Plan Cost
Forsyth/Poplar Connector	Poplar Street & Lower Poplar from MLK to Eisenhower Extension.	No	Local	Long Range	Exempt	2025	\$ 2,037,000
Houston Road	Standardize lanes from south of the Sardis Church Road Extension (South Walden Road) to US 41 in Houston County.	No	331750	Long Range	Exempt	2025	\$ 305,280
I-75/Hardeman Ave/ Forsyth Street/Gerogia Ave	Modify Interchange as needed. Widen from 3 to 4 lanes across bridges. Add storage lanes as needed. Modify approaches. Improve operations.	Yes	311560	Long Range	Non-Exempt	2025	\$ 3,579,000
I-16 Call Boxes	Install call boxex from Macon to Savannah.	Yes	811030	Long Range	Exempt	2025	\$ 72,600
I-16	Reconstruct bridge to widen shoulders at Walnut Creek.	Yes	311130	Long Range	Exempt	2025	\$ 4,616,000
Ocmulgee East Blvd/ SR 87	Intersection improvements at I-16 & Joe Tamplin Blvd.	Yes	333050	Long Range	Exempt	2025	\$ 579,000
Ocumulee East Blvd/SR 87/US 23	Widen from 2 to 4 lanes from I-16 to SR 96 in Twiggs County.	Yes	0000813	Long Range	Non-Exempt	2025	\$ 11,004,640
Pio Nono Ave/ SR247/US41	Widen from 4 to 6 lanes from I-75 to Broadway.	Yes	350560	Long Range	Non-Exempt	2025	\$ 5,882,000
Second Street & RR Bridge	Replace existing bridge.	No	0002225		Exempt	2025	\$ 3,390,000
Vineville Ave	Widen from three lanes to four from Pio Nono Ave to Forest Hill Road.	Yes	363500	Long Range	Non-Exempt	2025	\$ 13,792,000

2030 Network - Projects under construction in 2028 - assumed completed by 2030 - are added to 2025 Network

Road/Project Name	Description/ Location	Regionally Significant Project	State Project ID #	Construction Scheduled GDOT/RIP	Air Quality Conformity Determination Requirements	Network Year	2030 LRTP Total Plan Cost
ITS Architecture Advanced Transportation Management Systems	Operations 2026 to 2030. State Traffic Engineering.	No		Long Range	Exempt	2030	\$ -
ITS Architecture Advanced Transportation Management Systems	Maintenance for 2026 - 2030.	No		Long Range	Exempt	2030	\$ 800,000
ITS Architecture Advanced Transportation Management Systems	Miscellaneous minor improvements from 2026 to 2030.	No		Long Range	Exempt	2030	\$ 3,200,000
Areawide Intersection Improvements		No	LRTP	Long Range	Exempt	2030	\$ 1,800,000
Bloomfield Road/Bloomfield Drive	Intersection improvement at Eisenhower Parkway.	No	LRTP	Long Range	Exempt	2030	\$ 1,500,000
Forsyth Road SR 19	Add northbound passing lane from Colaparchee Road to Monroe County Line.	Yes	332230	Long Range	Non-Exempt	2025	\$ 3,088,000

Table 6-1 continued

2030 Network - Projects under construction in 2028 - assumed completed by 2030 - are added to 2025 Network

Road/Project Name	Description/ Location	Regionally Significant Project	State Project ID #	Construction Scheduled GDOT/RIP	Air Quality Conformity Determination Requirements	Network Year	2030 LRTP Total Plan Cost
Gray Highway/ Second Street	Intersection improvements.	Yes	L RTP	Long Range	Exempt	2030	\$ 1,500,000
I-75	Widen from six to eight lanes from Sardis Church Road to SR 247 Connector in Houston County	Yes	L RTP	Long Range	Non-Exempt	2030	\$ 16,000,000
I-75/Eisenhower	Reconfigure Interchange.	Yes	L RTP	Long Range	Non-Exempt	2030	\$ 7,000,000
I-75/Mercer University Blvd.	Reconfigure Interchange.	Yes	L RTP	Long Range	Non-Exempt	2030	\$ 7,000,000
Joycliff Road Extension	Build new two lane road (R-O-W four lanes) from SR 49 to SR 57.	No	L RTP	Long Range	Non-Exempt	2030	\$ 6,000,000
Milledgeville Road SR 49	Widen from two to four lanes from Griswoldville Road to SR 18.	Yes	L RTP	Long Range	Non-Exempt	2030	\$ 19,000,000
Zebulon Road	Widen Zebulon Road from Lake Wildwood Entrance to Lamar Road from two to four lanes. Add turn lanes at Lamar Road and Zebulon Road.	No		Long Range	Non-Exempt	2030	\$ 1,200,000

Table 6-1 continued

Proposed Studies for 2030 MATS Plan

Interstate Facilities:	a) Storage and merging needs assessment for Interstate ramps	\$200,000
	b) I-75/Pio Nono/Rocky Creek Interchanges	\$200,000
US129/SR247:	from Warner Robins (Houston) to Rocky Creek (Bibb)	\$100,000
US129/SR11/SR22:	from I-16 northward to a yet to be determined terminus in Jones County	\$100,000
US80/Eisenhower Park	US80 from Fulton Mill east to Broadway	\$50,000
SR74/Mercer University	Mosley Dixon east to I-75	\$50,000
Avondale Mill Road/Sgoda Road Extension Study:	US129/SR247 to I-16 at Sgoda Interchange	\$300,000
Guy Paine Road:	US129/Pio Nono to Broadway	\$20,000
Vineville Ave/Roff Ave:	Alternative Study	\$50,000
US 80/Chambers Road Study	of US80 and Chambers subarea between I-475 and Log Cabin	\$30,000
		\$1,100,000

L RTP Studies \$ 2,200,000

Lump Sum

Interchange Operational Improvements	\$	600,000
Interstate Maintenance - Pavment & Bridge	\$	908,667
National Highway System - Pavement & Lighting	\$	526,667
STP Safety Funds	\$	909,333
STP Enhancement Funds	\$	858,667
Recreational Trails	\$	24,000
STP Q24	\$	2,116,667
STP Q26 & Q27 Railroad Safety	\$	116,000
Consultant Services	\$	255,000
Construction Management	\$	205,000
Annual Lump Sum Total	\$	6,520,000

Table 6-1 continued

Summary of Expenses

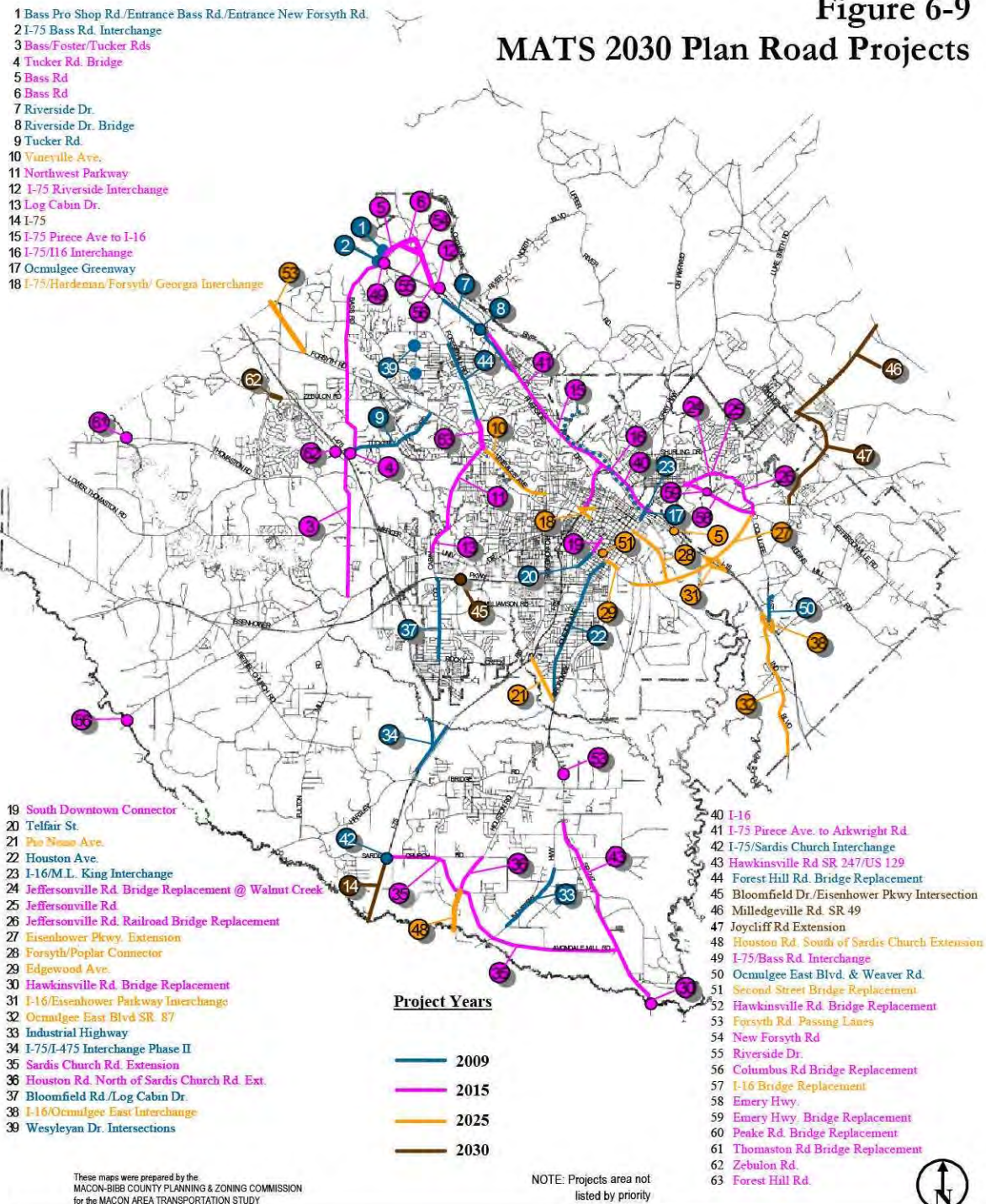
2009 ITS Architecture	\$	1,560,000
2009 Lump Sum	\$	19,560,000
2009 LRTP Projects	\$	120,072,000
2009 Total Network Costs	\$	141,192,000
2015 ITS Architecture	\$	8,000,000
2015 Lump Sum	\$	39,120,000
2015 LRTP Projects	\$	362,987,612
2015 Total Network Costs	\$	410,107,612
2025 ITS Architecture	\$	9,000,000
2025 Lump Sum	\$	65,200,000
2025 LRTP Projects	\$	160,601,520
2025 Total Network Costs	\$	234,801,520
2030 ITS Architecture	\$	4,000,000
2030 Lump Sum	\$	32,600,000
2030 LRTP Projects	\$	64,088,000
2030 Total Network Costs	\$	100,688,000

2030 LRTP Subtotals

ITS Architecture	\$	22,560,000
2030 LRTP Projects	\$	707,749,132
Lump Sums for 2030 LRTP	\$	156,480,000
2030 LRTP Studies	\$	2,200,000

2030 LRTP Grand Total	\$	888,989,132
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Figure 6-9
MATS 2030 Plan Road Projects



These maps were prepared by the
MACON-BIBB COUNTY PLANNING & ZONING COMMISSION
for the MACON AREA TRANSPORTATION STUDY



Parking

In general, there is not a parking problem in downtown Macon. There is a sufficient number of parking spaces, however the location of the spaces don't always meet the needs of the users.. The biggest parking problem facing the community in the downtown area is the amount of parking around the Medical Center of Central Georgia. A good bit of on-street parking was lost when parking was removed from First Street to facilitate traffic flow. First Street now has two through lanes with a center turn lane. Additional parking garages have come on line since the removal of the First Street parking. While parking is an issue around the Medical Center, it is being addressed.

The Medical Center through the years has continued to work to address these parking needs. Currently, the Medical Center provides 4,833 off street parking spaces on surface lots and in parking garages. One of the oldest parking garages at the Medical Center has recently been torn down and is being replace with a much larger parking facility.

Existing parking structures are shown on Figure 6-10.

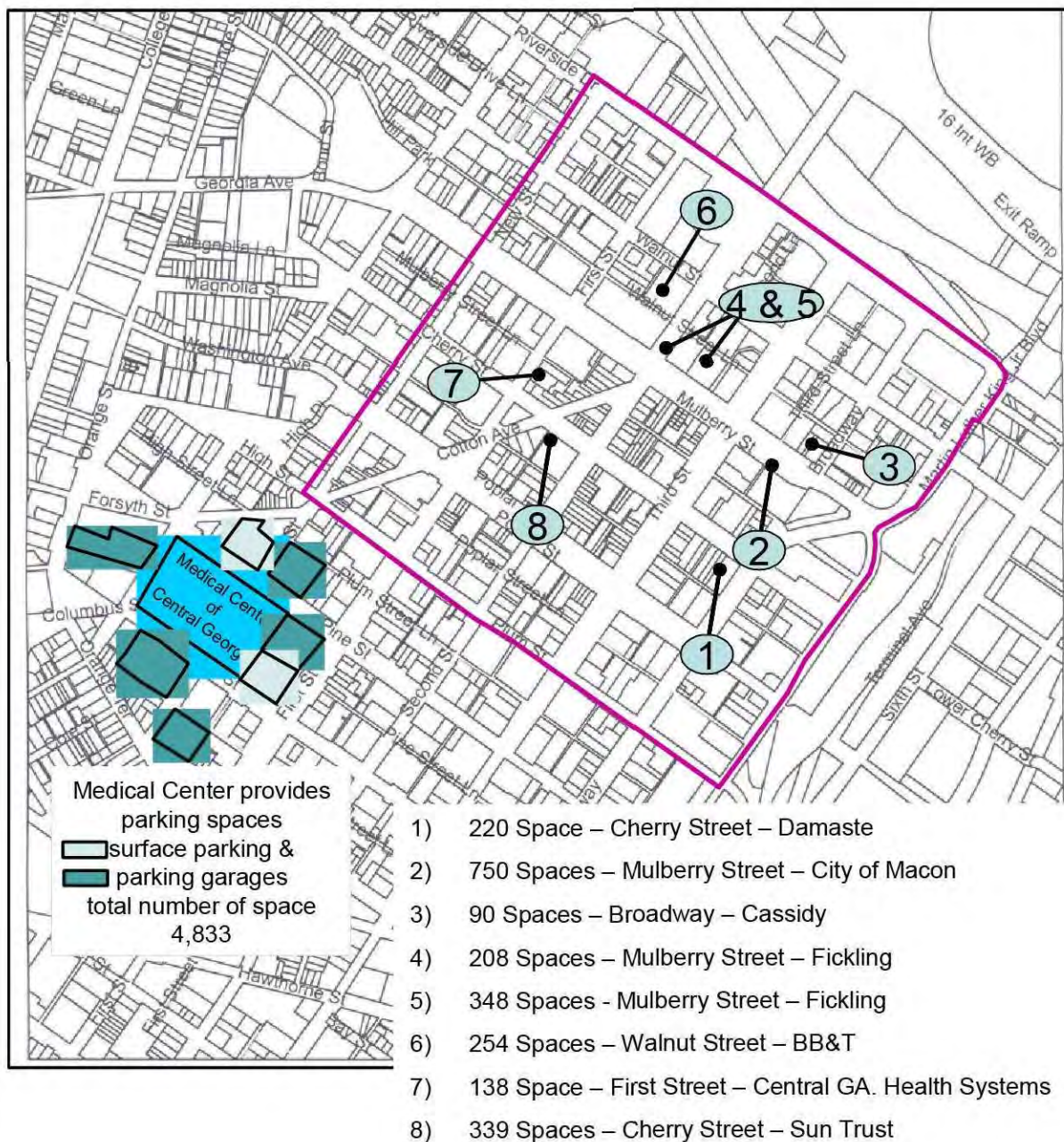
Over the years a number of parking studies have been done for the downtown. The following areas in the downtown have need for additional parking facilities.

1. Bibb County Courthouse (Mulberry & Second Streets) has a shortage of parking in the immediate vicinity during the day and for special evening events at the Grand Opera House. This is the area in the downtown that has the most critical need for additional parking.
2. City Hall/City Auditorium (Poplar & First Streets) has a shortage of parking for those doing business with the City during the day and for special evening events at the Macon Auditorium.
3. Terminal Station Area (Cherry & Fifth Streets) has limited parking in the general area.

While these parking facilities have been discussed on numerous occasions, there is no great impetus to build any of these facilities at this time. A parking garage in the downtown has not been high on Bibb County's priority list since being defeated a number of years ago in a sales tax referendum. The City of Macon is facing serious financial constraints so that they are not likely too take on such projects in the immediate or near future.

Figure 6-10

CBD PARKING STUDY AREA



Public Transportation

The Macon Transit Authority is responsible for providing transit service for Macon and Bibb County. The Macon Transit Authority went into operation in 1981 when the City of Macon transferred the entire operation of the transit system to them. Currently the city and county provide funding for operating and capital costs. Overall, federal, state, and local funding as well as system revenues cover the operating and capital costs of the Transit Authority. The Macon Transit Authority first applied for federal assistance in FY 2000.

The public transportation section is divided into two parts. First, a review of existing routes, route changes and ADA service is presented as well as a comparison of the Macon Transit Authority's performance to other transit systems in the State. Secondly, a capital plan along with a strategy to finance the plan is provided. In summary, this document should serve as a planning tool for long term capital improvements and operations.

Description of Service by Route

This section provides a discussion of fixed transit routes and ADA service. In addition, a peer analysis is made from a comparison of similar systems in Georgia.

Fixed Routes

Currently, the Macon Transit Authority operates nine fixed bus routes in Bibb County. In addition, there is downtown trolley service that is called Mitsi. The service hours for the bus routes are from 5:20 a.m. to 11:00 p.m. Monday - Saturday. Last year, the Transit Authority buses traveled a total of 1,121,833 vehicle miles and were in operation a total of 88,144 hours.

The main transfer station for the transit system recently moved from Poplar Street to the Terminal Station located at Cherry Street. The Transit Authority has also started selling swipe card passes at the Terminal Station for the public. A general description of each route is included below.

Vineville Route

The service area for this route includes Washington Ave., Hardeman Ave., Vineville Ave.,

and Forsyth Rd. In addition, portions of Forest Hill Rd. and Ridge Ave. are included in this route. The Transit Authority operates only one bus for this route. This transit route includes service to Northside Hospital.

Bellevue-Log Cabin Route

This route includes service to Zebulon and Peake Roads. In addition, the route also serves Log Cabin Rd., Napier Ave., and Hollingsworth Rd. The Transit Authority operates two buses along this route.

West Macon

This route serves the areas along Montpelier Ave., Columbus Road, and Mercer University Drive. The service hours for this route have been extended to 11:00 p.m. There are two buses that operate on this route.

North Highlands

Service is provided to various sites on Gray and Emery Hwy. including Baconsfield Shopping Center and the Health Department. The service hours for this route have been extended to 11:00 p.m.

Ocmulgee

This bus operates along Riverside Dr., Pierce Ave., Ingleside Ave., and Northside Drive. The route extends to the Kroger Shopping Center on Tom Hill Sr. Blvd.

Westgate – Bloomfield

The Transit Authority operates only one bus along this route which consists of Eisenhower Pkwy., Pio Nono Ave., Bloomfield Rd., and Rocky Creek Road. Transit service for this route is available until 11:00 p.m.

Macon Mall – Chambers Road

This route offers service to Macon Mall, Eisenhower Crossing Shopping Center, and

Macon Tech. The route consists of Telfair Street, Pio Nono Ave., and Eisenhower Pkwy. The Transit Authority operates three buses along this route.

East Macon – Kings Park

The East Macon – Kings Park route provides transportation to such sites as Coliseum Hospital and Northeast Plaza Shopping Center. The service area for this route includes Coliseum Drive, Shurling Drive, Old Clinton Rd., and Gray Highway.

Houston – Peach Orchard

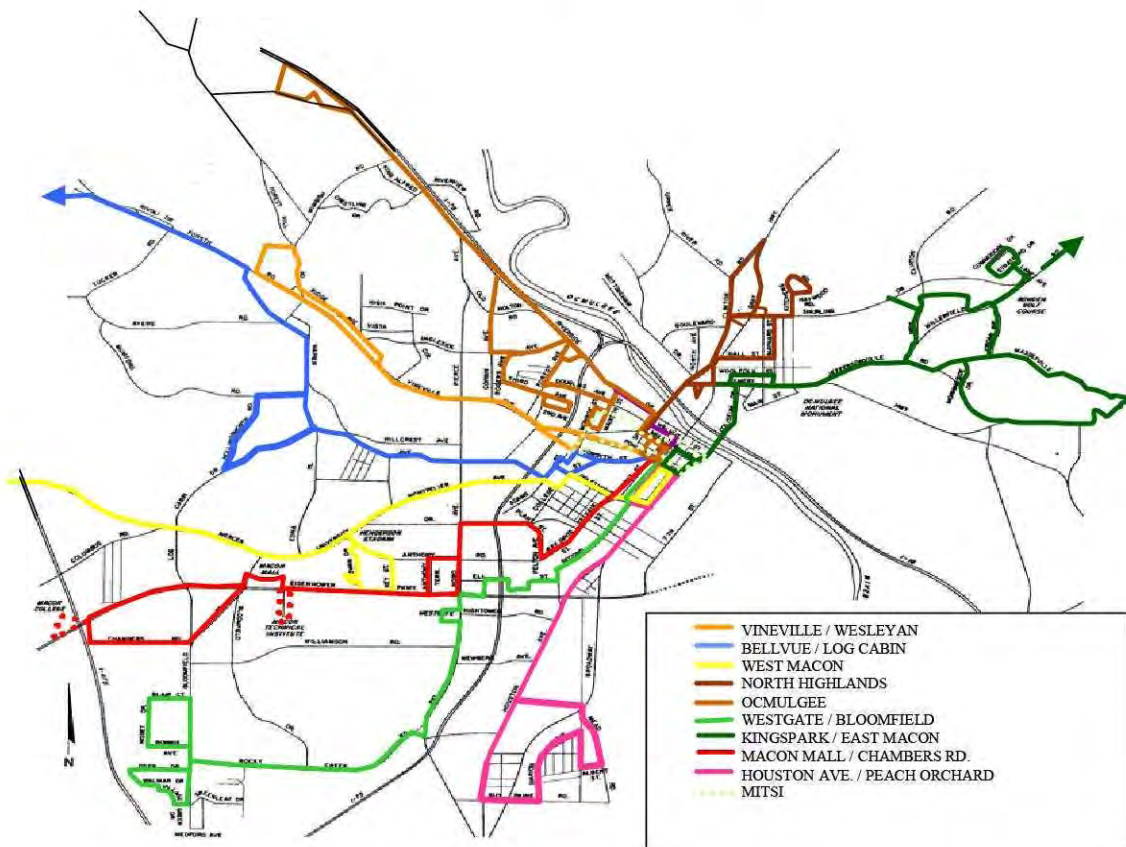
This route serves the Houston Ave. and Peach Orchard area of the city. The Peach Orchard area consists of Guy Paine Rd., Marion Ave., Mead Rd., Carlos Dr., and a portion of Broadway. This route is served by two buses. (See Transit Map on the following page)

Transit Service in Jones County

There is also transit service available in Jones County as part of the Section 5311 program. The southern portion of Jones County is part of the MATS area and transit service is provided on a demand response basis. The system operates three vans with two of the vans being equipped with a wheelchair lift. The service is not targeted towards a specific group but is available to the elderly and handicapped as well as others. Service is available in this program Monday thru Friday.

Figure 6– 11
Macon Transit Authority
Bus Routes

MACON TRANSIT AUTHORITY
BUS ROUTES



ADA Description of Service

The Transit Authority operates a fleet of five vans in conjunction with the Older Americans Council as part of the Americans with Disabilities Act (ADA). The ADA requires that local transit operators provide paratransit service for the disabled. This service is also available for individuals who cannot use the local transit system because of a disability. The service is available Monday – Saturday. (See Table 6-2)

**TABLE 6-2
ADA SERVICE STATISTICS**

<u><i>SERVICE CHARACTERISTIC</i></u>	<u><i>WEEKDAY</i></u>	<u><i>SATURDAY</i></u>	<u><i>SUNDAY</i></u>
<i>SPAN OF SERVICE</i>	5 am – 11 pm	5 am – 11 pm	CLOSED
<i>DAILY VAN Hrs.</i>	90 hours	54 hours	CLOSED
<i>DAILY VAN MILES</i>	3,000 miles/day	1,400 miles	CLOSED
<i>DAILY RIDERSHIP</i>	100 clients/day or more	75 clients	CLOSED

SOURCE: OLDER AMERICANS COUNCIL

Comparison to Other Transit Providers In Georgia

This section provides an analysis of how the Macon Transit Authority (MTA) ranks among other comparable transit companies in Georgia. The analysis is broken down into five performance characteristics; namely, operating ratio, expense per mile, passenger trips per revenue mile, passengers per revenue vehicle hour and consumption per revenue mile (see Table 6-3).

Operating Ratio

Operating ratio is the ratio of operating expenses to operating revenue. The average operating ratio for comparable systems in Georgia was 3.48 for FY 2002. Based on these same figures, MTA had a ratio of 3.50 which is slightly below the state average.

**TABLE 6-3
PERFORMANCE CHARACTERISTICS**

SERVICE AREA	OPERATING RATIO	EXPENSE-PER MILE	PASSENGER-TRIPS / REVENUE	PASSENGERS/REVENUE VE-HICLE HOUR	CONSUMPTION-PER REVENUE MILE
ALBANY	6.12	\$ 4.61	1.21	18.41	3.12 GAL.
ATHENS	2.03	\$ 2.51	1.63	21.40	3.10 GAL.
AUGUSTA	3.55	\$ 3.23	1.42	13.28	5.23 GAL.
COBB CO.	3.78	\$ 4.68	1.42	23.56	3.16 GAL.
COLUMBUS	3.43	\$ 2.75	.81	10.91	4.26 GAL.
MACON	3.50	\$ 2.75	1.23	15.60	4.02 GAL.
ROME	3.06	\$ 3.50	1.60	26.95	5.79 GAL.
SAVANNAH	3.11	\$ 3.66	1.50	20.74	3.62 GAL.
AVERAGE	3.48	\$ 3.70	1.29	18.21	3.52 GAL.

Source: Georgia Department of Transportation, Office of Intermodal Programs, FY 2003 Georgia Transit fact Book.

Expense Per Mile

The expense per mile in the state averaged \$3.70. MTA had expenses less than the state average and was the second best out of the eight transit companies. Athens had the best expense per mile ratio among the transit systems analyzed.

Passenger Trips per Revenue Mile

Revenue miles are the total miles traveled by revenue vehicles while in revenue service. This excludes miles traveled to and from storage facilities and other deadhead travel. During FY 2002, the average trip per revenue mile was 1.29 miles. The MTA ranked third out of the eight studied transit systems in this category.

Passengers per Revenue Vehicle Hour

Revenue vehicle hours are the total number hours that a vehicle is in revenue service. This excludes hours consumed while traveling to and from storage facilities and during other deadhead travel. Based on the figures reflected in Table 6-3, MTA was below the state average in this category.

Consumption per Revenue Mile

MTA has a fuel consumption rate of 4.02 gallons per revenue mile. This was more than the state average of 3.52 gallons per revenue mile. The MTA should monitor these trends to evaluate the efficiency of the transit system. There is always a need to be current on evaluating service. Accordingly, this analysis should be performed annually.

Transit Facilities Plan

This section provides a long term facilities plan for the MTA. The first part of this section discusses transit ridership; the second develops a bus replacement schedule; the third discusses possible service improvements; and the fourth establishes a capital plan. The final section formulates a financial plan.

Transit Ridership

According to Transit Authority projections, the weekly transit ridership will increase 43% by FY 2008. This increase will occur as a result of increased service. (See Table 6-4 below)

TABLE 6-4 PROJECTED TRANSIT WEEKLY RIDERSHIP			
	FY 2003	FY 2008	PERCENT CHANGE
BUS SERVICE	10,000	14,000	
FIXED ROUTE VAN SERVICE	220	575	
TOTAL	10,220	14,575	43 %

SOURCE: MACON TRANSIT AUTHORITY

In terms of ridership characteristics, the majority of transit users are African Americans in the 25-61 year old age group. Most of these users do not have an automobile and use the transit system for such purposes as travel to work, shopping, and the doctor's office.

Bus Replacement Schedule

The Bus Replacement Schedule for FY 2005 – 2030 may be found in Table 6-5. The number of buses in the active fleet will average 26 vehicles for the next 10 years. However, in 2016 the total amount of vehicles will increase to 30 vehicles in anticipation of increased ridership. In addition, the number of buses in peak usage will be 18 vehicles until the year 2016 when this amount will increase to 21 vehicles. The Transit Authority has instituted a fleet management plan in order to decrease the overall spare ratio. Subsequently, the spare ratio will be less than 45% each year for the Transit Authority.

**Table 6-5
BUS REPLACEMENT SCHEDULE FY 2005-2030**

F Y	2 0 0 5	2 0 0 6	2 0 0 7	2 0 0 8	2 0 0 9	2 0 1 0	2 0 1 1	2 0 1 2	2 0 1 3	2 0 1 4	2 0 1 5	2 0 1 6	2 0 1 7	2 0 1 8	2 0 1 9	2 0 2 0	2 0 2 1	2 0 2 2	2 0 2 3	2 0 2 4	2 0 2 5	2 0 2 6	2 0 2 7	2 0 2 8	2 0 2 9	2 0 3 0									
Model	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Veh.	26	26	26	26	26	26	26	26	26	26	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Peak Usage	18	18	18	18	18	18	18	18	18	18	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Spares	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Spare Ratio	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%	43%
Veh. Retired	3	3	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Veh. Purch.	3	3	3	3	3	3	3	3	3	3	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Transit Improvements

The Macon Transit Authority plans to place kiosks at various locations in order to provide the public with schedule and bus information. The initial kiosks will be located at the terminal station and the Macon Mall in 2005. In the future, the Transit Authority will be moving their office from the present location on Riverside Drive to the Terminal Station. In addition, the Terminal Station will eventually be renovated for use as an intermodal facility. However, the date for the relocation to the Terminal Station and the renovation of the facility has not been set. Funding for the renovation of the Terminal Station is available through the FTA Section 5309 program. The City of Macon is currently preparing a development plan for the Terminal Station in order to qualify for funding under this program. The Transit Authority plans to continue to provide the same level of efficient service as it has in the past.

The Transit Authority is examining the possibility of expanding service to Sundays as well as using more buses on existing routes in order to increase service. In addition, a possible new route is being studied that would involve a North – South express bus from Tom Hill Rd. to Rocky Creek Rd. However, these improvements all depend on the availability of adequate funding in the future.

In terms of future service, the City of Macon has been designated to receive funding under the Job Access and Reverse Commute (JARC) Program. This program would provide transportation service for low income persons in order to access jobs in the area. The JARC study that was completed recommended additional transit services in various areas. First of all, the study recommended demand response service to both the Ocmulgee Industrial Park and Robins Air Force Base on a daily basis. The study also recommended that the Transit Authority create a new daily route to southwest Macon as well as expand existing service to include late night and Sunday service. The total cost of this additional service is estimated to be \$1,167,770. Funding for the JARC program is available under the Section 3037 program but one half of the total amount must be funded through local sources.

Capital Plan

During the time period from FY 2005-2030, the Transit Authority plans to purchase a number of capital items. These items include a total of eighty passenger buses that will involve the purchase of three buses each year except in 2016 when a total of five buses will be purchased. In addition there will be a total of twenty-three paratransit vans, six administrative vehicles, and five service vehicles purchased from FY 2005 thru FY 2030. The passenger buses will be acquired through the FTA Section 5307 and Section 5309 grant programs. However, the other vehicles will be purchased through the FTA Section 5307 grant program only. The Capital Improvement Schedule can be found in Table 6-6 on the following page.

Financial Plan

The projected operating revenues and expenses for the Macon Transit Authority (MTA) are located in Table 6-7. Subsequently, the enclosed Financial Plan for FY 2005-2030 in Table 6-8 demonstrates the various funding sources that are utilized to run the MTA. The FTA Section 5307 program will fund both capital and operating expenses. This grant program will fund 80% of capital expenses and the remainder can be applied to operating costs. In addition, the FTA Section 5309 program will fund a portion of the capital items that will be purchased in the future. As a result, the local funding share required for capital costs will not increase substantially in the future.

Conclusion

The Macon Transit Authority is dedicated to providing efficient and quality service to the public. As the Macon area grows, the ridership for the Transit Authority will also increase. The Transit Authority will continue to determine what improvements are needed in order to serve the increased demand for public transportation.

TABLE 6-6
Capital Improvement Schedule 2005-2030

	FY 2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Item													
Lease Vehicles	\$116,124	116,124	116,124	116,124	116,124	116,124	116,124						
Purchase Passenger Buses	\$870,000	870,000	870,000	855,000	855,000	855,000	855,000	855,000	855,000	855,000	855,000	1,425,000	855,000
Purchase Paratransit Vans		\$40,000	40,000	40,000			40,000	40,000	40,000	40,000	40,000	40,000	40,000
Purchase Admin. Vehicles	\$25,000		\$25,000				25,000					25,000	
Purchase Service Vehicles	\$40,000						40,000					40,000	
Total	\$1,051,124	1,026,124	1,051,124	1,011,124	971,124	971,124	1,076,124	895,000	895,000	895,000	895,000	1,530,000	895,000

(Continued)

	FY 2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Item													
Purchase Passenger Buses	\$855,000	855,000	855,000	855,000	855,000	855,000	855,000	855,000	855,000	855,000	855,000	855,000	855,000
Purchase Paratransit Vans	\$40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000
Purchase Administrative Vehicles				\$25,000					25,000				
Purchase Service Vehicles				\$40,000					40,000				
Total	\$895,000	895,000	895,000	960,000	895,000	895,000	895,000	895,000	960,000	895,000	895,000	895,000	895,000

TABLE 6-7
PROJECTED OPERATING EXPENSES AND SYSTEM REVENUES
FY 2005-2030

YEAR	OPERATING EXPENSE	SYSTEM REVENUE
2005	\$3,674,549	\$1,015,021
2006	\$3,748,040	\$1,025,171
2007	\$3,823,001	\$1,035,423
2008	\$3,899,461	\$1,045,771
2009	\$3,977,450	\$1,056,235
2010	\$4,056,999	\$1,066,797
2011	\$4,138,139	\$1,077,465
2012	\$4,220,902	\$1,088,240
2013	\$4,305,320	\$1,099,122
2014	\$4,391,426	\$1,110,113
2015	\$4,479,255	\$1,121,214
2016	\$4,568,840	\$1,132,426
2017	\$4,660,217	\$1,143,751
2018	\$4,753,421	\$1,155,188
2019	\$4,848,489	\$1,166,740
2020	\$4,945,459	\$1,178,408
2021	\$5,044,368	\$1,190,192
2022	\$5,145,255	\$1,202,094
2023	\$5,248,160	\$1,214,114
2024	\$5,353,123	\$1,226,256
2025	\$5,460,185	\$1,238,518
2026	\$5,569,389	\$1,250,903
2027	\$5,680,777	\$1,263,412
2028	\$5,794,393	\$1,276,046
2029	\$5,910,281	\$1,288,807
2030	<u>\$6,028,487</u>	<u>\$1,301,695</u>
TOTAL	\$123,725,386	\$29,969,122

TABLE 6-8
FINANCIAL PLAN 2005-2030

OPERATIONAL COST PLAN

Projected Revenue	\$29,969,122
Less: Operating Expenses	<u>\$123,725,386</u>
Operating Deficit	\$93,756,264

Source of funding to cover operating deficit:

1. Federal Section 5307 Operating Grant	\$46,878,132
2. Local Operating Funds	\$46,878,132

CAPITAL PURCHASE COST PLAN

Estimated Cost of Capital Items:	\$24,927,868
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Source of funding to cover capital items:

1. Section 5307 Capital Grant Program	
a. Federal Section 5307 Capital Grant (80%)	\$13,558,294
b. State Match for Sec. 5307 Capital Grant (10%)	\$ 1,694,787
c. Local Match for Sec. 5307 Capital Grant (10%)	\$ 1,694,787
2. Section 5309 Capital Grant Program	
a. Federal Section 5309 Capital Grant (80%)	\$ 6,384,000
b. State Match for Sec. 5309 Capital Grant (10%)	\$ 798,000
c. Local Match for Sec. 5309 Capital Grant (10%)	\$ 798,000

Total amount of funding needed to purchase capital items	\$24,927,868
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Amount of capital items not funded:	- 0 -
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Bicycle and Pedestrian Facilities

In many parts of the country, bikeways, sidewalks, and other pedestrian and recreational facilities have become integral parts of a holistic strategy to improve quality of life for neighborhoods and the communities that use them. The call for more walkable, livable, and accessible communities has seen bicycling and walking emerge as an indicator of the health and well being of a community. Accommodations for bicycling, walking, and other recreational facilities should be a routine part of the planning, design, construction, operation, and maintenance of transportation facilities in the Macon Area Transportation Study (MATS) area and not as a last afterthought or “icing on the cake”.

This portion of the Long Range Transportation plan draws from the Macon-Bibb County Bikeways and Pedestrian Plan. The plan was meant to be primarily informational to serve as a first step in a comprehensive endeavor to address bicycle and pedestrian issues in the MATS area. A more in depth implementation strategy will be forth coming in the near future. The plan completed in FY 03 presented proposed routes that were selected from a citizens committee and the plan also discussed improvements along current routes. The pedestrian element identified pedestrian needs such as sidewalks along transit routes throughout the community that are operated by the Macon Transit Authority.

The proposed bicycle routes in the plan were chosen based upon various criteria that took into consideration the complexity that would be involved into bringing the routes to fruition. Therefore, the bicycle element was driven by two objectives. The first objective was to identify existing routes and new routes that could be improved by adding striping to accommodate a bike lane and/or signage within the existing pavement width without requiring a major road project. The second objective was to identify new routes that would require new construction and coordinate the construction of these routes with Transportation Improvement Program (TIP) projects.

Lastly, the Visual Preference Survey (VPS) provided invaluable community input on the importance of bicycle and pedestrian facilities in Bibb County. The VPS was most useful in articulating the community’s desires as they relate to bicycle and pedestrian facilities.

Inventory of Existing Conditions

Bikeways

The MATS area currently contains a total of six designated bikeways. One of the bikeways, the Ocmulgee Heritage Greenway, is also a multi-use path. The information in this section will provide a general description of the routes and the trip generators that are served by each route.

Table 6-9
Existing Designated Bicycle Routes

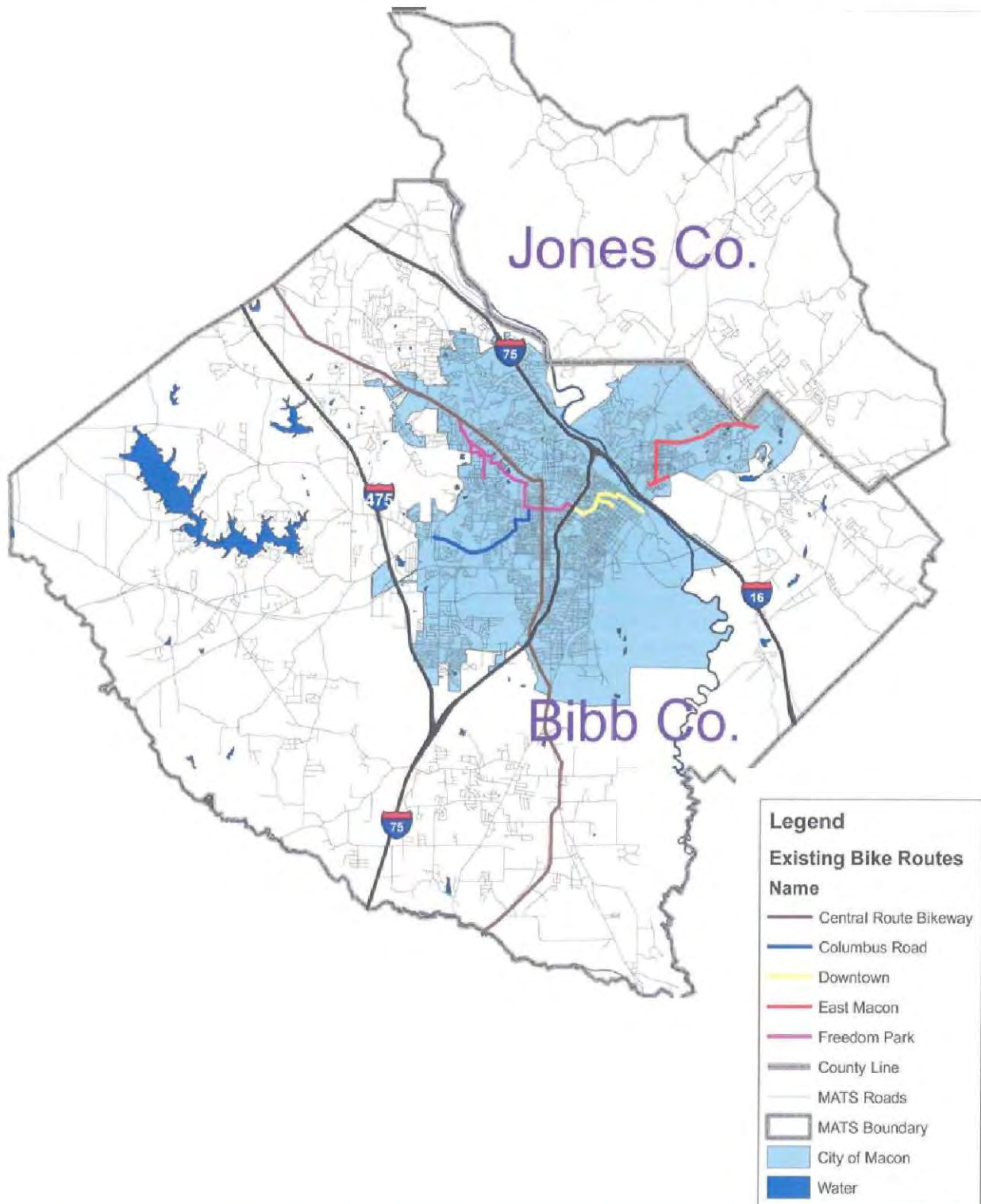
Route	From	To	Type	Length
East Macon	Coliseum Dr. / Main St	Shurling Dr./ Millerfield Rd	Shared Lane	4.4 mi.
Downtown	Tatnall Square Park	Central City Park	Shared Lane	2.9 mi.
Freedom Park	Tatnall Square Academy	Napier Ave. / Forsyth Rd	Shared Lane / Bike Lane	5.9 mi.
Columbus Road	Brentwood Ave.	Columbus Rd.	Shared Lane	3.5 mi.
Central Route	Monroe Co. Line	Houston Co. Line	Shared Lane	21.1 mi.
Ocmulgee Heritage Greenway	MLK Bridge	Glenridge Dr.	Muti-Use Off Road Facility	1.5 mi.

East Macon. The East Macon bikeway traverses along a historically and culturally significant portion of the city. The southern portion starts at Main Street and traverses to Emery Highway. The northern spur encompasses the length of Fort Hill Street from Main Street to Shurling Drive. This route then heads east on Shurling Drive and ends at Millerfield Road. Bicycle route signs are found along the route and sidewalks are provided. This route offers access to several attractions in East Macon. Attractions such as Fort Hawkins, Ocmulgee National Monument, Northeast Plaza Shopping Center, Shurlington Plaza, and various schools can be reached along this route.



Fort Hill Street

Figure 6-12
Current Designated Bike



Downtown. The Downtown route traverses through many historical areas and neighborhoods in Macon. This bikeway originates at Tatnall Square Park and it follows Oglethorpe Street, College Street, Georgia Avenue, New Street and Walnut Street. This route offers access to such facilities as the U.S. Post Office, Washington Park, the Municipal Auditorium, Central City Park, and Tatnall Square Park. A portion of the bikeway traverses through the Central Business District



College Street and Cotton Street

Freedom Park. This facility originates at Tatnall Square Park. The bikeway proceeds north on Dannenberg Avenue, changes direction southward along Holt Avenue and then proceeds west on Beech Avenue. The bikeway then heads northward along Wood Street and includes Bartlett Street, Roff Avenue, Lake Street, Fairmont Avenue, and Napier Avenue. The facility ends at the intersection of Napier and Forsyth Road. This bikeway provides access to various schools and some shopping.



Napier Avenue

Columbus Road. This bikeway is 3.5 miles long and starts on Brentwood Avenue and proceeds southward to Churchill Street. From Churchill Street, the route proceeds along Berkner Street and then heads west along Mercer University Drive until it stops at Columbus Road. This is a shared lane facility. The route offers access to regional shopping centers such as the Macon Mall, Presidential Parkway shopping center, and many other attractions.



Mercer University Drive

Central Route. The central bike route is a state designated bike route and is part of network of bike routes throughout the State of Georgia. The route spans the entire length of the county beginning on Forsyth Road near the Monroe County line and ending on Industrial Highway near the Houston County line. The route travels south along Forsyth Road, Vineville Avenue, Pionn Avenue, Hawkinsville Road and Industrial Highway. The entire length of the route is 21 miles. Currently this is a shared use facility with no signage.



Vineville Avenue

Biking, Exercise, and Hiking Trails

The Ocmulgee Heritage Greenway. The Ocmulgee Heritage Greenway is a recent addition to the recreation system in Macon-Bibb County. The greenway is a multi-use path that can accommodate a variety of uses such as, walking, skating, cycling, and general exercise to name a few.

Currently the greenway spans a little over a mile from the Otis Redding Bridge to Glenn Ridge Drive in the Shirley Hills neighborhood. In less than three years the greenway will continue to the Old Macon Water Works site near North Pierce Avenue. The greenway, when fully implemented, will span the entire length of the county by traversing along the Ocmulgee River. By spanning the entire length of the county, the greenway will provide a means of connectivity for many areas in the county.



Ocmulgee Heritage Greenway

East Macon Park. East Macon Park is the only park in Bibb County that offers facilities that are specifically designed for cycling and hiking. The park operates a BMX bike trail for people interested in what has now become known as Extreme Sports or it can be used for novice level use. The park also has a nature trail that can be used for nature hiking or biking.



East Macon Park Nature Trail

Pedestrian Facilities

As previously mentioned, the pedestrian element identified pedestrian needs along transit routes throughout the community that are operated by the Macon Transit Authority. The scope of the pedestrian element was confined to pedestrian facilities along transit routes primarily due to the funding source of the study being the Federal Transit Administration. Pedestrian facilities such as sidewalks along transit routes were important to examine because many times transit users walk along transit routes out of necessity due to the lack of personal transportation rather than for recreation or health benefits. These sidewalks are probably the most used per capita. This being the case, it is very important that these facilities be available and in good condition.

Vineville/Charter Hospital Route- #1. The Vineville/Charter Hospital Route serves the population mainly throughout what is considered as “Midtown Macon” along Vineville Ave/Ridge Avenue. The route is approximately 10 miles round trip and normally takes an average of 60 minutes to complete. During the course of the route, data was collected to inventory existing conditions that pertain to: Number of lanes – one direction, speed limit, turn lanes, on-street parking, sidewalks (on/off curb), sidewalk conditions & land-use.

Table 6-10
Vineville/Charter Hospital Route - #1
Inventory of Existing Conditions

	Transit Route - Location	# of Lanes - one direction	Speed Limit (MPH)	Turn Lane (y/n) Left, Right, Both	Onstreet Parking (y/n)	Sidewalks (On Curb/Off Curb)	Sidewalk Conditions (1 to 10)	Land Use (Commercial/ Residential/Institutional)
1	Hardeman Ave: College St to Ward St	2 to 3	30	Y(@ intersections)	Yes	On/Off	2 to 5; 6 to 9	Institutional/ Commercial
2	Vineville Ave: Ward St to Pierce Avenue	2	30	Both	No	On/Off	6 to 9	Res; Prof. Off; Institutional
3	Vineville Ave: Pierce Ave to Riley Ave	2 to 3	35	No	No	On	2 to 5	Res; Commercial; Prof. Off
4	Vineville Ave: Riley Ave to Park Street	2 to 3	45	No	No	Portion of Route	2 to 5	Res; Commercial; Prof. Off
5	Vineville Ave: Park St to Charter Blvd	2	45	Both	No	On	6 to 9	Institutional/ Prof. Office
6	Charter Blvd: Vineville Ave to Forest Hill Rd	1	Not Posted	No	No	N/A	N/A	Vacant; Instit; Prof. Off
7	Forest Hill Rd: Charter Blvd to Ridge Ave	1	30	No	No	N/A	N/A	Residential; Institutional
8	Ridge Ave: Forest Hill Rd to Riley Ave	1	35	No	Yes	Off	6 to 9	Res; Instit; Recreation
9	Ridge Ave: Riley Ave to Blind Academy	1	35	No	No	N/A	N/A	Res; Instit; Prof. Office
10	Vineville Ave: Forsyth St to College St	3	30	Y(@ intersections)	No	On	2 to 5	Residential, Commercial
11	College St: Forsyth St to Washington Ave	2 to 3	30	No	Yes	On	6 to 9	Residential
12	Washington Ave: College St to 2nd St	1	25	Y(@ intersections)	Yes	On	6 to 9	Res; Instit; Prof. Office

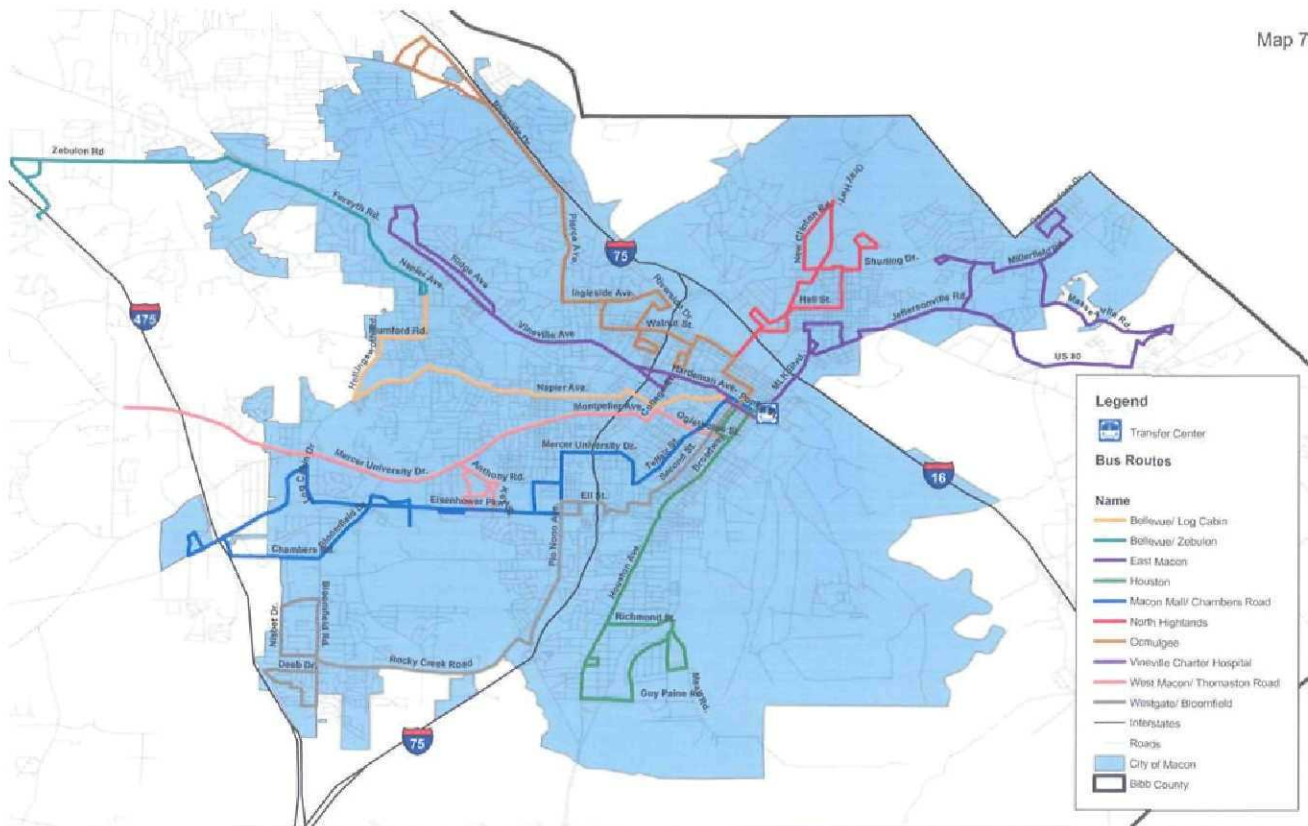
Sidewalk Conditions: 1 – Poor Condition; 2-5 Moderate Improvements; 6-9 Minor Improvements; 10 – Great Condition

Land Use Abbreviations: Res: Residential; Instit: Institutional; Comm: Commercial; Prof. Off: Professional Office;

Rec: Recreational; Light Ind: Light Industrial

**Figure 6-13
Transit Routes**

Map 7-



Bellevue/Log Cabin/Zebulon/ Route- #2/2B. The Bellevue/Log Cabin/Zebulon Drive route serves the population mainly throughout the Bellevue and Northwest Macon area. The route is approximately 13 miles round trip and normally takes an average of 60 minutes to complete during the weekday, and approximately 25 miles round trip which normally takes an average of 75 minutes to complete during the weekend.

Table 6-11
Bellevue/Log Cabin/Zebulon Road Route - #2/2B

	Transit Route - Location	# of Lanes - one direction	Speed Limit (MPH)	Inventory of Existing Conditions			Sidewalk Conditions (1 to 10)	Land Use (Commercial/ Residential/ Institutional)
				Turn Lane (y/n) Left, Right, Both	Onstreet Parking (y/n)	Sidewalks (On Curb/ Off Curb)		
1	Cotton Ave: Poplar St to College St	1	Not Posted	No	Yes	On/Off	2 to 5; 6 to 9	Comm; Instit; Prof. Office
2	College St: Cotton Ave to Oglethorpe St	1	30	Yes	Yes	On	6 to 9	Res; Instit; Commercial
3	Oglethorpe St: College St to Adams St	1	30	No	Yes	On	6 to 9	Recreation; Prof. Office
4	Adams St: Oglethorpe/ Chestnut/ Monroe St	1	25	No	Yes	On/Off	6 to 9	Residential
5	Forsyth St: Monroe St to College St	3	30	Yes	No	On/Off	6 to 9	Res; Instit; Prof. Office
6	Adams St: Oglethorpe St to Coleman Av	1	25	No	Yes	Off	6 to 9	Residential; Recreation
7	Coleman Ave: Adams St to Napier Av	1	25	No	No	On	6 to 9	Institutional; Recreation
8	Napier Ave: Carling Ave to Pio Nono Av	1	30	No	Yes	On/Off	2 to 5; 6 to 9	Institutional; Recreation
9	Napier Ave: Pio Nono Av to Hillcrest Blvd	1	35	Y(@ Intersection)	No	On/Off	6 to 9	Institutional; Recreation
10	Napier Ave: Hillcrest Blvd to Log Cabin	1	35	Y(@ Intersection)	No	On/Off	2 to 5; 6 to 9	Res; Comm; Instit; Prof. Office
11	Log Cabin Dr: Napier Ave to Hollingsworth	1	25-30	Y(@ Intersection)	No	On	10	Residential; Institutional
12	Hollingsworth Rd: Log Cabin to Mumford Rd	1	25	No	No	N/A	N/A	Residential; Institutional
13	Mumford Rd: Hollingsworth Rd to Napier Ave.	1	25	No	No	On	10	Residential; Institutional
14	Napier Ave: Mumford Ave to N. Napier Apts.	1	35-40	Yes	No	On	6 to 9	Res; Comm; Institutional
15	Napier Ave: N. Napier Apts. to Park St.	1	40	Both	No	On	10	Residential; Institutional
16	Napier Ave: Park St to Forsyth Rd	1	40	Y(@ Intersection)	No	N/A	N/A	Commercial; Residential
17	Forsyth Rd: Napier Ave. to Tucker Rd.	2	45	Both	No	On	10	Commercial
18	Forsyth Rd: Tucker Rd. to Zebulon Rd.	2	45	Both	No	On	10	Residential; Institutional
19	Zebulon Rd: Forsyth Rd. to Bass Rd.	2	45	Both	No	Off	10	Residential
20	Zebulon Rd: Bass Rd. to Plantation Centre	2	45	Both	No	Off	10	Residential; Institutional
21	Zebulon Rd: Plantation Centre to Peake Rd	2	45	Both	No	Off	10	Commercial; Institutional
22	Peake Rd: Zebulon Rd to Peake Nursing Center	1	35	No	No	Off	10	Comm; Res; Prof. Office

West Macon/Thomaston Rd Route- #3.. The West Macon/Thomaston Road route serves the population mainly throughout the westerly portion of the county. The route is approximately 19 miles round trip and normally takes an average of 75 minutes to complete.

Table 6-12
West Macon/Thomaston Road Route - #3

Inventory of Existing Conditions								
	Transit Route - Location	# of Lanes - one direction	Speed Limit (MPH)	Turn Lane (y/n) Left, Right, Both	Onstreet Parking (y/n)	Sidewalks (On Curb/Off Curb)	Sidewalk Conditions (1 to 10)	Land Use (Commercial/Residential/Institutional)
1	Poplar St: 2nd St to Broadway/ MLK	2	25	Both	Yes	On	6 to 9	Commercial; Residential
2	Broadway/ MLK: Poplar St to Oglethorpe St	2	30	Both	Yes	On	10	Commercial; Res; Prof. Office
3	Oglethorpe St: Broadway to 1st St	1	35	No	Yes	On	6 to 9	Comm; Prof. Office
4	Oglethorpe St: 1st St to College St	1	35	No	Yes	On	6 to 9	Comm; Instit; Residential
5	College St: Oglethorpe St to Coleman Av	1 to 2	25	Both	Yes	On	6 to 9	Recreation; Instit; Prof. Office
6	Coleman Av: College St to Adams St	1	30	No	Yes	On/Off	10	Recreation; Institutional
7	Montpelier Av: Adams St to Pio Nono Av	1	35	No	Yes	On	6 to 9; 10	Instit; Comm; Res; Prof. Office
8	Montpelier Av: Pio Nono Av to Mercer Univ Drive	1	35	No	No	On	6 to 9	Instit; Comm; Residential
9	Mercer Univ Dr: Montpelier Av to Anthony Rd	2	45	Both	No	On	10	Commercial; Prof. Office
10	Anthony Rd: Mercer Univ Dr to Key St	1	40	Both	No	Off	10	Comm; Res; Rec; Instit; Prof. Office
11	Key St: Anthony Rd to Eisenhower Pkwy	1	Not Posted	No	No	N/A	N/A	Commercial
12	Eisenhower Pkwy: Key St to Heron/ Mallard St	2	45	Both	No	N/A	N/A	Commercial
13	Heron/ Mallard St: Eisenhower Pkwy to Anthony Rd	1	25	No	Yes	On	10	Residential
14	Mercer Univ Dr: Anthony Rd to Edna Place	2	45	Both	No	On	10	Commercial
15	Mercer Univ Dr: Edna Place to Bloomfield Rd	2	45	Both	No	On	10	Institutional; Commercial
16	Mercer Univ Dr: Bloomfield Rd to Log Cabin	2	45	Both	No	On	10	Institutional; Commercial
17	Mercer Univ Dr: Log Cabin to Food Lion	2	45	Both	No	On/Off	6 to 9	Comm; Res; Prof. Off; light Ind.

Sidewalk Conditions: 1 – Poor Condition; 2-5 Moderate Improvements; 6-9 Minor Improvements; 10 – Great Condition
Land Use Abbreviations: Res: Residential; Instit: Institutional; Comm: Commercial; Prof. Off: Professional Office; Rec: Recreational; Light Ind: Light Industrial

North Highland Route - #4. The North Highland Route serves the population mainly throughout the Ft. Hill Neighborhood and areas along Clinton Road. The route is approximately 12 miles round trip and normally takes an average of 60 minutes to complete.

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Table 6-13
North Highland Route - #4

Transit Route - Location		# of Lanes - one direction	Speed Limit (MPH)	Inventory of Existing Conditions Turn Lane (y/n) Left, Right, Both	Onstreet Parking (y/n)	Sidewalks (On Curb/Off Curb)	Sidewalk Conditions (1 to 10)	Land Use (Commercial/ Residential/ Institutional) Comm; Ocmulgee River
1	Spring St: Riverside Dr. to Emery Hwy.	2 to 3	35	Both	No	On	10	Comm; Ocmulgee River
2	Baconsfield Dr: Gray Hwy to Nottingham	1	Not Posted	No	No	On/Off	6 to 9	Residential
3	Nottingham Dr: Baconsfield to Gray Hwy	1	35	No	No	On/Off	6 to 9	Commercial
4	Gray Hwy: Nottingham to Clinton Rd	3	35	Yes	No	Off	2 to 5	Commercial
5	Clinton Rd: Gray Hwy to Lexington	1	35	No	No	Off	10	Comm; Residential
6	Lexington St: Clinton Rd to Gray Hwy	1	Not Posted	No	No	N/A	N/A	Commercial
7	Gray Hwy: Lexington to Clinton Rd	2 to 3	35/50	Both	No	Off	6 to 9	Commercial
8	Clinton Rd: Gray Hwy to Upper River Rd	1	35	No	No	N/A	N/A	Residential
9	Shurling Dr: Clinton Rd to Kitchens Rd	1 to 2	45	Both	No	On	6 to 9	Commercial
10	Kitchens Rd: Shurling Dr to Haywood Rd	1	25	No	No	On	10	Residential
11	Maynard St: Shurling Dr to Hall St	1	25	No	Yes	On	6 to 9	Res; Instit; Rec.
12	Hall St: Maynard St to Gray Hwy	1	25	No	Yes	On	6 to 9	Res; Instit;
13	2nd St: Gray Hwy to Emery Hwy	2	45	Left	No	N/A	N/A	Res; Vacant
14	Emery Hwy: 2nd St to Gray Hwy	2	35	No	No	Off	6 to 9	Commercial

Ocmulgee/Tom Hill VA Hospital Route - #5/5B. The Ocmulgee/Tom Hill/VA Hospital Route serves the population mainly throughout the Pleasant Hill and North Macon area. The route is approximately 19 miles round trip and normally takes an average of 75 minutes to complete

Table 6-14
Ocmulgee/Tom Hill/VA Hospital Route - #5/5B

Inventory of Existing Conditions								
	Transit Route - Location	# of Lanes - one direction	Speed Limit (MPH)	Turn Lane (y/n) Left, Right, Both	Onstreet Parking (y/n)	Sidewalks (On Curb/Off Curb)	Sidewalk Conditions (1 to 10)	Land Use (Commercial/Residential/Institutional)
1	Riverside Dr: Spring St to Madison St	2	25	Both	No	Off	6 to 9	Commercial
2	Madison St: Riverside Dr to Jefferson St	1	25	No	Yes	On	6 to 9	Residential; Institutional
3	Jefferson St: Madison St to Monroe St	1	Not Posted	No	Yes	On	6 to 9	Residential; Recreation
4	Monroe St: Jefferson St to Stewart St	1	Not Posted	No	Yes	On	2 to 5	Residential
5	Stewart St: Monroe St to Madison St	1	Not Posted	No	Yes	N/A	N/A	Residential
6	Walnut St: Madison St to Ward St	1	25-35	No	Yes	Off	6 to 9	Institutional; Residential
7	Ward St: Walnut St to 2nd & 3rd Ave	1	Not Posted	No	Yes	N/A	N/A	Institutional; Residential
8	3rd Ave: 2nd Ave to Forest Ave	1	25	No	Yes	On	2 to 5	Institutional; Residential
9	3rd Ave: Forest Ave to Rogers Ave	1	25	No	Yes	On	2 to 5	Residential
10	Rogers Ave: 3rd Ave to Ingleside Ave	1	25	No	No	N/A	N/A	Residential
11	Ingleside Ave: Rogers Ave to Riverside Dr	1	35	No	No	On	10	Residential; Prof. Office
12	Riverside Dr: Ingleside Ave to Baxter Ave	2	45	Both	No	N/A	N/A	Commercial
13	Baxter Ave: Riverside Dr to Forest Ave	1	Not Posted	No	No	N/A	N/A	Residential
14	Forest Ave: Baxter Ave to 3rd Ave	1	25	No	Yes	On	6 to 9	Residential
15	Ingleside Ave: Rogers Ave to Pierce Ave	1	35	No	No	N/A	N/A	Residential; Commercial
16	Pierce Ave: Ingleside Ave to Old Holton Rd	1	40	No	No	N/A	N/A	Residential
17	Pierce Ave: Old Holton Rd to Riverside Dr	1	35-40	No	No	Off	10	Institutional; Residential
18	Riverside Dr: Pierce Ave to Wimbish Rd	2	45	Both	No	N/A	N/A	Commercial; Institutional
19	Riverside Dr: Wimbish Rd to North Crest	1 to 2	45	Both	No	N/A	N/A	Res; Comm; Institutional
20	North Crest: Riverside to Elnora/N. Side Dr	1	Not Posted	No	No	N/A	N/A	Commercial; Prof. Office
21	Northside Dr: Elnora Dr to Riverside Dr	2	45	Both	No	On	10	Commercial; Institutional
22	Tom Hill St: Northside Dr to Riverside Dr	2	35	Both	No	N/A	N/A	Commercial; Institutional

Sidewalk Conditions: 1 – Poor Condition; 2-5 Moderate Improvements; 6-9 Minor Improvements; 10 – Great Condition

Land Use Abbreviations: Res: Residential; Instit: Institutional; Comm: Commercial; Prof. Off: Professional Office; Rec: Recreational; Light Ind: Light Industrial

Westgate/Bloomfield Route - #6. The Westgate/Bloomfield route serves the population mainly throughout the South Macon/Bloomfield area. The route is approximately 20 miles round trip and normally takes an average of 75 minutes to complete.

Table 6-15
Westgate/Bloomfield Route - #6

	Transit Route - Location	# of Lanes - one direction	Speed Limit (MPH)	Inventory of Existing Conditions		Sidewalks (On Curb/Off Curb)	Sidewalk Conditions (1 to 10)	Land Use (Commercial/ Residential/ Institutional)
				Turn Lane (y/n) Left, Right, Both	Onstreet Parking (y/n)			
1	Poplar St: 2nd St to 3rd St	2	25	Both	Yes	On	6 to 9	Commercial; Prof. Office
2	3rd St: Poplar St to Plum St	2	Not Posted	Both	Yes	On	6 to 9	Commercial; Prof. Office
3	Plum St: 3rd St to 2nd St	1	Not Posted	No	Yes	On	2 to 5	Commercial
4	2nd St: Plum St to Poplar St	1 to 2	25	No	Yes	On	2 to 5	Commercial
5	2nd St: Plum St to 2nd Street Bridge	1 to 2	25-30	No	Yes	On	2 to 5	Comm; Prof. Off; Institutional
6	2nd St: 2nd St. Bridge to Edgewood Ave	1	30	No	Yes	On/Off	2 to 5	Residential; Institutional
7	2nd St: Edgewood Ave to Eli St	1	30	No	Yes	On	2 to 5	Residential; Instit; Commercial
8	Eli St: 2nd St to Murphy Homes	1	25	No	No	On	6 to 9	Residential; Institutional
9	Eli St: Murphy Homes to Pio Nono Av	1	25	No	Yes	On	6 to 9	Residential
10	Eisenhower Pkwy: Laveta Dr to Pio Nono Ave	3	45	Both	No	On	6 to 9	Commercial
11	Pio Nono Av: Eli St to Newberg Ave	2	40-45	Both	No	On	10	Comm; Prof. Off; Institutional
12	Pio Nono Av: Newberg Ave to Rocky Creek Rd	2	45	Both	No	N/A	N/A	Commercial; Institutional
13	Rocky Creek Rd: Pio Nono Av to Bloomfield Dr	2	45	Both	No	On	10	Commercial; Residential
14	Rocky Creek Rd: Bloomfield Dr to Bloomfield Rd	2	45	Both	No	On	10	Residential; Instit; Commercial
15	Bloomfield Rd: Rocky Creek Rd to Nisbet Rd/Dr	1	40	No	No	Off	10	Residential; Institutional
16	Nisbet Rd/ Dr: Bloomfield Rd to Bonnie Ave	1	25	No	No	N/A	N/A	Residential; Institutional
17	Bonnie Ave: Nisbet Dr to Bloomfield Rd	1	25	No	No	N/A	N/A	Residential
18	Deeb Dr: Bloomfield Rd to Walmar Dr	1	25	No	No	N/A	N/A	Residential
19	Walmar Dr: Deeb Dr to Leone Dr/ Bloomfield Rd	1	25	No	No	N/A	N/A	Residential
20	Bloomfield Rd: Leone Dr to Deeb Dr	1	25	No	No	Off	10	Residential

Sidewalk Conditions: 1 – Poor Condition; 2-5 Moderate Improvements; 6-9 Minor Improvements; 10 – Great Condition

Land Use Abbreviations: Res: Residential; Instit: Institutional; Comm: Commercial; Prof. Off: Professional Office; Rec: Recreational; Light Ind: Light Industrial

Macon Mall/Chambers Road Route- #9. The Macon Mall/Chambers Road route serves the population mainly throughout the Unionville area, Macon Mall and the westerly portion of the county at Macon State College. The route is approximately 18 miles round trip and normally takes an average of 90 minutes to complete.

Table 6-16
Macon Mall/Chambers Road Route - #9

	Transit Route - Location	# of Lanes - one direction	Speed Limit (MPH)	Turn Lane (y/n) Left, Right, Both	Inventory of Existing Conditions Onstreet Parking (y/n)	Sidewalks (On Curb/ Off Curb)	Sidewalk Conditions (1 to 10)	Land Use (Commercial/ Residential/ Institutional)
1	College Station Dr: Romeiser Dr to Eisenhower Pkwy/Rally Rd	1	Not Posted	No	No	N/A	N/A	Commercial, Institutional
2	Eisenhower Pkwy: Rally Rd to Chambers Rd	2	45	Both	No	N/A	N/A	Commercial
3	Chambers Rd: Eisenhower Pkwy to Log Cabin	1	35	No	No	N/A	N/A	Comm; Res; Institutional
4	Bloomfield Rd: Log Cabin to Eisenhower	1	40	No	No	Off	10	Comm; Res; Institutional
5	Eisenhower Pkwy: Bloomfield Rd to Log Cabin	2	45	Both	No	N/A	N/A	Commercial
6	Log Cabin: Eisenhower Pkwy to Presidential Pkwy	1	40	No	No	N/A	N/A	Commercial
7	Presidential Pkwy: Log Cabin to Eisenhower	2	30	Both	No	Off	10	Commercial
8	Eisenhower Pkwy: Bloomfield Rd to Walsh Pkwy	2	45	Both	No	N/A	N/A	Commercial
9	Eisenhower Pkwy: Walsh Pkwy to Pio Nono Av	2 to 3	45	Both	No	N/A	N/A	Commercial
10	Pio Nono Av: Eisenhower Pkwy to Anthony Rd	2	40	Both	No	On	10	Commercial
11	Anthony Rd: Pio Nono to Anthony Terr.	1	40	Both	No	Off	10	Residential
12	Anthony Terr: Anthony Rd to Eisenhower	1	Not Posted	No	No	N/A	N/A	Residential
13	Pio Nono Av: Anthony Rd to Mercer Univ. Dr	2	40	Both	No	On/Off	10	Comm; Res; Institutional
14	Mercer Univ. Dr: Pio Nono Av to Plant St	2	35-40	Both	No	On	6 to 9	Comm; Res; Institutional
15	Plant St/Felton Av: Mercer Univ. Dr to Jeff Davis	1	30	No	Yes	On/Off	10	Residential
16	Jeff Davis/ Telfair: Felton Av to Oglethorpe St	1	30	No	No	On/Off	6 to 9	Residential, Institutional
17	1st St: Oglethorpe St to Poplar St	2	25	No	Yes	On	6 to 9	Commercial; Institutional

Sidewalk Conditions: 1 – Poor Condition; 2-5 Moderate Improvements; 6-9 Minor Improvements; 10 – Great Condition

Land Use Abbreviations: Res: Residential; Instit: Institutional; Comm: Commercial; Prof. Off: Professional Office; Rec: Recreational; Light Ind: Light Industrial

East Macon/ Kings Park Route- #11. The East Macon/Kings Park Route serves the population mainly throughout the County portion of East Bibb County. The route is approximately 18 miles round trip and normally takes an average of 75 minutes to complete.

	Transit Route - Location	# of Lanes - one direction	Speed Limit (MPH)	Turn Lane (y/n) Left, Right, Both	Onstreet Parking (y/n)	Sidewalks (On Curb/ Off Curb)	Sidewalk Conditions (1 to 10)	Land Use (Commercial/Residential/Institutional) Comm; Instit; Rec.
1	Coliseum Drive: I-16 to Emery	3	35	Both	No	On/Off	10	Comm; Instit; Rec.
2	Lexington St: Emery to Woolfolk	1	25	No	Yes	N/A	N/A	Res; Light Ind.
3	Woolfolk: Lexington to Ft. Hill St	1	25	No	Yes	On	9	Residential
4	Maynard St: Woolfolk to Main St	1	25	No	Yes	On/Off	10	Residential
5	Main St: Emery to Garden/ Church St	1	30	No	Yes	On/Off	6-9; 10	Residential
6	Emery: Main St. to Jeffersonville	2	40	Both	No	On	10	Residential
7	Jeffersonville: Emery to Millerfield	1	40	No	No	N/A	N/A	Comm; Residential
8	Millerfield: Jeffersonville to New Clinton	1	35	No	No	N/A	N/A	Commercial
9	New Clinton: Millerfield to Pine Hill Dr	1	35	Both	No	Off	10	Residential
10	Pine Hill Dr: Donald Ave to Millerfield	1	25	No	No	N/A	N/A	Residential
11	Millerfield: Donald Ave to Laney Ave	1	35	No	No	N/A	N/A	Comm; Instit;
12	Jordan Ave: Millerfield to Masseyville	1	Not Posted	No	No	N/A	N/A	Residential
13	Masseyville: Recreation to Queens Dr	1	25/35	No	No	N/A	N/A	Res; Vacant
14	Queens Dr: Masseyville to Mogul Rd	1	Not Posted	No	No	N/A	N/A	Residential
15	Mogul Rd: Queens Dr to Jeffersonville	1	Not Posted	No	No	N/A	N/A	Res; Comm.
16	Jeffersonville: Mogul to Morningside	2	45	Both	No	N/A	N/A	Res; Comm.
17	Morningside: Jeffersonville to Recreation	1	25	No	Yes	N/A	N/A	Residential
18	Recreation: Morningside to Millerfield Rd	1	40	No	No	N/A	N/A	Res; Light Ind.

Sidewalk Conditions: 1 – Poor Condition; 2-5 Moderate Improvements; 6-9 Minor Improvements; 10 – Great Condition

Land Use Abbreviations: Res: Residential; Instit: Institutional; Comm: Commercial; Prof. Off: Professional Office; Rec: Recreational; Light Ind: Light Industrial

Houston Ave /Peach Orchard Route- #12. The Houston Avenue/Albert/Peach Orchard route serves the population mainly throughout the South Macon area. The route is approximately 8 miles round trip and normally takes an average of 50 minutes to complete.

Table 6-18
Houston Ave/ Peach Orchard Route - #12/B/C
Inventory of Existing Conditions

	Transit Route - Location	# of Lanes - one direction	Speed Limit (MPH)	Turn Lane (y/n) Left, Right, Both	Onstreet Parking (y/n)	Sidewalks (On Curb/ Off Curb)	Sidewalk Conditions (1 to 10)	Land Use (Commercial/ Residential/ Institutional)
1	Poplar St: 2nd St to Broadway/MLK	2	25	Both	Yes	On	6 to 9	Commercial; Residential
2	Broadway/MLK: Poplar St to Oglethorpe St	2	30	Both	Yes	On	10	Commercial; Res; Prof. Office
3	Broadway/MLK: Oglethorpe St to Houston Ave	2	30	No	No	On/Off	2 to 5; 6 to 9	Commercial
4	Houston Av: Broadway to Eisenhower Pkwy	1	30	No	No	On/Off	2 to 5	Residential; Commercial
5	Houston Av: Eisenhower Pkwy to Ponce De Leon	1	30	No	No	On	6 to 9	Instit; Comm; Residential
6	Houston Av: Ponce De Leon to Richmond St	1	30	No	No	On/Off	6 to 9	Instit; Comm; Residential
7	Houston Av: Richmond St to Chatham St	1	35	No	No	N/A	N/A	Instit; Comm; Residential
8	Houston Av: Chatham St to Guy Paine Rd	1	40	No	No	N/A	N/A	Instit; Comm; Residential
9	Guy Paine Rd: Houston Av to Marion Av	2	35	Both	No	Off	6 to 9	Commercial; Light Industrial
10	Marion Av: Guy Paine Rd to San Carlos Dr	1	25	No	No	N/A	N/A	Residential; Light Industrial
11	San Carlos Dr: Marion Av to Albert St	1	35	No	No	N/A	N/A	Residential; Light Industrial
12	Albert St: San Carlos Dr to Meade Rd	1	Not Posted	No	No	N/A	N/A	Light Industrial
13	Meade Rd: Albert St to Broadway	1	45	No	No	N/A	N/A	Recreation; Vacant; Light Ind.
14	Richmond St: Broadway to Houston Av	1	25	No	Yes	N/A	N/A	Residential; Commercial

Sidewalk Conditions: 1 – Poor Condition; 2-5 Moderate Improvements; 6-9 Minor Improvements; 10 – Great Condition

Land Use Abbreviations: Res: Residential; Instit: Institutional; Comm: Commercial; Prof. Off: Professional Office; Rec: Recreational; Light Ind: Light Industrial

Assessment of Current and Future Needs

The support and encouragement of bicycle and pedestrian usage in Bibb County will have to come to the forefront of importance to meet future demand. The demand for these facilities is expected to increase in the future. This hypothesis is supported by two recent occurrences; the first being the overwhelmingly positive community response to the Ocmulgee Heritage Greenway, and the second being that Bibb County has been designated a Non-Attainment Area by the Environmental Protection Agency. The non-attainment designation will place more emphasis on making modification to and placing more restrictions on traditional transportation modes. Moreover, alternative transportation modes such as bicycling and walking will garner greater interest and demand.

Although the designated bike routes and pedestrian facilities along the transit routes generally cover the major trip generators in the community; Bibb County will have to make investments in upgrading currently designated routes, designating new routes and maintaining current pedestrian facilities and establish new facilities as needed to accommodate this future demand. The following is an assessment of the currently designated bike routes in the community and pedestrian facilities along the transit routes.

Bikeways

East Macon. In terms of analysis, this route has some serious issues to overcome to make it safer. According to the most recent traffic counts, the portion of Shurling Drive that contains the bike route has an average daily traffic (ADT) count of 27,709. The other issue is speeding. The speeds for this link of Shurling Drive have been recorded to reach in excess of 60 mph. The speed data was recorded in the Congestion Management Study that was completed in 2002. Without the addition of a bike lane, the combination of high traffic and speeding make this portion of the route not very conducive for cycling.

Table 6-19
East Macon Assessment

Street	ADT	Functional Classification	Posted Speed	Lane Width	On-Street Parking	Pavement Condition	Bike Lane Present
Main Street	3,940	Neighborhood	30	18 EB 11 WB	Yes	Fair	No
Ft Hill Street	3,621	Neighborhood	25	15	Yes	Good	No
Shurling Drive	27,709	Arterial	45	12	no	Good	No

Downtown. The ADT's along the route are low to moderate and the speeds are low. There is, however, a substantial amount of on street parking along the route. According to local traffic officials, the on street parking along the routes inhibits the placement of a bike lane along streets such as College and Oglethorpe that have adequate width. This route has the potential to offer a good cycling experience.

Table 6-20
Downtown Assessment

Street	ADT	Road Class	Posted Speed	Lane Width	O n - Street Parking	Pavement Condition	Bike Lane Present
Oglethorpe Street	732 -5,100	Neighborhood	30	12' – 22'	Yes	Good	No
College Street	4,536 –12,500	Arterial	30	16 ft	Yes	Good	No
Georgia Avenue	6,573 – 9,730	Arterial	30	14 ft	Yes	Good	No
New Street	3,276	Collector	30	10 ft	No	Good	No
Walnut Street	5,325	Collector	30	11 ft	yes	Good	No

Freedom Park. This route is primarily composed of neighborhood streets. The ADT on most of these streets were not available; however, neighborhood streets will usually have ADT below 3,000 and low speeds. This is the only route with a bike lane; however, it is less than a mile in length. This route also has opportunities for bike lane striping along Dannenberg Avenue.

Table 6-21
Freedom Park Assessment

Street	ADT	Road Class	Posted Speed	Lane Width	O n - Street Parking	Pavement Condition	Bike Lane Present
Dannenberg Ave.	Not available	Neighborhood	30	12'– 22'	Yes	Good	No
Holt Ave.	Not available	Collector	30	16 ft	No	Good	No
Beech Ave.	Not available	Neighborhood	35	12 ft	Yes	Fair	No
Wood St	Not available	Neighborhood	30	10 ft	No	Good	No
Bartlett St.	Not available	Neighborhood	30	12ft	Yes	Good	No
Roff Ave.	Not available	Neighborhood	30	10ft	No	Fair to Poor	No
Lake St.	Not available	Neighborhood	35	10ft	Yes	Good	No
Fairmont Ave.	Not available	Neighborhood	35	11ft	Yes	Good	No
Napier Ave.	2,216 – 15,300	Arterial	35	12 ft – 18	No	Good	Yes

Columbus Road. This route is a mixture of low traffic neighborhood streets and a high traffic arterial. The portion along Mercer University Drive is in need of a bike lane to make it more conducive for cycling.

Table 6-22
Columbus Road Assessment

Street	ADT	Road Class	Posted Speed	Lane Width	On-Street Parking	Pavement Condition	Bike Lane Present
Brentwood Ave	N o t Available	Neighborhood	25	11 ft	Yes	Good	No
Churchill St.	N o t Available	Neighborhood	25	11 ft	Yes	Good	No
Berkner Street	N o t Available	Neighborhood	25	10 ft	No	Good	No
Mercer Univ. Dr.	22,264 – 30,312	Arterial	45	12 ft	No	Good	No

Central Route. The Central Route Bikeway as previously mentioned is a state designated bike route; however, it lacks many safety amenities. There are many hazards along this route such as high traffic, high speeds and ill placed drainage facilities. For example, the portion that travels along Hawkinsville Road is exposed to high speeds. Speeds along Hawkinsville Road can often exceed 65 mph. Another safety hazard is the presence of large trucks, especially near Industrial Highway. To make this a safer route, the addition of bike lanes and signage would be a must. Another option is to abandon this route altogether and designate an alternate state route through the county.



Truck Traffic on Industrial HWY

Table 6-23
Central Route Assessment

Street	ADT	Road Class	Posted Speed	Lane Width	On-Street Parking	Pavement Condition	Bike Lane Present
Forsyth Rd.	4,436 – 23,176	Arterial	25	12 ft	No	Good	No
Vineville Ave.	17,007 – 26,757	Arterial	25	11 ft	No	Good	No
Pio Nono Ave.	14,418 – 32,761	Arterial	25	12 ft	No	Good	No
Hawkinsville Rd	25,796 – 29,189	Arterial	55	12 ft	No	Good	No
Industrial Hwy.	7,325 – 7,594	Arterial	55	12 ft	No	Good	No

Pedestrian Facilities

Vineville/Charter Hospital Route- #1. While conducting a windshield survey of the existing sidewalk conditions along this route, there was some evidence of pedestrian activity occurring along the route at Ridge Avenue/Riley Avenue. Based on the data collected, the majority of the route does have sidewalks, on and off the curb. Almost half of the existing sidewalks along the route need moderate improvements, whereas the remaining half needs minor improvements. See below, photographed images of existing sidewalk conditions along portions of the Vineville/Charter Hospital Route.



Recommendations:

Based on the windshield survey conducted along the Vineville/Charter Hospital transit route it is recommended that sidewalk improvements should be made along some portions of the route:

- ☐ Improvements should be made to sidewalk curb-cuts in the Midtown area, near Midtown Plaza;
- ☐ The sidewalk @ Ridge Ave/Riley Ave should be extended, due to pedestrian activity.

Bellevue/Log Cabin/Zebulon Route- #2/2B. While conducting a windshield survey of the existing sidewalk conditions along this route, there was some evidence of pedestrian activity occurring near Bartlett Street & Carlisle Avenue on Napier Avenue. Based on the data collected, the majority of the sidewalks along the route are in good conditions that may need minor improvements. Refer to photographed images of existing sidewalk conditions along portions of the Bellevue/Log Cabin/Zebulon Road Route on the next page.



Napier Avenue: @
Hillcrest Blvd



Napier Avenue: @
Bartlett Street



Napier Avenue:
Near Carlisle Ave



Napier Avenue:
Near Brookdale Ave



Napier Avenue

Recommendations:

Based on the windshield survey conducted along the Bellevue/Log Cabin/Zebulon Road transit route it is recommended that minor sidewalk improvements should be made along some portions of the route:

- ☐ Sidewalks should be placed along portions of Napier Avenue @ Bartlett Street and Carlisle Avenue due to pedestrian activity.

West Macon/Thomaston Road Route- #3. While conducting a windshield survey of the existing sidewalk conditions along this route, there was little evidence of pedestrian activity occurring on Mercer University Drive @ Woodfield Drive. Based on the data collected, the majority of the sidewalks along the route are in good conditions that may need minor improvements. See below, photographed images of existing sidewalk conditions along portions of the West Macon/Thomaston Road Route.



B roadway/ M L K B lvd: @Pine
S treet Ln



A nthony R d: @H artley
E lementary S chool



M ercer U niv. D rive: @
W oodfield D rive

Recommendations:

Based on the windshield survey conducted along the West Macon/Thomaston Road transit route it is recommended that minor sidewalk improvements should be made along some portions of the route:

- ☐ Sidewalks should be considered along portions of Mercer University Drive @ Woodfield Drive due to low evidence of pedestrian activity.

- Curb-cut improvements should be considered along portions of the route, as it relates to sidewalks.

North Highland Route - #4. While conducting a windshield survey of the existing sidewalk conditions along this route, there was no evidence of pedestrian activity occurring along the route. Based on the data collected, the majority of the route does have sidewalks, on and off the curb. The sidewalks between Nottingham & Clinton Road on Gray Highway, needs moderate improvements. However, sidewalks that are present along the remainder of the route needs minor improvements. See below, photographed images of existing sidewalk conditions along portions of the North Highland Route.

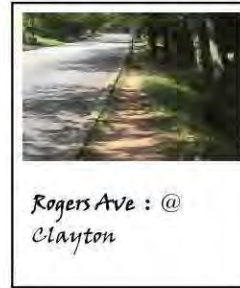


Recommendations:

Based on the windshield survey conducted along the North Highland transit route it is recommended that minor sidewalk improvements should be made along some portions of the route:

- It appears, as a result of pedestrian activity on Kitchens Street near the Military unit, sidewalks were constructed to better accommodate pedestrians.

Ocmulgee/Tom Hill/VA Hospital Route- #5/5B. While conducting a windshield survey of the existing sidewalk conditions along this route, there was some evidence of pedestrian activity occurring at Riverside Dr/Baxter Ave & Rogers Ave/Clayton Street. Based on the data collected, there are no sidewalks along the major arterials such as Riverside Drive and Tom Hill Sr. Blvd. In the Pleasant Hill area, sidewalks that are present along the route needs moderate improvements. Refer to photographed images of existing sidewalk conditions along portions of the Ocmulgee/Tom Hill/VA Hospital Route on the following page.



Recommendations:

Based on the windshield survey conducted along the Ocmulgee/Tom Hill/VA Hospital transit route it is recommended that sidewalk improvements should be made along some portions of the route:

- ☐ Sidewalks should be placed along portions of Rogers Avenue and Riverside Drive due to pedestrian activity.
- ☐ Although there was no evidence of pedestrian activity along Tom Hill Sr. Blvd and Riverside Drive, north of Pierce Ave, it is recommended that sidewalks should be considered in these areas.

Westgate/Bloomfield Route- #6. While conducting a windshield survey of the existing sidewalk conditions along this route, it was apparent that more than half of the sidewalks present along the route needs minor to moderate improvements. However, the portion between Newberg Avenue and Rocky Creek Rd may need to be considered as a possible location for sidewalks. See below, photographed images of existing sidewalk conditions along portions of the Westgate/Bloomfield Route.



Recommendations:

Based on the windshield survey conducted along the Westgate/Bloomfield transit route it is recommended that minor to moderate sidewalk improvements should be made along some portions of the route:

- ☐ Sidewalks should be considered along a portion of the route due to evidence of pedestrian activity. Evidence of pedestrian activity occurs @: Rocky Creek Road and the Chevron Gas Station, as well as areas near the Westgate shopping center.

Macon Mall/ Chambers Road Route- #9. While conducting a windshield survey of the existing sidewalk conditions along this route, there was an abundance of pedestrian activity occurring along portions of the route. Based on the data collected, the majority of the sidewalks along the route are in good conditions that may need minor improvements. See below, photographed images of existing sidewalk conditions along portions of the Macon Mall/Chambers Road Route.

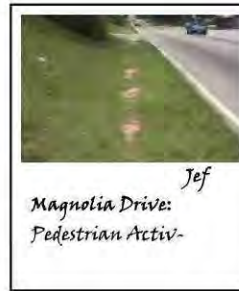
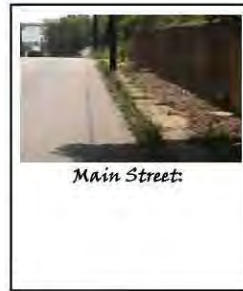
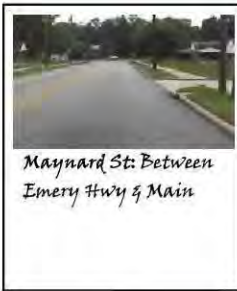


Recommendations:

Based on the windshield survey conducted along the Macon Mall/Chambers Road transit route it is recommended that minor sidewalk improvements should be made along some portions of the route:

- ☐ Sidewalks should be considered along several portions of the route due to evidence of pedestrian activity. Evidence of pedestrian activity occurs @: Chambers Rd/Log Cabin Dr.; Bloomfield Rd/Johnson Ave.; Eisenhower Pkwy/near Suburban Lodge Hotel; & Felton Ave/Jeff Davis Street.

East Macon/Kings Park Route- #11. While conducting a windshield survey of the existing sidewalk conditions along this route, there was some evidence that pedestrian activity occurs along portions of the route, but there were no sidewalks present. Based on the data collected, the majority of the route does not have sidewalks. Sidewalks that are present along the route needs minor improvements. Refer to photographed images of existing sidewalk conditions and evidence of pedestrian activity along portions of the East Macon/Kings Park Route on the next page.



Recommendations:

Based on the windshield survey conducted along the East Macon/Kings Park transit route it is recommended that sidewalk improvements should be made along some portions of the route:

- ☐ Improvements should be made to sidewalks along portions of Main Street;
- ☐ Sidewalks should be placed along portions of Jeffersonville Road near Magnolia Drive & Millerfield Road.

Houston Ave/Peach Orchard Route- #12. While conducting a windshield survey of the existing sidewalk conditions along this route, there was an abundance of pedestrian activity occurring along portions of the route. The majority of the route does not have sidewalks, but it is evident that pedestrian activity is present. Based on the data collected, the sidewalks that are present along the route needs minor to moderate improvements. Refer to photographed images of existing sidewalk conditions along portions of the Houston Avenue/Albert/Peach Orchard Route on the next page.



Recommendations:

Based on the windshield survey conducted along the Houston Avenue/Albert/Peach Orchard transit route it is recommended that minor to moderate sidewalk improvements should be made along some portions of the route:

- Sidewalks should be considered along several portions of the route due to evidence of pedestrian activity. Evidence of pedestrian activity occurs @: Houston Ave/Buena Vista; Broadway-MLK/Ash St; Houston Ave/Bruce Elementary School; Houston Ave/Unionville Baptist Church; Houston Ave/Dewey Street; & Guy Paine Rd/Marion Avenue.

Proposed Bicycle Routes

The task of proposing new routes in the MATS area was undertaken by a bicycle and pedestrian committee. This committee was made up of citizens, staff of the Macon-Bibb County Planning and Zoning Commission, staff of the City of Macon, and business owners. It was decided by the committee that there was ample opportunity to incorporate new bike routes and improve existing routes in the MATS area. To this end, a list of routes that could be implemented in the short term by lane striping, upgraded signage or additional signage was proposed. These projects could be implemented within a three year horizon. For more information on the proposed routes, please refer to a copy of the Macon-Bibb County Bikeways and Pedestrian Plan.

Short Term Projects. To address the short term projects, the MATS area was divided into six sectors and each committee member was assigned a sector to conduct a reconnaissance survey. Each committee member was asked to propose two types of routes in their respective sector. One route would be primarily recreational and the other for commuting. Once the committee members returned their suggested routes, the routes were reviewed by the local traffic engineering officials in order to be in compliance with local traffic safety standards.

Long Term Projects. As previously mentioned, the long term projects would require major construction to accommodate a bike lane. The TIP was thought to be the most economical and feasible way to bring these routes to fruition. The long term projects are listed in the June 2004 TIP that is entitled, "Transportation Improvement Program: Fiscal Years 2005-2007, Macon Area Transportation Study." Many of the routes include a pedestrian facility as well as a bike lane equipped facility.

Figure 6-14
Short Term Proposed Bicycle
Routes

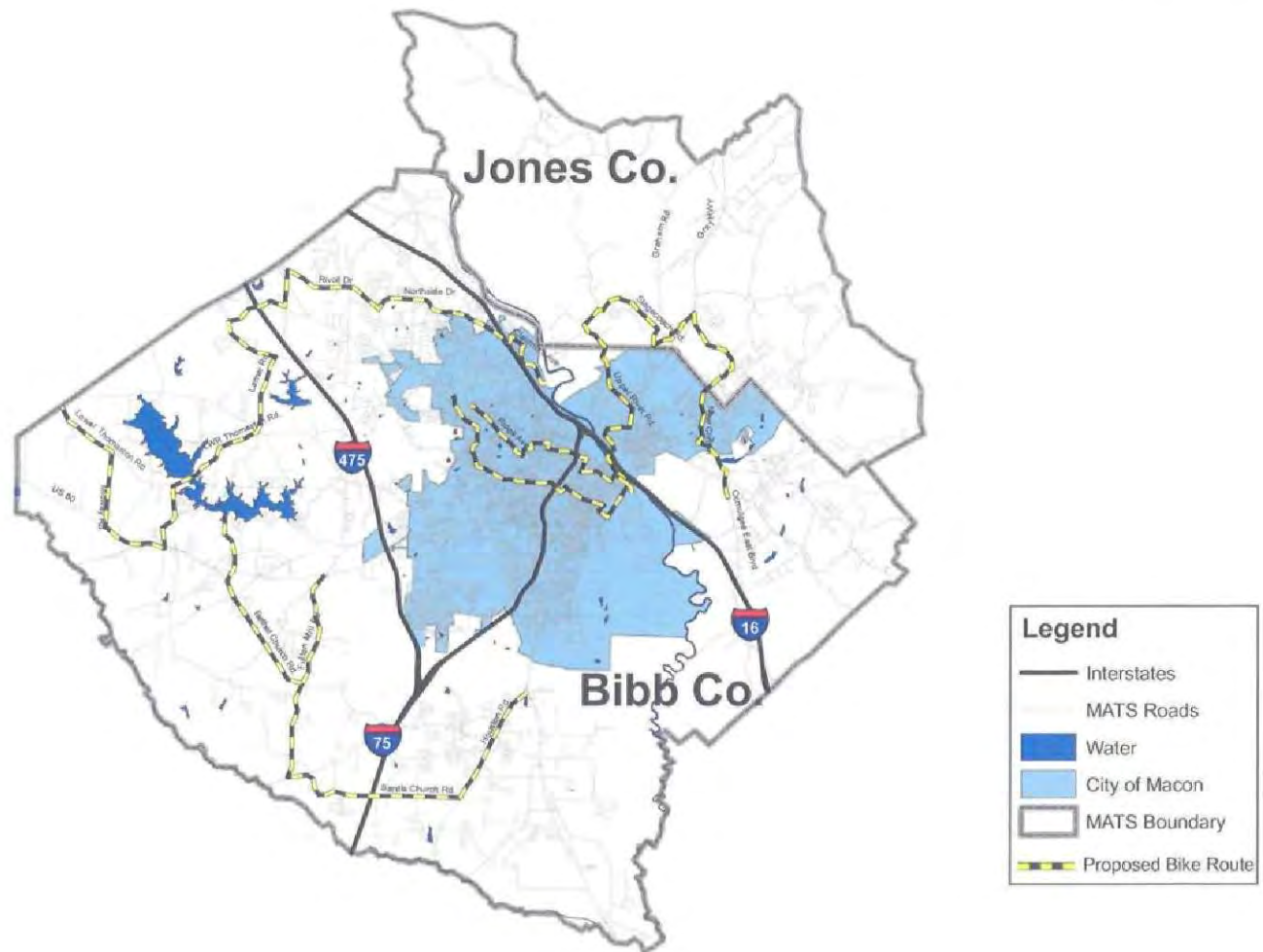
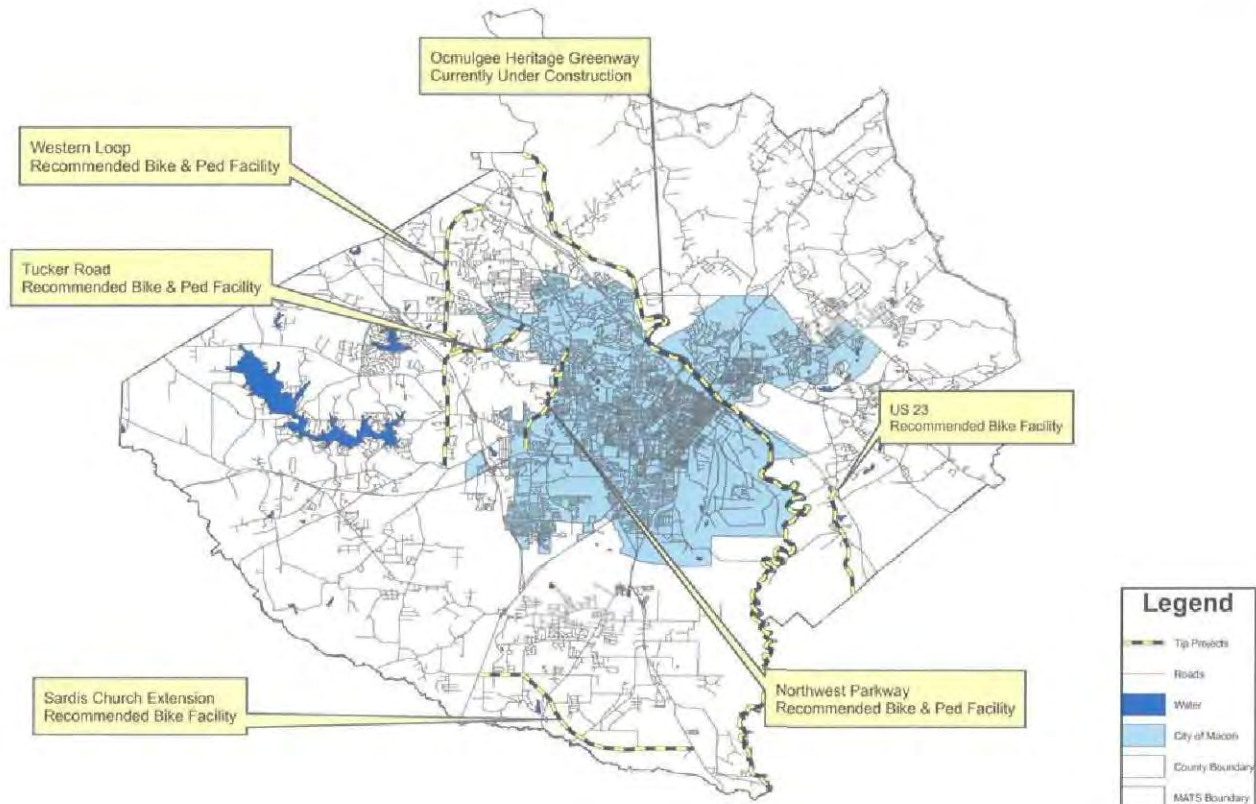
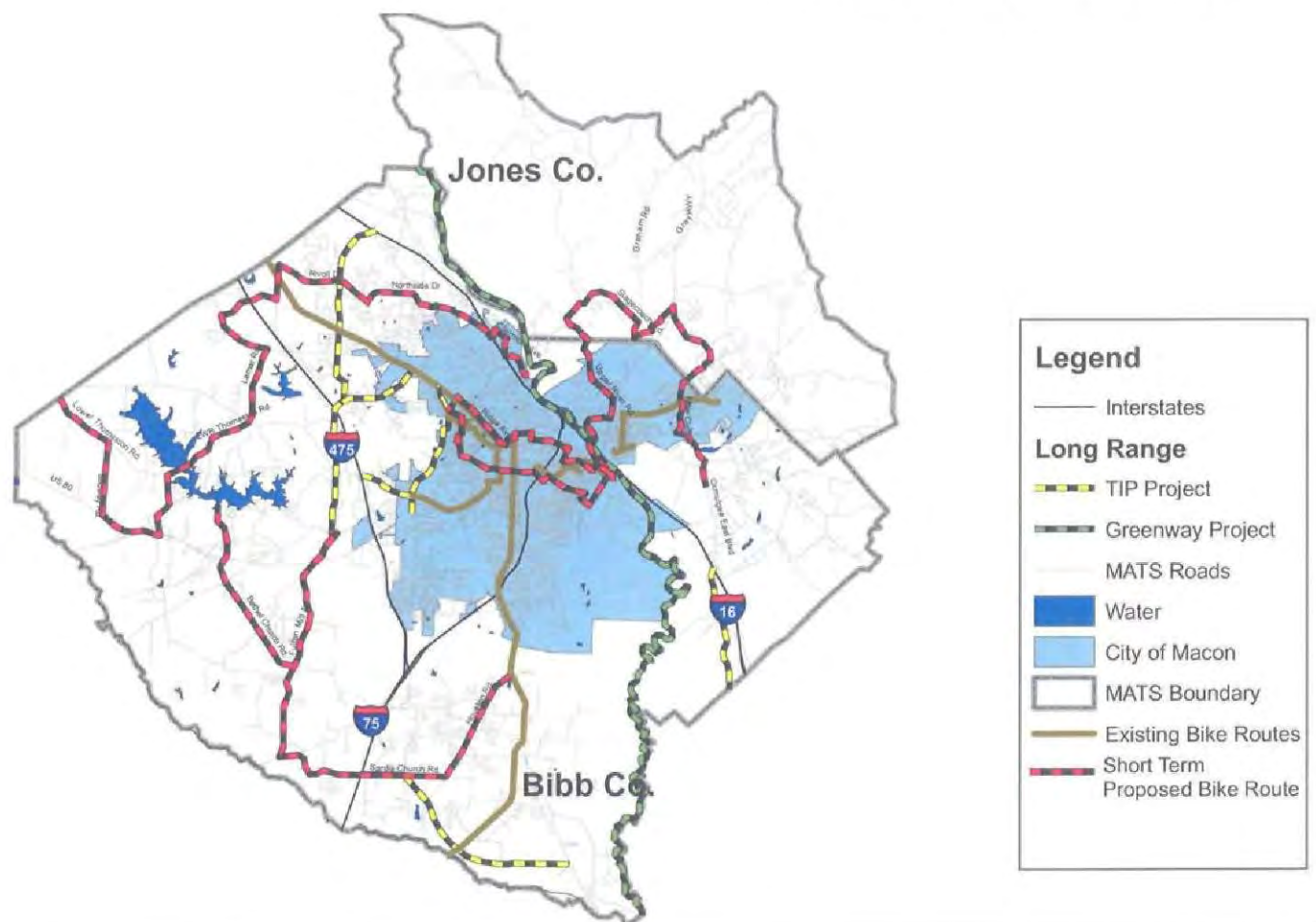


Figure 6-15
Long Term Bike Routes
TIP Projects with Bike & Ped
Facility



**Figure 6-16
MATS Existing and
Proposed Bicycle Routes**



Articulation of Community Vision, Goals and Associated Implementation Program

The Macon-Bibb County Visual Preference Survey (VPS) was a very successful attempt to harness the vision of the people of Bibb County and craft this vision into a future comprehensive plan for the community. Over 1,300 persons from every cross section of the community took this survey. In essence, the VPS represents the collective vision and voice of the community.

VPS participants were asked a series of question that involved everything from development options to mobility options. The county was dissected into three distinct regions; The Downtown, Neighborhoods, and the Rural/Suburban Region. In each region, development and mobility options were presented. Mobility options, which included bicycle and pedestrian facilities, were found to be highly desired options in each region.

The following are guidelines and policy recommendations from each region. These guidelines and policy recommendations are the articulation of citizen responses to the VPS regarding bicycle and pedestrian facilities.

Downtown

Bicycling was not identified as a preferred mobility option in the downtown by the VPS. However, the Bikeways and Pedestrian Plan survey primarily identified the Ocmulgee Heritage Greenway for recreational use. The greenway can be considered a part of the downtown realm.

The Downtown Pedestrian Realm should include the following characteristics:

- *sidewalks wide enough to accommodate projected pedestrian traffic*
- *commercial buildings built up to the sidewalk edge*
- *design guidelines to ensure uniformity of realm*
- *pedestrian furniture such as benches, trash baskets, planters, etc.*
- *street trees and on-street parking to provide protection*
- *continuous awnings in commercial areas to provide protection*
- *semi-public edge treatments such as fencing or hedging in residential areas*
- *pedestrian scaled lighting fixtures*
- *textured crosswalks*

Neighborhoods

The Neighborhood Mobility Options section indicated that bicycle paths on local streets and transit buses with front end bicycle hangers were highly desired. The guidelines and policy recommendations section indicated, in regards to bicycling and pedestrian activities, that:

a range of mobility alternatives should be made available to neighborhoods; it should include walkability, bicycle transit and multi-modal connections.

To enhance the Neighborhood Pedestrian Realm the following development guidelines and policy recommendations were suggested:

- *map and document all pedestrian realm features in an Existing Conditions Map and deteriorated or marginalized pedestrian realms in a Susceptibility to change Map*
- *develop a phased plan to repair and redevelop all deteriorated public pedestrian realm features in Macon-Bibb county neighborhoods*
- *develop and adopt a Design Plan for the redevelopment of all deteriorated public pedestrian realm features not meeting the full potential of Macon-Bibb County neighborhoods*
- *establish maintenance standards; regulate property maintenance and penalize property owners who fail to maintain properties per maintenance standard establish standards for design elements including sidewalks, street tree type and sizes, fence and hedge standards, window openings, awnings, etc.*

Rural/Suburban

The Rural/Suburban Mobility Options section indicated that bicycle lanes and paths should complement automobiles as a mobility alternative. The guidelines and policy recommendations section indicated, in regards to bicycling, that:

a range of mobility alternatives should be made available to rural and suburban areas; it should include walkability, bicycle transit and multi-modal connections

Rural/Suburban Pedestrian Realms should include the following characteristics:

- *sidewalks wide enough to accommodate projected pedestrian traffic*
- *commercial buildings built up to the sidewalk edge*
- *design guidelines to ensure uniformity of realm*
- *pedestrian furniture such as benches, trash baskets, planters, etc.*
- *street trees and on-street parking to provide protection*
- *continuous awnings in commercial areas to provide protection*
- *semi-public edge treatments such as fencing or hedging in residential areas*
- *pedestrian scaled lighting fixtures*
- *textured crosswalks*

To enhance the Rural/ Suburban Realm the following development guidelines and policy recommendations were suggested:

- *map and document all pedestrian realm features in an Existing Conditions Map and deteriorated or marginalized pedestrian realms in a Susceptibility to change Map*
- *develop a phased plan to repair and redevelop all deteriorated public pedestrian realm features in Macon-Bibb county neighborhoods*
- *develop and adopt a Design Plan for the redevelopment of all deteriorated public pedestrian realm features not meeting the full potential of Macon-Bibb County neighborhoods*
- *establish maintenance standards; regulate property maintenance and penalize property owners who fail to maintain properties per maintenance standards establish standards for design elements including sidewalks, street tree type and sizes, fence and hedge standards, window openings, awnings, etc.*

Aviation - Rail - Freight & Goods Movement

Introduction

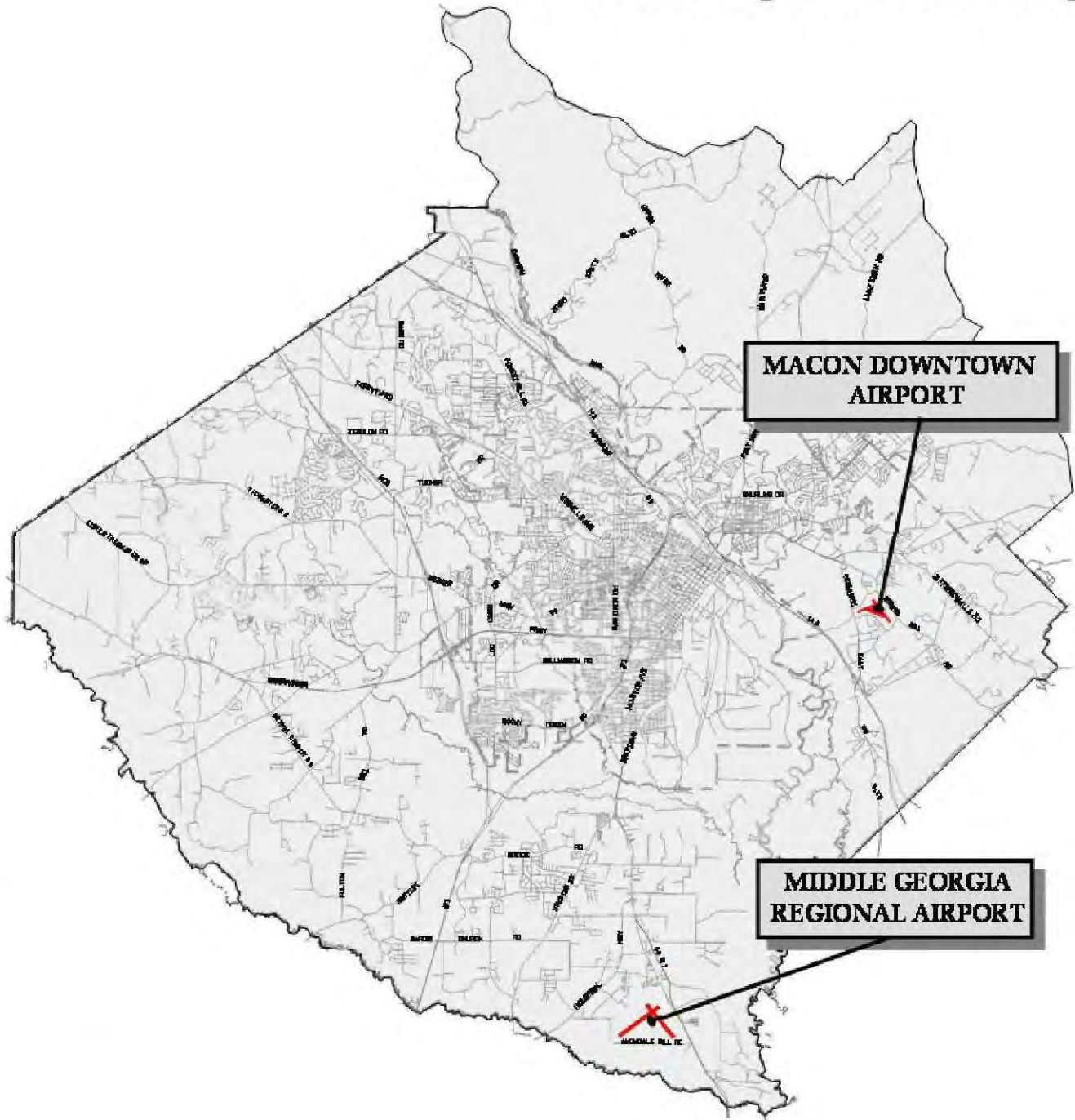
This portion of the 2030 LRTP includes both long-range and short-range strategies/actions which lead to the development of an integrated intermodal transportation system to facilitate the efficient movement of people and goods within the Macon Area Transportation Study Area (MATS), including Jones County. Intermodalism attempts to improve all modes of transportation by addressing any cross-modal connections the transportation system lacks. The 2030 LRTP will examine several modes of transportation such as airports, railroads, and truck terminals and determine how they can be better linked together into an intermodal system with other forms of transportation. The TEA – 21 (Transportation Equity Act for the 21st Century) requires each MPO to consider seven (7) planning factors in its transportation planning process, which includes; (1) Supporting the Economic Vitality of the Metropolitan Area; (2) Increasing Safety and Security; (3) Increasing Accessibility and Mobility Options for People and Freight; (4) Protecting the Environment, Conserving Energy, and Improving Quality of Life; (5) Enhancing Integration and Connectivity of the Transportation System; (6) Promoting Efficiency; and (7) Emphasizing Preservation of the Existing Transportation System. Of the seven (7) planning factors, three (3) planning factors specifically addresses the issues as it relates to airport, rail and freight and goods movement. Those factors are: Factor 3: Increase Accessibility and Mobility Options for People and Freight; Factor 5: Enhance Integration and Connectivity of the Transportation System and Factor 7: Emphasize Preservation of the Existing Transportation System. Overall, the seven (7) planning factors must inform transportation decisions at several levels in the planning process, guide the development of the long-range plan that defines the overall concept of the transportation network, and must be utilized in the decisions concerning the implementation of individual projects.

Aviation

Situated in the heart of the State of Georgia, Macon plays host to two airports, known as the Middle Georgia Regional, formerly known as the (Lewis B. Wilson) Airport and the Macon Downtown, formerly known as the (Herbert Smart) Airport. Airports are an important part of the transportation system, as well as the economy and can be characterized by two major categories; Air carrier airports and general aviation airports. Air Carrier Airports include the facilities that serve regularly scheduled passenger service. They are primarily facilities with the capacity to handle significant volumes of freight/cargo and passengers on a daily basis. The Middle Georgia Regional Airport accounts for the majority of revenue and traffic generated by airports within this classification. General Aviation Airports include smaller facilities which are normally located in counties throughout the State of Georgia. These facilities typically have paved runways 2,000 to 5,500 feet in length and are capable of accommodating small (single-engine) and medium sized (multi-engine) aircraft. These airports often provide opportunities for businesses with suitable aircraft to avoid the use of larger facilities and minimize air travel associated lag time. The Macon Downtown Airport falls within the description of the general aviation classification. The airports, along with the aviation related businesses and facilities, represents a vital and significant regional economic asset. In addition to the many aviation related assets, the airports also provide benefits to local businesses and industry, promotes tourism, as well as encourages additional business development and expansion throughout the City, surrounding communities, and adjacent counties. (Macon-Bibb Airport Locations, Figure 6-17)

The Middle Georgia Regional Airport began in 1940 as an airfield for the U.S. War Department from land donated by the City of Macon. The airfield was constructed primarily for flight training and was named Cochran Field. After World War II the U.S. Government returned the airport with associated facilities back to the City and commercial air service was initiated at Macon in 1948. Currently, the Middle Georgia Regional Airport is owned and operated by the City of Macon and is located approximately nine (9) miles south of the Central Business District. The Airport Reference Point (ARP) is located at Latitude 32° 41' 34.258" N, and Longitude 83° 38' 57.159" W. Middle Georgia Regional Airport, classified as a primary commercial service airport by the FAA's National Plan of Integrated Airport Systems (NPIAS), has an elevation of 354 feet above mean sea level (AMSL) and has property consisting of approximately 1,149 acres (www.airnav.com/airport/KMCN). Currently, the airport is served by one (1) commuter airline, Atlantic Southeast Airlines – Delta Airlines' connection carrier – which provides six (6) daily non-stop flights to Atlanta-Hartsfield-Jackson International Airport. Atlantic Southeast Airlines operates the Macon/Atlanta

Figure 6-17
Macon-Bibb Airport Locations Map



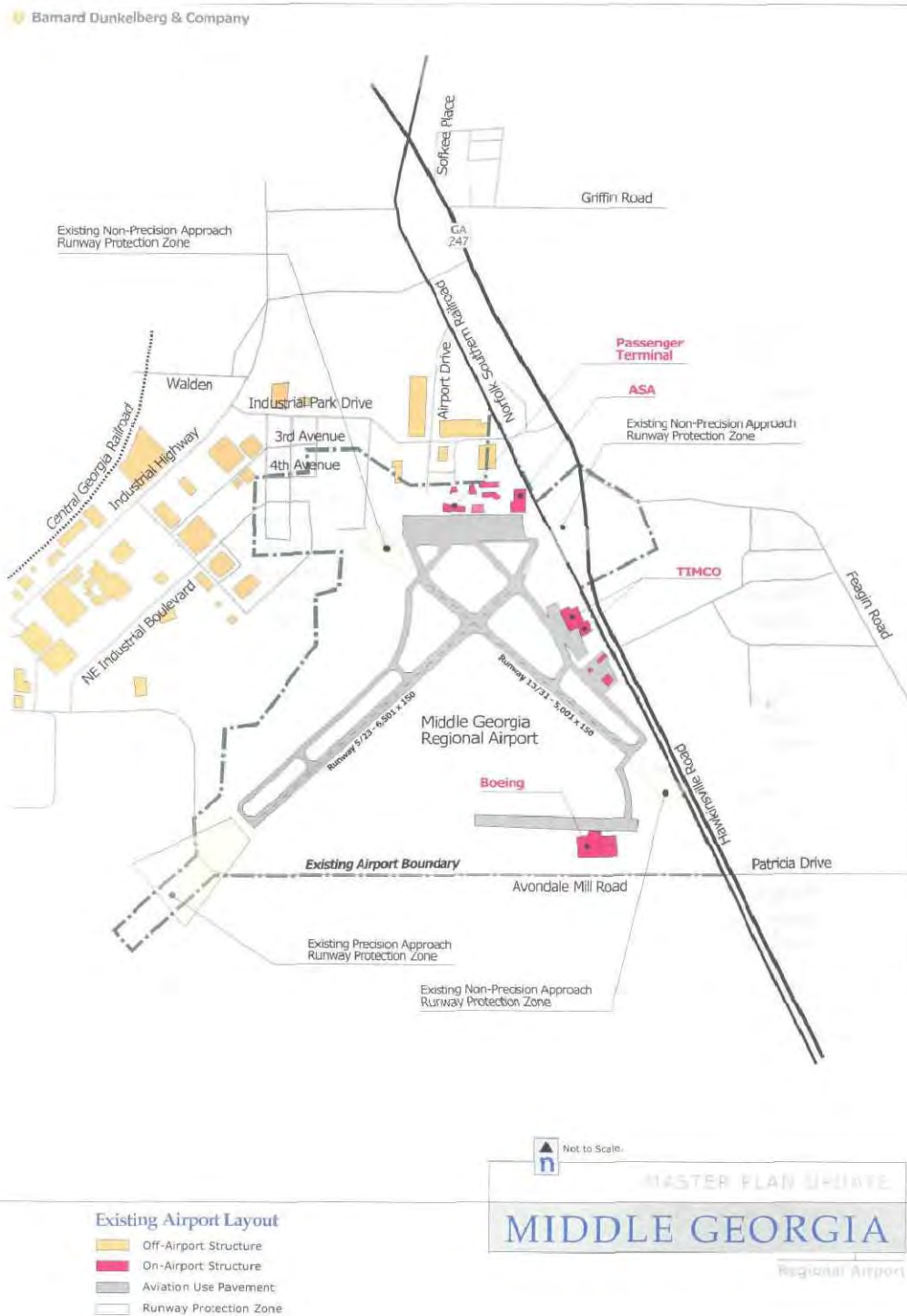
These maps were prepared by the
MACON-BIBB COUNTY PLANNING & ZONING COMMISSION
for the MACON AREA TRANSPORTATION STUDY



route with a variety of aircraft ranging in size from 30 seats to 66 seats. Middle Georgia Regional Airport is operated with two runways (Runways 5/23 and 13/31), taxiways, passenger terminal and lounge, a terminal/hangar structure, FBO hangars, aircraft parking aprons, and support facilities. In the past years, the Middle Georgia Regional Airport experienced a significant decline in passenger ridership, mainly because of the expansion of the Hartsfield-Jackson International Airport, the improvements to Interstate 75 and the initiation of local shuttle service from Macon to Atlanta. The *EXISTING AIRPORT LAYOUT* illustration provides a graphic presentation of the existing airport facilities (*Middle Georgia Regional Airport, Master Plan Update, Draft Report April 2002, pg A.2 - A.5*). See Figure 6-18.

The Macon Downtown Airport was originally constructed by the U.S. Government during World War II for the purpose of Army Air Force flight training. After World War II, the Airport was deeded to the City of Macon for use as a Civil Aerodrome. Commercial service was initiated by Delta Airlines and remained until the Middle Georgia Regional Airport was developed. However, the airport was retained for general aviation use. Currently, the Macon Downtown Airport is owned and operated by the City of Macon and is located approximately three (3) miles southeast of the Central Business District. The Airport Reference Point (ARP) is located at Latitude 32° 49' 19.700" N, and Longitude 83° 33' 43.300" W. The Macon Downtown Airport, classified as a general aviation airport by the FAA's National Plan of Integrated Airport Systems (NPIAS), has an elevation of 451 feet above mean sea level (AMSL). Currently, the airport operates 16 single-engine airplanes and 3 multi-engine airplanes. In addition, a flight school is operated at this location. The airport is operated with two runways (Runways 10/28 and 15/33), passenger terminal and lounge, FBO hangars, aircraft parking aprons, and support facilities. (www.airnav.com/airport/KMAC).

Figure 6-18
Existing Airport Layout Map



Aviation Access and Transportation

The Middle Georgia Regional Airport is located in southern Bibb County, east of Interstate 75. In its immediate vicinity, major thoroughfares such as Hawkinsville Road (SR 247) and Industrial Highway are primarily the existing transportation facilities that carry traffic into the Airport Industrial Park. However, Airport Road provides direct access to the passenger terminal and parking areas. The proposed interchange at I-75 and Sardis Church Road and the construction of the Sardis Church Road extension is expected to provide access to the Airport Industrial Park and the Middle Georgia Regional Airport. Local taxi services and rental car options are available at the airport terminal.

The Macon Downtown Airport is located in east Bibb County, east of Interstate 16. In its immediate vicinity, major thoroughfares such as Riggins Mill Road and Ocmulgee East Boulevard are the existing transportation facilities that carry traffic in the area of the airport. Herbert Smart Airport Road provides direct access to the terminal and parking areas.

Aviation Future Conditions

Planning for the future and constructing needed improvements is important for each airport as an individual facility, but also for the national and international system of airports as a whole. When an airport system or an individual facility begins to approach capacity, critical issues arise ranging from continued business viability to safety. The City of Macon has begun to plan for the improvement of airport facilities for the short and long term. In April 2002, an Airport Master Plan was prepared for the Middle Georgia Regional Airport by TOC, Inc., Barnard Dunkelberg & Company and Atkins Benham. The plan was prepared as a result of changes that have transpired within the aviation industry on a local, regional, and national level that impacted aviation facilities and services provided at the airport. These changes necessitated a re-evaluation of the airport's Master Plan as a means of analyzing current and forecast operational characteristics and facilities, as well as updating the program for airport development. The population growth and economic expansion that is occurring within the region have necessitated a long-range analysis and plan for the future needs of the airport to accommodate aviation demand. However, the overall planning goal will focus on the development of an aviation facility that can accommodate future demand that is not significantly constrained by its surroundings. The sections below provide a brief description of the improvements to be made to the Middle Georgia Regional Airport and will also identify projects that are completed. (Middle Georgia Regional Airport Layout Plan, Figure 8-3)

Middle Georgia Regional Airport - Runway System Improvements

The airport's runway configuration will remain structured around two runways. Runway 5/23 will be retained as the airport's primary runway. Ultimately, Runway 5/23 is programmed to be extended from its existing length of 6,501 feet to a length as long as 8,000 feet. To achieve Safety Area and Object Free Area requirements, the approach end of Runway 23 will be initially displaced 500 feet. Ultimately, if the runway is extended to the southwest, the Runway 23 threshold will be permanently relocated. Runway 5/23 will remain at its existing width of 150 feet. The crosswind runway (Runway 13/31) will be maintained at its existing length and width (5,001' x 150'). In association with the extension of Runway 5/23 to the east, a 130-acre parcel of land is recommended for acquisition. In addition, a small parcel of land (approximately 3 acres) on the east side of the airport (west of the railroad, south of the Timco, and north of the approach end of Runway 31) is programmed for acquisition and will be utilized for general aviation storage facilities.

Middle Georgia Regional Airport - Taxiway System Improvements

The parallel taxiway systems serving Runway 5/23 and Runway 13/31 will be retained. The existing parallel taxiway serving Runway 5/23 will be extended to the northeast to provide a full parallel taxiway. In addition, a parallel taxiway system is programmed for the southwest side of Runway 13/31 and the southeast side of Runway 5/23.

Landside Development Improvements

East Development Area. This area is located on the eastern portion of airport property, south of Runway 5/23. The area will continue to accommodate industrial aviation uses (i.e., Timco), along with various general aviation storage facilities (T-hangars and corporate hangars). New T-hangars are programmed to be built within the East Development Area, following the acquisition of a small parcel of land not presently owned by the airport.

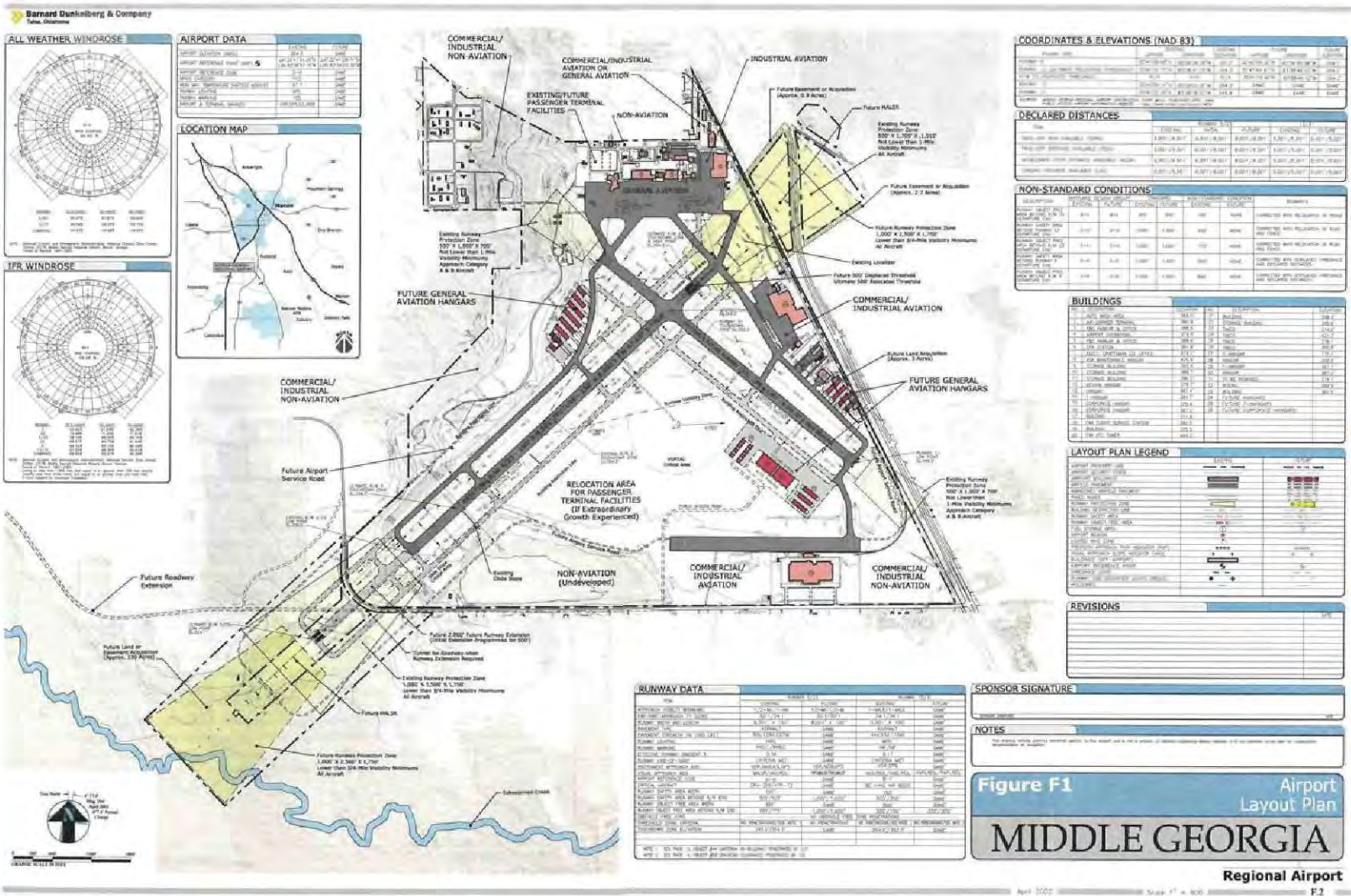
Additional improvements and completed projects at the Middle Georgia Regional Airport & the Macon Downtown Airport are listed below.

Middle Georgia Regional Airport Improvements:

- ☐ Development of the South Ramp
- ☐ Establishing a Sub-Foreign Trade Zone by the end of 2005.
- ☐ Expand terminal to 5 gates: 3 Jet-ways and 2 walk-out gates for passengers.
- ☐ Construct a 4-level parking deck.
- ☐ The main runway will be extended 1500 ft in order to accommodate larger aircrafts.

Macon Downtown Airport Improvements:

- ☐ Completed pavement of runway in 2004
- ☐ Completing taxi & runway lights in 2005
- ☐ Completing a Fixed Base Operation (FBO) hangar in 2005



Rail

At one time, Macon was the railroad hub of the South for passenger and freight trains. Macon was a strategic point in linking the markets in the west with the South Atlantic and the north and south route. But as air travel became the transportation mode of choice for passenger and freight movement, many railroad lines were abandoned. The Central Georgia region has been served well by surface and air transportation facilities from Atlanta. As the Central Georgia region continues to grow, the need for improved rail transportation services will increase. Overall, Georgia has a network of nearly 5000 miles of rail lines, many of which can have capacity added to handle passenger & freight traffic. The Macon-Bibb County area is served by the Norfolk Southern and Georgia Central rail lines. (See Macon-Bibb Railroads, Figure 8-4). The Norfolk Southern Rail line is considered a “Class I” railroad that has approximately 1,724 miles of rail throughout the State of Georgia. The Georgia Central Rail line is considered a “Shortline Railroad” that has approximately 171 miles of rail within the State of Georgia. (See Georgia Rail System Map, Figure 8-5). These rail lines transport freight into the Macon-Middle Georgia region but do not provide multimodal interconnectivity with other modes of transit in the region. It is estimated that approximately 40 million tons of freight per mile travel between Macon and Savannah. Due to its coastal location, Savannah provides multimodal linkages to middle Georgia via Interstate 16 and rail lines.

Georgia Rail Passenger Program

(Proposed Rail Service – Atlanta to Macon)

Georgia’s economy has grown considerably through the vision of its leaders and the productivity of its citizens. That vision has always understood the importance of mobility of people and goods in Georgia through transportation systems that are among the best in the world. The world’s busiest airport, a highway system consistently ranked as the best maintained in the nation, rapidly growing port activities and burgeoning freight rail activity all reflect that understanding. Planning for passenger rail service using existing railroad corridors has been going on in Georgia since the late 80’s. Georgia’s extraordinary rate of growth, traffic congestion and air quality problems make it imperative to develop safe and affordable transportation alternatives to the single-occupancy automobile. With added infrastructure improvements, it is feasible to implement passenger service in several existing railroad corridors as exists already in over a dozen U.S. cities. GEORGIA RAIL is the rail passenger program for Georgia. The Georgia Department of Transportation (GDOT), the Georgia Rail Passenger Authority (GRPA) and the Georgia Regional Transportation Authority (GRTA) have joined forces to complete the planning and implement a system of

Figure 6-20
Macon-Bibb Railroads Map

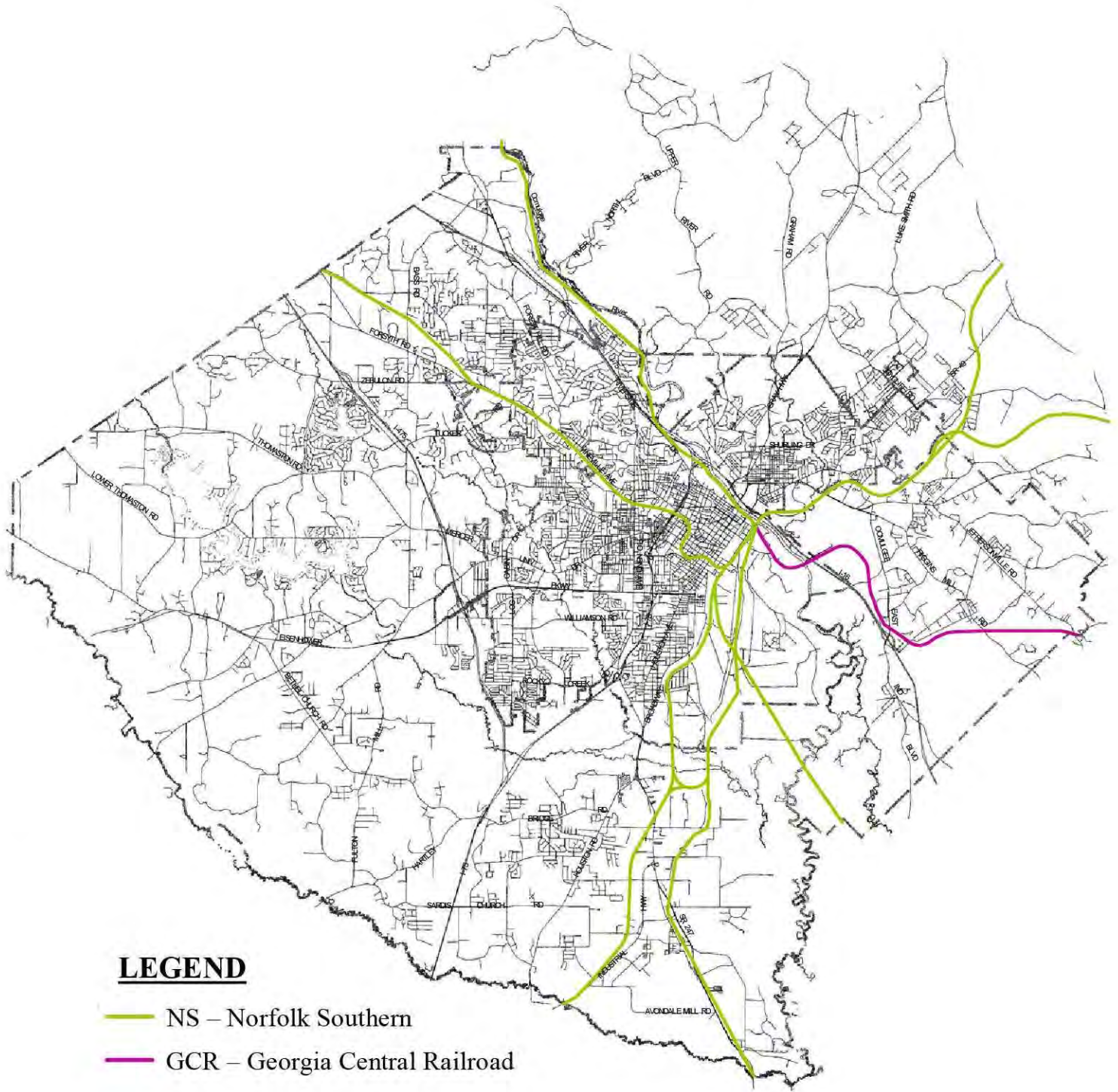
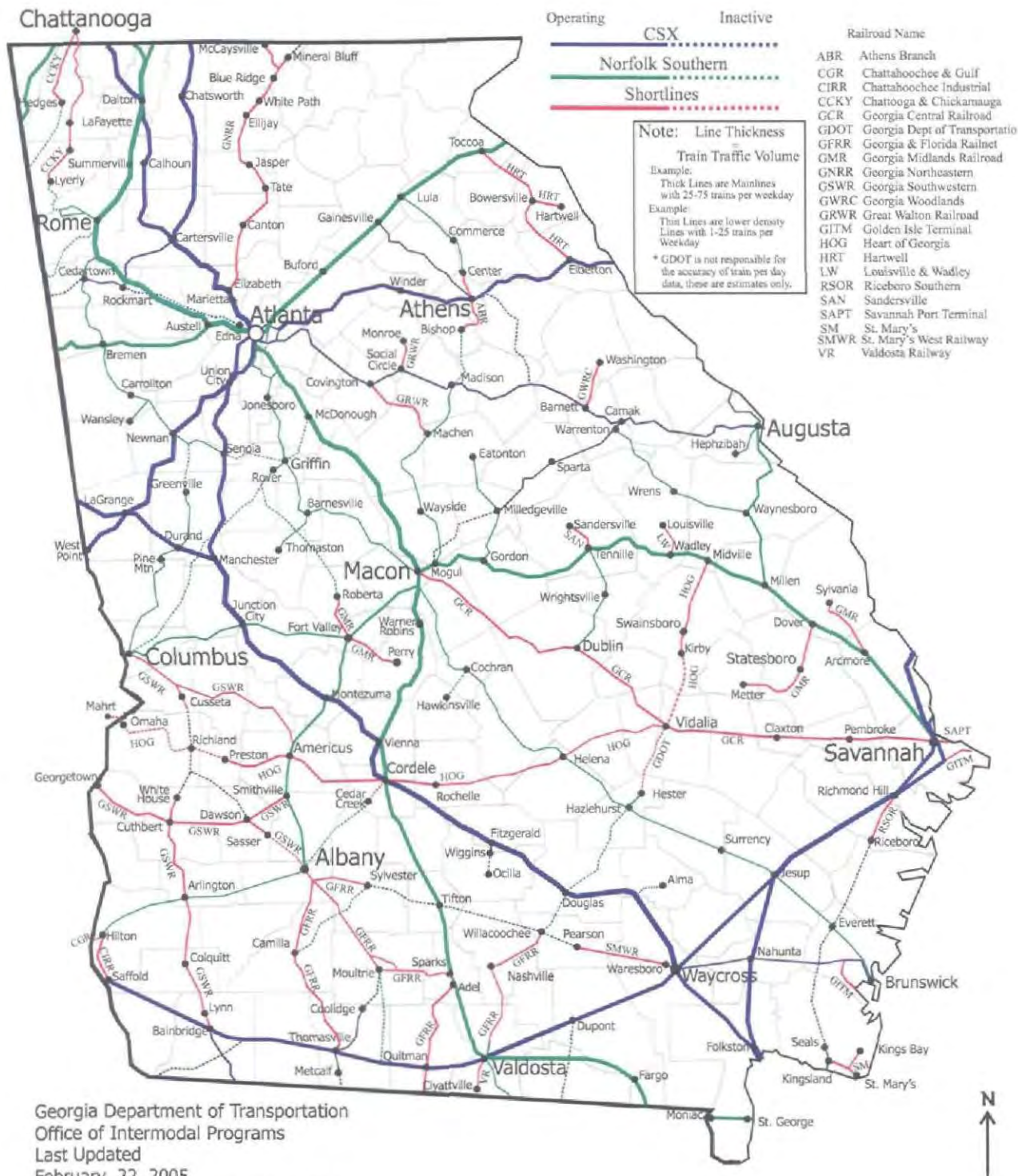


Figure 6-21
Georgia Rail System Map



commuter and intercity rail passenger service in Georgia over the next 14 years. Athens to Atlanta and Macon to Atlanta are the first phase of the Program. In addition, extensive studies of the impact passenger service will have on existing freight operations are being conducted. Agreements with the CSX and Norfolk Southern Railroads will have to be reached and federal clearances obtained before service can be initiated. (www.garail.com). The following section briefly describes each proposed corridor.

Macon to Atlanta Rail Corridor

Macon/Houston Co.–Griffin–Henry–Hartsfield/Jackson Airport– Atlanta Commuter Rail Service

The 103-mile Macon – Atlanta line will carry 7,600 trips a day during peak periods in the year 2030. About 75% of the forecast passengers will board at Spalding, Henry, and Clayton County with stops destined for Hartsfield-Jackson, East Point, and the Multi-Modal Passenger Terminal in downtown Atlanta. Six trains will run to the downtown Atlanta MMPT in the morning peak period from Griffin, while making all stops; two trains will run from Macon, also making all stops. In the afternoon peak period, trains would



Source: GDOT 2005 Legislative Session Fact Sheet

return commuters to their home stations. Limited mid-day and evening service will provide needed flexibility for customers. Trains will run within the existing railroad right-of-way using existing and new tracks, owned by Norfolk Southern Corporation (NS). Capital costs to provide capacity for the year 2015 are esti-

Table 6-24 Macon Line capital costs (2004 \$\$ in millions)	
Track work & signals	\$ 169
Rolling stock	\$ 64
Stations and parking	\$ 54
Maintenance facilities	\$ 12
Total	\$ 299

Source: GDOT 2005 Legislative Session Fact Sheet

ated at \$299 million in the year 2004 dollars. **Phase 1** with four trains from Lovejoy (26 mile segment) will cost \$106 million and can be open by Fall 2006. **Phase 2** will extend trains from Hampton and Griffin (16 mile segment) for an initial cost of \$37 million. Two additional trains and more parking at stations to handle growth to 2015, and permanent maintenance facilities will cost \$38 million.

Phase 3 will add Barnesville, Forsyth, Bolingbroke and Macon for \$118 million. Phases 2 & 3 could open two years after funding. An additional \$88 million will handle growth to 2030. The major categories of this cost are shown in the table, with each category including all costs of design, construction management and contingency attributable to each. The Federal Transit Administration issued a Finding of No Significant Impact (FONSI) for the Macon – Atlanta commuter rail service in November 2001, clearing the environmental hurdle to spending Federal funds on preliminary engineering and related matters. Negotiations are ongoing with the Norfolk Southern Railroad on the terms of access, operation, and upgrading of the rail line for Phase 1 from Lovejoy. A Macon Corridor Local Advisory Committee (MACLAC) has been established to help communities leverage the transportation investment with station area land use plans. According to GDOT officials, the development of the Macon commuter rail comes with several benefits.

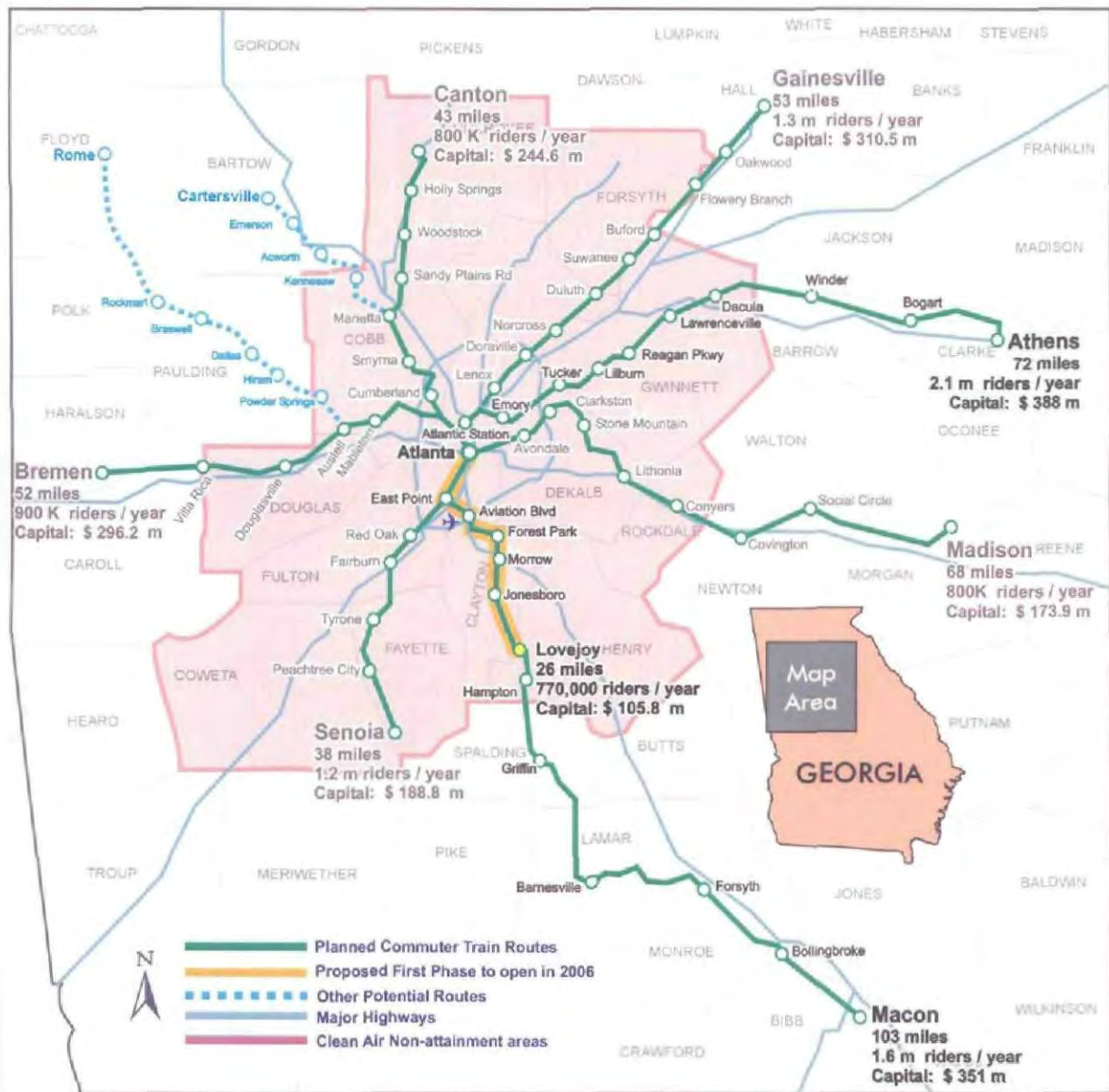
- 3,800 fewer auto trips in each peak period—equivalent capacity of a lane in each direction on I-75/85
- Avoids road construction cost of \$700 million, creates \$48 million annually in time savings for remaining road users, reduces accident, injury and fatality exposure of riders by 2/3
- Controlled traffic environment less subject to breakdown and delay; enhances mobility to non-drivers, helps improve air quality, and saves energy
- Intercity trains to Middle and South Georgia can use improved tracks, crossings and stations

Source: GDOT "2005 Legislative Session Fact Sheet"

Macon - Griffin – Atlanta Commuter Rail

GDOT will use \$106 million in currently available earmarked funding and other Federal transportation funds to make improvements and acquisitions in order to open commuter train service on the 26 miles from Lovejoy to Atlanta as early as September 2006, and \$14.5 million in Federal funds to operate for three years. Agreements need to be reached with the owner of the rail line (Norfolk Southern) on track improvements and operations, as well as with local governments on final station locations, station area development, and partnerships for stable and reliable operating funding after 3 years. In this first phase, four trains daily will serve Lovejoy, Jonesboro, Morrow, Forest Park, East Point, and downtown Atlanta at Five Points. (See Macon to Atlanta Commuter Rail, Figure 8-6). Passenger cars and locomotives will be acquired and refurbished to allow quick start-up. Track, signals, and grade crossings will be improved to allow top speeds of 60 – 79 mph. The outer stations will have platforms, canopies, and park and ride lots; the East Point and downtown Atlanta station will be provided with platforms, canopies, and direct connections to the adjacent MARTA stations. By 2009, 3,080 daily trips are forecast (770,000 trips a year), removing 21 million vehicle miles annually from parallel I-75 and US 19/41, and reducing rush hour congestion by 800,000 hours a year. In later phases, track, signal, crossing and station/parking improvements will be made to extend service to Hampton, Griffin, Barnesville, Forsyth, Bolingbroke, and Macon. Service could begin within two years of funding. Two additional trains will be needed to handle the increased passenger loads, as well as additional parking at stations and long-term train maintenance facilities. The capital cost to provide capacity for forecast year 2015 traffic is estimated at \$299 million with almost half for track-work and signals, one third for rail vehicles, and the remainder for stations, park and ride lots, and maintenance facilities. A further \$99 million will be needed to provide enough capacity to handle year 2030 traffic. At the mid-range of fares, 1.9 million passengers will be carried in 2030, with operating assistance of \$8.7 million per year. The number of train riders into the Atlanta urban area will equal 10% of the rush hour travel on parallel I-75 and US 19/41, providing the capacity of 2 general-purpose highway lanes at half the cost.

**Figure 6-23
Macon to Atlanta Commuter Rail Map**



The Georgia Rail Passenger Program / 276 Memorial Drive, S.W. / Atlanta, GA 30303 / 404-463-0965

GRPA M101 - 10 / 2004

Macon – Griffin – Atlanta Intercity Rail

Three daily express intercity trains will operate each way with tilting trainsets, stopping at Griffin and at Hartsfield-Jackson Airport-related station. Feeder bus service will add passengers from Twiggs, Houston and Peach Counties to the trains at Macon. Initial 2015 equipment acquisition and facility capital improvement will require \$56 million in capital. A further \$5 million will be needed to provide enough capacity to handle year 2030 traffic. At the mid-range of fares, 275,000 passengers will use the service in 2030, with operating assistance of \$3.6 million per year.

Albany - Macon – Atlanta Intercity Rail

This 106-mile extension of the Macon - Atlanta intercity rail will use an NS freight line, with stops in Dougherty and Sumter counties. The initial capital cost to provide capacity for 2015 is estimated at \$140 million, with a further \$12 million needed to provide capacity for 2030. At the mid-range of fares, 271,000 passengers are forecast in 2030, with an operating surplus of \$3.6 million per year. Opening will occur within two years of funding, once service to Macon is in place.

Savannah - Macon – Atlanta Intercity Rail

This service will link the Coastal Empire with Macon and Atlanta and intercity trains at both ends. The three trains daily each way will double the service between Macon and Atlanta. From Macon to Savannah, the service will use either: (a) the NS freight line to Jesup and the CSX line from Jesup to Savannah with stations in Dodge, Wayne, and Chatham counties (204 miles), or (b) the Georgia Central line, with stops in Toombs and Chatham counties (171 miles). Initial capital cost based on the NS/CSX route is estimated at \$294 million to provide capacity for 2015, with a further \$24 million needed to provide capacity for the year 2030. At the mid-range of fares, an additional 551,000 passengers would use the service, with an operating surplus of \$2.4 million per year in 2030. Opening could be within two years of start of service between Atlanta and Macon.

Intercity Rail Program

The Intercity Rail Passenger Plan prepared for the Georgia Department of Transportation (GDOT) collected extensive information on current intercity travel within the State in 1995, made forecasts of future

travel by all modes, examined the suitability of existing railroad corridors for rail passenger service, and estimated ridership, revenues, costs, and external benefits of intercity rail passenger service in a number of possible corridors.

Today all the rail lines in the recommended network are active freight lines, except for a short abandoned stretch on the line to Columbus. There is very limited passenger service only between Savannah and Jacksonville as part of Amtrak's New York to Florida line, and between Greenville, Atlanta, and Birmingham on their New York to New Orleans line.

Significant investment will be needed in these rail corridors to meet the capacity needs of the freight railroads, improve signaling, and increase grade crossing protection to allow the speeds of up to 110 mph that are recommended to attract passengers and create benefits for the State. Currently there are no dedicated Federal or State sources for funding intercity rail service, and Georgia will have to create its own combinations of funding to develop the intercity rail passenger service. (See Georgia Intercity Routes, Figure 8-7).

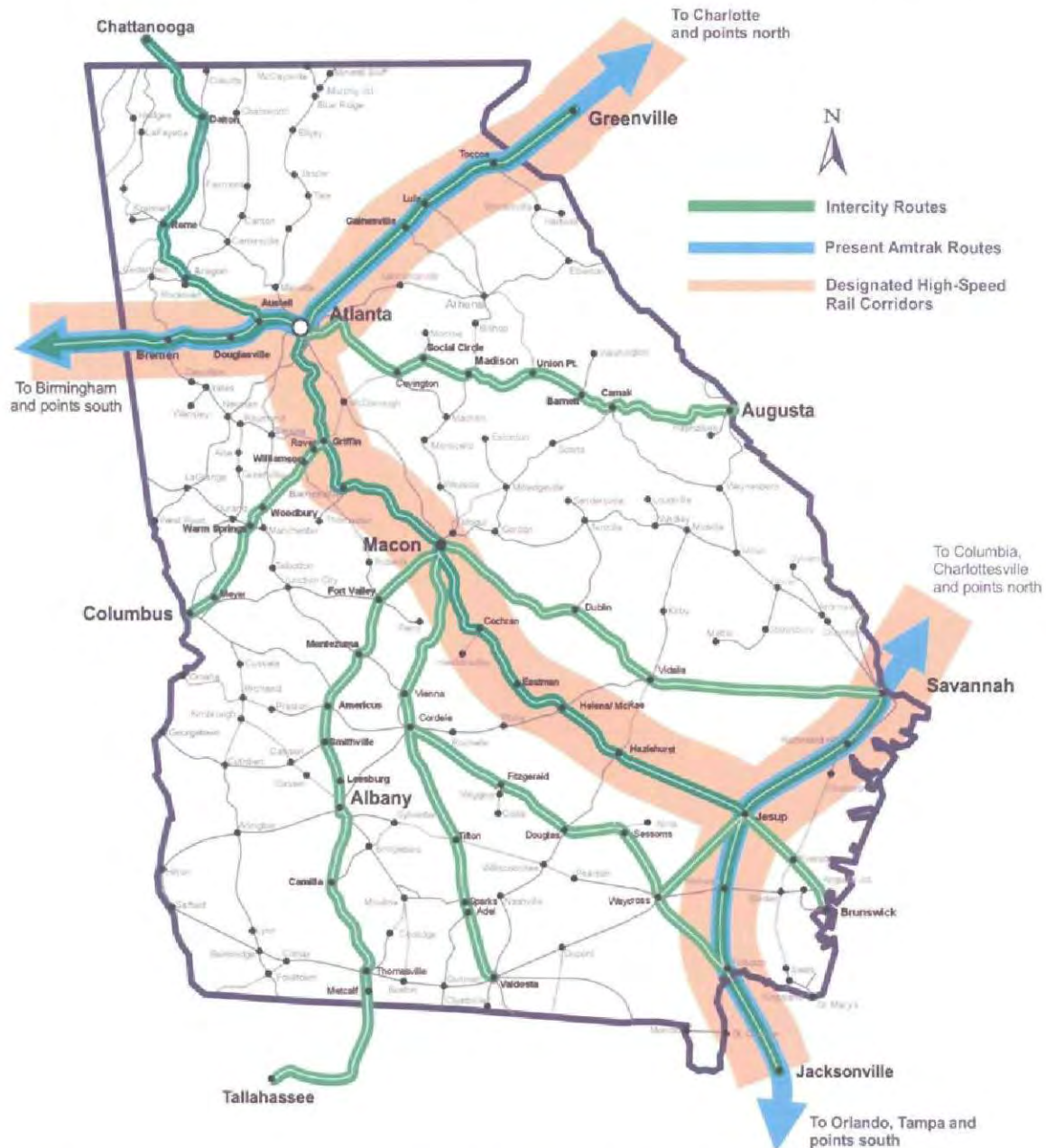
Rail Service Relative to the 2030 LRTP

The above text on passenger and intercity rail has been provided for information purposes. Since operating funds have not been secured to support extension of passenger rail services between Macon and Lovejoy, the rail program cannot be included in the financially constrained LRTP or TIP.

Multimodal Facilities in Macon and Bibb County

Macon's 1916 Terminal Station, at the foot of Cherry Street downtown, was designed in the Beaux Arts

Figure 6-24
Georgia Intercity Routes Map



The Georgia Rail Passenger Program / 276 Memorial Drive, S.W. / Atlanta, GA 30303 / 404-463-0965

GRPA.M102 -

style by architect Alfred Fellheimer (1875-1959). Fellheimer and his partners also designed stations in Cincinnati, Buffalo, and other cities. In 1926-27, the station handled as many as a hundred arrivals/departures each day, primarily trains of the [Central of Georgia, Southern Railway](#), and [Georgia Southern & Florida](#). Passengers accessed the train platforms by way of a tunnel under the tracks. After closing in 1975, the building stood unused several years until it was purchased by Georgia Power Company in 1982 and used as its local offices in the 1980s and 1990s. In 2002, the City of Macon received one million dollars in TEA funds to purchase the building from Georgia Power and convert it to a retail, office, and multi-modal transportation center. The City of Macon has repurchased Macon Terminal Station from the Georgia Power Company, and is now in the process of developing the structure as an intermodal gateway facility. Intercity trains will use this station once it becomes available. Ultimately, Macon will be a hub for rail service to many points in middle Georgia and south Georgia. The Macon-Bibb County Transit Authority has relocated its transfer station to the Macon Terminal Station.

Although there are several rail lines and truck depots in the city of Macon, Macon is not a city that has active multimodal facilities. The majority of the multimodal and intermodal facilities that service the city of Macon and Bibb County are located in the Atlanta area. The presence of I-75 and the proximity of Hartsfield-Jackson International Airport make Macon very accessible to Atlanta's multimodal and intermodal facilities. Conventional inter-city passenger rail service is receiving much consideration at the state level. Preliminary studies are ongoing concerning the passenger rail service between Macon and Atlanta. The Macon Terminal Station will function as a multimodal facility that will include public transportation options, such as local bus service, taxi service, as well as, intercity bus service that is provided by Greyhound Bus Service and rail service will be provided.

Freight and Goods Movement

Freight, as defined by Webster, is known as "the ordinary transportation of goods by a common carrier and distinguished from express." However, when planning for freight it should include the transport of

goods not only by common carriers operating for-hire but also should include the use of a firm's own vehicles, primarily fleets of trucks, to transport its own goods. Freight can be transported via roadways, rails, air, waterways and/or pipelines. Because each mode of freight transportation offers different levels of service (travel time and reliability) and different levels of pricing (cost), the value, weight and fragility of a commodity will determine the most cost-effective mode or combination of modes (*GDOT Freight Guidebook, Interstate System Plan – Technical Memorandum, February 2004*). Businesses and individuals now demand more flexible and timely service, increasing the importance of an efficient and reliable freight transportation system. The growth in freight movement is placing enormous pressure on an already congested highway system. Between 1980 and 2002, truck travel grew by more than 90 percent while lane-miles of public roads increased by only 5 percent. The Freight Analysis Framework (FAF) estimates that the percentage of urban Interstates carrying 10,000 or more trucks will increase from 27 percent in 1998 to 69 percent in 2020 (USDOT FHWA 2002a). Because of the significant growth in freight on an increasingly congested network, decision-makers in the public sector are giving more attention to the effects of congestion on freight transportation and the need for freight-specific investment (*USDOT FHWA Freight Transportation: Improvements & the Economy, June 2004*). The Georgia Department of Transportation (GDOT) and its Metropolitan Planning Organizations (MPOs) are responsible under Federal legislation and regulations for conducting planning activities “that serve the mobility needs of freight and foster economic growth and development within and through urbanized areas. The Transportation Equity Act for the 21st Century (TEA-21) passed in 1998 outlined seven planning factors, three with freight-specific requirements;

- Supporting economic vitality by enabling global competitiveness, productivity and efficiency;
- Increasing the accessibility and mobility of people and freight;
- Enhancing the integration and connectivity of the transportation system, across and between modes for people and freight.

(*GDOT Freight Guidebook, Interstate System Plan – Technical Memorandum, February 2004*)

Freight Infrastructure

Macon-Bibb County has extensive freight transportation infrastructure composed of highways, railroads, and air cargo services.

Highways – Macon-Bibb County has interstate highways (I-75 and I-475) providing North/South service north into Tennessee and south into Florida, as well as an East/West interstate (I-16) which provides ac-

cess to Georgia's largest port city, Savannah. Other major thoroughfares such as SR 247, US 129, US 80, SR 74, SR 49 provides service throughout other parts of Georgia.

Railroads - Macon-Bibb County is served by two rail lines which include Norfolk Southern and Georgia Central Railroad. These rail lines transport freight into the Macon-Middle Georgia region but do not provide multimodal interconnectivity with other modes of transit in the region. It is estimated that approximately 40 million tons of freight per mile travel between Macon and Savannah. Although this may appear to be a huge volume, it is considerably less than the amount that travels in and out of Atlanta.

Air – The Middle Georgia Regional Airport provides Macon-Bibb County with passenger service to Hartsfield-Jackson International Airport. Macon Downtown Airport is a smaller airport in the area used for general aviation use.

Freight and Goods Movement Industry Outreach Initiative

Recognizing the key role that freight transportation plays in its region, the Macon-Bibb County Planning & Zoning Commission (MPO) initiated a Freight and Goods Movement Study to develop a framework for an integrated freight program for Macon-Bibb County. The MPO has become increasingly focused on freight transportation planning over the last several years, undertaking freight specific studies and research efforts, including the "Goods Movement Study, June 1995. As a result of this research effort, the MPO continuously attempts to formally incorporate freight transportation issues into the traditional MPO planning process. Significant work had already been undertaken by the MPO in June 1995 and November 2004 to reach out to the freight community and solicit input on the region's freight system. On November 1, 2004, approximately 31 Freight and Goods Movement Surveys were mailed to several freight companies throughout Macon-Bibb County. Of the 31 surveys, 5 were returned undeliverable and 7 were completed that provided some usable information. As part of that effort, industry participants provided an overview of their business and identified problem areas that will assist transportation planners in improving freight flows in the region. These suggestions represent the continuous nature in working to develop a regional freight program by identifying and documenting the issues and concerns expressed by the system users.

The following is a summarization of comments and recommendations identified in the *Freight and Goods Movement Industry Outreach Initiative, November 2004*.

- **Primary type of facilities at this site?** Truck terminal, Logistics/Third Party Provider

- **Primary type of shipments handled at this site?** Less than Truckload, Truckload, Hazardous materials
- **During what hours do you usually need to receive/ship deliveries of your major inbound and outbound products?** 6am – 12 noon, 12 noon – 4pm, 4pm – 8pm, 12 midnight – 6am, 24 hours a day
- **How many trucks on average does your company use on a daily basis for freight and goods movement in the City of Macon and Bibb County area?** 5, 6, 8, 10, 11, 12-16, 48
- **What roadways are used most by your company's vehicles in the movement of freight and goods in the City of Macon and Bibb County area?** US 80, SR 74, SR 247, I-16, I-75, I-475, Broadway, Pio Nono Avenue
- **What improvements could be made to the roadway system to improve the movement of freight and goods in the City of Macon and Bibb County?** Should be a south bound turn lane from Hartley Bridge Road onto I-75 south bound; Improve turn lane at Pio Nono Avenue and Guy Paine Road
- **Indicate specific transportation problem locations within the City of Macon and Bibb County.** SR 247 – Congestion & surface condition; Bridge at I-475 & Hartley Bridge Road – Too Narrow; Guy Paine Road @ Pio Nono Avenue – Improve lane width and surface condition; Guy Paine Road – Improve maintenance; I-16 @ Spring Street entrance & exit ramp – Length & Signage problem; I-75 & Pio Nono Avenue (Loop exit) – Signage problem; Pio Nono Avenue (between I-75 & Guy Paine Road) – Congestion, Lane width and needs turning lane; I-16 West @ I-75 North – length & sight problems
- **If there is any additional information which might be beneficial to this study, please indicate?** Should be southbound turn lane from Allen Road onto SR 247; I-16/I-75 Interchange is extremely dangerous

The Freight & Goods Movement Industry Outreach Initiative was undertaken by the Macon-Bibb County Planning and Zoning Commission, which encompassed the entire Macon and Bibb County. A survey was made of existing enterprises and broken down into 3 types of freight movement concerns that included liquid or dry bulk, local cartage and motor freight. This provided the study with 31 entities from which to survey. See figure 8-8 for truck terminals locations. Also, see figure 8-9 for a list of all the freight companies in Bibb County. Appendix A includes the "Freight & Goods Movement Industry Outreach Initiative letter & the Freight & Goods Movement survey instrument. The responses from this outreach are summarized in the above paragraph.

Figure 6-25
Truck Terminals Locations Map

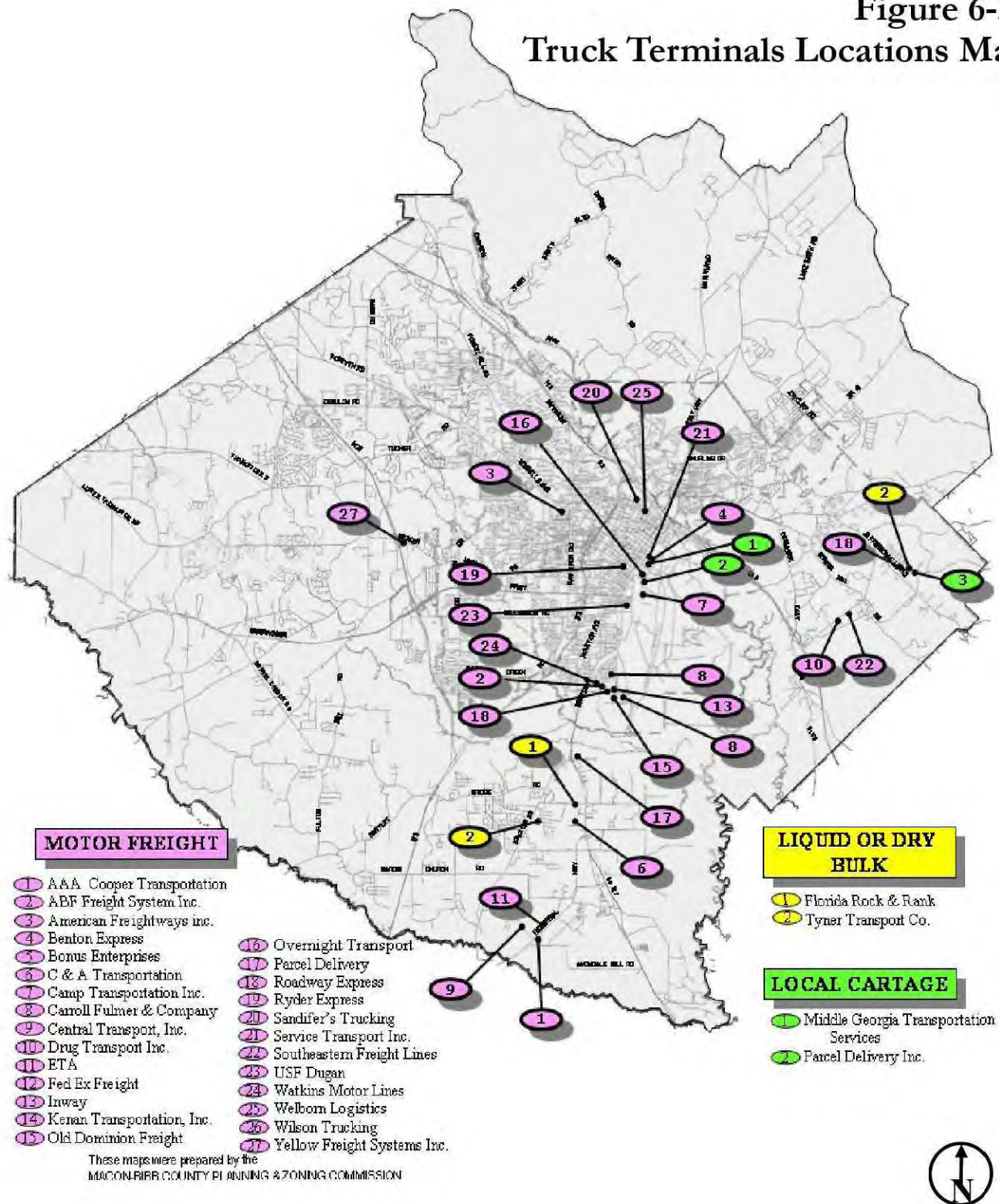


Table 6-25
List of Freight Companies

List of Freight Companies/Truck Terminals		
Name	Address	Phone #
LIQUID OR DRY BULK		
Florida Rock & Tank Lines	2532 Allen Rd. Macon, GA 31216	(478) 788-5113
Tyner Transport Co.	105 Francis Dr Macon, GA 31216	(478) 784-0570
LOCAL CARTAGE		
Middle Georgia Transportation Services	170 Lower Bay St. Macon, GA 31206	(478) 742-0890
Parcel Delivery	455 Lower Bay St. Macon, GA 31206	(478) 743-9549
MOTOR FREIGHT		
AAA Cooper Transportation	3165 Avondale Mill Macon, GA 31206	(478) 781-1055
ABF Freight System, Inc.	4430 Marion Ave. Macon, GA 31206	(478) 788-6424
American Freightways, Inc.	2750 Roff Ave. Macon, GA 31204	(478) 744-0736
Benton Express	170 Lower Bay St. Macon, GA 31206	(478) 750-0211
Bonus Enterprises, Inc.	2351 Hubbard Road Macon, GA 31217	(478) 741-1021
C & A Transportation	2360 Spires Dr. Macon, GA 31216	(478) 784-8652
Camp Transportation, Inc.	2280 Seventh St. Macon, GA 31206	(478) 755-8338
Carroll Fulmer & Company	4661 Mead Road Macon, GA 31206	(478) 784-7333
Central Transport, Inc.	4420 Marion Avenue Macon, GA 31206	(478) 781-7608
Drug Transport, Inc.	501 Joe Tamplin Ind. Blvd. Macon, GA 31217	(478) 750-8814

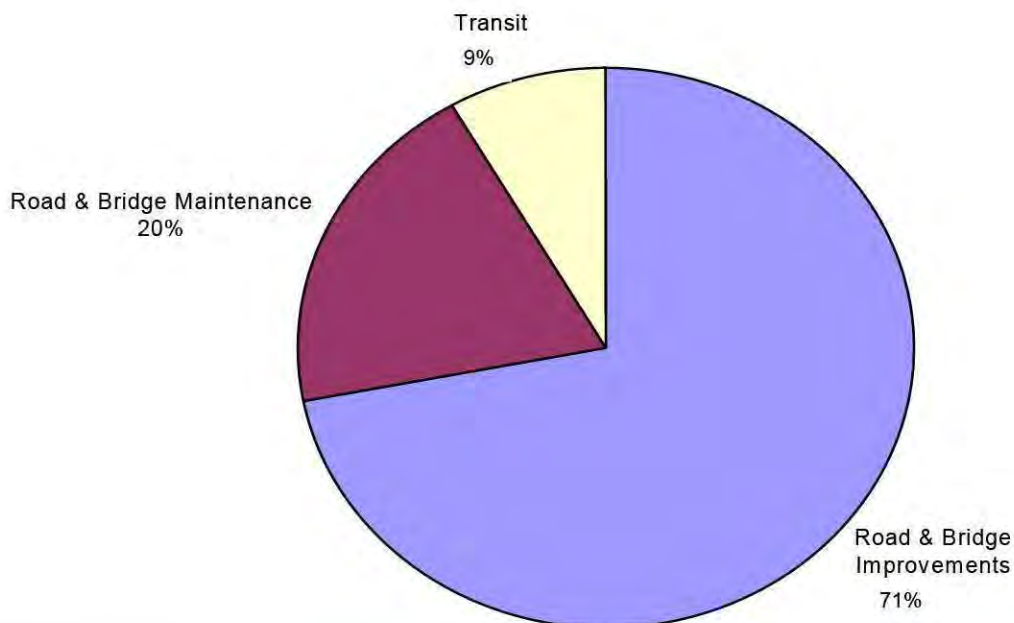
ETA	8345 Grace Road Macon, GA 31216	(478) 785-0845
Fed Ex Freight	2750 Roff Avenue Macon, GA 31204	(478) 744-0736
Inway	600 Guy Paine Rd Macon, GA 31206	(478) 785-0288
Kenan Transport, Inc.	2131 Barnes Ferry Road Macon, GA 31216	(478) 788-2596
Milan Express	625 Guy Paine Rd Macon, GA 31206	(478) 788-7773
Old Dominion Freight	4271 Bowman Ind. Conley, Ga. 30027	(478) 363-0770
Overnight Transport	475 Guy Paine Rd. Macon, Ga. 31206	(478) 788-4464
Parcel Delivery	455 Lower Bay St. Macon, GA 31206	(478) 743-9549
Roadway Express	2360 Cargill Rd. Macon, GA 31216	(478) 788-9662
Ryder Integrated Logistics	587 Guy Paine Rd Macon, GA 31206	(478) 788-9911
Sandifer's Trucking	580 Edgewood Ave. Macon, GA 31201	(478) 755-8823
Service Transport, Inc.	170 Lower Bay St. Macon, GA 31206	(478) 750-9008
Southeastern Freight Lines	4444 Marion Avenue Macon, GA 31206	(478) 781-2888
USF Dugan	205 Raines Ave. Macon, GA 31206	(478) 781-7411
Watkins Motor Lines	4444 Marion Ave. Macon, GA 31206	(478) 788-4312
Welborn Logistics	195 Spring St. Macon, GA 31201	(478) 745-0740
Wilson Trucking Corporation	4390 Mead Road Macon, GA 31206	(478) 781-7170
Yellow Freight Companies	4241 Interstate Road Macon, GA 31206	(478) 474-0221

Costs and Revenues

The total cost of MATS' 2030 LRTP is \$1.256 billion over its time frame. In recent years, there has been steady progress toward executing major elements in the MATS long range transportation plan through the 1% sales tax and the implementation of the Road Improvement Program.

The allocation of funding by major expense category throughout the life of the 2030 LRTP is shown in a pie chart. Road and bridge improvements account for 71% which is the largest share. This expense category is followed by road and bridge maintenance and transit which are expected to consume 20% and 9% of the total costs, respectively. The share of costs applied to road and bridge maintenance is usually much larger in comparison with the road and bridge improvements. This particular plan contains an unusually large list of capital improvements on roads and bridges that have been deferred from previous plans. Figure 6-26

Figure 6-26
2006-2030 Cost Allocation



4.1 Cost Information

Estimating costs for the life of the plan were based, to a large extent, on the following types of information: unit maintenance cost experience at the Georgia Department of Transportation; the FY 2004 operations and maintenance budgets from Bibb County, City of Macon and Jones County, and the estimated cost of projects, programs and studies that were included in the 2030 LRTP. For public transportation, it was reasonable to expect that future costs would be slightly higher than those incurred presently and that a level of funding will be available from the existing sources of revenue to meet those costs. An explanation for the different cost estimates that were used in the plan are presented below for each major transportation category:

- Roads and Bridges Improvements
- Roads and Bridges Maintenance; and
- Transit.

Roads and Bridges. The 2030 LRTP costs were split between two principal categories: (1) capital improvements, programs and studies explicitly identified in the plan; and (2) routine maintenance. The first cost category was in Table 6-26. This table itemized in the detailed description of projects, programs and studies in the *2030 Long Range Transportation Plan*. Capital improvements, programs and studies amounted to \$888,989,132. The last category, routine maintenance expenses, totaled \$248,365,612. The total cost for roads and bridges over 25 years, including capital, operating and maintenance expenses, is \$1,137,354,744.

Table 6-26 Plan Costs			
	Fed/State	Local	Total
Roads & Bridges			
Improvements	\$ 880,763,132	\$ 8,226,000	\$ 888,989,132
Operations & Maintenance	\$ 27,918,844	\$220,446,768	\$ 248,365,612
Sub-Total	\$ 908,681,976	\$228,672,768	\$1,137,354,744
Transit			
Capital	\$ 22,435,081	\$ 2,492,787	\$ 24,927,868
Operating	\$ 46,878,132	\$ 46,878,132	\$ 93,756,264
Sub-Total	\$ 69,313,213	\$ 49,370,919	\$ 118,684,132
Total	\$ 977,995,189	\$278,043,687	\$1,256,038,876

Transit. Total costs to provide public transportation service in the MATS region throughout the 25 year life of the plan was projected to be approximately \$118,684,132. Operating expenses are anticipated to account for the majority of total cost. Operating expenses amount to \$93,756,264 which comprises roughly 79% of the total. Federal and state sources of funding are expected to account for most of the capital costs while the MTA's farebox, the City of Macon and Bibb County are expected to finance most of the operating expenses.

Table 6-27 State Maintenance Costs					
Functional Classification	Miles in Bibb County	Miles in Jones County	Total Miles in MATS Area	Cost per Mile	Total Costs
Interstate	42.8	0.0	42.8	\$ 9,500	\$ 406,220
Principal Arterial	46.0	1.3	47.3	\$ 6,900	\$ 326,246
Minor Arterials & Collectors	55.0	19.3	74.3	\$ 5,800	\$ 430,819
State Maintenance Cost per Year				\$	1,163,285
State Maintenance Cost for 2030 LRTP					27,918,843.84

Routine maintenance costs on the Interstate and the State system of roads was estimated by the Georgia Department of Transportation based on route miles by functional classification. These costs were extrapolated into the future for 25 years. The cumulative cost for routine maintenance during the life of the plan was \$27.9 million. Table 6-27.

Draft budgets, prepared by local government staff, were used to estimate the routine maintenance and repair costs for local streets. The individual budgets for the portion of Jones County that is in the MATS study area, the City of Macon, and Bibb County are depicted in the table below. Together, these three jurisdictions estimate their routine maintenance and safety expenses to be \$9,185,282. Extrapolated for 24 years, local maintenance and safety expenses amount to \$220,446,768 throughout the life of the plan. Jones County's costs are a small fraction of the total. Table 6-28.

Table 6-28
Local Maintenance Costs

City of Macon (FY 2000 Budget)	
Public Works Administration	\$ 412,492
Street Cleaning	\$ 1,154,868
Street Maintenance	\$ 1,221,103
Signs & Signals	\$ 811,768
Sub-Total	\$ 3,600,231
Bibb County (FY 2004)	
Highway & Street Administration	\$ 756,421
Shop Repair Service	\$ 672,885
Street Maintenance & Construction	\$ 2,851,222
Engineering	\$ 391,202
Traffic Safety	\$ 178,728
Birdge Maintenance	\$ 96,115
Road Crew Detail	\$ 3,616
Prison Work detail	\$ 103,931
Traffic Engineering	\$ 130,931
Sub-Total	\$ 5,185,051
Jones County (MATS)	\$ 400,000
Sub-Total	\$ 400,000
Total per Year	\$ 9,185,282
Total for 2030 LRTP	\$220,446,768

4.2 Revenue Information

Total revenues that are reasonable to expect during the 25 year life of the transportation plan amount to \$1,595,415,744. This is approximately \$339 million more than the plan's cost. Therefore, the plan is considered to be constrained or feasible in terms of its financial implementation.

Table 6-29
Federal & State Funding Estimates for Streets & Bridges

Fiscal Year		Funding
Actual		
1994	\$	800,000
1995	\$	12,500,000
1996	\$	7,300,000
1997	\$	5,400,000
1998	\$	20,000,000
1999	\$	13,700,000
2000	\$	14,700,000
2001	\$	19,000,000
2002	\$	19,700,000
2003	\$	19,700,000
2004	\$	23,300,000
2005	\$	25,121,818
Projected		
2006	\$	26,943,636
2007	\$	28,765,455
2008	\$	30,587,273
2009	\$	32,409,091
2010	\$	34,230,909
2011	\$	36,052,727
2012	\$	37,874,545
2013	\$	39,696,364
2014	\$	41,518,182
2015	\$	43,340,000
2016	\$	45,161,818
2017	\$	46,983,636
2018	\$	48,805,455
2019	\$	50,627,273
2020	\$	52,449,091
2021	\$	54,270,909
2022	\$	56,092,727
2023	\$	57,914,545
2024	\$	59,736,364
2025	\$	61,558,182
2026	\$	63,380,000
2027	\$	65,201,818
2028	\$	67,023,636
2029	\$	68,845,455
2030	\$	70,667,273
Total	\$	1,220,136,364

Table 6-30
Available Revenues

	Fed/State	Local	Total
Roads & Bridges			
Improvements	\$1,220,140,000	\$ 8,226,000	\$1,228,366,000
Operations & Maintenance	\$ 27,918,844	\$ 220,446,768	\$ 248,365,612
Sub-Total	\$1,248,058,844	\$ 228,672,768	\$1,476,731,612
Transit			
Capital	\$ 22,435,081	\$ 2,492,787	\$ 24,927,868
Operating	\$ 46,878,132	\$ 46,878,132	\$ 93,756,264
Sub-Total	\$ 69,313,057	\$ 49,370,919	\$ 118,684,132
Total	\$1,317,372,057	\$ 278,043,687	\$1,595,415,744

Funding is expected to come from a variety of sources, including:

- Federal Highway Trust Fund (Based on trends from 1994 to 2005);
- State Gasoline Taxes; (Based on trends from 1994 to 2005);
- Bibb County General Fund (Based on previous budgets);
- City of Macon General Fund (Based on previous budgets);
- Jones County General Fund (Based on previous budgets);
- Bibb County Road Improvement Program (Based on revenues that have been allocated to projects);
- Jones County Special Purpose Sales Tax;
- Macon-Bibb Transit Authority Fares and Advertising;
- State of Georgia General Fund; and
- United States Treasury General Fund.

Of the numerous revenue sources, the Federal Highway Trust Fund, State Gasoline Tax, Bibb County General Fund, City of Macon General Fund and the Bibb County Road Improvement Program are the dominant contributors to the overall pool of revenues. Federal and State funding is expected to account for \$1,317,372,057 or approximately 83% of the total. Although federal and state money reaches into all aspects of the plan, it is expected to cover a particularly large share of the total capital costs for road, bridge, bike, pedestrian, greenway, and transit in the plan. If previous customs continue into the future, then a significant portion of expenses for mainte-

nance and operations of the transportation system will be shouldered with funds from local sources and supplemented by state and federal revenues. An estimated total of \$1,317,375,057 is anticipated from state and federal sources during the life of the 2030 Long Range Transportation Plan. Table 6-30.

Table 6-31
Estimated Total Funding from Local
Sources for the 2030 LRTP

Category	
Maintenance & Repair \$	220,446,768
Transit Authority \$	49,370,919
SPLOST & General Fund Accounting \$	8,226,000
Total \$	278,043,687

From local sources, another \$278,043,687 is reasonably expected to be as shown below. The largest component of local funding comes from budgets for maintenance and repair programs for streets, bridges and traffic control equipment. These revenue sources account for \$220,446,768. A summary of the base budget estimates for the City of Macon, Bibb County and the portion of Jones County that is in the MATS area was presented in Table 5-4 earlier in this section. Bibb County and the City of Macon planned to spend approximately \$5.1 million and \$3.6million, respectively, on maintenance and repair activities. If the budget figure of \$9,185,282 is extended over the 25-year life of the plan then the total funds available amounts to more than \$220 million. Table 6-31.

There are two other significant local sources of revenue. Local funds to support services provided by the Macon-Bibb County Transit Authority (MTA) are expected to total \$49,370,919 during the life of the plan. The City of Macon and also Bibb County underwrite a portion of the MTA's operating and capital expenses each year through the life of the plan. It is anticipated that most of this money will come from the general fund accounts of these two local governments.

Funds from the current Bibb County and Jones County SPLOST's that are earmarked for transportation are also included in determining the total amount of funds that will be available to underwrite the 2030 Transportation Plan. These funds are typically used to make capital improvements to the existing transportation infrastructure as opposed to maintenance and repair needs. A total

of \$8,266,000 was projected to be available from SPLOST programs during the 2030 LRTP. This was already allocated by the Road Improvement Program and is reflected in the MATS TIP.

The three major sources of local revenue are listed in the table. These revenues, in combination with those from state and federal sources, are expected to generate a total of \$1,595,415,744 during the 25-year life of the plan.

Financial Capacity

This section shows that there will be sufficient revenues from existing sources, as well as from those that are anticipated to be reasonably available in the future, to pay for the cost of the 2030 Long Range Transportation Plan (LRTP) as well as for the ongoing maintenance and repair of the transportation system. Cost estimates for roadway improvement projects, bicycle/pedestrian improvements, studies, programs and policies being recommended to be in the 2030 LRTP are reported in table 6-26 and cost \$889 million. To these, the cumulative 25 year cost estimate of \$248 million for maintenance, repair. In addition, the anticipated non-road improvement expenditures such as \$118 million for the Macon Transit Authority are reflected.

In this section, the amount of revenue that can reasonably be assumed available during the 25-year life of the plan is also estimated. There are several principle sources of revenue assumed to be available during the life of the plan. These include:

- State and federal programs that are funded from gasoline taxes primarily, but also with from the United States and State of Georgia general funds on occasion;
- Bibb County sales tax revenues from the 1994 SPLOST. These are listed in the current Transportation Improvement Program and Tier II;
- Jones County sales tax revenues;
- Bibb County, Jones County, and City of Macon general funds; and
- Fares collected by the MTA.

The final calculation determining whether the list of projects recommended for the 2030 LRTP is fiscally constrained is a simple comparison that checks total revenues against total costs. To be

financially constrained, the revenues must exceed or be equal to the costs over the 25 year life of the plan.

The amount of revenue that was projected to be available during the 25 year life of the plan was based, in large part, on experience from previous years. Estimates of future maintenance and repair costs were also calculated from trends using actual expense information. All revenue and cost estimates are depicted in terms of 2004 dollars.

Cost Estimation.

The total estimated cost of the projects, studies and programs being recommended for inclusion in the 2030 LRTP is over \$1.256 billion. This includes maintenance and repair expenses on state and local roads at a cost of \$248 million or 20% of the total. An expenses breakdown by cost type and generalized revenue source is depicted in Table 6-32. Road improvements, sidewalks, bike lanes and other enhancement type projects take around \$889 million or 71% of the total. Transit service costs have totaled to around \$118 million or 9% of the total.

Table 6-32

Plan Costs

	Fed/State	Local	Total
Roads & Bridges			
Improvements	\$ 880,763,132	\$ 8,226,000	\$ 888,989,132
Operations & Maintenance	\$ 27,918,844	\$220,446,768	\$ 248,365,612
Sub-Total	\$ 908,681,976	\$228,672,768	\$1,137,354,744
Transit			
Capital	\$ 22,435,081	\$ 2,492,787	\$ 24,927,868
Operating	\$ 46,878,132	\$ 46,878,132	\$ 93,756,264
Sub-Total	\$ 69,313,213	\$ 49,370,919	\$ 118,684,132
Total	\$ 977,995,189	\$278,043,687	\$1,256,038,876
Available Revenues			
Roads & Bridges			
Improvements	\$1,220,140,000	\$ 8,226,000	\$1,228,366,000
Operations & Maintenance	\$ 27,918,844	\$220,446,768	\$ 248,365,612
Sub-Total	\$1,248,058,844	\$228,672,768	\$1,476,731,612
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Operating	\$ 46,878,132	\$ 46,878,132	\$ 93,756,264
Sub-Total	\$ 69,313,213	\$ 49,370,919	\$ 118,684,132
Total	\$1,317,372,057	\$278,043,687	\$1,595,415,744

Revenue Estimation – Total revenues from both Federal/State and Local sources amounts to \$1.59 billion. The list of projects being recommended for the 2030 LRTP is financially constrained because the anticipated revenues exceed the estimated cost by approximately \$339 million. The 2030 Long Range Transportation is fiscally constrained. These figures are based on recent trends with factors applied to normalize revenue stream data to the value of 2004 dollars. See Table 6-31.

The 2030 LRTP proposes nine planning studies to be done for \$2.2 million to develop projects. to address future problems that appear to be on the horizon. Possible projects from these studies could prove to be very large and very expensive. Cost overruns on existing projects and future projects from planning studies may greatly reduce this surplus.

Plan Considerations

Environmental Justice

Transportation plans for the Macon Area must show compliance with federal laws guaranteeing rights to persons of all races, color or national origins and to persons with disabilities as well. Two policies among many others that must be taken into consideration in transportation process on the state and local levels are Executive Order 12898, better known as Environmental Justice (EJ) and the Americans with Disabilities Act (ADA). EJ policies require local transportation plans to identify and address as appropriate, disproportionately high and adverse human or environmental effects of its programs, policies, and activities on minority populations and low income populations. Macon's long range transportation must comply with Title VI laws that state, "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied benefits of, or be subject to discrimination under and program or activity receiving federal assistance". It must also comply with the Americans with Disabilities Act (ADA) which concentrates on the physical access to services and facilities.

Title VI and the Americans with Disabilities Act

Compliance with Title VI of the Civil Rights Act of 1964 as well as the requirements of the Environmental Justice Orders and the Americans with Disabilities Act is of major concern to the Macon Area Transportation Planning Study. Title VI states, "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied benefits of, or be subject to discrimination under and program or activity receiving federal assistance". Further, Environmental Justice provides "each Federal Agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human or environmental effects of its programs, policies, and activities on minority populations and low income populations". The Americans with Disabilities Act concentrates on the physical access to services and facilities.

All three of these areas of concern were considered and addressed in the MATS procedure used to develop the Long-Range Transportation Plan (LRTP). First, access to the planning process was handled to ensure that the low income populations and minority populations, and persons with disabilities could participate in the development of the LRTP. The Citizens Advisory Committee (CAC) was used as an instrument for identifying, discussing, and documenting diverse positions and sentiments regarding local transportation matters. Throughout the development of the LRTP, this committee was consulted in, and offered comments for the development of the Plan. The CAC has key representation to ensure these protected interest have access to the planning process. While the following does not represent the total membership of the CAC, those listed below do provide input for EJ and ADA concerns:

- One person from each of the city election wards;
- One person from each county election district;
- One person from the Older Americans Council;
- One person from the Macon Housing Authority Tenant Association;
- A representative of the disabled population;
- A transit rider, and an ADA transit user.

In addition, minority representation on decision making bodies in Bibb County is in most cases substantial. The following provides a breakdown of minority representation on many of the major decision making bodies in Bibb County.

	<u>Members</u>	<u>Minority Members</u>
• Macon-Bibb County Transit Authority	7	4
• Macon City Council	14	10
• Bibb County Board of Commissioners	5	2
• Macon-Bibb County P&Z Commission	5	3
• Macon Area Transportation Study Policy Committee	16	4
• CAC	15	6

To further solicit minority participation from the general public, notices for public forums are published in a newspaper of general circulation and in a minority newspaper in the study area. Notices are also posted in Macon City Hall and the offices of the Planning and Zoning Commission. Other forms of media include the city's cable station, FYI segments of local TV stations.

All systems are evaluated as to the impact on low income populations and minority populations. The spatial distribution, access to service and facility impacts of the LRTP were analyzed to ensure there were no disproportionate impacts on low income and minority communities. Figures 6-27 through 6-31 illustrate the EJ areas of the study area according to the 2000 U.S. Census. EJ areas are defined as locations that contain a minority population greater than 50% and/or is at least 20 percent below the poverty level. It should be noted that there were new areas that met the criteria of being classified as an EJ area. Map 9.1 displays the contrast between the areas based upon the 1990 U.S. Census and the 2000 U.S. Census. Based on an analysis of the proposed of the proposed street and highway improvements, there is not a disproportionate impact on the EJ community because of major road widening and other facility enhancements. The facilities proposed are those that can be justified because of documented needs for these areas whose benefits outweigh any negative benefits. Accordingly, disproportional impacts are not exhibited in the street and highway portion of the LRTP. Figure 6-28 displays the list of TIP projects that are in the 2030 LRTP and are contrasted along with the EJ areas.

Transit service was evaluated as to the access to EJ areas based on this evaluation forty-two percent of the routes providing service in the study area are located in EJ areas. This is a favorable situation since people residing in these areas depend on transit service for work, shopping, doctor's appointment, and etc. Although a significant amount of service is outside EJ areas, such diversity is needed to provide these travel demands at a variety of destinations to the transit riding public. It is important to link low income areas that have limited access to private autos to the rest of the community. This is needed to provide access to employment, shopping and other activities. An illustration of how the Macon Transit Authority's transit routes overlay with the EJ areas is displayed in Figure 6-29.

Figure 6-27
Expansion of the 2000 U.S. Census Defined
Environmental Justice Areas of the 1990 U.S. Census
Defined Environmental Justice Areas

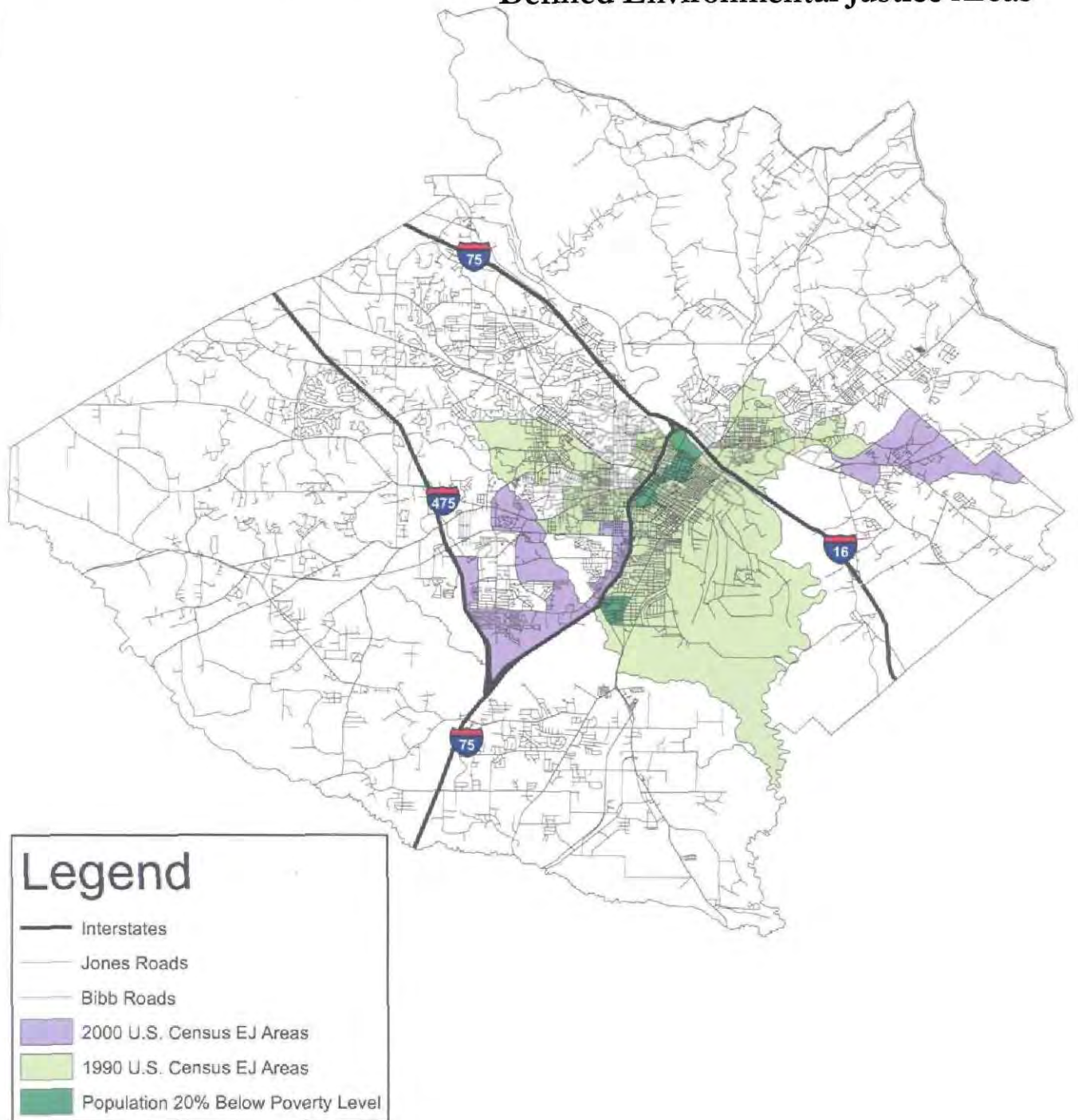


Figure 6-28
Environmental Justice Areas
and TIP Projects

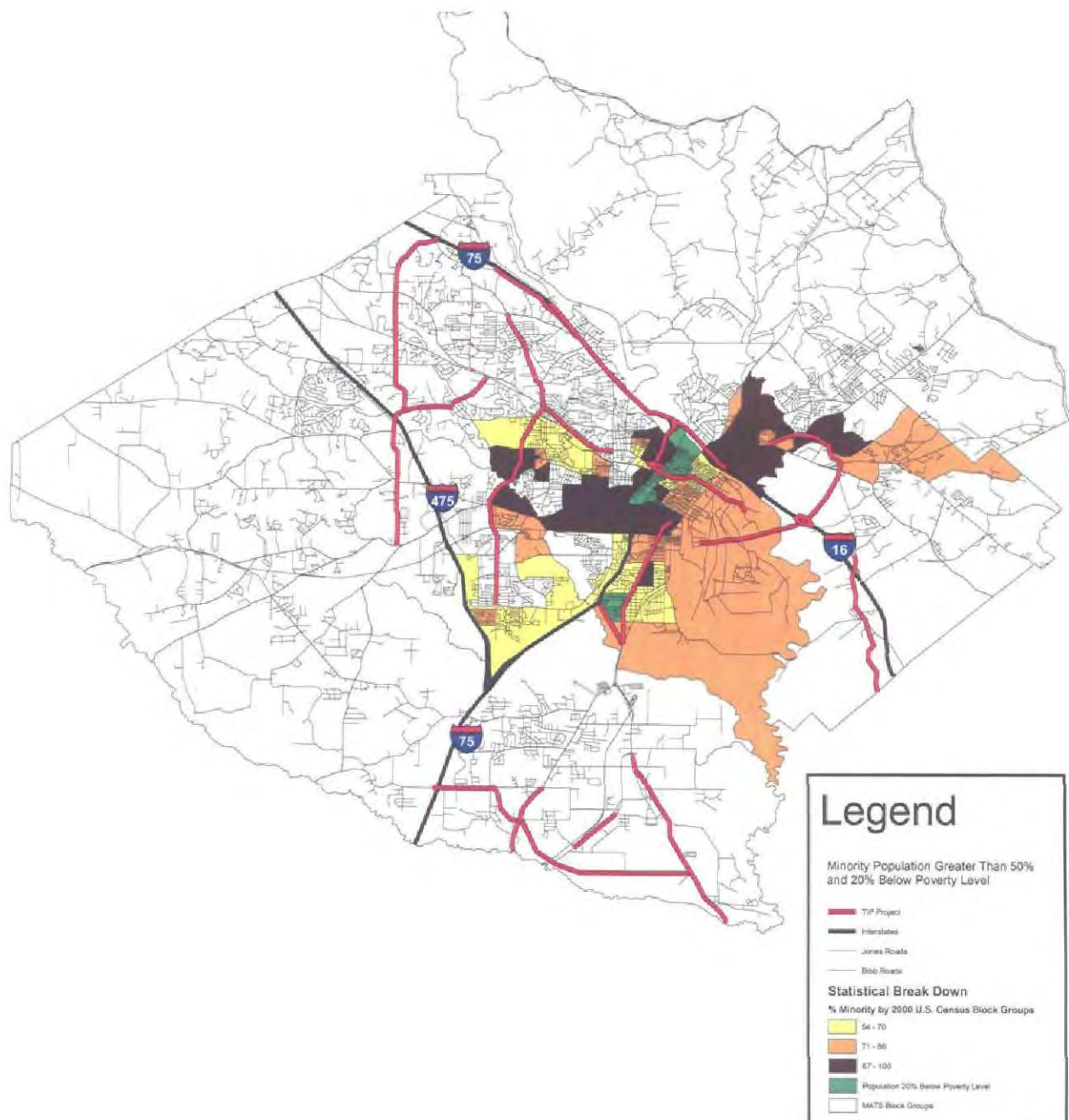


Figure 6-29
Environmental Justice Areas
and Transit Routes

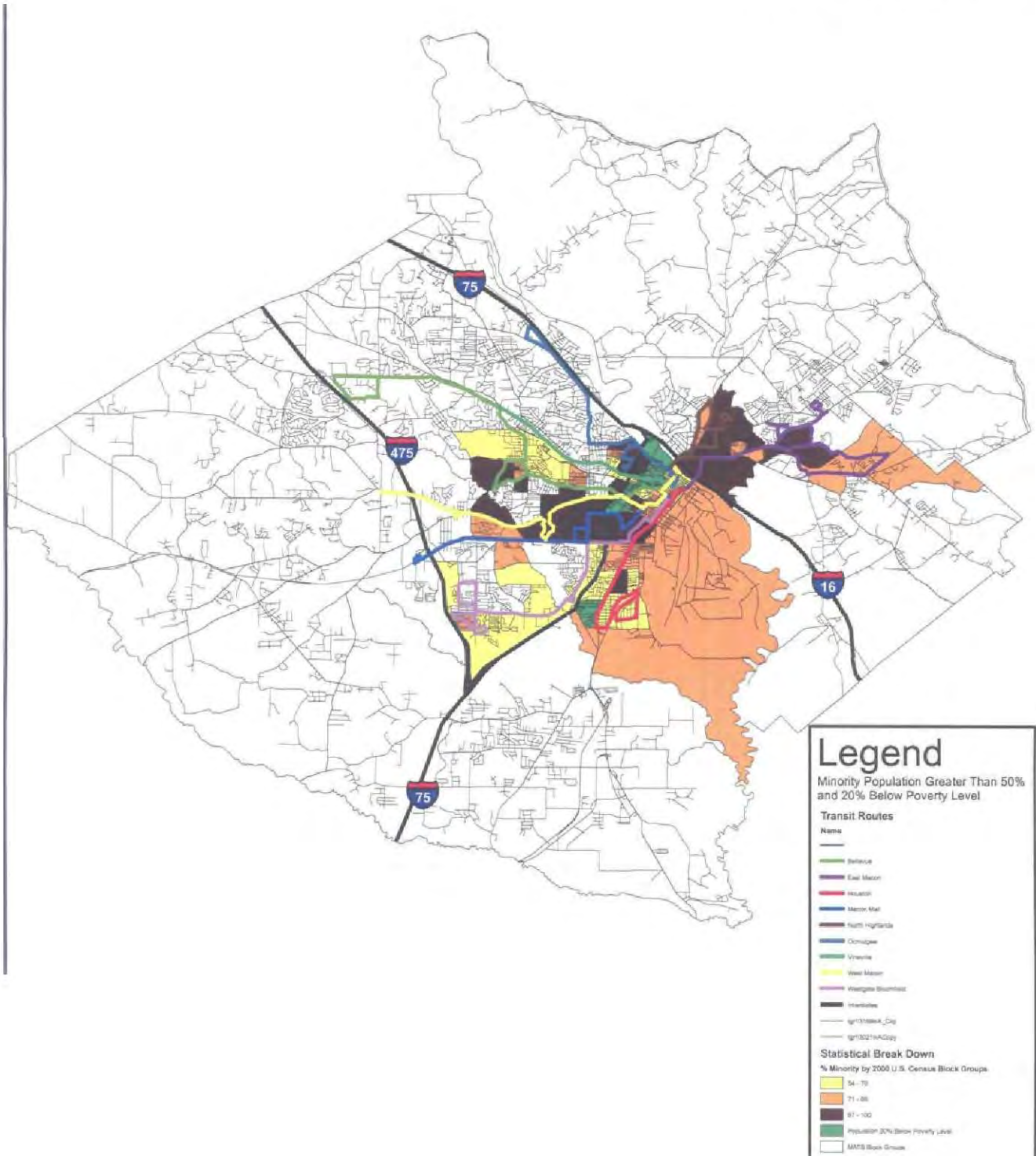


Figure 6-30
Environmental Justice Areas
And Future Sidewalk Projects

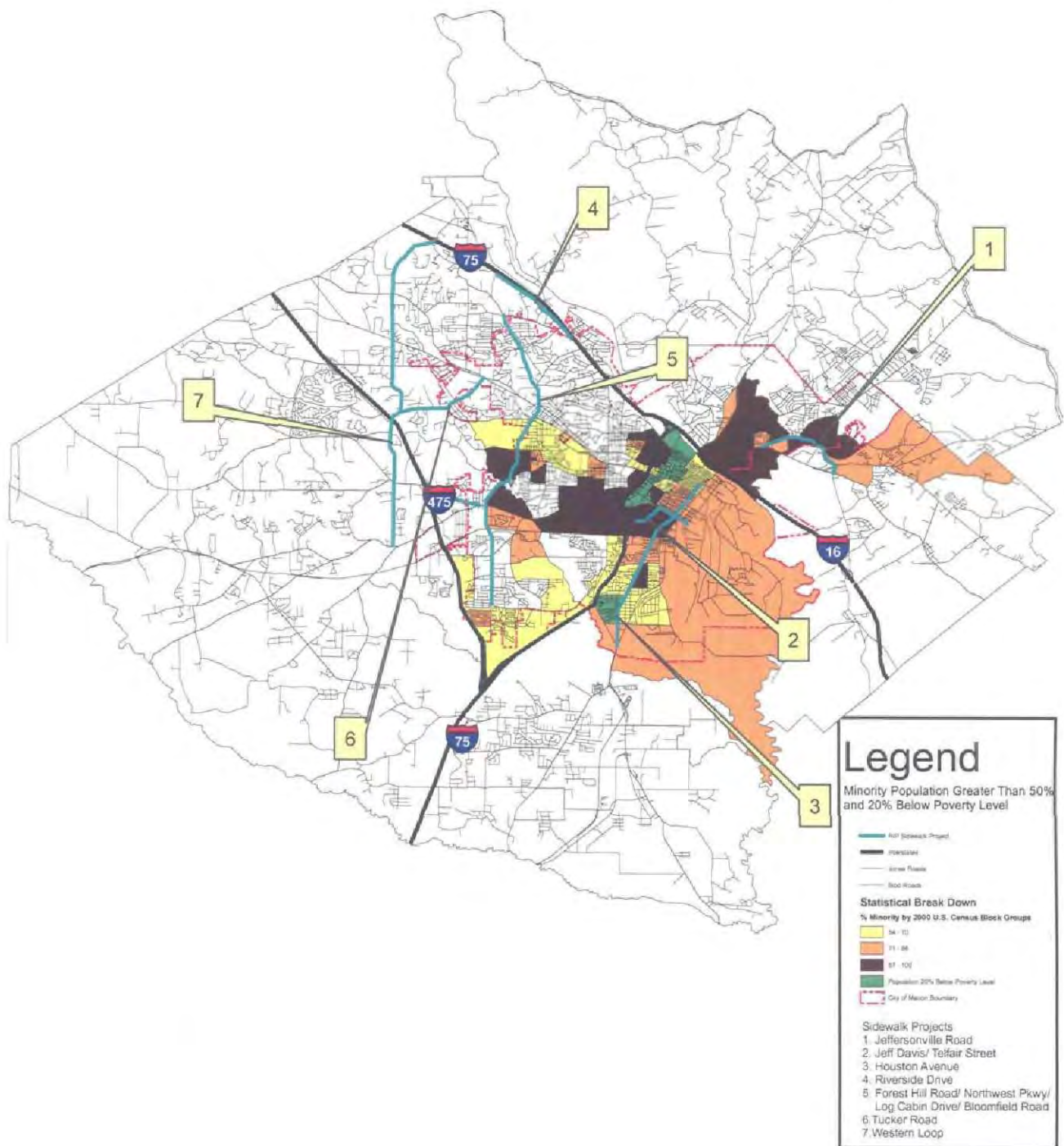
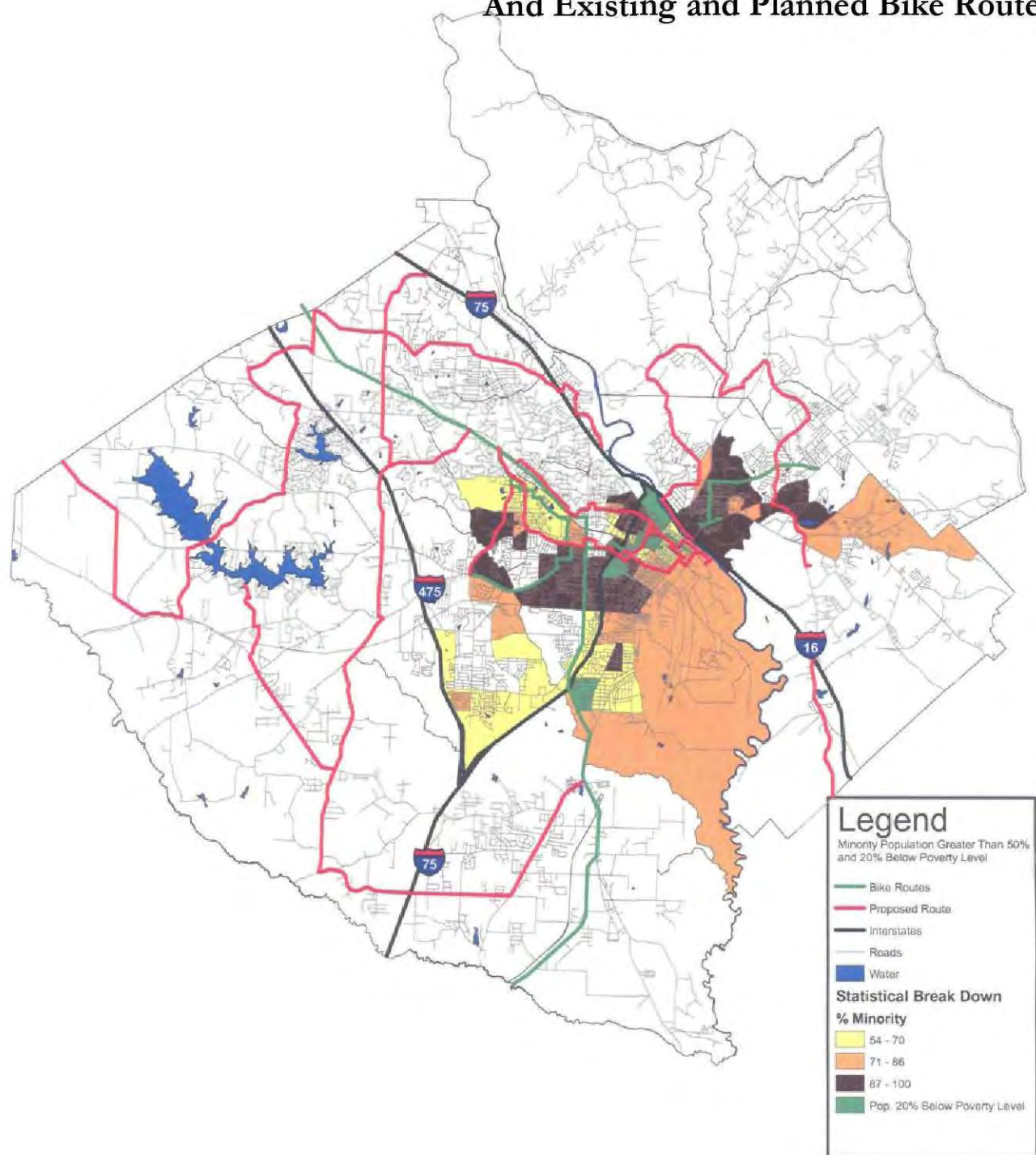


Figure 6-31
Environmental Justice Areas
And Existing and Planned Bike Routes



Safety

Increasing the safety and security of the transportation system has become a major goal of transportation planning on all levels government from the federal level to the MPO and county levels. The MATS planning process takes safety concerns into consideration into almost every project. Proper design of facilities to improve operations will in most cases improve safety.

There are several projects proposed in the plan that have been identified because of significant safety concerns. A good example of such a project is the improvements to the I-16/I-75 interchange. When the interchange operated well below capacity, there were no significant safety issues. As the interchange approached and then exceeded capacity, the number of accidents greatly increased. There are currently over 200 accidents per year within this large interchange.

The proposed designs being considered today address past design problems as well as future capacity issues. This has resulted in what seems to be an over design of the proposed project when compared to the existing project. The proposed alternative designs may seem large, but they will be simple and safe to use.

Other safety related projects are the turn lanes recently constructed on Gray Highway and a similar project with turn lanes on Emery Highway. Recently, many of the railroad crossings were improved with lights, gates, signs, and markings. The Traffic Management Center, message boards, and signalization coordination, also, greatly enhance and promote safety.

The MATS CAC, TCC, and Policy Committees have addressed safety on a somewhat informal basis in the past; based on community concerns and accident data. The Macon-Bibb County Traffic Engineering Department and GDOT maintain an accident database and this data is used in determining safety based improvements.

The table 6-33 lists intersection projects proposed by the Macon-Bibb County Traffic Engineering department that warrant safety upgrades. The overall justification of the projects is that in most cases high accident frequencies have been observed at the locations listed.

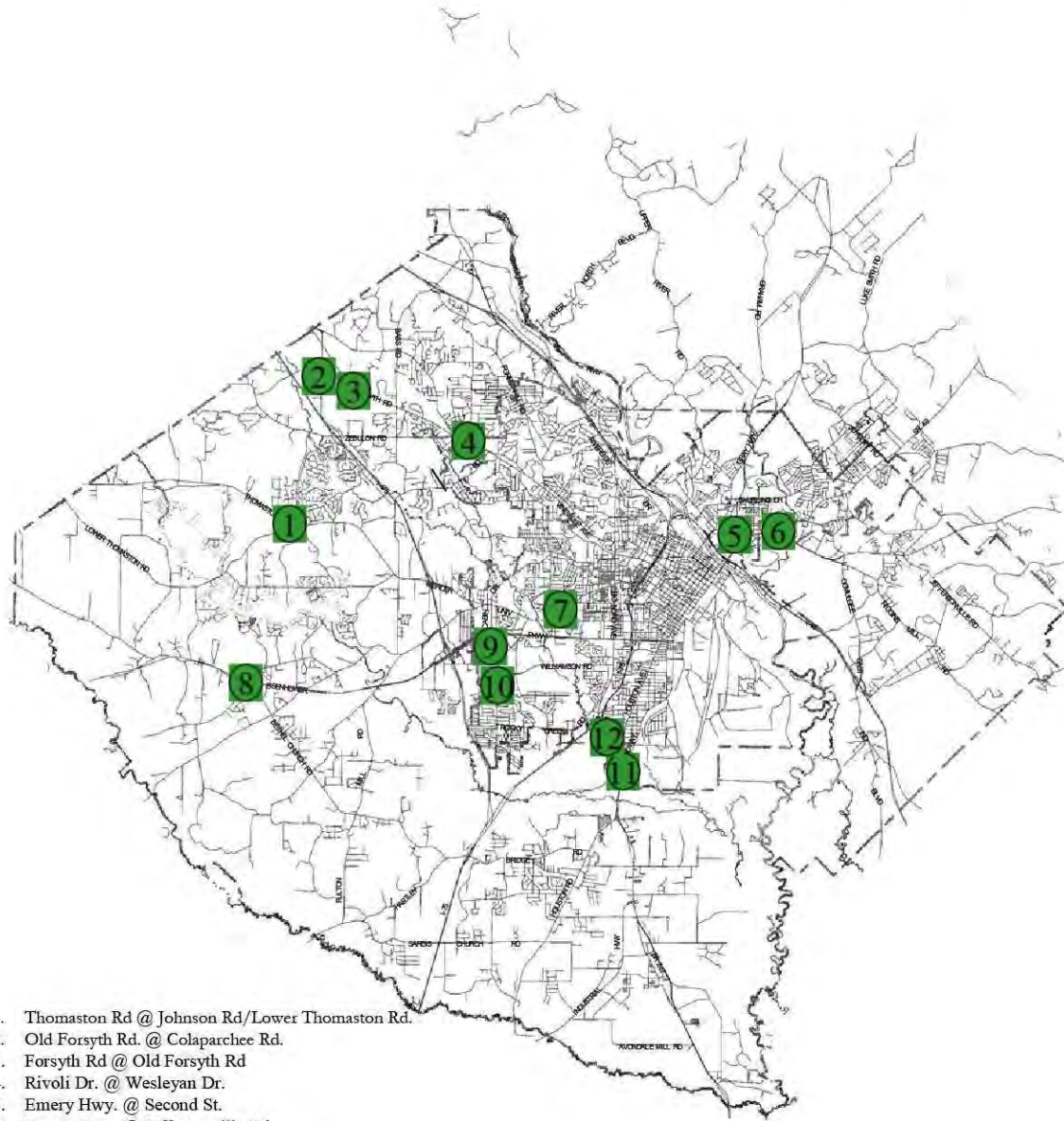
Table 6-33
Safety Projects Proposed by Macon-Bibb Traffic Engineering

Location	Justification	2030 LRTP Total Plan Cost
Eisenhower Pkwy @ Holly Rd.	5 Accidents with 1 fatality	\$700,000
Emery Highway @ 2 nd Street	17 accidents of various types with 7 rear end accidents.	\$800,000
Forsyth Rd. @ Old Forsyth Rd.	10 accidents from 2001 through October 2004 with 6 right angle type.	\$700,000
Mercer University Dr. @ Montpelier Ave.	18 accidents with 16 rear end accidents.	\$700,000
Old Forsyth Rd. @ Colaparchee Rd.	3 right angle accidents, 2001 through 2004.	\$800,000
Rivoli Drive @ Wesleyan	13 accidents with 9 right angle type accidents.	\$1,700,000
Thomaston Rd. @ Johnson/Lwr. Thomaston Rd.	Signal warrants and criteria met.	\$1,200,000
Proposed Safety Projects Included as Part of Larger Projects		
Bloomfield Road @ Brownley Drive	15 rear end type accidents.	\$600,000
Bloomfield Rd. @ Log Cabin Rd./Chambers Drive	13 accidents with 8 rear end type.	\$600,000
Emery Hwy @ Jeffersonville Rd-Ocmulgee Monument	14 accidents. This is included as part of the Jeffersonville Rd Project 351090.	\$1,000,000
Pio Nono Ave. @ Guy Paine Rd.	24 accidents with 22 rear end from Guy Paine onto Pio Nono Ave. This is included as part of the Pio Nono Ave Project 350560.	\$800,000
Pio Nono Ave. @ Broadway & Houston Ave.	Intersection configuration	\$1,200,000
Total		\$10,800,000

Upgrading these intersections may entail one or more of the following actions: 1) Adding left and right turn lanes. 2) Improving turning radii. 3) Installing traffic signals, cameras, video detection devices, and/or flashing beacon. 4) Re-alignment of intersecting roads. 5) Providing a transition lane to facilitate merging traffic. 6) Provide acceleration and deceleration lanes.

One of the main problems that need to be addressed in the very near future is how accident reporting is done. Now that the GIS is being utilized, more specific accident location information can be utilized. Better and more useful data can be provided to the planners and engineers involved in transportation planning as a result of the GIS. Part of the problem is how the data is recorded in the field by law enforcement.

Figure 6-32
Safety Projects Proposed by
Traffic Engineer



1. Thomaston Rd @ Johnson Rd/Lower Thomaston Rd.
2. Old Forsyth Rd. @ Colaparchee Rd.
3. Forsyth Rd @ Old Forsyth Rd
4. Rivoli Dr. @ Wesleyan Dr.
5. Emery Hwy. @ Second St.
6. Emery Hwy. @ Jeffersonville Rd.
7. Mercer University Dr. @ Montpelier Ave.
8. Eisenhower Pkwy @ Holley Rd.
9. Bloomfield Rd. @ Chambers Rd./Log Cabin Dr.
10. Bloomfield Rd. @ Brownley Dr.
11. Pio Nono Ave. @ Broadway & Houston Ave.
12. Pio Nono Ave. @ Guy Paine Rd.

These maps were prepared by the
MACON-BIBB COUNTY PLANNING & ZONING COMMISSION
for the MACON AREA TRANSPORTATION STUDY

NOTE: Projects area not
listed by priority



Chapter 7—Intergovernmental Coordination

INTRODUCTION

The Intergovernmental Coordination element provides federal, state, regional and local governments an opportunity to inventory existing intergovernmental coordination mechanisms and processes with other local governments and governmental entities that can have profound impacts on the success of implementing the local government's Consolidated Plans, Comprehensive Plans and Long-Range Transportation Plans. The purpose of this element is to assess the adequacy and suitability of existing coordination mechanisms to serve the current and future needs of the community and articulate goals and formulate a strategy for effective implementation of community policies and objectives that, in many cases, involve multiple governmental entities. As Macon-Bibb County continues to experience a greater share of employment and population growth, intergovernmental coordination will become increasingly more important in maintaining the quality of life that attracts individuals to the City and County. The following are key entities within the City and County where coordination is extremely important.

Federal, State & Regional Coordination:

Federal Highway Administration (FHWA)

The FHWA is a major agency of the U.S. Department of Transportation (DOT). As a cabinet-level organization of the Executive Branch of the U.S. Government, the DOT is led by a presidential appointee—the Secretary of Transportation. The top-level official at FHWA is the Administrator, who reports directly to the Secretary of Transportation. FHWA is headquartered in Washington, DC, with field offices in every State, the District of Columbia, and Puerto Rico. FHWA is charged with the broad responsibility of ensuring that America's roads and highways continue to be the safest and most technologically up-to-date. Although State, local, and tribal governments own most of the Nation's highways, FHWA provides financial and technical support to them for constructing, improving, and preserving America's highway system. The annual budget of more than \$30 billion is funded by fuel and motor vehicle excise taxes. The budget is primarily divided between two programs: Federal-aid funding to State and local governments; and Federal Lands Highways funding for national parks, national forests, Indian lands, and other land under Federal stewardship. FHWA provides the local MPO (Metropolitan Planning Organization) which is the Macon-Bibb County Planning and Zoning Commission, with Federal funding to implement various transportation related projects such as the Long-Range Transportation Plan for the MATS (Macon Area Transportation Study) area. FHWA has representation on the MATS Technical Coordinating Committee and the Policy Committee.

Federal Transit Authority (FTA)

FTA is one of eleven modal administrations within the U.S. Department of Transportation. Headed by an Administrator who is appointed by the President of the United States, FTA functions through a Washington, DC headquarters office and ten regional offices which assist transit agencies in all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, Northern Mariana Islands, and American Samoa. Public transportation includes buses, subways, light rail, commuter rail, monorail, passenger ferry boats, trolleys, inclined railways, and people movers. The Federal government, through the FTA, provides financial assistance to develop new transit systems and improve, maintain, and operate existing systems. FTA oversees thousands of grants to hundreds of state and local transit providers, primarily through its ten regional offices. These grantees are responsible for managing their programs in accordance with Federal requirements, and FTA is responsible for ensuring that grantees follow Federal mandates along with statutory and administrative requirements. FTA provides the local MPO (Metropolitan Planning Organization) which is the Macon-Bibb County Planning and Zoning Commission, with Federal funding to implement various transit related projects.

Georgia Department of Community Affairs (DCA)

The Georgia Department of Community Affairs (DCA) was created in 1977 to serve as an advocate for local governments. On July 1, 1996, the Governor and General Assembly merged the Georgia Housing and Finance Authority (GHFA) with the Department of Community Affairs. Today, DCA operates a host of state and federal grant programs; serves as the state's lead agency in housing finance and development; promulgates building codes to be adopted by local governments; provides comprehensive planning, technical and research assistance to local governments; and serves as the lead agency for the state's solid waste reduction efforts. The GDCA creates opportunities to improve the quality of life for Georgia citizens by: fostering partnerships within State government, local governments, and the private sector; understanding a community's challenges and opportunities; working to develop locally-driven solutions; and bringing resources to the table.

Georgia Department of Transportation (GDOT)

The State Highway Department was created on August 16, 1916 by an act of the Legislature. The Department of Transportation (GDOT) was created in 1972 by former Governor Jimmy Carter. The Georgia Department of Transportation plans, constructs, maintains and improves the state's road and bridges; provides planning and financial support for other modes of transportation such as mass transit and airports; provides airport and air safety planning; and provides air travel to state departments. The Department also provides administrative support to the State Tollway Authority and the Georgia Rail Passenger Authority. The Georgia Department of Transporta-

tion provides a safe, seamless and sustainable transportation system that supports Georgia's economy and is sensitive to its citizens and environment. GDOT works collaboratively with the MPO in providing technical assistance in regards to transportation related projects. GDOT has representation on the MATS Technical Coordinating Committee and the Policy Committee.

Middle Georgia Regional Development Center (RDC)

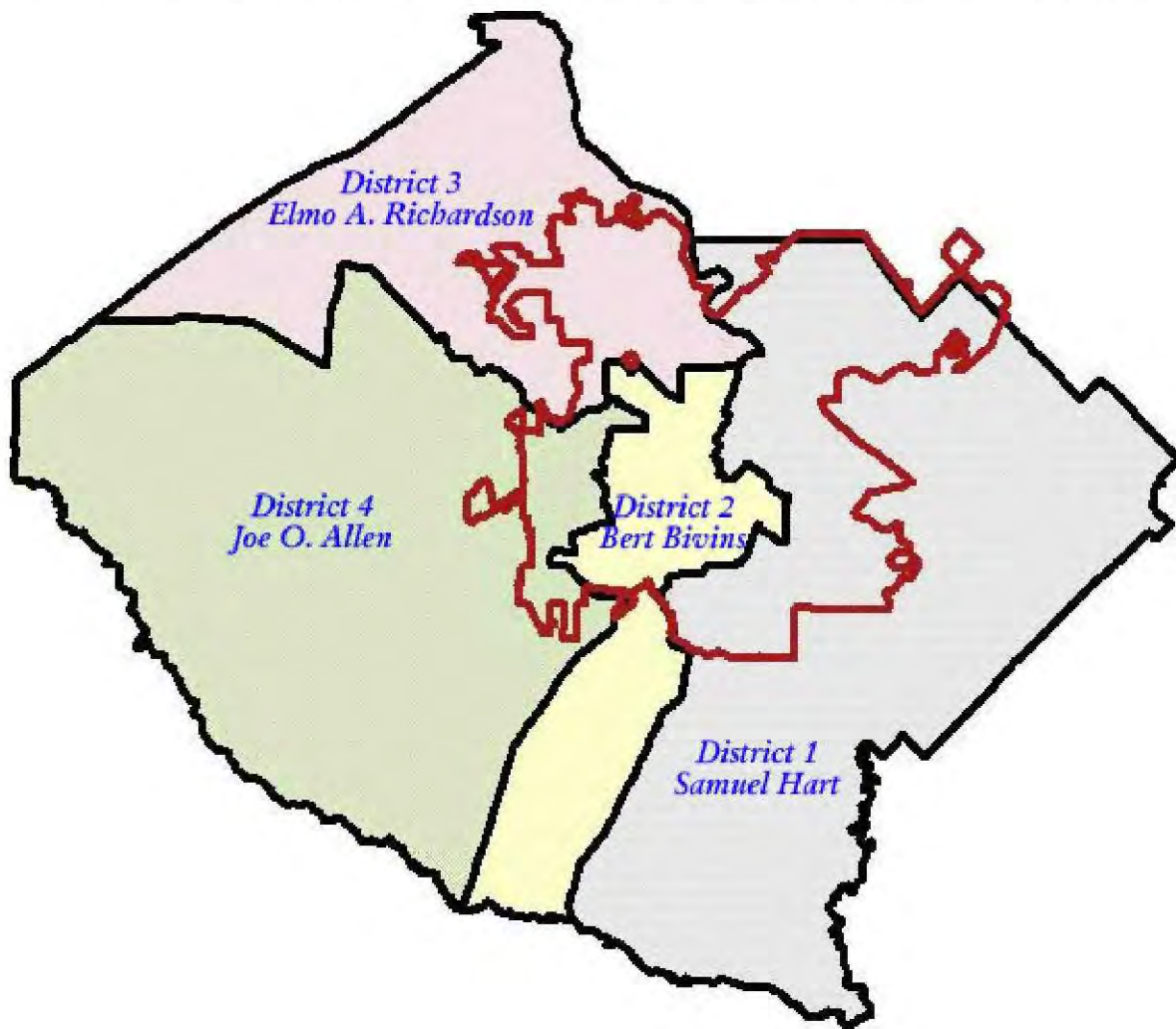
The Middle Georgia Regional Development Center (RDC) was established through the enactment of the Georgia State Planning Act of 1989, commonly known as House Bill 215. The Middle Georgia RDC, effective July 1, 1989, succeeded the former Middle Georgia Area Planning and Development Commission established in 1965. The Official Code of Georgia (OCGA) Section 50-8-31 et al provided for this succession and is the basis for the existence of the Middle Georgia RDC. Membership in the RDC is mandatory for each county and municipality in the Middle Georgia region. The RDC's membership consists of 11 counties and 22 cities in Middle Georgia. The area consists of both urban and rural counties with Bibb County/Macon and Houston County/Warner Robins being predominately urban. The RDC Board of Directors is responsible for establishing policy and direction. The objectives of the RDC are to develop, promote and assist in establishing coordinated and comprehensive planning in Georgia; to provide local governments on both an individual and regional basis with professional technical assistance to improve local government service programs; to provide professional technical assistance with the development, collection, compilation and maintenance of a local information base and network; to manage those nonprofit corporations created by the RDC in accordance with Georgia law for the operation of revolving loan programs and to function as a certified development company; and to function as the designated Area Agency on Aging (AAA), responsible for services, advocating on behalf of older persons in need, and contacting with a network of agencies to provide direct services to the elderly in the Middle Georgia region. The MPO works closely with the RDC when submitting and reviewing local DRI (Development of Regional Impact) applications. The RDC has representation on the MATS Technical Coordinating Committee and the Policy Committee.

Local Coordination:

Bibb County Government

Bibb County is governed by a County Commission Chairman and four County Commissioners. The Commission operates on a committee system and oversees the operations of 31 departments and funds 24 agencies of Bibb County government. Commissioners are elected to serve 4 year terms. They are eligible for re-election and must live in Bibb County. The Chairman is elected countywide and is the Chief Executive Officer of the County. The Board Chairman is an ex-officio member of all committees. Bibb County Chairman serves as a voting member on the MATS Policy Committee of the MPO.

Bibb County Commission Districts Figure 7.1

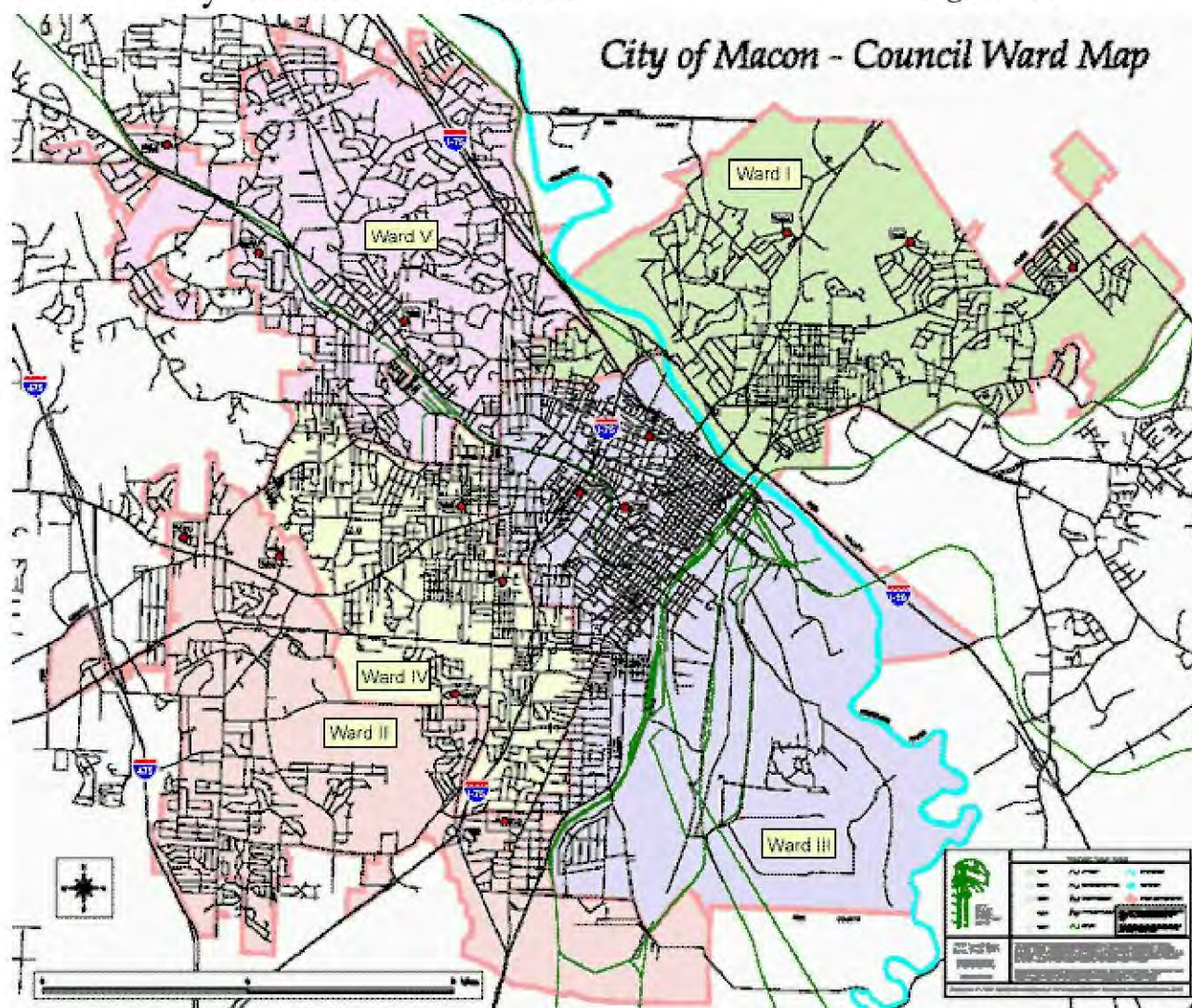


City of Macon

The Mayor's major duties include supervising the executive and administrative functions of city government. The Mayor also serves on a number of authorities and boards. Composed of fifteen members, City Council is the legislative branch of the City Government. This body enacts the laws, ordinances, and resolutions for local government. Council is elected every four years, with three members from each of the five wards. Post I of each ward is elected by the City at large and Post 2 and 3 positions are elected by only those people from within the respective ward. A President is elected by Council members from those members holding a Post I position. President Pro Tem is elected from the Council members as a whole. The President, President Pro Tem, and one other council members serve as a committee to appoint members to the six standing Council Committees. The Mayor of the City of Macon serves as a voting member on the MATS Policy Committee of the MPO.

City Council Wards

Figure 7.2



Macon-Bibb County Planning & Zoning Commission

The Planning & Zoning Commission has two major functions: land development regulation and planning. The land development function administers and enforces the zoning and platting regulations. The planning function provided the technical expertise for local planning for the city and county and the Macon Area Transportation Study (i.e. streets, highways and transit planning). Policy is set by a five person Commission that is alternatively appointed by City and County. The Chairman and Vice—Chairman are elected annually by the Commission itself.

Macon-Bibb County Water & Sewer Authority

The Macon Water Authority was created by an act of the Georgia General Assembly to serve as a public corporation that provides municipal water and sewerage services for the City of Macon and Bibb County areas. The origin of the Macon Water Authority dates back to 1880, when water for domestic service was procured from the wells of individual Bibb county citizens. That same year, The Macon Gas Light and Water Company undertook the task of providing water under pressure for the business section of the City by developing what is known as Tuff Springs. The next year, the company installed 53 fire hydrants to supply water for domestic and manufacturing services for a small area south of Spring Street. In the early 1900's, the Board of Water Commissioners was created by special act of the Georgia Legislature, to be operated by three elected members. In 1973, the Macon-Bibb County Water and Sewerage Authority was created with five members, three of whom were elected and two of whom were appointed – one from the City Council and one from the County Commission. Those respective city and county appointees remain in effect today. However, in 1979, the state passed legislation requiring representation on the Water Authority by districts. District elections began in 1980, and the number of members was increased to seven – the current number of board members that serve on the Authority today. It was 1992 when the Macon-Bibb County Water & Sewerage Authority was renamed to The Macon Water Authority (MWA), and it has operated under this utility moniker since. Today, the MWA Water Distribution System has approximately 1,425 miles of water mains and service lines serving approximately 54,000 metered customers. The Authority also operates a sewage collection system, which includes approximately 250 miles of interceptor sewers and approximately 950 miles of sanitary sewer lines serving over 41,000 customers. Macon Soils, a subsidiary of the Authority, handles the recycling of biosolids from wastewater treatment at the Authority's water reclamation or water pollution control facilities, distributing these byproducts to area farmers for agricultural purposes. The MWA closely coordinates its expansion of water service with the local MPO. MWA has representation on the MATS Technical Coordinating Committee and the Policy Committee.

Bibb County Board of Education

The Bibb County School District provides a quality education for approximately 25,000 children throughout Macon and Bibb County. From Pre-K through the twelfth grade, students learn in an atmosphere that promotes cultural understanding and respect, while holding the highest standards for academic achievement and personal responsibility. The standard curricula in our 27 elementary, 6 middle and 6 high schools provide a solid educational foundation. We currently have 3 magnet elementary schools, 1 magnet middle school, 4 magnet high schools and 1 high school offering career opportunities. Among our 5 specialty school, we have two facilities to meet special needs, Butler Early Childhood Center which also provided Pre-K for 4 year olds and Elam Alexander Academy. Other schools of interests are: the Performance Learning Center, the Teen Parent Center and Joseph Neel Academy. The school system is managed by an elected Bibb County Board of Education and an appointed Superintendent of Schools. There are eight board members—6 serve a district and 2 are members at-large. The Board meets in regular session on the third Thursday of each month beginning at 6:00p.m. School Board committee meetings are held on the second Thursday of each month, beginning at 2:30pm and are open to the public. The local MPO works closely with the Bibb County BOE when the rezoning process for residential development are pending. The Bibb County BOE works with the Macon-Bibb County Planning and Zoning Commission in collecting socio-economic data and with other planning initiatives. The Bibb County BOE has representation on the MATS Citizens Advisory Committee.

Macon Housing Authority

The Macon Housing Authority provides safe, decent and sanitary housing to low-income families. Originally, this was done through public housing, where the Authority owned and directly managed the facilities. Later, the Authority added the Section 8 program, which provides rental assistance to low-income families renting housing from private owners. The Authority is governed by a six-member Board of Commissioners that are appointed by the Mayor for five year terms. The Authority uses no local tax revenue in its operation, but derives its revenue from rent and federal subsidies. The Authority maintains 11 neighborhoods consisting of single family homes and one senior citizens tower. The Macon Housing Authority has representation on the MATS Citizens Advisory Committee.

Industrial Authority

The Authority was created by an Act of the General Assembly in 1962, and is governed by a six (6) member board consisting of the Mayor, County Commission Chairman, Macon Economic Development Chairman, and three City/County appointees. The Act charged the Authority with the responsibility of creating jobs and in-

creasing the tax base of Macon/Bibb County. It issues Industrial Revenue Bonds for financing of economic development projects and provides incentives to new or expanding industry. These incentives can be funded through Authority resources or through other sources with the Authority acting as the vehicle to provide the incentives. The Authority has developed and owns land in five (5) industrial parks. It also owns and leases manufacturing, warehousing, and office space, as well as operating the Allied Enterprise Center, an incubator for small, start-up businesses. The Authority supports the Macon Economic Development Commission in its economic development efforts, including acting as a liaison with City and County governments to implement incentives and financing of projects. The Industrial Authority has representation on the MATS Technical Coordinating Committee and the Policy Committee.

Urban Development Authority

The Urban Development Authority was created through a special act of the Georgia General Assembly and a referendum approved by the voters of Macon and Bibb County. It possesses broad legal powers to facilitate the financing and implementation of development projects, both public and private, in Downtown Macon and the surrounding areas. The authority provides a vital link between local government and the development/business community. Since its creation in 1974, the authority has worked in partnership with the city, county, and other groups to bring about major redevelopment and reinvestment in Downtown. For example, the Historic Facade/Rehabilitation Program resulted in more than \$17 million in private investment in 90 historic commercial buildings. The \$1.5 million Cherry Street Improvement Project leveraged \$12 million in private reinvestment. The Broadway Redevelopment Project eliminated major blighted properties in an area that is now home to the Music and Sports Halls of Fame and Tubman Museum. The authority has partnered with NewTown Macon and the city and county in property assemblage for the 10-acre Riverside Development Project. The authority is the issuing agency for \$8 million in bonds for the city and county as part of the \$36 million NewTown Community Challenge. The new *Willow on Fifth* restaurant is an example of an authority /city/NewTown partnership. The Urban Development Authority has representation on the MATS Technical Coordinating Committee and the Policy Committee.

Bibb County Development Authority

The Development Authority of Bibb County is a public corporation, established in 1973, which has been created pursuant to the Development Authorities Law of the State of Georgia. The Authority functions for the implementation of projects including:

- Manufacturing facilities
- Industrial facilities
- Water and air pollution control facilities
- Solid waste disposal facilities
- Convention centers and sports facilities
- Mass commuting facilities (such as airports and bus stations)
- Hotels
- Office buildings for business and charitable institutions
- Television facilities
- Provision of water and sewage
- Educational facilities
- Assisted living/nursing homes

The officers of the Authority include a Chairman, a Vice Chairman, a Secretary, an Assistant Secretary, a Treasurer, and an Administrator. Meetings of the Authority are held annually in May. The purposes of and eligible projects of the Authority are found in O.C.G.A. § 36-62-1, et seq.

Chamber of Commerce

The Greater Macon Chamber of Commerce is a privately funded, not-for-profit organization of businesses in Macon and Bibb County, Georgia. It has approximately 1,400 members, 3,000 active volunteers and its members employ some 67,000 employees. The Chamber has been active for more than 150 years. The Chamber's primary mission is job creation, both through recruitment of new industry and assistance to Existing Industry. The Chamber funds two thirds of the annual budget of the Macon Economic Development Commission. Government Affairs is an important part of Chamber Activity, insuring a free flow of information between business and government at the local, state and federal level. The Chamber takes positions as appropriate on legislation and represents the interest of its business members in lobbying for or against proposed laws.

Macon Economic Development Commission (MEDC)

The Macon Economic Development Commission (MEDC) is a partnership of government and private industry. MEDC has as its mission: the responsibility for business and industry recruitment and expansion in Macon and Bibb County. Many community organizations contribute to or support development in some way or another. MEDC works closely with these organizations to ensure that proper communication occurs. These guidelines constitute the framework for a working relationship between the entities.

- **Macon Economic Development Commission:** MEDC is the contact point for development in Macon and Bibb County. It has the responsibility for coordination of the effort in general and specifically:

- **Marketing Macon** - All pro-active efforts to recruit prospects including advertising, promotion, marketing trips, contacts with statewide developers, public statements, and any other dealings with entities or persons external to Macon and Bibb County.
- **Project Management** - All direct contacts with Development Prospects including correspondence, proposals, site visits, entertainment, and liaison between Prospects and other Development entities. MEDC shall have the responsibility for communicating project requirements to financing authorities and authority proposals to prospects.

The Macon Economic Development Commission is in business to serve firms considering expansion or relocation to Macon. It represents the city, county, and all authorities as the marketing arm. This allows Macon to speak with one voice. The Macon Economic Development Commission is currently funded to a maximum of \$ 600,000 per year. Funding and governance are according to this table:

	Chamber	Government
Funding	\$ 400,000 (max)	\$ 200,000 (max)
Executive Committee	3 Members	3 Members
Board of Directors	12 Members	6 Members

Macon Transit Authority

The Macon-Bibb County Transit Authority maintains forty (40) buses that provides transit service within Macon, Georgia and to portions of Bibb County adjacent to the urban area. MAC, the fixed route transit system includes a radial network of 9 routes which converge at the downtown transfer facility on Poplar Street. The tenth route, Macon's In-Town Trolley Service (MITSI) is a circulator that operates in the downtown area. Approximately, 4500 passenger boardings occur each weekday. Routes operate Monday through Saturday, with frequencies of 25 to 75 minutes. Service hours were recently expanded so that most routes operate from 6 a.m. to 11 p.m. Routes are designed to provide maximum coverage, resulting in trips that are somewhat circuitous and time consuming. While MBCTA provides fairly comprehensive service within the City of Macon, growth along the fringe of the urban areas has resulted in many key destinations being unserved. These include many employment sites located in the outlying industrial parks (Airport Industrial Park and Ocmulgee Industrial Park). The Authority also operates four vans in conjunction with the Older Americans Council (OAC) in order to comply with paratransit service requirements of the Americans with Disabilities Act (ADA). The local MPO works very closely with the Macon Transit Authority in providing technical support to improve their ridership. The local MPO has performed On-Board route analysis for MTA and is currently inputting their routes into GIS format. MTA has representation on the MATS Technical Coordinating Committee and the Policy Committee.

Service Delivery Strategy Summary

The 1997 Georgia General Assembly enacted the Local Government Services Delivery Strategy Act (HB 489). The intent of the Act is: a) to provide a flexible framework for local governments and authorities to agree on a plan for delivering services efficiently, effectively and responsively; b) to minimize any duplication and competition among local governments and authorities providing local services and, c) to provide a method to resolve disputes among service providers regarding service delivery, funding equity and land use.

In brief, the Service Delivery Strategy addresses the following:

- Identification of all services presently provided in the county by cities, counties and authorities.
- Identification of which local government or authority will be responsible for providing which service in what area of the county in the future.
- Identification of funding sources for all services.
- Identification of intergovernmental contracts, ordinances, resolutions, etc. to be used in implementing the strategy, including existing contracts.
- If a duplication of services is found, an explanation for its existence and a timetable for the elimination of the duplication must be provided.
- Jurisdictions charging water and sewer rate differentials to customers outside their boundaries must be able to justify such differentials.
- Services provided primarily for unincorporated areas must be funded by revenues derived exclusively from the unincorporated area of counties.
- Conflicts in land use plans within a county, between the county and its cities, must be eliminated.
- A process must be established for resolving land use classification disputes between a county and city arising over property to be annexed.

Each county and its municipalities has developed a service delivery strategy including the items listed above. However, as it relates to the City of Macon and Bibb County, the Middle Georgia Regional Development Center is currently acting as the liaison between both entities to complete the Service Delivery Strategy for the area.

CHAPTER 8

Land Use, Character Areas and Quality Community Objectives

Macon-Bibb County, working cooperatively through the Macon Area Transportation Study (MATS) process, undertook a major update to the Transportation Plan for Macon-Bibb County and the southern portion of Jones County. Traditional planning theory dictates that transportation planning and land-use planning should work in tandem. Therefore the Land Use Plan was updated in association with the Long Range Transportation Plan.

While previous plans had substantial public input, this plan update has benefited from a significantly improved public participation process via the Macon-Bibb County Visual Preference Survey (VPS) which in essence represents the collective vision and voice of the community. The VPS asked nearly 1,300 persons from every cross section of the community a series of questions and presented images of development options that existed and some that could exist in the future. The county was dissected into three distinct regions; Downtown, Neighborhoods, and Rural/Suburban Areas. In each region, the study focused on seven subcategories: street type/character, development options, pedestrian realm, parks/open space, parking options, signs, and mobility/transportation options. Participants were asked to rate images that represented options in each subcategory and rate how appropriate each option was in relation to each region. If a person thought the image was appropriate for the community it would be given a positive rating that ranged from +1 to +10. If a person thought the image was inappropriate for the community it would be given a negative rating that ranged from -1 to -10. The findings were then compiled and analyzed and policy recommendations were developed in the *2030 Vision and Action Plan*. Many of these findings and recommendations were then used in the development of the land use policies in this Land Use Plan update.

Purpose of the Land Use Plan

The land use plan is used as a guide to promote, facilitate, and direct orderly growth and change. It aggregates the spatial relationship of the land uses of the community and provides the basis for rezonings and other land use decisions made by community officials.

The land use plan cannot fully dictate how growth will take place, but must work with the economics of the marketplace. It tries to anticipate where growth will occur based on current land use trends and projections of population, housing needs, and employment. The plan must recognize, however, that the market place is dynamic and therefore cannot be created and then etched into stone. A static land use plan cannot work effectively in the real world that is dynamic and constantly changing.

Decisions made within the framework of the land use plan do have an impact upon the marketplace and affect the economy and well being of the community. The difficulty in arriving at a future land use plan is how to balance the economic forces of the marketplace with the overall well being of the community. Arriving at a consensus and achieving the proper tradeoffs is often a very difficult and controversial process.

The land use plan does attempt to provide stability and a direction for growth and change. At the same time, the plan utilizes the community's resources, such as streets, highways, water and sewer facilities to community's best advantage. The plan is a focal point from which a discussion on land use decisions can begin. It provides the basic rationale for how the community sees itself growing and tries to minimize the negative impacts of one type of land use upon another.

Land Use Classification

Standard Classification System

In order to facilitate the development of a state and regional land use database, land use categories used in local plans must be consistent with the standard land use classification system established by the Georgia Department of Community Affairs (DCA). More detailed categories used by local governments must be subcategories that can be grouped into one of the state mandated categories established by DCA.

Land Use Categories

The specific recommendations regarding how land is anticipated to be used are governed by land use categories. There are eight standard land use categories that are mandated by the Georgia Department of Community Affairs to meet minimum planning requirements. In most cases the land use categories in this plan will provide more detail and go beyond the minimum standards. Several of the land use categories will also be augmented with suggested VPS definitions/regulations.

Residential

Residential use of land is usually the most extensive use of land in a community. Residential areas must be designed to accommodate basic human and social functions. Therefore, great care and thought must go into the land use plan for these areas of the community. To achieve this end, this land use category was subdivided into the following subcategories: Rural Residential, Suburban Residential, and Urban Residential.

DCA Land Use Mandate

The predominant use of land within the residential category is for single-family and multi-family dwelling units.

Rural Residential. This district is meant to preserve the rural character of outlying areas of Bibb County. Homes on large lot subdivisions and agricultural/forestry uses are expected in this district. Public sewer is not anticipated in much of this district. According to the VPS, large lot single family detached homes with one unit per acre are the preferred option in this district. Minor agricultural cultivation is also expected in this category.

Suburban Residential. This subcategory predominantly promotes single family detached



Source: Macon-Bibb County VPS Results and Recommendations

dwelling in subdivision settings with higher density single family attached or multi-family developments at appropriate locations. Mixed use developments that are predominantly single family in nature but may include attached or multi-family dwellings are also anticipated in this district.

The following images are examples of housing types and development patterns that were found to be appropriate in this district. The VPS results indicated that smaller single family lots that are $\frac{1}{4}$ to $\frac{3}{4}$ acres in size would be appropriate. Other appropriate housing types are townhouse, condominiums, apartments and senior citizen housing. It is important to note that



Source: Macon-Bibb County VPS Results and Recommendations

the smaller lot developments, cluster developments, and attached/multi-family developments should incorporate substantial park or open space.

Where appropriate, mixed use developments which contain small scale commercial or office in addition to residential uses may be allowed.

Small scale office developments may be located at appropriate locations to serve a small market area in nearby neighborhoods. The image to the right illustrates the general type of mixed use development that may be acceptable in this classification. This development includes a mixed center having a more traditional architectural character. It has sidewalks, diagonal parking and an outdoor café. Building heights vary from one to two and one half stories with emphasis on full roofs, more like a small village center.



Source: Macon-Bibb County VPS Results and Recommendations

Urban Residential. Traditional urban neighborhoods may contain such residential uses as single family houses, single family attached and multi-family developments along with nearby small scaled neighborhood convenience retail and services that are intended to serve the need of the immediately surrounding neighborhood. The images below were positively rated from the VPS in the urban residential category.



Source: Macon-Bibb County VPS Results and Recommendations

The images represent visually attractive development characteristics with integrated features including two to three story masonry buildings, ground floors raised above grade, pedestrian realm amenities including a semi-public edge between the sidewalk and the front yard, narrow setbacks, no garages on the front façade, (parking in rear or off and alley), defined individual entrances, on street parking and street trees. Developments higher in density than in rural or suburban subcategories should be expected in this classification.

Office conversions in single family residences may be suitable along major thoroughfares where appropriate in this classification. Scale, compatibility and protection of residential and historic properties are keys issues in the appropriateness of use.

Commercial

The commercial category was subdivided into four categories: office, community commercial, regional commercial, and the central business district (CBD). Subdividing commercial uses in these categories helps to better offer a more adequate fit of the proposed commercial use with the surrounding community.

DCA Land Use Mandate

This category is for land dedicated to non-industrial business uses, including retail sales, office, service and entertainment facilities, organized into general categories of intensities. Commercial uses may be located as a single use in one building or grouped together in a shopping center or office building.

Office. Various types of professional, corporate and administrative office establishments including stand alone offices, multi-tenant establishments and office supply stores are appropriate in this classification. This district may also include office/warehouse or service centers were deemed appropriate.

Community Commercial. Retail sales, office and service uses with the largest establishments being less than 100,000 square feet of floor area, and whose market is primarily community oriented are expected in this classification.

Regional Commercial. This classification includes retail sales, office and service uses that support commercial establishments of over 100,000 square feet of floor whose market is predominantly regional in nature. Uses are to be located on highways and major thoroughfares.

The image to the right is a highly rated example of desirable development in this category. The example image is a new prototype shopping center that models itself after a traditional main street that incorporated three large magnet retailers including a multiplex cinema and two “big boxes” at either end. The main street has wide sidewalks, street furniture, street trees and diagonal parking. The high rating on this image suggests this is the right form of commercial development for Macon-Bibb County.



Source: Macon-Bibb County VPS Results & Recommendations

Central Business District. A variety of traditional uses are to be expected in the downtown area. Uses include a mix of residential, commercial, and light industrial that are compatible and appropriately scaled to encourage the continued pedestrian nature and ambiance of the downtown area. In addition, the VPS indicated that downtown commercial development should include the following characteristics:

- Buildings built up to the sidewalk edge
- Infill mixed-use buildings
- Retail frontage with large display windows
- pedestrian shelter in the form of continuous awnings
- 3 to 6 story heights
- 40 to 60 percent façade is transparent
- articulated cornice lines

The images below are examples of development that is appropriate for the downtown area.



Source: Macon-Bibb County VPS Results and Recommendations

Industrial

This category encourages land use activities and development ranging from light to heavy manufacturing along with wholesale and warehouse operations. Light manufacturing does not generally require extensive loading and unloading of goods or outside storage. Normally the effects of the industrial operation are not detectable beyond the boundaries of the property. Heavy manufacturing will contain most of the fabrication, processing, storage and assembly operations in the community. Areas designated for heavy manufacturing may generate noise, odors, and smoke that are detectable beyond the boundaries of the property. An office/warehouse center with limited retail is also appropriate in this district.

DCA Land Use Mandate

This category is for land dedicated to manufacturing facilities, processing plants, factories, warehousing and wholesale trade facilities, mining or mineral extraction activities, or other similar uses, organized into general categories of intensity.

Public/ Institutional

The institutional category used here includes properties classified as public and quasi-public uses, such as government buildings, places of worship, cemeteries, schools, fraternal organizations and museums.

DCA Land Use Mandate

This category includes certain state, federal or local government uses, and institutional land uses. Government uses include city halls and government building complexes, police and fire stations, libraries, prisons, post offices, schools, military installations, etc. Examples of institutional land uses include colleges, churches, cemeteries, hospitals, etc. Facilities that are publicly owned, but would be classified more accurately in another land use category. For example, publicly owned parks and/or recreational facilities should be placed in the Parks/Recreation/Conservation category; landfills should fall under the Industrial category; and general office buildings contains government offices should be placed in the Commercial category.

Transportation/

Communications/Utilities

This land use category includes properties used for transportation, communications and utility uses, such as streets and highways, power generation plants, railroad facilities, radio towers, public transit stations, telephone switching stations, airports, port facilities or other similar uses.

DCA Land Use Mandate

This category includes such uses as major transportation routes, public transit stations, power generation plants, railroad facilities, radio towers, telephone switching stations, airports port facilities or other similar uses.

Parks/Recreation/Conservation/Floodplain

This category is for land dedicated to parks, passive open space and recreational centers that are owned by and accessible to the public. Land that is privately held with uses such as golf course, country clubs and athletic facilities that are operated on a member-only basis by clubs or non-profit organizations is also covered by this classification. Lastly, land that has been designated for preservation under the Georgia Greenspace program or as recognized floodplain will fall under this classification.

DCA Land Use Mandate

This category is for land dedicated to active or passive recreational uses. These areas may be either publicly or privately owned and may include playgrounds, public parks, nature preserves, wildlife management areas, national forests, golf courses, recreation centers or similar uses.

Agriculture

Agricultural land uses are not designated in Bibb County due to the small amount of land that is used for agricultural purposes.

DCA Land Use Mandate

This category is for land dedicated to agriculture, farming (fields, lots, pastures, farmsteads, specialty farms, livestock production, etc.) or other similar uses such as pasture land not in commercial use.

Forestry

Forestry land uses are not designated in Bibb County due to the small amount of land that is used for timber harvesting purposes.

DCA Land Use Mandate

This category is for land dedicated to commercial timber or pulpwood harvesting or other similar rural uses such as woodlands not in commercial use.

FUTURE GROWTH AND DEVELOPMENT

Residential Growth to 2030

Methodology

The following data in this section is taken from the report, “Development Trends and Land Demand Analysis”. All tables and figures are taken from this document unless otherwise stated. Estimates of residential growth to the year 2030 are based on forecasts of the number of housing units, by structure type (single-family, duplex and multi-family). The housing unit forecasts themselves are based on forecasts of the number of future households, since households and occupied housing units are synonymous. The tables on the following page reflect the following general methodology:

- The number of housing units in Macon-Bibb County in 1990 and 2000 is obtained from the decennial Census data.
- The number of housing units built since the 2000 Census through 2001 are added to the Census figure to estimate the number of units in 2002.
- Household growth is based on the forecasts for the county by Woods & Poole Economics added by each benchmark year (2009, 2005, 2015 and 2025) and projected to 2030, adjusted for actual housing counts in 2002.
- The number of new households added by each benchmark year is allocated by structure type in the same proportions that were reflected in the new growth in housing units from 1990 to 2002.

It should be noted that persons living in group quarters (such as nursing homes, dormitories, fraternities and the jail) are considered separately in these forecasts since the residents represent population growth but not household growth, and therefore do not generate housing development.

Current Housing Supply

Tables 8-1 and 8-2 show the number of housing units, by structure type, reported in the 1990 and 2000 Censuses for Bibb County. The data are summarized under the general categories of single-family, duplex, multi-family and "other." The tables also show the number and percentage of units that were vacant for each general category in the two Census year.

Table 8-1
Housing Units 1990 to 2000

Type of Structure	Total Units		Occupied		Total		Vacant	
	1990	2000	1990	2000	1990	2000	1990	% Vacant 2000
Single-Family Detached	39,794	43,737	37,352	40,330	2,442	3,407		
Mobile Home	2,111	2,205	1,872	1,871	239	334		
Subtotal Single-Family	41,905	45,942	39,224	42,201	2,681	3,741	6.4	8.1
Two-Family (Duplex)	5,105	4,574	4,278	3,527	827	1,047	16.2	22.9
Single-Fam Attached	1,539	1,991	1,406	1,784	133	207		
3 to 4 Units	3,515	4,071	3,050	3,329	465	742		
5 to 9 Units	4,443	5,277	3,850	4,400	593	877		
10 to 19 Units	1,971	2,070	1,768	1,745	203	325		
20 to 49 Units	1,179	1,060	1,040	667	139	393		
50 or More Units	1,120	2,191	1,049	1,996	71	195		
Subtotal Multi-Family	13,767	16,660	12,163	13,921	1,604	2,739	11.7	16.4
Other	685	18	642	18	43		6.3	
Total	61,462	67,194	56,307	59,667	5,155	7,527	8.4	11.2

Source: Development Trends & Analysis, Ross + Associates, 2004.

Table 8-2
Housing Unit Change 1990 to 2002

Total Units	1990	2000	New Units		1990-2002 Change	
			2000-02	2002	Number	Percent
Single-Family*	42,590	45,960	908	46,868	3,370	50.75
Duplex	5,105	4,574	0	4,574	-531	-8
Multi-Family	13,767	16,660	0	16,660	2,893	43.57
Total**	61,462	67,194	908	68,102	6,640	100

* Includes units classified as "other"

** New construction between 1990 and 2002 breaks down as follows: Single Fam- 53.8% Multi-Fam - 46.2%

Source: Development Trends & Analysis, Ross + Associates, 2004.

Future Growth In Households

The increase in the number of housing units between 1990 and 2002 is shown in Table 8-2, based on the number of units authorized by building permits. Of the total number of housing units added between 1990 and 2002, the percentage that were located in single-family houses, duplexes and multi-family buildings is also shown. Overall, the number of units in duplexes has fallen over the past 12 years; no future construction of duplexes is anticipated over the forecast period. The remaining proportional share by structure type is used in later calculations.

Table 8-3 forecasts population and households to the year 2030 and for each of the benchmark year increments. The forecasts are based on the projections prepared by Woods & Poole for the county to 2025, adjusted to reflect updated household and population estimates for 2002. The adjusted forecasts are then projected to 2030 using "best fit" regression analysis, with the population in households smoothed to a continuous regression curve. The population in group quarters is derived as the difference between the total population and those residing in households.

Table 8-3
Population And Household Forecast 2002 to 2030

Bibb County							Increase
	2002	2009	2015	2022	2025	2030	2002-2030
Woods & Poole							
Total Population	154,181	155,454	157,155	159,681	161,005		
Number of Households	60,088	61,342	62,144	62,419	62,352		
Persons per Household	2.47	2.44	2.43	2.45	2.47		
Population in Households	148,417	149,674	151,010	152,927	154,009		
Population in Group Quarters	5,764	5,780	6,145	6,754	6,996		
MATS Adjustment							
		Percent Difference					
Total Population	156,136	101.268%					
Number of Households	60,524	100.726%					
Persons per Household	2.4920	100.891%					
Population in Households	150,826						
Population in Group Quarters	5,310						
Adjusted Forecasts							
Total Population	156,136	157,425	159,148	161,706	163,047		
Number of Households	60,524	61,787	62,595	62,872	62,804		
Persons per Household	2.49	2.46	2.45	2.47	2.49		
Population in Households	150,826	152,103	153,461	155,409	156,508		
Population in Group Quarters	5,310	5,322	5,687	6,297	6,539		
Revised Forecasts (Regressions)							
Total Population	156,136	157,425	159,148	161,706	163,047	165,551	9,415
Number of Households	60,524	61,787	62,595	62,872	62,804	62,539	2,015
Persons per Household	2.49	2.46	2.45	2.47	2.49	2.53	
Population in Households	150,826	151,921	153,360	155,503	156,483	158,081	7,255
Population in Group Quarters	5,310	5,504	5,788	6,203	6,564	7,470	2,160
Occupancy Rate	88.59%	88.59%	88.59%	88.59%	88.59%	88.59%	
Total Dwelling Units	68,323	69,749	70,661	70,974	70,897	70,598	2,275

Table 8-4 estimates the future number of households by structure type. The net number of new households added between each benchmark year is allocated to single- family houses and multi-family buildings using the same proportions that were experienced between 1990 and 2002 (see the footnote in Table 8- 2).

It is assumed that, on average, there is no more than a six-month lag between permit issuance and the completion of construction. Thus, units issued building permits through December of one year would be completed and available for occupancy prior to July 1 of the next year. As noted above, the upper limit of household growth is achieved in 2022 according to the Woods & Poole projections for the county.

Table 8-4
Household Growth 2002-2030

Macon-Bibb County							Increase
	2002	2009	2015	2022	2025	2030	2002-30
Total Households	60,524	61,787	62,595	62,872	62,804	62,539	
Net New Households							
Increase over Previous Increment*		1,263	808	277			2,348
Growth Share by Type							
Single-Family		53.81 %	53.81 %	53.81 %	53.81 %	53.81%	
Duplex**		0.00%	0.00%	0.00%	0.00%	0.00%	
Multi-Family		46.19%	46.19%	46.19%	46.19%	46.19%	
Net New Households by Type							
Single-Family		680	435	149			1,264
Duplex							
Multi-Family		583	373	128			1,084

Residential Development Macon-Bibb County

Methodology

Once the number of new households is estimated, the number of new housing units can be estimated and the amount of land they will consume in development can be calculated using average density factors for each structure type. The methodology is:

- The number of new housing units that are anticipated to be built is based on the future increase in the number of households (i.e., occupied housing units) plus a factor for vacant units.
- An estimate is made of the average density at which future residential development will occur.
- The future number of housing units divided by the average density yields the number of acres that are anticipated to be consumed by actual construction.

Future Housing Demand

Table 8-5 shows the estimated number of new housing units that are forecast to be constructed during each of the benchmark year periods between 2002 and 2030. The estimates are based on the forecasts of net new households (i.e., occupied housing units) from Table 4-4, to which an estimate of vacant units is added reflecting 2000 vacancy rates.

Table 8-5
Housing Demand 2002 - 2030

	2002-09	2009-15	2015-25	2025-30	Total
Net New Households by Type					
Single-Family	680	435	149	0	1,264
Duplex	0	0	0	0	0
Multi-Family	583	373	128	0	1,084
Net New Households	1,263	808	277	0	2,348
Vacancy Rates					
Single-Family	8.1%	8.1%	8.1%	8.1%	
Duplex	22.9%	22.9%	22.9%	22.9%	
Multi-Family	16.4%	16.4%	16.4%	16.4%	
Net New Housing Units					
Single-Family	740	474	162	0	1,376
Duplex				0	
Multi-Family	698	446	153	0	1,297
Net New Housing Units	1,438	920	315	0	2,673

Residential Development Densities

The total number of acres occupied by existing development has been calculated for the entire county, by land use category. The total number of housing units, 68,102, was divided by the total number of acres allocated for residential development. Those acreages per land use category, divided into the current number of housing units, produces a county-wide average density of housing units per acre. These figures have been rounded slightly for calculation of future development activity, as shown on Table 8-6.

Table 8-6
Average Residential Densities 2002

Land Use Category	Number of Acres	Total Housing Units	Housing Units Per Acre
Total Single Family	27,788.28	46,868	1.69
	Single-Family rounded to		1.70
Total Duplex	795.92	4,574	5.75
	Duplex rounded to		6.00
Total Multi-Family	1,290.71	16,660	12.91
	Multi-Family rounded to		13.00

Source: 2002 land use acreages compiled by MBP&Z Commission staff

Residential Land Demand

Table 8-7 shows the estimated number of acres that will be developed with actual construction to accommodate the number of new housing units that are forecast to be constructed during each of the benchmark year periods to 2030. The net number of new units is shown for each benchmark year, as well as the cumulative total.

The demand in acres is estimated using the average density figures from Table 8-6, expressed in housing units per acre, divided into the number of new units. These figures should be interpreted as being land on which housing units have been actually built. Land consumed by residential development will exceed the figures shown in Table 8-7, reflecting vacant lots in subdivisions, future phases dedicated to development but not yet begun, and projects under construction but not yet completed. This land consumption is discussed in a later section.

Table 8-7
RESIDENTIAL LAND DEMAND

Macon-Bibb County					Cumulative
	2002-09	2009-15	2015-25	2025-30	to 2030
Net New Housing Units					
Single-Family	740	474	162	0	1,376
Duplex	0	0	0	0	0
Multi-Family	698	446	153	0	1,297
Net New Units by Increment	1,438	920	315	0	2,673
Total Cumulative New Units	1,438	2,358	2,673	2,673	
Avg. Units per Acre					
Single-Family	1.7	1.7	1.7	1.7	
Duplex	6.0	6.0	6.0	6.0	
Multi-Family	13.0	13.0	13.0	13.0	
Demand in Acres					
Single-Family	435.3	278.8	95.3	0	809.4
Duplex	0	0	0	0	0
Multi-Family	53.7	34.3	11.8	0	99.8
Net New Acres by Increment	489.0	313.1	107.1	0	909.2
Total Cumulative New Acres	489.0	802.1	909.2	909.2	

Employment Growth to 2030-Macon-Bibb County

Methodology

An important distinction to bear in mind when considering future nonresidential development is the difference between "employed persons" and "employees." The Census reports employment characteristics of the resident population, which has less relevance to the future growth of business and industry in Macon- Bibb County than the number of actual jobs. More people work in Macon- Bibb County than the number of residents who are employed, underlining the "central city" role that Macon- Bibb County plays in attracting workers from surrounding areas.

The Woods & Poole forecasts of employment are particularly useful in that the data reports jobs not people. That is, if a person has two jobs possibly a full-time job during the day and a part- time job nights or weekends; Woods & Poole reports two jobs, not one employed person. Since it is ultimately the number of jobs that generates floor space requirements for the number of employees, and thus future land development to accommodate that floor space, the Woods & Poole approach generates more realistic results. In addition, Woods & Poole includes in their forecasts self-employed people and sole proprietors, unlike statistics from the Georgia Dept. of Labor or the U.S. Dept. of Commerce. This is an important consideration in estimating the true demand for space for future business growth. The methodology proceeds along the following lines:

- Employment forecasts are obtained for each employment category.
- For each private sector employment category, the percentage of employees normally occupying retail, office or industrial space is determined.
- The percentages by land use category are applied to the employment data to estimate the number of employees in retail, office, industrial and public settings.

Employment Forecast

Table 8-8 shows the Woods & Poole figures for employment from 2002 to 2025 by benchmark increment for Bibb County. The number of employees for each sector was then projected to 2030 using regressions against the Woods & Poole figures.

Table 8-8						
Employment Forecasts 2002 – 2030						
	2002	2009	2015	2025	2030	Change 2002- 30
Construction	5,345	5,454	5,558	5,746	5,848	503
Manufacturing	12,678	12,374	12,238	12,263	12,392	(286)
Transport, Communications & Utilities	5,488	5,764	6,002	6,402	6,602	1,114
Wholesale Trade	4,712	4,620	4,612	4,716	4,812	100
Retail Trade	20,926	21,636	22,453	24,045	24,997	4,071
Finance, Insurance, Real Estate	11,564	12,506	13,412	15,040	15,923	4,359
Services	40,281	45,274	50,115	59,317	64,448	24,167
Federal, State & Local Government	11,585	11,687	11,782	11,992	12,135	550
Total- Employees	112,579	119,315	126,172	139,521	147,157	34,578

Source: County Forecasts: Woods & Poole Economics, Inc.: 2030 projection Ross+associates.

Employment By Land Use Category

In order to estimate future demand for nonresidential development, future employment estimates must be translated from employment sector category to land use category. Table 8-9 shows the percentage breakdown by land use category estimated for each of the employment sectors. The percentages are estimated from the detailed employment by NAICS code data reported in the latest *County Business Patterns*:

2001. Employment by detailed category is distributed to or among the three types of private land uses based on the most likely setting appropriate to the category. The number of employees

by land use are then

summed by general employment category and percentages calculated. These percentages are summarized on Table 8-9. Government employment, of course, is allocated exclusively to “public” land use.

Table 8-9				
Percent Employment By Land Use				
	Retail	Office	Industrial	Public
Construction	0%	18.2%	18.2%	0%
Manufacturing	0%	0%	100%	0%
Transport, Commun. & Utilit.	9.2%	21.6%	69.3%	0%
Wholesale Trade	0%	25%	75%	0%
Retail Trade	92.3%	0%	7.7%	0%
Finance, Insurance, & Real Estate	37.2%	62.8%	0%	0%
Private Services	17.8%	78.4%	3.7%	0%
Federal, State & Local Gov.	0%	0%	0%	100%

Source: Ross+associates evaluation of County Business Patterns: 2001 for Bibb County, U.S. Dept. of Commerce, Bureau of the Census.

It should be noted that *County Business Patterns* data exclude most small businesses and virtually all sole proprietors. However, the proportion of employees in each sector from *County Business Patterns* that would be expected to be located in the various land use categories is viewed as being equally valid for the larger number of workers when the "excluded" categories are added back in.

Table 8-10 converts employment in Macon-Bibb County by employment sector to land use category. Employment by land use category is estimated by applying the percentages from Table 8-9 to the employment data by sector on Table 8-8. Because some economic sector increases, such as construction, result in limited increases in land uses, the total number of employees by land use category is less than total employment by economic sector.

Table 8-10
Employment Forecast By Land Use 2002-2030

Macon-Bibb County						Change
	2002	2009	2015	2025	2030	2002-30
Employment by Sector						
Construction	5,345	5,454	5,558	5,746	5,848	503
Manufacturing	12,678	12,374	12,238	12,263	12,392	(286)
Transport, Communications & Utilities	5,488	5,764	6,002	6,402	6,602	1,114
Wholesale Trade	4,712	4,620	4,612	4,716	4,812	100
Retail Trade	20,926	21,636	22,453	24,045	24,997	4,071
Finance, Insurance & Real Estate	11,564	12,506	13,412	15,040	15,923	4,359
Private Services	40,281	45,274	50,115	59,317	64,448	24,167
Federal, State & Local Government	11,585	11,687	11,782	11,992	12,135	550
Total by Employment Sector	112,579	119,315	126,172	139,521	147,157	34,578
Employment by Land Use Category						
Retail Commercial	31,307	33,229	35,206	38,959	41,100	9,793
Office	42,198	46,763	51,197	59,585	64,250	22,052
Industrial	24,094	24,173	24,457	25,336	25,958	1,863
Public	11,585	11,687	11,782	11,992	12,135	550
Total by Land Use Category*	109,185	115,851	122,642	135,872	143,443	34,258

*Totals by land use category are less than totals by economic sector due to employment that does not permanently consume land (such as itinerant construction workers).

Nonresidential Development-Macon-Bibb County

Methodology

Estimates are presented in the preceding section of the number of employees (i.e., jobs) that are expected in the future in retail, office, industrial and public settings in Macon- Bibb County. This section of the report provides estimates of the amount of building floor space and land acreage that will be needed to accommodate these future employees in each land use category. The methodology is:

- The total number of employees that will occupy retail, office or industrial space is estimated for each benchmark year.
- The number of employees is multiplied by an average floor area per employee factor, resulting in an estimate of the amount of floor area that will be needed to accommodate the future number of employees in each of the land use categories.
- The net new floor area added for each benchmark year is determined.
- The amount of new development in acres is determined by dividing the net new square footage of floor area by an average floor area per acre factor, for each land use category.

New Growth Demand Floor Area

Tables 8-11, 8-12, and 8-13 show estimates of the total number of square feet of floor area that will be needed to accommodate private sector employment growth in Macon-Bibb County at each future benchmark year. A separate table is presented for each of the three private sector land use categories-retail, office and industrial.

Each of the three tables shows the total number of employees by employment sector that is fore-cast for each benchmark year in the relevant land use category (retail, office or industrial). The figures are derived by multiplying the total number of employees by sector

in Table 8-10 by the percentages of employment by land use category in Table 8-9 for each benchmark year.

The floor area needed to accommodate these employees is estimated by multiplying the number of employees by the average amount of floor area each employee will occupy. The "floor area per employee" factors used on the three tables are derived from national vehicle trip data. The floor area per employee factors used on the following tables are generalized from the specific results as appropriate to the nature of the land use type and the employment sector.

Table 8-11
Retail Demand 2002-2030

Macon-Bibb County						
	Factor	2002	2009	2015	2025	2030
	Percent of Total					
Retail Employment						
Construction	0.0%	0	0	0	0	0
Manufacturing	0.0%	0	0	0	0	0
T.C.U.	9.2%	502	528	550	586	604
Wholesale Trade	0.0%	0	0	0	0	0
Retail Trade	92.3%	19,317	19,972	20,726	22,196	23,074
F.I.R.E.	37.2%	4,301	4,652	4,989	5,594	5,923
Private Services	17.8%	7,187	8,078	8,941	10,583	11,499
Total Retail Employees		31,307	33,229	35,206	38,959	41,100
	Floor Area per Emp.*					
Retail Floor Area						
Construction	0	0	0	0	0	0
Manufacturing	0	0	0	0	0	0
T.C.U.	600	301,496	316,658	329,733	351,708	362,696
Wholesale Trade	0	0	0	0	0	0
Retail Trade	600	11,589,903	11,983,138	12,435,635	13,317,367	13,844,634
F.I.R.E.	300	1,290,396	1,395,511	1,496,609	1,678,274	1,776,805
Private Services	600	4,312,106	4,846,609	5,364,841	6,349,921	6,899,198
Total Retail Floor Area		17,493,900	18,541,917	19,626,819	21,697,270	22,883,332

<Estimate of average gross floor area per employee based on analysis of data from *Trip Generation*, 6th Edition, 11E.

Table 8-12
Office Demand 2002-2030

Macon-Bibb County

	Factor	2002	2009	2015	2025	2030
	Percent of Total					
Office Employment						
Construction	18.2%	975	995	1,014	1,048	1,067
Manufacturing	0.0%	0	0	0	0	0
T.C.U.	21.6%	1,184	1,244	1,295	1,382	1,425
Wholesale Trade	25.0%	1,178	1,155	1,153	1,179	1,203
Retail Trade	0.0%	0	0	0	0	0
F.I.R.E.	62.8%	7,263	7,854	8,423	9,446	10,000
Private Services	78.4%	31,598	35,514	39,312	46,530	50,555
Total Office Employees		42,198	46,763	51,197	59,585	64,250
	Floor Area per Emp.*					
Office Floor Area						
Construction	300	292,583	298,550	304,242	314,533	320,117
Manufacturing	0	0	0	0	0	0
T.C.U.	300	355,314	373,183	388,592	414,489	427,438
Wholesale Trade	330	388,740	381,150	380,490	389,070	396,990
Retail Trade	0	0	0	0	0	0
F.I.R.E.	300	2,178,804	2,356,289	2,526,991	2,833,726	3,000,095
Private Services	240	7,583,436	8,523,435	9,434,818	11,167,218	12,133,197
Total Office Floor Area		10,798,877	11,932,606	13,035,133	15,119,037	16,277,837

*Estimate of average gross floor area per employee based on analysis of data from *Trip Generation, 6th Edition*, ITE.

Table 8-13
Industrial Demand 2002-2030

	Factor	2002	2009	2015	2025	2030
	Percent of					
	Total					
Industrial Employment						
Construction	18.2%	975	995	1,014	1,048	1,067
Manufacturing	100.0%	12,678	12,374	12,238	12,263	12,392
T.C.U.	69.3%	3,801	3,992	4,157	4,434	4,573
Wholesale Trade	75.0%	3,534	3,465	3,459	3,537	3,609
Retail Trade	7.7%	1,609	1,664	1,727	1,849	1,923
F.I.R.E.	0.0%	0	0	0	0	0
Private Services	3.7%	1,497	1,682	1,862	2,204	2,394
Total Industrial Employees		24,094	24,173	24,457	25,336	25,958
	Floor Area					
	per Emp.*					
Industrial Floor Area						
Construction	430	419,369	427,921	436,081	450,831	458,834
Manufacturing	540	6,846,120	6,681,960	6,608,520	6,622,020	6,691,680
T.C.U.	1,050	3,991,185	4,191,908	4,364,995	4,655,898	4,801,349
Wholesale Trade	800	2,827,200	2,772,000	2,767,200	2,829,600	2,887,200
Retail Trade	800	1,287,596	1,331,283	1,381,554	1,479,511	1,538,088
F.I.R.E.	0	0	0	0	0	0
Private Services	430	643,497	723,261	800,597	947,601	1,029,570
Total Industrial Floor Area		16,014,967	16,128,334	16,358,947	16,985,462	17,406,722

*Estimate of average gross floor area per employee based on analysis of data from *Trip Generation, 6th Edition*, ITE.

Non-Residential Densities

The total number of acres occupied by existing development has been calculated for the entire county, by land use category. Those acreages divided by the current number of employees, produces a countywide average density of employees per acre. By multiplying the average number of employees per acre by the number of square feet of floor area each employee occupies, the total floor area per acre in square feet is estimated. The square feet per employee figure is derived from the average for all employees for each land use category (Tables 8-11, 8-12 and 8-13) weighted by economic sector. These figures have been rounded slightly for calculation of future development activity, as shown in Table 8-14.

Table 8-14
Average Nonresidential Densities 2002

Land Use Category	Number of Acres	Total Employment	Employees Per Acre	Sq. Ft Per Employee	Sq. Ft. Per Acre
Total Retail	2,663.21	31,307	11.76	577	6,782.9
			Retail rounded to 6,800		
Total Office	589.70	42,198	71.56	256	18,318.9
			Office rounded to 18,300		
Total Industrial	4,380.53	24,094	5.50	737	4,053.8
			Industrial rounded to 4,100		

Source: 2002 land use acreages compiled by MBCP&Z Commission staff

Non-Residential Growth Demand Land Area

Table 8-15 converts the forecasted number of square feet of floor area by land use into net land demand for new nonresidential development in acres, using the average densities shown in Table 8-14. The total floor area for each of the land use categories by benchmark year are shown at the

Table 8-15
Land Area Demand for Private Nonresidential Uses

	2002	2009	2015	2025	2030	Increase 2002 to 2030
Total Floor Area						
Each Increment:						
Retail Commercial	17,493,900	18,541,917	19,626,819	21,697,270	22,883,332	5,389,432
Office	10,798,877	11,932,606	13,035,133	15,119,037	16,277,837	5,478,960
Industrial	16,014,967	16,128,334	16,358,947	16,985,462	17,406,722	1,391,755
TOTAL Nonres Floor Area	44,307,745	46,602,857	49,020,899	53,801,768	56,567,891	12,260,147
New Floor Area Added						
Each Increment:						
Retail Commercial		1,048,016	1,084,902	2,070,451	1,186,063	5,389,432
Office		1,133,730	1,102,527	2,083,904	1,158,800	5,478,960
Industrial		113,366	230,614	626,514	421,261	1,391,755
Total Added Each Increment		2,295,112	2,418,043	4,780,869	2,766,123	12,260,147
CUMULATIVE New Floor Area		2,295,112	4,713,155	9,494,024	12,260,147	
sf per acre:						
Acres of Land						
Retail Commercial	6,800	154.1	159.5	304.5	174.4	792.6
Office	18,300	62.0	60.2	113.9	63.3	299.4
Industrial	4,100	27.7	.2	152.8	102.7	39.5
Total Added Each Increment		243.7	276.0	571.2	340.5	1,431.4
CUMULATIVE Developed Acres		243.7	519.8	1,090.9	1,431.4	

top of the Table, taken from Tables 8-11, 8-12 and 8-13. The net increase for each benchmark increment is then calculated from the totals. The total for the increment and the cumulative total since 2002 are both shown. By dividing the increase in floor area for each increment by the average density figures for each land use type (from Table 8-14), the net number of acres that the floor area will occupy can be determined.

It should be understood that the demand shown in Table 8-15 reflects land on which businesses and industries will have been actually built. Land consumed by nonresidential development will exceed the figures shown on Table 8-15, reflecting vacant lots in office and industrial parks, future phases dedicated to development but not yet begun, and projects under construction but not yet completed.

Land Consumption-Macon-Bibb County

Previous sections of this report have estimated the net acres that will be needed to accommodate actual growth to the year 2030. These land areas are, specifically, the land upon which actual buildings will be placed (along with such accessory areas as parking lots, normal yards and, where appropriate,

Table 8-16
Gross Future Demand In Acres In 2030

	Single Fam	Duplex	Multi Fam	Commercial	Office	Industrial	Total
Net Demand (New Acres)	809.4	0.0	99.8	792.6	299.4	339.5	2,340.6
Efficiency Multiplier	25%	10%	20%	20%	25%	50%	
Development Demand	1,011.8	0.0	119.7	951.1	374.2	509.2	2,966.0
Market Choice Multiplier	4.0	3.0	3.0	2.0	3.0	5.0	
Gross Land Demand	4,047.1	0.0	359.2	1,902.2	1,122.7	2,545.9	9,977.0

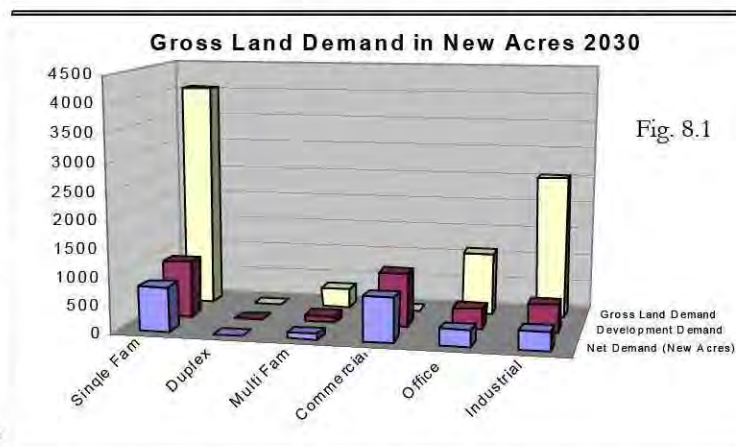
appropriate, loading areas). For the purposes of developing a land use plan, these acreages need to be expanded to account for inefficiencies in the land development process, and for the "uncertainty" as to precisely which lands will be developed.

Table 8-16 summarizes projected land demand for Macon- Bibb County to accommodate future development to 2030, and all the attendant land uses that that development implies. The net new demand from the various land use categories is shown in Table 8-16, as estimated for the year 2030 in previous sections of this report. The "efficiency multiplier" recognizes that, during the land development process, some lands are vacant but irrevocably dedicated to development in

that particular land use category. For instance, a single-family subdivision will contain vacant lots throughout development until the subdivision is 100% built out. A shopping center may contain spin sites and an industrial park may contain pad sites, all graded and ready for development, but vacant nonetheless. The "efficiency multiplier" accounts for these lands that have been included within a land development project, but have not yet been used to satisfy actual market ("net") demand. The efficiency multiplier also recognizes that some land use developments, such as industrial parks, are generally built with comparatively more vacant sites (and build out more slowly) than other developments, such as an apartment complex.

The "market choice" multiplier differs notably from the efficiency multiplier. The "market choice" multiplier relates directly to the uncertainty of a particular property to develop, compared to other similar properties. For instance, a particular area may contain 1,000 acres, but only 400 are expected to develop within the planning horizon. The problem is that: 1) which 400 acres is not clear, and 2) all 1,000 acres may be appropriate for development for the particular land use. Thus, more acres normally will be shown on the land use plan for each land use category than are actually expected to be developed in order to allow the market to choose the appropriate sites within the appropriate areas identified for the use. Simply stated, an intersection may be appropriate for one future gas station, but which specific corner will be occupied by the new station may be uncertain, so the land use plan may designate all of the corners that are appropriate. The market choice multiplier also varies according to land use type, reflecting the level of "certainty" that one may have about the variety of appropriate locations for each use and the level of "compactness" of urban form desired.

The "gross land demand" acreages shown in figure 8-1 represent the total number of acres that should be designated on the land use plan map to accommodate future development while allowing the market to operate freely within the designated areas. Clearly, single-family residential dominates the future development scene in terms of acres of land use designated on the future land use map.



Specifically, the Gross Land Demand in acres for each category is 4,047 for Single Family, 0 for Duplex, 359 for Multi-Family, 1,902 for Commercial, 1,122 for Office, and 2,545 for Industrial. The total Gross Demand was calculated to be 9,977 acres.

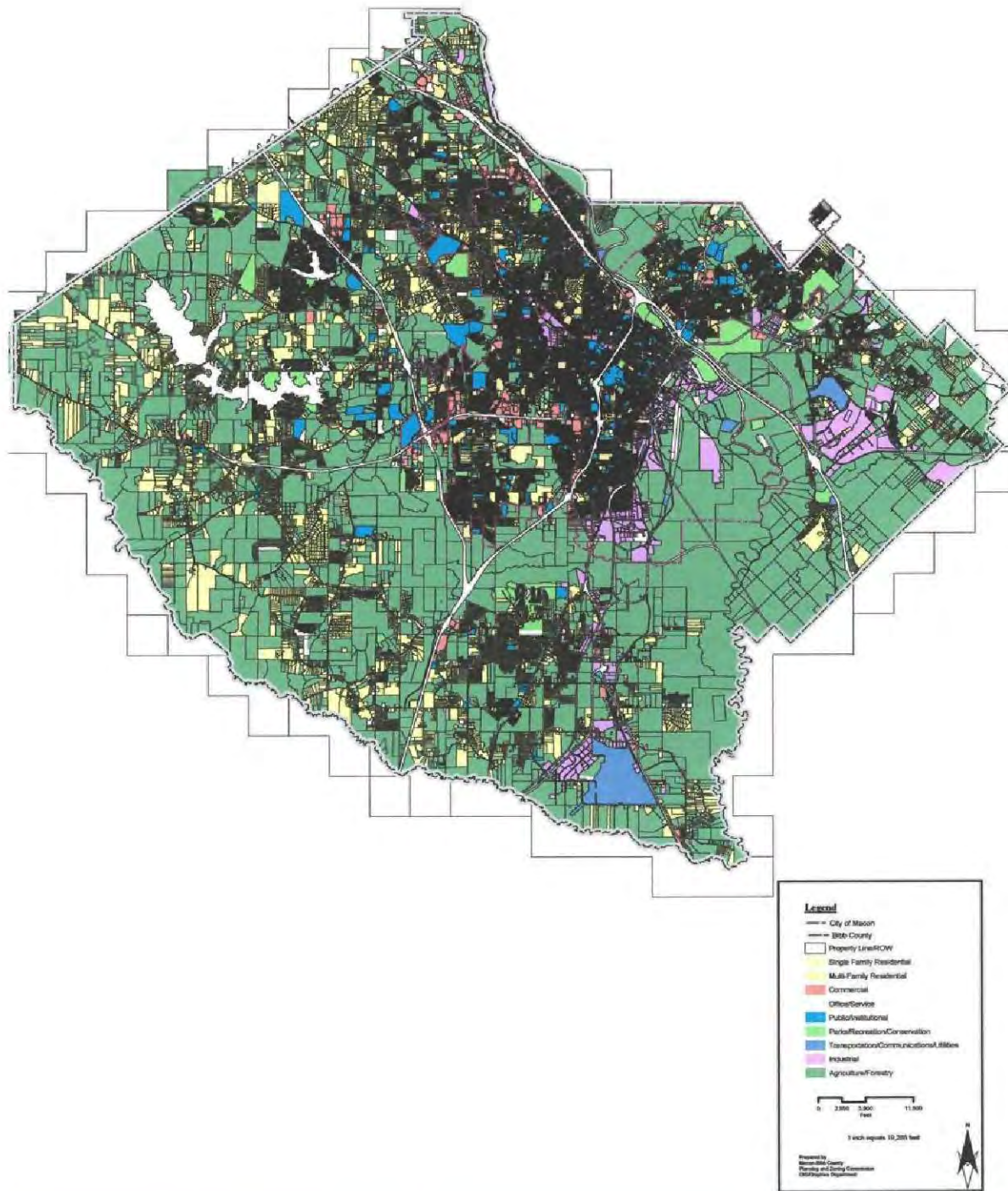
Proposed Changes to the 2025 Land Use Map

The information presented in the Development Trends and Land Demand Analysis report paints a picture of continued growth in Bibb County to the year 2030. Residential currently is and is forecasted to continue to be the largest allocation of land in Bibb County. Non-residential uses such as commercial/office and industrial will require substantial amounts of land in the future to meet forecasted needs.

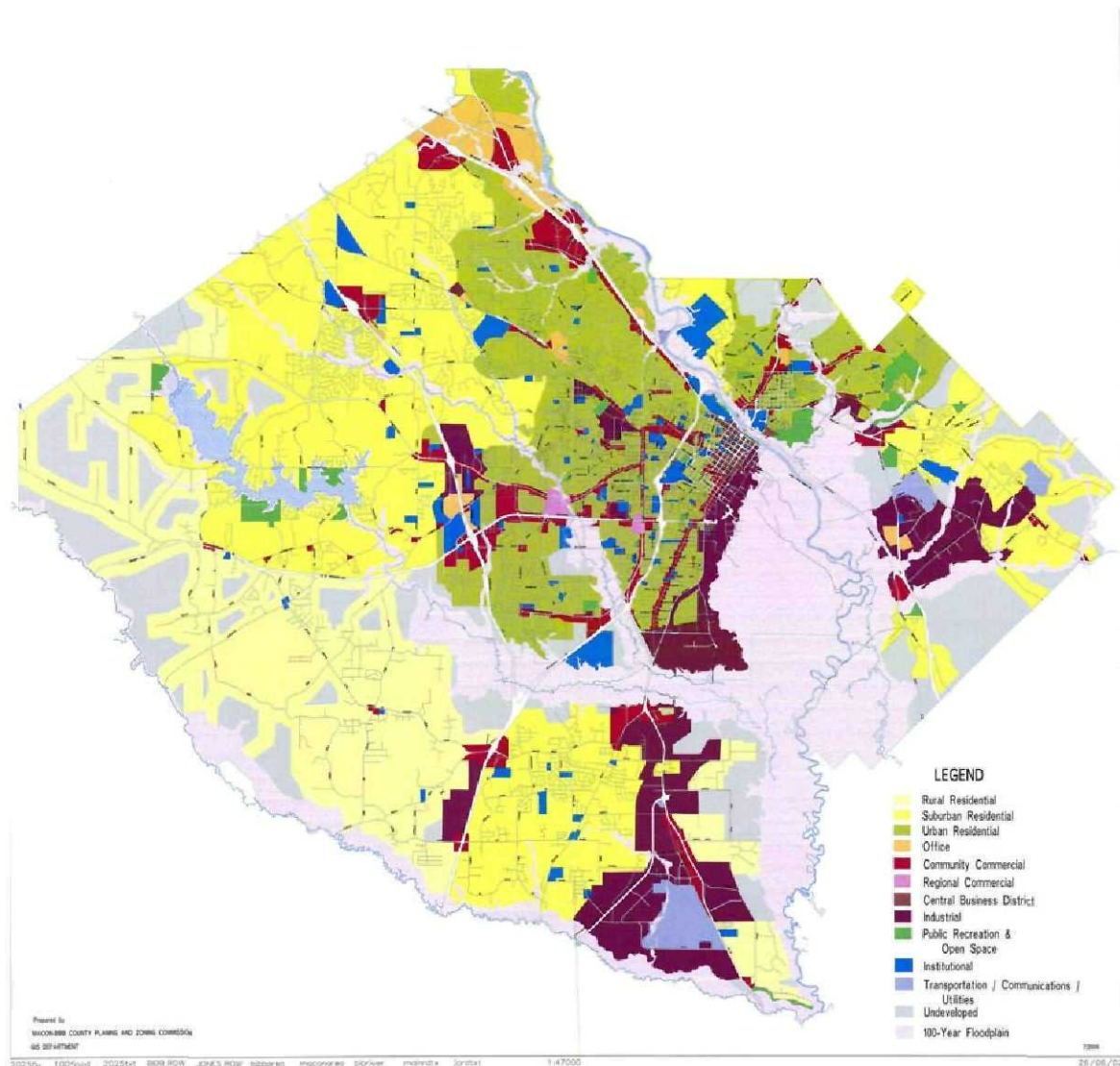
The Development Trends and Land Demand Analysis report provides a part of the needed information by which to make decisions concerning land use by forecasting the future demand. However, information that provides insight on how this new demand will be spatially distributed in Bibb County is needed in order to make logical decisions on altering the current 2025 Land Use Map. The spatial relationship of the forecasted demand was discussed in a report entitled, “Growth Allocations by Traffic Analysis Zones.”

The report assigns growth trends in population, housing, and employment by Traffic Analysis Zones (TAZ’s). According to the U.S. Census Bureau, a TAZ is defined as a special area delineated by state and/or local transportation officials for tabulating traffic-related data- especially journey-to-work and place-of-work statistics. A TAZ usually consists of one or more census blocks, block groups, or census tracts. The TAZ data from the report was placed in a Geographical Information System in order to produce maps to display the spatial relationship of the trend data. These maps, illustrate Percent Change in Population, Percent Change in Housing, and Percent Change in Employment. These maps are displayed on the following pages. An examination of these trends was needed to make recommendations concerning changes to the 2025 Land Use to produce the proposed 2030 Land Use Map. It should be noted that in terms of population, the population map more accurately reflects population shifts rather than immigration from areas outside of Bibb County

Figure 8-2
2006 Existing Land Use Plan



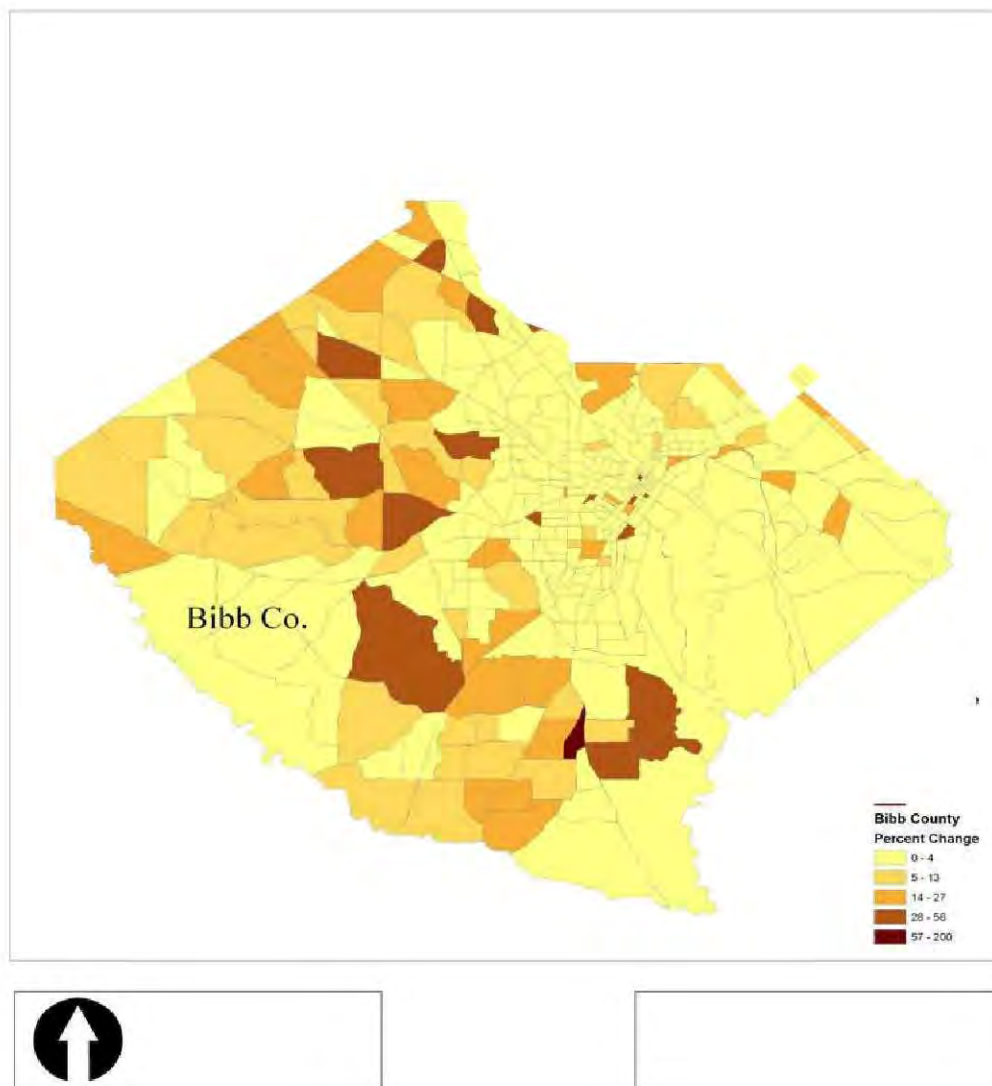
**Figure 8-3
2025 Future Land Use
Plan**



Percent Change In Population

Figure 8-3 displays the percent change in population from 2002 to 2030 for the MATS area. This figure indicates that the majority of the population growth in Bibb County will be concentrated in the western, northwestern, and southern portions of county. These TAZ's are for the most part located outside the city of Macon. The population in southern Jones County is expected to grow during this time period at a robust rate.

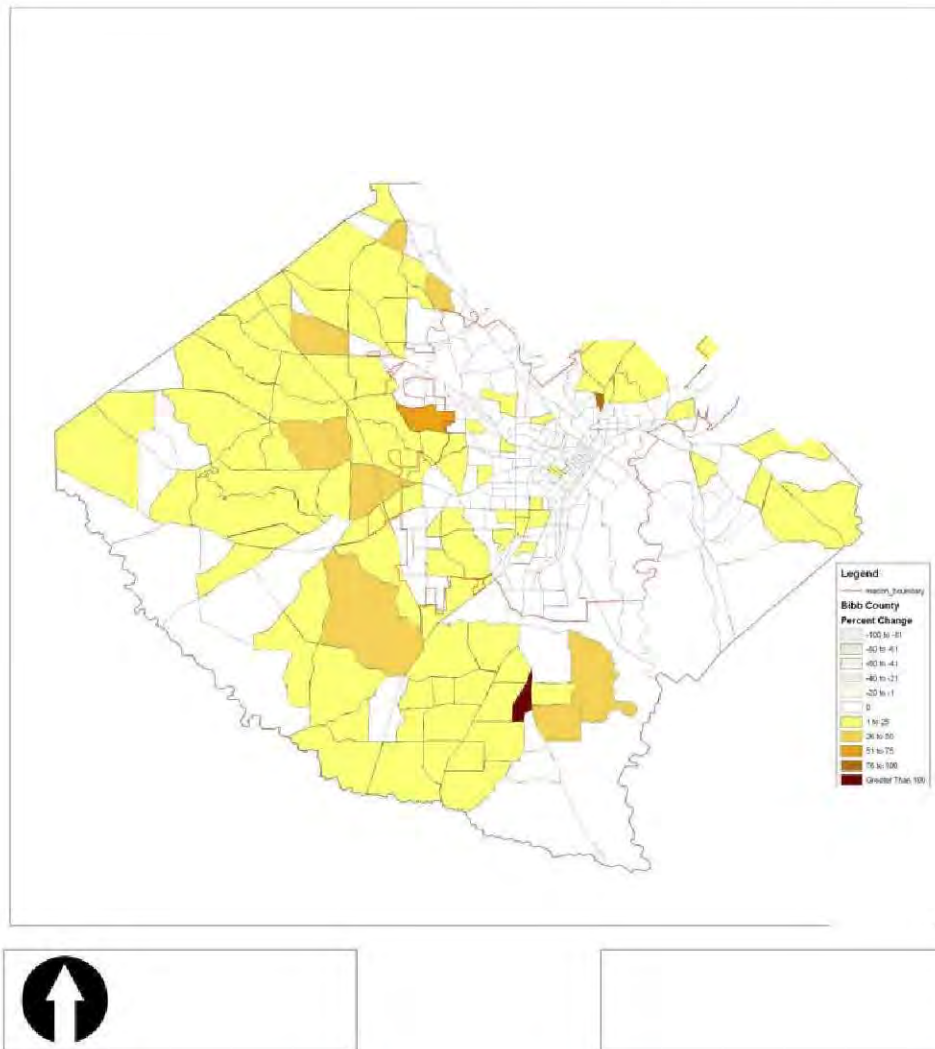
Fig. 8-4
Percent Change in population
2002 to 2030



Percent Change In Housing

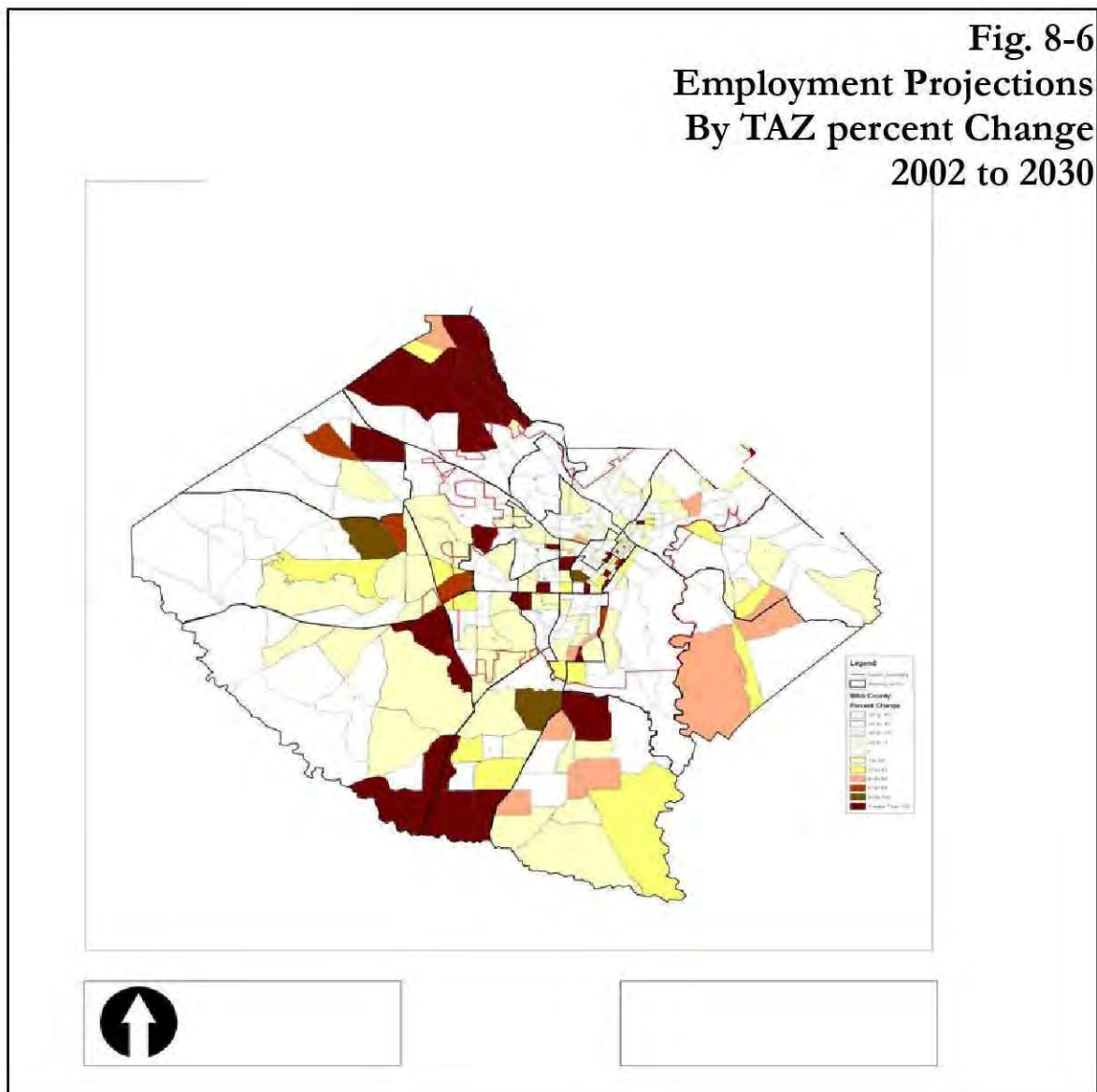
Figure 8-4 displays the percent change in housing from 2002 to 2030. This figure indicates that the majority of the housing growth in Bibb County will be concentrated in the western, northwestern, and southern portions of county. This is logical due to the fact that the TAZ's that experienced growth in housing parallel the TAZ's that experienced growth in population. Again, these TAZ's are for the most part located outside the city of Macon.

Fig. 8-5
Housing Projections By TAZ
Percent Change 2002 to 2030



Percent Change In Employment

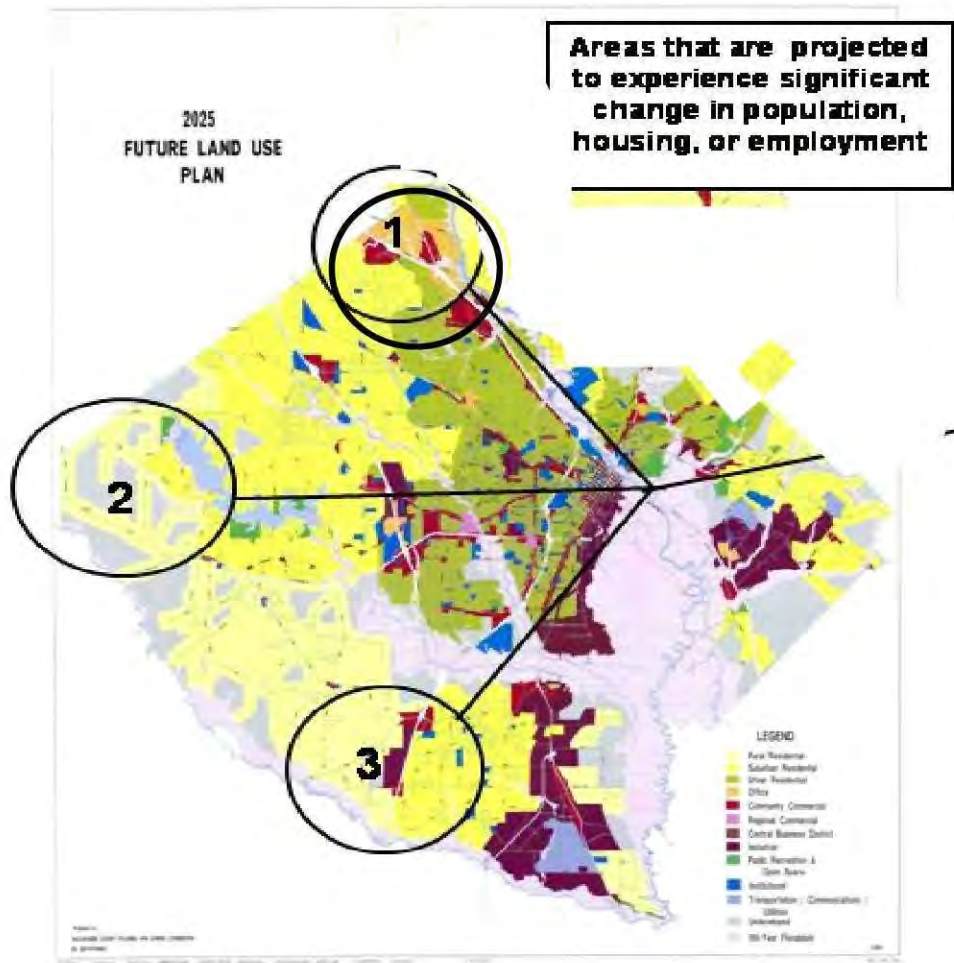
Figure 8-5 displays the percent change in employment from 2002 to 2030 for the MATS area. This figure indicates that employment growth in Bibb County will be scattered. The TAZ's with the most employment growth will be concentrated in the northern and southern portions of county. Employment growth will also be significant inside the city of Macon. The employment growth in southeastern Jones County is expected to grow during this time period at a significant rate.



Proposed Changes To The 2025 Land Use Map

Figure 8-6 displays the areas in Bibb County that are projected to experience significant growth. Area 1 was identified to have a robust rate of growth in all three categories. Area 2 was identified to have a significant rate of growth in population. Lastly, Area 3 was also identified to have a robust rate of growth in all three categories. Figure 8-7 displays the proposed 2030 Land Use map that reflects the changes that should accommodate the projected land use demand.

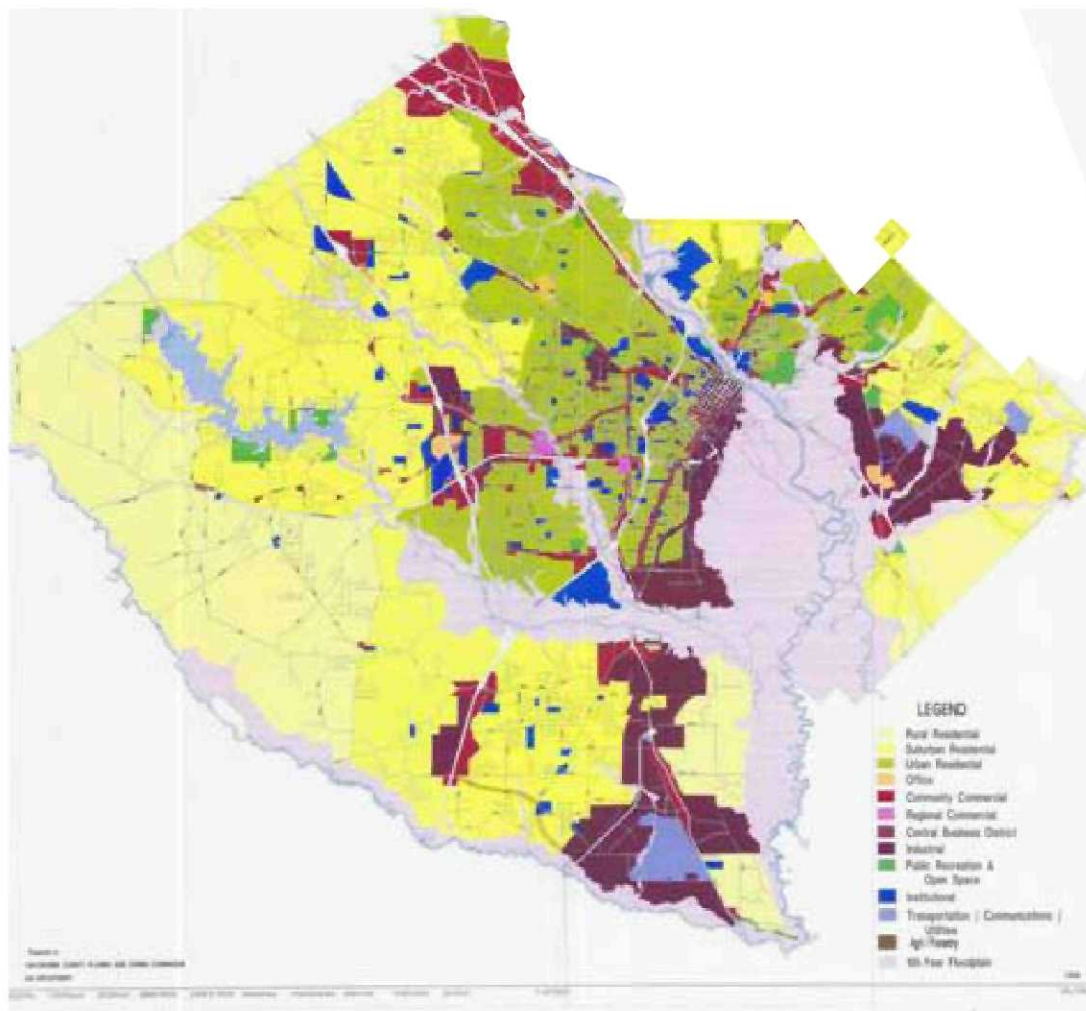
**Fig. 8-7
2025 Future
Land**



The proposed 2030 Land Use map displays an increase of Community Commercial in Area 1 to accommodate the demand for the projected increase in employment. Community Commercial can

Lastly, in Area 3 it is recommended that the Suburban Residential and the Community Commercial Land Use classifications be expanded.

Fig. 8-8
2030 Future Land use
Plan



Preliminary Community Character Areas

Character Areas are geographic planning sub-areas of a community that share similar characteristics such as development patterns or development histories. They also are used to guide desired development patterns and policies that are based on a community vision. The preliminary character areas indicated on the character area map were developed as a result of the Visual Preference Survey that was the beginning of the community's comprehensive planning effort. The Survey was launched in 2001 in an effort to create a community vision based on the ranking of more than 150 images of commercial, residential, and street scenes. In addition a companion 12 page written survey form was used to inventory demographics of the participants as well as attitudinal issues concerning policy preferences.

The proposed community character areas are:

- Urban / Downtown
- Suburban
- Rural
- Floodplain

Urban / Downtown

The Urban / Downtown character area represents the traditional urban center and surrounding areas that include historic districts as well older traditional neighborhoods. Development in this area, for the most part, took place prior to 1950 and exhibits a denser development pattern with smaller lots and grid pattern street systems. Commercial areas are generally of a smaller scale serving mainly neighborhood needs. The urban core or central business district is the historic retail/service center that has experienced several changes over the years. While it is no longer the retail center for the community it serves as the service core and government center with support retail and entertainment facilities.

Suburban

The Suburban character area encompasses sections in the community that have generally developed since 1950 during the post war housing boom. These areas are characterized by development patterns oriented for the automobile with wide streets to accommodate vehicular traffic and less dense development patterns. Commercial areas are characterized by strip development oriented for the automobile. These types of developments usually serve a community sized market and in some case a regional market.

Rural

The rural character area is comprised of sections of the county that have experienced little development pressure and where development has occurred, a rural character has been maintained. These areas are characterized by low densities, large properties, and fewer road networks. The commercial areas that exist in these areas serve a smaller market mainly for the convenience of residents in the area. Many of the community's industrial properties are located within the rural character area.

Floodplain

The floodplains, while shown as a character area, do not support development and are maintained as natural areas for the most part. Some industrial users such as clay mining and timbering occur in these areas but it is anticipated that these areas will remain undeveloped.

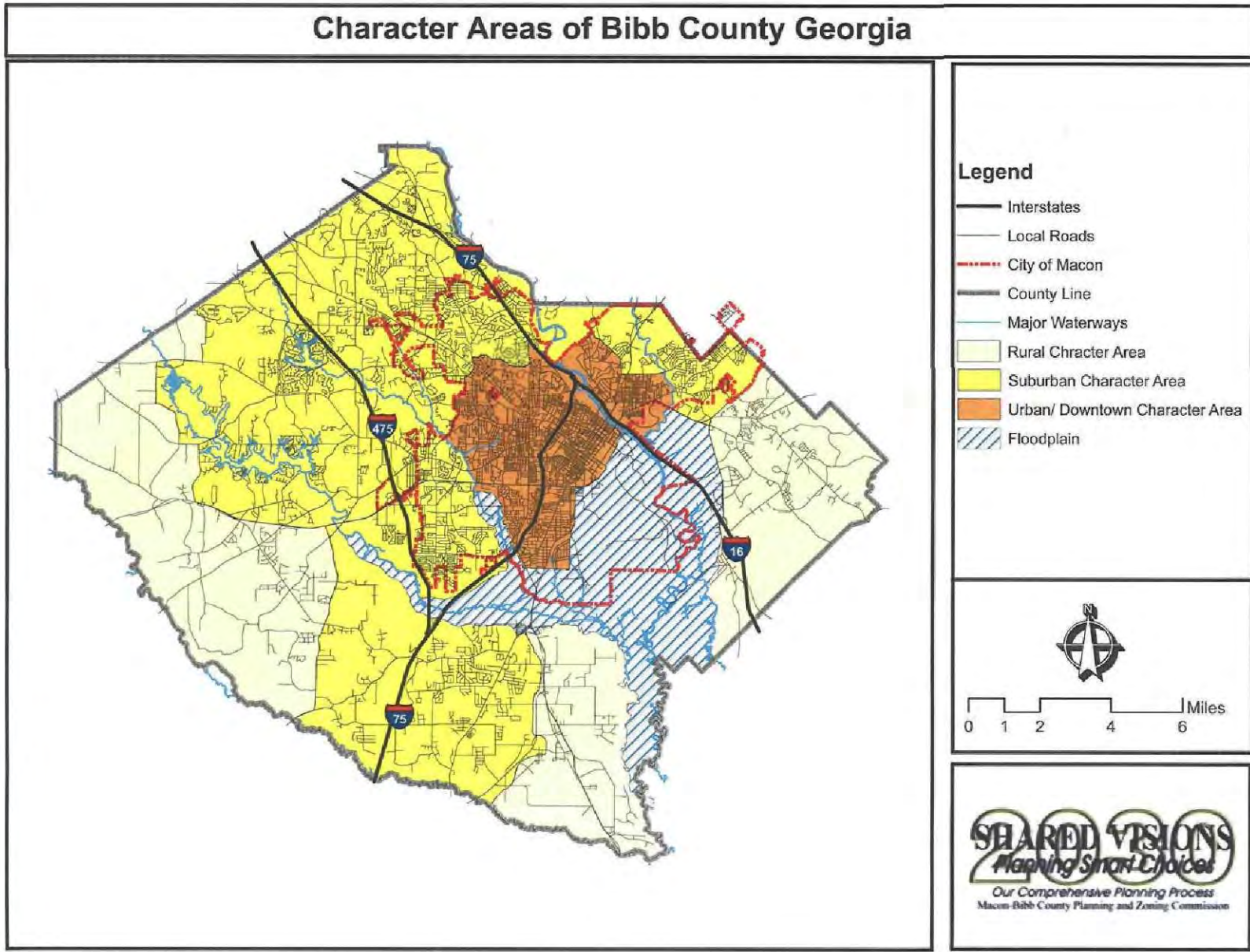


Figure 8-9

Quality Community Objectives

Development Patterns

Traditional Neighborhoods

“Traditional Neighborhood development patterns should be encouraged, including use of more human scale development, compact development, mixing of uses within easy walking distance of one another, and facilitating pedestrian activity.”

Planned development zoning and conditional use cluster developments are the only mechanisms available to provide for traditional neighborhood and mixed use development in Macon/Bibb County. The community's subdivision and development regulations do not promote the traditional neighborhood objective. Land use and land development regulations need to be updated to promote traditional neighborhood and mixed use developments as a matter of right utilizing permitted use standards and design guidelines. Landscape requirements are imposed on new developments with an emphasis on tree planting to minimize the impacts of parking lots. Existing landscape requirements should be updated to reflect an additional emphasis on canopy replacement and street trees.

Many of the road improvements undertaken by the Bibb County Road Program have occurred through existing neighborhoods and have often encountered significant opposition due to the impact of these improvements. The community should consider street and road design guidelines to ensure context sensitive design solutions to projects located within established neighborhoods whether they be residential or commercial.

While many of the older neighborhoods have sidewalks, the community should focus on the maintenance and improvement of pedestrian access in both existing neighborhoods and new developments. The bicycle/pedestrian section of the transportation plan should be used as a starting point and guide when analyzing the need for sidewalks and bike lanes.

Infill Development

“Communities should maximize the use of existing infrastructure and minimize the conversion of undeveloped land at the urban periphery by encouraging development or redevelopment of sites closer to the downtown or traditional core of the community.”

Much of the new development in the community has occurred in “Greenfield” areas. This is due to several influences such as the extension of water and sewer systems; the construction of new schools in developing areas; the availability of undeveloped land; and the lower property taxes in the unincorporated areas of the county. The land use plan currently being implemented promotes infill development by allowing denser development patterns within the urban/downtown areas however there are several strategies that should be considered to better satisfy this quality community objective:

- Changing retail markets have caused vacant or under leased shopping centers to remain as eyesores within the community. Redevelopment of these areas needs to become a priority and be promoted. The appropriate zoning regulations should be amended to help encourage the redevelopment of these retail areas.
- Strip development, especially along recently improved roadways, should be limited. Appropriate commercial design should be encouraged at commercial nodes or in mixed use developments. Design guidelines should be incorporated into development standards and the use of planned mixed use developments should be encouraged.
- Roadways should be designed with context sensitive standards and should be compatible with the conditions of the surrounding neighborhoods. Road improvement should not be the major driving force in the improvement of existing neighborhoods.

Sense of Place

“Traditional downtown areas should be maintained as the focal point of the community or, for newer areas where this is not possible, the development of the activity centers that serve as community focal points should be encouraged. These community focal points should be attractive, mixed use, pedestrian friendly places where people choose to gather for shopping, dining, socializing, and entertainment.”

Macon/Bibb County has a unique identity due mostly to the historic urban core and the many historic neighborhoods which maintain a large inventory of historic residences and commercial buildings. The community has actively protected these assets by adopting and maintaining historic zoning districts and a central business district with design guidelines and required design review. In addition, new sign regulations have recently been adopted in an effort to implement the community’s preferences identified in the Visual Preference Survey.

While planned development districts are often utilized to employ appropriate project design, more specific development and design guidelines should be adopted to help ensure the type of development the community desires. These should be based on the results and recommendations that were developed from the Visual Preference Survey.

Transportation Alternatives

“Alternatives to transportation by automobile, including mass transit, bicycle routes, and pedestrian facilities, should be made available in each community. Greater use of alternative transportation should be encouraged”.

While Macon/Bibb County is served by public transportation (The Macon Transit System), there are policies and regulations that should be improved to better satisfy this quality community objective. A recent bicycle/pedestrian study and this assessment document indicate that the pedestrian infrastructure network needs improvement to better provide connectivity for both transit riders and pedestrians along streets on which transit routes are located. The current zoning regulations and development patterns that have evolved by their application put emphasis on use of the automobile or at least do not consider the use of transit or pedestrian facilities. To better meet this quality community objective, the following should be considered:

- Implement appropriate sections of the Bicycle/Pedestrian Plan
- Revamp zoning and development regulations to include bicycle/pedestrian facilities in new developments and provide connectivity
- Require adequate transit access in new commercial developments and employment centers and include these items in the site plan and development review process
- Work with the Transit Authority to help strengthen the transit/pedestrian connection by planning for better transit shelter locations and connections to sidewalks
- Implement project to provide bike racks on buses to enhance the transit/bicycle connection.

Regional Identity

“Each region should promote and preserve a regional identity or regional sense of place, defined in terms of traditional architecture, common economic linkages that bind the region together, or other shared characteristics”.

Macon/Bibb County has always been recognized as the cultural and economic center of the Middle Georgia area and Bibb County. It has enjoyed a regional connection and identity with its many historic structures and neighborhoods that represent the typical small southern post Civil War city and the preservation of the neighborhoods and downtown area has played a major role in promoting that specific identity within the region. The community’s historic resources are a major component of the tourism industry of the Middle Georgia area. It has also become the cultural and entertainment center for the region with the museum district and entertainment venues in the downtown area. To enhance this quality community objective the community should develop guidelines for downtown that will provide for a healthy mix of night life and residential uses. In addition Macon/Bibb County should continue to be promoted as the cultural center for the region utilizing the various art, music, and educational venues.

Resource Conservation

Heritage Preservation

“The traditional character of the community should be maintained through preserving and revitalizing historic areas of the community, encouraging new development that is compatible with the traditional features of the community, and protecting other scenic natural features that are important to defining the community’s character”.

Existing regulations and development policies of Macon/Bibb County support this quality community objective. Macon has three historic zoning districts and a well established Design Review Board which oversees the design and compatibility of new developments and renovations to existing structures. In addition the central business district has design review requirements which protect its historic resources and aesthetics. Planning and Zoning should consider design guidelines for other urban neighborhoods which will assist in promoting and preserving the aesthetic qualities and characteristics that make these older areas so appealing.

Open Space Preservation

“New development should be designed to minimize the amount of land consumed, and open space should be set aside from development for use as public parks or as greenbelts/wildlife corridors. Compact development ordinances are one way of encouraging this type of open space preservation”.

Existing ordinances and policies of Macon/Bibb County do not adequately satisfy this quality community objective. While the Planning Commission utilizes the planned development district regulations to require open space or green space in new projects, there are no specific requirements that impose standards for the amount or quality of the open or green space. Most green space is imposed in the form of buffers between disparate uses or amenity areas in residential developments. Rules for the protection of scenic areas and green space are not currently in place however the Planning Commission has developed a draft conservation subdivision ordinance that is being reviewed and amended for adoption in the near future.

Environmental Protection

“Environmentally sensitive areas should be protected from negative impacts of development, particularly when they are important for maintaining traditional character or quality of life of the community or region. Whenever possible, the natural terrain, drainage, and vegetation of an area should be preserved”.

Macon/Bibb County regulates development utilizing basic requirements for the protection of floodplains, groundwater recharge areas, and water supply watersheds. In addition, storm water management and soil erosion control regulations are imposed for all new development. All of these requirements help in protecting most of the environmentally sensitive areas. The city of Macon has adopted a tree ordinance that regulates tree removal on all public properties and rights of way but tree preservation or canopy re-establishment issues are not addressed sufficiently for new development. The Planning Commission should consider improved landscape and tree regulations specifically for new development.

Macon/Bibb County must conform to new air quality requirements for ground level ozone and PM2.5 since the entire county (as well as a portion of Monroe County) has been designated as being in non-attainment by EPA. Recent air quality conformity analysis has indicated however that air quality will continue to improve to the point where the county should be classified as a maintenance area. Macon/Bibb, in partnership with the surrounding jurisdictions and state agencies, must continue to implement air quality planning strategies to maintain improvements to air quality.

Social and Economic Development

Growth Preparedness

“Each community should identify and put in place the pre-requisites for the type of growth it seeks to achieve. These might include infrastructure (roads, water, and sewer) to support new growth, appropriate training of the work force, ordinances and regulations to manage growth as desired, or leadership capable of responding to growth opportunities and managing new growth when it occurs”.

Macon/Bibb County has experienced slow but steady growth and has facilitated that growth through the expansion of water and sewer service and improvements to the street network through the Bibb County Road Improvement Program. The Board of Education is also providing expansion and improvement to the school system utilizing revenue from the special purpose local option sale tax. Through the land use plan, zoning, and subdivision regulations, the community has identified areas where growth should be directed. In addition, several other planning studies such as the Visual Preference Survey have helped the citizens to take an active role in the planning process. Public participation and outreach has become a major aspect of the local planning effort. Through the use of the Planning & Zoning website, public meetings, newsletters, and stakeholder groups, the access to information regarding planning and development has been greatly enhanced. To better achieve this quality community objective the following should be considered:

- Local governments, the School Board, the Water Authority, Planning & Zoning, and other decision making entities should strive to better coordinate decisions affecting growth and infrastructure policies.
- Planning & Zoning should undertake neighborhood level planning studies to better prepare for land use changes that are affected by major new developments or regional issues such as the Warner Robins Air Force Base.
- The connection between land use and transportation should continue to be emphasized in all local planning efforts.
- Planning & Zoning should review the Land Development Resolution (the zoning regulations) on a periodic basis and make necessary changes and updates as required to reflect changing land use trends and growth strategies.

Appropriate Businesses

“The businesses and industries encouraged to develop or expand in a community should be suitable for the community in terms of job skills required, long term sustainability, linkages to other economic activities in the region, impact on the resources of the area, and future prospects for expansion and creation of higher skill job opportunities”.

Overall, Macon/Bibb County has a diversified economy that supports a wide variety of businesses and therefore is satisfying this quality community objective. Macon/Bibb County serves as a major regional center for health care as evidenced by two major regional hospitals; the Medical Center of Central Georgia and the Coliseum Health System. This reflects education, health, and social services being the largest employment sector in the community. Other major employment sectors include manufacturing, warehousing, wholesale, and retail.

There are several industrial parks that have been developed and marketed by the Macon-Bibb County Industrial Authority. These areas along with other industrially zoned properties will provide for adequate growth in the manufacturing, warehousing, and wholesale employment sectors. The Macon Economic Development Commission has recruited several large employers to the area such as the Bass Pro Shop Distribution Center and Sara Lee Industries.

Employment Options

“A range of job types should be provided in each community to meet the diverse needs of the local work force”.

Since the economy of the community is substantially diversified, there is a range of available jobs to meet the needs of the work force. Employers such as two major hospitals, the Bibb County school system, various manufacturers and distributors, a vibrant retail trade and government services offer opportunities for a diverse cross section of the workforce. In addition, Warner Robins Air Force Base, while located in Houston County, provides employment for a wide variety of skilled workers who live in Bibb County. Even though there have been significant jobs lost due to closings at Brown & Williamson, GE Capital, and Keebler, it appears that this Quality Community Objective is being met due to diversity of the employers in the community.

Housing Choices

“A range of housing size, cost, and density should be provided in each community to make it possible for all who work in the community to also live in the community (thereby reducing commuting distances), to promote a mixture of income and age groups in each community, and to provide a range of housing choice to meet market needs”.

The housing stock mix for Macon/Bibb County is generally considered to be diverse and affordable. While single family detached homes continue to make up the majority of housing type in the community, it is not the fastest growing housing type. Mobile homes were found to be the fastest growing housing type with multi-family housing the second fastest growing. The growth in these two housing types is primarily a response to the changing demographics of the county in regards to a decrease in household size and the desire for more affordable housing choices. In comparison to state and regional levels, the majority of the community’s housing overall was found to be affordable and there are many housing options available both in size and location.

One deficiency that the community could improve is the availability of garage apartments within existing single family neighborhoods. This type of housing can provide an affordable housing choice and make better use of existing residential properties. Planning & Zoning should consider amending the Land Use Resolution to facilitate the development of this type of housing.

Educational Opportunities

“Educational and training opportunities should be readily available in each community – to permit community residents to improve their job skills, adapt to technological advances, or to pursue entrepreneurial ambitions”.

Current policies and facilities within the community support this quality community objective. There are a variety of appropriate educational and training opportunities available to the residents of Macon/Bibb County such as Mercer University, Macon State College, Wesleyan College, and Middle Georgia Technical College which provide both higher education and vocation/technical training. The Bibb County Board of education provides a curriculum and appropriate training so

that high school graduates are able to find employment. Facilities such as the Career Training Center offers vocational training and career development at the high school level and provide opportunities for students who will enter the work force upon graduation. One deficiency of this quality community objective is the educational attainment of the citizens as evidenced by the drop out rate of high school age students.

Governmental Relations

Regional Solutions

“Regional solutions to needs shared by more than one local jurisdiction are preferable to separate local approaches, particularly where this will result in greater efficiency and less cost to the taxpayer”.

The City of Macon and Bibb County will participate in the service delivery strategy to insure efficient delivery of public services. The community must think more regionally due to issues like the BRAC review and possible realignment of the Warner Robins Air Force Base and the recent designation of non-attainment for ozone and particulate matter. The policy makers of Macon/Bibb County have taken an active roll in working through these regional issues and will continue to be open to regional solutions to problems that will be confronted in the future.

Regional Cooperation

“Regional cooperation should be encouraged in setting priorities, identifying shared needs, and finding collaborative solutions, particularly where it is critical to success of a venture, such as protection of shared natural resources or development of a transportation network”.

In Macon/Bibb County, comprehensive planning, transportation planning, and zoning is accomplished without regard to jurisdictional boundaries. The Planning & Zoning Commission undertakes these functions and must regard the community as a whole without getting involved in the jurisdictional issues that often arise. Several public services such as fire protection and water and

sewer are also provided on a countywide basis. While city and county officials continue to be open to collaborative solutions to the problems of the city and the region, the migration of the population from the city to the county has presented some challenges regarding the delivery of services and the associated cost. The key to maintaining regional cooperation is ongoing communication and a willingness to take a broader regional view to the challenges that must be resolved.

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*NON-VOTING MEMBER

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Georgia Department of Natural Resources

2 Martin Luther King, Jr. Drive, SE, Suite 1154, Atlanta, Georgia 30334

Noel Holcomb, Commissioner

Carol A Couch, Ph.D., Director

(404) 656-2833

Reference No. 42

Macon Naval Ordnance Plant

EPA ID No. GAD003302676

TRIP REPORT

SITE NAME & LOCATION:

Armstrong World Industries, Inc.
4520 Broadway
Macon, Georgia
Bibb County
GAD003297413

TRIP BY:

Brett Blackwelder **BB**
Environmental Engineer
Georgia Environmental Protection Division,
Hazardous Waste Management Branch,
Government Facilities Unit

Edwin Williams
Geologist
Georgia Environmental Protection Division,
Hazardous Waste Management Branch,
Government Facilities Unit

William Powell
Engineer
Georgia Environmental Protection Division,
Hazardous Waste Management Branch,
Combustion and Treatment Unit

DATE OF TRIP:

July 19, 2007

PURPOSE:

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), the Hazardous Waste Management Branch of the Georgia Environmental Protection Division (GA EPD) performed a Site Reconnaissance Inspection at the areas surrounding the Armstrong World Industries, Inc. (Armstrong) facility in Macon, Georgia. Brett Blackwelder and Edwin Williams conducted the inspection for the purpose of completing a Preliminary Assessment (PA) of the site. William Powell of the GA EPD DoD Remediation Unit was present to become familiar with the Armstrong facility and the Former Macon Naval Ordnance Plant property.

BACKGROUND:

The Armstrong World Industries, Inc. facility at 4520 Broadway in Macon, Georgia manufactures ceiling tiles. The facility is located southeast of the intersection of Broadway and Guy Paine Road. Armstrong World Industries, Inc. in Macon is currently listed as a Conditionally Exempt Small Quantity Generator and has the EPA Identification Number GAD003297413.

The Armstrong facility comprises two separate parcels. The main parcel, the northern parcel, is fenced and comprises the manufacturing area, the wastewater treatment plant (WWTP) area which includes the WWTP sludge storage landfill, and the Woodyard landfill. The southern parcel, located southeast of the main parcel, also is fenced, and comprises an approximately 5-acre landfill referred to as the remote landfill.

This site visit had several purposes. One purpose was to determine if people fishing in Rocky Creek consume the fish they catch. Other purposes included determination of potential contamination pathways from the Woodyard landfill and the WWTP landfill, a closer examination of the Georgia Power substation located adjacent to Armstrong, and a well survey.

COMMENTS:

The visit to the site occurred on Thursday July 19, 2007. The first location visited was the intersection of Rocky Creek and Highway 41 located south of the main Armstrong facility (See Photographs 1-2). Signs warning of PCB contamination were present at this location. There was evidence that people fish in Rocky Creek at this location including numerous bait containers (See Photographs 3-6). No one was fishing at the time of the first visit to this location. Wetlands extend south along Highway 41 for approximately 0.5 mile and include Tobesofkee Creek.

The next area visited was the Williams Brothers Inc. property, which is located east of Broadway, north of Rocky Creek, south of the Armstrong property, and west of the Central of Georgia railway. A dirt and gravel road was taken onto the Williams Brothers Inc. property, which had a gate and signs reading "Posted Keep Out" (See Photograph 7). At the time of inspection the gate was open, presumably to allow workers access to the railroad bridge under construction at Rocky Creek. Two small lakes were present on the property which had formed in former borrow pits (See Photographs 8-10). Empty bait containers were seen on the shores of the lakes indicating people sometimes fish in these lakes. Walking access to the lakes from the Former Macon Naval Ordnance Plant (FMNOP) property, now the Allied Industrial Park, appeared to be unrestricted. The two lakes are down-gradient from the Armstrong WWTP and the Woodyard landfills. Contamination from these landfills would be expected to eventually reach these lakes.

The next location visited was Georgia Power Company substation G503303 accessed

on the west from Broadway (See Photograph 12). Armstrong borders the substation property on the north and east, while Yancey Brothers property is on the south. The substation is surrounded by a chain link fence, which was locked at the time of the inspection.

After visiting the substation an abbreviated well survey was conducted in the area southwest of Armstrong. The EPD drinking water well database showed several wells in this area. Only one well at a trailer park was found and that appeared to be in use. No one was available to verify the usage of this well. Phone calls will be necessary to complete the well survey.

While passing Rocky Creek after the well survey a pickup truck was observed parked on the side of Highway 41. There were fishing supplies in the bed of pickup truck and a short walk down to the creek bank found two men fishing (See Photographs 14-15). The two men gave their names as Theo Crapps and Mr. Jones. The men stated that they caught brim and blackfish in Rocky Creek. Mr. Crapps stated that he had recently caught fish, which he had taken to someone for human consumption. Mr. Crapps also stated he had fished in the lakes located on the Williams Brothers Inc. property.

ATTACHMENTS: Fifteen (15) Photographs



County: Bibb

Picture: 1 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: South

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Rocky Creek at Highway 41.

Yellow PCB warning sign.



County: Bibb

Picture: 2 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: South

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Rocky Creek at Highway 41.

PCB warning sign.



County: Bibb

Picture: 3 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: South

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Rocky Creek at Highway 41.

Bait containers on bank of Rocky Creek.



County: Bibb

Picture: 4 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: West

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Rocky Creek at Highway 41.

Bait containers on bank of Rocky Creek.



County: Bibb

Picture: 5 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: East

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Rocky Creek at Highway 41.

Bait container on bank of Rocky Creek



County: Bibb

Picture: 6 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing:

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Rocky Creek at Highway 41.

Rocky Creek under Highway 41 bridge.



County: Bibb

Picture: 7 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: East

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Broadway entrance to Williams Brothers, Inc. property.

Keep Out signs are posted. Gate appeared to be kept open for people working on the railroad bridge that crosses Rocky Creek.



County: Bibb

Picture: 8 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: North

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Williams Brothers, Inc. property.

Lake formed in borrow-pit. Armstrong Site is behind trees on opposite side of the lake.



County: Bibb

Picture: 9 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: North

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Williams Brothers, Inc. property

Lake formed in borrow-pit.
Armstrong Site is behind trees on opposite side of the lake.



County: Bibb

Picture: 10 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: East

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Williams Brothers, Inc. property

Lake formed in borrow-pit.
Armstrong Site is behind trees on opposite side of the lake.



County: Bibb

Picture: 11 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: West

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Williams Brothers, Inc. property

Georgia Power right of way.
Armstrong property is to the right of the fence in the photograph.



County: Bibb

Picture: 12 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: South

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Georgia Power Substation

Georgia Power Substation G503303.



County: Bibb

Picture: 13 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: South

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Georgia Power Substation

View from Georgia Power Substation looking onto Yancey Brothers Company property at 4660 Broadway. Trees in the background are on Armstrong property.



County: Bibb

Picture: 14 of 15

Site: Armstrong World Industries, Inc.

Date: July 19, 2007

Dir. Facing: North

Photographer: Brett Blackwelder

Haz. Waste Management Branch

Location: Rocky Creek near Highway 41.

Fishermen fishing in Rocky Creek approximately 100 yards east of Highway 41.



County: Bibb
Picture: 15 of 15
Site: Armstrong World Industries, Inc.
Date: July 19, 2007
Dir. Facing: North
Photographer: Brett Blackwelder
Haz. Waste Management Branch
Location: Rocky Creek near Highway 41.
Fishermen fishing in Rocky Creek approximately 100 yards east of Highway 41.

Guidelines For Eating Fish From Georgia Waters



2010 Update

Georgia Department of Natural Resources
2 Martin Luther King, Jr. Drive, S.E., Suite 1252
Atlanta, Georgia 30334-9000

For more information on fish consumption in Georgia, contact the
Georgia Department of Natural Resources.

Environmental Protection Division
2 Martin Luther King, Jr. Drive, S.E., Suite 1152
Atlanta, GA 30334-9000
(404) 656-4713 or (706) 369-6376

Wildlife Resources Division
2070 U.S. Hwy. 278, S.E.
Social Circle, GA 30025
(770) 918-6406

Coastal Resources Division
One Conservation Way
Brunswick, Ga. 31520
(912) 264-7218

Check the DNR Web Site at: <http://www.gadnr.org>

- For this booklet: Go to Environmental Protection Division at www.gaepd.org, choose publications, then fish consumption guidelines.
- For the current Georgia 2008-2009 Freshwater Sport Fishing Regulations, Click on Wildlife Resources Division. Click on Fishing. Choose Fishing Regulations. Or, go to <http://www.gofishgeorgia.com>
- For more information on Coastal Fisheries and 2007-2008 Regulations, Click on Coastal Resources Division, or go to <http://crd.dnr.state.ga.us>
- For information on Household Hazardous Waste (HHW) source reduction, reuse options, proper disposal or recycling, go to Georgia Department of Community Affairs at <http://www.dca.state.ga.us>.

Call the DNR Toll Free Tip Line at 1-800-241-4113 to report fish kills, spills, sewer overflows, dumping or poaching (24 hours a day, seven days a week).

Also, report Poaching, via e-mail using Turninpoachers@dnr.state.ga.us

Check USEPA and USFDA for Federal Guidance on Fish Consumption

- USEPA: <http://www.epa.gov/ost/fishadvice>
- USFDA: <http://www.cfsan.fda.gov/seafood.1.html>

Image Credits:

Covers: Duane Raver Art Collection, courtesy of the U.S. Fish and Wildlife Service (USFWS), Black Crappie on Front Cover and Flathead Catfish on Back Cover. U.S. Fish and Wildlife Service Line Drawings by Robert Savannah (courtesy of the USFWS); Snowy Egret (p. 4); Fisherman (p. 5); Yellow Bullhead (p. 7); Raccoon (p. 8). Diagram of Fish Fat Areas (p. 10): Redrawn by Georgia EPD from other sources.

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Introduction



Fishing is a popular pastime in Georgia. Whether you go alone to relax and enjoy nature, with your friends to enjoy camaraderie and “fish tales” or with your family to pass on a sport you learned as a child, fishing is a fun and rewarding sport enjoyed by many people.

Not only does fishing give people an excuse to get away from the hustle and bustle of daily life, but it can also put a healthy, satisfying meal on the table. Fish are low in saturated fat, high in protein, and can have substantial health benefits when eaten in place of other high-fat foods. The quality of sport fish caught in Georgia is very good; however, polychlorinated biphenyls (PCBs), mercury, chlordane, DDT residues (DDT/DDE/DDD), toxaphene (and related compounds), and dieldrin have been found in some fish. In most cases, the levels of these chemicals are low. However, to help ensure the good health of Georgians, the Georgia Department of Natural Resources (DNR) has developed guidelines for how often certain species of fish can be safely eaten. These guidelines are based on the best scientific information and procedures available. As more advanced procedures are developed, these guidelines may change.

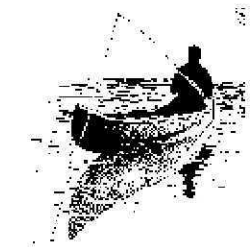
It is important to keep in mind that the consumption recommendations are based on health-risk calculations for someone eating fish with similar contamination over a period of 30 years or more.

These guidelines are not intended to discourage people from eating fish, but should be used as a guide for choosing which type (species) and size of fish to eat from Georgia waters.

The guidelines are non-binding recommendations EPA determines based on the body of water a fish comes from, the species of fish and the amount of fish a person consumes. The purpose of these guidelines is to provide detailed information in an understandable format for people who eat fish. Waters listed in the fish consumption guidelines are not necessarily assessed as impaired using USEPA guidelines for Section 303(d) of the Clean Water Act.

The river basin where tested sites are located has been identified in the tables. The fourteen major river basins in Georgia are shown on the map provided, preceding the consumption guidance tables. The listings for lakes have been divided into those with a surface area of 500 acres or more, and small lakes and ponds less than 500 acres in size. Georgia rivers have also been divided into freshwater rivers and creeks, and estuarine systems. An index is provided at the back of the booklet for quick page reference to lake, river and estuarine locations that have been tested.

Are Georgia's Fish Safe to Eat?



Yes. The quality of fish in Georgia is good. Fish and seafood are nutritious and can play a role in maintaining a healthy well-balanced diet. This booklet provides you with the guidance and recommendations to use in eating fish in a healthy and informed manner. The Georgia Department of Natural Resources (DNR) has one of the most progressive fish testing programs in the southeast. A variety of different fish species were tested for 43 separate contaminants, including metals, organic chemicals and pesticides. Many of these contaminants did not appear in any fish. However, two contaminants, polychlorinated biphenyls (PCBs), and mercury, were frequently detected in significant amounts in a few species from some bodies of water in Georgia. Four additional contaminants, chlordane, DDT residues (DDT/DDE/DDD), toxaphene-like compounds, and dieldrin were also detected infrequently. This publication provides you with information on those six contaminants: PCBs, mercury, chlordane, DDT/DDE/DDD, toxaphene and dieldrin.

In some areas, fish are contaminated with low concentrations of PCBs. It is now illegal to manufacture PCBs; however, in the past, these synthetic oils were used regularly as fluids for electrical transformers, cutting oils, and carbonless paper. Although they were banned in 1976, they do not break down easily and remain in aquatic sediments for years. Over time, levels of PCBs are decreasing.

Mercury is a naturally occurring metal that does not break down as it cycles between land, water, and air. As mercury cycles through the environment it is absorbed and ingested by plants and animals. Nearly all of the mercury found in fish flesh is an organic form, called methylmercury. Most of the mercury absorbed or ingested will be returned to the environment but some will remain in the plant and animal tissues. It is not known where the mercury in Georgia's fish originated. Mercury may be present in fish because of the mercury content of soils and rocks in the southeast, from municipal and industrial sources, or from fossil fuel use. Scientific evidence is growing that mercury is transported long distances through the upper atmosphere, making its control a global environmental issue. Although mercury has always been present, scientific research shows that the amount of mercury cycling through the environment has increased significantly following the dawn of the Industrial Revolution in the late 1800s.

Chlordane is a man-made pesticide used in the U.S. from the late 1940s to the early 1980s. Historically, chlordane was used as an agricultural pesticide, but in 1978 it was restricted to termite control use only. It is now banned for all uses. Chlordane is persistent in the environment and may remain in aquatic sediments for years.

Fish at only one site (Albany By-Pass Pond, page 18), had enough DDE/DDD residues to recommend a restriction in consumption. The DDE/DDD contaminants are chemical breakdown products of the pesticide DDT. DDT was first synthesized in 1874 and its insecticidal properties were discovered in 1939. In the United States DDT was used extensively until 1969. The U.S. production of DDT was discontinued in 1969. Residues of DDE and DDD are persistent and break down slowly in the environment.

Striped mullet at only one site (Casey Canal, page 27), had enough dieldrin to recommend a restriction in consumption. Dieldrin is another chlorinated pesticide like chlordane and DDT, and has been restricted from use in the United States. It was used to control corn and citrus pests, termites, and in moth proofing. Dieldrin is persistent in the environment because of the slow breakdown rate.

Toxaphene was a chlorinated camphene pesticide used extensively on cotton. In 1982 registration for all uses were cancelled, and a ban on all uses went into effect in 1990. One estuarine area (Terry and Dupree Creeks, and the Back River, page 52), adjacent to a site where toxaphene was once manufactured has remaining residues of toxaphene-like compounds present in some fish. Toxaphene is also persistent in the environment.

Like PCBs, the chlorinated pesticides do not break down easily and remain in aquatic sediments for years. These organic contaminants tend to concentrate in fat and fatty tissues of fish such as the liver and other organs. Over time levels of PCBs and chlorinated pesticides are decreasing.

Some fish in the Savannah River below Augusta contain the radioactive elements cesium-137 and strontium-90. Exposure to large amounts of these elements may increase the risk of developing cancer.

How Do Fish Become Contaminated?

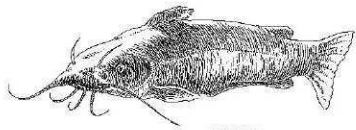
Contaminants get into water as a result of storm water runoff, industrial and municipal discharges, agricultural practices, nonpoint source pollution and other factors. When it rains, chemicals from the land and in the air are washed into the water.

Contaminants are carried downstream by rivers and creeks into lakes, reservoirs, and estuaries. Contaminants can get into fish in a variety of ways. Fish absorb PCBs, chlordane and other pesticides from water, suspended sediments, or their food. These organic chemicals concentrate in the fat of fish tissue and in fatty fish such as carp and catfish. Cleaning and cooking a fish to remove fat will lower the amount of PCBs, chlordane or other pesticides in a fish meal. Larger, older fish and fish which eat other fish may accumulate more contaminants than smaller, younger fish. Contaminants are often not measured in panfish such as crappie and bluegill.

because their food sources are lower on the food chain and bioaccumulate less.

Once in the water, mercury is converted to methylmercury by bacteria and other processes. Fish absorb methylmercury from their food and from water as it passes over their gills. Mercury is bound to proteins in fish tissue, including muscle.

Benefits of Eating Fish



Fish has long been recognized as a nutritious "protein food". Its nutritional value as a protein source is greater than that for beef, pork, chicken or milk. Additionally, the types and amounts of dietary fats are generally more

"heart healthy" than the fats found in other protein foods. Fish is also an important source of the fatty acids that are critical for the development of the brain and nervous system. Fish is an excellent source of several vitamins, and also contributes appreciable amounts of dietary calcium, iron and zinc. These minerals are essential nutrients that tend to be low in people's diets. Many studies suggest that eating fish regularly may help protect against heart and inflammatory diseases.

These guidelines are based on a range in fish meal size from 4 to 8 ounces (1/4 to 1/2 pound). Where the guidelines recommend only 1 meal per week or month, you may prefer to have two smaller meals over that period.

Risks of Contaminated Fish

These guidelines were designed to protect you from experiencing health problems associated with eating contaminated fish. The consumption advice provided in this booklet is developed in a conservative manner. It is intended to protect both children and adults from cancer and the other potential toxic effects of these chemicals.

PCBs, methylmercury, chlordane, DDT/DDE/DDD, toxaphene and dieldrin build up in your body over time. It may take months or years of regularly eating contaminated fish to accumulate levels that would affect your health. Keep in mind that these guidelines are based on eating fish with similar contamination over a period of 30 years or more. Current statistics indicate that cancer will affect about one in every four people nationally, primarily due to smoking, diet and hereditary risk factors. If you follow Georgia's consumption guidelines, the contaminants in the fish you eat may not increase your cancer risk at all. At worst, using the USEPA estimates of contaminant potency, your cancer risk from fish consumption should be less than 1 in 10,000.

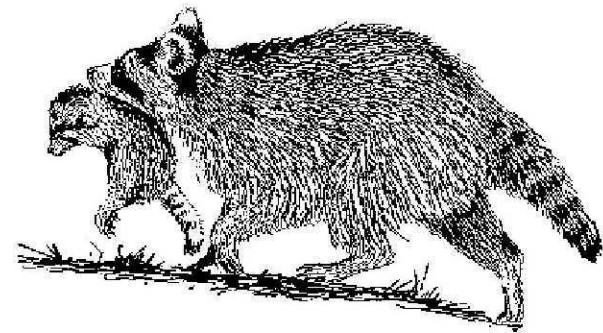
PCBs, chlordane, DDT/DDD/DDE, toxaphene and dieldrin can cause cancer in laboratory animals exposed to large amounts, and may cause cancer in humans.

Effects other than cancer from these chemicals may include developmental problems in children whose mothers were exposed to them before or during pregnancy. Studies of people who have been exposed to very large quantities of these chemicals (pesticide workers, etc.), have indicated a relationship between high exposures and health effects on the nervous system, digestive system, and the immune system.

Exposure to methylmercury has not been linked to cancer. Methylmercury is a concern because of its potential to damage the nervous system, especially in the developing fetus and young child. This could affect your baby's brain and how your baby learns, moves, and behaves.

Special Notice for Pregnant Women, Nursing Mothers and Children

If you are pregnant or a nursing mother, or plan to become pregnant soon, you and children under 6 years of age are sensitive to the effects of contaminants such as mercury. DNR's guidelines are designed to be protective for these sensitive groups. In early 2001 the USEPA issued a national advisory recommending that these sensitive groups limit consumption of all freshwater fish to one meal per week due to mercury. People may wish to follow USEPA's recommendation, especially in areas where DNR has not tested fish and offered detailed guidelines. For most other healthy adults, DNR's recommendations may actually be overly conservative.



Ways to Reduce Risk

Keep smaller fish for eating. Generally, larger, older fish may be more contaminated than younger, smaller fish. You can minimize your health risk by eating smaller fish (within legal size limits) and releasing the larger fish.

Vary the kinds of fish you eat. Contaminants build up in large predators and bottom-feeding fish, like bass and catfish, more rapidly than in other species. By substituting a few meals of panfish, such as bream (e.g. bluegill, redear), and crappie, you can reduce your risk.

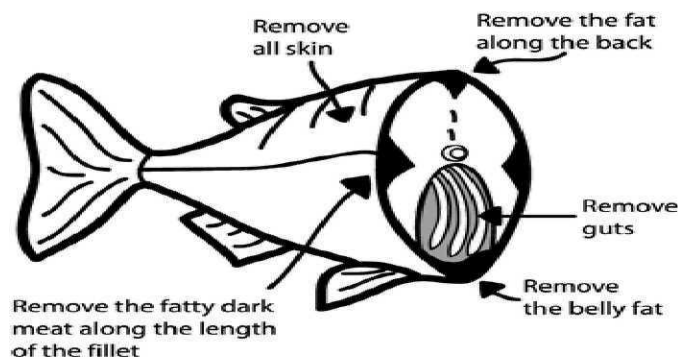
Eat smaller meals when you eat big fish and eat them less often. If you catch a big fish, freeze part of the catch (mark container or wrapping with species and location), and space the meals from this fish over a period of time.

Clean and cook your fish properly. How you clean and cook your fish can reduce the level of contaminants by as much as half in some fish. Some chemicals have a tendency to concentrate in the fatty tissues of fish. By removing the fish's skin and trimming fillets according to the following diagram, you can reduce the level of chemicals substantially. Mercury is bound to the meat of the fish, so these precautions will not help reduce this contaminant.

Remove the skin from fillets or steaks. The internal organs (intestines, liver, roe, and so forth), and skin are often high in fat and contaminants.

Trim off the fatty areas shown in black on the drawing. These include the belly fat, side or body fat, and the flesh along the top of the back. Careful trimming can reduce some contaminants by 25 to 50%.

Cook fish so fat drips away. Broil, bake or grill fish and do not use the drippings. Deep-fat frying removes some contaminants, but you should discard and not reuse the oil for cooking. Pan frying removes few, if any, contaminants.

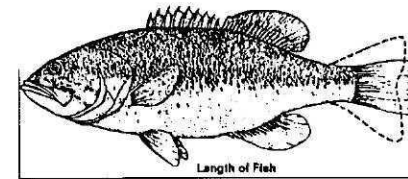


Using These Guidelines

Check the following pages (or *Index*), for the area where you fish. The lakes and rivers on the list are arranged in alphabetical order. If your fish or fishing location is NOT in this booklet, follow the suggestions in *Ways to Reduce Risk*. If your fish or fishing location is in the booklet, it does not necessarily mean that there are contaminants present, but only that the fish have been tested. Meal advice will depend on what contaminant(s) were found and how much was found in different species and sizes of fish. Follow these instructions carefully.

The current *Georgia Sport Fishing Regulations* should be consulted for the legal sizes and creel limits for different species in a water body. Some legal size limit information is provided in the following tables. The regulations also provide detailed information on how to measure fish length, other seafood size measures, and color pictures for identification.

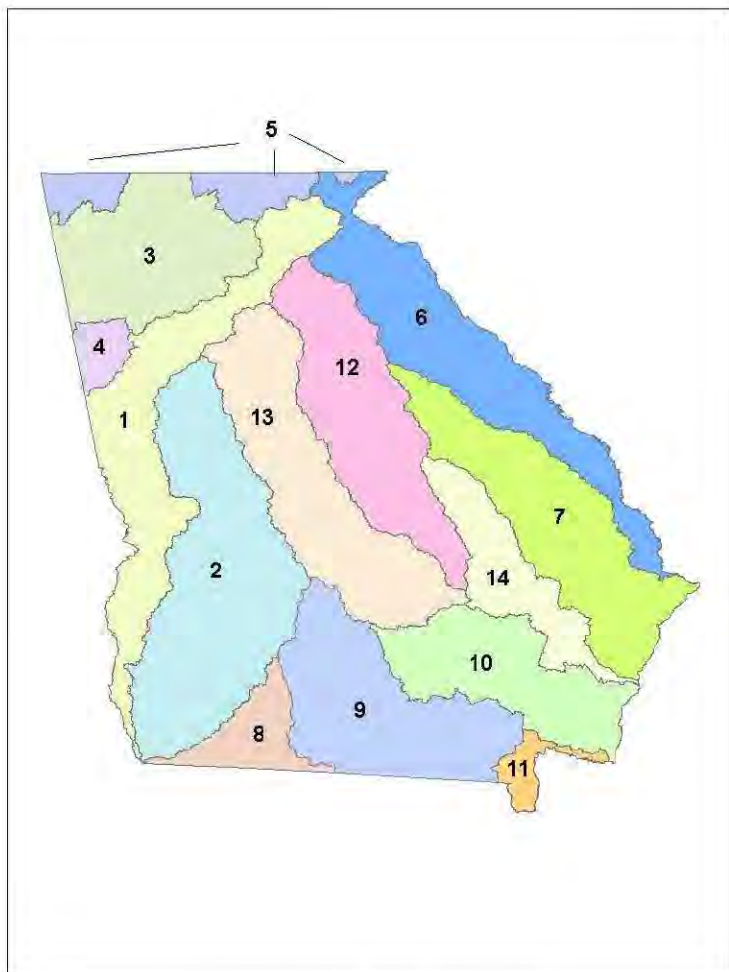
- Measure fish from the tip of the nose to the end of the tail fin.



- In the tables find your lake or river and the species and size of fish you caught. If there is no meal frequency listed for a particular size fish, that size has not been tested or is illegal to keep. For rivers, the size that was tested was the common creel size for that species.
- Listed below are the four different recommended meal frequencies that are possible for different species and sizes of fish.

no restriction
1 meal per week
1 meal per month
do not eat

- For the purposes of these guidelines, one meal is assumed to range from 1/4 to 1/2 pound of fish (4-8 ounces) for a 150 pound person. Subtract or add 1 ounce of fish to the range for every 20 pounds of body weight. For example, one meal is assumed to be 3 - 7 ounces for a 130 pound person and 5 - 9 ounces for a 170 pound person.



RIVER BASINS OF GEORGIA

- | | |
|------------------------------|----------------------------|
| 1. Chattahoochee River Basin | 8. Ochlockonee River Basin |
| 2. Flint River Basin | 9. Suwannee River Basin |
| 3. Coosa River Basin | 10. Satilla River Basin |
| 4. Tallapoosa River Basin | 11. St. Marys River Basin |
| 5. Tennessee River Basin | 12. Oconee River Basin |
| 6. Savannah River Basin | 13. Ocmulgee River Basin |
| 7. Ogeechee River Basin | 14. Altamaha River Basin |

Fish Consumption Guidelines

The tables for public lakes have been separated into two categories based on size. The first set of lakes are those with a surface area of 500 or more acres. The second listing of public lakes includes those having less than 500 acres in surface area. These include Georgia DNR Public Fishing Areas (PFAs) and State Parks with small lakes and ponds, and municipal or other public fishing impoundments.

These guidelines are based on a range in fish meal size from 4 to 8 ounces ($\frac{1}{4}$ to $\frac{1}{2}$ pound). Where the guidelines recommend only 1 meal per week or month, you may prefer to have two smaller meals over that period.

GEORGIA PUBLIC LAKES 500 ACRES OR LARGER

Lake Allatoona

Coosa River Basin

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Black Crappie	No Restrictions			
Carp	No Restrictions	No Restrictions	No Restrictions	
White Bass	No Restrictions			
Largemouth Bass		No Restrictions	1 meal/week	Mercury
Spotted Bass		No Restrictions	1 meal/week	Mercury
Golden Redhorse		No Restrictions		
Channel Catfish	No Restrictions	No Restrictions		
Hybrid Bass			1 meal/week	Mercury

Lake Andrews

Chattahoochee River Basin

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Channel Catfish			No Restrictions	
Spotted Sucker			No Restrictions	

Banks Lake

Suwannee River Basin

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/month		Mercury
Bluegill Sunfish	No Restrictions			

Bear Creek Reservoir**Oconee River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass*	1 meal/week	1 meal/week		Mercury
Channel Catfish		1 meal/week	1 meal/week	Mercury
Sunfish *	No Restrictions			
* Largemouth Bass 16-22 inches are illegal to keep. ** Bluegill, Redear and Redbreast Sunfish were tested				

Lake Blackshear**Flint River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		1 meal/week		Mercury
Channel Catfish	No Restrictions	1 meal/week		Mercury
*Only Largemouth Bass 14 inches and longer may be legally retained.				

Black Shoals Lake**Ocmulgee River Basin****(Renamed Randy Poynter Lake in 2003: originally named Big Haynes Reservoir)**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week		Mercury
Channel Catfish	No Restrictions	1 meal/week	1 meal/week	Mercury
Black Crappie	1 meal/week			Mercury
Redear Sunfish	No Restrictions			

Lake Blue Ridge**Tennessee River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *	No Restrictions	1 meal/week		Mercury
White Bass		1 meal/week		Mercury
Channel Catfish		No Restrictions	1 meal/week	Mercury
* Lake Blue Ridge has no minimum size on Largemouth Bass				

Lake Burton**Savannah River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass*	No Restrictions	No Restrictions	1 meal/week	Mercury
White Catfish	No Restrictions	No Restrictions		
Channel Catfish			No Restrictions	
Bluegill Sunfish	No Restrictions			
Spotted Bass		1 meal/week		Mercury
Walleye			1 meal/week	Mercury
* Lake Burton has no minimum size on Largemouth Bass				

Carters Lake**Coosa River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
Spotted Bass	No Restrictions	No Restrictions		
Channel Catfish		No Restrictions	No Restrictions	
Walleye		No Restrictions	No Restrictions	
Hybrid Bass			No Restrictions	

Lake Chatuge**Tennessee River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
Channel Catfish		No Restrictions	No Restrictions	
Spotted Bass		1 meal/week		Mercury

Clarks Hill Lake (J. Strom Thurmond)**Savannah River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	1 meal/week	Mercury
Black Crappie	No Restrictions	No Restrictions		
White Perch	No Restrictions			
Redear Sunfish	No Restrictions			
Hybrid Bass		No Restrictions	No Restrictions	
Striped Bass	No Restrictions	No Restrictions	No Restrictions	
Channel Catfish	No Restrictions	No Restrictions	No Restrictions	
Spotted Sucker			No Restrictions	

Goat Rock Lake**Chattahoochee River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	1 meal/month	PCBs, Mercury
White Bass	1 meal/month	1 meal/month		PCBs
Hybrid Bass	1 meal/week	1 meal/month	1 meal/month	PCBs
Spotted Sucker			No Restrictions	
Black Crappie	No Restrictions	No Restrictions		
Channel Catfish		1 meal/week	1 meal/month	PCBs
Bluegill Sunfish	No Restrictions			

Lake Harding (Bartletts Ferry)**Chattahoochee River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	1 meal/week	PCBs, Mercury
Channel Catfish	1 meal/week	1 meal/week	1 meal/week	PCBs
Black Crappie	No Restrictions	1 meal/week		PCBs
Hybrid Bass			1 meal/week	PCBs
Striped Bass			1 meal/week	PCBs, Mercury
Spotted Bass	No Restrictions	1 meal/week		Mercury

Lake Hartwell: Tugaloo Arm**Savannah River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week	1 meal/month	Mercury
Black Crappie	No Restrictions	No Restrictions		
Hybrid/Striped Bass	No Restrictions	1 meal/month	Do Not Eat	PCBs
Channel Catfish	No Restrictions	No Restrictions	1 meal/month	PCBs
Carp			1 meal/week	Mercury
Walleye			1 meal/week	Mercury

Lake Hartwell: Main Body, D.S. Andersonville IS. Georgia/South Carolina Listing

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/month	1 meal/month	PCBs
Hybrid & Striped Bass	Do Not Eat	Do Not Eat	Do Not Eat	PCBs
Channel Catfish	1 meal/month	1 meal/month	1 meal/month	PCBs
Main Body.Guidance issued with South Carolina DHEC (Ph.: 1-888-849-7241)				

High Falls Lake**Ocmulgee River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
Channel Catfish	No Restrictions	No Restrictions	No Restrictions	
Redear Sunfish	No Restrictions			
Hybrid Bass	No Restrictions	No Restrictions	No Restrictions	
Black Crappie	No Restrictions	No Restrictions		

Jackson Lake**Ocmulgee River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Channel Catfish	No Restrictions	No Restrictions	1 meal/week	PCBs
Black Crappie	No Restrictions			
Redear Sunfish	No Restrictions	No Restrictions		
White Catfish	No Restrictions	No Restrictions		

Lake Juliette**Ocmulgee River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *	No Restrictions	No Restrictions	No Restrictions	
Redear Sunfish	No Restrictions			
Bullhead species		No Restrictions		
* Lake Juliette has no minimum size on Largemouth Bass				

Lake Sydney Lanier**Chattahoochee River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Striped Bass		No Restrictions	1 meal/week	Mercury
Spotted Bass *		1 meal/week *	1 meal/week	Mercury
Largemouth Bass *		1 meal/week *	1 meal/week	Mercury
White Catfish	No Restrictions	No Restrictions		
Channel Catfish	No Restrictions	No Restrictions	1 meal/week	Mercury
Common Carp			1 meal/week	Mercury
Bluegill Sunfish	No Restrictions			
Black Crappie	No Restrictions			

Lake Nottely**Tennessee River Basin**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Striped Bass			1 meal/week	Mercury
Channel Catfish		No Restrictions	No Restrictions	
Black Crappie	No Restrictions			

Lake Oconee**Oconee River Basin**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass *	No Restrictions	No Restrictions	No Restrictions	
Hybrid Bass	No Restrictions	No Restrictions		
Channel Catfish	No Restrictions	No Restrictions	No Restrictions	
White Catfish	No Restrictions			
Black Crappie	No Restrictions			

Lake Oliver**Chattahoochee River Basin**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week	1 meal/week	PCBs, Mercury
Channel Catfish	No Restrictions	No Restrictions	1 meal/month	PCBs
Hybrid Bass	No Restrictions			
Bluegill Sunfish	No Restrictions			
Redear Sunfish	No Restrictions			

Lake Rabun**Savannah River Basin**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		No Restrictions	1 meal/week	Mercury
White Catfish	No Restrictions	No Restrictions	1 meal/week	Mercury
Bluegill Sunfish	No Restrictions			
Walleye			No Restrictions	

Lake Richard B. Russell**Savannah River Basin**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Black Crappie	No Restrictions	No Restrictions		
Bluegill Sunfish	No Restrictions			
White Perch	No Restrictions			
Channel Catfish	No Restrictions	No Restrictions		
Bullhead	No Restrictions			

Lake Seminole**Chattahoochee/Flint River Basin (Apalachicola)**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Channel Catfish		No Restrictions	No Restrictions	
Spotted Sucker	No Restrictions	No Restrictions	No Restrictions	
Black Crappie	No Restrictions	No Restrictions		
Redear Sunfish	No Restrictions			

Lake Sinclair**Oconee River Basin**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
Hybrid Bass	No Restrictions	No Restrictions	No Restrictions	
Catfish	No Restrictions	No Restrictions	No Restrictions	
Black Crappie	No Restrictions	No Restrictions		

Lake Tobesofkee**Ocmulgee River Basin**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Channel Catfish	No Restrictions	No Restrictions	No Restrictions	

Lake Tugalo**Savannah River Basin**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/month	1 meal/month	Mercury
White Catfish		No Restrictions		
Bluegill Sunfish	No Restrictions			
Walleye			1 meal/week	Mercury

Lake Varner (Cornish Creek Reservoir, Newton County) **Ocmulgee River Basin**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Channel Catfish			No Restrictions	
Redear Sunfish	No Restrictions			

Lake Walter F. George (Eufaula)**Chattahoochee River Basin**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass *			No Restrictions	
Hybrid Bass		No Restrictions	No Restrictions	
Channel Catfish		No Restrictions	No Restrictions	
Black Crappie	No Restrictions			
Spotted Sucker		No Restrictions	No Restrictions	

* Only Largemouth Bass 14 inches and longer may be legally retained.

West Point Lake**Chattahoochee River Basin**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass *		No Restrictions	No Restrictions	
Spotted Bass	No Restrictions	No Restrictions		
Hybrid Bass	No Restrictions	No Restrictions	1 meal/week	PCBs
Channel Catfish	No Restrictions	No Restrictions	1 meal/week	PCBs
Common Carp			No Restrictions	
Black Crappie	No Restrictions	No Restrictions		

* Legal Largemouth $\geq 14"$. ** Striped Bass move between Lake & Morgan Falls Dam

Lake Worth (Lake Chehaw; Flint River Reservoir)**Flint River Basin**

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Channel Catfish		No Restrictions	No Restrictions	

Lake Worth (Lake Chehaw, Old Lake Worth Reservoir)

Largemouth Bass		1 meal/week		Mercury
Channel Catfish			1 meal/week	Mercury
Redear Sunfish	No Restrictions			
Spotted Sucker			No Restrictions	

GEORGIA PUBLIC LAKES AND PONDS LESS THAN 500 ACRES

These guidelines are based on a range in fish meal size from 4 to 8 ounces ($\frac{1}{4}$ to $\frac{1}{2}$ pound). Where the guidelines recommend only 1 meal per week or month, you may prefer to have two smaller meals over that period.

Lake Acworth**Coosa River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	1 meal/week	Mercury
Bluegill Sunfish	No Restrictions			

City of Adairsville Pond**Coosa River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Carp		No Restrictions		

Albany By-Pass Pond**Flint River Basin**

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week	1 meal/week	DDE/DDD
Catfish		1 meal/week		DDE/DDD
Common Carp			1 meal/month	DDE/DDD
Redear Sunfish	No Restrictions			

Allen Creek Wildlife Management Area, Ponds A and B *Oconee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Bluegill Sunfish	No Restrictions			

Antioch Lake (East & West), Rocky Mountain PFA *Coosa River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
Channel Catfish		No Restrictions	No Restrictions	
Black Crappie	No Restrictions	No Restrictions		
Bluegill Sunfish	No Restrictions			

Lake Bennett (Marben PFA, Charlie Elliot Wildlife Center) *Oconee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		1 meal/week*	1 meal/week	Mercury

Big Lazer PFA (Gum Creek Impoundment) *Flint River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions	1 meal/week	Mercury
Channel Catfish			No Restrictions	

Bowles C. Ford Lake, City of Savannah *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
White Catfish	No Restrictions	No Restrictions		

Brasstown Valley Kids Fishing Pond *Tennessee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Bluegill Sunfish	No Restrictions			

Bush Field Airport, Augusta: Unnamed Pond *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass	No Restrictions	1 meal/week		Mercury
Bluegill Sunfish	No Restrictions			

Clayton County Water Authority: Blalock Reservoir *Ocmulgee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Black Crappie	No Restrictions			

Clayton County Water Authority: J.W. Smith Reservoir *Flint River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Redear Sunfish	No Restrictions			

Clayton County Water Authority: Shamrock Reservoir *Ocmulgee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Bluegill Sunfish	No Restrictions			

Dodge County PFA (Steve Bell Lake) *Ocmulgee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions	No Restrictions	
Channel Catfish		No Restrictions	No Restrictions	

Evans County PFA *Ogeechee Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions	1 meal/week	Mercury
Channel Catfish			No Restrictions	

Fort Yargo State Park Lake (Marburg Cr. Watershed Proj.) *Oconee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
Carp	No Restrictions			

Hamburg Millpond, Hamburg State Park *Ogeechee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week		Mercury
Redear Sunfish	No Restrictions			

Heath Lake, Rocky Mountain PFA *Coosa River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions	No Restrictions	
Black Crappie	No Restrictions	No Restrictions		
Bluegill Sunfish	No Restrictions			

Hugh M. Gillis PFA *Oconee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Channel Catfish		No Restrictions	No Restrictions	
Bluegill Sunfish	No Restrictions			
Largemouth Bass		1 meal/week		Mercury

Ken Gardens Lake (Albany, Georgia) *Flint River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Channel Catfish	No Restrictions	No Restrictions		
Brown Bullhead	No Restrictions			
Bluegill Sunfish	No Restrictions			

Kolomoki Lake, Kolomoki Mounds State Park *Chattahoochee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Redear Sunfish	No Restrictions			

Little Ocmulgee State Park Lake (Gum Creek Swamp)) *Ocmulgee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass			1 meal/month	Mercury
Brown Bullhead		1 meal/week		Mercury

Margery Lake (Marben PFA, Charlie Elliot Wildlife Center) *Oconee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Bluegill Sunfish	No Restrictions			
Largemouth Bass*		No Restrictions	No Restrictions	

*Minimum size is 14 inches unless posted otherwise.

Lake Mayer (City of Savannah) *Ogeechee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Redear Sunfish	No Restrictions			
Speckled Bullhead		No Restrictions	No Restrictions	

McDuffie PFA (East Watershed Ponds) *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions		
Channel Catfish		No Restrictions		

*Minimum size is 14 inches unless posted otherwise.

McDuffie PFA (West Watershed Ponds) *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		1 meal/week *	1 meal/week	Mercury
Channel Catfish		No Restrictions	No Restrictions	

*Minimum size is 14 inches unless posted otherwise.

Nancy Town Lake (Habersham County) *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Bluegill Sunfish	No Restrictions			
Largemouth Bass		No Restrictions		

Lake Olmstead (Richmond County) *Savannah River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Spotted Sucker		No Restrictions		

Paradise PFA (Horseshoe 4) *Suwannee River Basin*

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Channel Catfish			No Restrictions	

Paradise PFA (Lake Patrick)***Suwannee River Basin***

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions	No Restrictions	
Brown Bullhead		No Restrictions	No Restrictions	
*Minimum size is 14 inches unless posted otherwise.				

Payton Park Pond, Valdosta***Suwannee River Basin***

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Bluegill Sunfish	No Restrictions			

Reed Bingham State Park Lake***Suwannee River Basin***

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/month	1 meal/month	Mercury
White Catfish			1 meal/month	Mercury

Lake Rutledge (Hard Labor Creek State Park)***Oconee River Basin***

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		No Restrictions		
Channel Catfish	No Restrictions	No Restrictions		

Lake Seed***Savannah River Basin***

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Bluegill Sunfish	No Restrictions			

Shepherd Lake (Marben PFA, Charlie Elliot Wildlife Center)***Oconee River Basin***

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass *		No Restrictions	No Restrictions	
Bluegill Sunfish	No Restrictions			
*Minimum size is 14 inches unless posted otherwise.				

South Slappy Blvd. Offramp Pond (Albany, Georgia)***Flint River Basin***

Species	Less than 12"	12" - 16"	Over 16"	Chemical
Largemouth Bass		1 meal/week	1 meal/month	Mercury
Bluegill Sunfish	No Restrictions			

Stone Mountain Lake***Ocmulgee River Basin***

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass			1 meal/week	Mercury
Catfish	No Restrictions	No Restrictions		

Tribble Mill Lake, Gwinnett County***Ocmulgee River Basin***

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass	No Restrictions	1 meal/week		Mercury
Black Crappie	No Restrictions			
Bluegill Sunfish	No Restrictions			

Yohola Lake, Kolomoki Mounds State Park***Chattahoochee River Basin***

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week	1 meal/week	Mercury
Bluegill Sunfish	No Restrictions			

Yonah Lake***Savannah River Basin***

Species	Less than 12"	12" - 16 "	Over 16 "	Chemical
Largemouth Bass		1 meal/week		Mercury
Catfish (mixed sp.)		1 meal/week		Mercury
Bluegill Sunfish	No Restrictions			

GEORGIA FRESHWATER RIVERS AND CREEKS

Please note that the consumption guidelines for Georgia rivers are presented in a different format from the lake tables. Due to the flow of rivers, the site tested is important to the consumption guidelines. Consumption guidelines may vary from one stretch of river to another. The fish tested was the common creel size for the location and species. Freshwater rivers and creeks are tabulated first, followed by listings for Georgia tidal estuarine systems.

These guidelines are based on a range in fish meal size from 4 to 8 ounces (1/4 to 1/2 pound). Where the guidelines recommend only 1 meal per week or month, you may prefer to have two smaller meals over that period.

Alapaha River (Tifton to Stockton)

Suwannee River Basin

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S.Hwys. 82 to 84	1 meal/month	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	No Restrictions	

Alapaha River (Near State Line)

Suwannee River Basin

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Near Statenville	1 meal/month	Mercury
Bullhead	See Above	1 meal/month	Mercury

Alapahoochee River (Near State Line)

Suwannee River Basin

Species	Site Tested	Recommendation	Chemical
Bullhead	Echols County	1 meal/week	Mercury

Alcovy River

Ocmulgee River Basin

Species	Site Tested	Recommendation	Chemical
Spotted Sucker	Arrowhatchee Farms	No Restrictions	
Chain Pickerel	See Above	No Restrictions	

Allatoona Creek, Cobb County

Coosa River Basin

Species	Site Tested	Recommendation	Chemical
Spotted Bass	Ga. Hwy. 176	1 meal/week	Mercury
Alabama Hog Sucker	See Above	1 meal/week	Mercury

Altamaha River,

Altamaha River Basin

Near Baxley (U.S. Hwy 1), and Near Jesup, Ga. (U.S. Hwy.s 25/84)

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 1	1 meal/week	Mercury
Channel Catfish	See Above	1 meal/week	Mercury
Flathead Catfish	See Above	1 meal/week	Mercury
Bluegill Sunfish	See Above	No Restrictions	
Largemouth Bass	U.S. Hwys 25/84	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	
Flathead Catfish	See Above	1 meal/week	Mercury
Striped Mullet	Altamaha Park	No Restrictions	

Apalachee River

Oconee River Basin

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Apalachee Beach	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	

Beaver Creek (Tributary to Patsiliga Creek)

Flint River Basin

Species	Site Tested	Recommendation	Chemical
Yellow Bullhead	Taylor County	1 meal/month	Mercury

Boen Creek

Savannah River Basin

Species	Site Tested	Recommendation	Chemical
Bluehead Chub	Rabun County	No Restrictions	

Brasstown Creek

Tennessee River Basin

Species	Site Tested	Recommendation	Chemical
Northern Hog Sucker	Towns County	No Restrictions	

Brier Creek (Burke County)*Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy. 56	1 meal/month	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury

Broad River*Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Channel Catfish	Ga. Hwy 17	No Restrictions	
Flathead Catfish	See Above	No Restrictions	

Buffalo Creek*Tallapoosa River Basin*

Species	Site Tested	Recommendation	Chemical
Bluegill Sunfish	Carroll County	No Restrictions	

Butternut Creek*Tennessee River Basin*

Species	Site Tested	Recommendation	Chemical
Hog Sucker	Union County	No Restrictions	

Cane Creek (Wimpy's Air Field)*Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Lumpkin County	No Restrictions	

Canoochee River (Hwy 192 to Lotts Cr.)*Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy. 280	1 meal/month	Mercury
Channel Catfish	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	1 meal/month	Mercury
Snail Bullhead	See Above	1 meal/month	Mercury

Canoochee River (Lotts Cr. To Ogeechee River)*Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Below Canoochee Creek (Taylor Creek)	1 meal/month	Mercury
Channel Catfish	See Above	1 meal/month	Mercury

Casey Canal (Tributary to Hayners Cr. / Vernon River)*Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Eisenhower Dr.	No Restrictions	
Bluegill Sunfish	See Above	No Restrictions	
Striped Mullet	See Above	1 meal/week	Dieldrin

Cedar Creek Tributary (Hart County WMA)*Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Creek Chubsucker	Hart County WMA	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

Chattahoochee River*Chattahoochee River Basin***(Near Helen, and Above Lake Lanier)**

Species	Site Tested	Recommendation	Chemical
Redeye Bass	Ga. Hwy 75, Helen	1 meal/week	Mercury
Snail Bullhead	See Above	1 meal/week	Mercury
Golden Redhorse	See Above	1 meal/week	Mercury
Largemouth Bass	Belton Bridge Road	1 meal/month	Mercury
Channel Catfish	See Above	No Restrictions	

Chattahoochee River*Chattahoochee River Basin***(Buford Dam to Morgan Falls Dam)**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Multiple, Dam to Dam	1 meal/week	Mercury
Common Carp	See Above	No Restrictions	
Brown Trout	See Above	No Restrictions	
Rainbow Trout	See Above	No Restrictions	
Yellow Perch	Above Morgan Falls	No Restrictions	

**Chattahoochee River
(Morgan Falls Dam to Peachtree Creek)***Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Below Morgan Falls Dam	No Restrictions	
Common Carp	See Above	1 meal/month	PCBs
Brown Trout	See Above	No Restrictions	
Rainbow Trout	See Above	No Restrictions	
Jumprock Sucker	See Above	1 meal/week	Mercury
Bluegill Sunfish	See Above	No Restrictions	

**Chattahoochee River
(Peachtree Creek to Pea Creek)***Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Common Carp	SR 166 (DNR boat ramp)	1 meal/month	PCBs
Channel Catfish	See Above	No Restrictions	
Bluegill Sunfish	See Above	1 meal/week	PCBs
White Sucker	Peachtree Cr. To I-20	No Restrictions	
Black Bass Spp.	I-285	1 meal/week	Mercury

**Chattahoochee River
(Pea Creek to West Point Lake, below Franklin)***Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. 27/SR16 Whitesburg	1 meal/week	Mercury
Spotted Bass	See Above	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	

**Chattahoochee River: Special for Striped Bass
(Morgan Falls Dam to West Point Lake, below Franklin)***Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Striped Bass	Morgan Falls to I-285	1 meal/month	PCBs, Mercury
Note: One population of striped bass migrates annually between West Point Lake and Morgan Falls Dam. Sampled population represents this stretch of river and Lake.			

**Chattahoochee River
(West Point Dam to Interstate 85)***Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Below Dam	No Restrictions	
Spotted Bass	See Above	1 meal/week	Mercury
Flat Bullhead Catfish	See Above	No Restrictions	

**Chattahoochee River
(Oliver Dam to Upatoi Creek, Muscogee County)***Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Oliver Dam to Eagle Phoenix Dam	1 meal/month	PCBs
Bullhead Catfish	See Above	1 meal/week	PCBs

**Chattahoochee River
(Chattahoochee County to Stewart County; Upatoi Creek to Omaha, Ga.)***Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Oswichee Creek	No Restrictions	
Spotted Sucker	See Above	No Restrictions	
Crappie	See Above	No Restrictions	
Channel Catfish	See Above	No Restrictions	

Chattahoochee River (Early County)*Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Hybrid Bass	Downstream of Plant Farley	No Restrictions	

Chattanooga Creek*Tennessee River Basin*

Species	Site Tested	Recommendation	Chemical
Bluegill Sunfish	Ga. Hwy 193	No Restrictions	
Northern Hog Sucker	See Above	No Restrictions	

Chattooga River (Northeast Georgia, Rabun County)*Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Northern Hog Sucker	Hwy. 24	1 meal/week	Mercury
Silver Redhorse	Above Lake Tugalo	1 meal/week	Mercury

Chattooga River (Northwest Georgia)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Bluegill Sunfish	Chattoogaville	No Restrictions	
Black Crappie	See Above	No Restrictions	

Chestatee River, Headwaters, Turners Corner**Chattahoochee River Basin**

Species	Site Tested	Recommendation	Chemical
Redeye Bass	Hwy. 19	No Restrictions	
Alabama Hog Sucker	See Above	No Restrictions	
Bluehead Chub	See Above	No Restrictions	

Chestatee River, (Tennessee River to Lake Lanier)**Chattahoochee River Basin**

Species	Site Tested	Recommendation	Chemical
Spotted Bass	Downstream Ga. 400	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

Chickamauga Creek (East and South)**Tennessee River Basin**

Species	Site Tested	Recommendation	Chemical
Rock Bass	Ga. Hwy 2	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

Chickamauga Creek (West)**Tennessee River Basin**

Species	Site Tested	Recommendation	Chemical
Spotted Bass	Ga. Hwy 2	1 meal/week	Mercury
Redbreast Sunfish	See Above	No Restrictions	

Chickasawhatchee Creek, WMA near Elmodel, Ga.**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Spotted Sucker	Wildlife Mgm't Area	No Restrictions	

Cohulla Creek (Praters Mill)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Blacktail Redhorse	Ga. Hwy. 2	1 meal/week	Mercury

Coleman River, Near Mouth, Rabun County**Savannah River Basin**

Species	Site Tested	Recommendation	Chemical
Rainbow Trout	Near Tate City Rd.	No Restrictions	

Conasauga River: Headwaters in Cohutta Nat'l Forest**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Rainbow Trout	Upstream Rough Cr.	No Restrictions	

Conasauga River:**Coosa River Basin****State Line to Hwy 286 (Hwy 2); and, Hwy 286 to Calhoun (Old Tilton Bridge)**

Species	Site Tested	Recommendation	Chemical
Spotted Bass	Ga. Hwy. 2	1 meal/week	Mercury
Smallmouth Buffalo	See Above	1 meal/month	PCBs, Mercury
White Bass	Old Tilton Bridge	1 meal/month	PCBs
Smallmouth Buffalo	See Above	1 meal/month	PCBs, Mercury

Coosa River (River Mile Zero to Hwy 100)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	River Mile 2, Rome	1 meal/month	PCBs
Spotted Bass	See Above	1 meal/week	PCBs, Mercury
Blue Catfish < 18"	River Mile 2 & Hwy. 100	1 meal/week	PCBs
Blue Catfish 18-32"	River Mile 2 & Hwy. 100	1 meal/month	PCBs
Blue Catfish > 32"	River Mile 2 & Hwy. 100	Do Not Eat	PCBs
Smallmouth Buffalo	River Mile 2, Rome	Do Not Eat	PCBs

Coosa River (Hwy 100 to Stateline)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Smallmouth Buffalo	Below Hwy 100 and at Brushy Branch	1 meal/month	PCBs
Largemouth Bass	See Above	1 meal/week	PCBs
Spotted Bass	See Above	No Restrictions	
Channel Catfish	See Above	1 meal/month	PCBs
Black Crappie	Foster Bend	1 meal/week	PCBs
Blue Catfish < 18"	River Mile 2 & Hwy. 100	1 meal/week	PCBs
Blue Catfish 18-32"	River Mile 2 & Hwy. 100	1 meal/month	PCBs
Blue Catfish > 32"	River Mile 2 & Hwy. 100	Do Not Eat	PCBs

Coosa River: Special Striped Bass**Coosa River Basin****(River mile zero in Rome to Stateline/Lake Weiss)**

Species	Site Tested	Recommendation	Chemical
Striped Bass less than 20 inches in length	Multiple sites on Coosa	1 meal/month	PCBs
Striped Bass ≥ 20 inches in length	See Above	Do Not Eat	PCBs
Note: One population of striped bass migrates annually between Lake Weiss and locations on the Coosa, Etowah (below Thompson-Weinman Dam) and Oostanaula Rivers. Sampled population represents these stretches of river.			

Coosawattee River (Below Carters Lake Dam)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Smallmouth Buffalo	Owens Gin Road	1 meal/month	PCBs, Mercury
Bluegill Sunfish	As Above	No Restrictions	

Daniels Creek (Dade County)**Tennessee River Basin**

Species	Site Tested	Recommendation	Chemical
Bluegill Sunfish	Cloudland Canyon State Park	No Restrictions	

Dukes Creek (Near Helen)**Chattahoochee River Basin**

Species	Site Tested	Recommendation	Chemical
Rainbow Trout	Near Ga.Hwy. 75	No Restrictions	
Brown Trout	See Above	No Restrictions	
Note: Trout may not be harvested in Smithgall Woods			

Etowah River (Dawson County)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Blacktail Redhorse	Kelly Bridge Road	1 meal/week	Mercury

Etowah River (Above Lake Allatoona, Cherokee County)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Spotted Bass	York Street	1 meal/week	Mercury
Golden Redhorse	See Above	No Restrictions	

Etowah River (Below Lake Allatoona, Bartow/Floyd Co.s)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Channel Catfish	U.S. Hwy. 411	No Restrictions	
Largemouth Bass	See Above	1 meal/week	Mercury
Striped Bass *	Below Allatoona Dam *	No Restrictions	
Spotted Bass	See Above	1 meal/week	PCBs, Mercury
Bluegill Sunfish	See Above	No Restrictions	
Smallmouth Buffalo	See Above	1 meal/month	PCBs, Mercury
* For Striped Bass below Allatoona Dam and above Thompson-Weinman Dam in Cartersville only. See "Coosa River: Special Striped Bass", for lower Etowah River.			

Flint River (Spalding/Fayette Counties)**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy. 92	1 meal/week	Mercury
Spotted Sucker	See Above	No Restrictions	

Flint River (Meriwether/Pike/Upton Counties)**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Shoal Bass	Ga. Hwy. 18	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	
Flathead Catfish	See Above	No Restrictions	

Flint River (Taylor County)**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy. 80	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	
Shoal Bass	See Above	No Restrictions	

Flint River (Above Lake Blackshear, Macon/Dooly Co.s)**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Oglethorpe, Ga. Hwy 49	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	

Flint River (Below Lake Blackshear, Worth/Lee Co.s)**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	No. Albany, Ga. Hwy 32	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	

Flint River (Dougherty/Baker/Mitchell Counties)**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Below Albany & Merck	1 meal/week	Mercury
Sucker	See Above	No Restrictions	
Flathead Catfish <16"	Above Newton, GA	No Restrictions	
Flathead Catfish 16-30"	See Above	1 meal/week	Mercury
Flathead Catfish >30"	See Above	1 meal/month	Mercury

Goldmine Branch (Tributary to Warwoman Cr.)**Savannah River Basin**

Species	Site Tested	Recommendation	Chemical
Brook Trout	Rabun County	No Restrictions	

Gum Creek**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Crisp County	1 meal/week	Mercury
Carp	See Above	No Restriction	

Holly Creek (Murray County)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Blacktail Redhorse	Fox Bridge Road	1 meal/week	Mercury

Ichawaynochaway Creek**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Cordays Millpond	1 meal/week	Mercury
Spotted Sucker	See Above	No Restriction	

Jacks River (Fannin County)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Brown Trout	Watson Gap	No Restrictions	

Jones Creek (U.S. Forest Service Rd. 28-1)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Brown Trout	Lumpkin County	No Restrictions	

Kinchafoonee Creek (Sumter/Lee Counties)**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwys 49 to 118	1 meal/week	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury

Little Dry Creek (Floyd County)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Bluegill Sunfish	Near Rome	No Restrictions	

Little River (Above & Below Rocky Cr., Wilkes Co.) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Above & Below Rocky Creek	1 meal/week	Mercury
Silver Redhorse	See Above	No Restrictions	
Spotted Sucker	See Above	No Restrictions	

Little River (West of Valdosta, Lowndes County) *Suwannee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Above Ga. Hwy 133	1 meal/week	Mercury
Spotted Sucker	See Above	No Restrictions	

Little Tallapoosa River *Tallapoosa River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy. 27	No Restrictions	
Black Crappie	See Above	No Restrictions	
Brown Bullhead	See Above	No Restrictions	

Little Tennessee River (Rabun County) *Tennessee River Basin*

Species	Site Tested	Recommendation	Chemical
Mixed Bass/Sunfish	Above John Kelly Rd.	No Restrictions	
Mixed Sucker Spp.	See Above	No Restrictions	
Mixed Bass/Sunfish Species: Rock Bass, Redbreast and Green Sunfish. Mixed Sucker Species: Black Redhorse, Striped Jumprock and Northern Hog Sucker			

Middle Oconee River (Above & Below Athens) *Oconee River Basin*

Species	Site Tested	Recommendation	Chemical
Redbreast Sunfish	U.S. Hwy 29, (Above)	No Restrictions	
Spotted Sucker	See Above	No Restrictions	
Silver Redhorse	Below Barber Creek	No Restrictions	

Mill Creek (Whitfield County) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Spotted Sucker	Near Dalton	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

Mill Creek (Murray County) *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Golden Redhorse	Hwy. 411, Eton	1 meal/week	Mercury

Moccasin Creek (Lake Burton Hatchery) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Rainbow Trout	DNR Hatchery	No Restrictions	

Muckalee Creek (Sumter/Lee Counties) *Flint River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	McLittle Bridge Rd. To Ga. Hwy 118	1 meal/week	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury

Mud Creek, Near Powder Springs, Cobb County *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Alabama Hog Sucker	Ga. Hwy 360	No Restrictions	
Bluegill Sunfish	See Above	No Restrictions	

Nickajack Creek, Cobb County *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Alabama Hog Sucker	Cooper Lake Road	No Restrictions	
Bluegill Sunfish	See Above	No Restrictions	

Noonday Creek *Coosa River Basin*

Species	Site Tested	Recommendation	Chemical
Alabama Hog Sucker	Cobb County	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

North Oconee River (Above and Below Athens, Clarke Co.) *Oconee River Basin*

Species	Site Tested	Recommendation	Chemical
Redbreast Sunfish	Newton Bridge Road	No Restrictions	
Redbreast Sunfish	Whitehall Rd. (Below)	No Restrictions	
Flat Bullhead	See Above	No Restrictions	

Ochlockonee River (Moultrie to Thomasville)***Ochlockonee River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Above Thomasville, Hwy. 19	1 meal/month	Mercury
White Catfish	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury
Warmouth	See Above	1 meal/week	Mercury

Ochlockonee River (Thomasville to State Line)***Ochlockonee River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy. 93	1 meal/month	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	No Restrictions	

Ocmulgee River (Butts/Monroe Counties)***Ocmulgee River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Below Lloyd Shoals Dam, Lake Jackson	No Restrictions	
Brown Bullhead	See Above	No Restrictions	

Ocmulgee River (Bibb County)***Ocmulgee River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	6 Miles Downstream of Tobesofkee Creek	1 meal/week	Mercury
Flathead Catfish	See Above	1 meal/month	PCBs, Mercury
Channel Catfish	See Above	No Restrictions	

Ocmulgee River (Houston/Twiggs Counties)***Ocmulgee River Basin***

Species	Site Tested	Recommendation	Chemical
Channel Catfish	Ga. Hwy. 96	No Restrictions	
Flathead Catfish	See Above	No Restrictions	
Largemouth Bass	See Above	1 meal/week	Mercury

Ocmulgee River (Pulaski County)***Ocmulgee River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Hawkinsville	No Restrictions	
Channel Catfish	See Above	No Restrictions	

Ocmulgee River (Wilcox/Telfair Counties)***Ocmulgee River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 280	1 meal/week	Mercury
Flathead Catfish	See Above	1 meal/week	Mercury
Channel Catfish	See Above	No Restrictions	

Ocmulgee River (Telfair/Wheeler Counties)***Ocmulgee River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 341	1 meal/week	Mercury
Flathead Catfish	See Above	1 meal/week	Mercury

Oconee River (Clarke and Oconee Counties)***Oconee River Basin*****Confluence of North and Middle Oconee to Barnett Shoals Dam**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Above Barnett Shoals	1 meal/week	Mercury
Silver Redhorse	See Above	1 meal/week	Mercury

Oconee River (Oconee and Greene Counties)***Oconee River Basin*****Barnett Shoals Dam to Lake Oconee**

Species	Site Tested	Recommendation	Chemical
Silver Redhorse	Ga. Hwy. 15	No Restrictions	
Channel Catfish	See Above	No Restrictions	
Common Carp	See Above	No Restrictions	

Oconee River (Baldwin/Wilkinson Counties)***Oconee River Basin***

Species	Site Tested	Recommendation	Chemical
Flathead Catfish	Milledgeville to Dublin	No Restrictions	
Largemouth Bass	See Above	No Restrictions	
Channel Catfish	See Above	No Restrictions	

Oconee River (Laurens County)*Oconee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	I-16	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	
Channel Catfish	See Above	No Restrictions	

Ogeechee River (Washington County; near Davisboro)*Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy 88	1 meal/month	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury

Ogeechee River (Jefferson County; Louisville)*Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 1	1 meal/month	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury

Ogeechee River (Burke County; Midville)*Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy. 56	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury

Ogeechee River (Jenkins County; Millen)*Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 25	1 meal/month	Mercury
Snail Bullhead	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury

Ogeechee River (Bulloch County; near Statesboro)*Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 301	1 meal/month	Mercury
Channel Catfish	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury
Snail Bullhead	See Above	1 meal/week	Mercury
Spotted Sucker	Ga. Hwy. 24 (so. bridge)	1 meal/week	Mercury

Ogeechee River (Bryan County; near Ellabelle)*Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy 204	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury
Channel Catfish	See Above	1 meal/week	Mercury

Ogeechee River (Near Ft. McAllister)*Ogeechee River Basin*

Species	Site Tested	Recommendation	Chemical
Mullet	Fort McAllister	No Restrictions	

Ohoopsee River (Near Oak Park, Ga.)*Altamaha River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	I-16	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury

Ohoopsee River (Near Reidsville, Ga., Tattnall Co.)*Altamaha River Basin*

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwys 280 to 56	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury

Okefenokee Swamp (Stephen Foster State Park)*Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Bowfin	Billy's "Lake"	1 meal/month	Mercury
Flier (sunfish)	See Above	1 meal/week	Mercury
Chain Pickerel	See Above	1 meal/month	Mercury

Olley Creek (Near Austell, Cobb County)*Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Large Scale Stoneroller	Clay Road	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

Oostanaula River (Floyd/Gordon Counties)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Smallmouth Buffalo	Ga. Hwy 156, Calhoun	1 meal/week	PCBs, Mercury
Bluegill Sunfish	See Above	No Restrictions	
Spotted Bass	Ga. Hwy 140	1 meal/week	Mercury
Bluegill Sunfish	See Above	No Restrictions	
Largemouth Bass	See Above	1 meal/week	PCBs
Smallmouth Buffalo	See Above	1 meal/week	PCBs, Mercury
Channel Catfish	See Above	1 meal/week	PCBs
See "Coosa River: Special Striped Bass"			

Patsiliga Creek (Upstream of Beaver Creek, Taylor Co.)**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	From McCants Millpond to Ga. Hwy 208	No Restrictions	
Spotted Sucker		No Restrictions	
Chain Pickerel	See Above	1 meal/week	Mercury

Patsiliga Creek (Downstream of Beaver Creek)**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Bass Spp. *	Taylor County	1 meal/month	Mercury
Sucker Spp. *	See Above	1 meal/week	Mercury
*Bass: Largemouth & Shoal; Suckers: Grayfin Redhorse, Spotted & Greater Jumprock			

Pipe Makers Canal (Near Savannah, Georgia)**Savannah River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Chatham County	1 meal/week	Mercury

Ponder Branch (Walker County, Villanow)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Redeye Bass	Ga. Hwy 136	No Restrictions	

Proctor Creek, Near Acworth, Cobb County**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Green Sunfish	Ga. Hwy 293, Old US 41	No Restrictions	

Satilla River (Near Waycross, Ware/Brantley Co.s)**Satilla River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 84	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury
Channel Catfish	U.S. Hwy 301	1 meal/week	Mercury

Satilla River (Folkston, Burnt Fort, Charlton/Camden Co.s)**Satilla River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy. 252	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/month	Mercury
Flathead Catfish 30 inches and smaller	See Above	1 meal/month *	Mercury
Flathead Catfish greater than 30 inches	See Above	Do Not Eat	Mercury

* Because there is considerable variation in how much mercury these large predatory fish contain, people who are considered to be especially sensitive to the effects of mercury (pregnant women, nursing mothers and young children), may wish to limit their consumption further than listed above.

Savannah River (Below Clarks Hill Dam, Columbia County)**Savannah River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Above New Savannah Bluff Lock & Dam	1 meal/week	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury
Redear Sunfish	Above Stevens Cr. Dam	No Restrictions	
Redbreast Sunfish	Below Stevens Cr. Dam	No Restrictions	

Savannah River (Richmond/Burke Counties)**Savannah River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Below New Savannah Bluff Lock & Dam	1 meal/week	Mercury
Sucker	See Above	No Restrictions	
Striped Mullet	See Above	No Restrictions	

Specific consumption guidelines have not been issued for the radionuclides cesium-137 & strontium-90, in the Savannah River (Burke/Screven Co.s), adjacent to the Savannah River Site (SRS). Guidance on mercury were evaluated and deemed to be protective.

Savannah River (Screven County)***Savannah River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy 301	1 meal/week	Mercury
Redear Sunfish	See Above	No Restrictions	
Channel Catfish	See Above	No Restrictions	
Bluegill Sunfish	See Above	1 meal/week	Mercury
Specific consumption guidelines have not been issued for the radionuclides cesium-137 & strontium-90, in the Savannah River (Burke/Screven Co.s), adjacent to the Savannah River Site (SRS). Guidance on mercury were evaluated and deemed to be protective.			

Savannah River (Effingham County)***Savannah River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy 119	1 meal/month	Mercury
Channel Catfish	See Above	No Restrictions	
Redbreast Sunfish	See Above	1 meal/week	Mercury

Savannah River (Fort Howard)***Savannah River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Near Rincon	1 meal/month	Mercury
White Catfish	See Above	1 meal/week	Mercury
Redbreast Sunfish	See Above	No Restrictions	
Bowfin	See Above	1 meal/month	Mercury

Savannah River (Chatham County)***Savannah River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	I-95 and U.S. Hwy. 17	1 meal/week	Mercury
Channel Catfish	U.S. Hwy. 17	No Restrictions	
Striped Mullet	Hwy. 17, Front River	No Restrictions	

Savannah River (Tidal Gate)***Savannah River Basin***

Species	Site Tested	Recommendation	Chemical
Red Drum	Tidal Gate	No Restrictions	
White Catfish	See Above	1 meal/week	Mercury

Savannah River: Special Striped Bass***Savannah River Basin*****(New Savannah Bluff Lock & Dam to Estuary, Chatham Co.)**

Species	Site Tested	Recommendation	Chemical
Striped Bass 27" and greater in length	Multiple locations, over section noted above	1 meal/month *	Mercury
* Because there is considerable variation in how much mercury these large predatory fish contain, people who are considered to be especially sensitive to the effects of mercury (pregnant women, nursing mothers and young children), may wish to limit their consumption further than listed above.			
Note: one population of striped bass migrates annually between the Savannah estuary and New Savannah Bluff Lock and Dam. Current minimum legal size is 27 inches.			

Sewell Mill Creek (Cobb County)***Chattahoochee River Basin***

Species	Site Tested	Recommendation	Chemical
Alabama Hog Sucker	Ga. Hwy 120	No Restrictions	
Bluegill Sunfish	See Above	No Restrictions	

Short Creek (Warren County)***Ogeechee River Basin***

Species	Site Tested	Recommendation	Chemical
Sunfish	Warren County	1 meal/week	Mercury

Slab Camp Creek (Oconee County)***Oconee River Basin***

Species	Site Tested	Recommendation	Chemical
Greater Junprock	Watson Spring Road	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

South River (DeKalb/Rockdale County)***Ocmulgee River Basin***

Species	Site Tested	Recommendation	Chemical
Bluegill Sunfish	Hwy. 155, Panola Shoals	1 meal/week	PCBs
Snail Bullhead	See Above	1 meal/week	PCBs

South River (Henry County)***Ocmulgee River Basin***

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Snapping Shoals	1 meal/week	PCBs
Silver Redhorse	See Above	No Restrictions	
Channel Catfish	Below Snapping Shoals	No Restrictions	

South River (Butts County)**Ocmulgee River Basin**

Species	Site Tested	Recommendation	Chemical
Black Crappie	Ga. Hwy. 36	No Restrictions	
Largemouth Bass	See Above	No Restrictions	
Channel Catfish	See Above	No Restrictions	
Redbreast Sunfish	See Above	No Restrictions	

Spirit Creek**Savannah River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Above Richmond Factory Pond	No Restrictions	
Spotted Sucker	See Above	No Restrictions	
Redear Sunfish	See Above	No Restrictions	

Spring Creek (Seminole/Decatur/Miller Counties)**Flint River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Ga. Hwy. 84	1 meal/week	Mercury
Spotted Sucker	See Above	1 meal/week	Mercury
Redear Sunfish	See Above	1 meal/week	Mercury

Stamp Creek (Cherokee County)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Rainbow Trout	Pine Log WMA	No Restrictions	

Stekoa Creek**Savannah River Basin**

Species	Site Tested	Recommendation	Chemical
Striped Jumprock	Rabun County	No Restrictions	

St. Marys River (Charlton County)**St. Marys River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Near St. George	1 meal/month	Mercury
Redbreast Sunfish	See Above	No Restrictions	

St. Marys River (Camden County)**St. Marys River Basin**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	U.S. Hwy. 17	1 meal/month	Mercury
Redbreast Sunfish	See Above	No Restrictions	
Striped Mullet	See Above	No Restrictions	

Sugar Creek (Murray County)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Golden Redhorse	Sugar Creek Road	1 meal/week	Mercury

Sumac Creek (Murray County)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Golden Redhorse	Hwy. 225	1 meal/week	Mercury

Suwannee River (Clinch/Ware/Echols Co.s)**Suwannee River Basin****Suwannee River Sill to State Line**

Species	Site Tested	Recommendation	Chemical
Largemouth Bass	Short Camp Road	1 meal/month	Mercury
Bullhead Catfish	See Above	1 meal/week	Mercury
Chain Pickerel	See Above & U.S. 441	1 meal/week	Mercury
Flier	U.S. Hwy 441	1 meal/week	Mercury

Swamp Creek (Whitfield County)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Redeye Bass	Redwine Cove Road	1 meal/week	Mercury

Talking Rock Creek (Downtown Talking Rock, Pickens Co.)**Coosa River Basin**

Species	Site Tested	Recommendation	Chemical
Redeye Bass	Near Fire Department	1 meal/week	Mercury

Tallapoosa River**Tallapoosa River Basin**

Species	Site Tested	Recommendation	Chemical
Blacktail Redhorse	U.S. Hwy. 27	No Restrictions	
Bluegill Sunfish	See Above	No Restrictions	

Blacktail Redhorse	Ga. Hwy. 100	1 meal/week	Mercury
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Tallulah River, Towns County *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Rainbow Trout	Charlies Creek Road	No Restrictions	

Tributary to Hudson River (Alto, Ga., Banks County) *Savannah River Basin*

Species	Site Tested	Recommendation	Chemical
Redeye Bass	Below Alto Prison	1 meal/week	Mercury
Brown Bullhead	See Above	No Restrictions	

Upatoi Creek *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Grayfin Redhorse	Above Mouth	No Restrictions	

Withlacoochee River *Suwannee River Basin*

(Hahira to State Line, Berrien/Lowndes Counties)

Species	Site Tested	Recommendation	Chemical
Redbreast Sunfish	Ga. Hwy 122	1 meal/week	Mercury
Largemouth Bass	Near Clyattville	1 meal/month	Mercury
Redbreast Sunfish	See Above	1 meal/week	Mercury

Yahoola Creek (Consolidated Goldmine) *Chattahoochee River Basin*

Species	Site Tested	Recommendation	Chemical
Alabama Hog Sucker	Lumpkin County	No Restrictions	

Yellow River *Ocmulgee River Basin*

Species	Site Tested	Recommendation	Chemical
Flat Bullhead Catfish	Porterdale Dam	No Restrictions	

GEORGIA ESTUARINE SYSTEMS

Estuaries and freshwaters in Georgia are included in the watersheds of 14 different river basins, using the United States Geological Survey Hydrologic Unit Code (HUC), cataloging system. Estuarine systems often communicate with adjoining basins due to natural interconnections and manmade structures and actions such as causeways, tidal gates and dredging. Terry Creek, Dupree Creek, the Back River, Academy Creek and the lower Brunswick River are technically in the Satilla River Basin, but because of tidal dynamics, water exchange occurs between them and the Altamaha River system.

These guidelines are based on a range in fish meal size from 4 to 8 ounces (1/4 to 1/2 pound). Where the guidelines recommend only 1 meal per week or month, you may prefer to have two smaller meals over that period.

Academy Creek *Satilla River Basin*

Species	Site Tested	Recommendations	Chemical
Blue Crab	Academy Creek	No Restrictions	

Altamaha River Estuary *Altamaha River Basin*

Species	Site Tested	Recommendations	Chemical
Striped Mullet	Below Hwy. 17	No Restrictions	
Spotted Seatrout	Multiple in Delta	No Restrictions	

Floyd Creek (to St. Andrews Sound) *Satilla River Basin*

Species	Site Tested	Recommendations	Chemical
Blue Crab	Floyd Creek, So. of Floyd Basin	No Restrictions	
Southern Kingfish		No Restrictions	

Hayners Creek *Ogeechee River Basin*

Species	Site Tested	Recommendations	Chemical
Blue Crab	Above SR 204	No Restrictions	

North Newport River (Upper) and Cay/Peacock Cr.s, Riceboro *Ogeechee River Basin*

Species	Site Tested	Recommendations	Chemical
Striped Mullet	No. Newport River Cay & Peacock Creeks nr. I-95	No Restrictions	
Blue Crab		1 meal/week	Mercury

Turtle River System:*Satilla River Basin***Purvis and Gibson Creeks , (St. Simons Estuary)**

Species	Site Tested	Recommendation	Chemical
Red Drum, Flounder	Purvis & Gibson Creeks	1 meal/week	PCBs, Mercury
Shrimp, Black Drum, Spot		1 meal/month	PCBs
Blue Crab, Spotted Seatrout, Southern Kingfish (whiting), Sheepshead		1 meal/month	PCBs, Mercury
Striped Mullet, Atlantic Croaker		Do Not Eat	PCBs
Clams, Mussels, Oysters	Not applicable	Do Not Eat	Shellfish Ban *
* Shellfish Ban: National Shellfish Sanitation Program. For information see Coastal Resources Division website: http://crd.dnr.state.ga.us			

Upper Turtle & Buffalo Rivers (St. Simons Estuary)*Satilla River Basin*

Species	Site Tested	Recommendation	Chemical
White Shrimp	Turtle and Buffalo Rivers, Upriver of Georgia Hwy 303	No Restrictions	
Blue Crab, Red Drum, Spotted Seatrout		1 meal/week	PCBs, Mercury
Flounder		1 meal/week	PCBs
Southern Kingfish, Sheepshead		1 meal/month	PCBs, Mercury
Black Drum, Croaker, Spot		1 meal/month	PCBs
Striped Mullet		Do Not Eat	PCBs
Clams, Mussels, Oysters	Not applicable	Do Not Eat	Shellfish Ban *
* Shellfish Ban: National Shellfish Sanitation Program			

Middle Turtle River (St. Simons Estuary)*Satilla River Basin*

Species	Site Tested	Recommendation	Chemical
White Shrimp	State Hwy 303 to Channel Marker 9	No Restrictions	
Red Drum, Flounder		1 meal/week	PCBs, Mercury
Blue Crab, Atlantic Croaker, Black Drum, Spotted Seatrout, Southern Kingfish, Sheepshead		1 meal/month	PCBs, Mercury
Striped Mullet, Spot		Do Not Eat	PCBs
Clams, Mussels, Oysters	Not applicable	Do Not Eat	Shellfish Ban *
* Shellfish Ban: National Shellfish Sanitation Program			

Lower Turtle & South Brunswick Rivers (St. Simons Estuary) *Satilla River Basin*

Species	Site Tested	Recommendation	Chemical
White Shrimp, Flounder	Turtle River (From Channel Marker 9) and South Brunswick River (Downstream to Dubignon and Parsons Creeks)	No Restrictions	
Blue Crab		1 meal/week	Mercury
Black Drum, Red Drum, Sheepshead		1 meal/week	PCBs
Spotted Seatrout		1 meal/week	PCBs, Mercury
Atlantic Croaker, Striped Mullet, Spot		1 meal/month	PCBs
Southern Kingfish (whiting)		1 meal/month	PCBs, Mercury
Clams, Mussels, Oysters	Not applicable	Do Not Eat	Shellfish Ban *
* Shellfish Ban: National Shellfish Sanitation Program			

St. Simons Sound

Species	Site Tested	Recommendations	Chemical
Tripletail	Northern end of Jekyll Island	No Restrictions	

Savannah River Estuary*Savannah River Basin*

Species	Site Tested	Recommendations	Chemical
Striped Mullet	U.S. Hwy 17/SR 25	No Restrictions	

Savannah River Estuary*Savannah River Basin***(New Savannah Bluff Lock & Dam to Estuary, Chatham Co.)**

Species	Site Tested	Recommendations	Chemical
Striped Bass 27" and greater in length	Multiple locations, over section noted above	1 meal/month *	Mercury
* Because there is considerable variation in how much mercury these large predatory fish contain, people who are considered to be especially sensitive to the effects of mercury (pregnant women, nursing mothers and young children), may wish to limit their consumption further than listed above.			
Note: one population of striped bass migrates annually between the Savannah estuary and New Savannah Bluff Lock and Dam. Current minimum legal size is 27 inches.			

SPECIAL LISTINGS

Terry & Dupree Creeks & Back River to St. Simons Sound

(St. Simons Estuary)

Satilla River Basin

Location	Species	Recommendation	Chemical
Terry Creek South of Torras Causeway to Lanier Basin	Silver Perch (Yellowtail)	1 meal/week	PCBs, Mercury
	Blue Crab, Shrimp, Spot, Striped Mullet, Atlantic Croaker, Southern Kingfish (e.g. Ga. whiting), Spotted Seatrout	No Restrictions	
Terry & Dupree Creeks North of Torras Causeway to Confluence with Back River	Blue Crab, Shrimp	No Restrictions	
	Red Drum	1 meal/week	Toxaphene and related compounds
	Striped Mullet, Atlantic Croaker, Southern Kingfish, Spotted Seatrout	1 meal/month	
	Spot	Do Not Eat	
Back River 1 mi. above Terry Cr. to Confluence w/ Torras Causeway	Blue Crab, Shrimp, Striped Mullet, Atlantic Croaker, Southern Kingfish, Spotted Seatrout, Red Drum	No Restrictions	
	Spot	1 meal/month	Toxaphene and related compounds
Back River From Causeway to St. Simons Sound	Blue Crab, Shrimp, Spot, Striped Mullet, Southern Kingfish, Spotted Seatrout, Red Drum	No Restrictions	
	Atlantic Croaker	1 meal/week	Toxaphene and related compounds
Do Not Eat Clams, Mussels or Oysters; Shellfish Ban, Nat'l Shellfish Sanitation Program. For information see Coastal Resources Division website: http://crd.dnr.state.ga.us			

SPECIAL MERCURY GUIDANCE ON KING MACKEREL

On March 23, 2000, Georgia joined together with North Carolina, South Carolina and Florida in issuing a joint health advisory for the consumption of large king mackerel caught offshore in the South Atlantic Ocean that have been found to have high mercury concentrations. This advisory was issued to provide guidance on the safe consumption of king mackerel to the general public and sensitive populations such as pregnant women, nursing mothers and young children. It does not prevent fishermen from landing fish larger than 39 inches.

Georgia DNR officials began working with the other Southeast States to determine levels of mercury in king mackerel in 1998 after learning that Gulf Coast States initiated a similar program. Each State's findings documented consistent levels of mercury over a range of sizes with high levels found in large king mackerel. This is Georgia's first consumption advisory for ocean waters. The king mackerel is a migratory species with the Atlantic population ranging from South Florida through North Carolina and into the Mid-Atlantic.

King Mackerel: Atlantic Ocean Offshore Georgia Coast

Atlantic Ocean

Size Range (Fork Length = FL)	Recommendation
24 to Less than 33 inches	No Restrictions
33 to 39 inches (a 33 inch fish weighs approximately 10 pounds)	1 meal per month ** for pregnant women, nursing mothers and children age 12 and younger
	1 meal per week ** for other adults
Over 39 inches (approximately 15 to 17 pounds)	Do Not Eat
King Mackerel are measured in Fork Length (FL), which is from the tip of the snout to the fork of the tail. The minimum legal size in Georgia is 24 inches FL, with a maximum daily creel limit of 3 fish per person. Federally permitted commercial fishermen are limited to 3500 pounds per trip, and a minimum size of 24 inches FL. ** One meal portion in this special guidance is 8 ounces or 1/2 pound.	

King mackerel spawn along the continental shelf of the Atlantic Coast, rapidly growing to approximately 20 inches in length in the first year. Their diet consists almost exclusively of other fish. King mackerel typically have a maximum life span of 15 years, reaching approximately 4 feet in length and 25 to 30 pounds in weight. Most fish landed are considerably smaller. As a fast-growing, long-lived top predator, the king mackerel has a propensity for accumulating high levels of mercury.

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Reference No. 44
Macon Naval Ordnance Plant
EPA ID No. GAD003302676



LEGEND



SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

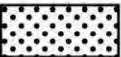
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.



FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.



OTHER FLOOD AREAS

- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.



OTHER AREAS

- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.



COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS



OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

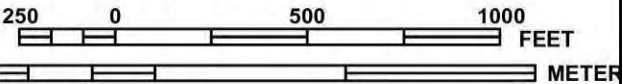
- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary



Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.



MAP SCALE 1" = 500'



PANEL 0144F

FIRM

FLOOD INSURANCE RATE MAP

**BIBB COUNTY,
GEORGIA
AND INCORPORATED AREAS**

PANEL 144 OF 265

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BIBB COUNTY	130500	0144	F
MACON, CITY OF	130011	0144	F

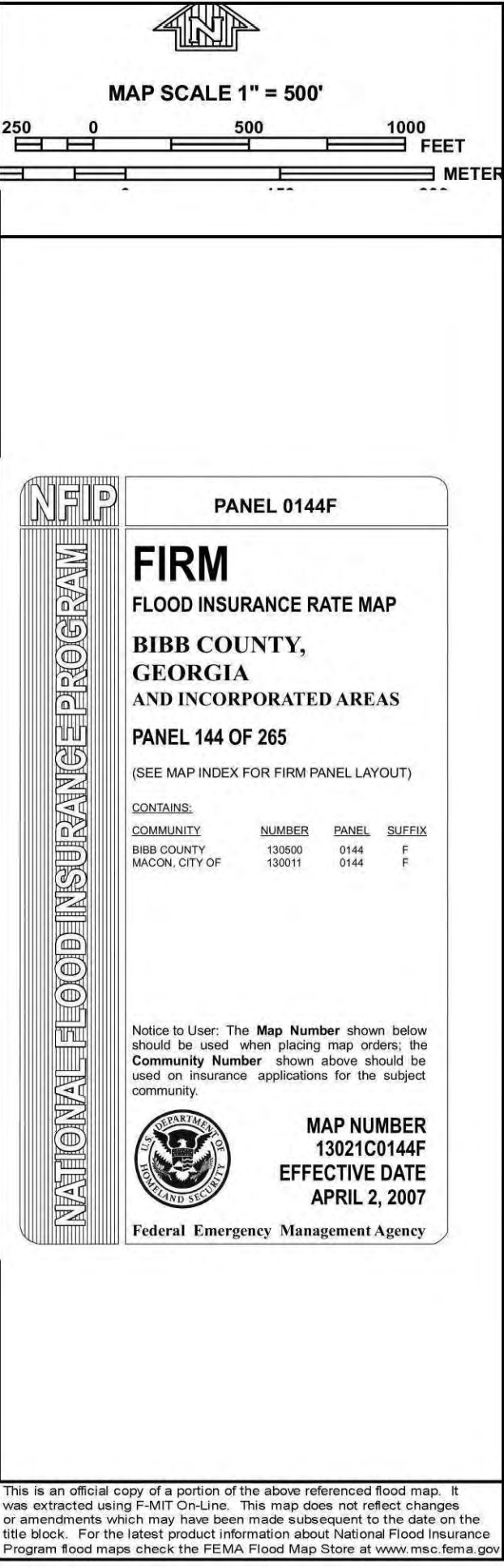
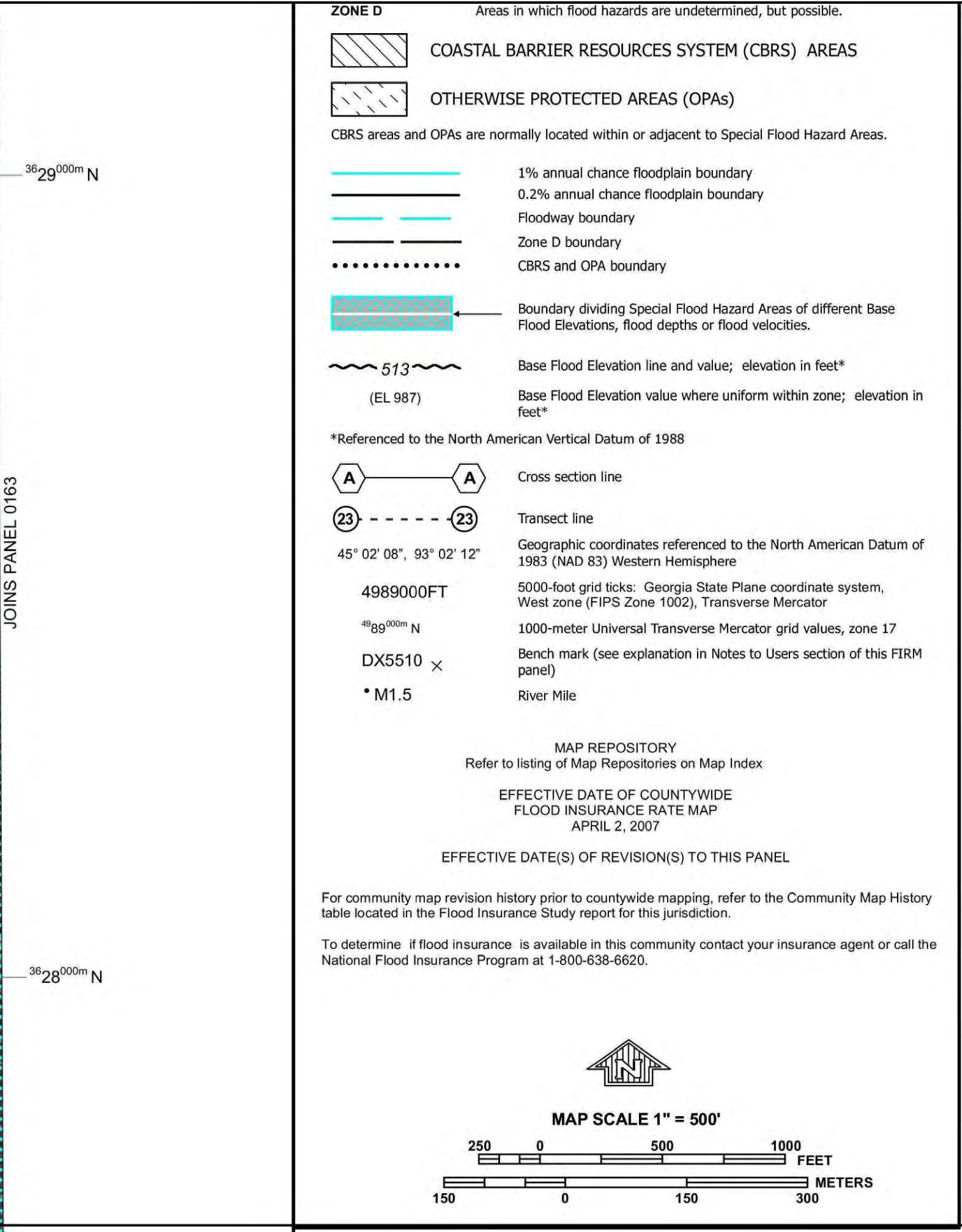
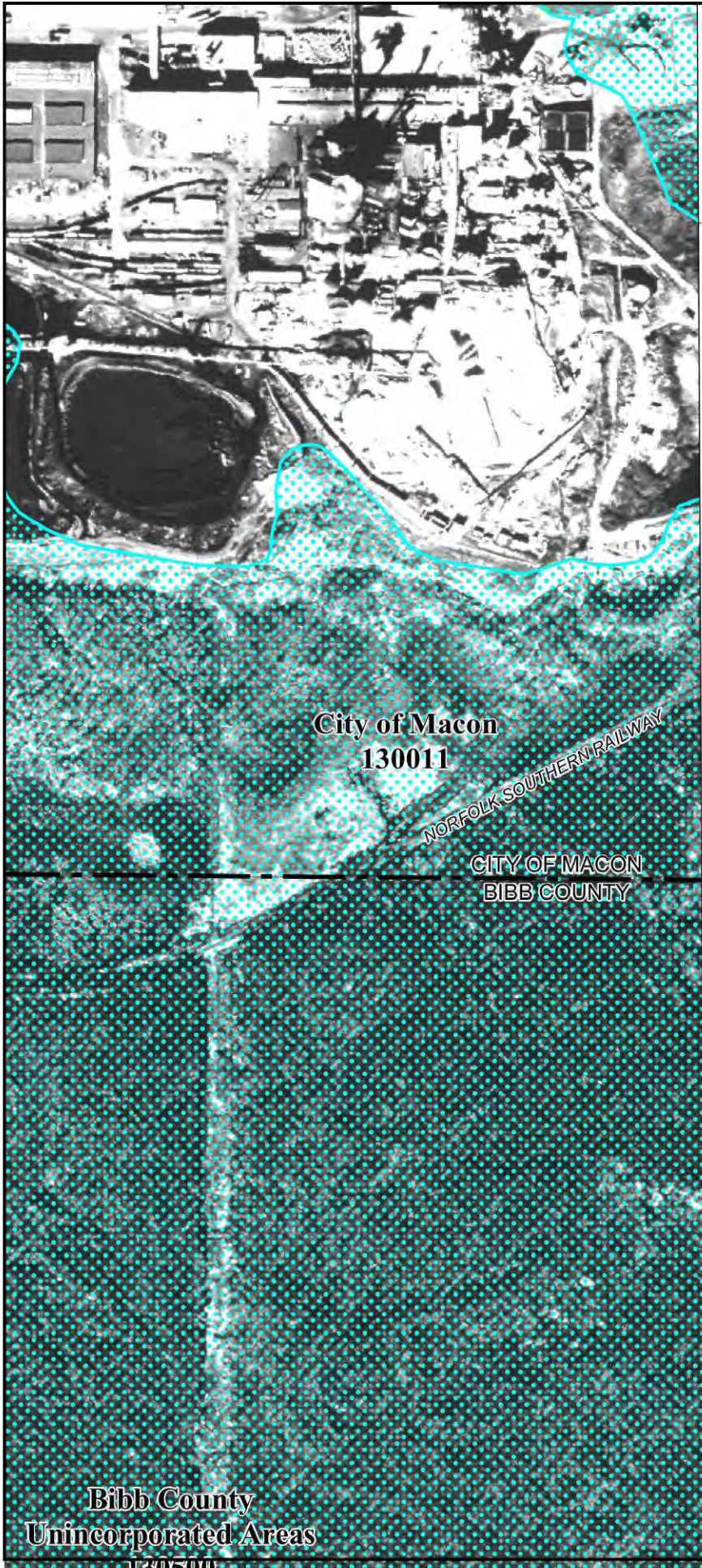
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



**MAP NUMBER
13021C0144F
EFFECTIVE DATE
APRIL 2, 2007**

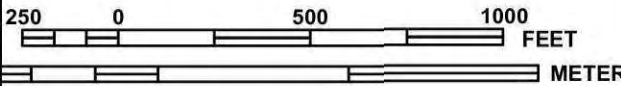
Federal Emergency Management Agency

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MAP SCALE 1" = 500'



NFIP

PANEL 0144F

FIRM
FLOOD INSURANCE RATE MAP
**BIBB COUNTY,
GEORGIA
AND INCORPORATED AREAS**
PANEL 144 OF 265

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BIBB COUNTY	130500	0144	F
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Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



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Federal Emergency Management Agency

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Operations

Water Reclamation Facilities

The Lower Poplar Street Water Reclamation Facility

The Lower Poplar Street Water Reclamation Facility (WRF) opened in 1959 to provide treatment for municipal and industrial waste within the service area that extends north of Macon along the Ocmulgee River, within Bibb County.

With an original wastewater treatment capacity of 12 million gallons of wastewater per day (MGD), the Authority has upgraded the Lower Poplar Street Plant with highly sophisticated processes that expanded its capacity to 20 MGD. Thus, the plant now features the most recent advances and innovations in wastewater treatment. A vehicle maintenance shop has been added to the Lower Poplar Street Facility to allow MWA personnel the capabilities to perform necessary maintenance for fleet vehicles and plant equipment.



The wastewater treatment process

The Lower Poplar Street WRF is an advanced secondary wastewater treatment facility utilizing a coupled filter tower/activated sludge process. The major treatment stages at the facility involve preliminary, primary, and secondary wastewater treatment, as well as sludge handling.

Preliminary treatment at Lower Poplar entails the removal of larger solids and grit out of the wastewater through a process involving four barscreens and two grit chambers. The barscreens remove solids from three-eighths of an inch and above. The grit chambers remove detritus material from the wastewater, such as sand, coffee grounds, etc. This material is abrasive to the equipment and will take up unnecessary room in the digestors if not removed at this stage. Material removed from the barscreens and grit chambers is disposed in a landfill.

During the primary treatment of wastewater, the flow is slowed down to allow solids to settle and be removed from the water and pumped as sludge to the digesters for further treatment through the use of two circular primary clarifiers, as well as additional, rectangular primary clarifiers.

After the wastewater leaves the primary clarifiers, it enters the secondary treatment

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stage. The MWA's advanced secondary treatment of wastewater utilizes two filter towers and four activated sludge aeration basins.

The filter tower/activated sludge process is an advanced biological secondary treatment system. This system utilizes microorganisms such as bacteria and protozoa, fungi and invertebrates, to produce an acceptable effluent quality by removing substances that have an oxygen demand. In doing so, the treated wastewater is safe and approved for disposal into the receiving stream, according to the provisions of the Authority's regulated permits for this form of direct discharge into a water body.

As for the sludge exiting the aeration basins, it is sent to three final clarifiers. In the final clarifiers, the sludge settles to the bottom and is collected and sent back to the head of the aeration basins to mix with the incoming wastewater. In order to keep the sludge fresh and the micro-organisms active, a portion of the sludge must be disposed on a regular basis.

The clean water from the final clarifiers flows over weirs and by gravity through the effluent flume to the chlorine contact chamber. At this stage, chlorine is added to kill any pathogenic organisms in the water. After enough contact time is given for sufficient kill in the chlorine contact chambers, the water is de-chlorinated by sodium bisulfate. The final treated water is then discharged to the river by the effluent pumps or by gravity.

Proper handling of biosolids

The waste sludge from the final clarifiers, along with the sludge from the primary clarifiers, is pumped to three gravity thickeners. The purpose of these gravity thickeners is to thicken the sludge in order to avoid excess water from entering the digesters.

The sludge from the gravity thickeners is pumped to two primary digesters. The primary digesters are part of an anaerobic digestion process, involving a biological treatment method in which organisms break down and reduce the organic material of the solids to methane, carbon dioxide and other gases, as well as water and inorganic solids that will further reduce decomposition upon its final disposal.

For proper digestion, the temperature in these digesters has to be maintained between 80 and 100 degrees Fahrenheit throughout the year. During this process, enough methane is produced and used as a fuel for the boiler to heat the sludge to the desired temperature. After proper digestion, the sludge is sent to three secondary digestors. The purpose of these secondary digesters is to separate any excess water from the sludge and hold it prior to sludge dewatering.

The sludge dewatering process consists of four belt filter presses. During this process, the liquid sludge is converted to a solid sludge by the belt filter presses. The solids from the belt filter presses are called biosolids.

The biosolids from the belt filter presses are trucked to the shed at the Rocky Creek Water Reclamation Facility. These solids from Lower Poplar are mixed with the Rocky Creek Plant's solids and sent to farm land throughout the surrounding area. Farmers benefit from the productive use of the nutrients in the solids. These solids are applied in a controlled manner and analyzed regularly for chemical and biological content.

[See more information on the MWA's Biosolids Recycling Program](#)

The Rocky Creek Water Reclamation Facility (WRF)

The Rocky Creek Water Reclamation Facility (WRF) provides wastewater treatment for the southern and western portions of the City of Macon and Bibb County. The facility was built in the early 1970's as a joint treatment facility with the Macon Kraft Company, now called Graphic Packaging, Inc.

The current design flow of the plant is for handling a monthly average of 24 million gallons of wastewater per day (MGD) or a weekly average of 30 MGD. The current treatment flow is approximately 18.5 MGD, with 7 to 9 MGD coming from the Graphic Packaging industrial site.

The Rocky Creek Plant is an advanced secondary wastewater treatment facility utilizing the extended aeration activated sludge process, followed by conventional filtration.



There are three separate flow streams conveying wastewater to the plant – the Graphic Packaging, Tobesofkee Creek and Rocky Creek sewer interceptor lines. Sewage from the Rocky Creek and Tobesofkee interceptors flow by gravity to the plant through two influent barscreens and then to the influent pumping station. The influent pumping station consists of four pumps that pump a total of 14 million gallons of wastewater per

day (MGD). The wastewater is then pumped through two grit structures whose purpose is to remove any sand or coarse debris.

The secondary treatment of wastewater at the Rocky Creek facility begins with its three aeration basins. The Graphic Packaging wastewater flows through two of those aeration basins, each with a 7 million gallon capacity. The Rocky Creek wastewater flows through the third basin, which can handle up to 14 million gallons.

Flow from the aeration basins is split between six circular final clarifiers. Three are used to handle the Graphic Packaging wastewater, and the other three take care of the Rocky Creek wastewater.

The effluent from the clarifiers is then sent to the post aeration/chlorine contact chambers where chlorine is added for disinfection purposes. A portion of the effluent is pumped to eight individual sand filters, where the treated wastewater is used for several purposes at the plant, including dewatering wash down, chlorine injection, etc.

After chlorine is added and allowed enough contact time for sufficient kill of pathogens, the effluent is de-chlorinated by chemical sodium bisulfate, prior to sending the water to the Ocmulgee River. The plant effluent flows by gravity to the river. The effluent pumping station serves the purpose of pumping the effluent when high river levels prevent gravity flow.

Waste sludge produced during the wastewater treatment process is pumped to three gravity thickeners. The purpose of the gravity thickeners is to enhance the thickness of the sludge prior to the dewatering process.

Scum from the surface of the final clarifiers is dewatered on the two scum screens and disposed of in a sanitary landfill. The thickened solids from the gravity thickeners are then routed to two holding tanks for storage.

The sludge from the holding tanks is pumped to eight belt filter presses. Polymer is added to the sludge to enhance flocculation. The liquid sludge is converted to a solid sludge by the belt filter presses. The solids from the belt filter presses are called biosolids.

These biosolids from the Rocky Creek Facility are placed under a shed and mixed with the solids that have come from the Lower Poplar WRF. Macon Soils is a subsidiary of the MWA that handles the final disposal of biosolids from the Authority's two wastewater treatment plants. Trucks from Macon Soils take the biosolids from the shed and apply it on the land of farmers in Bibb and surrounding counties. The farmers benefit from these biosolids because of their nutrient content.

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Reference No. 46
 Macon Naval Ordnance Plant
 EPA ID No. GAD003302676



Enforcement & Compliance History Online (ECHO)

You are here: [EPA Home](#) [Compliance and Enforcement](#) [ECHO](#) [Search Data](#) Search Results

Detailed Facility Report


[Report Error](#)
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For Public Release - Unrestricted Dissemination Report Generated on 11/01/2011
 US Environmental Protection Agency - Office of Enforcement and Compliance Assurance

Gray text in this report indicates information that is not required to be reported to EPA. These data, typically regarding non-major or smaller facilities, are often incomplete.

Facility Permits and Identifiers

[Data Dictionary](#)

Statute	System	Source ID	Facility Name	Street Address	City	State	Zip	
	FRS	110007498412	MACON-BIBB CNTY ROCKY CREEK WWTP	4705 MEAD ROAD	MACON	GA	31206	
CWA	ICP	GA0024546	MACON WATER AUTH (ROCKY CRK)	PO BOX 108	MACON	GA	31202	
RCRA	RCR	GAD991275892	MACON-BIBB CNTY ROCKY CREEK WWTP	MEADE RD	MACON	GA	31298	

Facility Characteristics

[Data Dictionary](#)

Statute	Source ID	Universe	Status	Areas	Permit Expiration Date	Latitude/ Longitude	Indian Country?	SIC Codes	NAICS Codes
	110007498412					LRT: 32.773912 , -83.634202	No		
CWA	GA0024546	Major; NPDES Individual Permit	EFF		12/31/2012	32.768639, -83.640611	No	4952	
RCRA	GAD991275892		Inactive				No	4212 4952	48411 22132

If the CWA permit is past its expiration date, this normally means that the permitting authority has not yet issued a new permit. In these situations, the expired permit is normally administratively extended and kept in effect until the new permit is issued.

Permit documents for NPDES permit GA0024546 are available online: [Final permit](#), [Fact sheet](#)

For the RCRA program, activities that contribute to an overall facility status of Active are displayed in parentheses using the acronym HPACS, where H indicates handler activities, P - permitting, A - corrective action, C - converter, and S - state-specific. More information is available in the Data Dictionary.

Inspection and Enforcement Summary Data

[Data Dictionary](#)

Statute	Source ID	Insp. Last 05Yrs	Date of Last Inspection	Formal Enf Act Last 05 Yrs	Penalties Last 05 Yrs	
CWA	GA0024546	3	04/29/2010	2	\$00	
RCRA	GAD991275892	0	Never	0	\$00	

Compliance Monitoring History (05 years)

[Data Dictionary](#)

Statute	Source ID	System	Inspection Type	Lead Agency	Date	Finding	
CWA	GA0024546	ICP	Reconnaissance without Sampling (ROS); NPDES - Base Program	State	07/10/2008		
CWA	GA0024546	ICP	Sampling (SA1); NPDES - Base Program	State	02/10/2009		
CWA	GA0024546	ICP	Evaluation (CEI); NPDES - Sanitary Sewer Overflow (SSO)	State	04/29/2010		

Entries in *italics* are not considered inspections in official counts.

Compliance Summary Data

[Data Dictionary](#)

Information on the nature of [alleged violations](#) is available on the FAQ page.

Statute	Source ID	Current SNC/HPV?	Description	Current As Of	Qtrs in NC (of 12)	
CWA	GA0024546	NO		Apr-Jun11	6	
RCRA	GAD991275892	No		09/12/2011	0	

Three Year Compliance Status by Quarter

[Data Dictionary](#)

Violations shown in a given quarter do not necessarily span the entire 3 months. Information on the nature of [alleged violations](#) is available on the FAQ page, and information on the duration of non-compliance is available at the end of this report.

CWA/NPDES Compliance Status													
Statute:Source ID		QTR1	QTR2	QTR3	QTR4	QTR5	QTR6	QTR7	QTR8	QTR9	QTR10	QTR11	QTR12
CWA:GA0024546		Jul-Sep08	Oct-Dec08	Jan-Mar09	Apr-Jun09	Jul-Sep09	Oct-Dec09	Jan-Mar10	Apr-Jun10	Jul-Sep10	Oct-Dec10	Jan-Mar11	Apr-Jun11
Non-compliance in Quarter		Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	No	No	Yes
SNC/RNC Status »													
Effluent Violations by NPDES Parameter:													
View effluent charts for all parameters: Only Charts with Violations All Charts Custom Output (or click on parameter names below for individual parameter charts)													
Discharge point:0B2													

Flow, in conduit or thru treatment plant	Mthly		2%	1%	11%		11%	3%					
	NMth				16%		9%						
Solids, suspended percent removal	Neither	47%											
Single Event Violations:													
WW SSO - Discharge to Waters													08/10/11

Effluent Violations are displayed as highest percentage by which the permit limit was exceeded for the quarter. **Bold, largeprint** indicates Significant Non-compliance (SNC) effluent violations. Shaded boxes indicate unresolved SNC violations.

RCRA Compliance Status													
Statute:Source ID		QTR1	QTR2	QTR3	QTR4	QTR5	QTR6	QTR7	QTR8	QTR9	QTR10	QTR11	QTR12
RCRA: GAD991275892		Oct-Dec08	Jan-Mar09	Apr-Jun09	Jul-Sep09	Oct-Dec09	Jan-Mar10	Apr-Jun10	Jul-Sep10	Oct-Dec10	Jan-Mar11	Apr-Jun11	Jul-Sep11
Facility Level Status													
Type of Violation	Agency												

The first date displayed for a RCRA Violation corresponds to the violation determination date, and the next to the resolution date (if the violation has been resolved).

Notices of Violation or Informal Enforcement - AFS, PCS, ICIS-NPDES, RCRAInfo (05 year history)

[Data Dictionary](#)

Statute	Source ID	Type of Action	Lead Agency	Date	
- No data records returned.					

Formal Enforcement Actions - (05 year history)

AFS, PCS, RCRAInfo, NCDB

[Data Dictionary](#)

Statute	Source ID	Type of Action	Lead Agency	Date	Penalty	Penalty Description	
- No data records returned.							

In some cases, formal enforcement actions may be entered both at the initiation and final stages of the action. These may appear more than once above. Entries in *italics* are not "formal" actions under the PCS definitions but are either the initiation of an action or penalties assessed as a result of a previous action. This section includes US EPA and State formal enforcement actions under CAA, CWA and RCRA.

ICIS

[Data Dictionary](#)

Primary Law/Section	Case Number	Case Type	Lead Agency	Case Name	Issued/Filed Date	Settlement Date	Federal Penalty	State/Local Penalty	SEP Cost	Comp Action Cost
CWA / §OTHER	GA-CMON	Administrative - Formal	State	MACON WATER AUTH. 2P's Administrative Consent Order-CMON - W†	12/18/2007	12/18/2007				

CWA / §OTHER	GA-01/23/2009 STIP	Judicial	State	MACON WATER AUTH P2s CMON STIP - WQ 4819 †	01/23/2009			\$2,200			
CWA / §OTHER	GA-CMON WQ 4819	Judicial	State	MACON WATER AUTH (2Ps) STIP pd WQ 4819 †	07/23/2009			\$8,800			
CWA / §OTHER	GA-EPD-WQ-5218	Administrative - Formal	State	MACON CO WATER AUTH (GA0024538 & GA0024546) †	08/30/2010	08/30/2010					

Federal enforcement actions and penalties shown in this section are from the Integrated Compliance Information System (ICIS-FE&C). These actions may duplicate records in the Formal Enforcement Actions section.

† This enforcement case involves more than one facility. Penalties, SEP Cost, and complying action cost apply to the case as a whole and not just to this facility. Click on the Case Number for more information.

Environmental Conditions

[Data Dictionary](#)

Permit ID	Watershed	Watershed Name	Receiving Waters	Impaired Waters?	Combined Sewer System?	
GA0024546	0316		OCMULGEE RIVER BASIN	TMDL	No	

TRI History of Reported Chemicals Released in Pounds per Year at Site:

[Data Dictionary](#)

Year /	Total Air Emissions	Surface Water Discharges	Underground Injections	Releases to Land	Total On-site Releases	Total Off-site Transfers	Total Releases and Transfers
- No data records returned.							

TRI Total Releases and Transfers by Chemical and Year

Chemical Name	-8	-7	-6	-5	-4	-3	-2	-1	0	
- No data records returned.										

Demographic Profile of Surrounding Area (3 Miles)

[Data Dictionary](#)

Open more detailed information in a new window (links leave ECHO): [1 Mi](#) [3 Mi](#) or [5 Mi](#).

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2000 US Census data, and are accurate to the extent that the facility latitude and longitude listed below are correct. The latitude and longitude are obtained from the EPA [Locational Reference Table\(LRT\)](#) when available.

Radius of Area:	3 Miles	Land Area:	98.90%	Households in area:	5,098
Center Latitude:	32.768639	Water Area:	1.10%	Housing units in area:	5,999
Center Longitude:	-83.640611	Population Density:	494.03/sq. mi.	Households On Public Assistance:	363
Total Persons:	13,813	Percent Minority:	55.04%	Persons Below Poverty Level:	4,208

Race Breakdown	Persons (%)	Age Breakdown:	Persons (%)
----------------	-------------	----------------	-------------

White:	6,262 (45.33%)	Child 5 years and less:	1,525 (11.04%)
African-american:	7,176 (51.95%)	Minors 17 years and younger:	4,312 (31.22%)
Hispanic-Origin:	167 (1.21%)	Adults 18 years and older:	9,501 (68.78%)
Asian/Pacific Islander:	70 (0.51%)	Seniors 65 years and older:	1,715 (12.42%)
American Indian:	21 (0.15%)		
Other/Multiracial:	58 (0.42%)		

Education Level (Persons 25 & older)	Persons (%)	Income Breakdown:	Households (%)
Less than 9th grade:	772 (10.06%)	Less than \$15,000:	1,702 (33.39%)
9th-12th grades:	1,858 (24.22%)	\$15,000-\$25,000:	881 (17.28%)
High School Diploma:	3,087 (40.24%)	\$25,000-\$50,000:	1,311 (25.72%)
Some College/2-yr:	1,431 (18.65%)	\$50,000-\$75,000:	687 (13.48%)
B.S./B.A. or more:	523 (6.82%)	Greater than \$75,000:	448 (8.79%)

Notice About Duration of Violations -- The duration of violations shown on this report is an estimate of the actual duration of the violations that might be alleged or later determined in a legal proceeding. For example, the start date of the violation as shown in the ECHO database is normally when the government first became aware of the violation, not the first date that the violation occurred, and the facility may have corrected the violation before the end date shown. In some situations, violations may have been corrected by the facility, but EPA or the State has not verified the correction of these violations. In other situations, EPA does not remove the violation flag until an enforcement action has been resolved.



This report was generated by the Integrated Data for Enforcement Analysis (IDEA) system, which updates its information from program databases monthly. The data were last updated: RCRAInfo: 09/12/2011. FRS: 09/08/2011. ICIS: 09/09/2011.

Some regulated facilities have expressed an interest in explaining data shown in the Detailed Facility Reports in ECHO. Please check company web sites for such explanations.

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-This is searching PCS and ICIS-NPDES (all states).



Get Effluent Data (Water Program)


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Select a Permit

 Permit ID: (NPDES ID—9 characters)

[update form](#)

Facility data (display only:)

Permit ID

Database

Address

Status

Designation

Ownership

Select Charts

[Search](#)
☐ All

☒ Charts with violations

Selections for GA0024546

 Discharge points ☒ All

☒ 001

☒ 00B

☒ 0B0

☒ 0B2

 Parameters ☒ All

☒ BOD, 5-day, 20 deg. C

☒ BOD, 5-day, percent removal

☒ Chlorine, total residual

☒ Coliform, fecal general

☒ Flow, in conduit or thru treatment plant

☒ Nitrogen, ammonia total (as N)

☒ Oxygen, dissolved (DO)

☒ PCB-1016

☒ PCB-1221

☒ PCB-1232

☒ PCB-1242

☒ PCB-1248

☒ PCB-1254

☒ PCB-1260

☒ pH

	<input checked="" type="checkbox"/> Phosphorus, total (as P)
	<input checked="" type="checkbox"/> Solids, sludge, tot, dry weight
	<input checked="" type="checkbox"/> Solids, suspended percent removal
	<input checked="" type="checkbox"/> Solids, total suspended
Monitoring locations	<input type="checkbox"/> All
	<input checked="" type="checkbox"/> Effluents only
	<input checked="" type="checkbox"/> Effluent gross
	<input type="checkbox"/> Other - no description available
	<input type="checkbox"/> Percent removal
	<input type="checkbox"/> Raw sewage influent
Outfall types	<input type="checkbox"/> All
	<input checked="" type="checkbox"/> Effluents only
	<input checked="" type="checkbox"/> External outfall
Sampling periods	<input checked="" type="checkbox"/> All
	<input checked="" type="checkbox"/> Monthly

Select Dates

From Jul 2008 to Jun 2011

Effluent data	PCS:	Jan 2008	–	Jun 2011
available:	ICIS-NPDES:	Jul 2006	–	Jun 2011

Get the Data

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Last updated on Tuesday, November 01, 2011

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Macon Naval Ordnance Plant

Macon Water Authority
Rocky Creek Water
Reclamation Facility

32.768639, -83.640611

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Imagery Date: 10/6/2010 1993

32°46'12.86" N 83°38'37.11" W elev 306 ft

Eye alt 6296 ft

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Docket Folder Summary

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National Priorities List, Notice of Proposed Rulemaking - Armstrong World Industries

Docket ID: EPA-HQ-SFUND-2010-0640 Agency: EPA RIN:Not Assigned

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Document Type

☐ Public Submission (2) ☐ Other ☐ Supporting & Related Material ☐ Notice ☐ Rule ☐ Proposed Rule

7 Items in the Docket Folder

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Title	Document Type	Submitter Name	Organization	ID	Posted Date	View As
Letter to A. Stanley Meiburg, Acting Regional Administrator, Region 4,USEPA, from F. Allen Barnes, Director, Georgia Department of Natural Resources	Supporting & Related Material			EPA-HQ-SFUND-2010-0640-0004	10/21/2010	PDF
National Priorities List	Rule			EPA-HQ-SFUND-2010-0640-0007	09/16/2011	PDF HTML
Narrative Summary - Armstrong World Industries (September 2011)	Supporting & Related Material			EPA-HQ-SFUND-2010-0640-0009	09/27/2011	PDF
Support Document - Armstrong World Industries (September 2011)	Supporting & Related Material			EPA-HQ-SFUND-2010-0640-0008	09/27/2011	PDF
Narrative Summary: Armstrong World Industries, Macon, Georgia	Supporting & Related Material			EPA-HQ-SFUND-2010-0640-0003	10/21/2010	PDF
HRS Documentation Record: Armstrong World Industries, EPA ID No. GAN000410033	Supporting & Related Material			EPA-HQ-SFUND-2010-0640-0002	10/21/2010	PDF
National Priorities List; Proposed Rule No. 53	Proposed Rule			EPA-HQ-SFUND-2010-0640-0001	10/21/2010	PDF HTML

Comments Due Dec 20, 2010 11:59 PM ET

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