

#### 4.0 PEOPLE AND THE ALABAMA RIVER BASIN

---

*“Since the days of the settlers, the state of Alabama has relied on its stature of having more navigable waterways than any other state in the Union for transportation of products and passengers. While the importance of these waterways grew, the treatment of them declined as citizens cleared land to grow crops and developed cities. In the early 1900s the Alabama Power Company began building dams on the Coosa and Tallapoosa Rivers, bringing electricity to thousands. Entire species began to die, and new ones replaced them. During the second half of the twentieth century dams were built with locks on the lower Alabama and Tombigbee Rivers, and the Tennessee-Tombigbee waterway was completed. Along with navigation improvements to the Black Warrior River, these developments gave Alabama roughly 1,438 miles of navigable channels, still the most in the United States. Industrial and municipal pollution is still a threat and agricultural runoff remains a major problem. As the population grows, keeping the rivers clean and productive remains a challenge.”*

- From ‘Alabama’s Rivers’ (Alabama Department of Archives and History)

#### 4.1 Population in the Basin

The estimated population within the Alabama River basin based on 2000 U.S. Census data is 350,211 people. Major population centers like Montgomery, Selma and Monroeville are located in the basin. Table 2.8 exhibits the population in each county, along with median household income. On average, the median household income in the Alabama River Basin was \$28,452.

Table 4.1. Population Data and Median Income for the Alabama River Basin

County	Total Population	Estimated Population within Watershed	Percent Change since 1990	Median Household Income
Autauga	43,671	42,702	27.61%	\$42,013
Baldwin	140,415	13,494	42.87%	\$40,250
Butler	21,399	4,232	-2.25%	\$24,791
Chilton	39,593	14,950	21.98%	\$32,588
Clarke	27,867	6,912	2.30%	\$27,388
Crenshaw	13,665	622	0.22%	\$26,054
Dallas	46,365	41,379	-3.67%	\$23,370
Elmore	65,874	11,776	33.86%	\$41,243
Escambia	38,440	1,938	8.23%	\$28,319
Lowndes	13,473	13,056	6.44%	\$23,050
Marengo	22,539	3,141	-2.36%	\$27,025

<b>County</b>	<b>Total Population</b>	<b>Estimated Population within Watershed</b>	<b>Percent Change since 1990</b>	<b>Median Household Income</b>
Monroe	24,324	21,989	1.49%	\$29,093
Montgomery	223,510	157,265	6.90%	\$35,962
Perry	11,861	3,251	-7.04%	\$20,200
Wilcox	13,183	13,173	-2.84%	\$16,646

1 Population estimates were made by calculating the percentage of each county falling within the watershed boundary. The percentage area was used to estimate the proportion of the population within the watershed. These estimates assume an even distribution of people across each county and do not take into consideration population centers. Bullock and Conecuh counties were removed because they represent a very small portion of the watershed.

U.S. Census population projections for Alabama show that the state’s population will steadily increase from 4.47 million in 2000 to over 5.2 million in 2025. The greater proportion of this population increase will occur in the proximity of the major population centers of Birmingham, Huntsville, Mobile, Montgomery and Tuscaloosa as people move to these cities from out of state and other parts of Alabama. Whereas, the rural areas of Alabama are experiencing losses in population, many of these urban centers, and particularly their suburbs, are witnessing significant population increases.<sup>26</sup> As a result, urban sprawl is a phenomenon now in effect as population growth spurs residential growth outside of historic city centers.

An indicator of this growth and sprawl - home sales and home construction data - suggests that residential development continues to boom in these areas. In fact, Birmingham, Huntsville, Mobile, Montgomery, Baldwin County and Tuscaloosa rank the highest in terms of the periodic number of homes listed, sold and constructed (U.S. Census, 2004; AREREC, 2004). New homes equates to more land utilized for development and less for agricultural and other productive uses. Map 3 – Current Land Use - provides a graphical representation of the population centers and other land uses in the Alabama River Basin in 1990. Unfortunately, no current land use information is available for the entire basin to make a comparison.

---

<sup>26</sup> See ‘Metro areas see growth at edges’ by Haya El Nasser and Paul Overberg. USA TODAY, Posted 4/14/2005 6:18 PM, Updated 4/15/2005 10:50 AM ([http://www.usatoday.com/news/nation/2005-04-14-fastest-growing-county\\_x.htm](http://www.usatoday.com/news/nation/2005-04-14-fastest-growing-county_x.htm))

## 4.2 The Economy of the Alabama River Basin

This section will discuss some of the primary economic characteristics and statistics for the Alabama River Basin. Employment figures from the U.S. Census are presented below and in Appendix B. An overview of major natural resource-based industries is also provided. A brief description of the Black Belt Region is given due to the fact that this area of the basin is the focal point of recent concern.

### 4.2.1 Employment

The 2000 U.S. Census reported that an estimated 141,295 out of 350,211 (40%) people living in the Alabama River basin described themselves as employed. A breakdown of the industries employing these people by county is provided in Appendix B. The category with the largest number of employees in the basin is ‘education, health, and social studies’ followed by ‘manufacturing and construction.’ The category with the least amount of employees, out of thirteen, is the category including agriculture, forestry, fishing, hunting, and mining. It is worth noting that, although the number of people employed by these industrial sectors may be less than other ones, the gross land area supporting forestry and agriculture, in particular, far exceeds other industrial sectors.



- A Pulp and Paper Plant rises over the Alabama River

### 4.2.2 Major Natural-Resource-based Industries

#### *Forestry*

Forestry is by far Alabama’s largest industry. Compared to the rest of the Nation, Alabama boasts the second largest commercial forest with over two-thirds of the state

(22.9 million acres) forested. In fact, Alabama’s forestland covers more acres than the size of Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, and Rhode Island combined. It is estimated that 71% of these forested lands are owned by private, non-industrial land owners. Forestry generates approximately \$13 billion for Alabama each year and employs approximately 10% of the State’s total work force.

The Alabama River Basin is approximately 67% percent forested with over 2.5 million acres of forestland. Many of these acres are privately owned (71%) and actively managed for a variety of uses. Statistics from the Alabama Forestry Commission provide a more detailed understanding on how much forest is being harvested, for which purpose and in which counties. Clarke, Butler and Escambia Counties are the top three areas in terms of the average volume of trees removed per year. Please refer to Table 4.3a below for more detail.

Table 4.3a – Summary Forest Statistics for the Alabama River Basin

<b>Average Annual Removals of Live Trees for Selected Counties within the Alabama River Basin</b>		<b>Wood Use Percentages for Selected Counties within the Alabama River Basin</b>			
<b>County</b>	<b>Million Cubic Feet</b>	<b>County</b>	<b>Lumber</b>	<b>Pulp</b>	<b>Poles &amp; Pilings</b>
Autauga	21.1	Autauga	19%	81%	0%
Butler	54.3	Butler	37%	63%	0%
Chilton	23.6	Chilton	38%	62%	0%
Clarke	60.4	Clarke	46%	51%	3%
Conecuh	38.1	Conecuh	29%	70%	1%
Crenshaw	26.9	Crenshaw	35%	64%	1%
Dallas	24.5	Dallas	36%	64%	0%
Elmore	11.1	Elmore	28%	72%	0%
Escambia	37.2	Escambia	25%	71%	4%
Lowndes	19.8	Lowndes	27%	73%	0%
Marengo	24.9	Marengo	53%	46%	1%
Monroe	36.4	Monroe	37%	62%	1%
Montgomery	11.9	Montgomery	17%	83%	0%
Perry	25.6	Perry	38%	62%	0%
Wilcox	35.4	Wilcox	41%	57%	2%
<b>Note:</b> Data obtained from the 2000 Forest Inventory and Analysis (FIA) statistics.		<b>Note:</b> Data derived from the 2002 Forest Resource Report compiled by the Alabama Forestry Commission. Statistics are for the year 2002 only.			

## Agriculture



*-Field of Peanut Plants*

Between the years 2003-2004, the total statewide farm and forestry receipts were over \$4.54 billion. The top five farm commodities for cash receipts were (1) poultry (63%), (2) cattle and calves, (3) greenhouse, sod, and nursery products, (4) cotton, and (5) peanuts (Alabama Agricultural Statistics Service, 2004).

Together, these five commodities comprise 90% of the total commodity receipts. Within the Alabama River

Basin several counties are within the top ten leading producers of these commodities: 1) Lowndes (peanuts) 2) Monroe (peanuts and cotton) 3) Montgomery (cattle).

Table 4.3b – Summary Agricultural Statistics for Selected Counties within the Alabama River Basin

<b>County</b>	<b>Population*</b>	<b>Land Area within watershed (sq.mi)</b>	<b>Number of Farms (1997)</b>	<b>Average Farm Size (Acres)</b>
Autauga	44,876	591.03	348	301
Baldwin	145,799	159.00	977	169
Butler	21,147	153.86	440	221
Chilton	39,995	264.61	663	149
Clarke	27,776	310.68	248	248
Crenshaw	13,725	27.80	488	265
Dallas	46,029	886.56	435	572
Elmore	67,461	117.48	560	222
Escambia	38,181	48.04	380	229
Lowndes	13,418	702.59	330	524
Marengo	22,367	934.81	464	428
Monroe	24,177	562.73	422	319
Montgomery	221,973	562.73	654	368
Perry	11,676	198.45	340	425
Wilcox	13,130	906.77	248	621

\*U.S. Census Bureau, 2000

## *Aquaculture - Catfish*

Catfish farming is a major source of income in Central Alabama. Several of the top ranking counties in terms of annual production are located the Alabama River Basin: Dallas (#2), Perry (#4), Montgomery (#8), and Wilcox (#13).<sup>27</sup> Total annual sales reached a peak for the entire state in 2003, at \$85.2 million with 200 operations and a total water surface area dedicated to the crop of 25,400 acres. Water surface area increased from 22,100 acres with 260 operations in 2000, to 25,400 acres with 200 operations in 2004. Despite the decrease in total catfish farming operations the total annual sales have increased by over 1,174% between 2000-2003 (Alabama Agricultural Statistics Service, 2004).



- Catfish farm ponds

### **4.2.3 The “Black Belt” Region**

As described earlier in Section 3.8.1 of this plan, there exists a large swath of Central Alabama known for its dark rich soils and primarily agricultural economy and communities. Alabama's Black Belt consists of the counties of Pickens, Sumter, Choctaw, Greene, Hale, Marengo, Perry, Dallas, Wilcox, Lowndes, Macon, and Bullock. This region is characterized sociologically as experiencing severe social and economic hardships. According to the 2000 U.S. Census, the counties contain some of the lowest scoring school systems, high rates of poverty, illiteracy and infant mortality. In addition, the communities in these areas are among the 100 poorest counties in the United States, with poverty rates ranking in the poorest 13 percent of counties nationally.<sup>28</sup> A combination of these factors has resulted in the general opinion that this region is the

---

<sup>27</sup> Number indicates state ranking.

<sup>28</sup> Executive Order Number 22, August 11, 2004. Governor of the State of Alabama Bob Riley. Governor's Commission for Action in Alabama's Black Belt. <http://64.124.237.54/EO.asp>

most economically depressed area in Alabama, a situation that is thought to be attributable to poorly developed infrastructure and sparse economic opportunities.

The depressed quality of life in this region is interdependent with the general quality of the regional environment. Poorly developed infrastructure and sparse economic opportunities in the Black Belt suggest that protective measures are not being taken to ensure clean water and air for its residents. For instance, the absence of adequate storm water management and effective wastewater treatment systems greatly increases the likelihood of contaminated ground and surface water supplies for domestic, commercial and recreational uses. Environmental conditions such as these, tied with depressed socio-economic conditions, lead to a general perception that this region is subject to a disproportionate share of negative environmental harms that ultimately perpetuates a vicious cycle of poverty and poor public health.

In general, the state of the *natural* environment in the Black Belt is not well-understood. Other than the State's 303d List of Impaired Waters, there is very little information regarding water quality of this region. ADEM plans to conduct water quality assessments throughout the Alabama River Basin this year, which will include this region. Also, some information on the state of water supply and wastewater management is available through the West Alabama Regional Commission in its *Comprehensive Economic Development Strategy* but this region is mostly outside of the Alabama River Basin to the northwest. Regional planning documents for the basin did not contain water quality-related information. However, the information from the West Alabama plan would suggest that similar conditions would be found in other parts of the Black Belt and should be investigated.

#### **4.3 Political jurisdictions and Governmental Agencies in the Alabama River Basin**

The Alabama River flows through 18 counties in the state. These counties are listed in Table 4.2. below. The percent area of the Alabama River Basin within each county was calculated for illustrative purposes.

Table 4.2. Proportion of the Alabama River Basin in each County

County	% of Watershed in County	County	% of Watershed in County
Autauga	9.83%	Escambia	0.80%
Baldwin	2.64%	Lowndes	11.69%
Butler	2.56%	Marengo	2.28%
Chilton	4.40%	Monroe	15.55%
Clarke	5.17%	Montgomery	9.36%
Crenshaw	0.46%	Perry	3.30%
Dallas	14.75%	Wilcox	15.08%
Elmore	1.95%		

### 4.3.1 Regional Authorities

Alabama is divided into twelve regions that have a planning commission or council established to coordinate region-wide projects, promote cooperation among local governments and to carry out state and federal programs on a regional basis. Each of the regions produces a strategic plan for economic and community development that serves to guide certain activities in these regions.<sup>29</sup> The Alabama Association of Regional Councils (AARC) is the umbrella group that coordinates its twelve members and promotes cooperation among them.

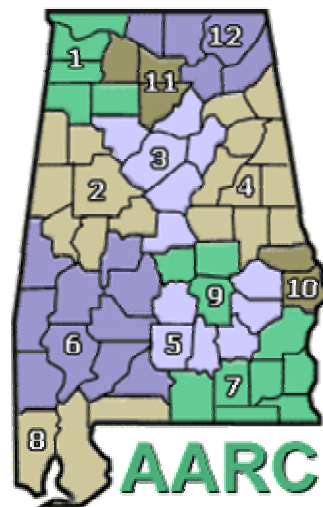


Figure 4.3 – Regional Planning Councils of Alabama (Image credit to AARC, 2005)

The greater proportion of the Alabama River Basin includes the following commissions: Alabama-Tombigbee Regional Commission (Region 6), the South Central Alabama Development Commission (Region 5), and the Central Alabama Regional Planning and Development Commission (Region 9).

<sup>29</sup> A review of the plans for the regional planning councils corresponding to the Alabama River Basin found that they do not focus on environmental issues to any extent. The websites for each region and their plans can be readily accessed through the AARC website (<http://www.alarc.org/>).

### **4.3.2 State and Federal Organizations**

Numerous federal and state agencies have jurisdiction over natural resources within the Alabama River Basin. Many, if not all, of them are involved in the Alabama Clean Water Partnership in some way. Some of the primary state and federal agencies are mentioned here. On the federal level there are, U.S. Environmental Protection Agency; several arms of the U.S. Department of Agriculture, including the Natural Resource Conservation Service; U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and the U.S. Geological Survey. Of the state agencies, the following are of major importance to this planning effort: Alabama Department of Environmental Management, Alabama Department of Conservation and Natural Resources, Alabama Department of Economic and Community Affairs, Alabama Forestry Commission, Geological Survey of Alabama, and the Alabama Soil and Water Conservation Committee.