

USDA-CSREES

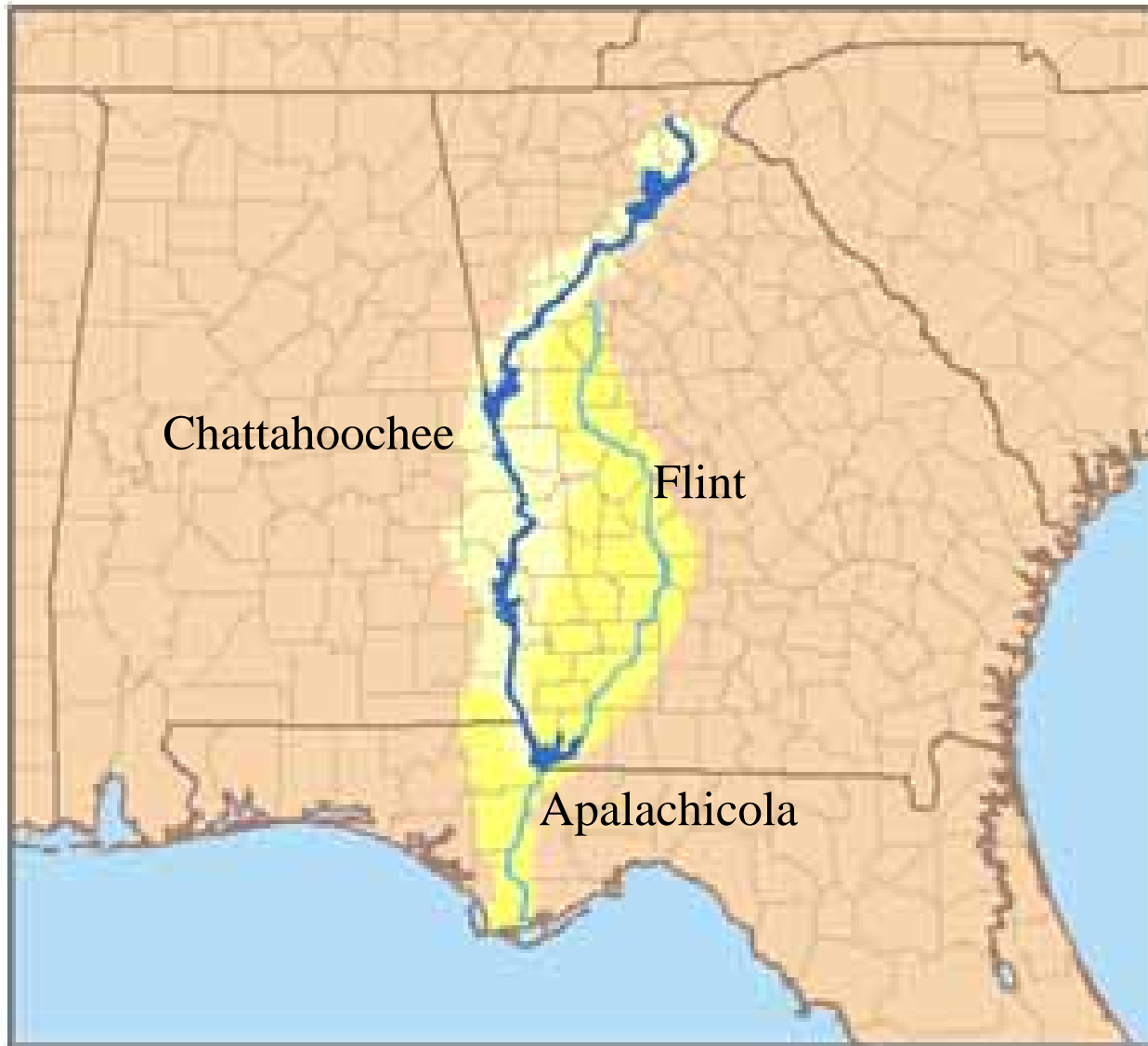
National Water Conference

Millennium Hotel
St. Louis, MO
February 8-12, 2009



ACF Water War: Focus on Agriculture

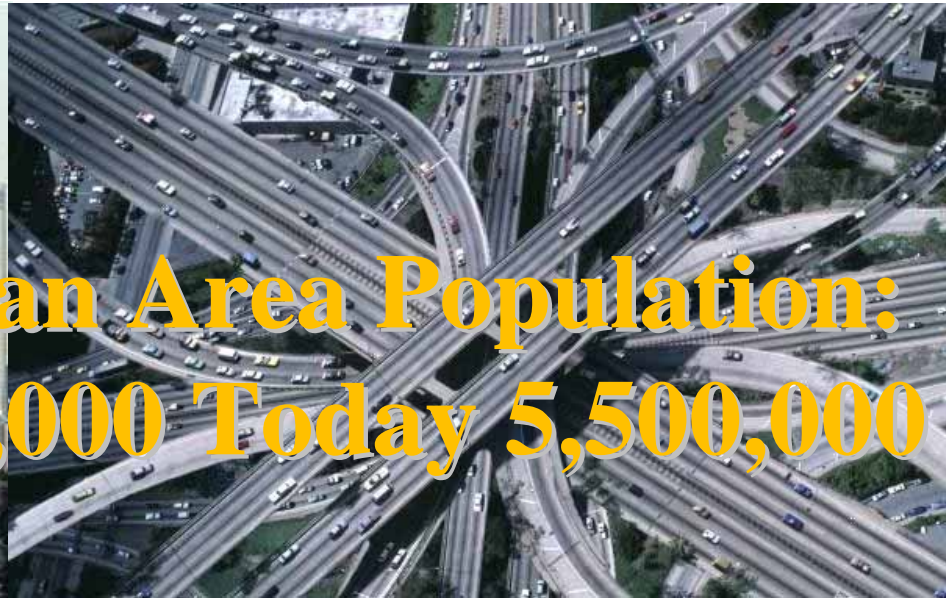
ACF



ACF Statistics

- **Apalachicola Basin** 2600 sq. miles
- **Chattahoochee Basin** 8770 sq. miles
- **Flint Basin** 8460 sq. miles
- **Total Area** 19830 sq. miles
- **Alabama** 2830 sq. miles
- **Florida** 2600 sq. miles
- **Georgia** 14400 sq. miles

Atlanta's Ever Increasing Thirst



Metropolitan Area Population:
1960 1,575,000 Today 5,500,000

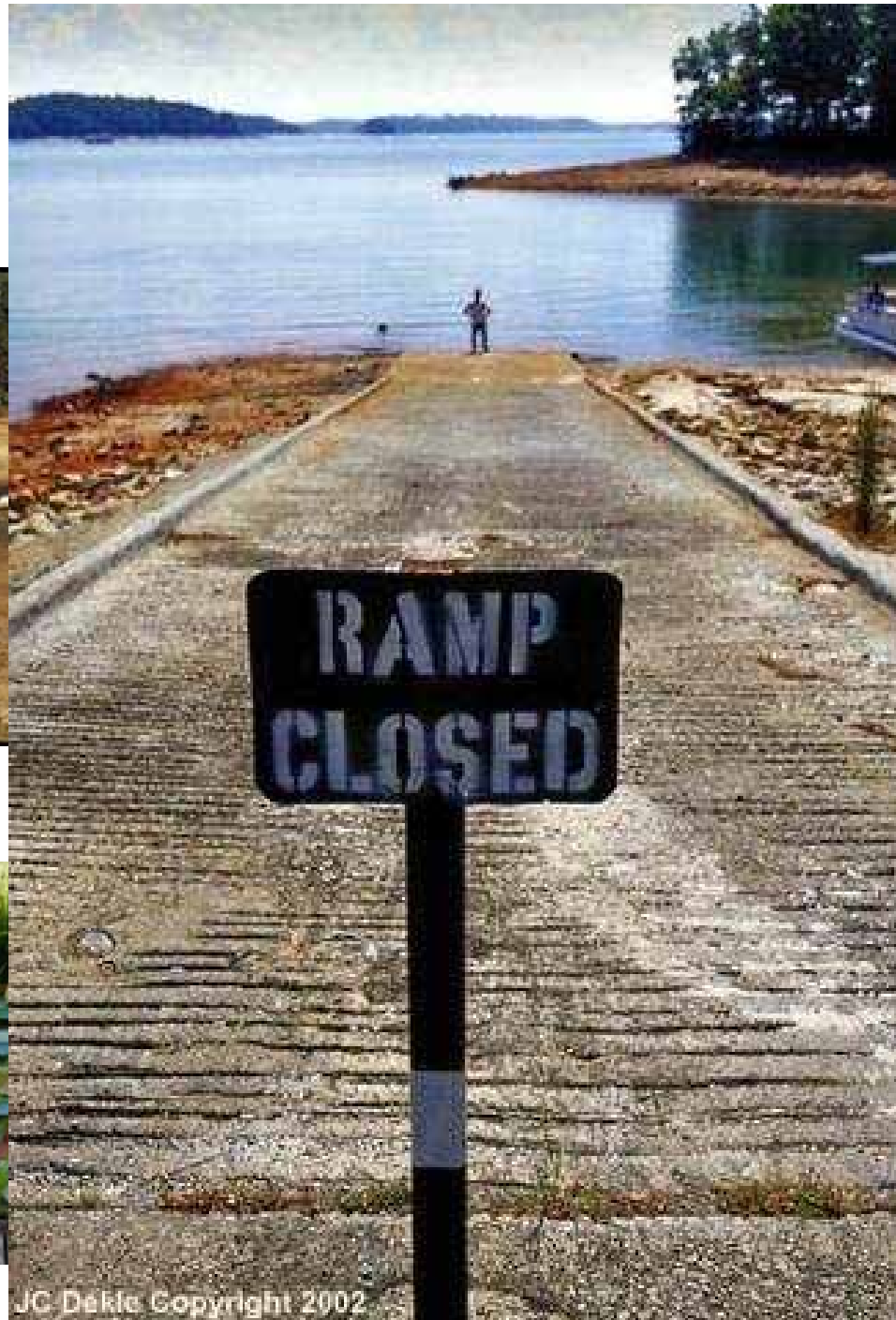


The Atlanta Metropolitan Statistical Area (MSA)

This map represents the expanded Atlanta Metropolitan Statistical Area (MSA) from its previous 20-county area to a 28-county "Atlanta-Sandy Springs-Marietta" MSA. The U.S. Office of Management and Budget (OMB) defines MSAs and the smaller micropolitan statistical areas nationwide according to published standards applied to U.S. Census Bureau data. These various statistical areas describe substantial core areas of population together with adjacent communities having a high degree of economic and social integration, often illustrated in high rates of commuting from the adjacent areas to job locations in the core. For more information, please consult <http://www.census.gov/population/www/estimates/metrodef.html>.

Focus

Lanier

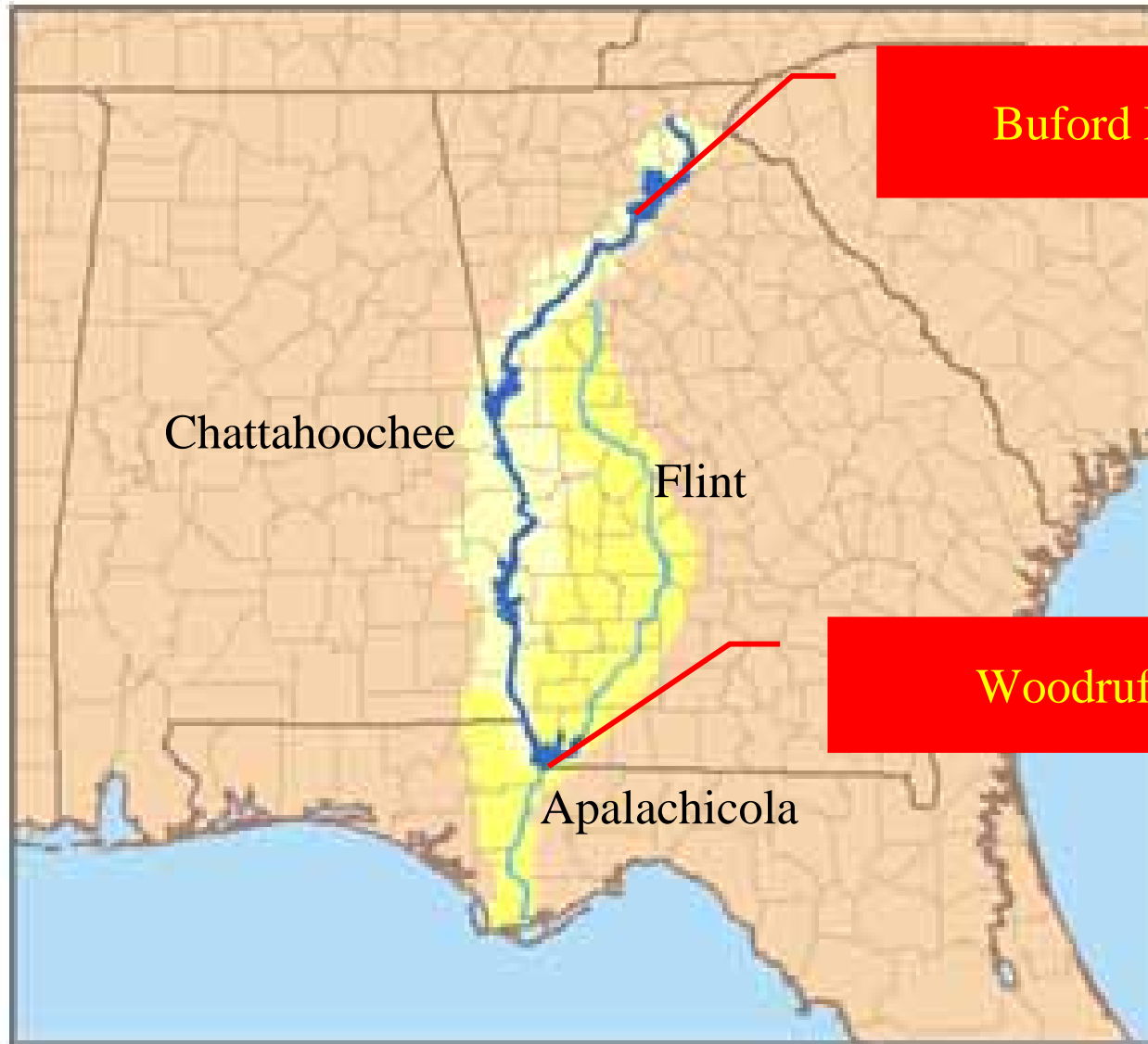


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So is Atlanta really the problem?

- There are 1040 sq. miles of drainage area upstream of Lake Lanier or about 12% of the Chattahoochee basin and about 5% of the entire ACF
- Atlanta's "consumptive" use is in the range of 250 to 350 cfs
- Flow at Woodruff Dam averaged 8,681 cfs during 2002 the lowest flow in the 80 year record
- Georgia has *promised* not to allow the flow to drop below 5000 cfs

ACF



Buford Dam

Woodruff Dam

What is Atlanta's impact?

- 250 to 350 cfs depletion = 2.9% to 4.0% of lowest daily average (8681 cfs)
- 250 to 350 cfs depletion = 5.0% to 7.0% of the 5000 cfs “guaranteed” flow
- From the Union of Concerned Scientists
“Massive water consumption by the households and industries of the metropolitan Atlanta region results in very little upstream storage and greatly reduced water downstream of the city.

What about Ag?

- In the ACF there are **559,976** irrigated acres in Georgia
- **33,596** in the Chattahoochee and **526,380** in the Flint
- **171,486** are surface water so their impact is one to one
- **388,490** are ground water and we use a **.28** multiplier to determine their impact*
- So what is the impact on stream flow in a dry June.....

*1 gallon of ground water reduces flow by .28 gallons

Ag Impact con't.

- **Surface Water: 171,486 acres x 1.6 in. = 7,450,449,350 gal. or 384 cfs.**
- **Groundwater: 388,490 acres x 2.6in. X .28 = 7,679,713,831 gal or 396 cfs.**
- **Average daily (dry June) impact of Ag on stream flow = 780 cfs.**
- **Average daily (dry year) impact of Ag = 341 cfs.**
- **Metro Atlanta = 250 to 350 cfs.**

So What?

- **Ag withdrawal permits are not quantified in Georgia so.....**
- **To “manage” ag use irrigated acreage must be retired to reduce impact on streamflow**
- **How many acres?**
- **To reduce impact by 100 cfs over 40K acres irrigated with surface water or over 90K acres irrigated with groundwater would have to be retired***

***Using the irrigation depths from a dry June**

Ag and the ACF

Bottom Line

- **Any attempt to manage Georgia's impact on flows in the ACF under existing law will require large numbers of irrigated acres be retired. For example if Georgia were ordered to increase flows by just 10% over the "agreed" 5000 cfs all of the acreage irrigated with surface water would not be enough.**

Questions





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Just a pretty photo.

