

Cumberland River Compact

KY
TN



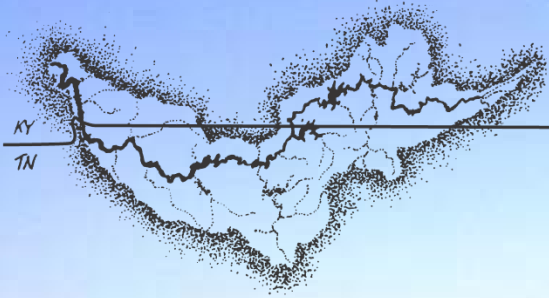
*Enhancing water quality through
education and cooperation*

Managing Tennessee Waters

Vena Jones

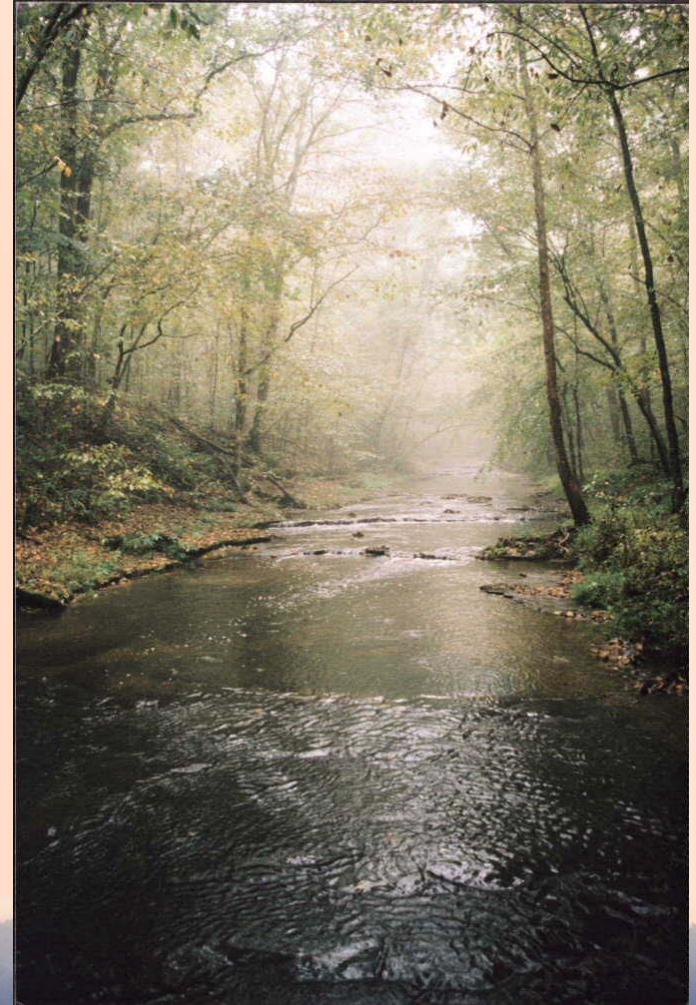
Sept. 2, 2009

Cumberland River Compact



What's Special about Tennessee?

- Globally significant biodiversity
- Booming population growth
- Good Jobs
- Outstanding recreational areas
- Variable Topography
 - Karst
 - Sandstone Plateaus
 - Granitic ridge and valley



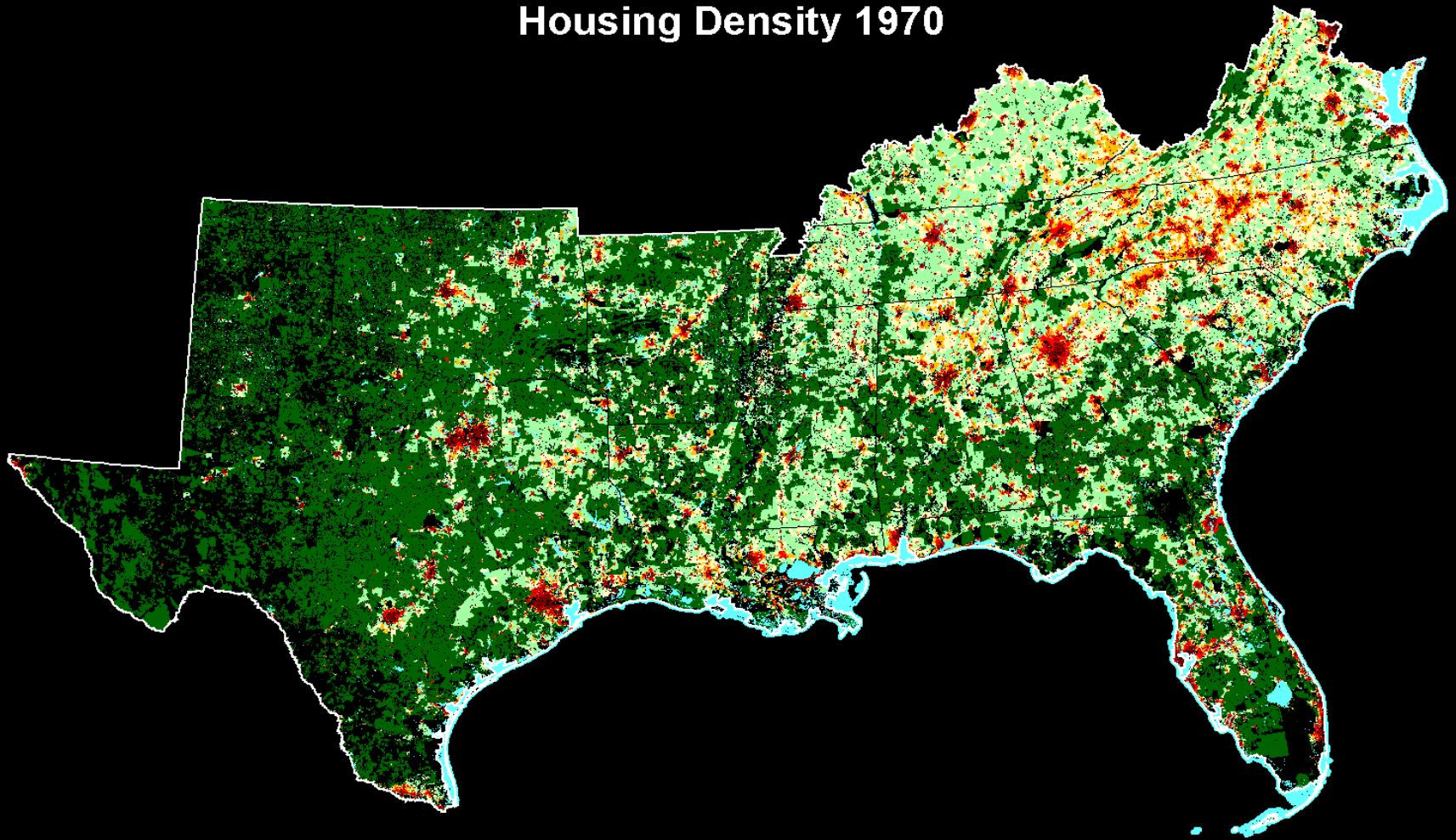
Cumberland River
Compact



*Enhancing water quality through
education and cooperation*

Southern Region

Housing Density 1970



Housing Units per Km²



0



2 - 4



8 - 16



>128



0 - 2



4 - 8



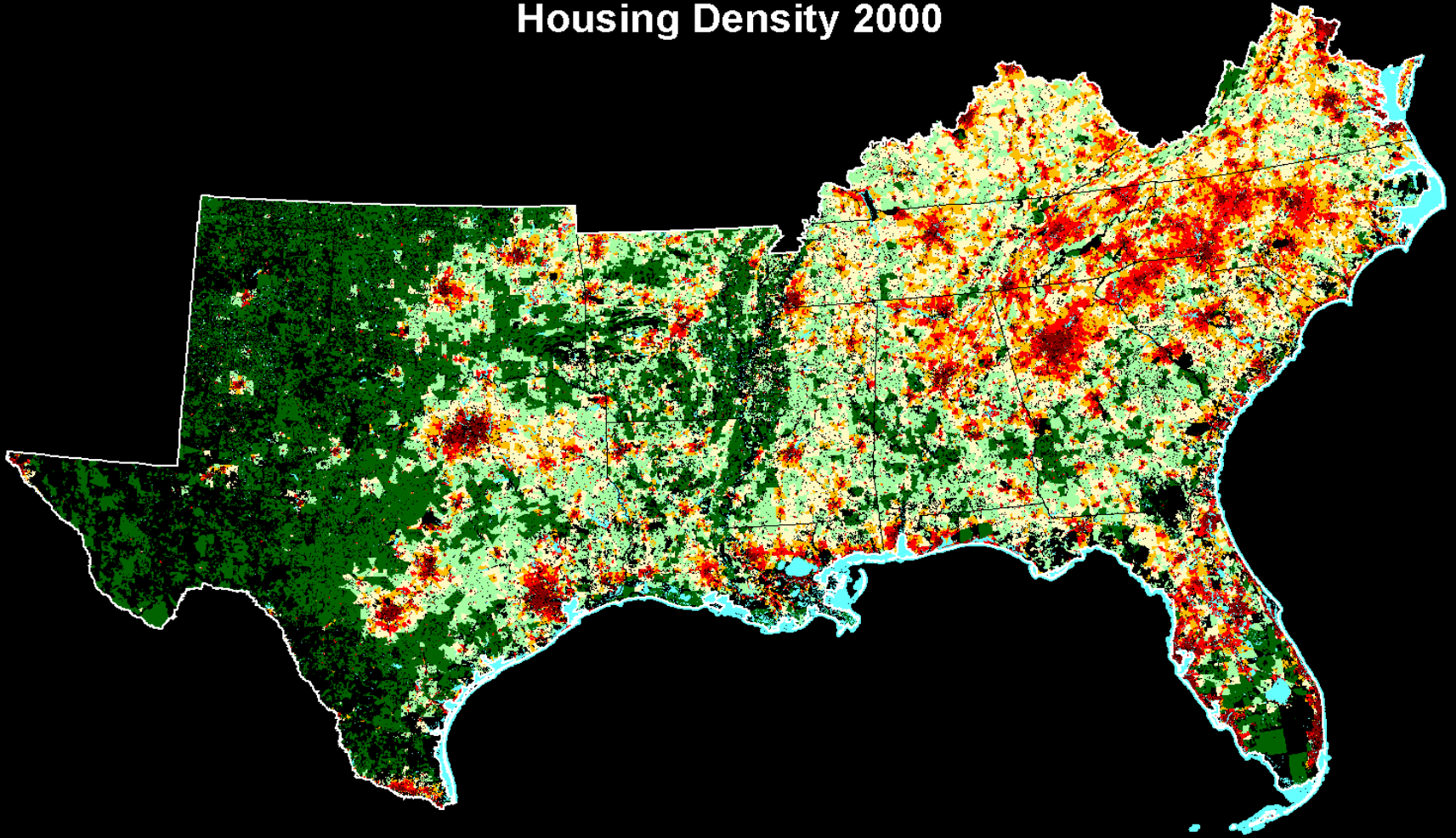
16 - 128



Water

Southern Region

Housing Density 2000



Housing Units per Km²

0

2 - 4

8 - 16

>128

0 - 2

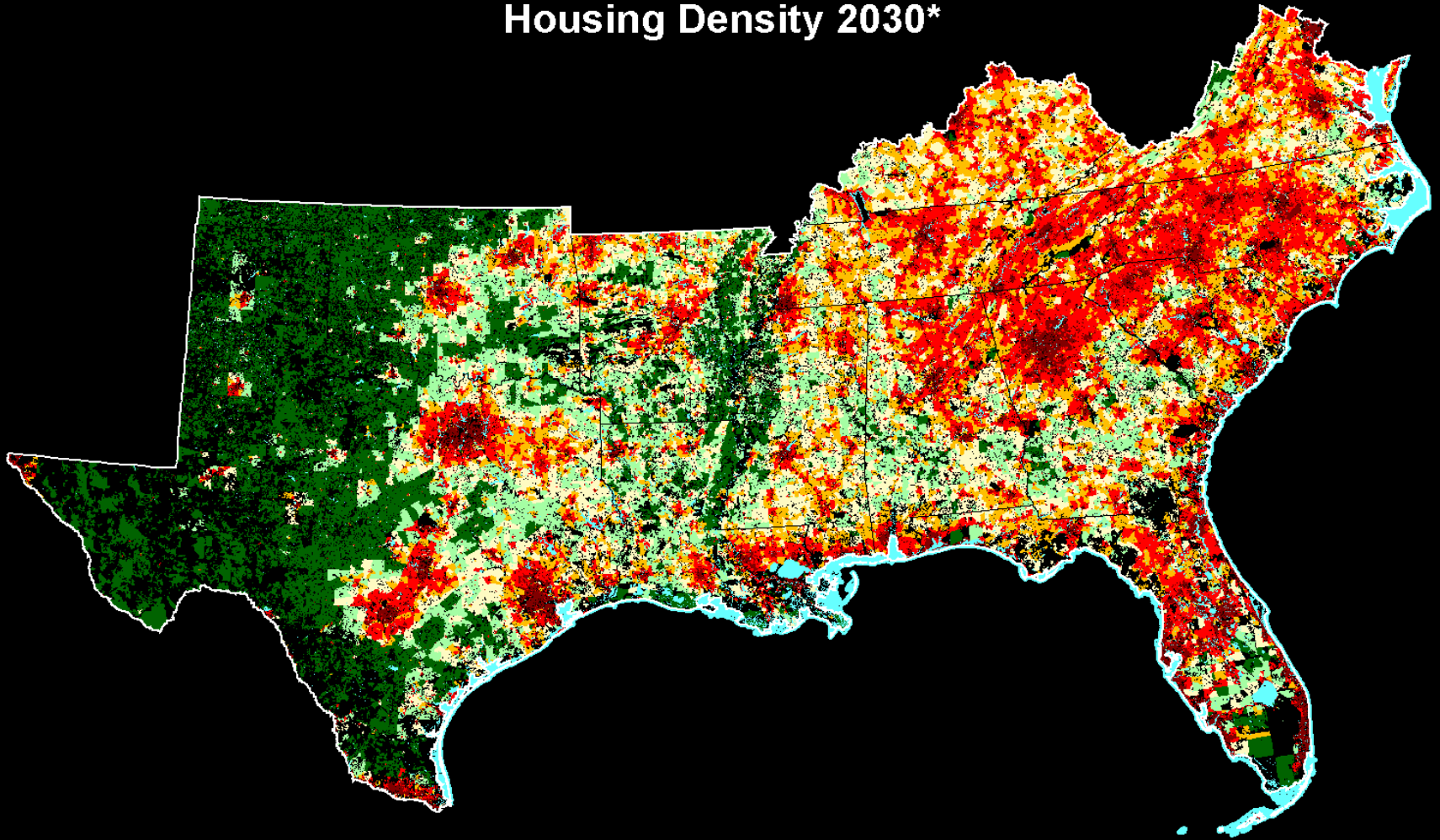
4 - 8

16 - 128

Water

Southern Region

Housing Density 2030*

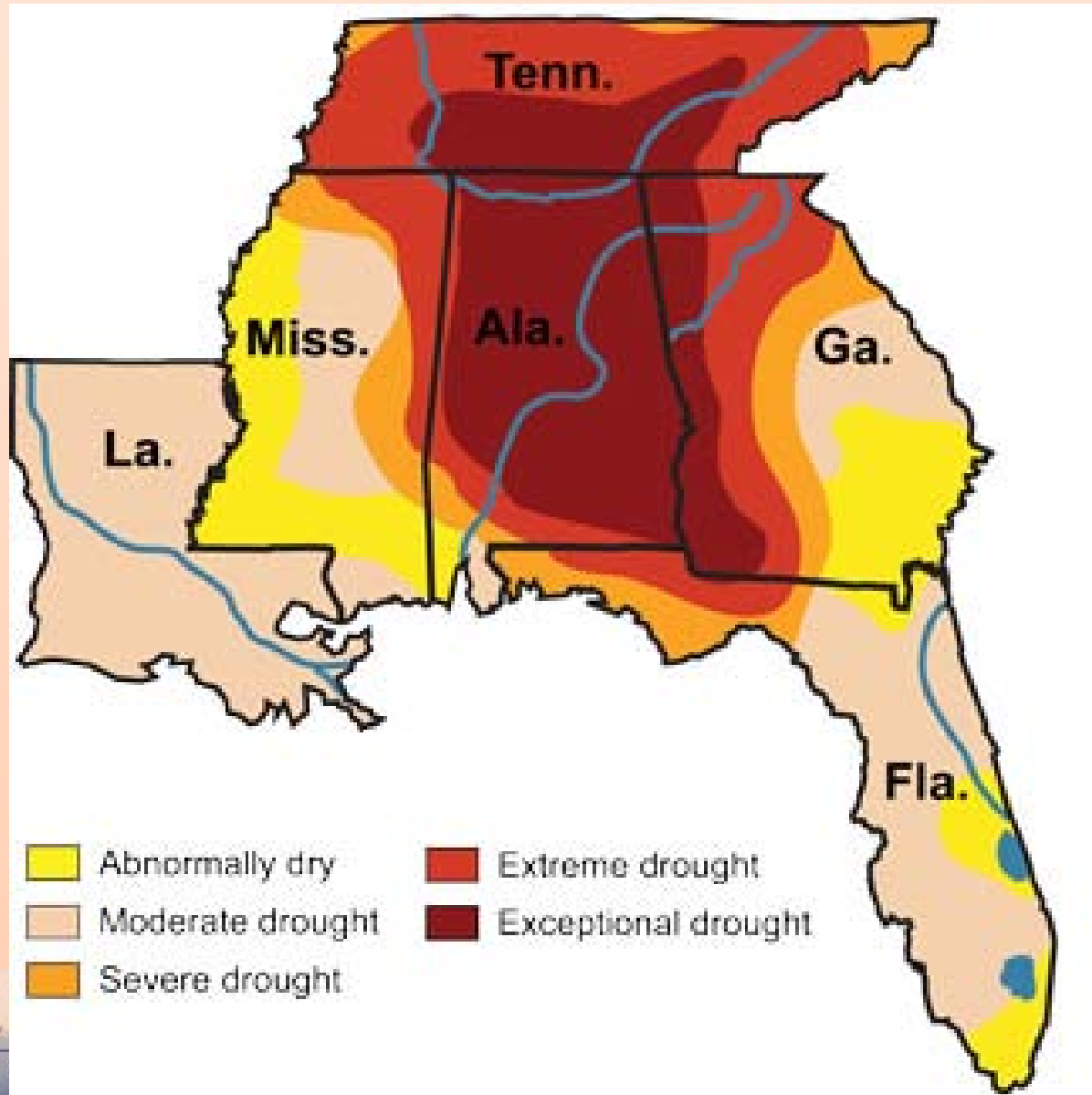


Housing Units per Km²

*Linear projection of 1990s growth



US Drought Monitor from August 2007



Water is in Short Supply!

As we grow we need to manage for multiple interests.



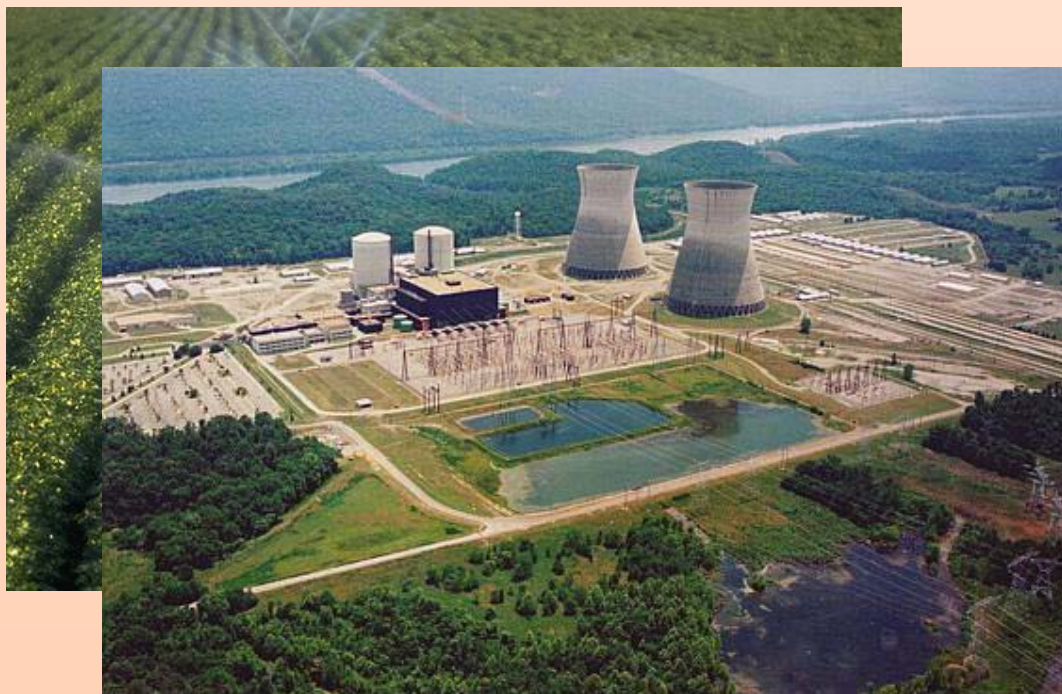
Cumberland River
Compact



*Enhancing water quality through
education and cooperation*

Water is in Short Supply!

As we grow we need to manage for multiple interests.



Cumberland River
Compact



*Enhancing water quality through
education and cooperation*

Water is in Short Supply!

As we grow we need to manage for multiple interests.



Cumberland River
Compact



*Enhancing water quality through
education and cooperation*

Water is in Short Supply!

As we grow we need to manage for multiple interests.



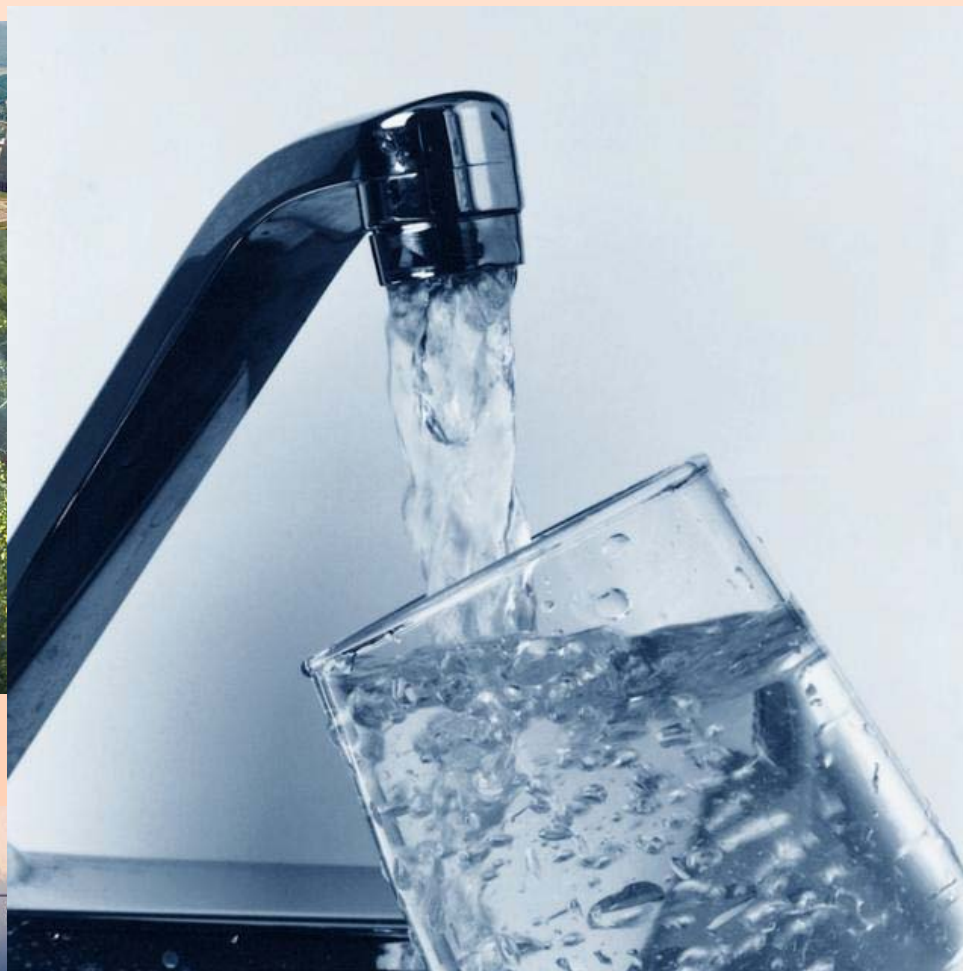
Cumberland River
Compact



*Enhancing water quality through
education and cooperation*

Water is in Short Supply!

As we grow we need to manage for multiple interests.



Cumberland River
Compact

education and cooperation

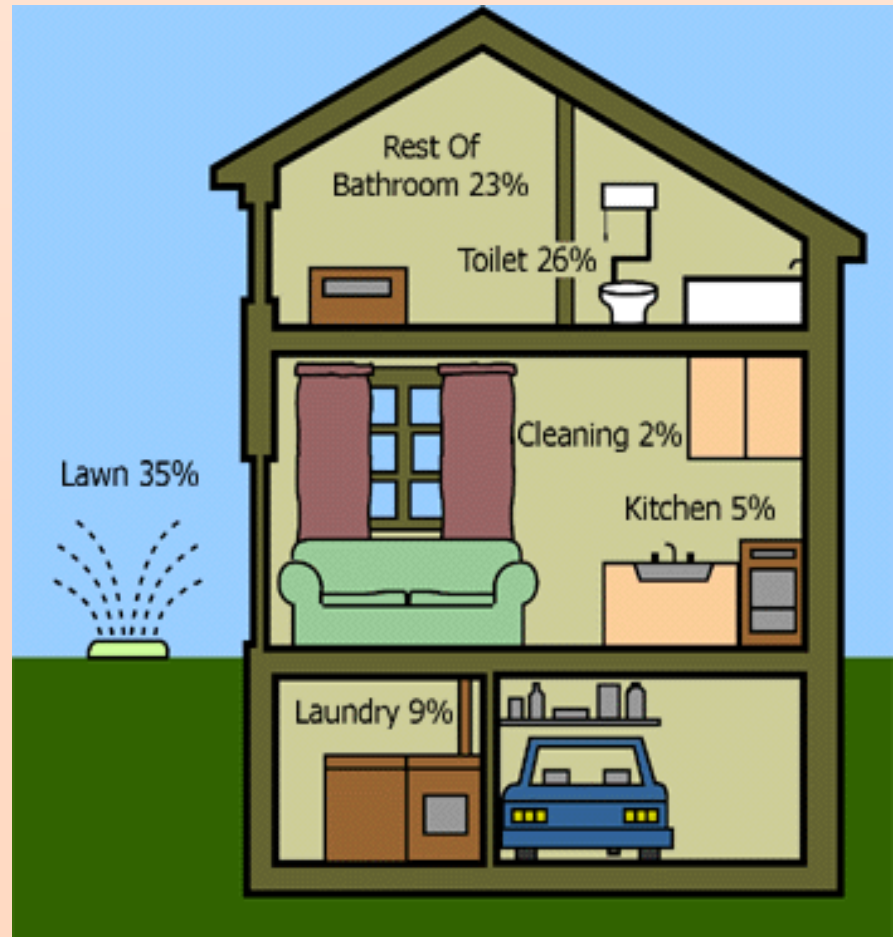
Public Water Supply for Tennessee

- 5.6 million people
 - 500 water supply systems
 - 900 Mgal/day from public systems
 - 88% of total water supply withdrawals
 - 12% private water withdrawals
 - % undocumented water withdrawals?
- *Over 1 Billion gallons withdrawn daily*



Water Use in Tennessee

- Average use 136 gal/day
- Minimum 569 Mgal/day from surface water
- **450%** increase in water use since 1950



Cumberland River
Compact



*Enhancing water quality through
education and cooperation*

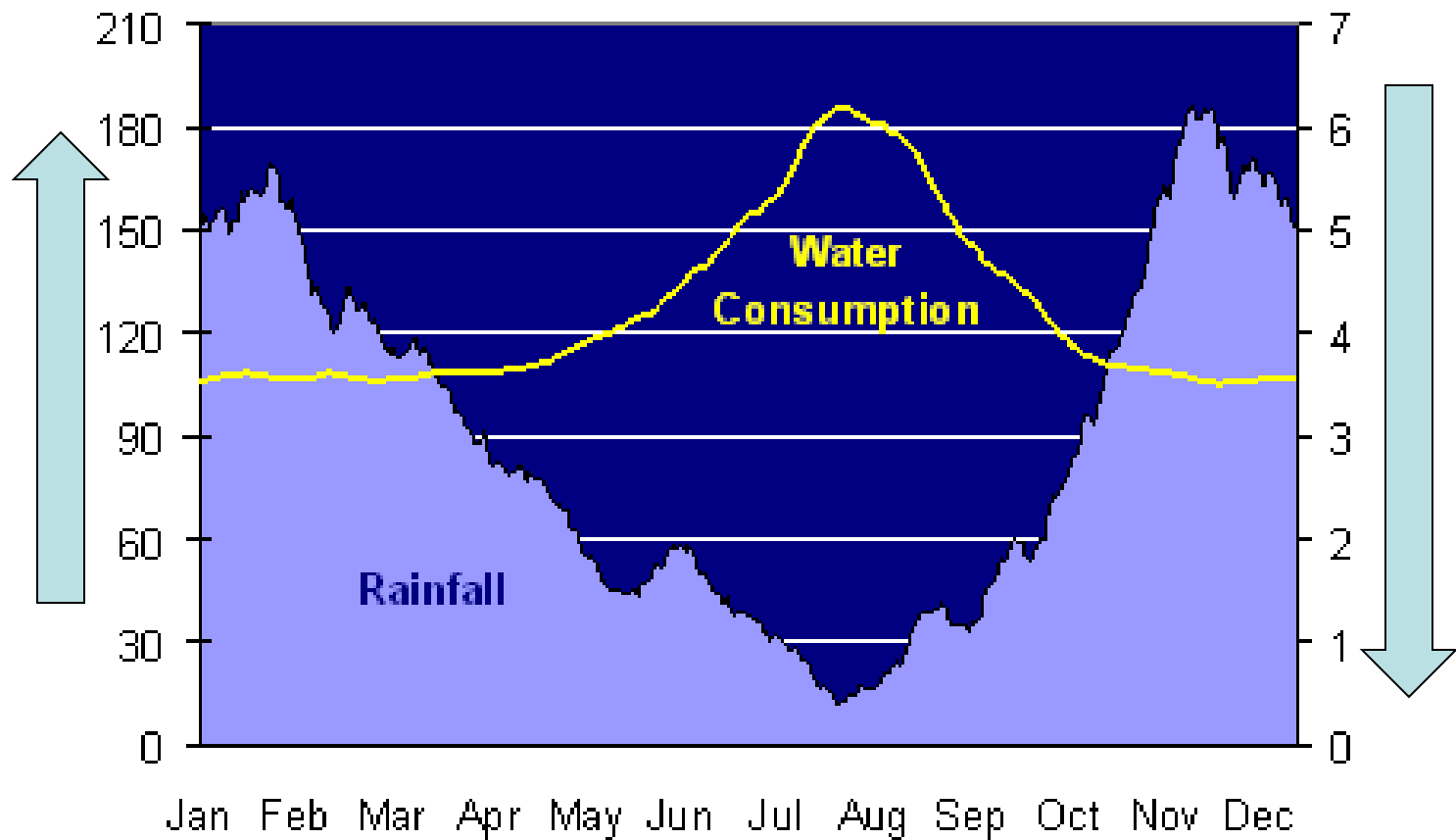
How Much Water Is There?

- Cumberland and Tennessee Rivers combined can have up to 2.6 billion gallons stored at any one time.
- 120 Mgal/day is removed from Cumberland R. in Davidson County
- 13% of the total surface water withdrawals from the state

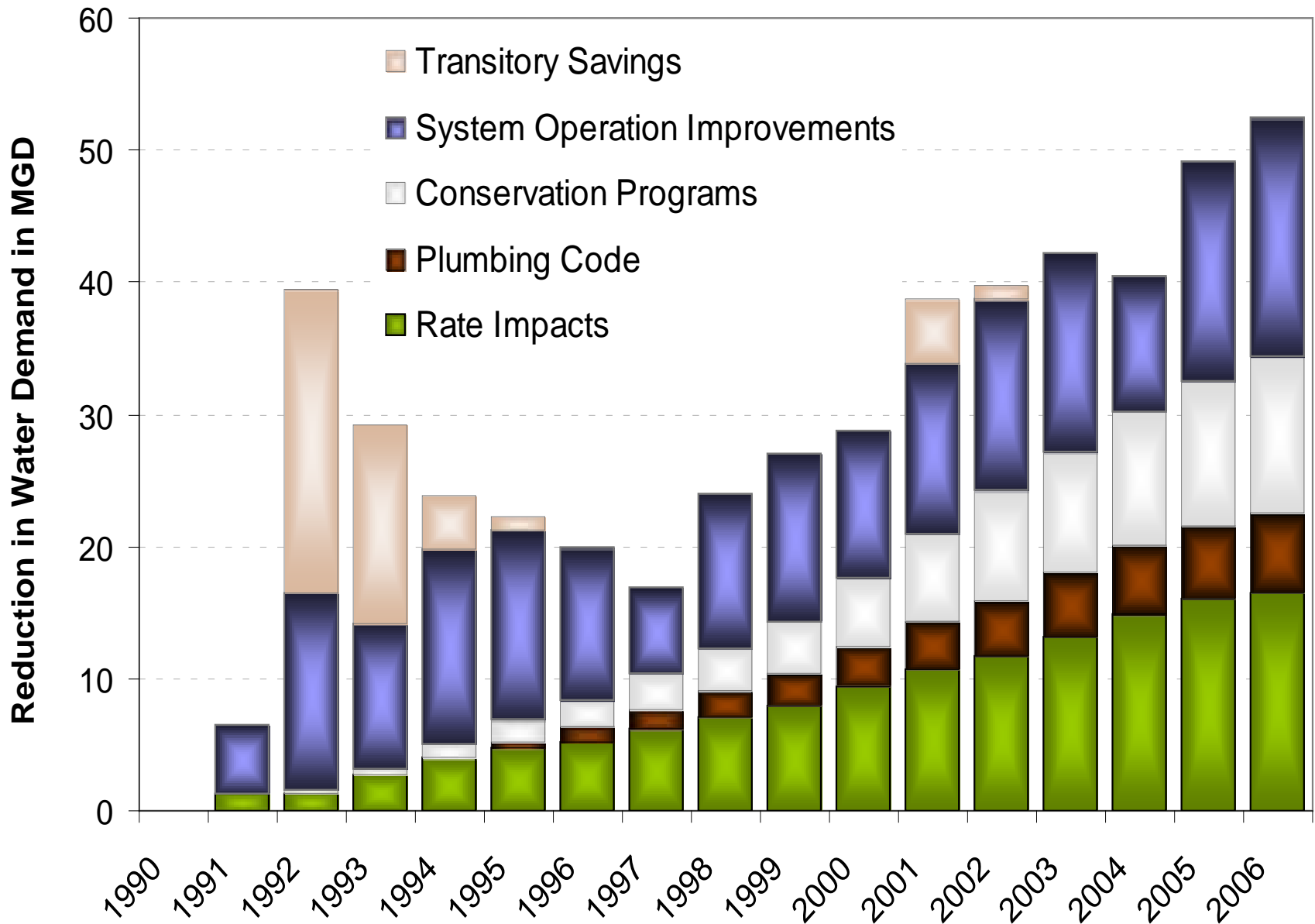
Surface Water Withdrawals	Millions of Gallons/Day
Cumberland	173.3
Tennessee	100.17
South Holston	23.99
Clinch	20.83
Duck	19.74
East Fork Stones	18.13
Barron Fork	10.86
Nolichucky	10.1
Priest Lake/Stones	9.87
French Broad	7.99
Little Tennessee	3.66
Harpeth	2.57
Sequatchie	2.28
Caney Fork	1.48



“Summer Crunch”

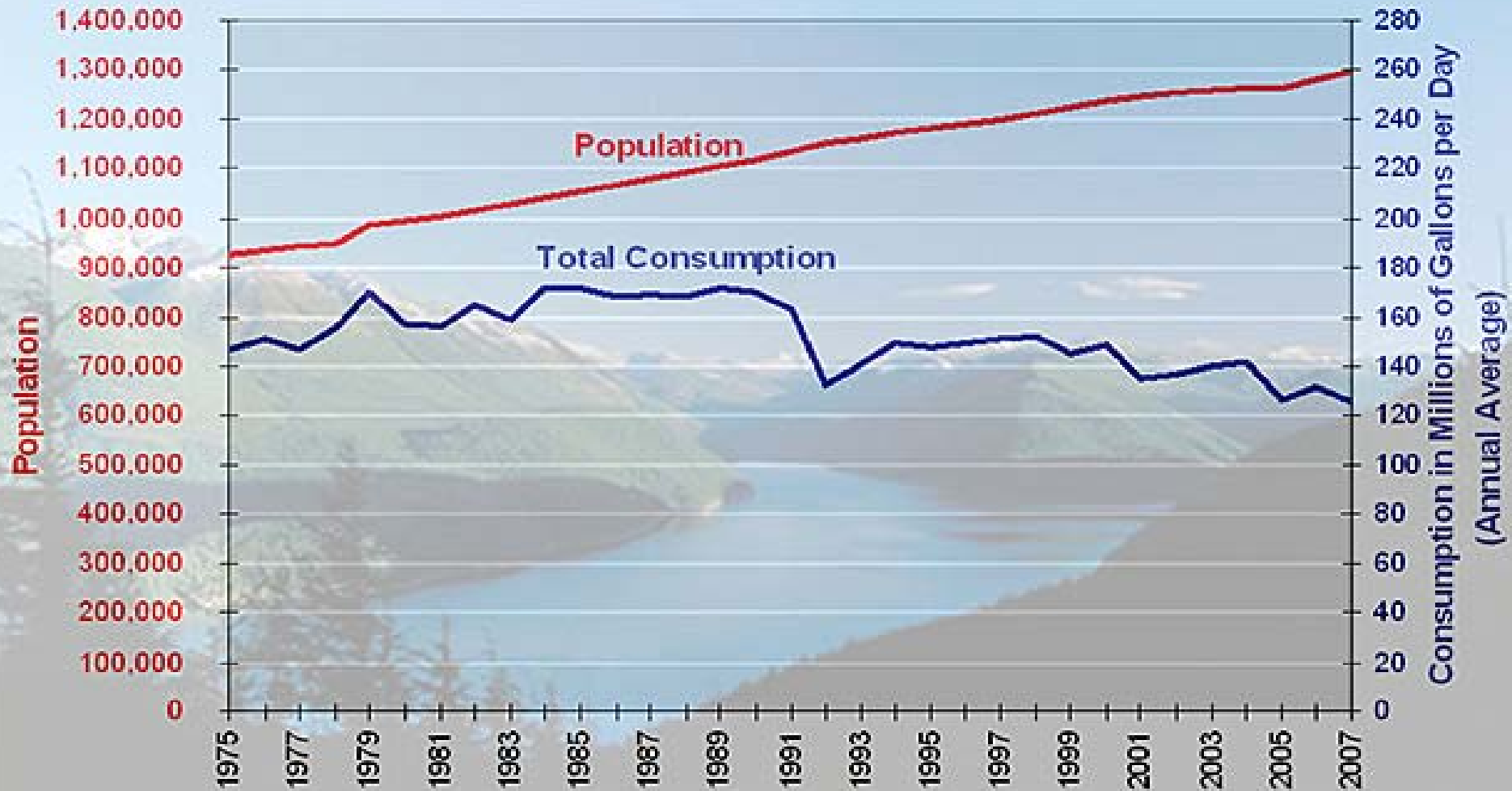


How Some Have Managed



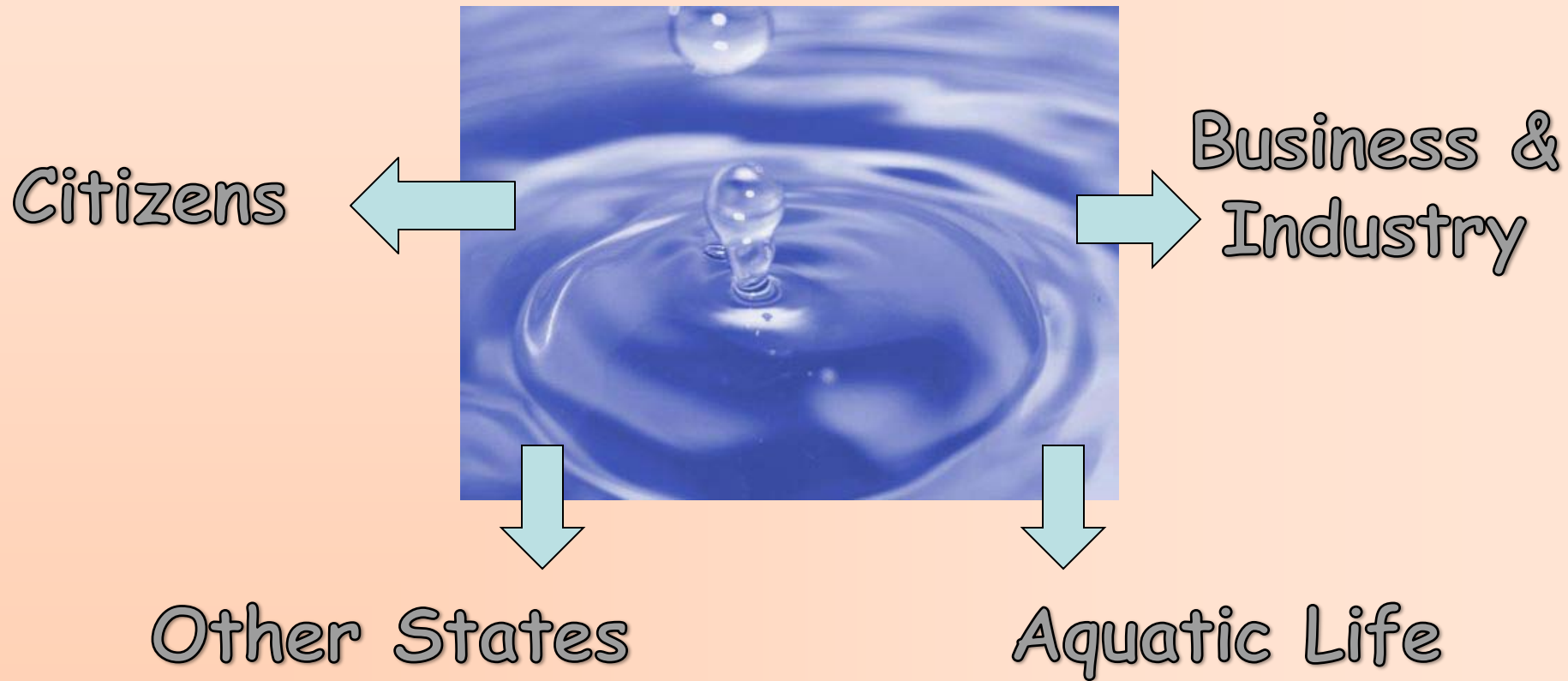
WATER USE DECLINED 26% SINCE 1990
EVEN WHILE POPULATION INCREASED 16%

Growth in Population and Water Consumption Seattle Regional Water System: 1975-2007



Tennessee Water Resource Balancing Act

Managing for Multiple Interests



Cumberland River
Compact



*Enhancing water quality through
education and cooperation*