

# RESPONSIBLE POLICY-MAKING LEADS TO REALISTIC WATER/SEWER RATES IN GEORGIA

James Melvin Ewing

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*AUTHOR:* James Melvin Ewing, P.E., Environmental Engineer, Georgia EPD, 205 Butler Street SE, Suite 1058, Atlanta, Georgia 30334.  
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## INTRODUCTION

In recent years, many Georgia residents have experienced first-hand what it is like to live with a limited water supply as well as stricter requirements aimed at water protection. In the recent drought years (1986 & 1988) the water shortage problems became increasingly noticeable. Drought, together with the peak demands placed on Georgia's water supply, made for a painful and uncomfortable situation in Georgia. This then dramatized the circumstances that would exist should the State's water resources be improperly managed.

What are the reasons for this? Can this situation be avoided? The answers can be found in the decision-making policies of many local governments and water & sewerage authorities.

Historically, water has been viewed as a plentiful resource, a commodity. The availability of an adequate water system serves as an incentive to attract residential, commercial and industrial customers. Typically, if this service is provided at a reasonable cost, the service is looked upon as an aide to economic growth. Many industrial and commercial businesses use water to assist in their everyday operation. Residential customers need water for basic necessities as drinking, bathing, washing and irrigation.

Many water utilities are disproportionately providing this water service to large users at discounted rates. The thinking here is that larger users will provide job opportunities and serve to broaden the tax base. Additionally, various other political reasoning can enter into the disproportioning of water rates. At the same time, little thought is given towards adequate budgeting of operation and maintenance costs for old and undersized water systems. This being the case, utilities not operating with large surpluses of funds, often will allocate money from other accounts to make up the difference -- a basis of poor decision making.

Wastewater treatment can also serve as a basis for economic growth. Available sewer service in a community is viewed as an aide to attracting new businesses. Again, since businesses provide jobs and broaden the tax base,

local governments may tend to allow a disproportioning of user fees.

Many communities do not expect sewerage systems to ever pay for themselves. This thinking in many cases leads to rate structures that are set up to charge reasonable rates rather to account for budgeted needs. This belief that sewer revenues are not profitable is one that is held by many small communities in the State.

The end result of these decisions will very often lead to uncomfortable conditions and a waste of water resources.

### Rate Structures and their Definitions:

There are various rate structures which may be used to set the pricing of water and sewer charges. Rate structures are generally made up of a fixed minimum service charge and a volume consumption charge. There are four types of rate structures that are commonly found in Georgia, and a fifth rate structure which may become more popular. They are defined as follows:

Flat Rate. This rate structure charges all customers the same amount regardless of consumption.

Decreasing Block Rate. This rate structure charges decreases as the volume of usage increases.

Uniform Rate. This rate structure charges remain constant regardless of the volume of usage.

Increasing Block Rate. This rate structure charges increases as the volume of usage increases.

Seasonal Rate/Surcharge. This rate structure creates different rates for winter and summer use and is designed to discourage the excessive use of water for outdoor purposes.

The decreasing block rate structure, is the most widely used pricing structure in Georgia. The uniform rate structure has been found to be the fairest, and ideally, coupled with a seasonal rate/surcharge, is the best plan to be selected. As price increases, demand will decline.

### The Survey and Rethinking of Policy-Making:

During recent months employees of both the Georgia Environmental Protection Division (EPD) and the Georgia Environmental Facilities Authority (GEFA)

undertook a review of water and sewer rate structures throughout the State. 439 water utilities and 264 sewer utilities were surveyed, and the data compiled in July, 1990.

Some of the water and sewer utilities surveyed are listed in Tables 1 and 2, which show rates for three levels of water and sewer usage - 3000, 10,000 and 100,000 gallons per month. (For a complete copy of the entire data, you may contact GEFA or the writer.) The 3,000 gallon benchmark represents the low range of residential use. Higher use residential and some commercial customers would be in the 10,000 gallon range, and the 100,000 gallon typifies some industrial users. Within these benchmarks could be as many as 4 or 5 rate "steps" used by local governments, while some use as few as one or as many as ten. Most charge per gallon, some use cubic feet. Most bill monthly, others bill bimonthly. Using benchmarks for comparison offers a common standard for evaluation.

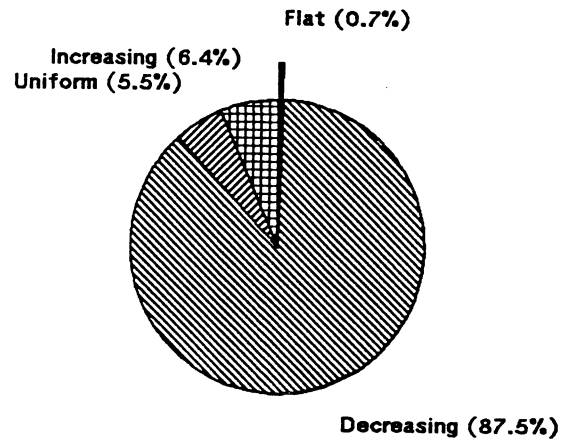


Figure 1. Water Rate Structure

TABLE 1. Water Rates (partial listing) Georgia Environmental Facilities Authority, compiled July 1990.

Name	inside			outside			1988 Pop.	Effective Date
	3,000	10,000	100,000	3,000	10,000	100,000		
Atlanta	6.70	63.38	472.09	8.72	82.41	613.59	420220	01/01/83
Cobb	10.37	27.90	309.00	0.00	0.00	0.00	425300	02/01/90
Augusta	4.80	12.76	94.31	9.60	25.52	188.62	42830	02/14/88
Macon	4.64	10.66	76.86	0.00	0.00	0.00	116860	10/01/89
Savannah	5.75	7.15	35.80	8.60	10.63	52.70	145980	01/01/90
Columbus	4.90	8.12	49.52	7.86	12.97	78.67	170108	05/01/88
Covington	6.70	19.65	144.65	8.80	27.00	173.00	13620	03/05/90
Buchanan	8.60	16.58	131.68	8.60	16.58	146.18	1430	09/01/89
Dekalb Co.	1.95	6.50	65.00	0.00	0.00	0.00	544700	01/26/83
Odum	10.00	10.00	10.00	0.00	0.00	0.00	420	06/07/90
Dearing	5.00	5.00	5.00	0.00	0.00	0.00	620	01/01/90

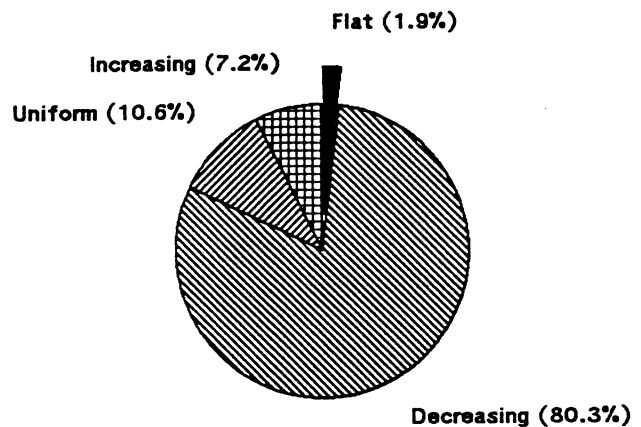


Figure 2. Sewer Rate Structure

TABLE 2. Sewer Rates (Partial listing) Georgia Environmental Facilities Authority, compiled July 1990.

Name	inside			outside			1988 Pop.	Effective Date
	3,000	10,000	100,000	3,000	10,000	100,000		
Atlanta	4.80	16.00	160.00	4.92	16.40	164.00	420220	01/01/83
Cobb	8.13	27.10	271.00	0.00	0.00	0.00	425300	02/01/90
Augusta	4.02	9.25	75.80	4.22	10.15	85.70	42830	02/14/88
Macon	5.64	11.59	88.09	0.00	0.00	0.00	116860	10/01/89
Savannah	5.41	8.77	72.38	8.12	13.16	108.14	145980	01/01/90
Columbus	3.70	7.41	55.11	5.90	10.24	66.04	170108	05/01/88
Carrollton	1.70	11.01	130.71	0.00	0.00	0.00	20220	05/01/89
Buchanan	5.59	10.78	85.59	5.59	85.59	95.02	1430	09/01/89
Dekalb Co.	3.30	11.00	110.00	0.00	0.00	0.00	544700	01/26/83
Alamo	2.50	2.50	2.50	0.00	0.00	0.00	950	06/01/86
Alapaha	3.50	3.50	3.50	0.00	0.00	0.00	680	09/01/88

Figures 1 and 2 summarize our data regarding the water and sewer rate structures used in Georgia. The decreasing block rate structure is the most frequently used in Georgia. This rate structure does not encourage water conservation, a fact quickly recognized by many water and sewer utilities as water shortages (impacted by outdoor water use) necessitated restrictions.

To this end, many utilities began to re-think their policy making decisions. The Atlanta Regional Commission (ARC) completed a rate survey and study which was finalized in May and July of 1990. Those reports recommended that local governments develop rate structures which both equitably distribute the costs of supplying water and discourages excessive use. This led many of the metro Atlanta area communities to change their pricing policies. This trend was also recently observed in some of the communities outside of the Atlanta region. As time goes by, it is expected that the majority of jurisdictions in Georgia will do likewise. However, much in the way of education is still needed, especially where smaller jurisdictions are concerned.

#### Other Water Issues:

The recent drought situation, which dramatized the water shortage problem, also revealed Georgia citizen's lack of concern for conservation and in many cases -- man's greed. Other relative issues surfaced, magnifying the problem.

The government officials of the State of Georgia were led to advance the idea for construction of twelve (12) regional reservoirs in the North Georgia region to mitigate the water shortage problem in an area of the State where water is scarce. To date, the planning for one reservoir is complete, the West Georgia Regional Reservoir to be located in Haralson County at a projected construction cost of \$34 million. Issues concerning permitting, wetlands impacts, and the public review process remain.

The Georgia Water Wars issue has largely dominated the news in recent past. It has to do with how well the Atlanta region is using the existing water resources. When finally resolved, this one issue could potentially affect growth in the Atlanta region for years to come. By the year 2010 communities from the Atlanta region propose to withdraw 375 million gallons per day of water mainly from Lakes Lanier and Allatoona, and the Chattahoochee River. Communities of the Atlanta Region currently withdraw roughly 250 million gallons per day. The States of Alabama and Florida and some citizens of Southern Georgia, all have expressed concerns over future water usage in the Atlanta region. Downstream uses involving recreational use, development downstream, and navigation were cited as concerns.

#### Legislation:

In considering the big picture, Georgia legislators have proposed to address the water shortage problem through legislation. The Georgia Water Conservation Act of 1990 (O.C.G.A. Section 8-2-1 to 8-2-3) requires all local governments to adopt an ordinance prior to June 30, 1991 to remain eligible to receive a water or waste water facilities grant from EPD and the Department of Community Affairs (DCA). The Community Development Block Grants for water and wastewater facilities administered by DCA, are subject to this requirement. The same action is also required for a water or wastewater facilities loan from the Georgia Environmental Facilities Authority.

The minimum criteria for ultra-low flow fixtures under the new Georgia Water Conservation Act are as follows:

- (1) Employ a gravity tank-type, flushometer-valve, or flushometer-tank toilet that uses no more than an average of 1.6 gallons of water per flush;
- (2) Employ a shower head that allows a flow of no more than an average of 2.5 gallons of water per minute at 60 pounds per square inch of pressure;
- (3) Employ a kitchen faucet or kitchen replacement aerator that allows a flow of no more than 2.5 gallons of

water per minute;

(4) Employ a lavatory faucet or laboratory replacement aerator that allows a flow of no more than 2.0 gallons of water per minute; or

(5) Employ a urinal that uses no more than an average of 1.0 gallon of water per flush.

In addition to adopting an ordinance, each local government must also, depending on its particular situation, take one of the following four actions:

(1) If the local government has a current construction codes enforcement program that includes enforcement of a plumbing code, the plumbing code should be updated to include the new water conservation criteria; or

(2) If the local government has a current construction codes enforcement program that does not include enforcement of a plumbing code such as the Georgia State Plumbing Code or the Standard Plumbing Code should be adopted and updated to include the new water conservation criteria; or

(3) If the local government does not have a current construction codes enforcement program, a program should be adopted to include as a minimum, the enforcement of a plumbing code (the Georgia State Plumbing Code or the Standard Plumbing Code), updated to include the new water conservation criteria; or

(4) If the local government does not have a current construction codes enforcement and does not adopt and implement such a program, it must adopt a special program for the enforcement of O.C.G.A. 8-2-1- to 8-2-3.

#### SEVEN STEP SOLUTION

In order for Georgia water and sewer utilities to better manage the limited water resources, realistic water/sewer rates must be an integral part of that effort. The following actions must be taken:

1. Uniform rules must be developed. This means that throughout the State, more than just a few communities must be committed to conservation. Tough standards must be in place State wide.
2. Project responsible yearly budgets. Water and Sewer utilities must establish annual budgets that represent the true costs of operation and maintenance.
3. Use an increasing rate structure. Water/Sewer charges based on an increasing or uniform pricing structure will assist in regulating water usage.
4. Each customer must pay their proportionate share. This is self explanatory. This will go a long way towards proper management.
5. Implement water conservation measures.
6. Utilize a public information campaign.
7. Charge rates that cover the true cost of operation.

This is especially true in regards to sewer charges. Sewer rate structures have long been inadequate. Operational staff should have input on budgets. As much

as a year of preparing users in advance on any increase should be made a part of planning strategy.

In conclusion, people can no longer take a free ride on Georgia's limited water resources by not respecting the rights of others. Communities must now become responsible for their own actions. If all parties pay attention to procedural concerns, such as discussed above, the possibility of revamping water rates can be met with less resistance and pain. This paper hopefully serves as a "game plan" for addressing the inadequate rate structure problem and underscores the need for an effective integrated management approach. It is not a panacea, but it will go a long way towards the stated goal.

#### LITERATURE CITED

Atlanta Constitution: "Water's Cheap - if you live in the right place", July 22, 1990.

Atlanta Regional Commission: Policy Regarding Water and Wastewater Rate Setting, 1990.

Georgia Environmental Facilities Authority: Water and Sewer Rates, Atlanta, GA, 1990.

Georgia Environmental Protection Division: Draft Report on Water Conservation in Georgia, 1990.