COMPILATION AND ESTIMATION OF PUMPAGE FOR THE MAJOR GROUND-WATER USERS IN THE COASTAL PLAIN OF ALABAMA, 1960-85

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ABSTRACT

This report provides compilation and estimation of ground-water pumpage for selected public supply systems located in the Southeastern Coastal Plain aquifer system of Alabama. The ground-water pumpage use and the source of data are given for each year during the period of 1960-85.

INTRODUCTION

The U.S. Geological Survey began a nationwide program in 1978, termed Regional Aquifer-System Analysis (RASA), to study a number of the major aquifer systems that provide a significant part of the country's water supply. One of the aquifer systems chosen for study was the thick and extensive sequence of sands of Cretaceous and early Tertiary age that underlies the Coastal Plain of the Southeastern United States. This system, which extends from Mississippi eastward to South Carolina, is called the Southeastern Coastal Plain aquifer system. The RASA program involves describing the regional ground-water flow in these sands in sufficient detail so that computer models can be designed to accurately simulate flow in the aquifer system. The purpose of this report is to present a compilation and estimation of ground-water pumpage from these sands from selected public supply systems for the period of 1960-85 for the simulation. These public supply systems are located in the Southeastern Coastal Plain of Alabama.

PROCEDURES FOR DATA COMPILATION AND ESTIMATION

Table 1 lists the public supply systems and the county in which they are located. Figure 1 shows the location of the study area for the Regional Aquifer-System Analysis (RASA) in Alabama. Table 2 lists ground-water pumpage for public supply systems in alphabetical order.

Public water systems serve the public with water retrieved from ground-water sources (wells and springs), surface water sources (rivers and lakes), and water purchased from other water suppliers. The total water received by customers is reported as water consumption. In most instances there is some water loss due to leaky pipes causing more water to be pumped than is actually consumed.

Annual ground-water pumpage data and their source are given for each system for the years 1960-85. Because data could not be collected for all the years during that period, estimations for the missing years based on the available data are reported also. For each year the amount of ground water used is given in million gallons per day (Mgal/d). The source of the data is indicated by the letters A-I. The letters and their definitions are as follows:

A. Ground-water pumpage reported to the U.S. Geological Survey or the Geological Survey of Alabama.

B. Ground-water consumption reported to the U.S. Geological Survey or the Geological Survey of Alabama.

C. Estimation of ground water pumpage based on population (assuming one person consumes one hundred gallons of water a day), industrial use, and reported water use. If the water system received water from more

than one source, then only the percentage reported to the U.S. Geological Survey or the Geological Survey of Alabama for ground-water pumpage was used.

1. Populations served by a system were determined from the Bureau of the Census reports for the years 1960, 1970, and 1980. A linear relation between these years was used in the determination of the population for the intermediate years. The Bureau of the Census determined population by city or division (city and the surrounding area served by the city). If the population was given for both division and city then an estimate of water use was calculated for each and the estimate that best correlated to any reported water use was used for calculating the total water use. Population estimates published by the Bureau of the Census for 1982 were also used.
2. Industries served by a system were determined by the public water supply system. The period and the amount of water used during that period by an industry were determined by the public water supply system or the industry. In some instances the dates an industry began and the amount of water used could not be obtained. For the missing dates, the date the industry was established (obtained from 1980-81 Alabama Directory of Mining and Manufacturing) was used for the beginning of the pumping period. For the missing amounts of water used, an average of available data was used for the year. Industrial water used is not available for some water systems so the estimation is based on method C1 where the industrial use is prorated into the domestic use.

3. The population water use (division, city, or both) and the industrial water use were added together. The estimated data that simulate the reported water pumpage are used in the estimation. An average of the ratio between estimated data and reported data is taken to prorate the estimated water pumpage to the reported water pumpage for the years that no data are available. Prorating the data is expected to make up for any water loss. Because water loss varies so much from year to year and system to system, it is not calculated separately (with population and industrial use).

D. Ground-water consumption was estimated by the same method used in C except water sold was substituted for water use. In this instance there was no water loss to take into consideration.

E. If a water system serves an area where information on population can not be obtained through the Bureau of the Census, then an estimation based on number of hookups and reported water use was made. The estimation was determined by calculating the average of water use per hookup and applying it to the years there were no available data.

F. In some instances information reported to the U.S. Geological Survey was reported in gallons used per month. Depending on when the water systems started recording data and when the data were sent to the U.S. Geological Survey, some years were incomplete. If the year was incomplete by 4 months then an average percent per month was calculated from the complete years. For each missing month a percentage was used to compute a complete year. This method is illustrated in figure 2.

G. In some instances water use reported to the U.S. Geological Survey was reported in gallons used per year. Depending on when the water systems started recording data and when the data were sent to the U.S. Geological Survey, some years were incomplete. If the years were incomplete by four months or less then that year was estimated by the method described. For each complete year an average of monthly water use was derived. The estimation for the incomplete year was based on an average of the monthly water use derived for each complete year. This average multiplied by the number of missing months added to the data for the incomplete year was the estimation for that year.

H. Estimation of ground-water use was made by the superintendent for the water system.

I. Actual water use was reported to the Geological Survey of Alabama for a few years and estimates were reported to the U.S. Geological Survey for all the years in operation. Because information on population could not be obtained for the system through the Bureau of the Census, the estimates received are being substituted for population and prorated in the same method described in C.

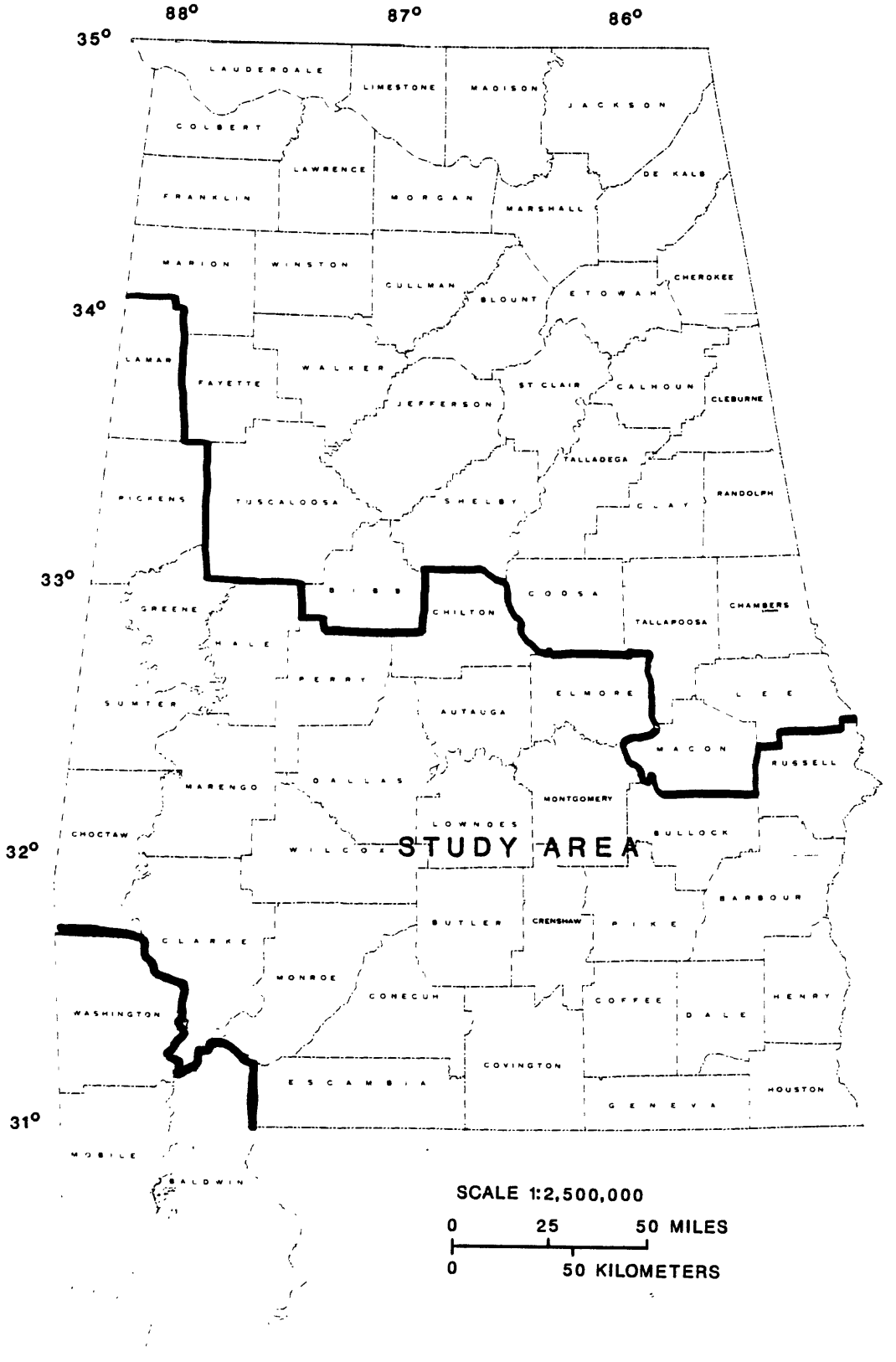

Figure 1.--Study area.

	1981		1982		1983	
	Mgal	percent	Mgal	percent	Mgal	percent
Jan.	6.894	4.42	13.930	7.78	15.546	7.42
Feb.	10.281	6.60	12.822	7.16	14.414	6.88
Mar.	9.744	6.26	10.190	5.69	14.960	7.14
Apr.	10.664	6.84	12.154	6.78	13.435	6.41
May	11.586	7.44	14.559	8.13	17.903	8.54
June	15.442	9.91	15.425	8.61	16.921	8.07
July	17.734	11.38	16.245	9.07	20.552	9.80
Aug.	14.144	9.08	17.288	9.65	22.141	10.56
Sep.	13.927	8.94	17.780	9.92	17.855	8.52
Oct.	14.852	9.53	17.762	9.91	17.448	8.32
Nov.	13.683	8.78	15.357	8.57	16.834	8.03
Dec.	16.826	10.80	15.632	8.72	21.646	10.32
TOTAL	155.778	99.98	179.144	99.99	209.655	100.01

	1984		average percent
	Mgal	percent	per month
Jan.	19.822	8.50	7.03
Feb.	17.410	7.46	7.02
Mar.	18.730	8.03	6.78
Apr.	15.330	6.57	6.65
May	18.250	7.82	7.98
June	21.722	9.31	8.98
July	21.921	9.38	9.91
Aug.	20.949	8.98	9.57
Sep.	21.561	9.24	9.16
Oct.	20.621	8.84	9.15
Nov.	18.636	7.99	8.34
Dec.	18.320	7.85	9.42
TOTAL	233.272	99.97	99.99

1985

Jan. - Oct. 229.002 Mgal

Jan. - Oct. 82.23 percent water is used on the average

Nov. and Dec. 17.76 percent water is used on the average

229.002 Mgal = 82.23 percent

229.002 / 82.23 = 2.78

one percent = 2.78 Mgal

Estimated water use for the year of 1985 is 2.78 million gallons multipled by 100 totaling 278 million gallons for the year.

Figure 2.-- An example showing the process of estimation for method (F).

Table 1.—List of public supply systems

Public Supply System	County Location
Prattville Water Works Board	Autauga
Bakerhill Water Authority	Barbour
Clio Water Department	Barbour
Eufaula Water Works and Sewer Board	Barbour
Union Springs Utilities Board	Bullock
Chapman Water and Fire Protection Authority	Butler
Georgiana Water Works and Sewer Board	Butler
Greenville Water Works	Butler
Chilton County Water Authority	Chilton
Mapleville Water Works and Gas Board	Chilton
Thorsby Water Works Board	Chilton
Butler Water Works	Choctaw
Thomasville Water Works	Clarke
Elba Water Works	Coffee
Enterprise Water Department	Coffee
Evergreen, City of	Conecuh
Andalusia Water Works Board	Covington
Opp Utilities Board	Covington
Brantley Water Works	Crenshaw
Luverne, City of	Crenshaw
Quint-Mar Water and Fire Protection Authority	Crenshaw
Rutledge Water System	Crenshaw
Daleville Water and Sewer	Dale
Ozark Utilities Board	Dale
Selma Water Works and Sewer Board	Dallas
Holtville Water System	Elmore
Tri-Community Water System	Elmore
Brewton, City of	Escambia
East Brewton Water and Sewer Board	Escambia
Geneva Water Works and Sewer Board	Geneva
Hartford, City of	Geneva
Eutaw Water Department	Greene
Greensboro Utilities Board	Hale
Moundville, Town of	Hale
Abbeville Water and Waste Water	Henry
Headland Water Works Board	Henry
Ashford, City of	Houston
Columbia Water Works	Houston
Dothan Water Department	Houston
Vernon Water Works and Sewer	Lamar
Demopolis Water Works	Marengo
Linden Utilities Board	Marengo
Monroeville Water Service	Monroe
Montgomery Water Works Board	Montgomery
Marion Water and Sewer System	Perry
Uniontown Utilities	Perry
Aliceville Water and Sewer Board	Pickens
Carrollton Water Works	Pickens
Gordo Water, Gas and Sewer Board	Pickens
Reform Water Department	Pickens
Brundidge, City of	Pike
Troy Utilities Department	Pike
Ladonia-Crawford Water and Fire Protection Authority	Russell
Camden, Town of	Wilcox

Table 2.—Ground-water pumpage for public supply systems

Abbeville			Aliceville		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.68	1960	C	0.62
1961	C	0.69	1961	C	0.62
1962	C	0.71	1962	C	0.61
1963	C	0.72	1963	C	0.60
1964	C	0.73	1964	C	0.60
1965	C	0.74	1965	C	0.59
1966	C	0.76	1966	C	0.58
1967	C	0.77	1967	C	0.58
1968	C	0.78	1968	C	0.57
1969	C	0.80	1969	C	0.56
1970	C	0.81	1970	C	0.56
1971	C	0.81	1971	C	0.56
1972	C	0.82	1972	C	0.57
1973	C	0.82	1973	C	0.58
1974	C	0.82	1974	C	0.59
1975	C	0.83	1975	C	0.59
1976	H	0.82	1976	C	0.60
1977	A	0.85	1977	C	0.61
1978	A	0.85	1978	C	0.61
1979	A	0.82	1979	C	0.62
1980	A	0.83	1980	A	0.49
1981	A	0.82	1981	C	0.61
1982	A	0.78	1982	A	0.51
1983	A	0.81	1983	C	0.58
1984	A	0.83	1984	A	0.67
1985	F	0.81	1985	A	0.78

Table 2.--Ground-water pumpage for public supply systems--Continued

Andalusia			Ashford		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	D	1.20	1960	C	0.20
1961	D	1.20	1961	C	0.20
1962	D	1.20	1962	C	0.21
1963	D	1.19	1963	C	0.22
1964	D	1.19	1964	C	0.22
1965	D	1.19	1965	C	0.23
1966	D	1.19	1966	C	0.24
1967	D	1.19	1967	C	0.24
1968	D	1.18	1968	C	0.25
1969	D	1.18	1969	C	0.25
1970	D	1.32	1970	C	0.26
1971	D	1.46	1971	C	0.26
1972	D	1.47	1972	C	0.27
1973	D	1.47	1973	C	0.27
1974	D	1.47	1974	C	0.27
1975	D	1.48	1975	C	0.27
1976	B	1.50	1976	C	0.28
1977	B	1.53	1977	C	0.28
1978	B	1.40	1978	C	0.28
1979	B	1.36	1979	C	0.28
1980	B	1.34	1980	C	0.28
1981	B	1.47	1981	C	0.28
1982	B	1.48	1982	C	0.27
1983	B	1.39	1983	C	0.27
1984	B	1.52	1984	C	0.26
1985	B	1.54	1985	A	0.26

Table 2.--Ground-water pumpage for public supply systems--Continued

Bakerhill			Brantley		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.24	1960	C	0.09
1961	C	0.24	1961	C	0.09
1962	C	0.24	1962	C	0.10
1963	C	0.24	1963	C	0.10
1964	C	0.23	1964	C	0.10
1965	C	0.23	1965	C	0.10
1966	C	0.23	1966	C	0.10
1967	C	0.22	1967	C	0.10
1968	C	0.22	1968	C	0.10
1969	C	0.22	1969	C	0.10
1970	C	0.22	1970	C	0.10
1971	C	0.22	1971	C	0.10
1972	C	0.22	1972	C	0.10
1973	C	0.23	1973	C	0.10
1974	C	0.23	1974	C	0.10
1975	C	0.24	1975	C	0.10
1976	C	0.24	1976	C	0.10
1977	C	0.25	1977	C	0.10
1978	C	0.25	1978	C	0.11
1979	C	0.26	1979	C	0.11
1980	A	0.21	1980	C	0.11
1981	C	0.26	1981	C	0.10
1982	A	0.27	1982	C	0.10
1983	C	0.27	1983	A	0.10
1984	A	0.33	1984	C	0.10
1985	A	0.31	1985	C	0.10

Table 2.--Ground-water pumpage for public supply systems--Continued

Brewton			Brundidge		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.74	1960	C	0.31
1961	C	0.74	1961	C	0.35
1962	C	0.76	1962	C	0.36
1963	C	0.76	1963	C	0.36
1964	C	0.77	1964	C	0.36
1965	C	0.77	1965	C	0.40
1966	C	0.79	1966	C	0.40
1967	C	0.78	1967	C	0.40
1968	C	0.79	1968	C	0.40
1969	C	0.79	1969	C	0.41
1970	C	0.80	1970	C	0.41
1971	C	0.80	1971	C	0.41
1972	C	0.84	1972	C	0.42
1973	C	0.84	1973	C	0.43
1974	C	0.84	1974	C	0.43
1975	C	0.84	1975	C	0.44
1976	C	0.84	1976	C	0.44
1977	C	0.84	1977	C	0.45
1978	B	0.81	1978	C	0.46
1979	C	0.84	1979	C	0.46
1980	A	0.83	1980	C	0.47
1981	A	0.82	1981	C	0.47
1982	A	0.78	1982	A	0.50
1983	C	0.87	1983	A	0.51
1984	B	0.93	1984	C	0.49
1985	F	1.06	1985	A	0.44

Table 2.--Ground-water pumpage for public supply systems--Continued

Butler			Camden		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.21	1960	C	0.16
1961	C	0.21	1961	C	0.17
1962	C	0.22	1962	C	0.18
1963	C	0.22	1963	C	0.19
1964	C	0.22	1964	C	0.20
1965	C	0.23	1965	C	0.21
1966	C	0.23	1966	C	0.22
1967	C	0.23	1967	C	0.23
1968	C	0.24	1968	C	0.23
1969	C	0.24	1969	C	0.24
1970	C	0.24	1970	C	0.25
1971	C	0.24	1971	C	0.26
1972	C	0.24	1972	C	0.27
1973	C	0.24	1973	C	0.28
1974	C	0.24	1974	C	0.29
1975	C	0.23	1975	C	0.30
1976	C	0.23	1976	C	0.31
1977	C	0.23	1977	C	0.32
1978	C	0.23	1978	C	0.33
1979	A	0.22	1979	C	0.34
1980	C	0.22	1980	A	0.39
1981	C	0.21	1981	C	0.34
1982	C	0.21	1982	A	0.27
1983	C	0.20	1983	C	0.33
1984	C	0.19	1984	C	0.33
1985	C	0.18	1985	A	0.38

Table 2.--Ground-water pumpage for public supply systems--Continued

Carrollton			Chapman		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.12	1960	D	0.21
1961	C	0.12	1961	D	0.20
1962	C	0.12	1962	D	0.20
1963	C	0.12	1963	D	0.19
1964	C	0.12	1964	D	0.19
1965	C	0.13	1965	D	0.18
1966	C	0.13	1966	D	0.18
1967	C	0.13	1967	D	0.18
1968	C	0.13	1968	D	0.17
1969	C	0.13	1969	D	0.16
1970	C	0.13	1970	D	0.16
1971	C	0.13	1971	D	0.16
1972	C	0.13	1972	D	0.16
1973	C	0.13	1973	D	0.16
1974	C	0.14	1974	D	0.15
1975	C	0.14	1975	D	0.15
1976	C	0.14	1976	D	0.15
1977	C	0.14	1977	D	0.15
1978	C	0.15	1978	D	0.15
1979	C	0.15	1979	D	0.15
1980	C	0.15	1980	B	0.15
1981	C	0.15	1981	D	0.15
1982	C	0.14	1982	D	0.14
1983	C	0.14	1983	D	0.14
1984	A	0.13	1984	D	0.14
1985	C	0.13	1985	D	0.14

Table 2.—Ground-water pumpage for public supply systems—Continued

Chilton County			Clio		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960			1960	C	0.56
1961			1961	C	0.56
1962			1962	C	0.55
1963			1963	C	0.55
1964			1964	C	0.54
1965			1965	C	0.54
1966			1966	C	0.53
1967			1967	C	0.53
1968			1968	C	0.52
1969			1969	C	0.52
1970	Started pumping in		1970	C	0.51
1971			1971	C	0.51
1972	December 1979		1972	C	0.51
1973			1973	C	0.51
1974			1974	C	0.51
1975			1975	C	0.51
1976			1976	C	0.51
1977			1977	C	0.50
1978			1978	C	0.50
1979			1979	C	0.50
1980			1980	A	0.50
1981	A	0.43	1981	C	0.50
1982	A	0.49	1982	C	0.50
1983	A	0.57	1983	C	0.50
1984	A	0.64	1984	C	0.49
1985	A	0.80	1985	C	0.49

Table 2.--Ground-water pumpage for public supply systems--Continued

Columbia			Daleville		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.09	1960	C	0.08
1961	C	0.09	1961	C	0.14
1962	C	0.09	1962	C	0.19
1963	C	0.09	1963	C	0.25
1964	C	0.10	1964	C	0.30
1965	C	0.10	1965	C	0.36
1966	C	0.10	1966	C	0.41
1967	C	0.10	1967	C	0.47
1968	C	0.10	1968	C	0.52
1969	C	0.10	1969	C	0.58
1970	C	0.10	1970	C	0.63
1971	C	0.10	1971	C	0.62
1972	C	0.10	1972	C	0.61
1973	C	0.10	1973	C	0.60
1974	C	0.10	1974	C	0.59
1975	C	0.10	1975	C	0.58
1976	C	0.10	1976	C	0.56
1977	C	0.10	1977	C	0.55
1978	C	0.10	1978	C	0.54
1979	C	0.10	1979	C	0.53
1980	C	0.10	1980	A	0.53
1981	C	0.10	1981	C	0.53
1982	A	0.06	1982	A	0.55
1983	C	0.09	1983	A	0.53
1984	A	0.12	1984	A	0.56
1985	A	0.12	1985	A	0.62

Table 2.--Ground-water pumpage for public supply systems--Continued

Demopolis			Dothan		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	1.28	1960	A	2.62
1961	C	1.28	1961	A	2.72
1962	C	1.29	1962	A	2.97
1963	C	1.29	1963	A	2.93
1964	C	1.29	1964	A	2.97
1965	C	1.30	1965	A	3.25
1966	C	1.30	1966	A	3.52
1967	C	1.31	1967	A	3.61
1968	C	1.31	1968	A	3.81
1969	C	1.31	1969	A	3.73
1970	C	1.32	1970	A	4.18
1971	C	1.32	1971	A	4.38
1972	C	1.32	1972	A	5.11
1973	C	1.32	1973	A	5.58
1974	C	1.32	1974	A	6.24
1975	C	1.32	1975	A	6.86
1976	C	1.32	1976	A	6.32
1977	C	1.32	1977	A	7.28
1978	A	1.40	1978	A	7.65
1979	A	1.45	1979	A	8.42
1980	A	1.26	1980	A	8.74
1981	A	1.30	1981	A	8.90
1982	A	1.26	1982	A	9.33
1983	A	1.23	1983	C	9.72
1984	A	1.35	1984	C	10.12
1985	C	1.34	1985	A	10.08

Table 2.--Ground-water pumpage for public supply systems--Continued

East Brewton			Elba		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.18	1960	C	0.75
1961	C	0.18	1961	C	0.75
1962	C	0.18	1962	C	0.76
1963	C	0.18	1963	C	0.76
1964	C	0.18	1964	C	0.76
1965	C	0.18	1965	C	0.77
1966	C	0.18	1966	C	0.77
1967	C	0.17	1967	C	0.77
1968	C	0.17	1968	C	0.78
1969	C	0.17	1969	C	0.78
1970	C	0.17	1970	C	0.79
1971	C	0.18	1971	C	0.79
1972	C	0.18	1972	C	0.79
1973	C	0.19	1973	C	0.79
1974	C	0.19	1974	C	0.79
1975	C	0.20	1975	C	0.79
1976	C	0.20	1976	C	0.79
1977	C	0.21	1977	C	0.79
1978	C	0.21	1978	C	0.79
1979	C	0.22	1979	C	0.79
1980	A	0.22	1980	C	0.79
1981	C	0.22	1981	C	0.79
1982	C	0.22	1982	C	0.80
1983	C	0.22	1983	C	0.80
1984	C	0.21	1984	A	0.80
1985	C	0.21	1985	C	0.80

Table 2.--Ground-water pumpage for public supply systems--Continued

Enterprise			Eufaula		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	1.47	1960	C	0.98
1961	C	1.52	1961	C	0.99
1962	C	1.57	1962	C	1.00
1963	C	1.63	1963	C	1.01
1964	C	1.68	1964	C	1.02
1965	C	1.73	1965	C	1.03
1966	C	1.79	1966	C	1.03
1967	C	1.84	1967	C	1.04
1968	C	1.89	1968	C	1.05
1969	C	1.95	1969	C	1.06
1970	C	2.00	1970	C	1.16
1971	C	2.05	1971	C	1.20
1972	C	2.09	1972	C	1.23
1973	C	2.13	1973	C	1.26
1974	C	2.18	1974	C	1.29
1975	C	2.22	1975	C	1.33
1976	C	2.27	1976	C	1.36
1977	C	2.31	1977	C	1.39
1978	C	2.36	1978	C	1.43
1979	C	2.40	1979	C	1.46
1980	A	2.82	1980	A	1.66
1981	A	2.55	1981	C	1.48
1982	A	2.33	1982	A	1.83
1983	C	2.58	1983	C	1.45
1984	A	2.45	1984	C	1.43
1985	F	2.81	1985	A	1.12

Table 2.--Ground-water pumpage for public supply systems--Continued

Eutaw			Evergreen		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.43	1960	C	0.67
1961	C	0.43	1961	C	0.67
1962	C	0.43	1962	C	0.68
1963	C	0.43	1963	C	0.68
1964	C	0.43	1964	C	0.68
1965	C	0.43	1965	C	0.69
1966	C	0.43	1966	C	0.69
1967	C	0.43	1967	C	0.69
1968	C	0.43	1968	C	0.70
1969	C	0.43	1969	C	0.70
1970	C	0.43	1970	C	0.70
1971	C	0.42	1971	C	0.71
1972	C	0.42	1972	C	0.71
1973	C	0.41	1973	C	0.72
1974	C	0.41	1974	C	0.72
1975	C	0.40	1975	C	0.73
1976	C	0.40	1976	C	0.73
1977	C	0.39	1977	C	0.73
1978	C	0.38	1978	C	0.74
1979	C	0.38	1979	C	0.74
1980	A	0.34	1980	C	0.75
1981	C	0.37	1981	C	0.73
1982	C	0.37	1982	A	0.60
1983	C	0.36	1983	A	0.68
1984	A	0.40	1984	A	0.75
1985	C	0.36	1985	A	0.96

Table 2.--Ground-water pumpage for public supply systems--Continued

Geneva			Georgiana		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.35	1960	C	0.25
1961	C	0.35	1961	C	0.25
1962	C	0.36	1962	C	0.25
1963	C	0.36	1963	C	0.25
1964	C	0.37	1964	C	0.25
1965	C	0.37	1965	C	0.25
1966	C	0.38	1966	C	0.25
1967	C	0.38	1967	C	0.25
1968	C	0.39	1968	C	0.26
1969	C	0.39	1969	C	0.26
1970	C	0.40	1970	C	0.26
1971	C	0.40	1971	C	0.25
1972	C	0.41	1972	C	0.25
1973	C	0.41	1973	C	0.25
1974	C	0.41	1974	C	0.25
1975	C	0.42	1975	C	0.25
1976	C	0.42	1976	C	0.25
1977	C	0.43	1977	C	0.24
1978	C	0.43	1978	C	0.24
1979	C	0.43	1979	A	0.22
1980	C	0.44	1980	A	0.23
1981	C	0.43	1981	A	0.23
1982	A	0.42	1982	A	0.24
1983	A	0.36	1983	A	0.24
1984	A	0.42	1984	A	0.24
1985	C	0.37	1985	E	0.24

Table 2.--Ground-water pumpage for public supply systems--Continued

Gordo			Greensboro		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.12	1960	C	0.42
1961	C	0.13	1961	C	0.43
1962	C	0.13	1962	C	0.43
1963	C	0.13	1963	C	0.43
1964	C	0.13	1964	C	0.44
1965	A	0.12	1965	C	0.44
1966	A	0.14	1966	C	0.44
1967	A	0.13	1967	C	0.45
1968	A	0.10	1968	C	0.45
1969	A	0.17	1969	C	0.46
1970	A	0.16	1970	C	0.51
1971	A	0.13	1971	C	0.52
1972	A	0.15	1972	C	0.53
1973	A	0.18	1973	C	0.55
1974	A	0.18	1974	C	0.57
1975	A	0.19	1975	C	0.99
1976	A	0.21	1976	C	1.00
1977	A	0.23	1977	C	1.02
1978	A	0.25	1978	C	1.03
1979	A	0.23	1979	C	1.05
1980	A	0.28	1980	A	1.04
1981	A	0.26	1981	A	1.09
1982	A	0.28	1982	C	1.09
1983	A	0.25	1983	C	1.10
1984	A	0.29	1984	C	1.12
1985	A	0.30	1985	C	1.13

Table 2.—Ground-water pumpage for public supply systems—Continued

Greenville			Hartford		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.87	1960	C	0.21
1961	C	0.89	1961	C	0.22
1962	C	0.90	1962	C	0.22
1963	C	0.92	1963	C	0.23
1964	C	0.93	1964	C	0.24
1965	C	0.95	1965	C	0.24
1966	C	0.96	1966	C	0.25
1967	C	0.98	1967	C	0.26
1968	C	0.99	1968	C	0.27
1969	C	1.00	1969	C	0.27
1970	C	1.02	1970	C	0.28
1971	C	1.02	1971	C	0.28
1972	C	1.01	1972	C	0.28
1973	C	1.01	1973	C	0.28
1974	C	1.01	1974	C	0.28
1975	C	1.00	1975	C	0.28
1976	C	1.00	1976	C	0.28
1977	C	1.00	1977	C	0.28
1978	C	1.00	1978	C	0.28
1979	C	0.99	1979	C	0.28
1980	C	0.99	1980	A	0.28
1981	C	0.99	1981	A	0.26
1982	A	1.00	1982	A	0.28
1983	C	1.01	1983	A	0.24
1984	C	1.01	1984	C	0.25
1985	C	1.02	1985	A	0.30

Table 2.--Ground-water pumpage for public supply systems--Continued

Headland			Holtville		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.37	1960		
1961	C	0.37	1961		
1962	C	0.37	1962		
1963	C	0.37	1963		
1964	C	0.37	1964		
1965	C	0.36	1965		
1966	C	0.36	1966		
1967	C	0.36	1967	Started pumping in	
1968	C	0.36	1968		
1969	C	0.36	1969	1974	
1970	C	0.36	1970		
1971	C	0.37	1971		
1972	C	0.38	1972		
1973	C	0.39	1973		
1974	C	0.40	1974	E	0.08
1975	C	0.41	1975	E	0.10
1976	C	0.42	1976	E	0.12
1977	C	0.43	1977	E	0.14
1978	C	0.44	1978	E	0.17
1979	C	0.46	1979	E	0.19
1980	C	0.47	1980	A	0.24
1981	C	0.46	1981	A	0.26
1982	C	0.45	1982	A	0.27
1983	A	0.53	1983	A	0.27
1984	C	0.44	1984	A	0.27
1985	A	0.37	1985	A	0.27

Table 2.--Ground-water pumpage for public supply systems--Continued

Ladonia-Crawford			Linden		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960			1960	C	0.25
1961			1961	C	0.26
1962			1962	C	0.26
1963			1963	C	0.26
1964			1964	C	0.26
1965			1965	C	0.26
1966	Started pumping in		1966	C	0.26
1967			1967	C	0.27
1968	1972		1968	C	0.27
1969			1969	C	0.27
1970			1970	C	0.27
1971			1971	C	0.27
1972	E	0.19	1972	C	0.27
1973	E	0.22	1973	C	0.27
1974	E	0.25	1974	C	0.27
1975	E	0.28	1975	C	0.28
1976	E	0.31	1976	C	0.28
1977	A	0.35	1977	C	0.28
1978	A	0.34	1978	C	0.28
1979	A	0.45	1979	C	0.28
1980	A	0.44	1980	C	0.28
1981	A	0.45	1981	C	0.28
1982	A	0.58	1982	C	0.28
1983	A	0.58	1983	C	0.28
1984	A	0.59	1984	A	0.28
1985	F	0.56	1985	C	0.28

Table 2.--Ground-water pumpage for public supply systems--Continued

Luverne			Maplesville		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.36	1960	C	0.06
1961	C	0.36	1961	C	0.06
1962	C	0.37	1962	C	0.06
1963	C	0.37	1963	C	0.06
1964	C	0.37	1964	C	0.06
1965	C	0.37	1965	C	0.06
1966	C	0.38	1966	C	0.06
1967	C	0.38	1967	C	0.06
1968	C	0.38	1968	C	0.06
1969	C	0.39	1969	C	0.06
1970	C	0.39	1970	C	0.06
1971	C	0.39	1971	C	0.06
1972	C	0.40	1972	C	0.06
1973	C	0.40	1973	C	0.06
1974	C	0.40	1974	C	0.06
1975	C	0.41	1975	C	0.07
1976	C	0.41	1976	C	0.07
1977	C	0.42	1977	C	0.07
1978	C	0.42	1978	C	0.07
1979	C	0.43	1979	C	0.07
1980	C	0.43	1980	A	0.07
1981	C	0.43	1981	C	0.07
1982	F	0.44	1982		
1983	A	0.47	1983	Started Purchasing	
1984	A	0.40	1984	from Chilton Co.	
1985	A	0.42	1985		

Table 2.--Ground-water pumpage for public supply systems--Continued

Marion			Monroeville		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.41	1960	C	1.39
1961	C	0.41	1961	C	1.40
1962	C	0.42	1962	C	1.41
1963	C	0.42	1963	C	1.42
1964	C	0.43	1964	C	1.43
1965	C	0.43	1965	C	1.44
1966	C	0.44	1966	C	1.45
1967	C	0.44	1967	C	1.46
1968	C	0.45	1968	C	1.47
1969	C	0.45	1969	C	1.48
1970	C	0.46	1970	C	1.49
1971	C	0.46	1971	C	1.50
1972	C	0.46	1972	C	1.53
1973	C	0.46	1973	C	1.57
1974	C	0.46	1974	C	1.61
1975	C	0.46	1975	C	1.62
1976	C	0.47	1976	C	1.64
1977	C	1.13	1977	C	1.65
1978	C	1.13	1978	C	1.67
1979	C	1.13	1979	C	1.68
1980	A	0.88	1980	C	1.70
1981	A	0.92	1981	A	1.84
1982	A	1.36	1982	A	1.69
1983	A	1.28	1983	A	1.67
1984	A	1.32	1984	A	1.62
1985	A	1.43	1985	A	1.90

Table 2.--Ground-water pumpage for public supply systems--Continued

Montgomery			Moundville		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	8.87	1960	C	0.13
1961	C	8.86	1961	C	0.13
1962	C	8.86	1962	C	0.13
1963	C	8.85	1963	C	0.13
1964	C	8.84	1964	C	0.13
1965	C	8.84	1965	C	0.13
1966	C	8.83	1966	C	0.13
1967	A	8.44	1967	C	0.14
1968	A	10.16	1968	C	0.14
1969	A	10.57	1969	C	0.14
1970	A	10.78	1970	C	0.37
1971	A	9.73	1971	C	0.34
1972	A	11.88	1972	C	0.34
1973	A	12.02	1973	C	0.35
1974	A	11.65	1974	C	0.35
1975	A	12.25	1975	C	0.36
1976	A	12.71	1976	C	0.36
1977	A	12.43	1977	C	0.37
1978	A	12.95	1978	C	0.37
1979	A	12.58	1979	A	0.21
1980	A	13.44	1980	A	0.30
1981	A	14.85	1981	A	0.44
1982	A	10.12	1982	A	0.51
1983	A	8.64	1983	A	0.54
1984	A	9.34	1984	A	0.57
1985	A	10.82	1985	A	0.43

Table 2.--Ground-water pumpage for public supply systems--Continued

Opp			Ozark		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.63	1960	C	0.89
1961	C	0.64	1961	C	0.93
1962	C	0.65	1962	C	0.96
1963	C	0.66	1963	C	1.00
1964	C	0.67	1964	C	1.04
1965	C	0.68	1965	C	1.07
1966	C	0.69	1966	A	0.93
1967	C	0.70	1967	A	1.09
1968	C	0.72	1968	A	1.21
1969	C	0.73	1969	A	1.36
1970	C	0.74	1970	A	1.44
1971	C	0.75	1971	A	1.49
1972	C	0.75	1972	A	1.65
1973	C	0.76	1973	A	1.51
1974	C	0.77	1974	A	1.45
1975	C	0.78	1975	A	1.35
1976	C	0.79	1976	A	1.39
1977	C	0.79	1977	A	1.35
1978	C	0.80	1978	A	1.58
1979	C	0.81	1979	A	1.51
1980	C	0.82	1980	A	1.72
1981	C	0.82	1981	A	1.82
1982	A	1.06	1982	A	1.87
1983	C	0.82	1983	A	1.77
1984	A	0.67	1984	A	1.84
1985	C	0.82	1985	A	2.00

Table 2.--Ground-water pumpage for public supply systems--Continued

Prattville			Quint-Mar		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	1.25	1960		
1961	C	1.31	1961		
1962	C	1.37	1962		
1963	C	1.43	1963		
1964	C	1.49	1964		
1965	C	1.55	1965		
1966	C	1.61	1966		
1967	C	1.67	1967		
1968	C	1.73	1968		
1969	C	1.79	1969	Started pumping in	
1970	C	1.85	1970		
1971	C	1.91	1971	April 1979	
1972	C	1.98	1972		
1973	C	2.04	1973		
1974	C	2.10	1974		
1975	C	2.16	1975		
1976	C	2.22	1976		
1977	C	2.28	1977		
1978	C	2.34	1978		
1979	C	2.40	1979	H	0.09
1980	A	2.75	1980	E	0.12
1981	A	2.61	1981	E	0.15
1982	A	2.44	1982	E	0.18
1983	A	2.40	1983	A	0.20
1984	A	2.79	1984	A	0.26
1985	A	2.81	1985	H	0.25

Table 2.--Ground-water pumpage for public supply systems--Continued

Reform			Rutledge		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.28	1960	Started pumping	
1961	C	0.29	1961	in 1964	
1962	C	0.30	1962		
1963	C	0.31	1963		
1964	C	0.32	1964	C	0.06
1965	C	0.33	1965	C	0.06
1966	C	0.34	1966	C	0.06
1967	C	0.35	1967	C	0.06
1968	C	0.36	1968	C	0.06
1969	C	0.37	1969	C	0.06
1970	C	0.38	1970	C	0.07
1971	C	0.39	1971	C	0.07
1972	C	0.39	1972	C	0.07
1973	C	0.40	1973	C	0.07
1974	C	0.40	1974	C	0.08
1975	C	0.41	1975	C	0.08
1976	C	0.41	1976	C	0.08
1977	C	0.42	1977	C	0.08
1978	C	0.42	1978	C	0.09
1979	C	0.43	1979	C	0.09
1980	C	0.44	1980	A	0.09
1981	C	0.43	1981	C	0.09
1982	A	0.44	1982	C	0.09
1983	C	0.43	1983	A	0.09
1984	A	0.42	1984	C	0.09
1985	C	0.43	1985	C	0.09

Table 2.--Ground-water pumpage for public supply systems--Continued

Selma			Thomasville		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	F	2.35	1960	C	0.30
1961	A	2.50	1961	C	0.30
1962	A	2.85	1962	C	0.31
1963	A	2.92	1963	C	0.31
1964	A	2.76	1964	C	0.32
1965	A	2.98	1965	C	0.32
1966	A	3.19	1966	C	0.33
1967	A	3.03	1967	C	0.33
1968	A	3.50	1968	C	0.34
1969	A	3.36	1969	C	0.34
1970	A	3.41	1970	C	0.35
1971	A	3.54	1971	C	0.36
1972	A	3.65	1972	C	0.37
1973	A	3.70	1973	C	0.37
1974	A	3.62	1974	C	0.38
1975	A	3.60	1975	C	0.38
1976	A	3.63	1976	C	0.39
1977	A	3.89	1977	C	0.39
1978	A	4.00	1978	A	0.40
1979	A	4.45	1979	C	0.42
1980	A	4.43	1980	A	0.40
1981	A	4.34	1981	C	0.45
1982	A	4.41	1982	A	0.52
1983	A	4.04	1983	C	0.49
1984	A	4.05	1984	C	0.51
1985	F	4.47	1985	C	0.53

Table 2.--Ground-water pumpage for public supply systems--Continued

Thorsby			Tri-Community		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.12	1960	Started pumping	
1961	C	0.12	1961	in 1963	
1962	C	0.12	1962		
1963	C	0.12	1963	I	0.04
1964	C	0.12	1964	I	0.04
1965	C	0.12	1965	I	0.04
1966	C	0.12	1966	I	0.04
1967	C	0.12	1967	I	0.04
1968	C	0.12	1968	I	0.04
1969	C	0.11	1969	I	0.04
1970	C	0.11	1970	I	0.09
1971	C	0.12	1971	I	0.09
1972	C	0.13	1972	I	0.09
1973	C	0.13	1973	I	0.21
1974	C	0.14	1974	I	0.21
1975	C	0.14	1975	I	0.21
1976	C	0.15	1976	I	0.21
1977	C	0.15	1977	I	0.21
1978	C	0.16	1978	I	0.21
1979	C	0.17	1979	I	0.44
1980	A	0.16	1980	I	0.44
1981	A	0.16	1981	I	0.44
1982	A	0.17	1982	A	0.49
1983	A	0.17	1983	A	0.40
1984	A	0.19	1984	I	0.44
1985	A	0.19	1985	A	0.44

Table 2.--Ground-water pumpage for public supply systems--Continued

Troy			Union Springs		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	1.36	1960	C	0.38
1961	C	1.38	1961	C	0.38
1962	C	1.39	1962	C	0.39
1963	C	1.41	1963	C	0.73
1964	C	1.42	1964	C	0.74
1965	C	1.44	1965	C	0.74
1966	C	1.46	1966	C	0.75
1967	C	1.47	1967	C	0.79
1968	C	1.49	1968	C	0.80
1969	C	1.70	1969	C	0.80
1970	C	1.72	1970	C	0.81
1971	C	1.76	1971	C	0.81
1972	C	1.75	1972	A	0.81
1973	C	1.77	1973	A	0.83
1974	C	1.79	1974	A	0.74
1975	A	1.56	1975	A	0.79
1976	A	1.79	1976	A	0.91
1977	A	1.85	1977	A	0.78
1978	A	2.14	1978	A	0.79
1979	A	2.24	1979	A	0.88
1980	A	2.24	1980	A	0.81
1981	A	2.30	1981	A	0.80
1982	A	2.49	1982	A	0.72
1983	A	2.54	1983	A	0.82
1984	A	2.81	1984	A	0.86
1985	G	2.92	1985	A	1.10

Table 2.--Ground-water pumpage for public supply systems--Continued

Uniontown			Vernon		
Year	Source of data	Pumpage Mgal/d	Year	Source of data	Pumpage Mgal/d
1960	C	0.42	1960	C	0.30
1961	C	0.42	1961	C	0.32
1962	C	0.41	1962	C	0.33
1963	C	0.41	1963	C	0.34
1964	C	0.40	1964	C	0.36
1965	C	0.40	1965	C	0.37
1966	C	0.39	1966	C	0.39
1967	C	0.38	1967	C	0.40
1968	C	0.38	1968	C	0.41
1969	C	0.37	1969	C	0.43
1970	C	0.37	1970	C	0.44
1971	C	0.37	1971	C	0.45
1972	C	0.37	1972	C	0.46
1973	C	0.36	1973	C	0.47
1974	C	0.36	1974	C	0.48
1975	C	0.36	1975	C	0.49
1976	C	0.36	1976	C	0.49
1977	C	0.36	1977	C	0.50
1978	C	0.36	1978	C	0.51
1979	C	0.36	1979	C	0.52
1980	C	0.35	1980	C	0.53
1981	C	0.35	1981	C	0.53
1982	C	0.35	1982	C	0.52
1983	A	0.35	1983	A	0.48
1984	C	0.35	1984	A	0.56
1985	C	0.35	1985	F	0.79