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WATER-LEVEL CONDITIONS IN THE UPPER FLORIDAN AQUIFER
IN THE SOUTH CAROLINA LOW COUNTRY,
MAY 1985

By

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Division of Geology and Hydrology
South Carolina Water Resources Commission

Report OF 13

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I. Introduction

Water levels in selected wells finished in the Floridan aquifer in Beaufort, Jasper, Colleton, and Hampton Counties were measured between May 13 and 16, 1985. The monitoring network was generally the same as described in "Water levels in the upper permeable zone of the Floridan aquifer in the South Carolina Low Country, March 1985" by Crouch and others(1985). Procedures and analysis are also the same. Differences in the network are shown in Section III of this report.

The May 1985 water level run was done at the request of Peter Bush of the U. S. Geological Survey in order that the data could be compared to similar data from Georgia and Florida. The following is a report based upon the South Carolina data. This report should be viewed as a follow up to the above mentioned report and is not self-sufficient.

II. Summary

- 1) Four County Area (Fig. 1) - Generally, the shape of the potentiometric contours are similar to those in March 1985. The contours did move upgradient from their March positions, indicating water level declines of 1 to 4 feet throughout the study area. (These declines are illustrated by selected hydrographs in Figure 6.) This decline is probably caused by increased ground water pumping and lack of precipitation in winter months. Water use and precipitation data are shown in Section V of this report. The May map is more accurate near the Georgia boundary owing to data obtained on the other side of the Savannah River in May. Discussion of site specific changes since March 1985 follows.
- 2) Ladies/St. Helena Islands (Fig. 3) - This area was subject to the most dramatic changes in the 4-county area.
 - a) Generally, water levels dropped .5 to 2 feet.
 - b) A cone of depression has formed in grid areas 26II and 26JJ where a recharge mound was in March. (This is an area of large pumping for irrigation.)
 - c) Water levels are roughly 2 feet lower throughout the recharge mound on Ladies Island. The potentiometric high is down to 12.35 ft above msl in 26HH-h3. In March the same well produced a water level of 14.05 ft above msl.
 - d) A cone of depression has formed at Pleasant Point Golf Course (27HH-f and 27HH-g) with water levels in 27HH-j2 down to -2.43 ft msl from +3.89 msl in March.
 - e) Water levels are up 1 to 2 feet at Datha Island.
 - f) Water levels are up .2 to .7 feet at Fripp Island.

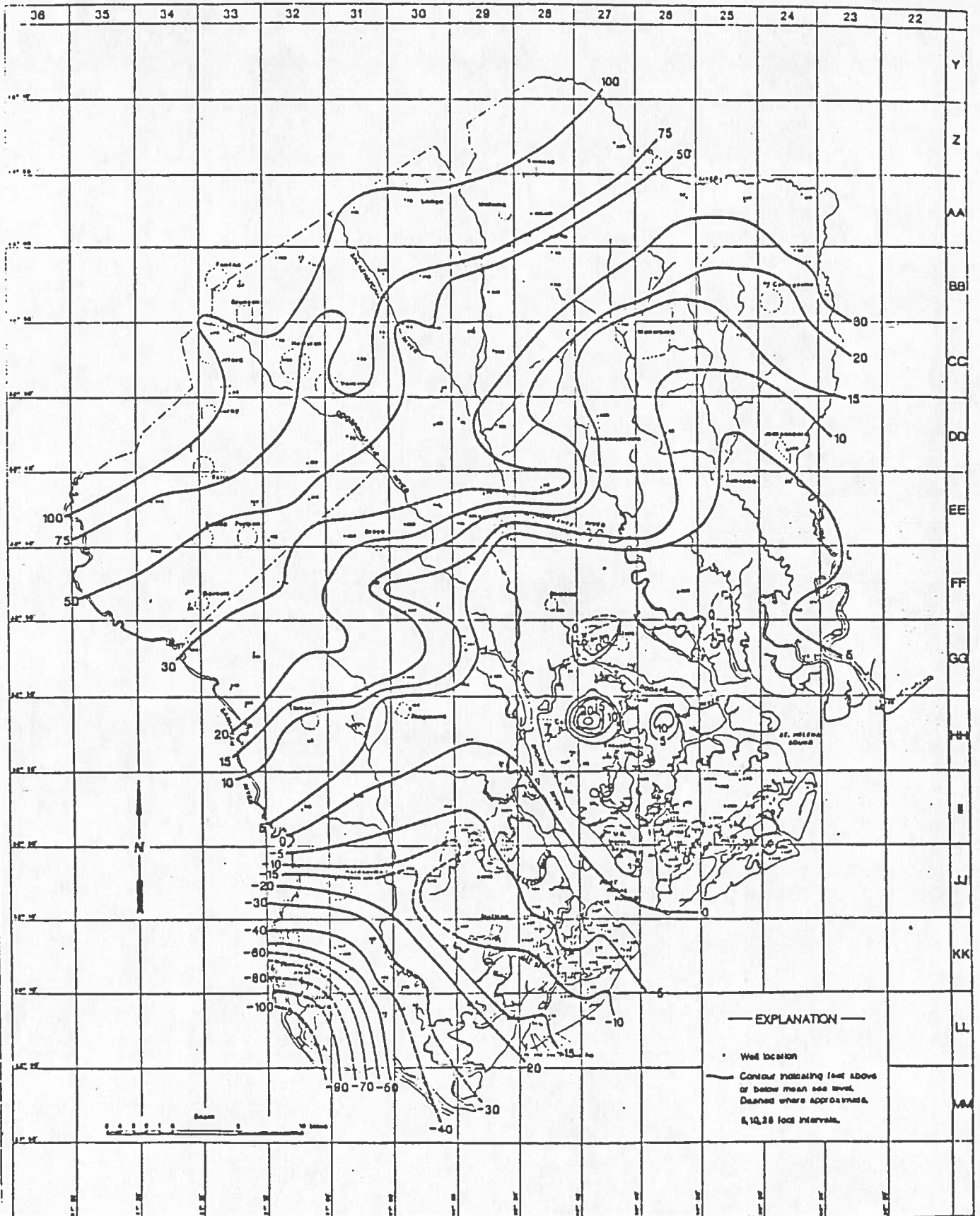


Figure 1. Potentiometric surface of the Floridan aquifer in May, 1985.

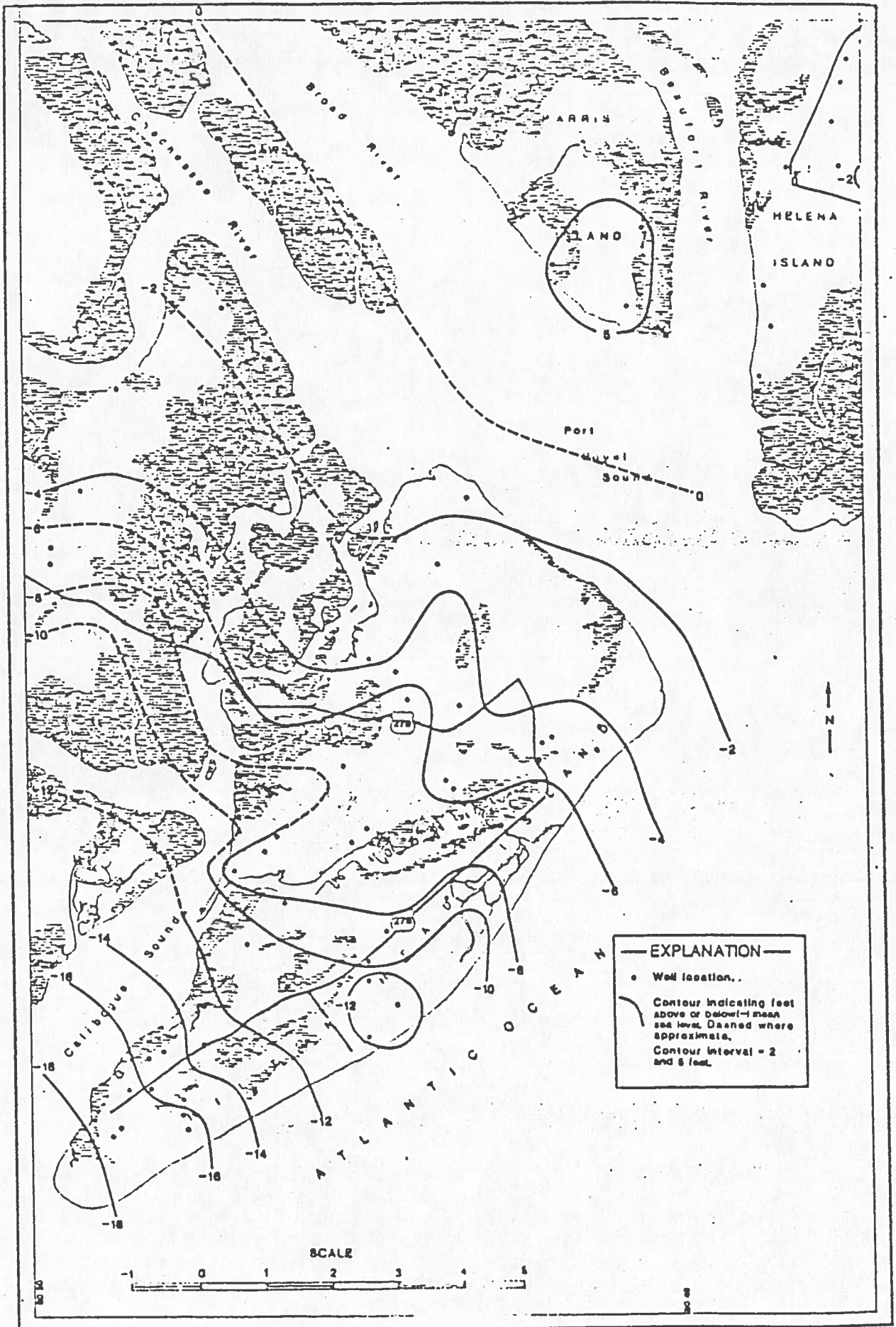


Figure 2. Water level contours of the upper Floridan aquifer, May 1985, Hilton Head Island area.

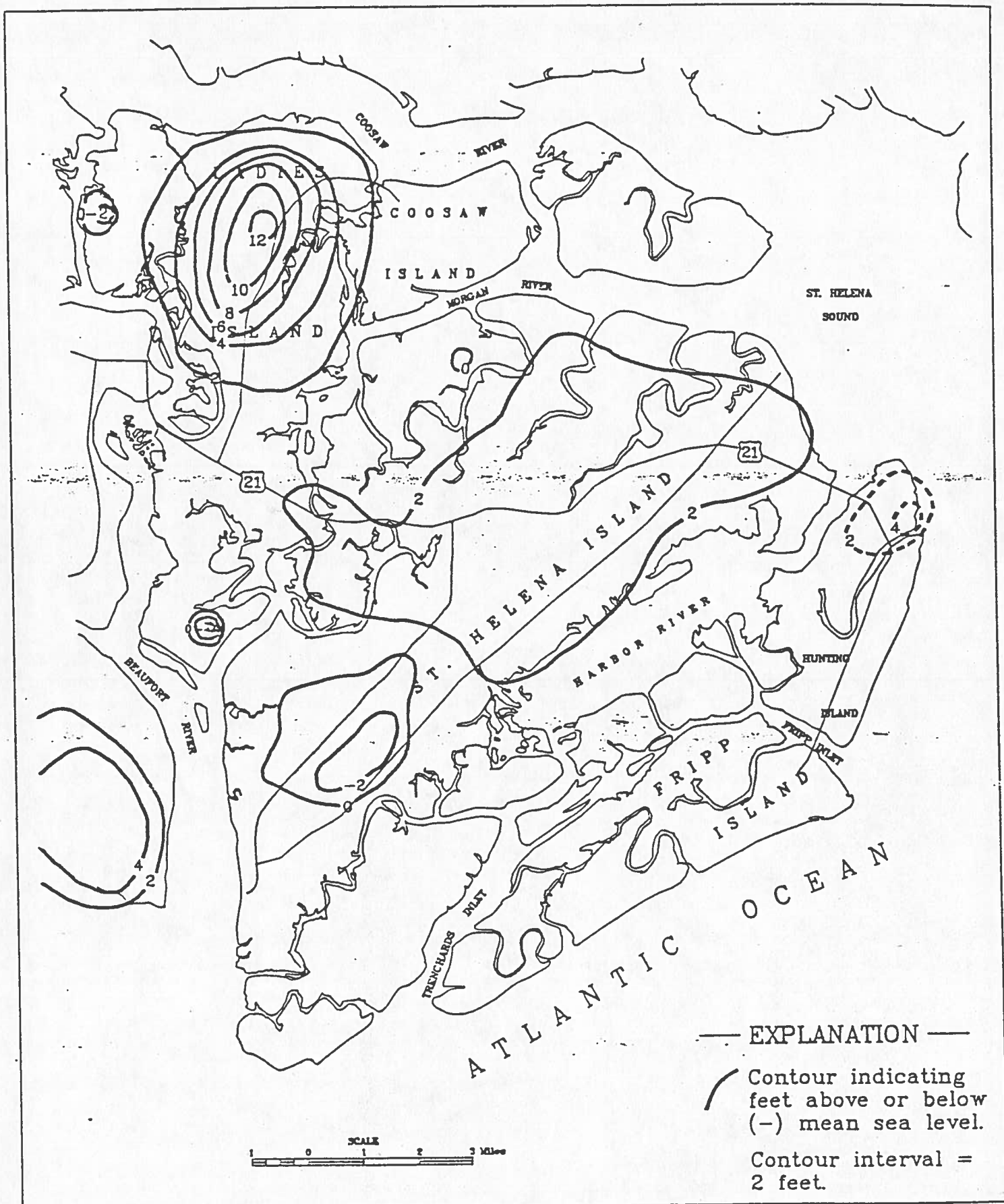


Figure 3 Water levels in the Floridan Aquifer, May 1985.

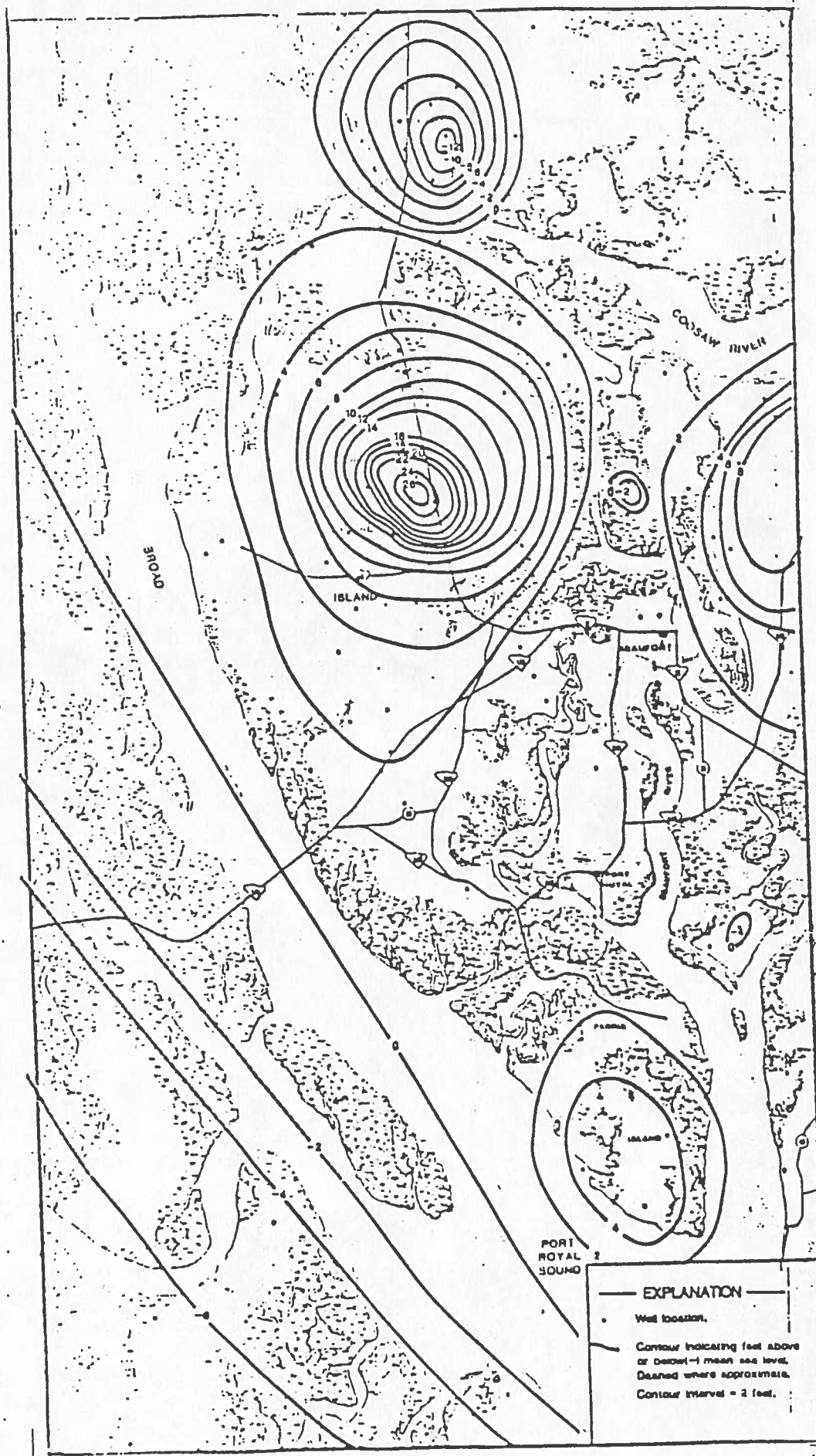


Figure 4. Potentiometric surface of the Floridan aquifer, Port Royal Island, May 1985.

- 3) Port Royal Island (Fig. 4)
 - a) Water levels have dropped .5 to 3 feet throughout the island.
 - b) Water levels have dropped 1 to 3 feet at the higher potentiometric levels.
- 4) Southern Jasper County (Fig. 1) - The shape of the contours has changed in this area owing to better definition from additional data points.
- 5) Walterboro Area (Fig. 1) - Variations in contours around Walterboro are caused by a scarcity of good data, causing contours to be highly interpretive.
- 6) Hilton Head Island Area (Fig. 2) - a) Water levels have dropped about .5 feet on the northern end of the island and up to 2 feet on the southern end of the island. b) There now exists a cone of depression in the Forest Beach area.

III. Water Level Monitoring Network

- A) 298 wells were measured in May 1985.
 - 1) 27 wells in Hampton County
 - 2) 34 wells in Colleton County
 - 3) 56 wells in Hilton Head Island/Bluffton Area
 - 4) 40 wells in Jasper County
 - 5) 77 wells in Ladies/St. Helena Islands Area
 - 6) 64 wells in Port Royal Island Area
- B) The following is a breakdown of wells added since March and wells not measured since March.

Wells Added

Wells Subtracted

Port Royal Island Area

None

28II-j3 Location questionable
 28II-bl Pumping
 28II-a3 Tape cannot go down
 28HH-j2 Pumping
 27HH-d2 Doberman
 28GG-w3 Pumping

Ladies/St. Helena Islands Area

27II-a6
 26II-o4
 26II-o5
 25HH-v3
 25II-p3

26II-o3 Gate locked
 25II-e3
 25HH-x7 Area overgrown
 25HH-v5 New pump on well
 24II-dl Need key

<u>Wells Added</u>	<u>Wells Subtracted</u>
None	26LL-11 Pumping
	26JJ-h4 Cannot get tape down
	26JJ-b3 No access
	26II-v3 Overgrown
	25II-m2 Well being sampled

Hilton Head Island Area

29JJ-e12	27KK-e5 Pumping
27KK-f13	27KK-i2 Pumping
27KK-n15	28LL-b1 Pumping
27KK-f12	28LL-m1 Could not find
27KK-g3	28LL-j4 Pumping
28KK-s13	28KK-f3
27KK-l2	29II-x8 Locked
27KK-xl	
27LL-e2	
28KK-v2	
28LL-n5	
28LL-m3	

Jasper County

31KK-i2	31KK-e1 Locked
32LL-b1	31KK-n1 Locked
32HH-il	
33GG-cl	
32GG-m1	
32FF-ul	
32EE-t1	
31EE-s2	
29GG-s1	
30GG-gl	
31HH-a2	
31GG-xl	

Hampton County

33CC-w1	33DD-y6 Pumping
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Colleton County

24GG-k2	24BB-ol No access
	26Z-x2 Tape wet
	30AA-v1 Pumping

C) The following is a list of wells traditionally measured which presented problems in measuring. These wells are in addition to the wells mentioned in Section III-B.

- a) 33GG-x1 Flowing. Pressure gauge will not fit casing
- b) 26FF-c3 Chickens in well house
- c) 24FF-v1 Taken off run at owner's request
- d) 26DD-n2 Welded shut
- e) 29FF-e1 Flowing. Cannot measure pressure.
- f) 33CC-d1 Flowing. Cannot measure pressure.
- g) 33CC-h2 Flowing. Cannot measure pressure.
- h) 34FF-s2 Flowing. Cannot measure pressure.
- i) 33CC-h1 Filled with sand.
- j) 32BB-m1 Owner says not to disturb chickens in pump house.
- k) 29JJ-g2 Need key.
- l) 28KK-l3 Could not find.
- m) 27JJ-g1 Blocked at 40 feet.
- n) 27KK-p4 Pump house locked.
- o) 27KK-h2 Need key.
- p) 27KK-b12 Cannot get tape down.
- q) 28LL-m6 Tape broke in well.
- r) 28LL-m2 Tape broke in well.
- s) 28JJ-n1 Well blocked at 50 feet.
- t) 29II-t2 Dogs
- u) 28II-a3 Cannot get tape down.
- v) 27HH-s1 Cannot locate.
- w) 27II-il Need air pump.
- x) 27HH-d2 Dogs
- y) 27GG-y4 Need key.
- z) 27GG-p3 Need key.
- aa) 26HH-s2 Well under pressure.
- bb) 25HH-x7 Cannot locate.
- cc) 25HH-v5 Pump on well.
- dd) 24II-d1 Need key.

IV. Water Use and Precipitation

- 1) Water use in the Low Country increased in the second quarter of 1985. Total ground water pumpage was 1,951 million gallons in April - June 1985 as opposed to 1,108 million gallons from January - March 1985. Table 1 illustrates pumpage by county. Figure 5 depicts 1-minute grid areas of 5 million gallons pumpage or more.
- 2) The SCWRC collects rainfall data from the 6 sites near Hilton Head. Monthly totals from October 1984 through May 1985 are shown in Table 2.

Seasonal response of water levels to rainfall in the Low Country has not been studied in depth at the present time so firm statements regarding the effects of the 1985 drought cannot be made as of yet.

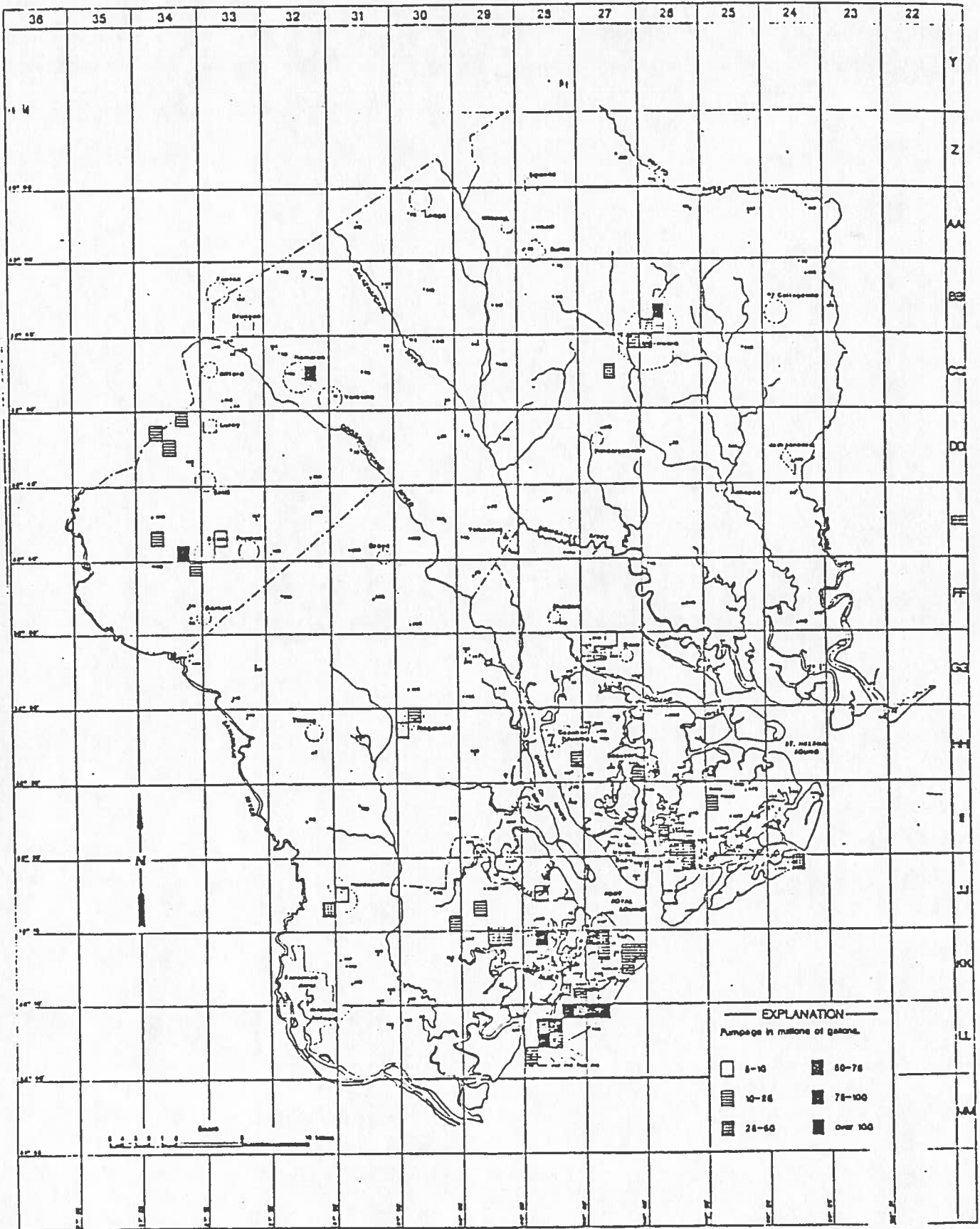


Figure 5. Distribution of pumpage from the Floridan aquifer, April-June 1985.

April - June 1985 (in million gallons)

	Beaufort	Jasper	Colleton	Hampton**
HHI	760.40	84.25	286.06	421.16
Bluffton	126.29			
Ladies Island	.624*			
St. Helena Island	225.491			
Port Royal Island	10.68			
Other	<u>36.90</u>			
	1,160.39			

Total = 1951.86

*Pleasant Point Plantation has not reported for 1985.
Expected usage for April - June is 30mg.

**1984 Data

Table 2. Precipitation Nov. 1984- May 1985

	NOV	DEC	JAN	FEB	MAR	APR	MAY
Bluffton T. H.	3.00	.10	.90	1.60	1.80	4.70	2.10
Waddell Mariculture Center		.10	1.73	1.76	1.72	3.31	1.52
H H Plantation	2.63	.10	1.19	1.55	1.40	2.25	3.10
H H Airport	1.30	Mechanical Problems		.80	1.30	4.00	4.09
H H F. S.	2.50	.10	1.30	1.50	1.40	3.90	1.9
Sea Pines F. S.	2.80	.10	.90	1.40	1.30	3.7	1.30

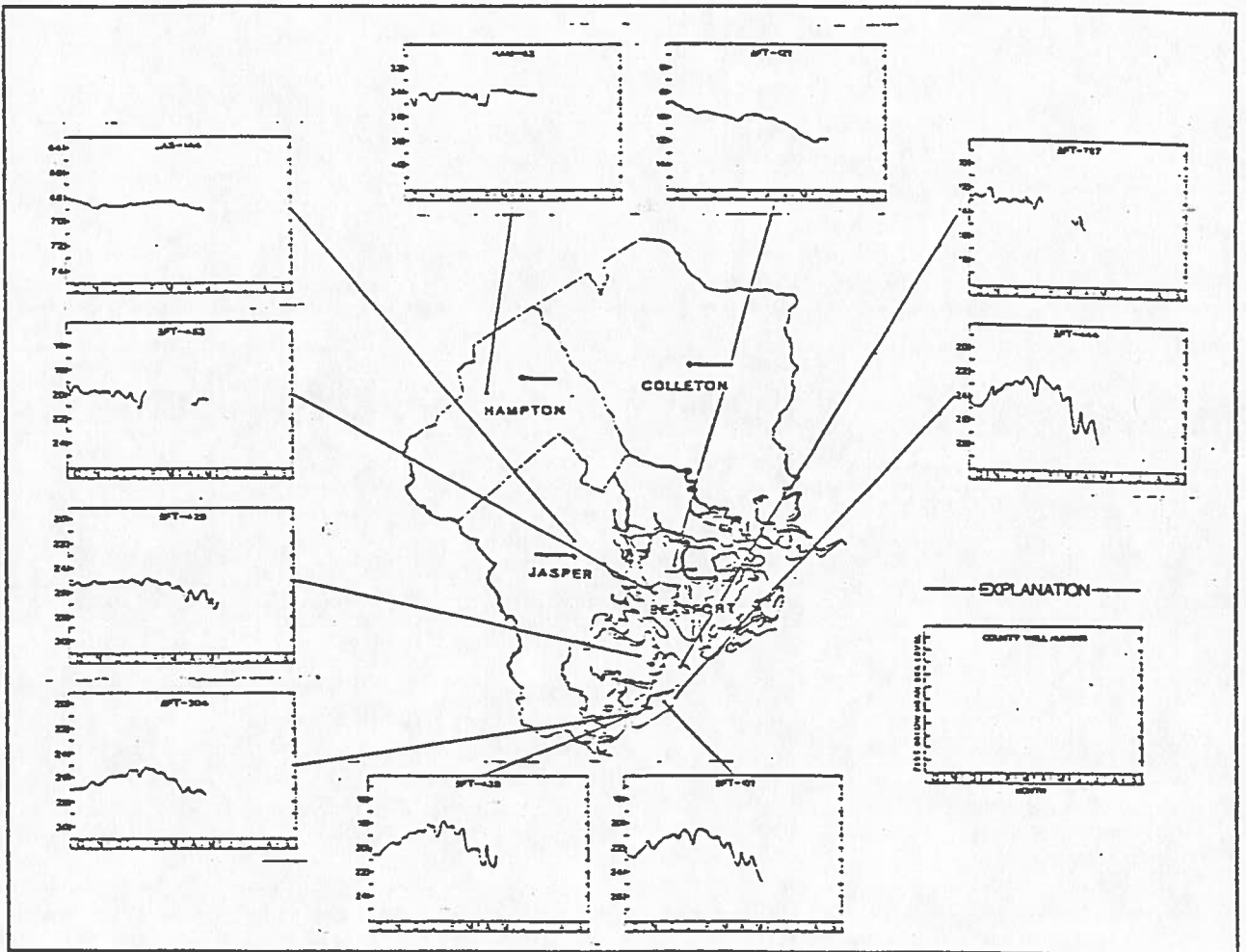


Figure 7. Location of continuous water level recorders and associated hydrographs.

APPENDIX A

SCWRC#	COUNTY#	LAT-LONG	MARCH	MAY	JUNE
23BB-p2	COL-0190	325740 802653	33.64	34.43	33.96
24BB-cl	COL-0052	325930 802752	35.68	35.53	35.01
24BB-h2	COL-0185	325807 802757	23.92	23.61	22.06
24BB-ol	COL-0186	325111 802917	17.44		16.42
24DD-rl	COL-0225	324625 802734	2.31	0.63	0.50
24EE-cl	COL-0096	324411 802709	4.41	5.35	5.22
24FF-wl	COL-0149	323533 802750	4.76	5.09	4.97
24GG-k2	COL-0173	323226 802555		4.78	5.31
24GG-l1	COL-0051	323234 802613	1.84	2.09	2.24
24HH-q4	BFT-1604	322611 802826	1.34	0.23	0.12
24HH-x5	BFT-1542	302528 802831	3.97	2.52	3.02
24II-d1	BFT-0562	322428 802805	3.14		3.02
24II-e3	BFT-0412	322447 802936	4.04	3.07	2.72
24II-f3	BFT-0497	322345 802450	1.41	0.52	0.60
24II-il	BFT-0452	322353 802615	2.29	4.52	3.32
24JJ-cl	BFT-0449	321930 802737	1.44	1.83	0.89
24JJ-d1	BFT-0455	321953 802803	1.20	1.90	1.26
24JJ-el	BFT-0456	321812 802913	1.42	1.60	1.18
25AA-l1	COL-0227	330258 803130	38.80	38.75	37.75
25CC-il	COL-0226	325400 803155	13.00	12.73	12.26
25DD-l1	COL-0224	324702 803155	5.27	5.03	4.25
25FF-q2	COL-0170	323645 803321	-.50	-1.18	
25GG-d1	COL-0094	323405 803329	-1.65	-1.87	-1.98
25HH-n2	BFT-1609	322852 803333	0.82	1.97	2.60
25HH-p2	BFT-1645	322605 803445	0.15	1.02	0.23
25HH-p3	BFT-1457	322639 803441	-.92	0.90	
25HH-p4	BFT-1458	322659 803428		1.35	-.08
25HH-p5	BFT-1459	322617 803432	-.99	-.86	-.79
25HH-r8	BFT-1538	322628 803233	2.48	2.15	2.22
25HH-s3	BFT-1540	322600 803159	2.67	2.76	2.56
25HH-v3	BFT-0595	322515 803133		2.78	
25HH-w5	BFT-1537	322540 803257	2.61	2.46	2.35
25HH-x7	BFT-1535	322553 803316	2.06		
25II-a7	BFT-0488	322431 803048	3.72	2.03	2.49
25II-a8	BFT-1548	322253 803423	3.58	3.20	2.66
25II-cl	BFT-0473	322408 803210	4.49	3.01	3.02
25II-cl8	BFT-1260	322445 803258	3.68	3.02	2.94
25II-d4	BFT-1252	322410 803317	4.57	3.38	3.36
25II-h2	BFT-1514	322331 803243	4.58	3.75	3.48
25II-i3	BFT-1550	322253 803423	2.86	2.24	2.61
25II-m2	BFT-0563	322228 803250	0.97		2.78
25II-p3	BFT-1247	322121 803435		1.23	0.51
25II-q3	BFT-0600	322145 803359	3.16	2.52	2.30
26AA-k1	COL-0097	330251 803556	38.10	37.52	37.15
26DD-n2	COL-0032	324712 803752			1.80
26FF-c3	COL-0243	323908 803710			9.32
26FF-el	COL-0092	323942 803920	3.95	4.26	3.90
26HH-d2	BFT-0782	322915 803813	7.57	8.06	8.08
26HH-d4	BFT-0837	322933 803827	4.40	3.34	3.51
26HH-g2	BFT-0585	322812 803819			15.39
26HH-g8	BFT-1489	322836 803857	8.91	7.81	8.28

APPENDIX

SCWRC#	COUNTY#	LAT-LONG	MARCH	MAY	JUNE
26HH-g9	BFT-1598	322833 803814	13.88		
26HH-h3	BFT-1599	322833 803758	14.05	12.35	11.78
26HH-j13	BFT-1463	322852 803506	1.60	1.65	2.51
26HH-l4	BFT-1605	322702 803646	2.75	2.22	1.54
26HH-m1	BFT-1466	322712 803724	4.93	4.33	4.66
26HH-o2	BFT-1031	322737 803925	6.22	5.33	4.16
26HH-o4	BFT-0830	322725 803903	11.46	7.21	10.17
26HH-p7	BFT-1583	322645 803916	4.66	3.25	3.65
26HH-u3	BFT-1618	322513 803534	1.40	1.92	0.40
26II-a1	BFT-1496	302403 803517	2.57	2.33	1.63
26II-b2	BFT-1511	322441 803617	1.15	1.62	1.31
26II-b4	BFT-1513	322458 803626	2.47	1.72	1.37
26II-e1	BFT-1526	322403 803726	2.24	2.27	2.22
26II-h11	BFT-1417	322319 803702	2.36	2.48	2.97
26II-h3	BFT-1400	322316 803714	1.59	1.27	3.44
26II-h7	BFT-1404	322308 803707	2.39	2.63	2.26
26II-i3	BFT-1518	322304 803645	2.44	2.69	3.08
26II-i5	BFT-1520	322324 803620	5.28	1.96	3.04
26II-i6	BFT-1530	322350 803627	2.53	2.17	1.87
26II-j7	BFT-1527	322350 803540	2.67	1.63	1.46
26II-k3	BFT-1551	322223 803515	2.32	2.04	1.30
26II-l1	BFT-0470	322213 803615	1.29		2.66
26II-m1	BFT-0977	322202 803754	1.65	-5.76	-6.34
26II-o4	BFT-1610	322208 803906		-4.23	0.59
26II-o5	BFT-1633	322202 803913		1.54	2.37
26II-pl	BFT-0982	322155 803936	2.66	1.58	1.95
26II-rl2	BFT-1290	322107 803729	2.32	-.52	0.45
26II-r6	BFT-1292	322128 803722	2.77	0.19	0.34
26II-r7	BFT-0447	322145 803704	2.40	0.35	0.04
26II-t3	BFT-1592	322135 803543	1.93	-.37	-.07
26II-u3	BFT-0535	322050 803527	3.74		
26II-u3	BFT-0535	322050 803527	3.74		
26II-u5	BFT-0976	322025 803514	2.74	0.98	-.59
26II-u9	BFT-1234	322035 803559	2.96	-8.25	-2.00
26II-v1	BFT-0192	322022 803604	3.16	-2.05	-.82
26II-w2	BFT-0564	322008 803725	2.23	-.92	-.83
26II-w3	BFT-1289	322044 803729	2.28	-.80	-.69
26II-x2	BFT-1199	322006 803819	2.26	0.17	2.75
26JJ-b3	BFT-0538	321948 803624	5.46		1.70
26JJ-b6	BFT-1203	321944 803656	2.38	-2.45	-1.86
26JJ-d4	BFT-1288	321958 803806	1.97	-.15	-.86
26JJ-g5	BFT-1554	321841 803828	2.11	1.30	1.19
26JJ-g6	BFT-1555	321803 803827	2.06	1.58	1.13
26JJ-h4	BFT-1556	321850 803719	1.85		
26JJ-n1	BFT-0430	321724 803843	1.14	0.92	0.62
26JJd1	BFT-0791	321943 803840	2.42	1.06	0.94
27CC-b1	COL-0198	325436 804158	6.66	11.09	2.10
27DD-gl	COL-0209	324834 804335	15.93	14.38	13.16
27GG-c5	BFT-1313	323449 804241	-6.80	-7.79	-6.99
27GG-e1	BFT-1212	323436 804429	-2.85	-3.78	-2.35
27GG-fl	BFT-0145	323300 804430	-8.19	-7.18	-7.21

SCWRC#	COUNTY#	LAT-LONG		MARCH	MAY	JUNE
27GG-f7	BFT-1210	323340	804405	-8.54	-8.59	-6.41
27GG-f8	BFT-1211	323355	804434	-8.09	-6.14	-5.04
27GG-g1	BFT-0420	323310	804342	-14.25	-12.37	-15.15
27GG-g4	BFT-1209	323354	804340	-6.90	-6.99	-5.76
27GG-h1	BFT-0504	323318	804235	-.64	-.82	-.08
27GG-o3	BFT-1208	323233	804404	17.65	16.15	18.24
27GG-p4	BFT-1743	323200	804500	-.73	-1.27	
27GG-ql	BFT-0133	323125	804307	2.50	2.05	0.78
27GG-q2	BFT-1534	323150	804400	1.33	1.20	0.14
27GG-rl	BFT-1709	323109	804249	3.82	3.34	3.35
27GG-t3	BFT-0797	323144	804006	1.78	0.74	1.20
27GG-v1	BFT0834	323018	804150	3.15	2.50	2.98
27GG-w3	BFT-1311	323005	804211	3.40	2.73	3.23
27GG-w4	BFT-1734	323040	804247	-1.42	-1.22	-2.38
27GG-y1	BFT-1204	323020	804444	2.96	2.38	2.78
27GG-y3	BFT-1733	323038	804402	6.03	4.83	3.12
27HH-a1	BFT-0467	322955	804010	3.34	1.51	1.90
27HH-b2	BFT-0569	322934	804110	2.95	1.75	2.44
27HH-c2	BFT-1746	322934	804256	10.39	10.60	10.84
27HH-d2	BFT-1708	322958	804353	17.35		14.65
27HH-e4	BFT-0798	322930	804412	14.15	13.70	13.60
27HH-e6	BFT-1732	322902	804453	18.32	15.82	17.02
27HH-e7	BFT-1735	322958	804437	6.78	6.22	6.85
27HH-fl	BFT-0981	322830	804421	25.94	24.96	25.19
27HH-fl4	BFT-1690	322813	804433	26.13	26.08	27.55
27HH-f4	BFT-0124	322750	804445	25.64	24.69	25.14
27HH-h1	BFT-0170	322844	804208	6.23	6.29	7.19
27HH-j2	BFT-1506	322823	804047	3.89	-2.43	-1.61
27HH-k3	BFT-1509	322805	804048	2.32	0.58	2.38
27HH-ol	BFT-0121	322748	804405	21.03	19.78	20.68
27HH-o9	BFT-1728	322744	804447	14.16	12.11	12.93
27HH-ql0	BFT-1717	322627	804322	2.76	2.80	2.32
27HH-rl	BFT-0474	322603	804245	2.92	1.36	2.50
27HH-t1	BFT-0801	322631	804040	4.75		
27HH-t1	BFT-0801	322631	804040	4.75	4.45	4.99
27HH-t1	BFT-1515	322612	804019	3.58	3.15	3.47
27HH-t7	BFT-0198	322631	804019	1.13	0.84	1.02
27HH-ul	BFT-0559	322552	804024	1.89	1.78	2.26
27HH-w3	BFT-1714	322546	804231	-3.37	-3.54	-4.20
27HH-w4	BFT-1718	322523	804217	0.83	-.44	-.04
27HH-y1	BFT-0118	322518	804459	-4.32	-4.88	-5.08
27II-a1	BFT-0471	322408	804003	-.08	0.43	-.18
27II-a6	BFT-1602	322423	804003		-.60	-.15
27II-a7	BFT-1611	322356	804058	1.64		
27II-a7	BFT-1611	322356	804058	1.64	1.00	1.69
27II-bl5	BFT-1702	322426	804128	-4.94	-5.20	-5.19
27II-el	BFT-0109	322446	804457	2.66	2.16	2.07
27II-f3	BFT-0331	322307	804420	-.33	-.58	-.74
27II-f4	BFT-1721	322357	804447	-2.85	-3.00	-3.20
27II-h8	BFT-1701	322313	804214	0.84	0.48	0.58
27II-j1	BFT-0557	322815	803730	-.56	0.62	-.90

SCWRC#	COUNTY#	LAT-LONG	MARCH	MAY	JUNE
27II-16	BFT-0800	322219 804134	2.28	3.62	3.64
27II-n2	BFT-0019	322249 804343	-4.05	-2.82	-2.66
27II-sl	BFT-0566	322108 804136	2.00	1.88	1.76
27JJ-al	BFT-0565	321918 804025	5.36	5.13	4.76
27JJ-il	BFT-0459	321852 804154	6.42	5.18	6.01
27JJ-jl	BFT-0181	321823 804048	6.05	5.91	5.86
27JJ-ql	BFT-0739	321601 804316	-4.50	-5.44	-6.46
27JJ-xl	BFT-0315	321512 804505	-.57	-1.45	-1.68
27KK-b2	BFT-0787	321456 804157	-1.79	-2.39	-3.31
27KK-c2	BFT-0714	321411 804255	-2.69	-3.81	-4.97
27KK-d2	BFT-0441	321457 804340	-3.40	-3.11	-5.32
27KK-d4	BFT-0697	321434 804324			-4.94
27KK-e5	BFT-0561	321403 804447	-10.37		-12.30
27KK-fl1	BFT-0651	321334 804451	-3.61	-3.93	-4.96
27KK-fl2	BFT-0738	321308 804408		-6.78	-9.94
27KK-fl3	BFT-0779	321332 804415		-4.15	-5.14
27KK-g3	BFT-0696	321301 804321		-4.88	-6.29
27KK-i2	BFT-0771	321312 804129	-7.32		
27KK-l10	BFT-1335	321237 804158	-4.92	-6.65	-7.47
27KK-l2	BFT-0342	321247 804109		-4.56	
27KK-l3	BFT-0777	321235 804112	-3.16	-4.46	-5.29
27KK-ml	BFT-0767	321220 804210	-4.99	-5.93	-7.08
27KK-m7	BFT-1334	321233 804204	-5.09	-6.58	-5.59
27KK-n15	BFT-1685	321204 804337		-9.08	-10.34
27KK-n4	BFT-0717	321244 804330			-5.59
27KK-ol	BFT-0317	321359 804459			-12.06
27KK-o3	BFT-0808	321253 804455			-6.43
27KK-p2	BFT-0835	321127 804447	-6.81	-7.18	-8.03
27KK-q4	BFT-0833	321153 804328	-5.00	-6.01	-6.94
27KK-r13	BFT-1742	321130 804227			-7.74
27KK-r8	BFT-0832	321134 804224			-7.41
27KK-xl	BFT-0444	321035 804337		-11.29	-9.70
27KK-yl	BFT-0101	321005 804426	-6.88	-10.39	-11.28
27LL-e2	BFT-0437	320911 804418		-13.57	-12.74
27LL-e3	BFT-0349	320927 804445	-9.87	-12.25	-13.20
27LL-e8	BFT-1239	320941 804451	-7.11	-9.18	-10.04
27LL-fl	BFT-0436	320842 804448	-10.45	-12.07	-14.95
27Z-rl	COL-0228	330648 804210	92.99	92.20	91.65
28AA-h1	COL-0159	330304 804727	66.92	66.66	
28AA-h2	COL-0221	330304 804727	55.46	54.37	
28BB-bl	COL-0073	325959 804640	39.24	45.11	44.67
28BB-ml	COL-0211	325721 804742	34.48	33.75	33.45
28EE-gl	COL-0093	324350 804820	30.70	29.94	31.43
28GG-sl	BFT-0037	323144 804602	3.47	2.53	0.58
28GG-w3	BFT-1712	323026 804710	0.33		
28HH-b4	BFT-0392	322940 804643	-2.73	-2.98	-4.18
28HH-j1	BFT-1395	322803 804519	20.10	17.50	18.80
28HH-j11	BFT-1730	322845 804505	24.35	21.82	23.21
28HH-j2	BFT-1396	322803 804519	19.52		10.80
28HH-kl1	BFT-1727	322708 804527	8.72	7.34	7.43
28HH-kl2	BFT-1731	322722 804557	5.90	4.88	4.72

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SCWRC#	COUNTY#	LAT-LONG		MARCH	MAY	JUNE
28HH-k5	BFT-1306	322747	804535	11.78	9.67	10.74
28HH-m2	BFT-0173	322730	804756	-1.50	-4.93	0.41
28HH-m3	BFT-0174	322743	804740	1.18	1.42	2.51
28HH-t1	BFT-0112	322645	804528	5.56	4.40	4.27
28HH-t3	BFT-0116	322607	804547	2.65	2.45	2.30
28HH-u4	BFT-1705	322507	804536	2.33	1.75	1.35
28II-a3	BFT-1725	322427	804508	0.50		
28II-b1	BFT-0476	322409	804611	-4.18		
28II-b4	BFT-1736	322427	804616	-1.18	-2.32	-2.80
28II-il	BFT-0453	322343	804603	1.55	1.08	0.31
28II-j3	BFT-1274	322414	804515	20.35		
28JJ-il	BFT-1689	321822	804657	-3.52	-5.20	
28JJ-n1	BFT-0501	321711	804849	-.01	-.33	
28JJ-yl	BFT-0429	321551	804912	-3.59	-4.66	
28JJ-y3	BFT-0500	321502	804943	-5.00	-6.84	-6.51
28KK-d6	BFT-1330	321424	804834	-8.96	-9.49	-11.05
28KK-el	BFT-0358	321454	804943	-5.30	-6.99	-6.80
28KK-f3	BFT-0374	321353	804902	-13.06	-10.98	
28KK-il	BFT-0718	321320	804616	-3.80	-4.85	-5.24
28KK-j12	BFT-1748	321317	804531			-10.25
28KK-k8	BFT-1294	321213	804508	-8.09	-9.17	-10.06
28KK-l3	BFT-0580	321256	804610		-5.66	-5.71
28KK-sl3	BFT-0824	321125	804613		-7.90	-8.78
28KK-s2	BFT-0799	321109	804624	-14.37	-8.53	-8.36
28KK-t2	BFT-0668	321115	804506	-9.10	-9.11	-9.91
28KK-v2	BFT-0712	321033	804608		-7.90	-8.67
28KK-v4	BFT-0805	321055	804654	-6.98	-7.81	-8.18
28KK-w1	BFT-0337	321025	804724	-12.87	-11.67	-12.28
28LL-bl	BFT-0744	320957	804640	-13.77		-11.84
28LL-g3	BFT-0754	320824	804811	-13.73	-15.25	-16.06
28LL-h1	BFT-0210	320835	804722	-11.76	-13.31	-14.41
28LL-h2	BFT-0439	320835	804757	-14.11	-15.57	-16.47
28LL-j2	BFT-0435	320838	804546	-11.03	-11.48	-12.94
28LL-j4	BFT-0343	320828	804539	-13.30		
28LL-m1	BFT-0706	320728	801739	-13.49		-15.72
28LL-m3	BFT-0750	320739	804738		-16.82	-17.85
28LL-m5	BFT-0709	320754	804740	-13.54	-14.86	-15.55
28LL-n4	BFT-0747	320733	804845	-15.38	-17.16	-17.71
28LL-n5	BFT-0751	320759	804811		-14.07	-15.04
28LL-n6	BFT-0753	320756	804830	-14.63	-16.40	-17.20
28LL-n8	BFT-0346	320725	804850	-17.61	-17.61	-18.12
29BB-sl	COL-0217	325649	805131	30.43	29.84	29.40
29BB-xl	COL-0213	325503	805142	27.40	25.30	24.70
29CC-gl	COL-0214	325343	805340	42.89	41.75	41.67
29CC-i3	COL-0222	325314	805115	46.33	44.81	45.01
29DD-f2	HAM-0076	324821	805435	38.35	37.74	37.25
29DD-l1	COL-0164	324755	805120	16.56	14.35	14.66
29EE-h1	HAM-0077	324330	805249	26.10	26.20	25.90
29EE-pl	HAM-0078	324131	805447	16.90	16.72	16.33
29EE-sl	HAM-0083	324152	805104	10.55	10.81	10.68
29GG-f2	JAS-0166	322226	805438	9.52	9.37	9.05

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SCWRC#	COUNTY#	LAT-LONG		MARCH	MAY	JUNE
29GG-s1	JAS-0330	323115	805152			5.73
29GG-yl	JAS-0322	323059	805459	4.78	4.22	3.64
29HH-n5	JAS-0298	322733	805348	1.23	0.57	0.04
29HH-v1	JAS-0094	322515	815125	-0.97	-1.65	-2.17
29II-l2	BFT-0154	322218	805111	-2.80	-3.07	-4.00
29II-v1	BFT-0844	322013	805118	-3.65	-4.50	
29JJ-el2	BFT-1767	321952	805440		-12.88	-13.95
29JJ-q2	BFT-1418	321657	805307			
29JJ-r3	BFT-1422	321651	805259	-6.04	-6.55	-6.29
29KK-al	BFT-0357	321419	805056	-8.36	-9.41	-10.22
29ii-xl	BFT-0301	322043	805358	-6.80		
30AA-n1	COL-0072	330227	805820	98.15	97.59	97.16
30AA-v1	COL-0220	330049	810156	101.47		
30BB-h1	COL-0216	325802	805733	73.57	70.63	68.72
30CC-bl	COL-0215	325430	805622	51.16	50.00	49.03
30CC-e2	COL-0183	325451	805919	49.44	49.27	49.15
30CC-ul	HAM-0099	325014	805535	34.48	33.88	32.40
30DD-il	HAM-0098	324801	805640	39.42	38.82	37.99
30EE-ql	JAS-0305	324115	805842	25.24	24.69	23.92
30FF-x2	JAS-0297	323530	805839	18.41	17.83	17.14
30GG-gl	JAS-0360	323150	805846		17.89	17.11
30HH-d1	JAS-0157	322906	805808	4.93	-6.17	3.68
30JJ-g2	BFT-0570	321805	805814	-7.94	-8.59	-9.26
30KK-yl	JAS-0139	321005	805935	-36.25	-38.61	-39.13
30LL-d1	JAS-0080	320922	805414	-30.24	-31.60	-32.44
30LL-el	JAS-0136	320907	805946	-39.53	-41.13	-41.55
31AA-rl	COL-0219	330150	810248	96.10	92.13	93.33
31CC-i2	HAM-0073	325305	810011	54.70	54.45	53.88
31CC-ml	HAM-0074	325242	810224	82.62	81.25	79.70
31CC-pl	HAM-0018	325109	810457	78.80	78.48	77.94
31DD-n1	HAM-0079	324709	810329	59.56	58.47	57.48
31EE-s2	JAS-0354	324153	810147		5.89	6.50
31FF-l1	JAS-0308	323735	810135	9.86	10.73	
31GG-xl	JAS-0358	323004	810310		14.11	13.54
31HH-a2	JAS-0357	322955	810054		4.45	3.66
31HH-n1	JAS-0303	322754	800306	8.84	7.77	7.18
31II-h1	JAS-0109	322314	810251	-0.10	-0.74	-1.36
31JJ-o2	JAS-0111	321737	810440	-14.90	-16.13	-15.81
31KK-el	JAS-0122	321417	810428		-26.62	
31KK-f2	JAS-0147	321330	810441	-40.44	-41.22	-41.32
31KK-i2	JAS-0159	321245	810151		-34.52	-34.70
31KK-ol	JAS-0128	321139	810329	-50.69	-51.83	-52.90
31KK-o4	JAS-0126	321344	810402	-44.86	-44.50	-45.86
31KK-u2	JAS-0138	321054	810038	-33.95	-34.29	-34.67
31KK-v1	JAS-0150	321001	810132	-47.19	-46.84	-47.32
31LL-j2	JAS-0134	320844	810040	-47.93	-48.77	-51.18
32BB-h1	HAM-0130	325857	810731	108.85	109.03	108.82
32BB-il	HAM-0072	325843	810651	101.85	100.92	99.35
32BB-i3	HAM-0129	325830	810612	95.22	95.69	94.20
32CC-el	HAM-0090	325404	810919	91.30	89.34	88.01
32CC-e3	HAM-0141	325435	811009	105.65	103.59	102.37

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SCWRC#	COUNTY#	LAT-LONG		MARCH	MAY	JUNE
32CC-11	HAM-0019	325201	810632	67.40	66.93	67.75
32CC-15	HAM-0043	325238	810642	47.60	45.47	46.99
32CC-n1	HAM-0151	325220	810801	94.50	92.64	90.95
32EE-i1	HAM-0105	324320	810627	46.70	45.15	43.68
32EE-t1	JAS-0366	324143	810503		8.59	
32EE-y2	HAM-0132	324029	810940	32.65	32.85	31.31
32FF-n1	JAS-0314	323735	810838	17.35	15.65	14.39
32FF-v1	JAS-0359	323548	810524	23.45	22.94	22.12
32GG-m1	JAS-0367	323255	810737		23.32	22.61
32HH-i4	JAS-0369	322822	810647		13.24	12.72
32HH-s1	JAS-0007	322659	810627		-3.00	8.57
32II-m2	JAS-0316	322215	810719	3.22	3.51	1.78
32LL-b1	JAS-0112	320945	810700		-43.47	-43.31
33CC-p2	HAM-0080	325357	811414	97.56	95.80	95.61
33CC-w1	HAM-0082	325109	811223		94.10	92.68
33CC-x1	HAM-0142	325034	811321	105.35	102.67	101.00
33EE-k1	HAM-0147	324246	811029	39.62	57.49	56.36
33GG-cl	JAS-0368	323459	811208	29.20	29.01	27.03
33GG-l1	JAS-0319	323216	811135	7.17	4.73	4.93
33GG-x1	JAS-0310	323050	811340	-		20.99
33HH-b2	JAS-0304	322913	811141	28.24	27.10	27.23
34DD-s1	HAM-0108	324623	811623	100.95	97.37	94.97
34EE-n4	HAM-0144	324248	811852	75.22	71.92	70.37
34FF-e2	HAM-0122	323949	811930	59.52	57.61	57.19
34GG-i1	JAS-0309	323009	801605	28.74	27.43	30.79