FIGURES AND TABLES

Proposed Inter-Relationship of Water Resource Protection Criteria

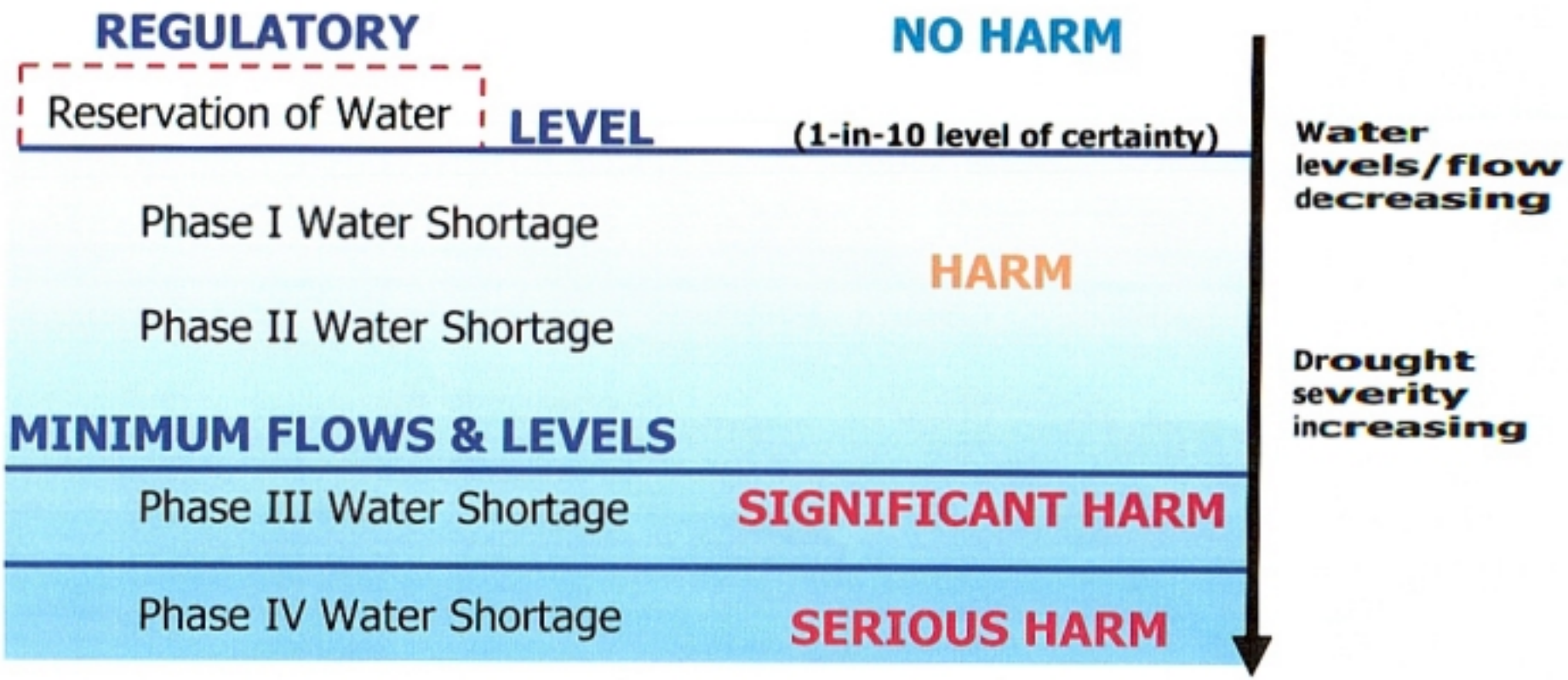

figure 1

AGE ESTIMATES OF BOUNDARIES (MYBP)	SERIES	STRATIGRAPHIC UNITS		HYDROGEOLOGIC UNITS		TRANS-MISSIVITY
0.01	Recent	Undifferentiated Deposits		Surficial Aquifer System	Water Table Aquifer	Figure C-3*
3.2	Pleistocene					
	Pliocene	Tamiami Formation			Confining Beds	NA
					Lower Tamiami Aquifer	Figure C-4
5.0	Miocene		Miocene Coarse Clastics			
			Hawthorn Group: Peace River Formation	Intermediate Aquifer System	Upper Hawthorn Confining Zone	NA
					Sandstone Aquifer	Figure C-5
					Mid-Hawthorn Confining Zone	NA
			Hawthorn Group: Arcadia Formation		Mid-Hawthorn Aquifer	Figure C-6
					Lower Hawthorn Confining Zone	NA
			Hawthorn Group: Tampa Member	Floridan Aquifer System	Lower Hawthorn Aquifer/Tampa Producing Zone	NA
25.0	Oligocene	Suwannee Limestone			Confining Beds	
37.0					Suwannee Aquifer	
	Upper Eocene	Ocala Group			Deeper Eocene Aquifer(s)	NA
43.0	Middle Eocene	Avon Park Formation				
52.0						

NA = Either the unit is a confining zone, or insufficient data was available.
MYBP = Million years before present.
* Hydraulic Conductivity

Dates are referenced to Decade of North American Geology Time Scale (Geology, 9-83).

Figure 2. Temporal and Physical Relationship Between Major Aquifer Systems in the Lower West Coast Planning Area.

Minimum Levels: LWC Aquifers

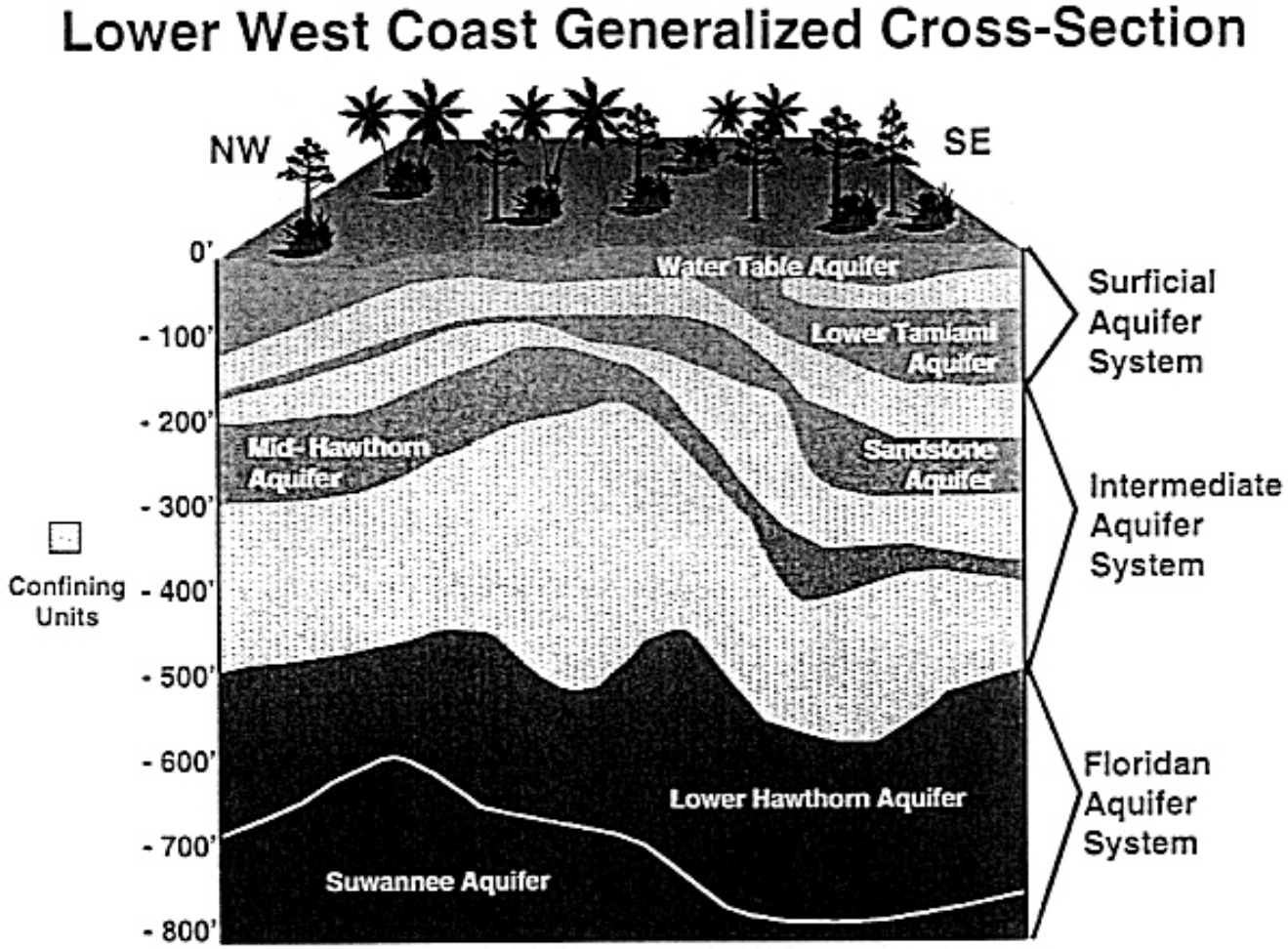

Figure 3. Generalized Cross Section of Aquifers in the LWC Planning Area.

Minimum Levels; LWC Aquifers

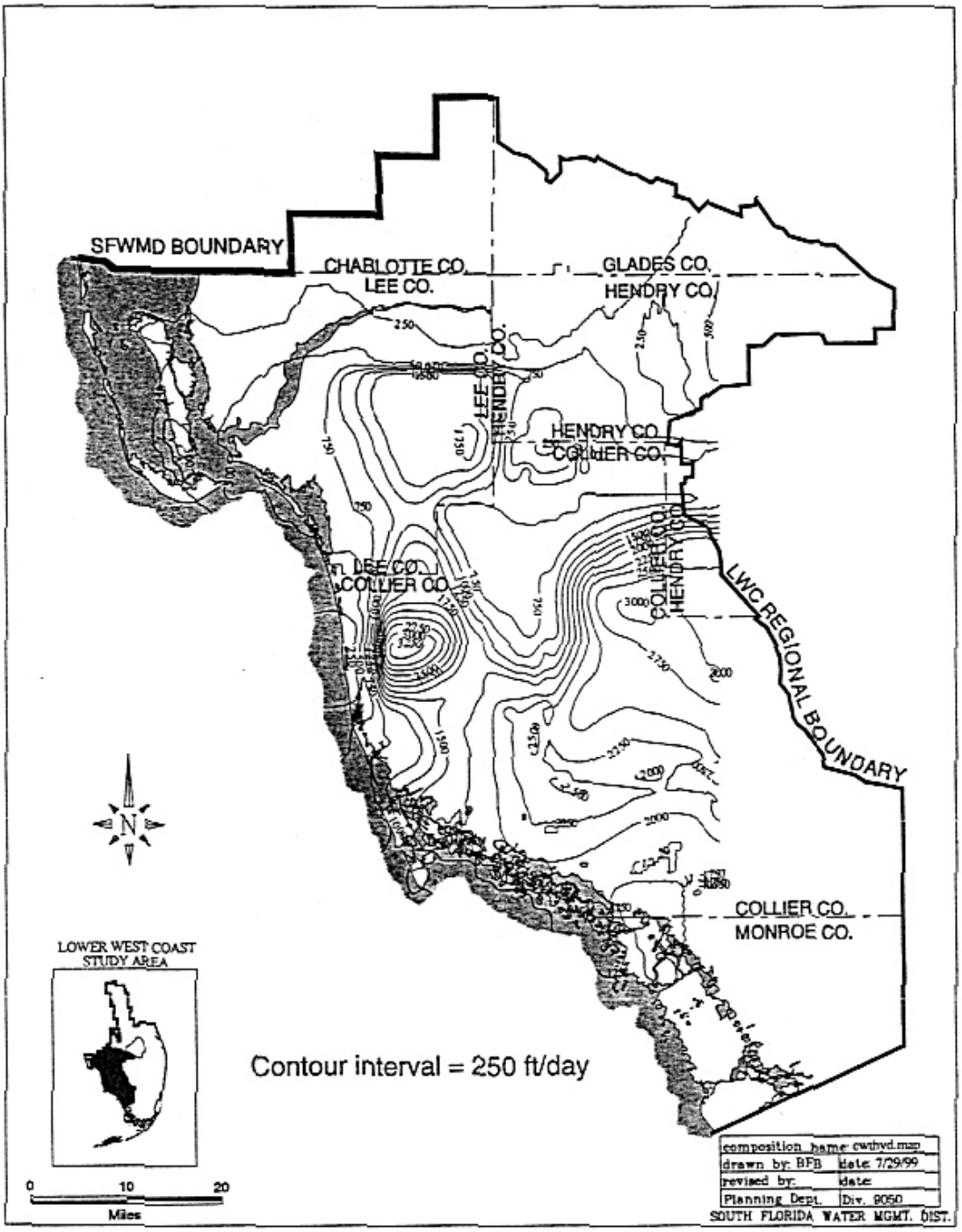

Figure 4. Hydraulic Conductivity of the Water Table Aquifer (ft/day).

Minimum Levels: LWC Aquifers

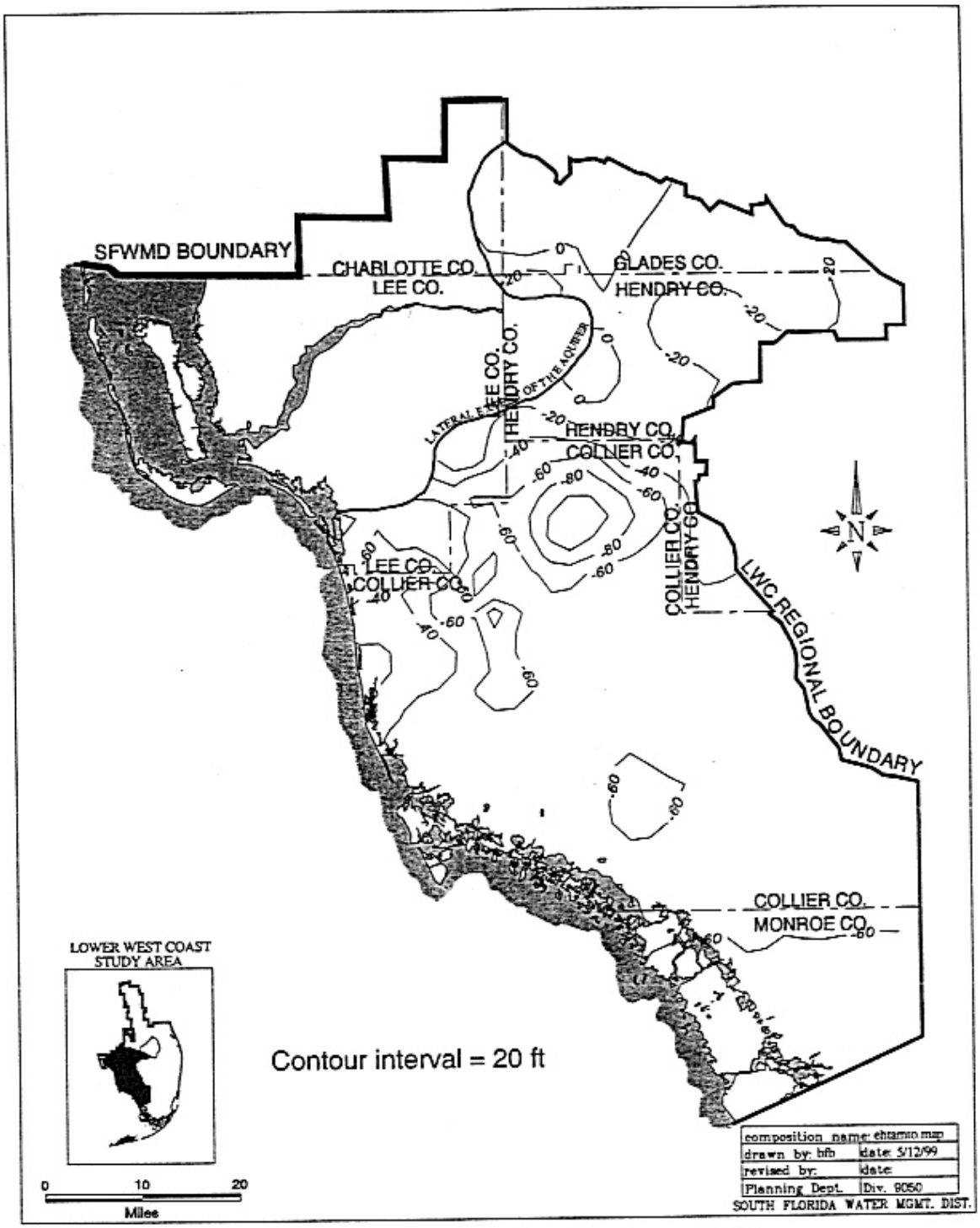

Figure 5. Top of Lower Tamiami Aquifer (in feet, NGVD).

Minimum Levels: LWC Aquifers

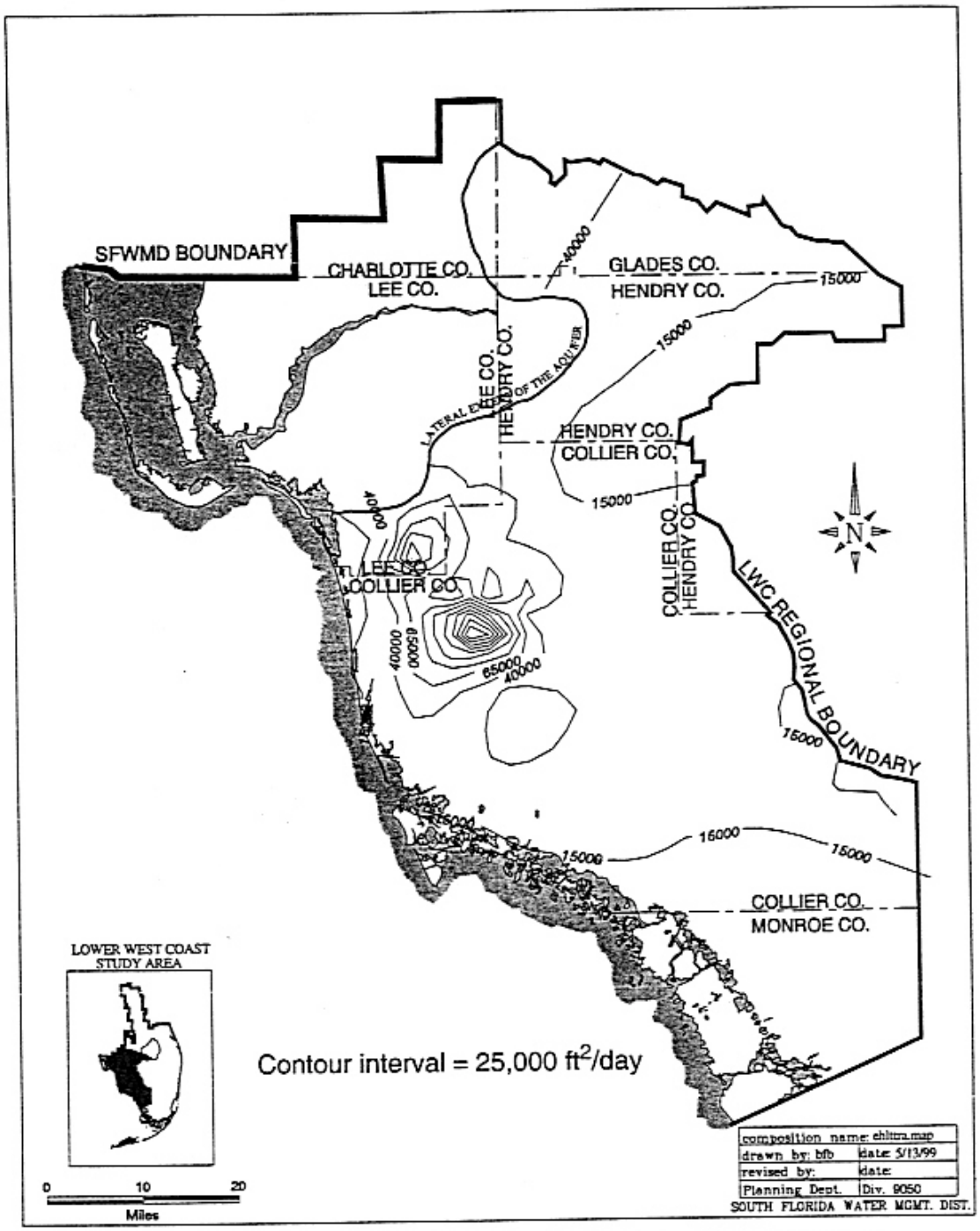

Figure 6. Transmissivity of the Lower Tamiami Aquifer (ft^2/day).

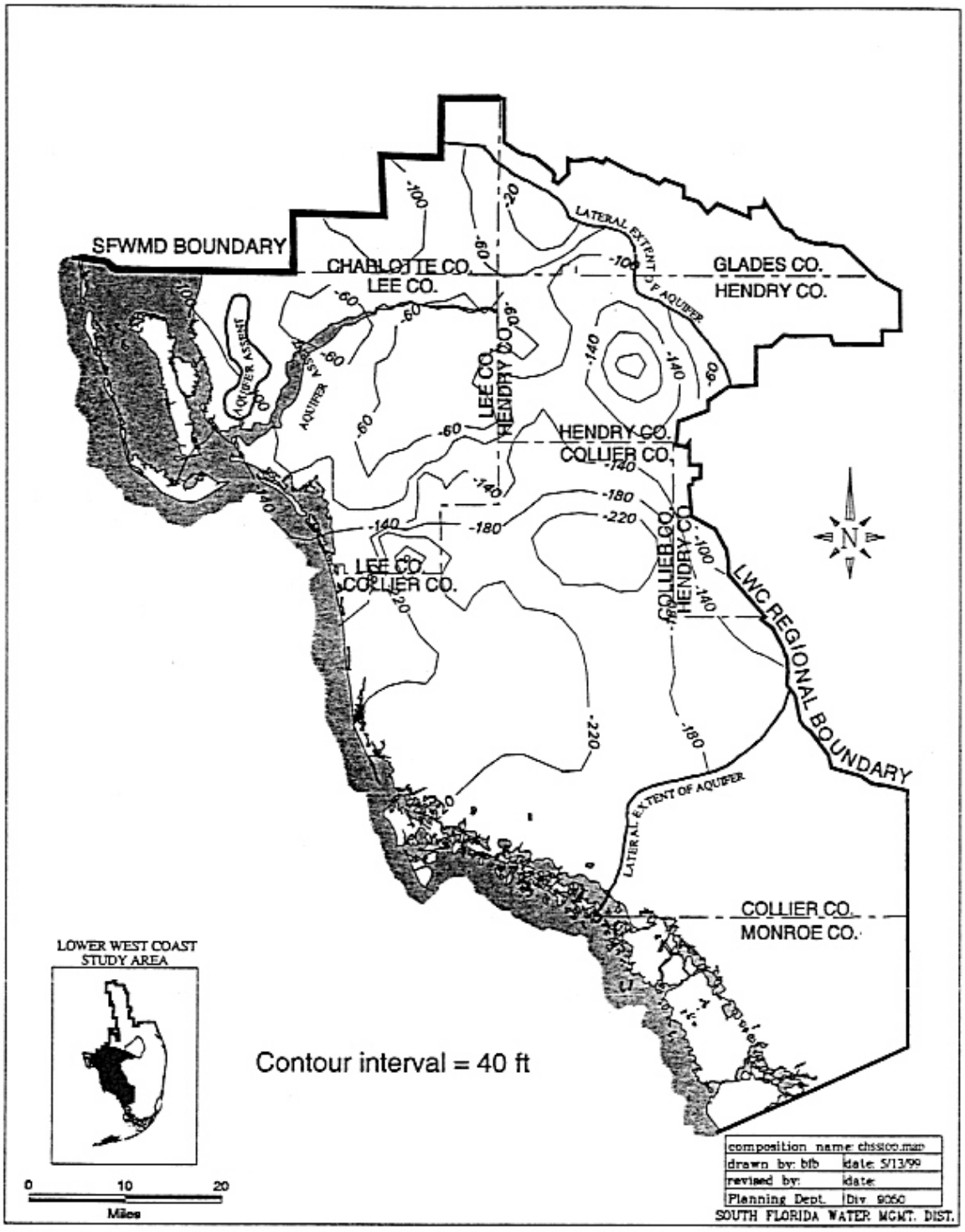

Figure 7. Top of Sandstone Aquifer (in feet, NGVD).

Minimum Levels: LWC Aquifers

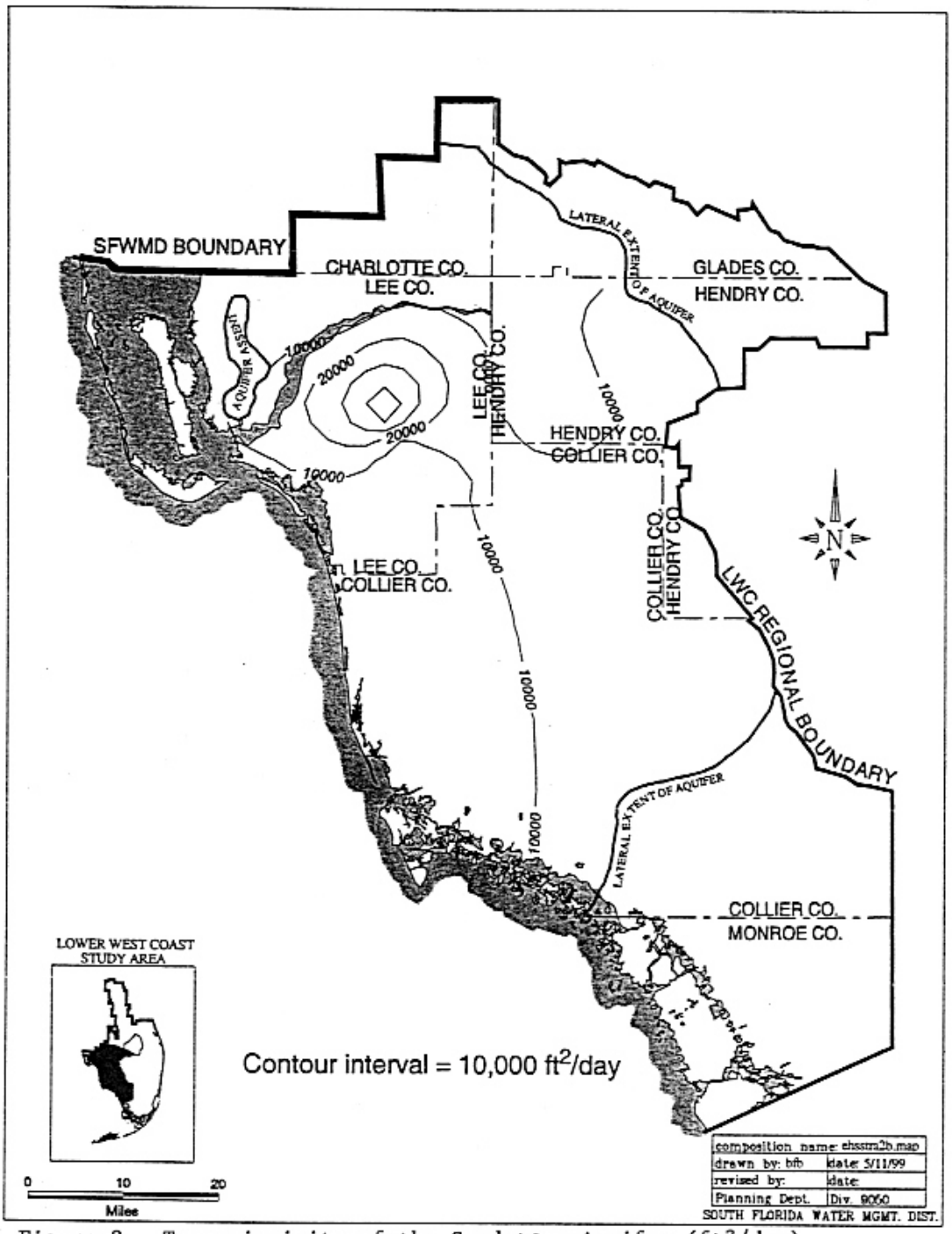

Figure 8. Transmissivity of the Sandstone Aquifer (ft^2/day)

Minimum Levels: LWC Aquifers

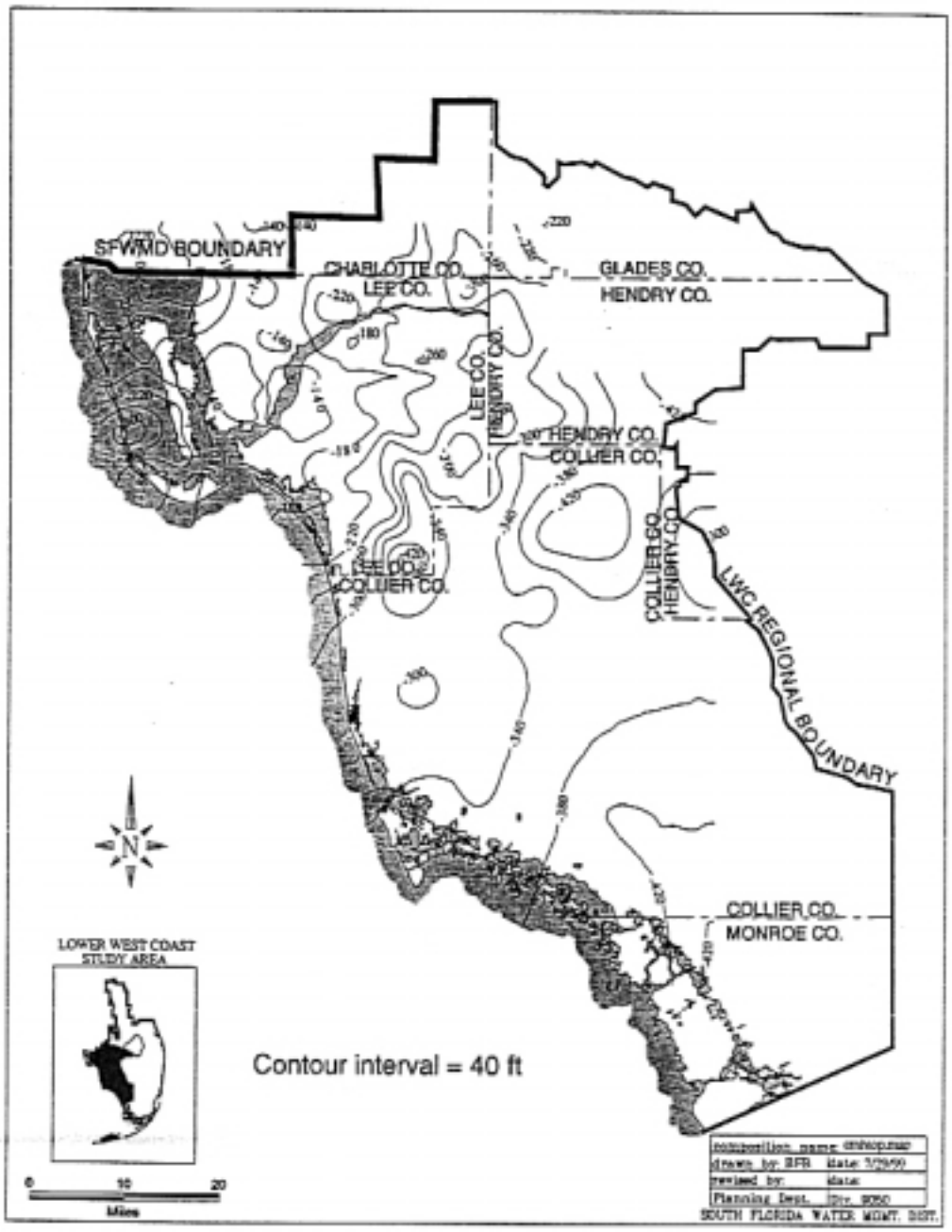

Figure 9. Top of Mid-Hawthorn Aquifer (in feet, NVGD).

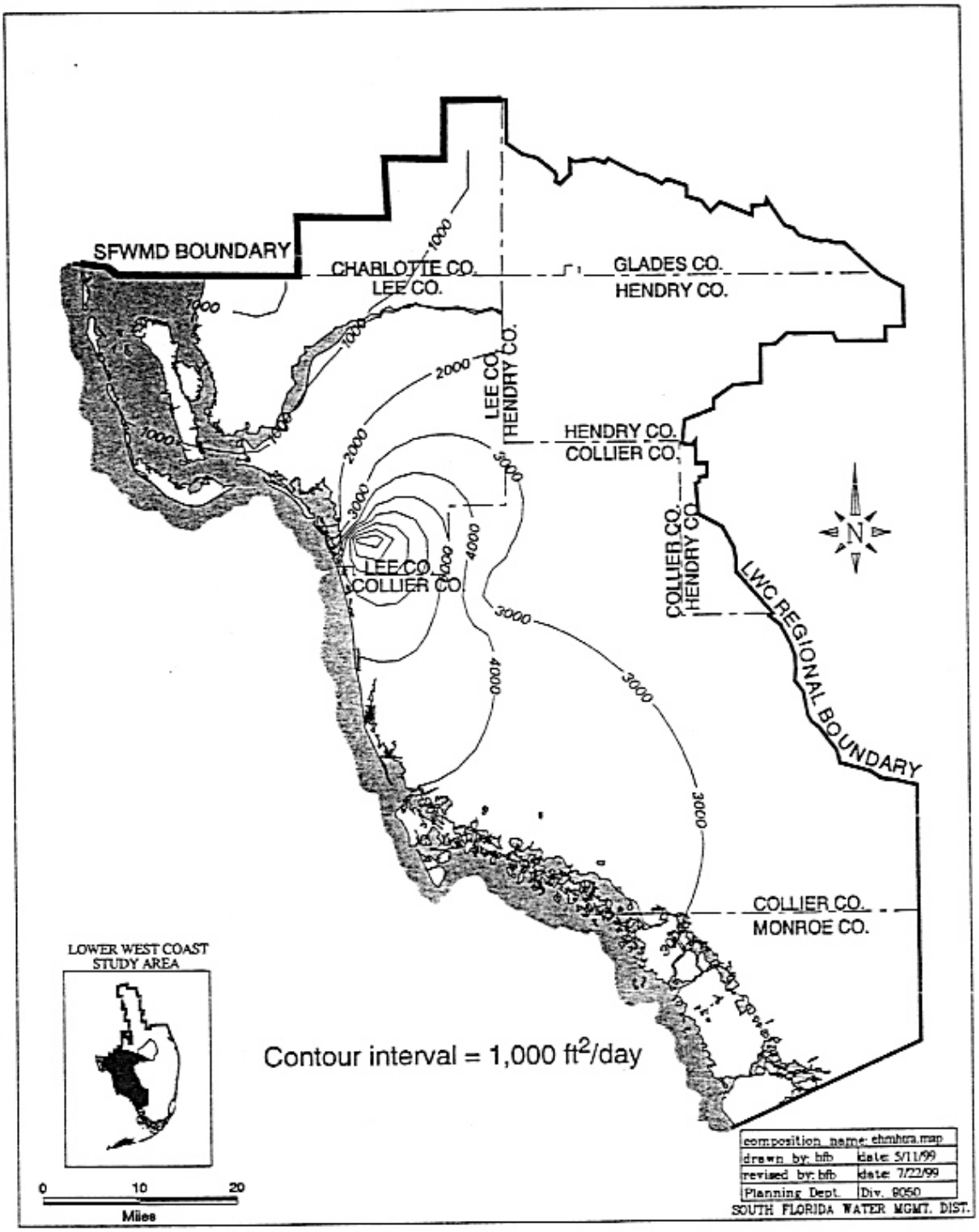

Figure 10. Transmissivity of the Mid-Hawthorn aquifer (ft^2/day).

Period of record hydrograph - past 25 years L - 581 (263532081592201)

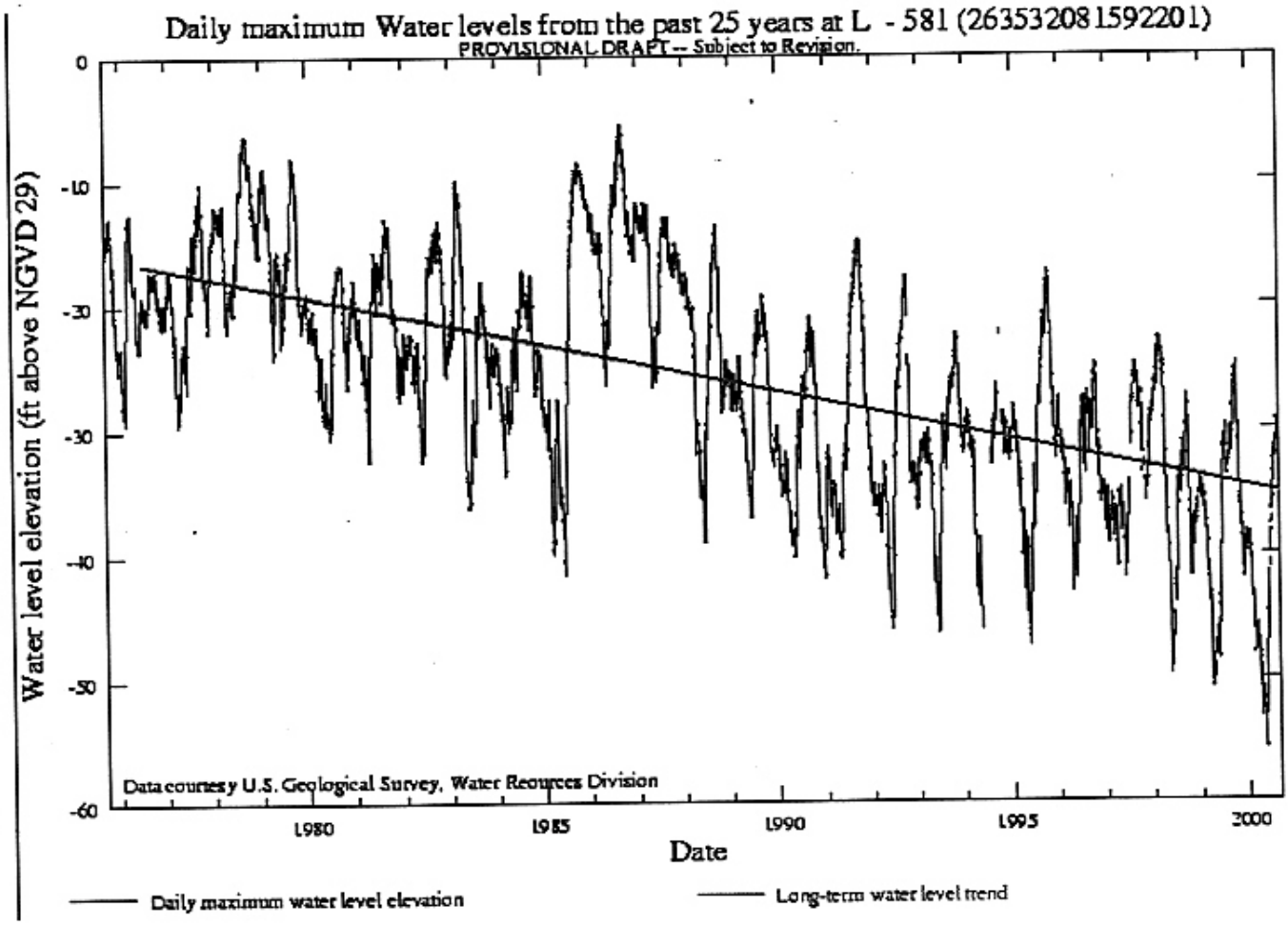

Figure 11. Daily Maximum Water Levels from Well L-581 (Mid-Hawthorn Aquifer) 1975-2000.

Minimum Levels: LWC Aquifers

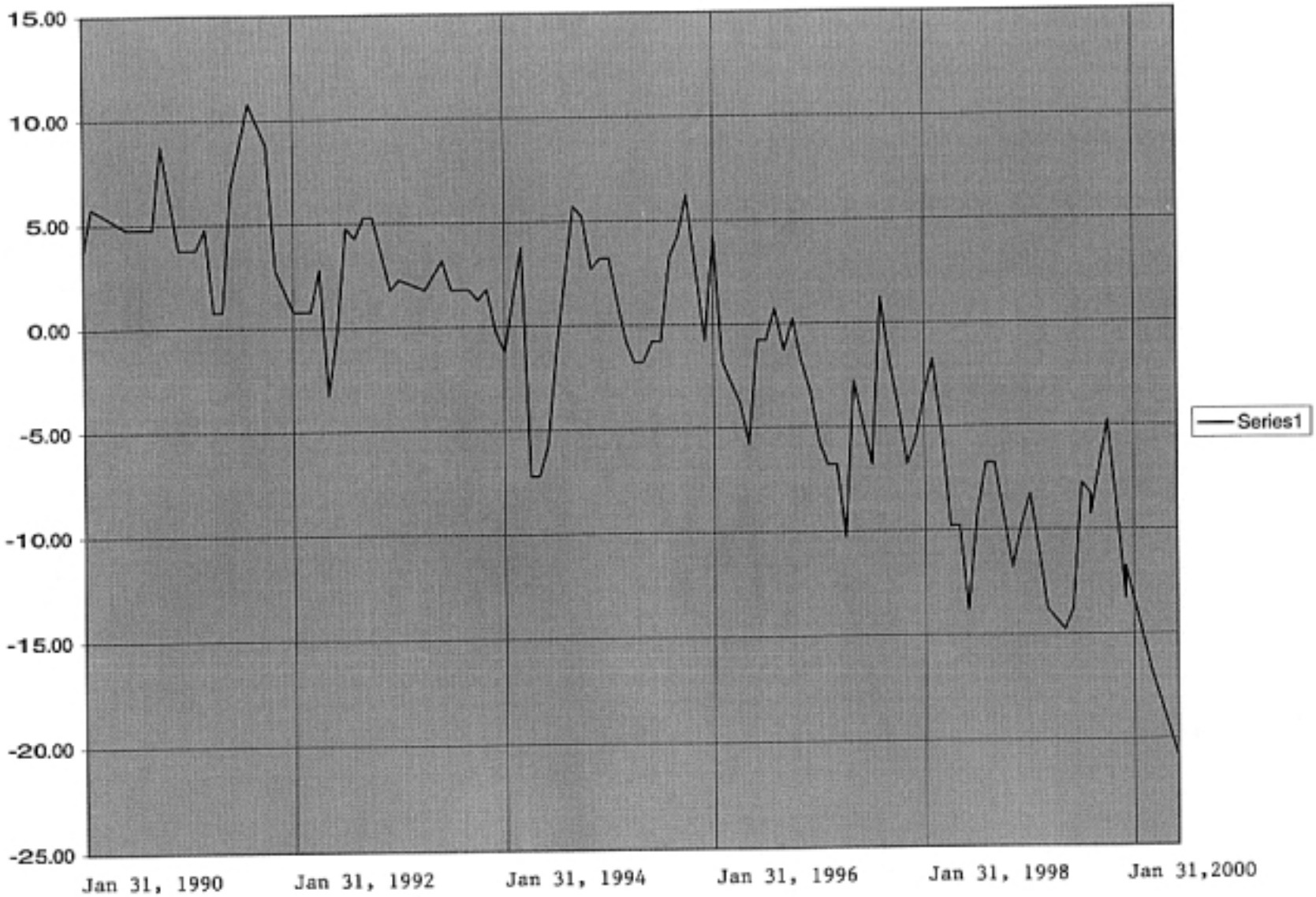

Figure 12. Monthly Water Levels from Well CCOWL (Lower Hawthorn Aquifer), 1990-2000

Period of record hydrograph - past 25 years L -1998 (263041081433102)

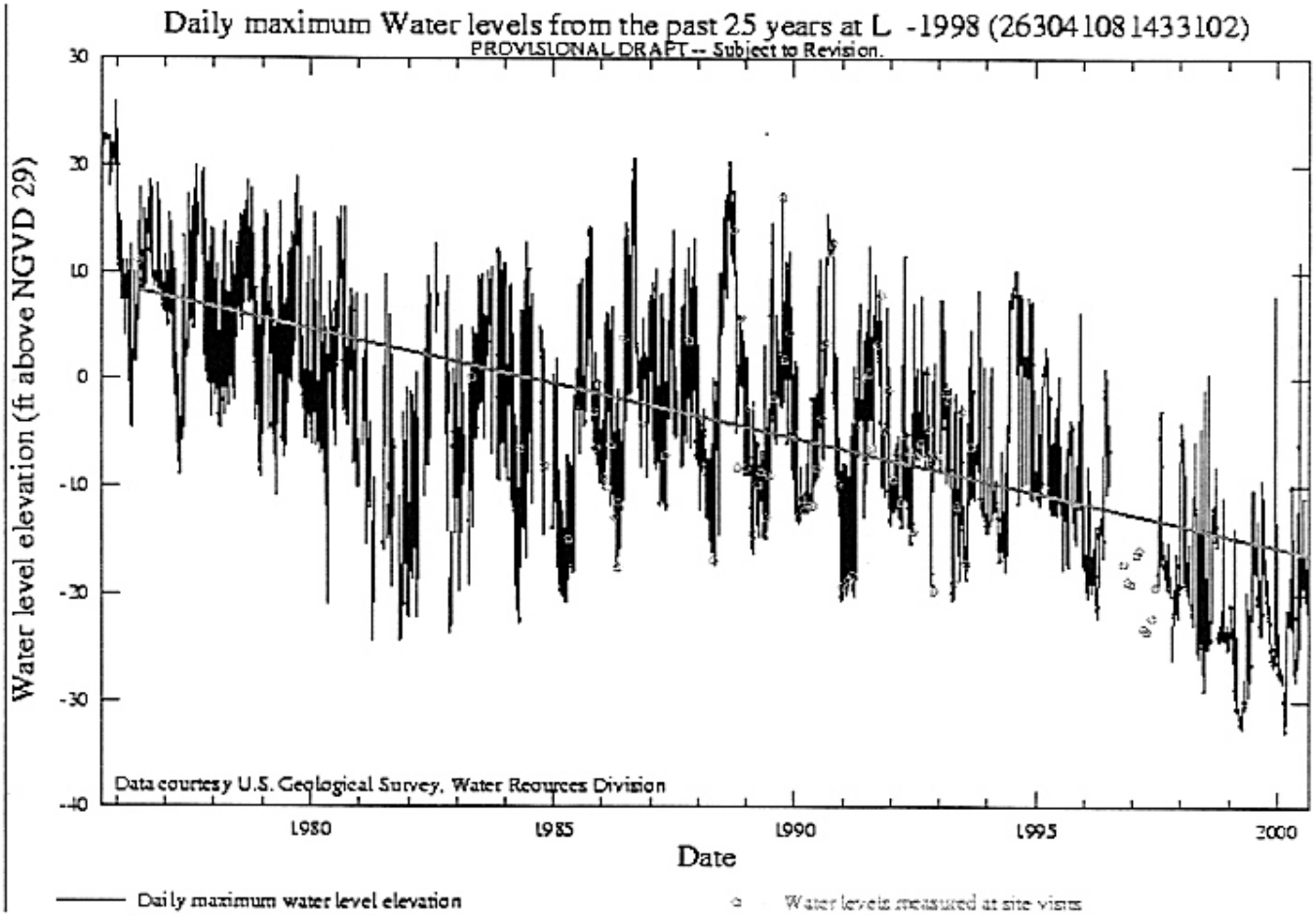

Figure 13. Daily Maximum Water Levels from Well L-1998 (Sandstone Aquifer), 1975-2000.

Period of record hydrograph - past 25 years C -1004 (261620081464401)

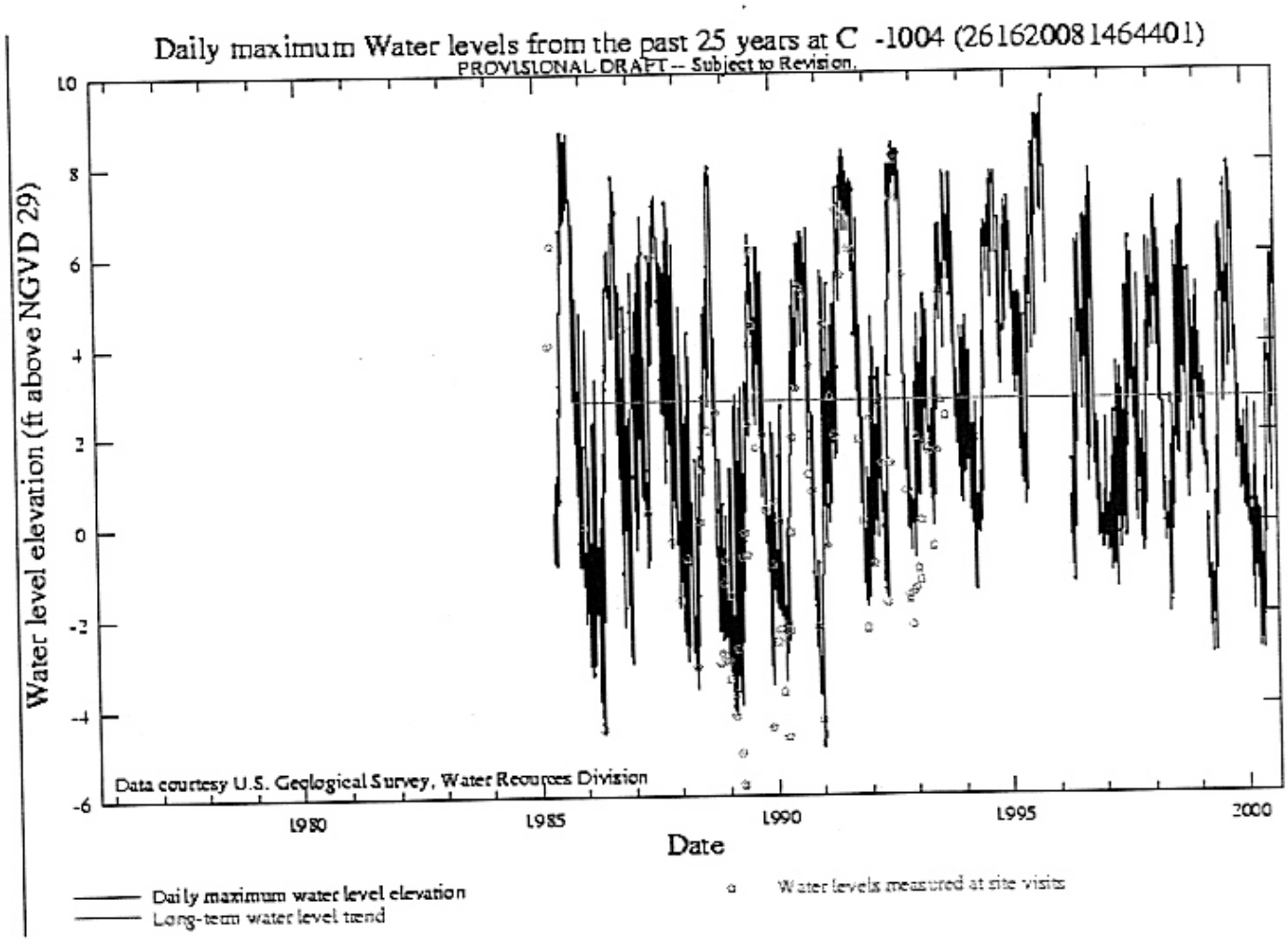

Figure 14. Daily Maximum Water Level from Well C-1004 (Lower Tamiami Aquifer), 1985-2000.

Minimum Levels: LWC Aquifers

PERMIT_NO	PROJECT_NAME	APP_NO	LU_CODE	WELL_NO	PUMP_CAPACITY	PUMP_TYPE	WELL_DEPTH
36-00089-W	BUCKINGHAM FARM	930814-274	AGR	1	1200	CENTRIFUGAL	40
36-00089-W	BUCKINGHAM FARM	930814-274	AGR	2	1200	CENTRIFUGAL	40
36-00089-W	BUCKINGHAM FARM	930814-274	AGR	3	1500	CENTRIFUGAL	40
36-00126-W	SUNNY GROVE NURSERY	930814-290	NUR	1	300	CENTRIFUGAL	25
36-00126-W	SUNNY GROVE NURSERY	930814-290	NUR	2	250	CENTRIFUGAL	25
36-00243-W	GREEN JEMS INC	930814-298	AGR	1	60	CENTRIFUGAL	20
36-00243-W	GREEN JEMS INC	930814-298	AGR	2			21
36-00243-W	GREEN JEMS INC	930814-298	AGR	3			19
36-00243-W	GREEN JEMS INC	930814-298	AGR	5			22
36-00243-W	GREEN JEMS INC	930814-298	AGR	4	7500	TURBINE	20
36-00243-W	GREEN JEMS INC	930814-298	AGR	6	7500	TURBINE	21
36-00676-W	BRECKENRIDGE	970424-4	GOL	5	38	SUBMERSIBLE	45
36-00676-W	BRECKENRIDGE	970424-4	GOL	6	38	SUBMERSIBLE	45
36-00676-W	BRECKENRIDGE	970424-4	GOL	7	38	SUBMERSIBLE	45
36-00676-W	BRECKENRIDGE	970424-4	GOL	8	38	SUBMERSIBLE	45
36-00676-W	BRECKENRIDGE	970424-4	GOL	9	38	SUBMERSIBLE	45
36-00737-W	THE VILLAGES OF COUNTRY CREEK	941115-7	GOL	1	300	TURBINE	26
36-00737-W	THE VILLAGES OF COUNTRY CREEK	941115-7	GOL	2	300	TURBINE	26
36-00737-W	THE VILLAGES OF COUNTRY CREEK	941115-7	GOL	3	300	TURBINE	26
36-00891-W	SHIRE OF BONITA THE	930814-367	LAN	1	40	CENTRIFUGAL	20
36-01111-W	PINE HAVEN CONDOMINIUM	930814-381	LAN	10	35		38
36-01111-W	PINE HAVEN CONDOMINIUM	930814-381	LAN	4	35		38
36-01111-W	PINE HAVEN CONDOMINIUM	930814-381	LAN	5	35		38
36-01111-W	PINE HAVEN CONDOMINIUM	930814-381	LAN	6	35		38
36-01111-W	PINE HAVEN CONDOMINIUM	930814-381	LAN	7	35		38
36-01111-W	PINE HAVEN CONDOMINIUM	930814-381	LAN	8	35		38
36-01111-W	PINE HAVEN CONDOMINIUM	930814-381	LAN	9	35		38
36-02027-W	BONITA FAIRWAYS	950821-7	GOL	3	225	SUBMERSIBLE	18
36-02791-W	IMPERIAL BONITA ESTATES	940601-1	LAN	1	80	CENTRIFUGAL	25
36-02930-W	STORM CITRUS GROVE	950314-8	AGR	1	10	CENTRIFUGAL	80
36-03087-W	O'DONNELL LANDSCAPES, INC.	960419-3	NUR	1	25	SUBMERSIBLE	45
36-03126-W	BRENDAN COVE	960904-3	LAN	1	80	CENTRIFUGAL	40
36-03579-W	BAY LANDING	990217-2	LAN	1	80	SUBMERSIBLE	35
36-03616-W	MONTERRA AT BONITA SPRINGS L.C.	990415-1	LAN	1	70	CENTRIFUGAL	50
36-03616-W	MONTERRA AT BONITA SPRINGS L.C.	990415-1	LAN	2	70	CENTRIFUGAL	50

Table 6. Description of Water Table wells within one half mile of the Imperian Estero and Orange rivers and Six Mile Cypress Slough.

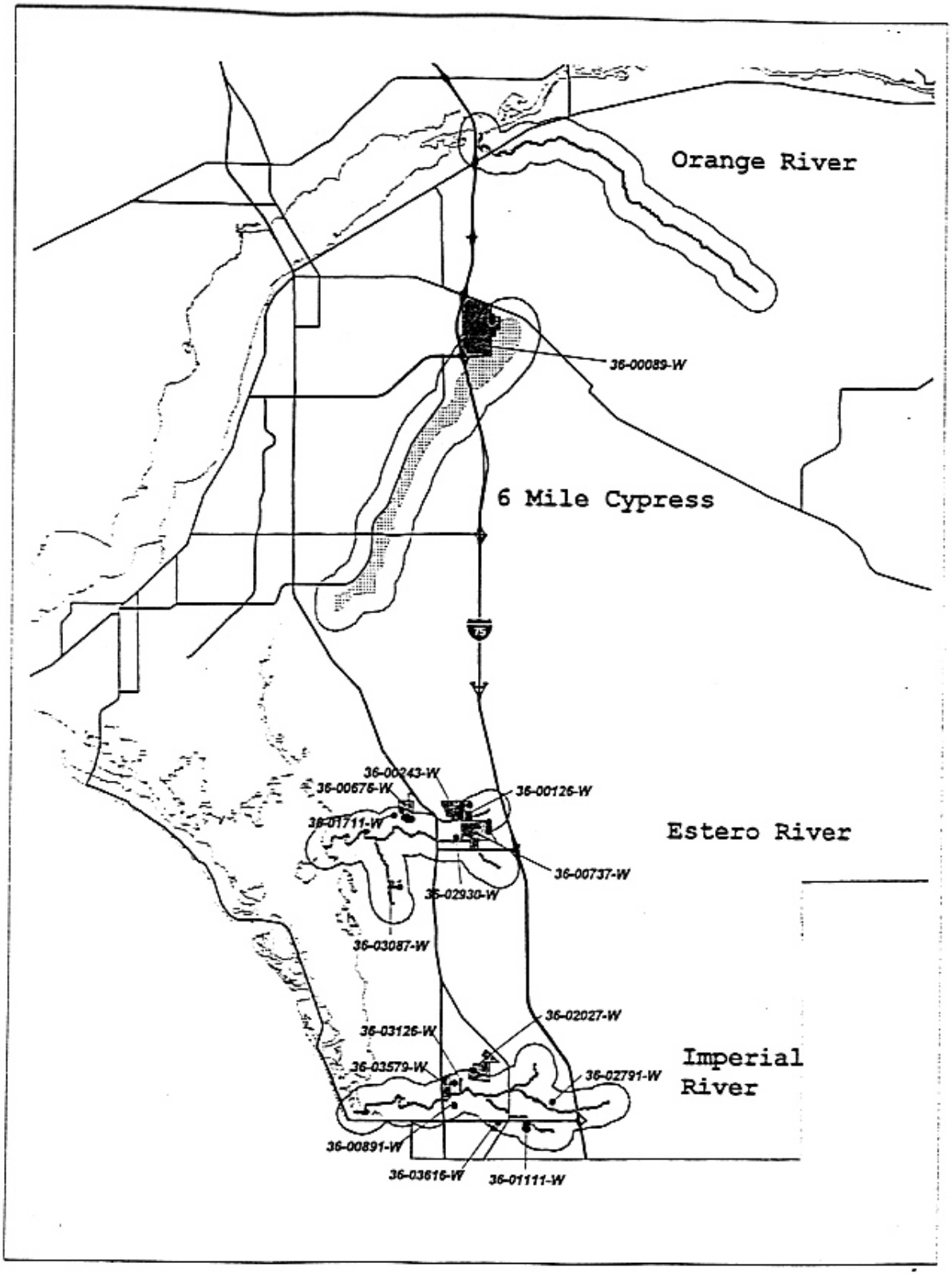

Figure 15. Location of permitted Water Table aquifer wells within one half mile of the Imperial, Estero, and Orange rivers and the Six Miles Cypress Slough.

Table 8. Individual Permit Allocations in the LWC Planning Area.

Water Use Category	Allocation (MGD)					Number of Permits			
	Ground Water	Surface Water	Both	Total	% of Total	Ground Water	Surface Water	Both	Total
Collier County (in the LWC Planning Area)									
Agriculture	204.63	0.76	70.35	275.73	50.68	114	5	21	140
Aquaculture	1.03	0.00	0.00	1.03	0.19	1	0	0	1
Nursery	0.77	0.00	0.23	1.00	0.18	12	0	3	15
Golf	1.29	4.03	18.41	23.73	4.36	3	11	32	46
Landscape	5.11	3.08	9.18	17.37	3.19	39	26	56	121
Livestock	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Dewatering	0.00	133.33	0.00	133.33	24.50	0	13	0	13
Public Water Supply	63.92	0.00	7.00	70.92	13.04	11	0	1	12
Industrial	0.50	6.67	1.20	8.37	1.54	10	2	1	13
Recreation	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Mining	0.00	12.60	0.00	12.60	2.32	0	1	0	1
Other	0.01	0.00	0.00	0.01	0.00	1	0	0	1
Total	277.25	160.47	106.37	544.09	100.00	191	58	114	363
Glades County (in the LWC Planning Area)									
Agriculture	30.52	105.67	33.20	169.38	68.83	41	35	11	87
Aquaculture	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Nursery	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Golf	0.00	0.61	0.00	0.61	0.25	0	1	0	1
Landscape	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Livestock	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Dewatering	0.00	4.18	0.00	4.18	1.70	0	1	0	1
Public Water Supply	0.81	0.00	0.00	0.81	0.33	4	0	0	4
Industrial	1.201	18.72	3.23	23.15	9.40	1	1	1	3
Recreation	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Mining	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Other	0.00	47.98	0.00	47.98	19.50	0	2	0	2
Total	32.52	177.16	36.43	246.11	100.00	46	40	12	98
Hendry County (in the LWC Planning Area)									
Agriculture	155.44	429.48	230.35	815.26	80.54	106	64	59	229
Aquaculture	0.00	0.00	0.00	0.00	0.00	1	0	0	1

Table 8. (Continued) Individual Permit Allocations in the LWC Planning Area.

Water Use Category	Allocation (MGD)					Number of Permits			
	Ground Water	Surface Water	Both	Total	% of Total	Ground Water	Surface Water	Both	Total
Nursery	0.27	0.00	0.00	0.27	0.03	0	0	0	0
Golf	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Landscape	0.06	0.30	0.16	0.52	0.05	2	2	1	5
Livestock	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Dewatering	0.00	0.10	0.00	0.10	0.01	0	1	0	1
Public Water Supply	3.40	0.04	0.00	3.44	0.34	7	1	0	8
Industrial	1.67	0.00	0.16	1.84	0.18	7	0	1	8
Recreation	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Mining	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Other	0.00	190.81	0.00	190.81	18.85	0	2	0	2
Total	160.84	620.72	230.68	1,012.24	100.00	123	70	61	254
Lee County (in the LWC Planning Area)									
Agriculture	38.08	5.07	30.27	73.42	8.17	129	16	30	175
Aquaculture	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Nursery	0.69	0.14	2.08	2.91	0.32	12	3	7	22
Golf	1.80	2.34	13.64	17.78	1.98	6	10	34	50
Landscape	3.76	1.78	9.97	15.51	1.73	67	30	52	149
Livestock	0.00	0.00	0.00	0.00	0.00	0	0	1	1
Dewatering	0.00	35.63	0.00	35.63	3.96	0	12	0	12
Public Water Supply	25.39	1.81	52.41	79.60	8.86	13	1	6	20
Industrial	1.07	6.00	666.64	673.71	74.96	19	1	4	24
Recreation	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Mining	0.00	0.24	0.00	0.24	0.03	0	1	0	1
Other	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Total	70.78	53.02	775.01	898.80	100.00	246	74	134	454
Lower West Coast Planning Area									
Agriculture	428.66	540.97	364.17	1,333.80	49.38	390	120	121	631
Aquaculture	1.03	0.00	0.00	1.03	0.04	2	0	0	2
Nursery	1.72	0.14	2.31	4.17	0.15	24	3	10	37
Golf	3.09	6.98	32.04	42.12	1.56	9	22	66	97
Landscape	8.93	5.16	19.31	33.40	1.24	108	58	109	275

Table 8. (Continued) Individual Permit Allocations in the LWC Planning Area

Water Use Category	Allocation (MGD)					Number of Permits			
	Ground Water	Surface Water	Both	Total	% of Total	Ground Water	Surface Water	Both	Total
Livestock	0.00	0.00	0.00	0.00	0.00	0	0	1	1
Dewatering	0.00	173.23	0.00	173.23	6.41	0	27	0	27
Public Water Supply	93.52	1.85	59.41	154.77	5.73	35	2	7	44
Industrial	4.44	31.39	671.24	707.06	26.18	37	4	7	48
Recreation	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Mining	0.00	12.84	0.00	12.84	0.48	0	2	0	2
Other	0.01	238.79	0.00	238.80	8.84	1	4	0	5
Total	541.40	1,011.36	1,148.47	2,701.23	100.00	606	242	321	1,169