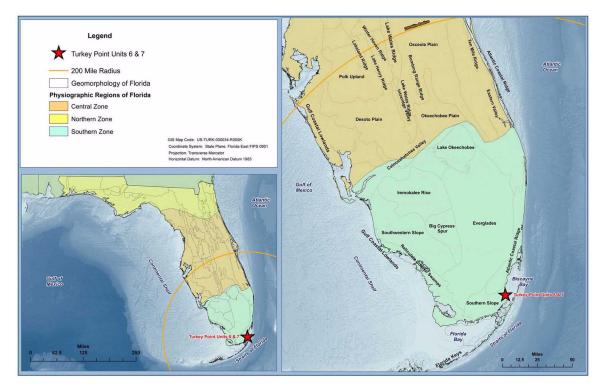
Figure 2.4.12-201 Physiographic Features



Modified from References 201 and 202

Note: Florida is within the Atlantic Coastal Plan physiographic province.

2.4.12-86 Revision 0

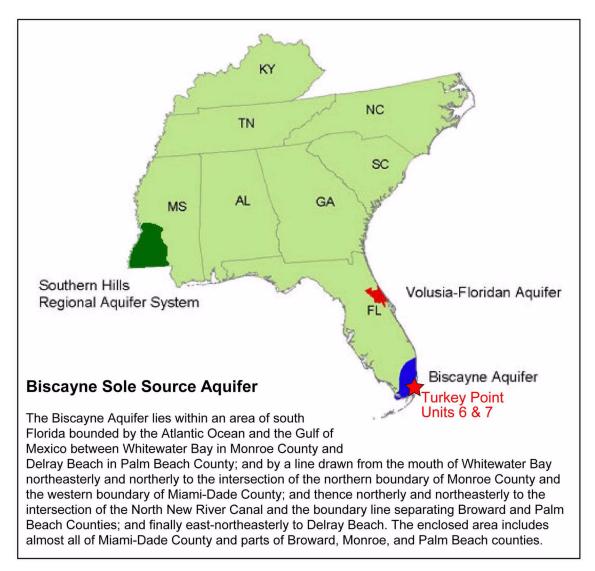
Figure 2.4.12-202 Regional Generalized Hydrostatigraphic Column

Serie	Series Geologic unit		Marker units and horizons	Lithology	Hydrogeologic unit		Approxii thickno (feet	ess			
HOLOCENE and PLEISTOCENE		Undifferentiated and various Pleistocene-aged formations			Quartz sand; silt; clay; shell; limestone; sandy shelly limestone	SYSTEM	WATER-TABLE / BISCAYNE AQUIFER	20-400		EXPLANATION	
PLIOCENE		TAMIAMI FORMATION			Silt; sandy clay; sandy, shelly limestone; calcareous sand- stone; and quartz sand	SURFICIAL AQUIFER SYSTEM	CONFINING BEDS LOWER TAMIAMI AQUIFER			*	Geologic unit(s) missing in some areas
MIOCE	ATE	HAWTHORN GROUP	PEACE RIVER FORMATION		Interbedded sand, silt, gravel, clay, carbonate, and phosphatic sand	INTERMEDIATE AQUIFER SYSTEM OR CONFINING UNIT	CONFINING UNIT SANDSTONE AQUIFER OR PZ1(2) CONFINING UNIT	0-900	BZ LHMU PZ1, PZ2,	Avon Park permeable zone Boulder Zone Lower Hawthorn marker unit Permeable zones in west-	
AND LA OLIGOC			ARCADIA FORMATION	LHMU	Sandy micritic limestone; marlstone; shell beds; dolomite; phosphatic sand and carbonate; sand; silt;	INTERME SYS CONFI	MID-HAWTHORN AQUIFER OR PZ2 CONFINING UNIT			PZ3	central Florida Middle Avon Park marker
			BASAL ** HAWTHORN** UNIT		and clay		LOWER HAWTHORN PZ3	0-300		GLAUC	
	EARLY OLIGOCENE		WANNEE MESTONE		Fossiliferous, calcarenitic limestone	SYSTEM	UPPER FLORIDAN AQUIFER	100-800		marker horizon PLEISTOCENE-AGED FORMATIONS	
	LATE	LI	OCALA * MESTONE		Chalky to fossiliferous, mud-rich to calcarenitic limestone		(UF)			IN SO	UTHEASTERN DA:
EOCENE	MIDDLE		VON PARK DRMATION	MAP	Fine-grained, micritic to fossiliferous limestone; dolomitic limestone; and dolostone. Also contains in the lower part anhydrite/	AQUIFER	MIDDLE CONFINING UNIT (MC1) APPZ MIDDLE CONFINING UNIT (MC2)	0-600		Satilla Formation (formerly Pamlico Sand) Miami Limestone Fort Thompson Formation Anastasia Formation Key Largo Limestone	
	M	-???		GLAUC	gypsum as bedded deposits, or more commonly as pore filling material. Glauconitic limestone near top of Oldsmar	FLORIDAN	LOWER FLORIDAN	0-1,800		. Key Lan	go Limestone
	EARLY		DRMATION EDAR KEYS		Formation in some areas Dolomite and dolomitic limestone		AQUIFER BZ	0-700			
PALEOCENE		FORMATION			Massive anhydrite beds		SUB-FLORIDAN CONFINING UNIT	1,200)?		

Source: Reference 206

PTN COL 2.4-4

Figure 2.4.12-203 Approximate Boundaries of EPA Region 4 Sole Source Aquifers



2.4.12-88 Revision 0

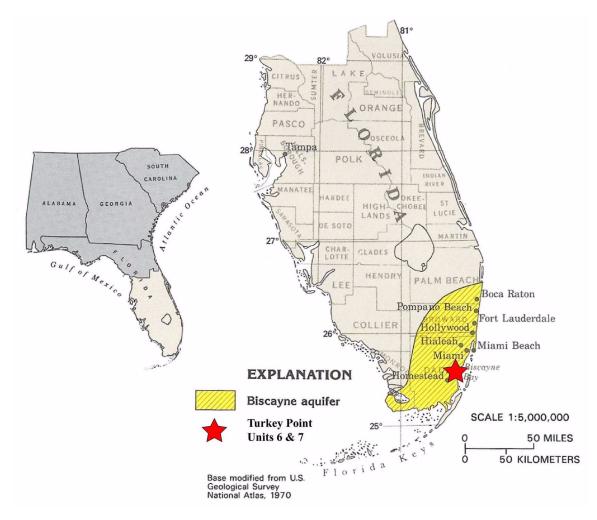
Figure 2.4.12-204 Site Hydrostatigraphic Column

ERATHEM	SYSTEM	SERIES	HYDRO- GEOLOGIC UNIT		STRATIGRAPHIC UNIT		LITHOLOGY	APPROXIMATE TOP ELEVATION (ft NAVD 88)	APPROXIMATE THICKNESS (ft)	
		HOLOCENE			organic muck		organic soil and silt	0	3	
CENEZOIC	кү	PLEISTOCENE		Biscayne aquifer	Miami Limestone Key Largo Limestone		sandy, oolitic limestone	-3	25	
	QUATERNARY		stem				argo Limestone well indurated, vuggy, coralline limestone		22	
	QUAT	PLEIST	quifer sys		Fort Thompson Formation		poor/well indurated fossiliferous limestone	-50	65	
		PLIOCENE	Surficial aquifer system	Semi-confining unit	Tamiami Formation		sand and silt with calcarenitic limestone	-115 105		
	TERTIARY	MIOCENE		Intermediate confining unit	Hawthorn Group	Peace River Formation	silty calcareous sand and silt	formation contact base signat -220		
						Arcadia Formation	calcareous wackestone with indurated limestones, sandstone, and sand	-455 drilling ended	>160 at -616.5 ft	

Color represents similar composition (carbonate, clastics, and organics).

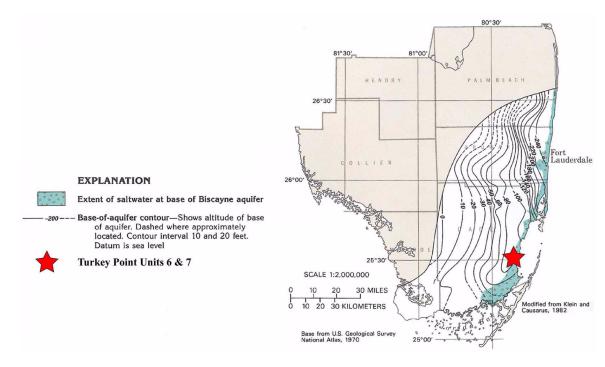
PTN COL 2.4-4

Figure 2.4.12-205 Location of the Biscayne Aquifer in Southeast Florida



2.4.12-90 Revision 0

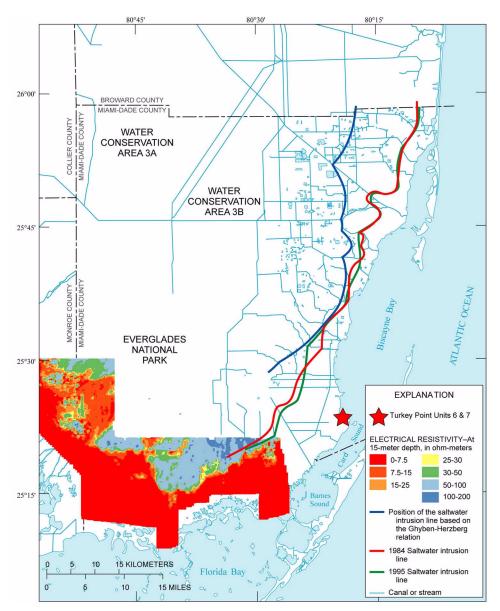
Figure 2.4.12-206 Base of the Biscayne Aquifer



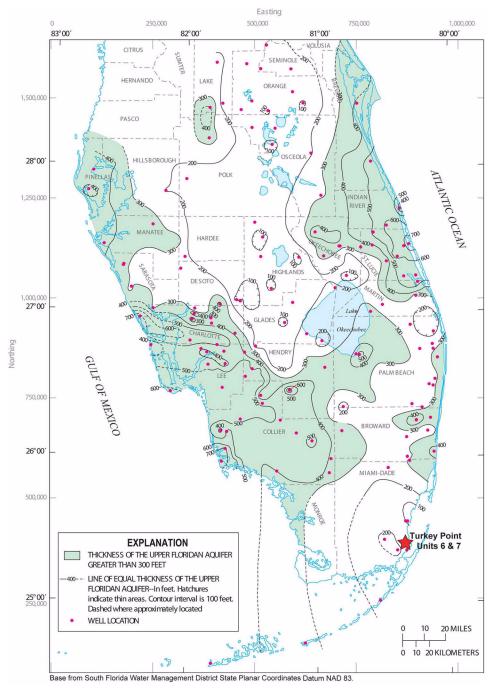
Modified from Reference 210

2.4.12-91 Revision 0

PTN COL 2.4-4 Figure 2.4.12-207 Location of the Freshwater-Saltwater Interface

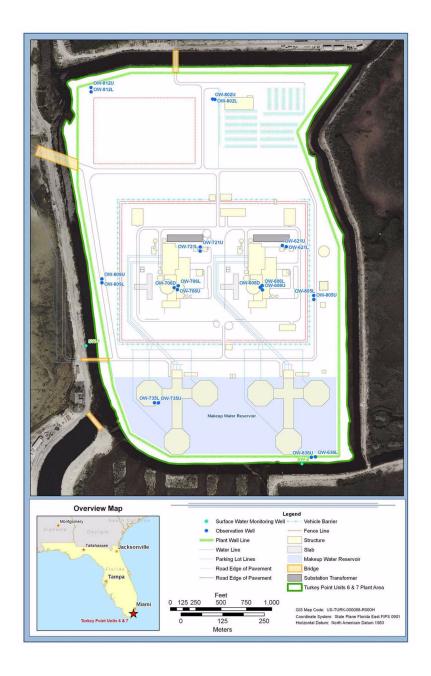


PTN COL 2.4-4 Figure 2.4.12-208 Thickness of the Upper Floridan Aquifer



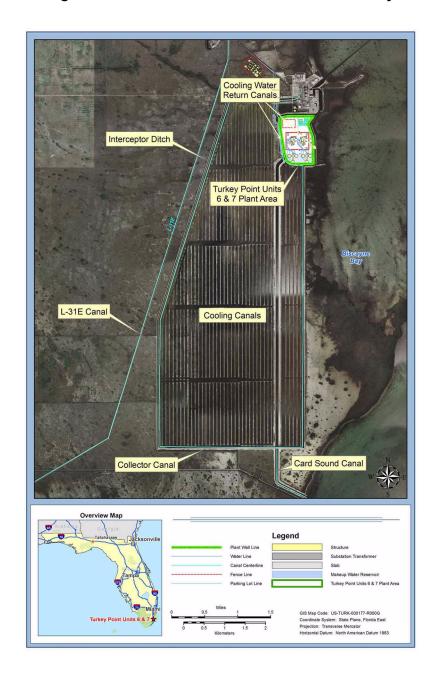
PTN COL 2.4-4

Figure 2.4.12-209 Observation Well Location Plan



PTN COL 2.4-4

Figure 2.4.12-210 Industrial Wastewater Facility

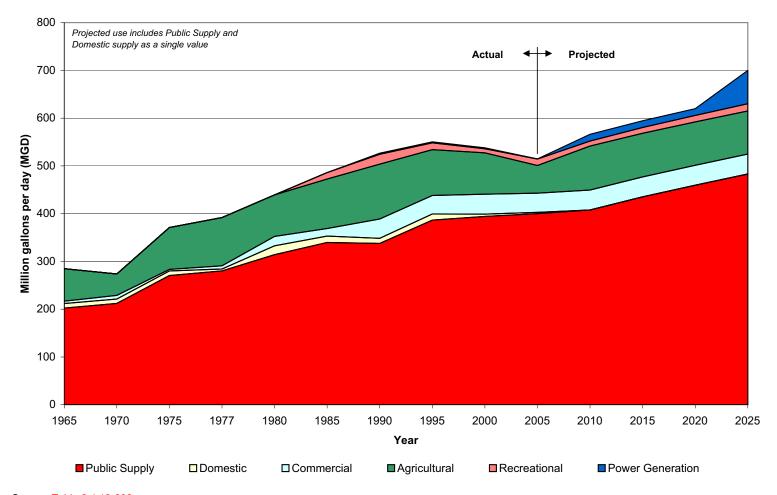


PTN COL 2.4-4 Figure 2.4.12-211 Upper Floridan Aquifer Production Wells for Unit 5



PTN COL 2.4-4

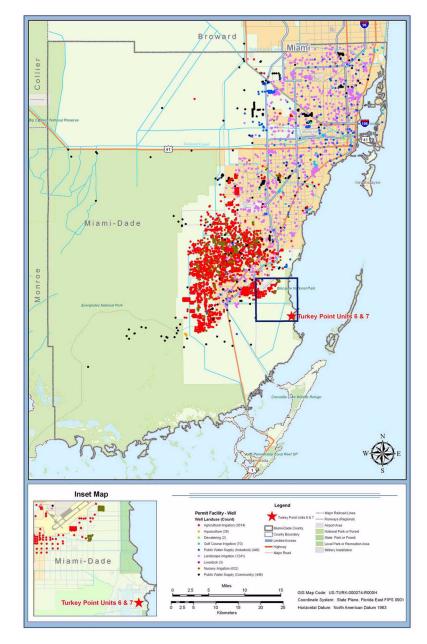
Figure 2.4.12-212 Withdrawals of Groundwater in Miami-Dade County



Source: Table 2.4.12-202

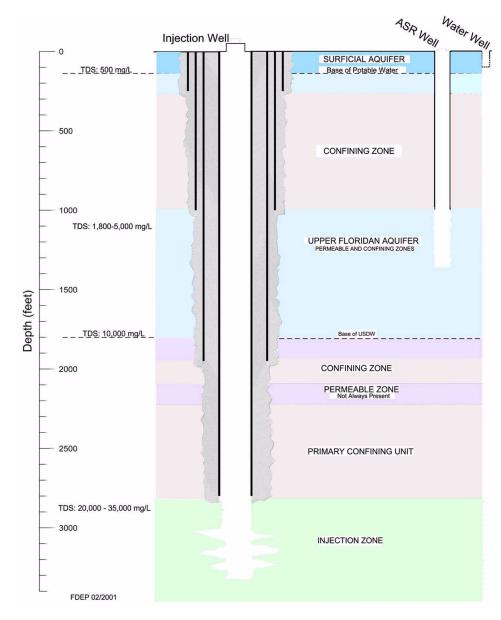
2.4.12-97 Revision 0

PTN COL 2.4-4 Figure 2.4.12-213 SFWMD Freshwater Well Permits in Miami-Dade County



Source: Reference 227

PTN COL 2.4-4 Figure 2.4.12-214 Typical Municipal Class 1 Injection Well, ASR Well and Water Well in Southeast Florida



Source: Reference 229

PTN COL 2.4-4

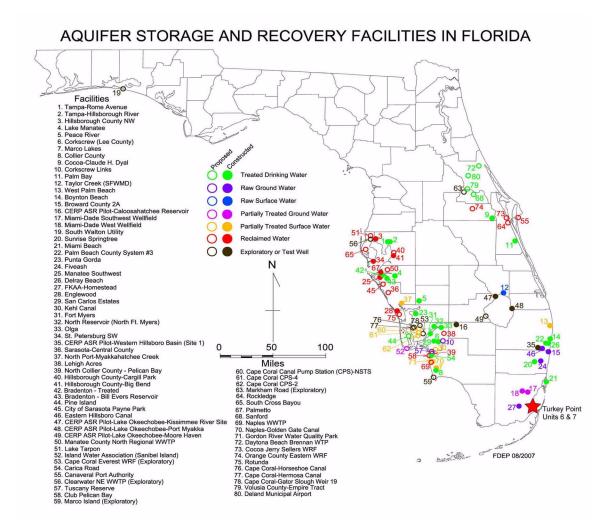
Figure 2.4.12-215 Locations of Class I Injection Facilities in Florida

CLASS I INJECTION FACILITIES Plugged Туре Municipal Industrial Δ Reverse Osmosis (RO) Concentrate V ∇ Combined Municipal & Nonmunicipal Class I Facilities 48. Sunset Park 49. Kendale Lakes 50. Miami-Dade South District Reg. 1. Solutia (Monsanto) Sterling Fibers (Cytec) NW Pinellas County (exploratory) 51. Broward County - North District Reg. 52. Gasparilla Island RO 4. Clearwater East 5. St. Petersburg NE 6. Albert Whitted 52. Casparilla Island RU 53. North Martin County 54. Seacoast Utilities 55. East Port 56. Melbourne-Grant Street 57. City of Sarasota (exploratory) 58. Pahokee 7. McKay Creek 8. South Cross Bayou 9. St. Petersburg NW 10. St. Petersburg SW 11. Kaiser 12. Manatee County SW 59. Belle Glade 60. Fort Myers Beach 61. Charlotte County West Port 13. Atlantic Utilities Ν Miami-Dade North District Reg. Knight's Trail Park RO (exploratory) 62. Rockledge 63. Palm Beach Co. Southern Regional 64. Plantation East RO 16. Venice Gardens RO 17. Englewood RO 18. Plantation RO (Sarasota CO.) 19. Gasparilla Island 65. Burnt Store 66. Boynton Beach RO 20. North Port 21. North Fort Myers 67. Plantation RO (Broward Co.) 68. Marco Island RO 21. North Fort Myers 22. Gulf Environmental Services 23. Sykes Creek (Merritt Island) 24. West Melbourne 25. Melbourne-D.B. Lee 70. Zemel Road Landfill 71. Hollywood 71. Hollywood 72. Sarasota County Center Road 73. Fort Pierce Utilities Auth. 74. Miramar RO 75. Sanibel Island 25. Melbourne-D.B. Lee 26. Intercil (Harris Corporation) 27. Palm Bay (GDU-Port Malabar) 28. South Beaches 29. Ocean Spray (Hercules) 30. North Port St. Lucie 31. South Port St. Lucie 50 100 Miles 76. Miramar 77. Venice Gardens East 4900 78. South Collier County 79. Sunrise Sawgrass RO 80. Port St. Lucie Western LTC WTP 81. Cooper City RO 95. Tropical Farms 96. Wellington 97. North Miami Beach RO 98. Pine Island 99. Tropicana 100. Peele-Dixie WTP 101. Deerfield Beach West WTP 102. Three Oaks 32. Stuart 33. Pratt & Whitney Turkey Point 34. Q.O. Chemicals 35. Encon 36. Palm Beach County RRF 37. East-Central Regional 38. Acme Improvement Dist. 82. Fort Myers RO 83. Punta Gorda 84. Pompano Beach RO 85. Immokalee 39. Palm Beach Co. Sys. #3 40. Palm Beach Co. Sys. #9 86. South Collier County RO 87. Fort Pierce RO 88. Bonita Springs WRF 89. Port St. Lucie Westport 90. North Collier County WRF BOSCON --40. Palm Beach Co. Sys. #9 41. Coral Springs Improvement Dist. 42. Margate 43. Royal Palm Beach 44. Sunrise 45. Plantation Utilities 46. G.T. Lohmeyer 47. Pembroke Pines (Century Village) FDEP 11/2003 91. Bonita Springs RO 92. Palm Bay RO 93. CPV Cana Power Plant 94. North Lee County WTP

Modified from Reference 229

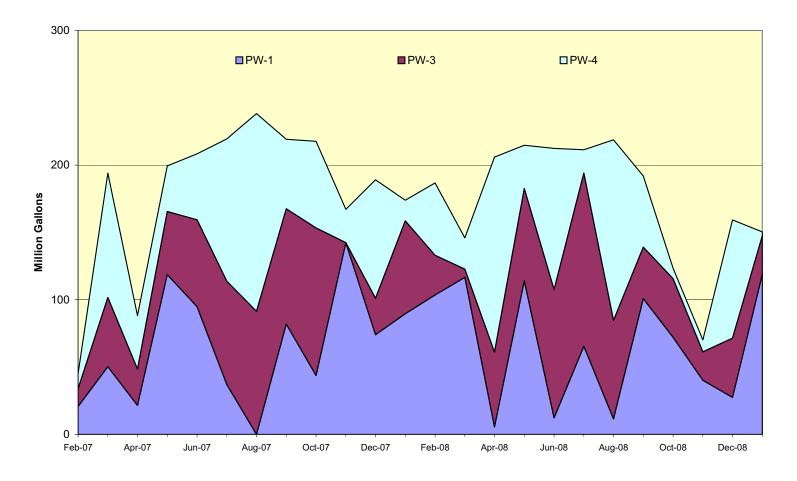
2.4.12-100 Revision 0

PTN COL 2.4-4 Figure 2.4.12-216 Location of Aquifer Storage and Recovery Facilities in Florida



2.4.12-101 Revision 0

Figure 2.4.12-217 Turkey Point Upper Floridan Aquifer Saline Groundwater Use

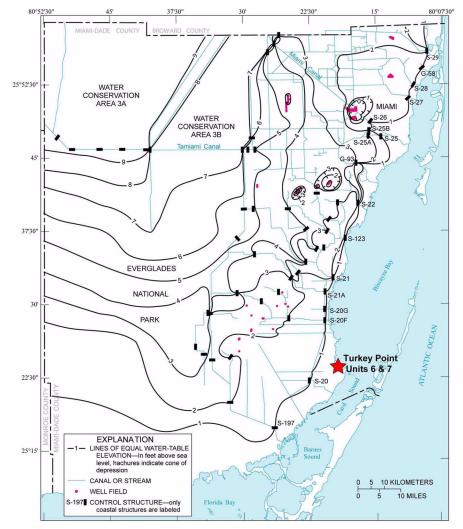


2.4.12-102 Revision 0

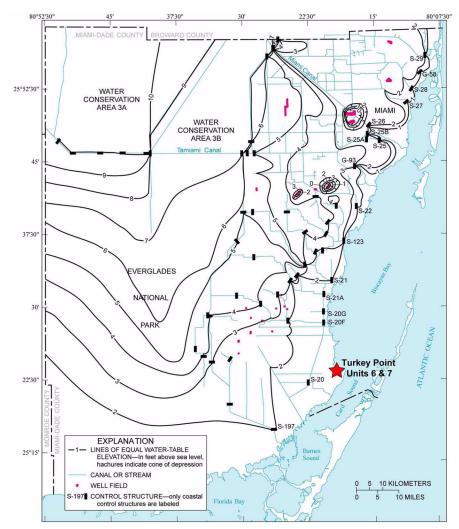
PTN COL 2.4-4 Figure 2.4.12-218 Location of Radial Collector Wells



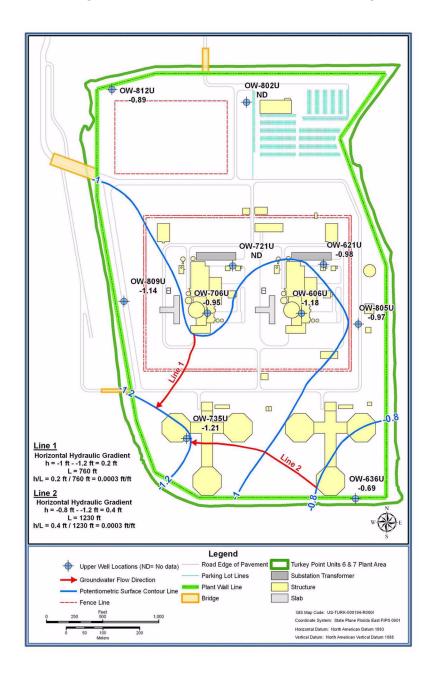
PTN COL 2.4-4 Figure 2.4.12-219 May 1993 Biscayne Aquifer Potentiometric Surface Map



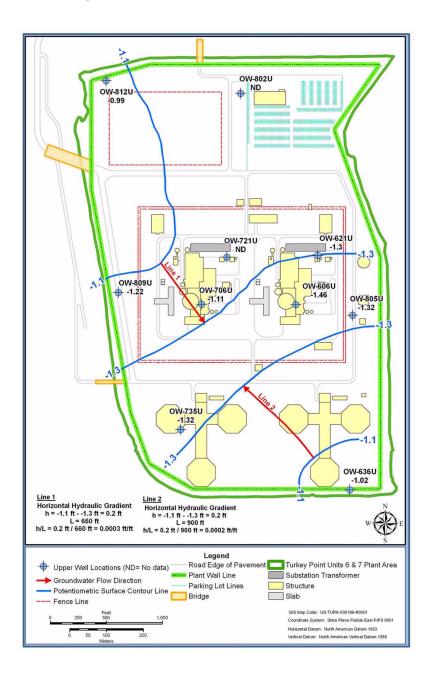
PTN COL 2.4-4 Figure 2.4.12-220 November 1993 Biscayne Aquifer Potentiometric Surface Map



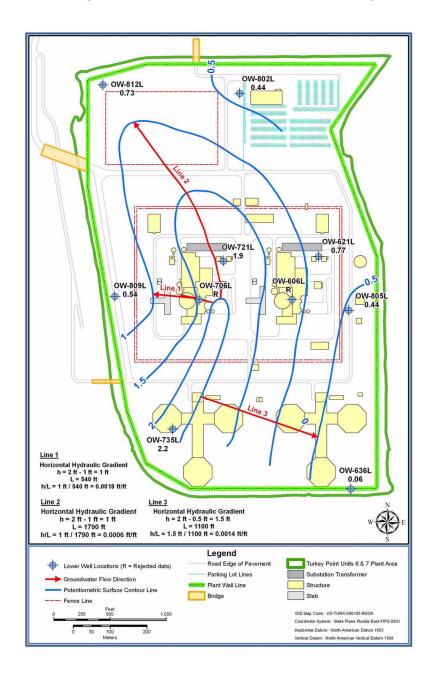
PTN COL 2.4-4 Figure 2.4.12-221 Biscayne Aquifer Potentiometric Surface Map, Upper Monitoring Interval, June 29, 2008 (Sheet 1 of 2) High Tide



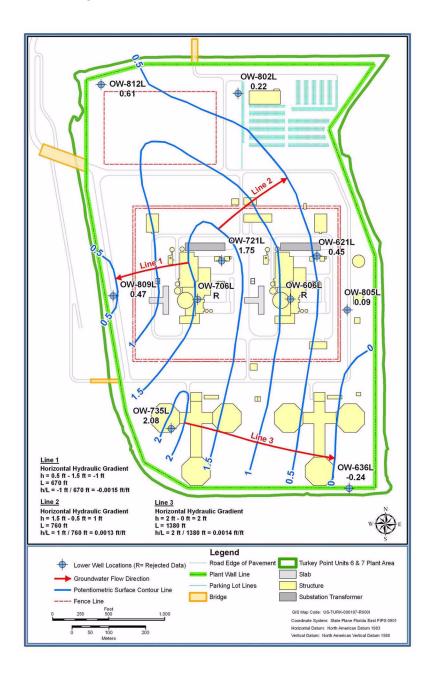
PTN COL 2.4-4 Figure 2.4.12-221 Biscayne Aquifer Potentiometric Surface Map, Upper Monitoring Interval, June 29, 2008 (Sheet 2 of 2) Low Tide



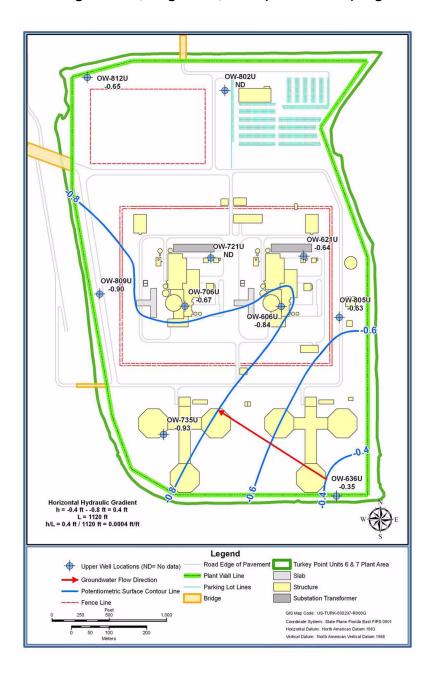
PTN COL 2.4-4 Figure 2.4.12-222 Biscayne Aquifer Potentiometric Surface Map, Lower Monitoring Interval, June 29, 2008 (Sheet 1 of 2) High Tide



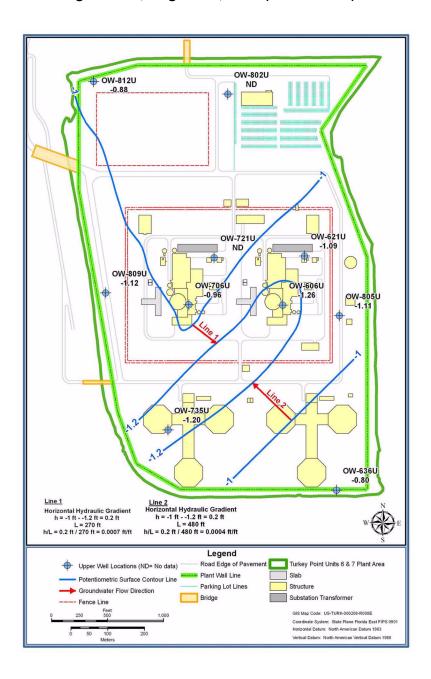
PTN COL 2.4-4 Figure 2.4.12-222 Biscayne Aquifer Potentiometric Surface Map, Lower Monitoring Interval, June 29, 2008 (Sheet 2 of 2) Low Tide



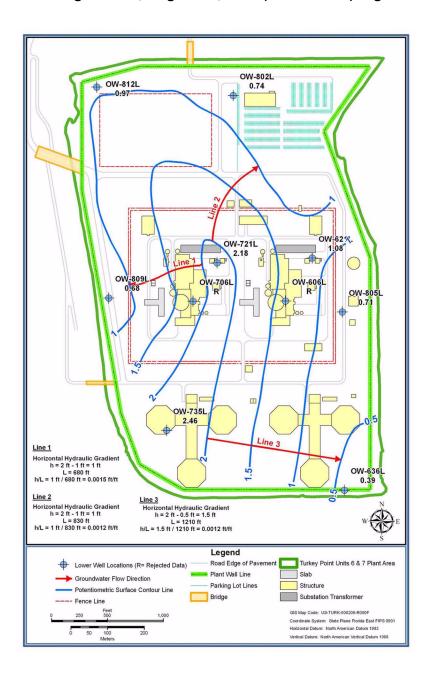
PTN COL 2.4-4 Figure 2.4.12-223 Biscayne Aquifer Potentiometric Surface Map, Upper Monitoring Interval, August 15, 2008 (Sheet 1 of 2) High Tide



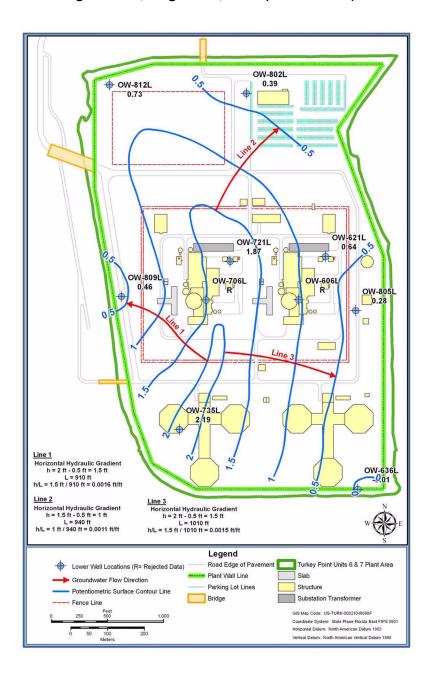
PTN COL 2.4-4 Figure 2.4.12-223 Biscayne Aquifer Potentiometric Surface Map, Upper Monitoring Interval, August 15, 2008 (Sheet 2 of 2) Low Tide



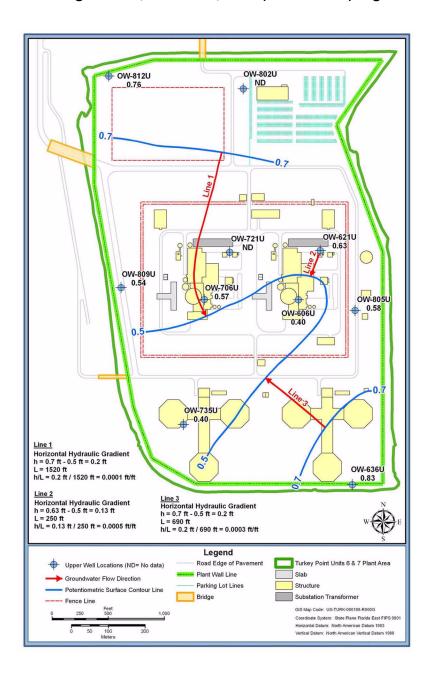
PTN COL 2.4-4 Figure 2.4.12-224 Biscayne Aquifer Potentiometric Surface Map, Lower Monitoring Interval, August 15, 2008 (Sheet 1 of 2) High Tide



PTN COL 2.4-4 Figure 2.4.12-224 Biscayne Aquifer Potentiometric Surface Map, Lower Monitoring Interval, August 15, 2008 (Sheet 2 of 2) Low Tide



PTN COL 2.4-4 Figure 2.4.12-225 Biscayne Aquifer Potentiometric Surface Map, Upper Monitoring Interval, October 5, 2008 (Sheet 1 of 2) High Tide



PTN COL 2.4-4 Figure 2.4.12-225 Biscayne Aquifer Potentiometric Surface Map, Upper Monitoring Interval, October 5, 2008 (Sheet 2 of 2) Low Tide

