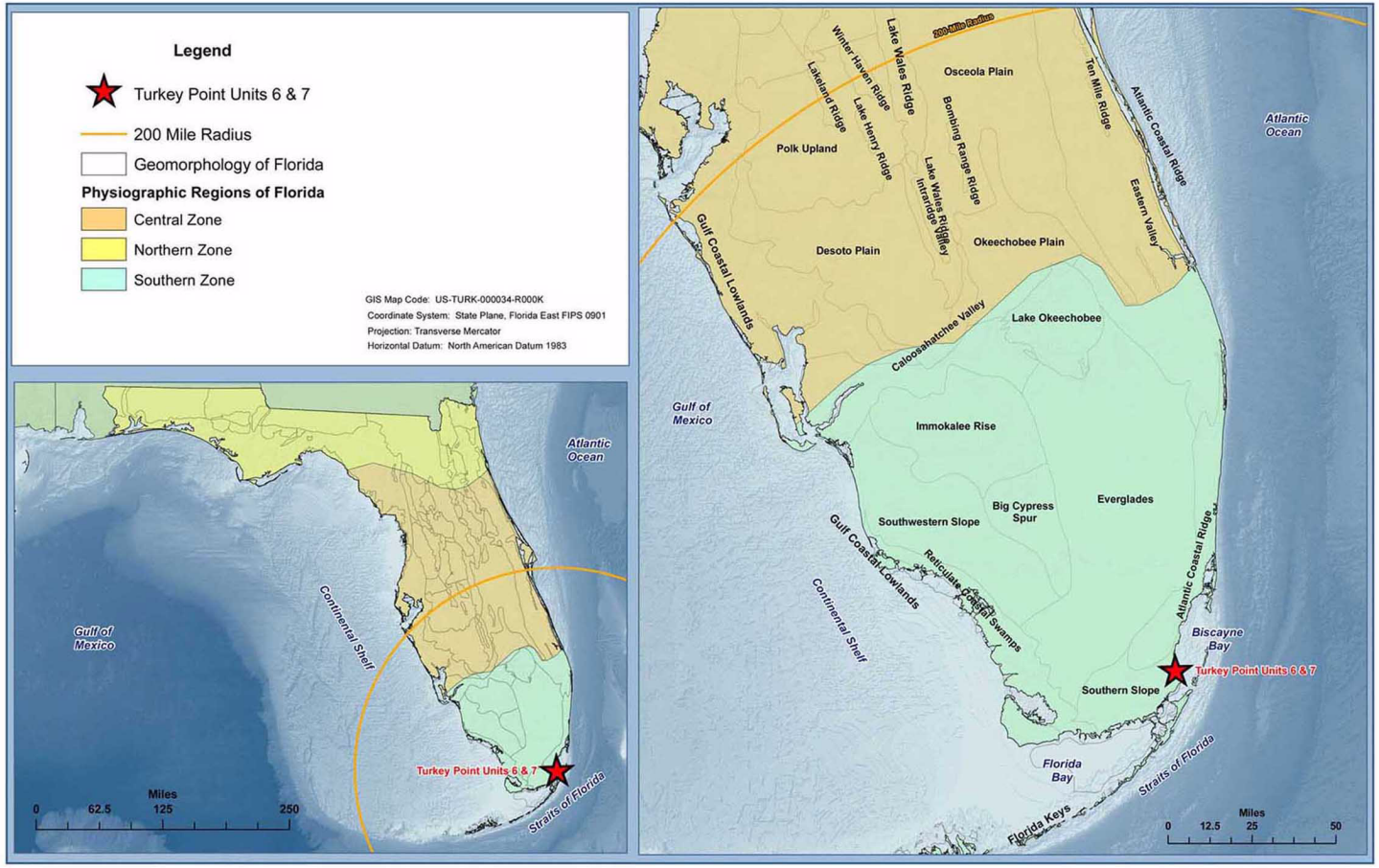
PTN COL 2.4-4

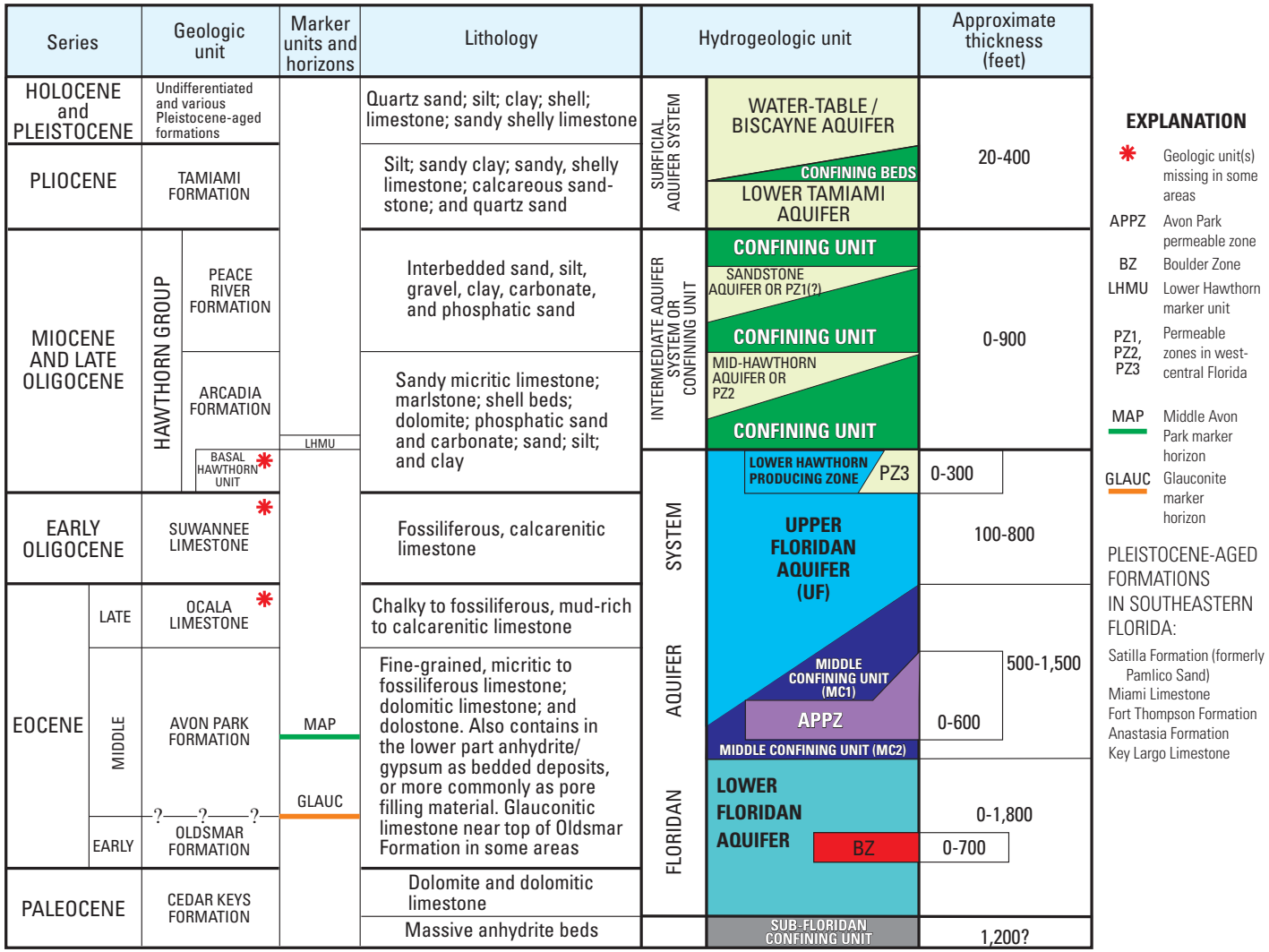
Figure 2.4.12-201 Physiographic Features



Modified from References 201 and 202
Note: Florida is within the Atlantic Coastal Plan physiographic province.

PTN COL 2.4-4

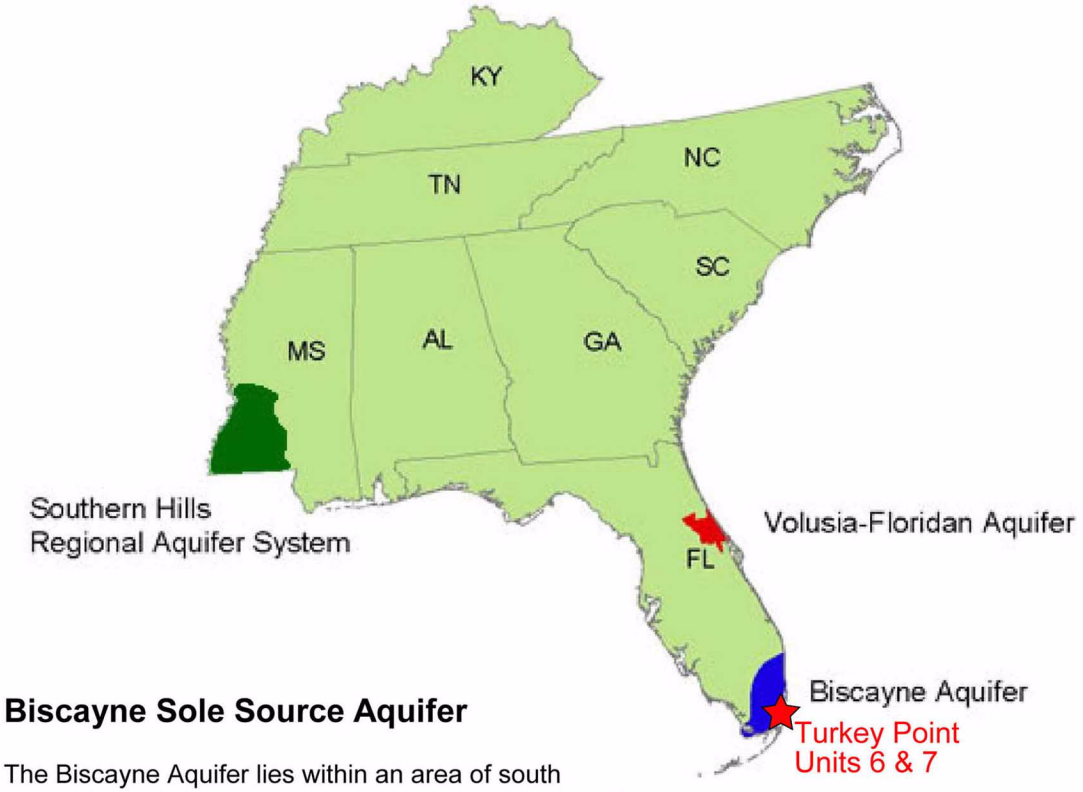
Figure 2.4.12-202 Regional Generalized Hydrostatigraphic Column



Source: Reference 206

PTN COL 2.4-4

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



Biscayne Sole Source Aquifer

The Biscayne Aquifer lies within an area of south Florida bounded by the Atlantic Ocean and the Gulf of Mexico between Whitewater Bay in Monroe County and Delray Beach in Palm Beach County; and by a line drawn from the mouth of Whitewater Bay northeasterly and northerly to the intersection of the northern boundary of Monroe County and the western boundary of Miami-Dade County; and thence northerly and northeasterly to the intersection of the North New River Canal and the boundary line separating Broward and Palm Beach Counties; and finally east-northeasterly to Delray Beach. The enclosed area includes almost all of Miami-Dade County and parts of Broward, Monroe, and Palm Beach counties.

Modified from Reference 205

PTN COL 2.4-4

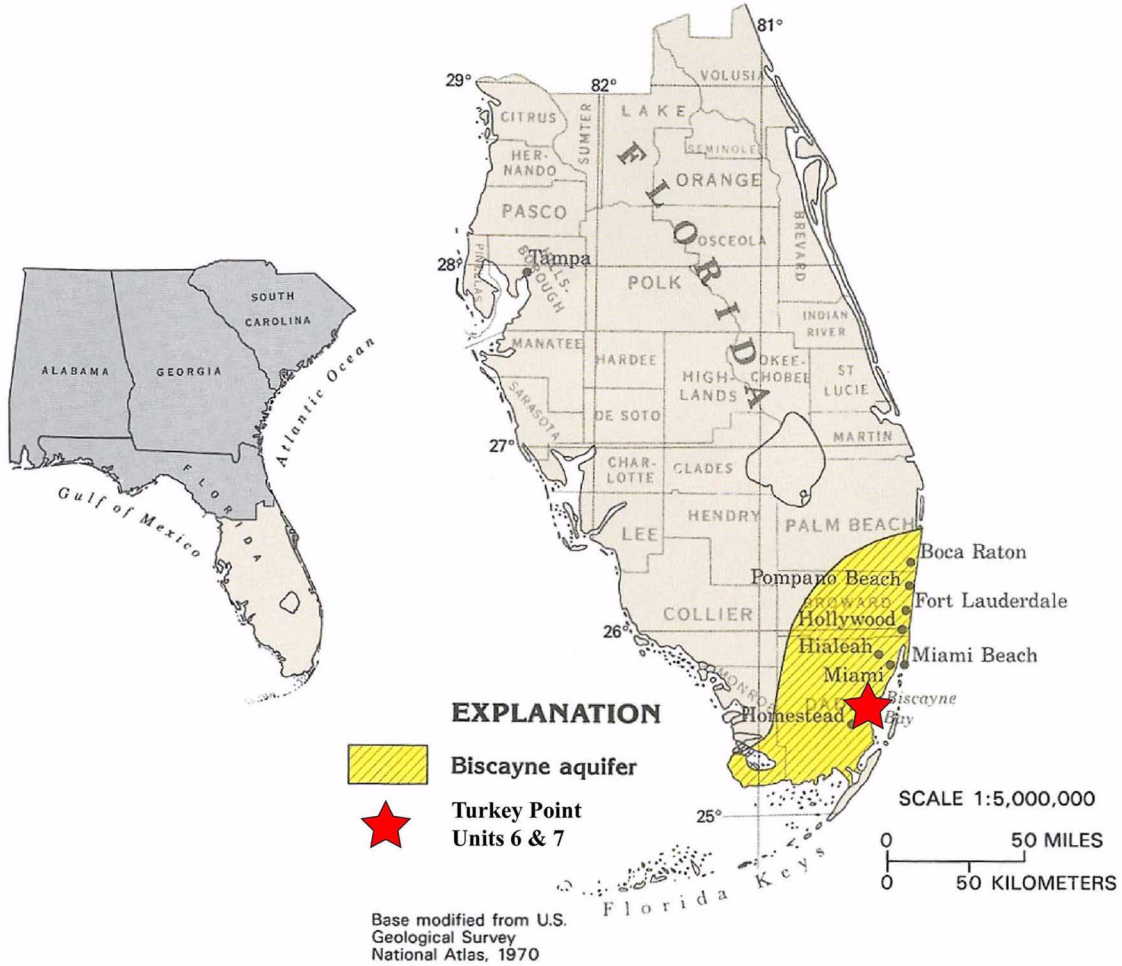
Figure 2.4.12-204 Site Hydrostatigraphic Column

ERATHEM	SYSTEM	SERIES	HYDRO-GEOLOGIC UNIT		STRATIGRAPHIC UNIT		LITHOLOGY	APPROXIMATE TOP ELEVATION (ft NAVD 88)	APPROXIMATE THICKNESS (ft)
CENEZOIC	QUATERNARY	HOLOCENE			organic muck		organic soil and silt	0	3
		PLEISTOCENE	Surficial aquifer system	Biscayne aquifer	Miami Limestone		sandy, oolitic limestone	-3	25
					Key Largo Limestone		well indurated, vuggy, coralline limestone	-28	22
					Fort Thompson Formation		poor/well indurated fossiliferous limestone	-50	65
	TERTIARY	PLIOCENE		Semi-confining unit	Tamiami Formation		sand and silt with calcarenitic limestone	-115	105
		MIOCENE	Intermediate confining unit		Hawthorn Group	Peace River Formation	silty calcareous sand and silt	*formation contact based on natural gamma signature* -220	235
						Arcadia Formation	calcareous wackestone with indurated limestones, sandstone, and sand	-455	>160
								drilling ended at -616.5 ft NAVD 88	

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

PTN COL 2.4-4

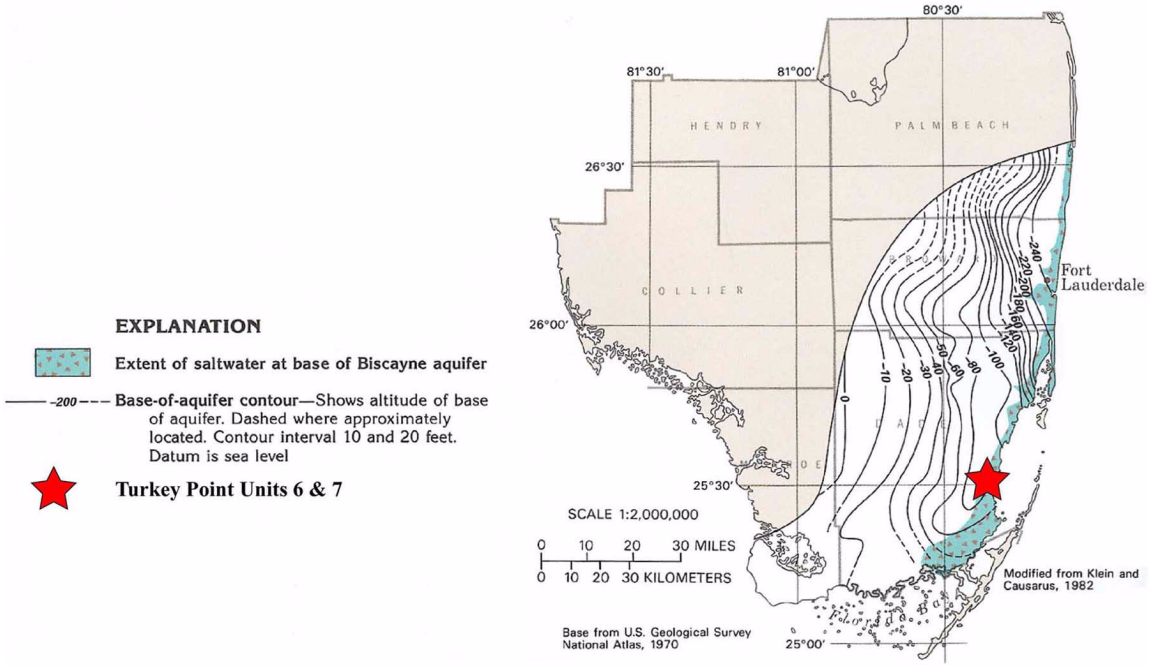
Figure 2.4.12-205 Location of the Biscayne Aquifer in Southeast Florida



Modified from Reference 210

PTN COL 2.4-4

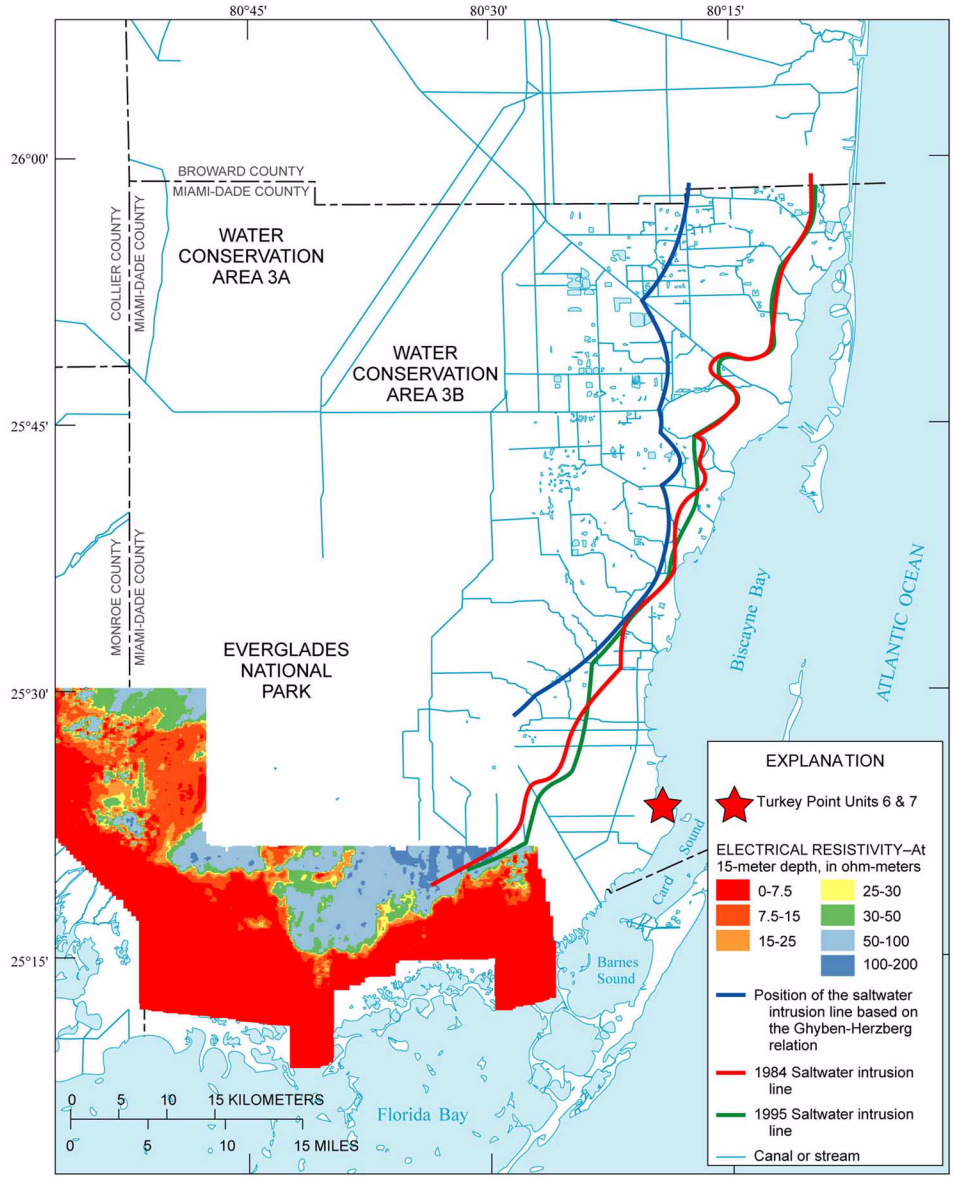
Figure 2.4.12-206 Base of the Biscayne Aquifer



Modified from Reference 210

PTN COL 2.4-4

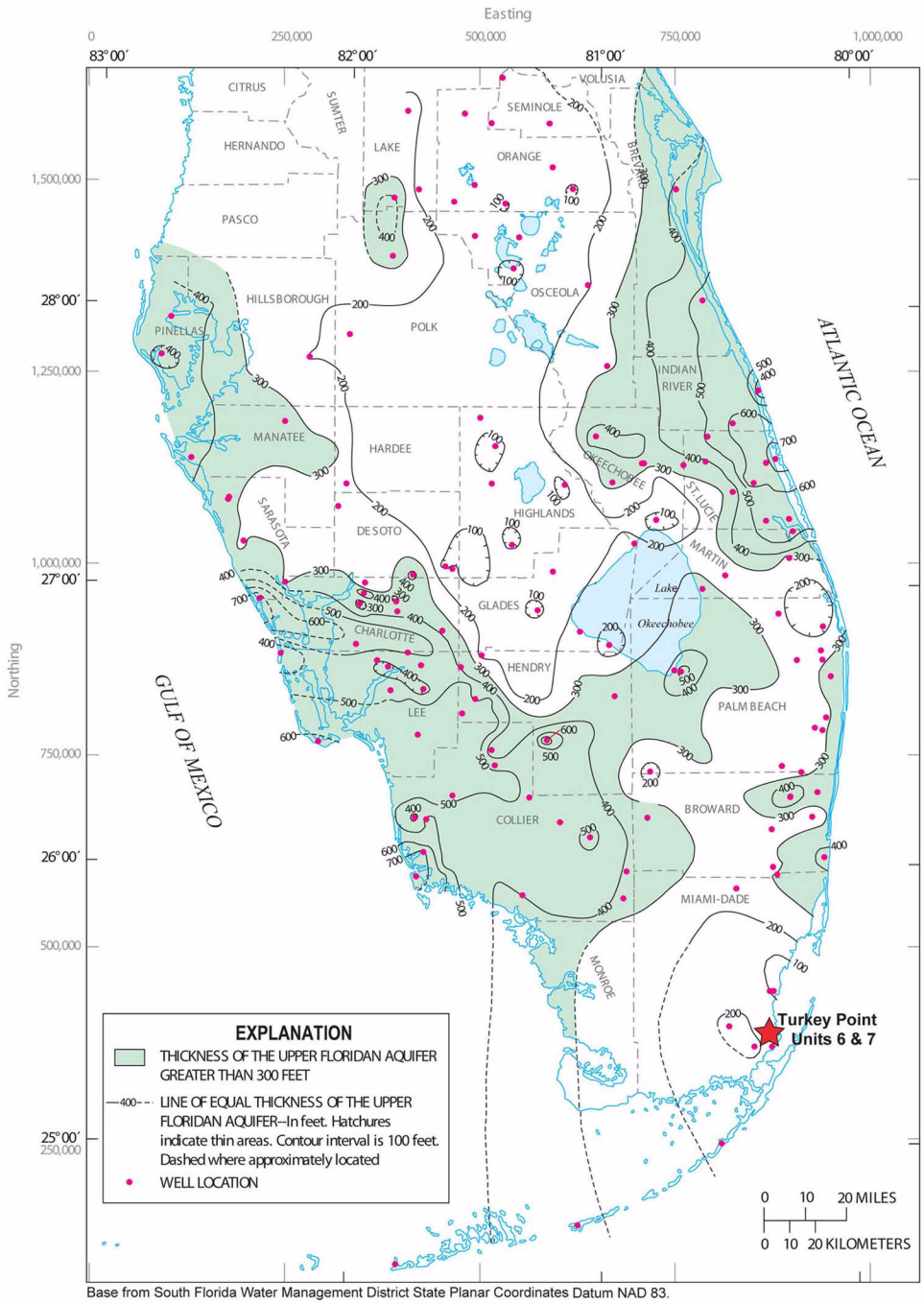
Figure 2.4.12-207 Location of the Freshwater-Saltwater Interface



Modified from Reference 212

PTN COL 2.4-4

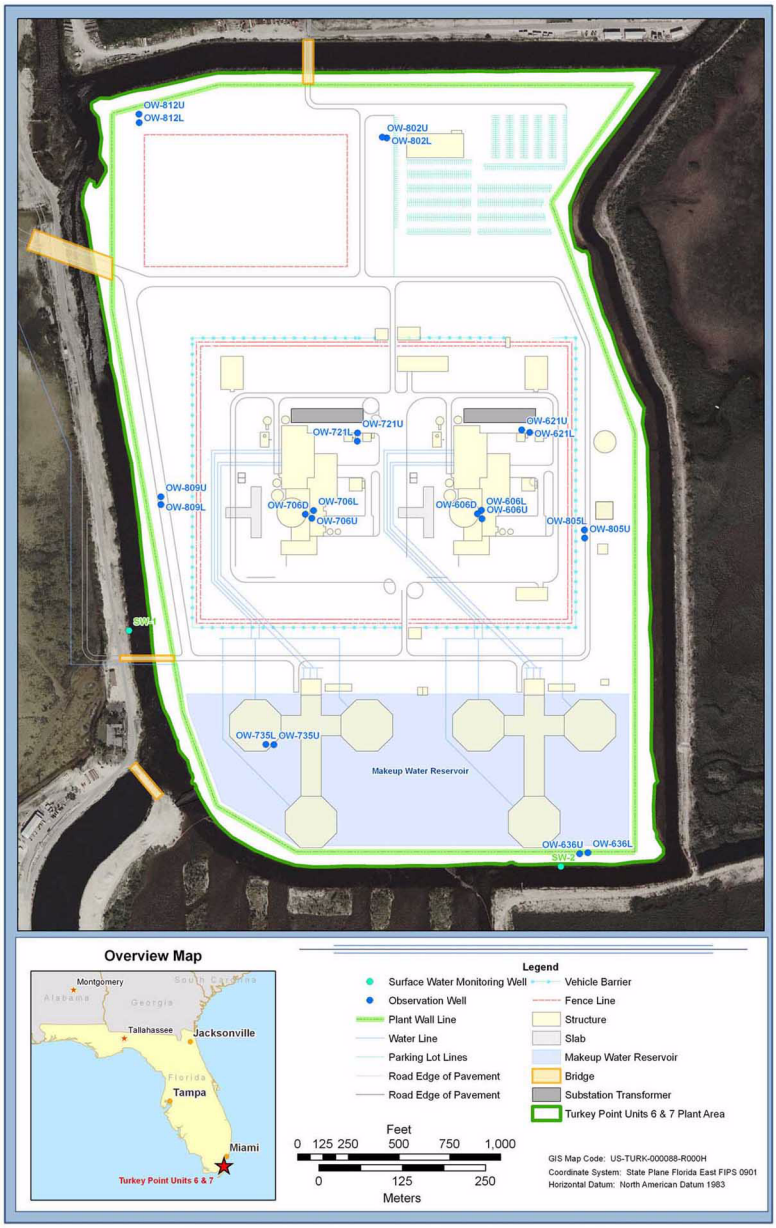
Figure 2.4.12-208 Thickness of the Upper Floridan Aquifer



Modified from Reference 206

PTN COL 2.4-4

Figure 2.4.12-209 Observation Well Location Plan



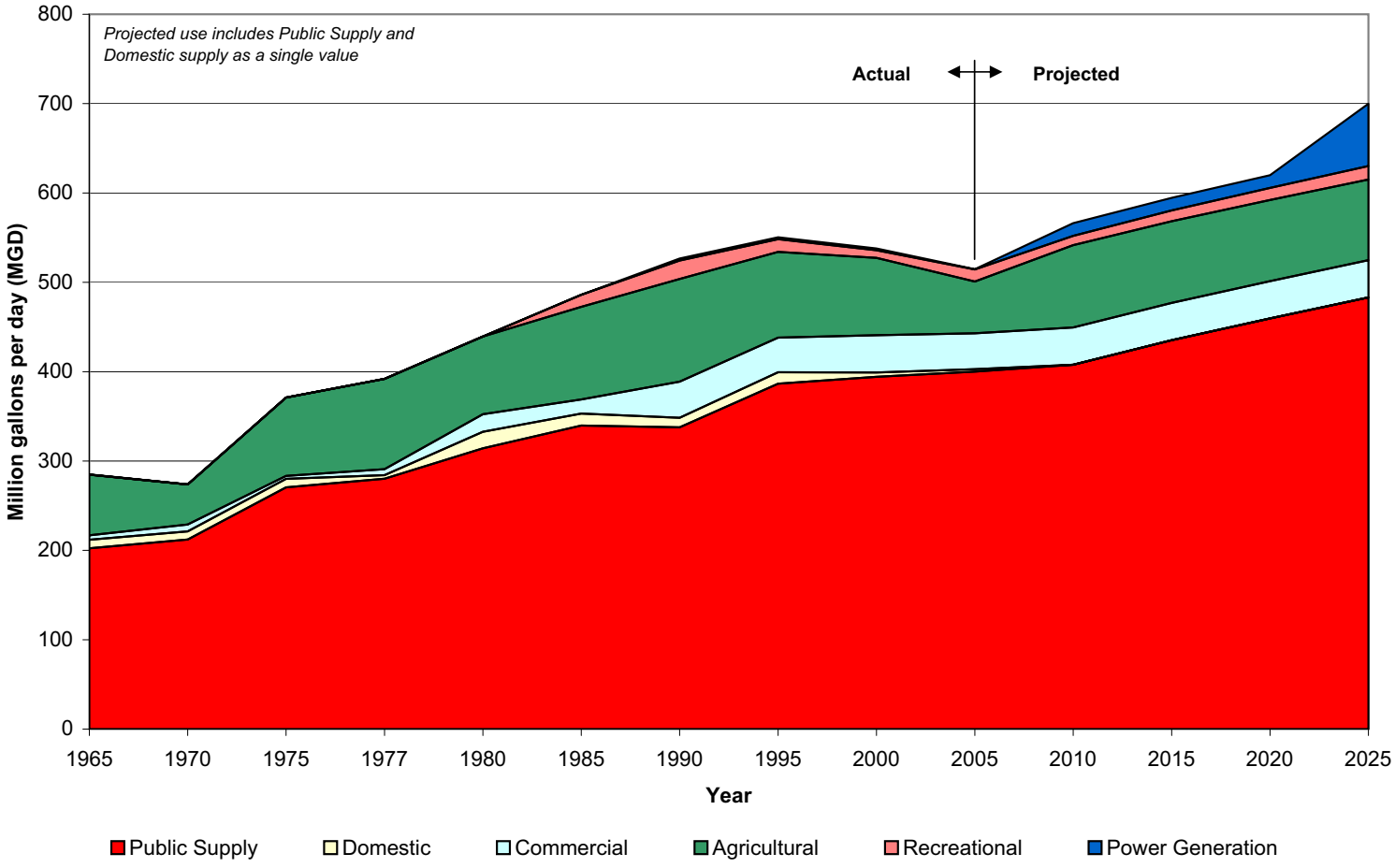
PTN COL 2.4-4

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**

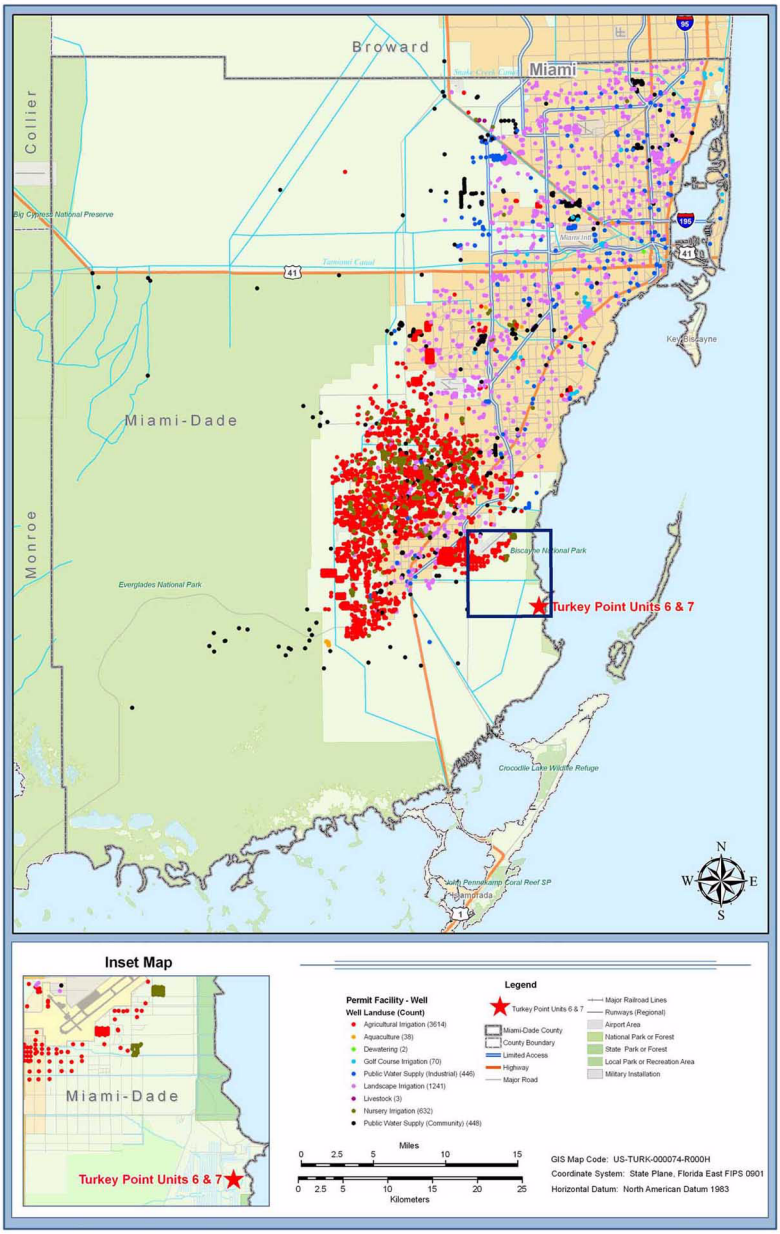
PTN COL 2.4-4

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



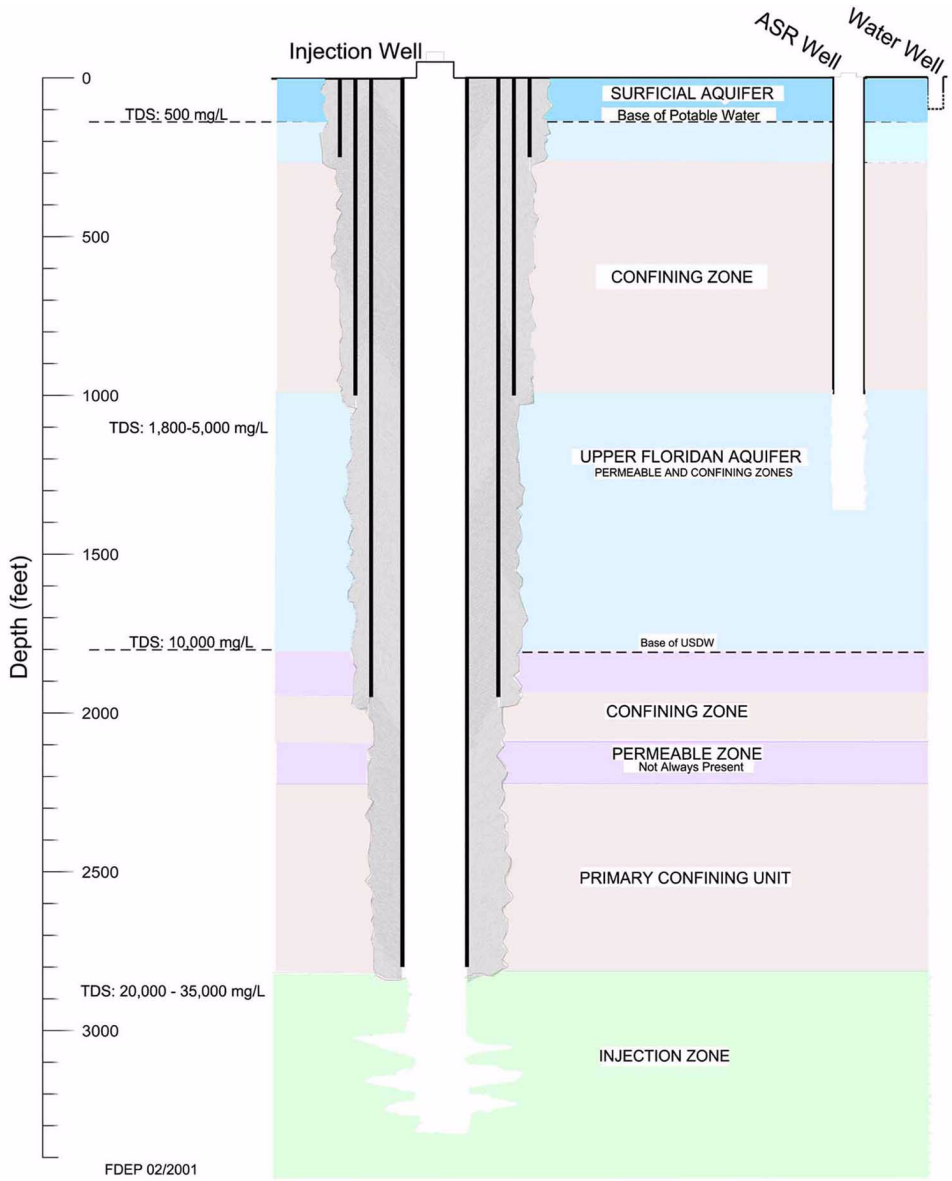
Source: Table 2.4.12-202

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



Source: Reference 227

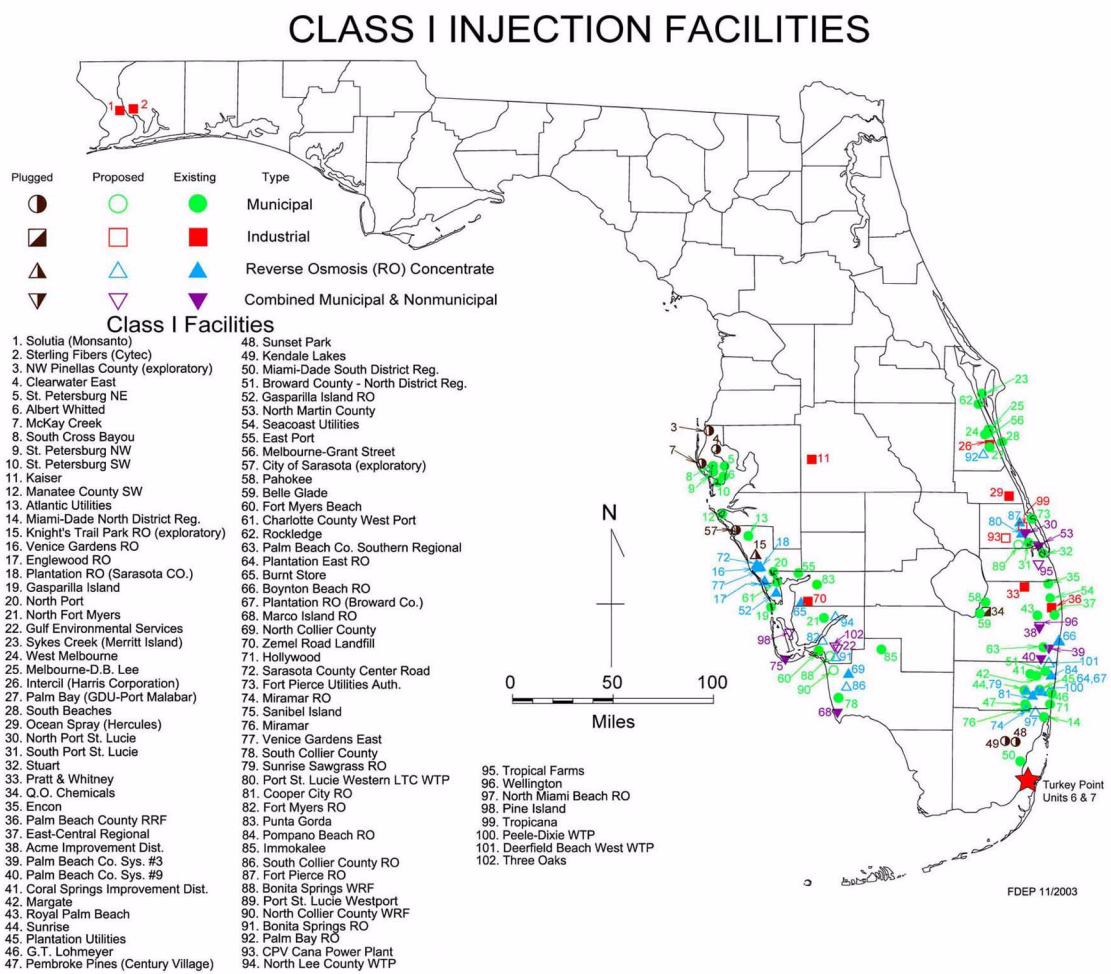
PTN COL 2.4-4 **Figure 2.4.12-214 Typical Municipal Class 1 Injection Well, ASR Well and Water Well in Southeast Florida**



Source: Reference 229

PTN COL 2.4-4

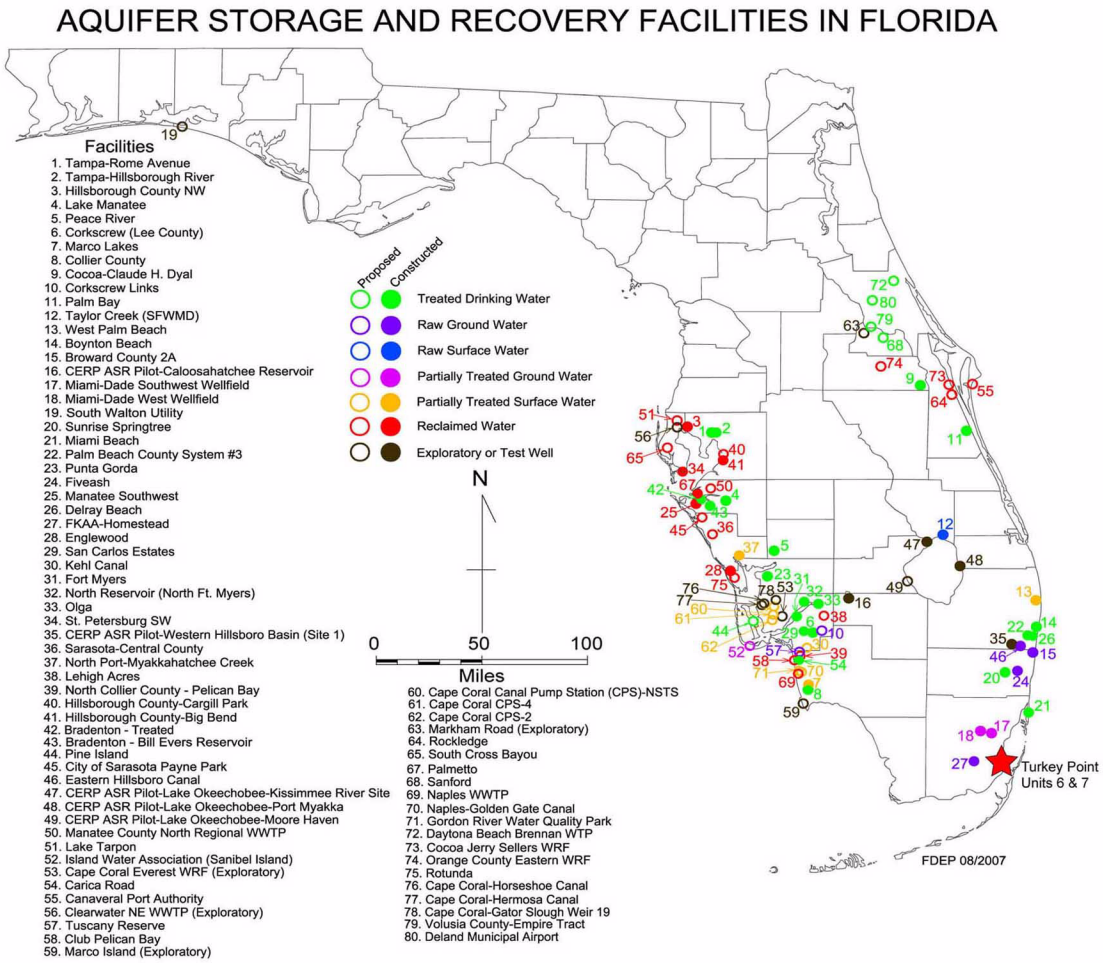
Figure 2.4.12-215 Locations of Class I Injection Facilities in Florida



Modified from Reference 229

PTN COL 2.4-4

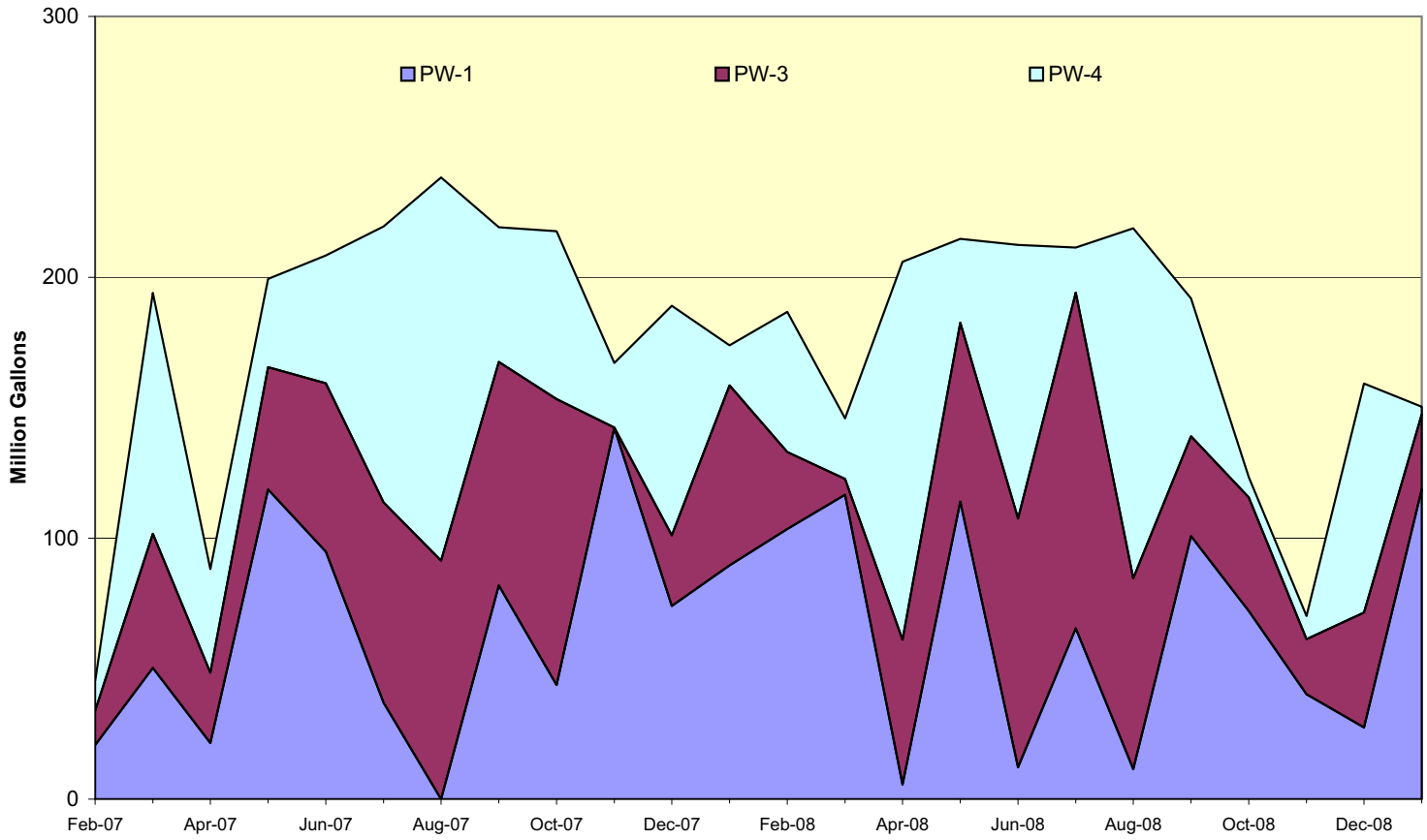
Figure 2.4.12-216 Location of Aquifer Storage and Recovery Facilities in Florida



Modified from Reference 229

PTN COL 2.4-4

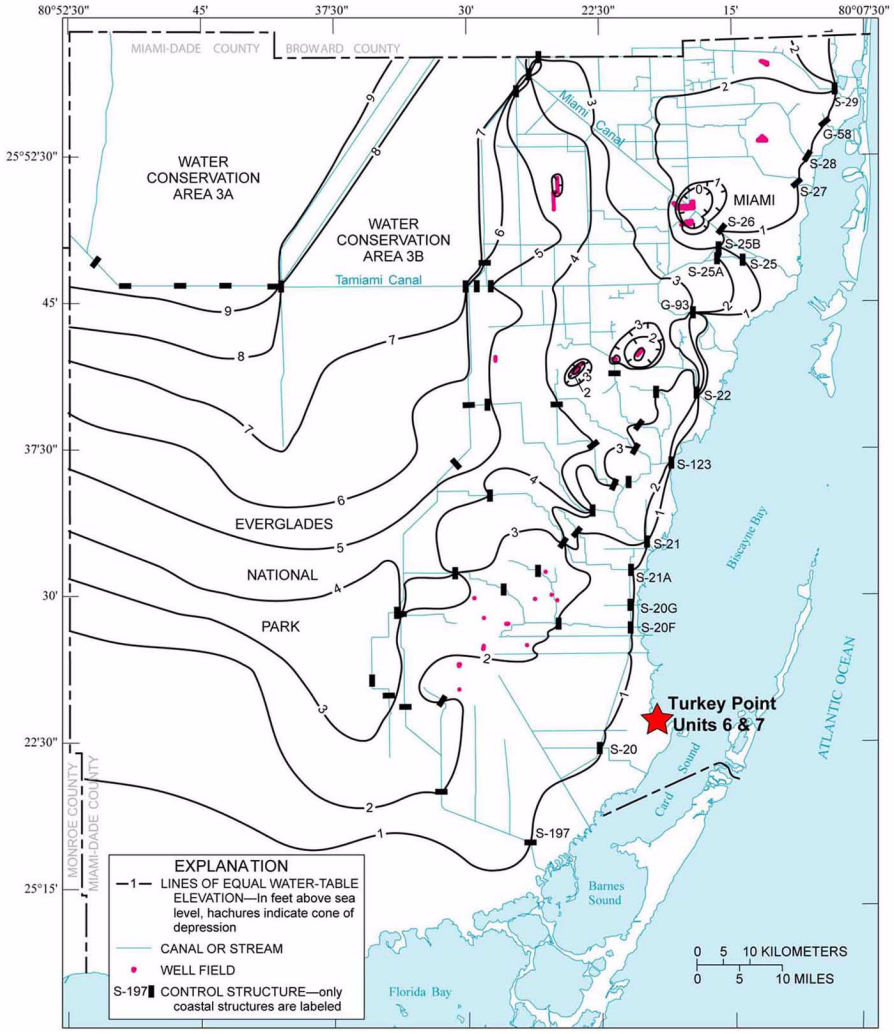
Figure 2.4.12-217 Turkey Point Upper Floridan Aquifer Saline Groundwater Use



PTN COL 2.4-4

Figure 2.4.12-218 Location of Radial Collector Wells

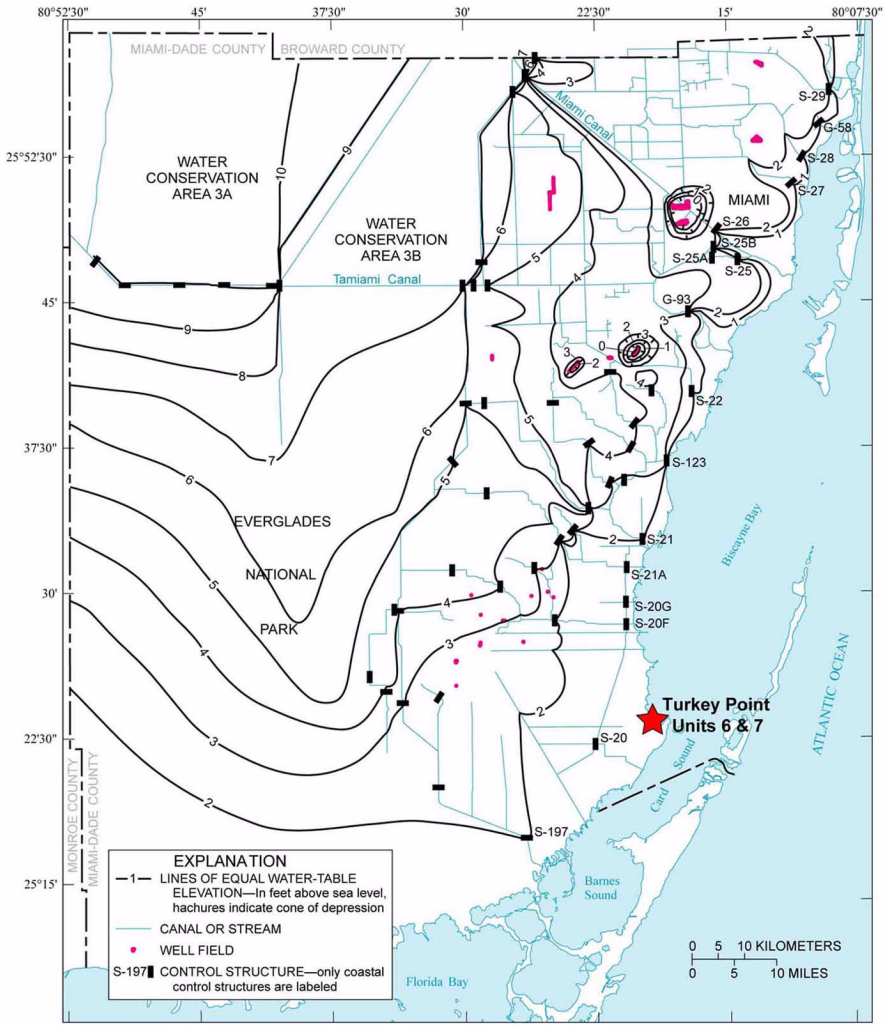
PTN COL 2.4-4 **Figure 2.4.12-219 May 1993 Biscayne Aquifer Potentiometric Surface Map**



Modified from Reference 212

PTN COL 2.4-4

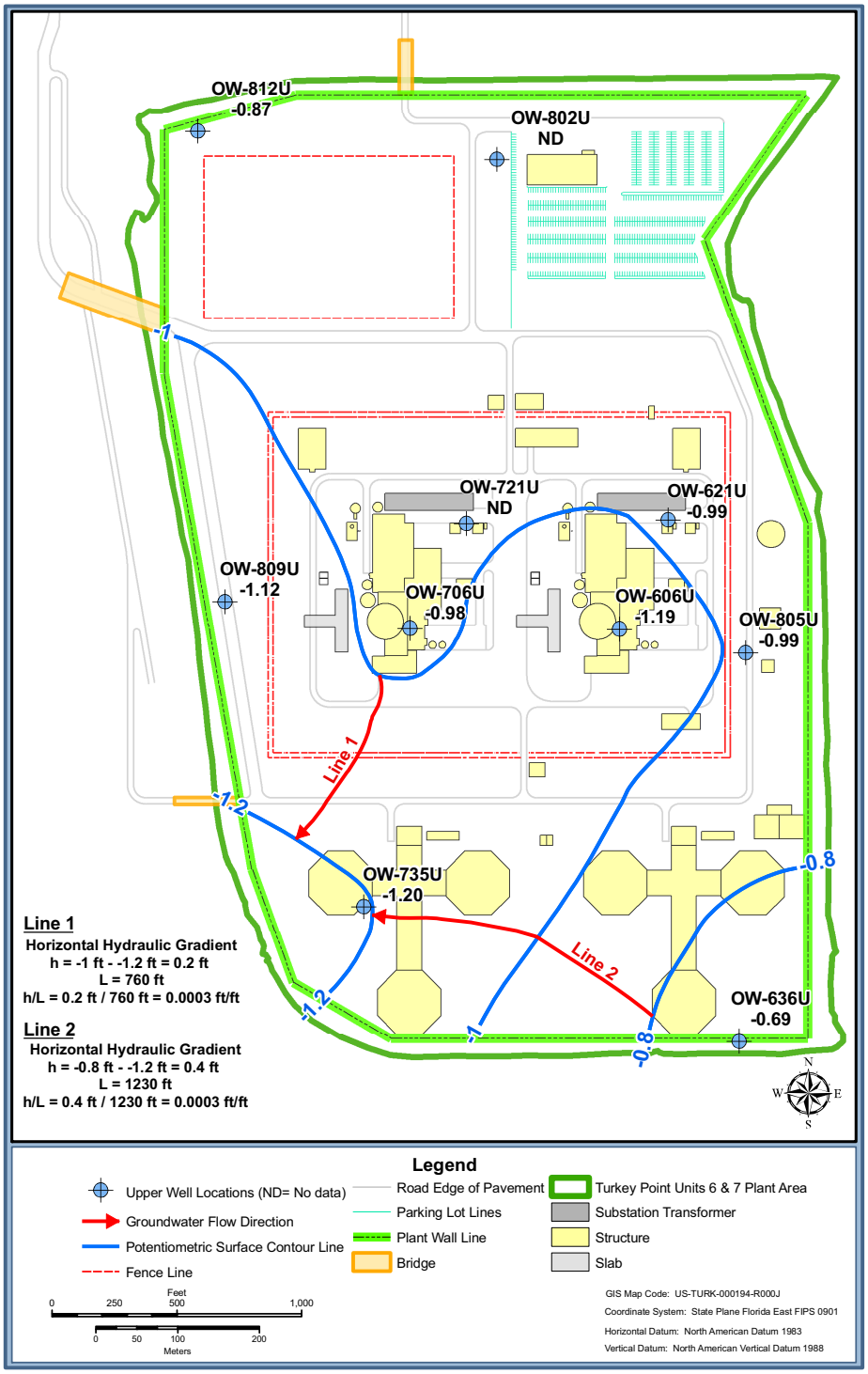
Figure 2.4.12-220 November 1993 Biscayne Aquifer Potentiometric Surface Map



Modified from Reference 212

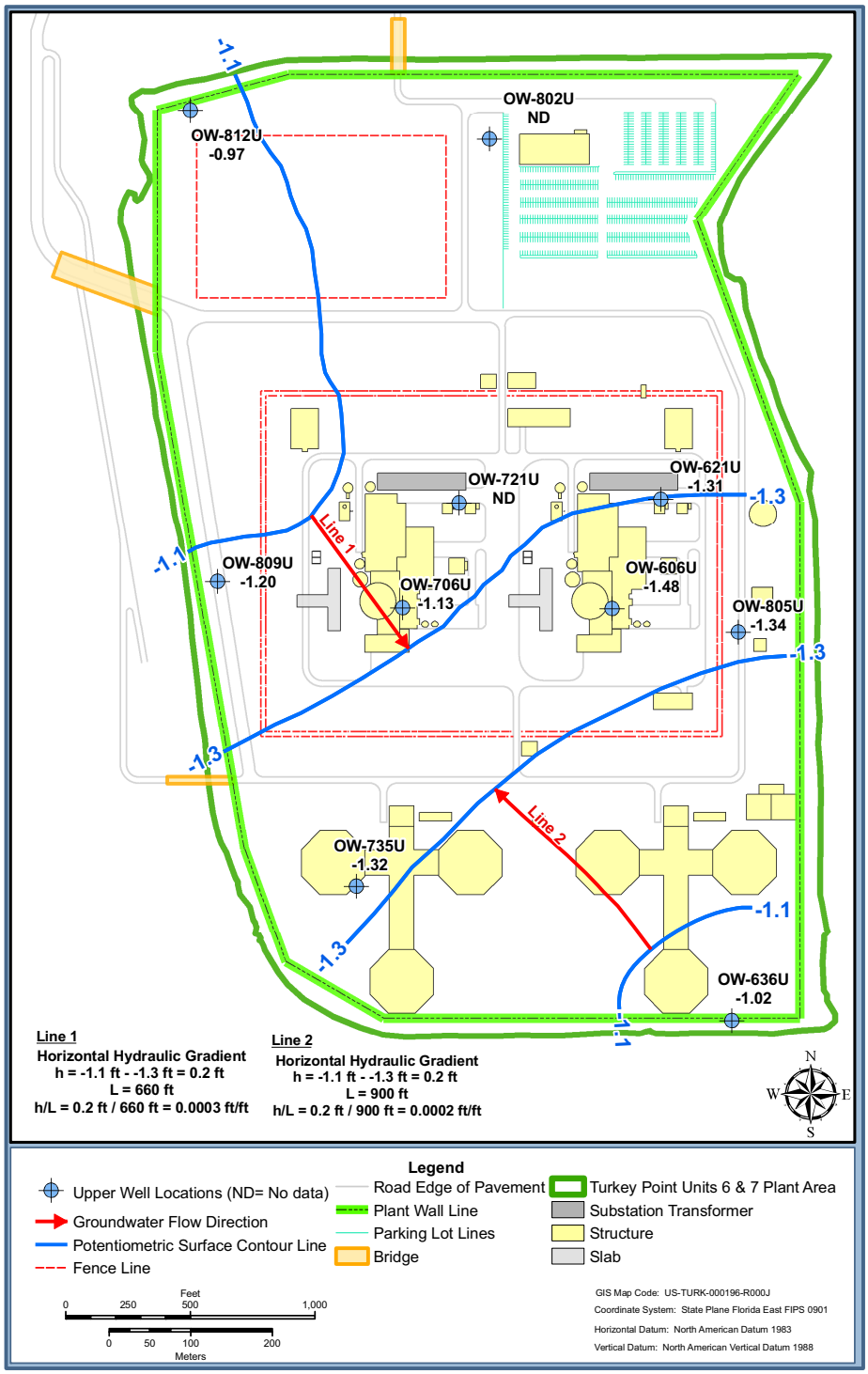
PTN COL 2.4-4

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



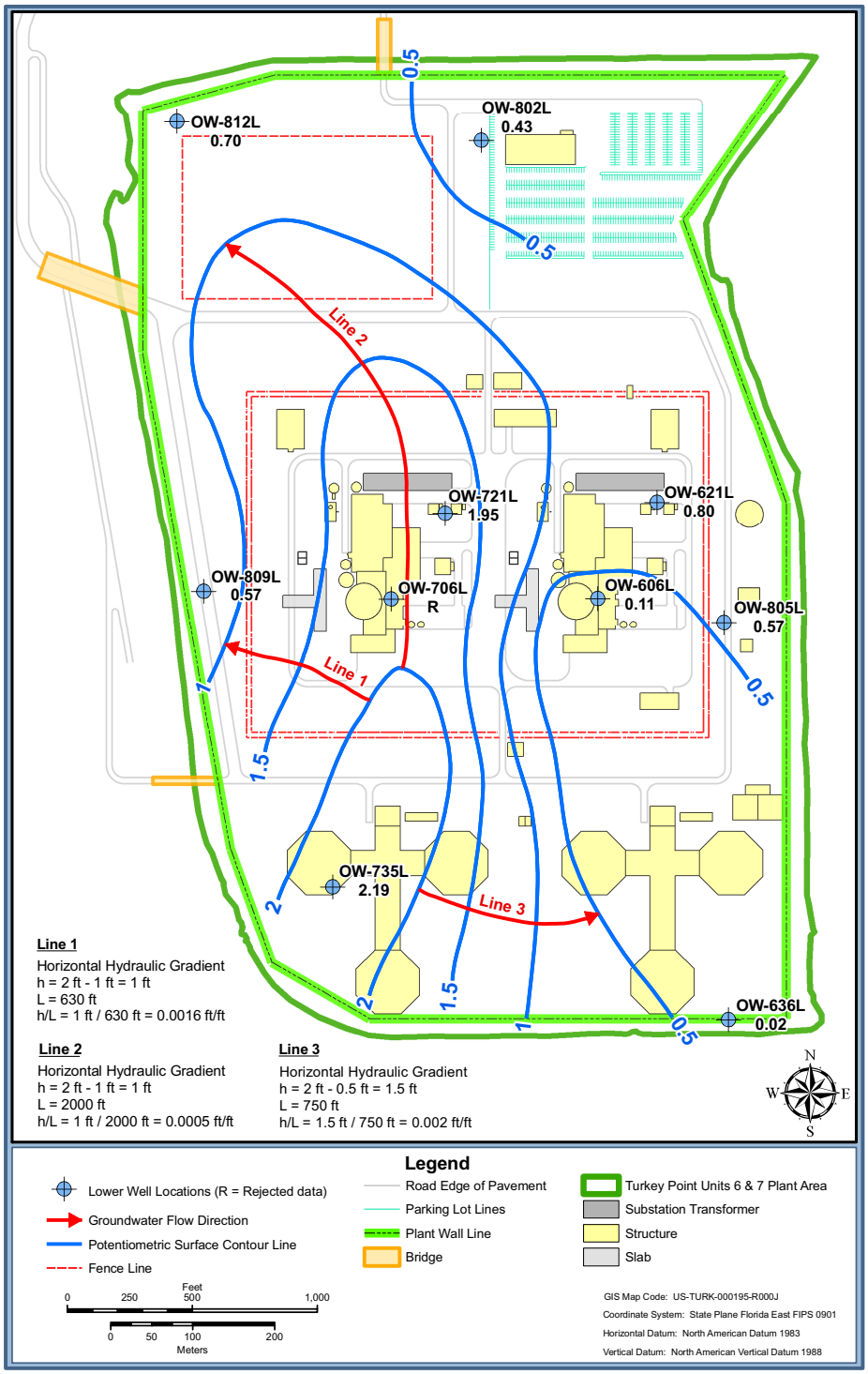
PTN COL 2.4-4

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



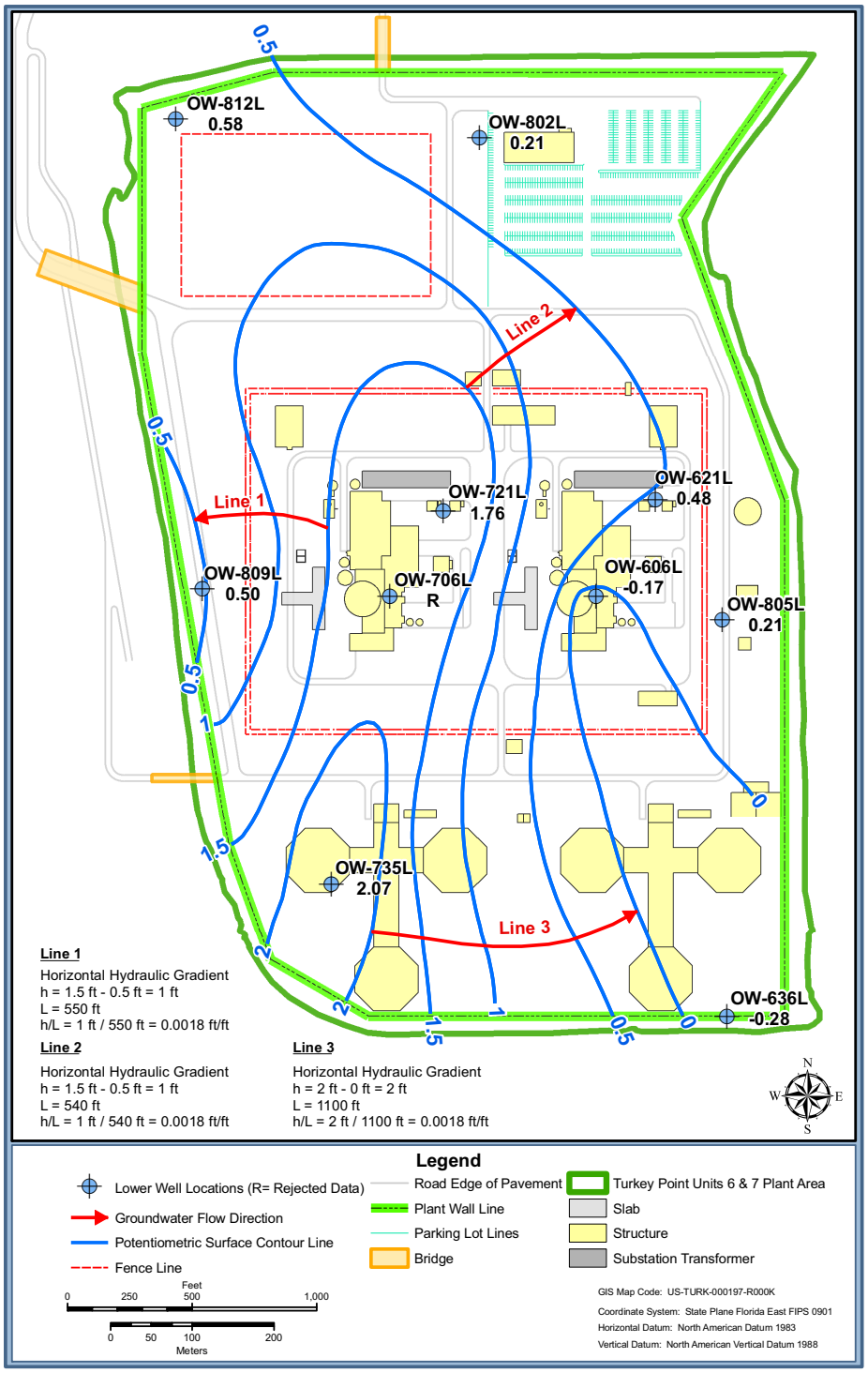
PTN COL 2.4-4

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



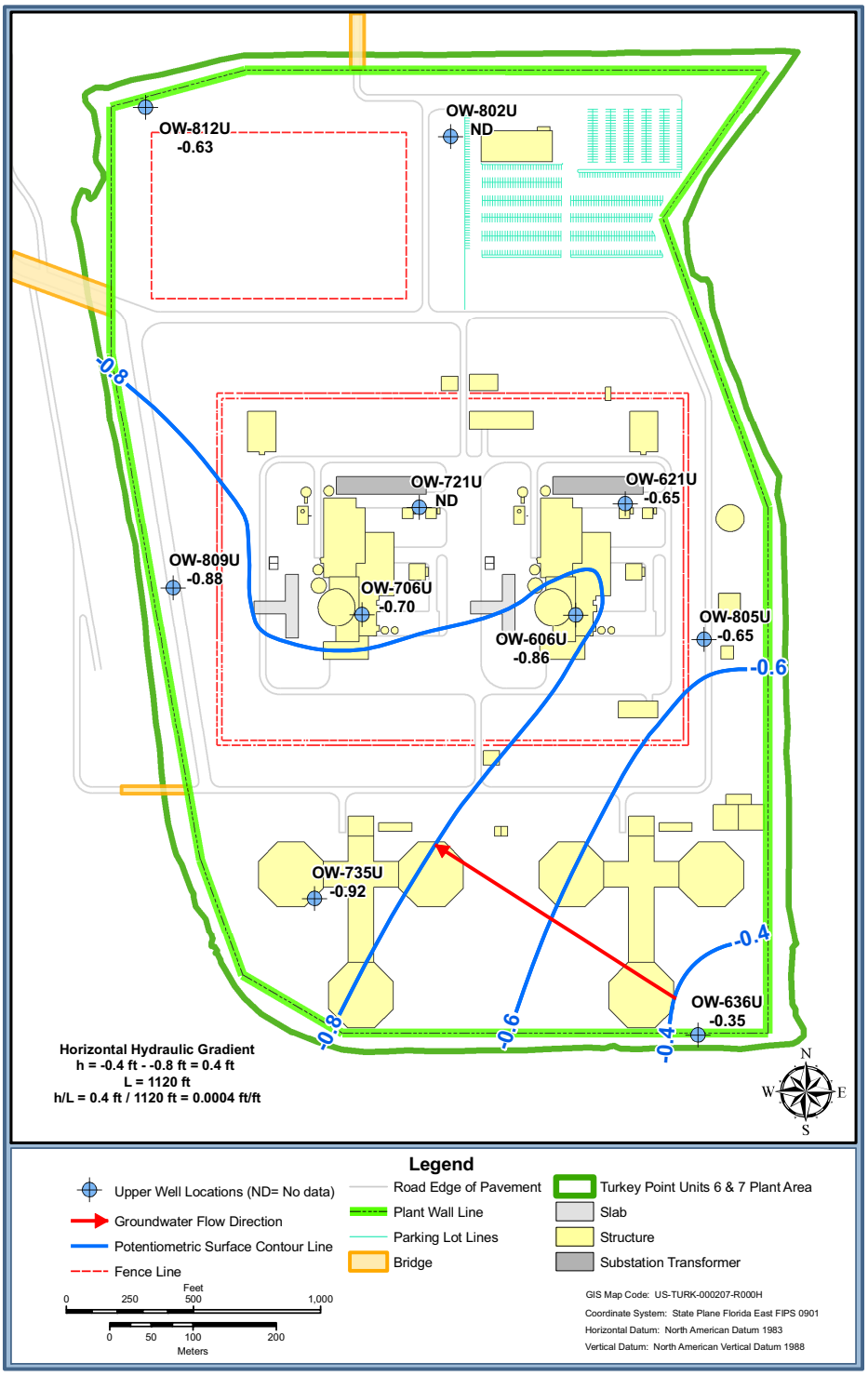
PTN COL 2.4-4

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



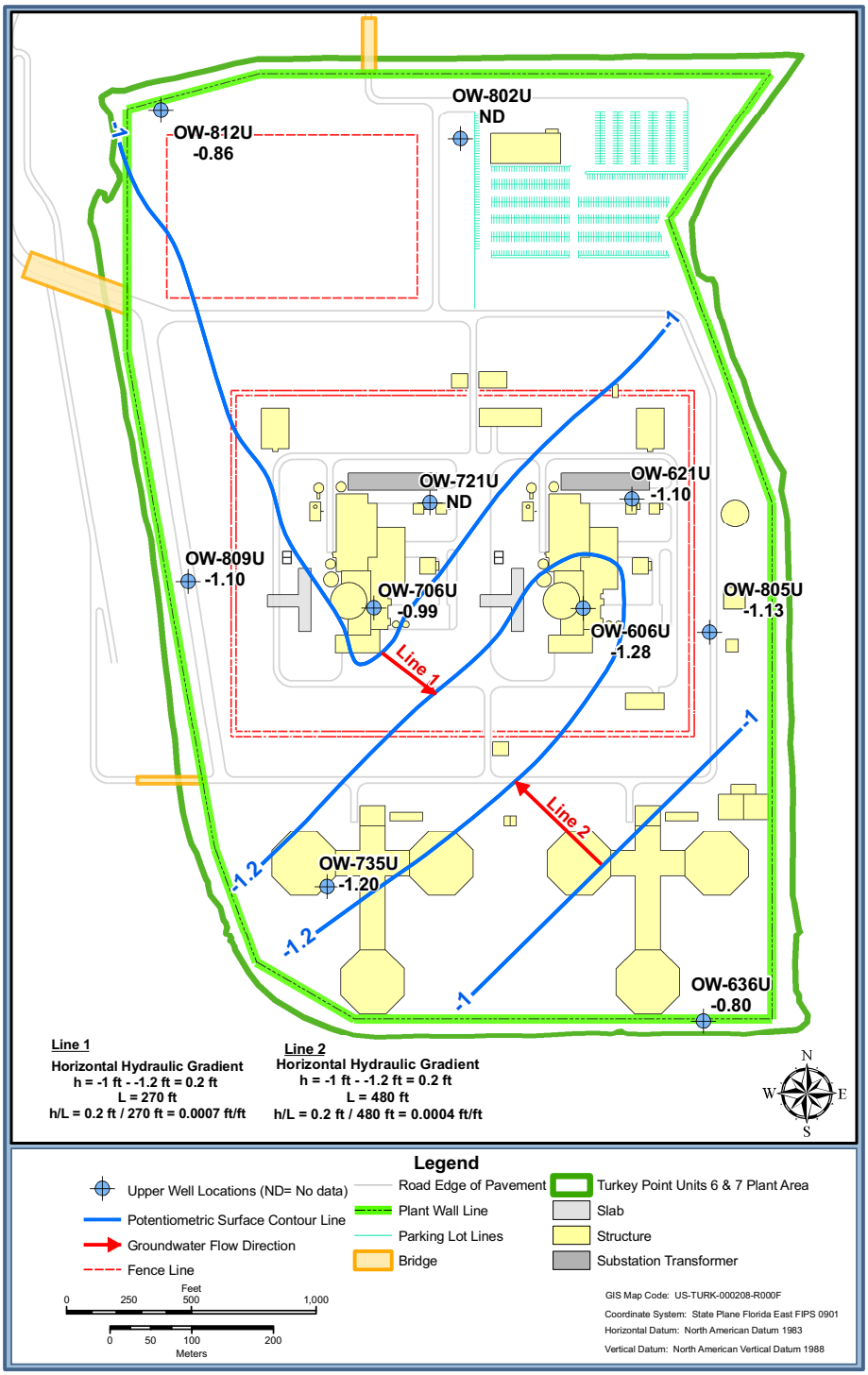
PTN COL 2.4-4

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



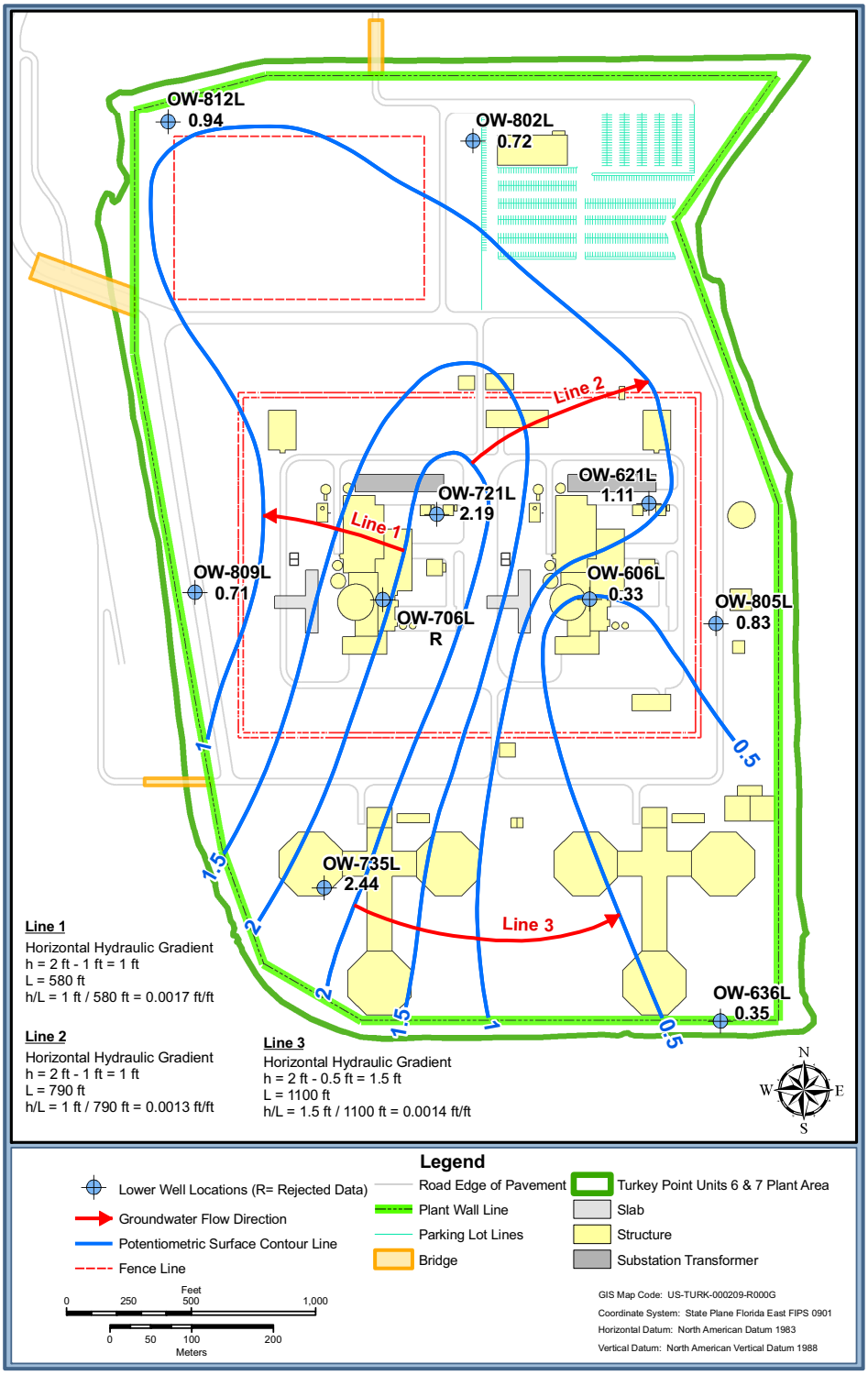
PTN COL 2.4-4

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



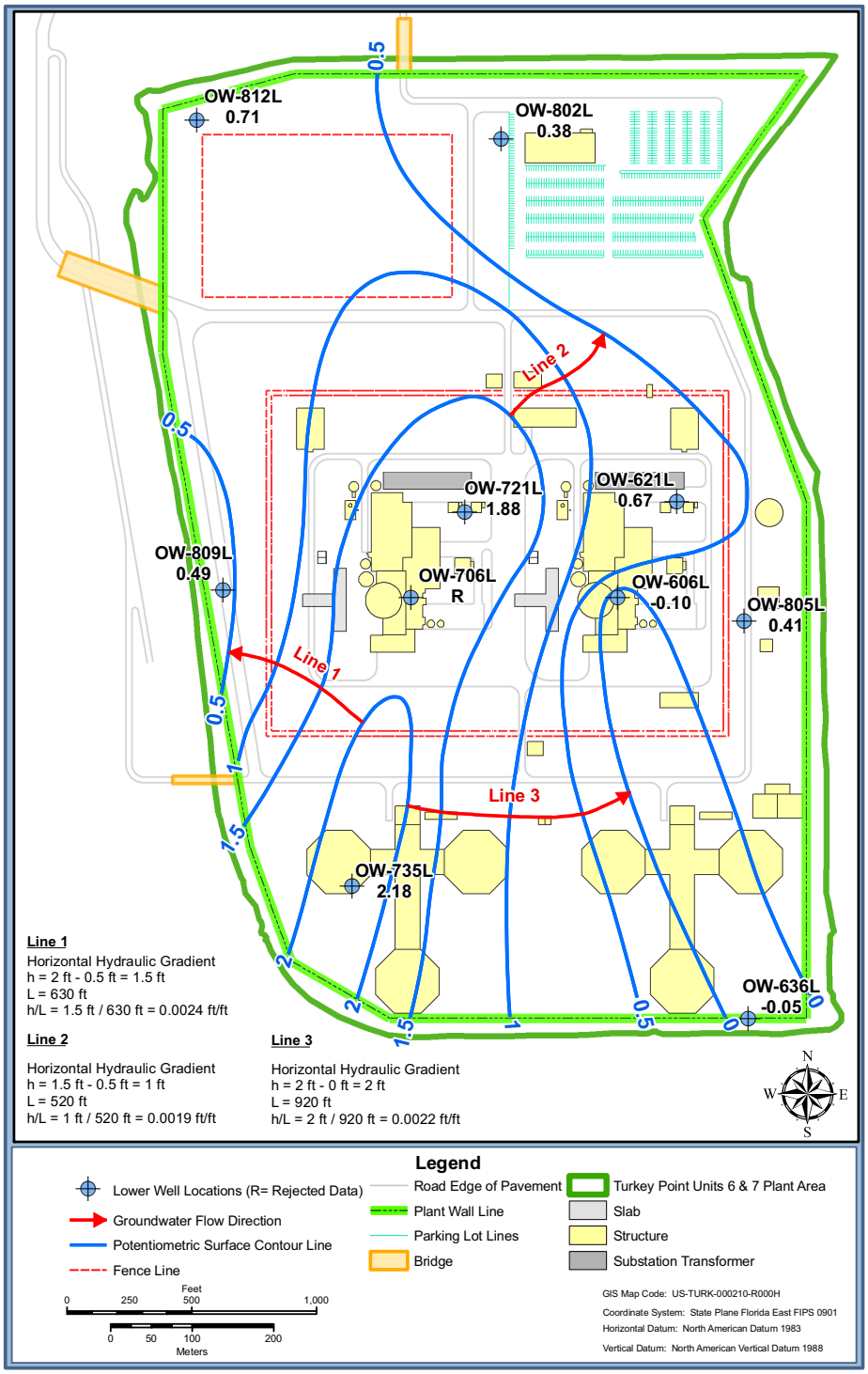
PTN COL 2.4-4

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



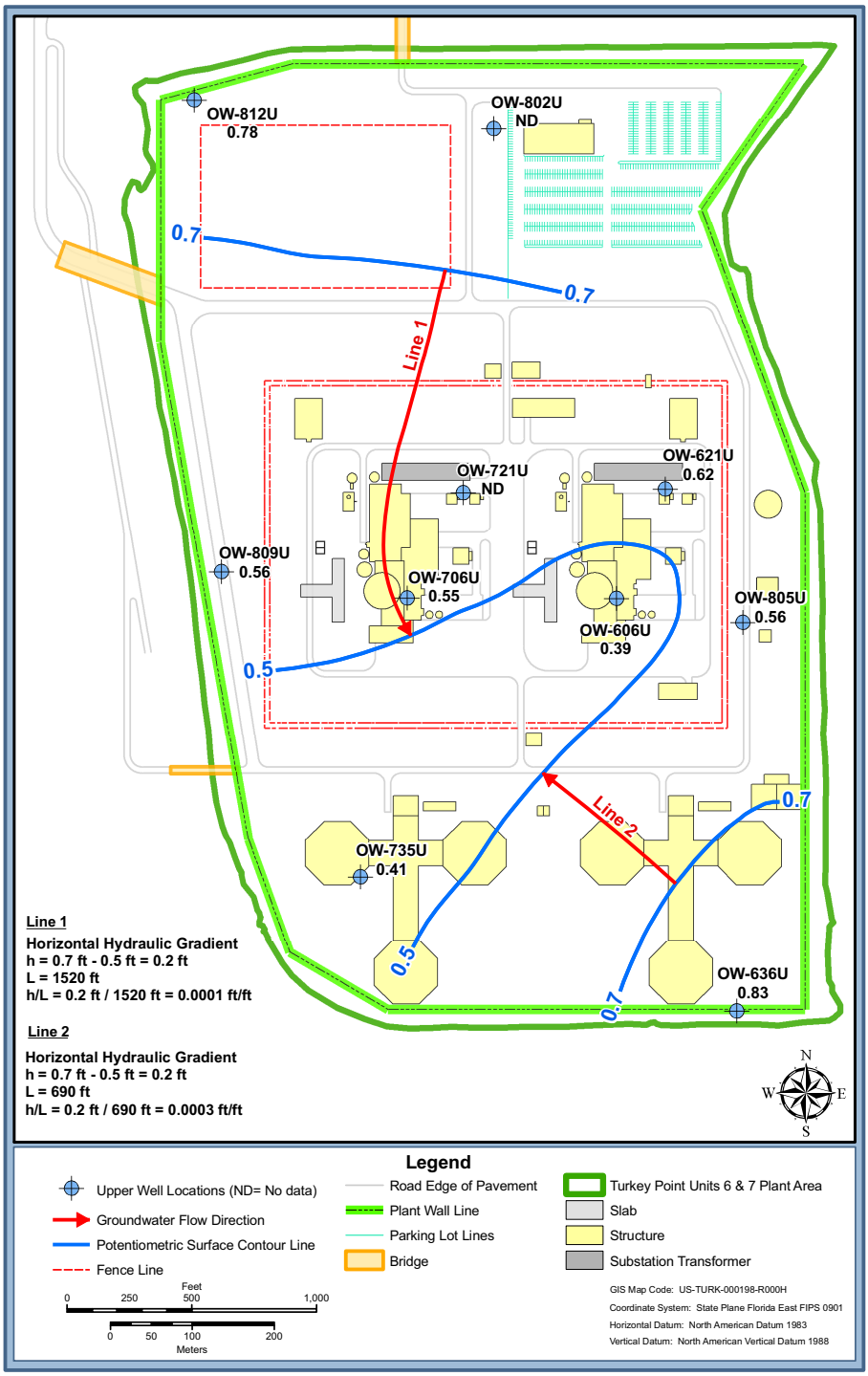
PTN COL 2.4-4

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

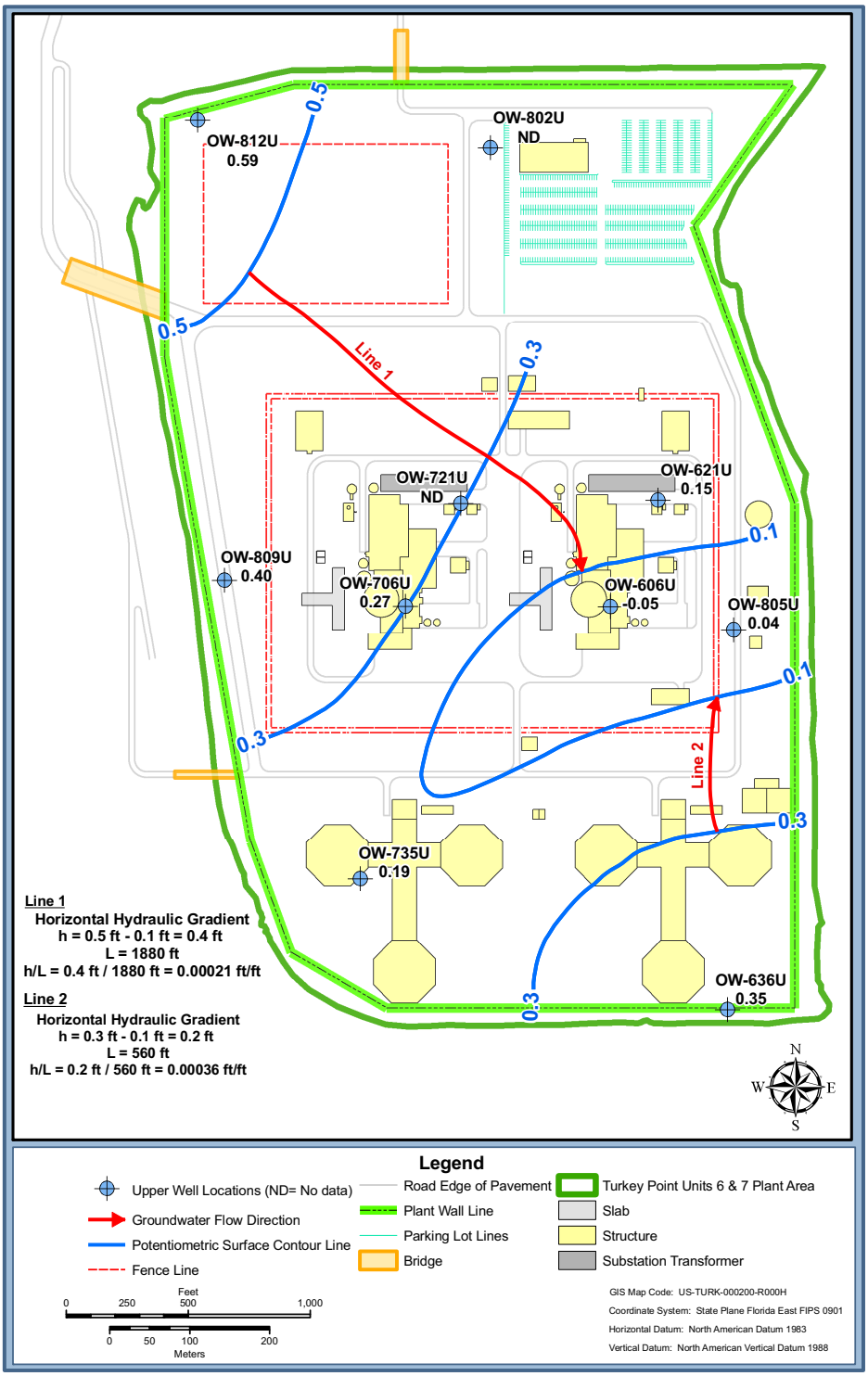



Figure 2.4.12-225 Biscayne Aquifer Potentiometric Surface Map, Upper Monitoring Interval, October 5, 2008 (Sheet 2 of 2) Low Tide