Figure 2.4-61 — {CCNPP Unit 3 Site Location}

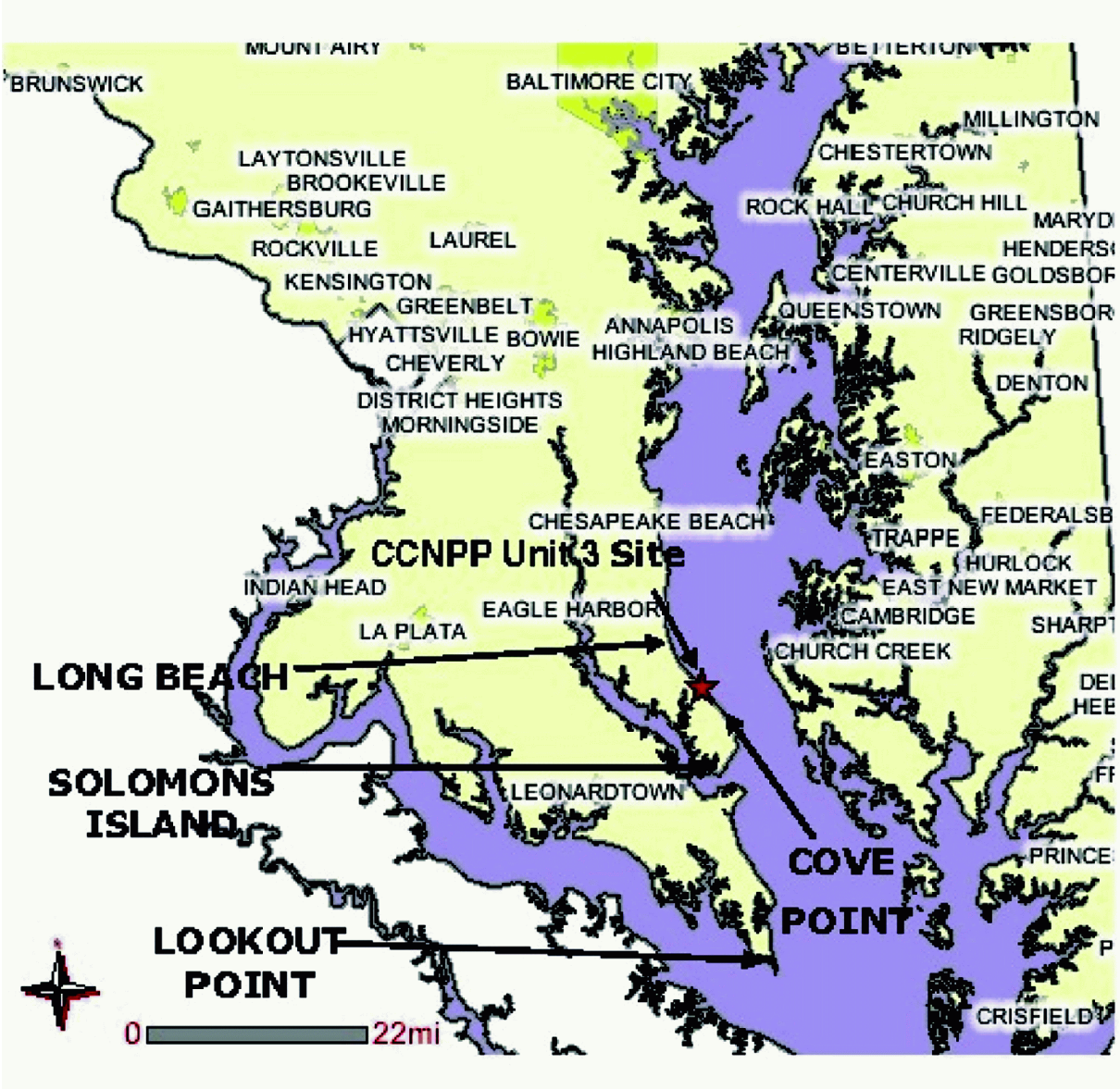


Figure 2.4-62 — {Low Water Level Data Of Annapolis Station And The Curve Fitted By Visual Inspection}

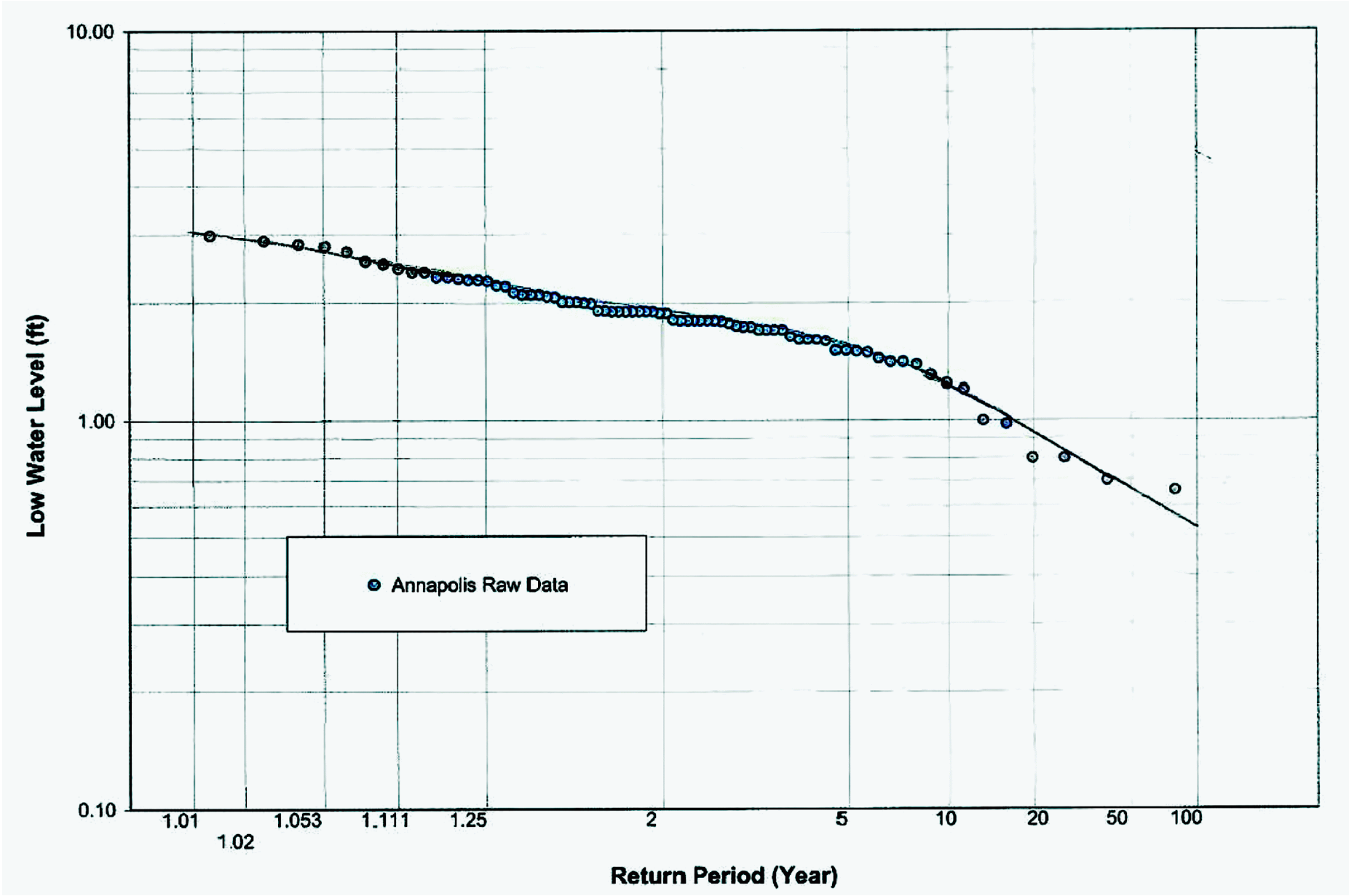


Figure 2.4-63 — {Location of CCNPP 200-Mile (320-Km) Radius From the Plant Site}

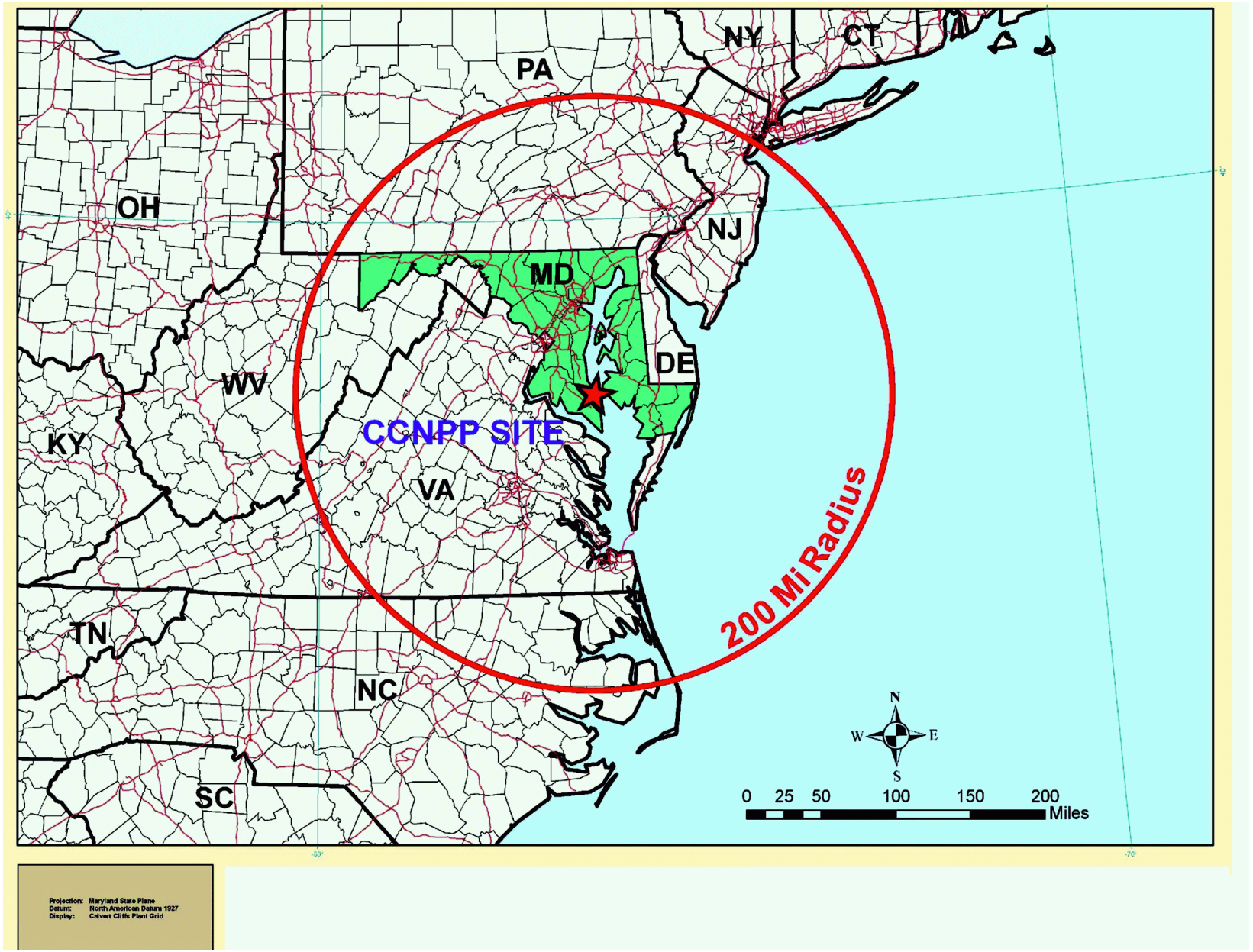


Figure 2.4-64 — {Mid-Atlantic Regional Physiographic Provinces and Hydrostratigraphic Units}

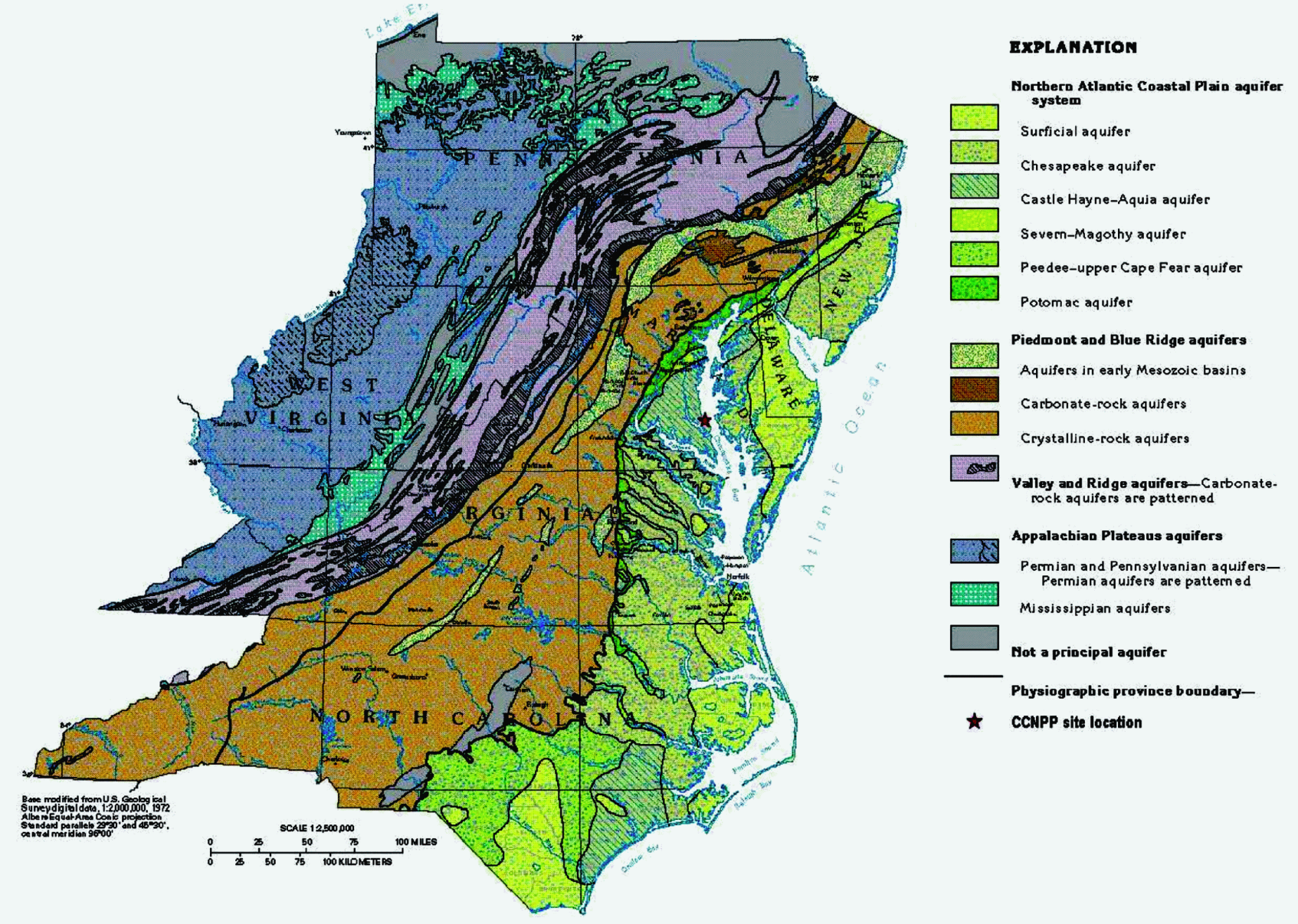


Figure 2.4-65 — {Schematic Geologic Cross Section Through the Mid-Atlantic Region}

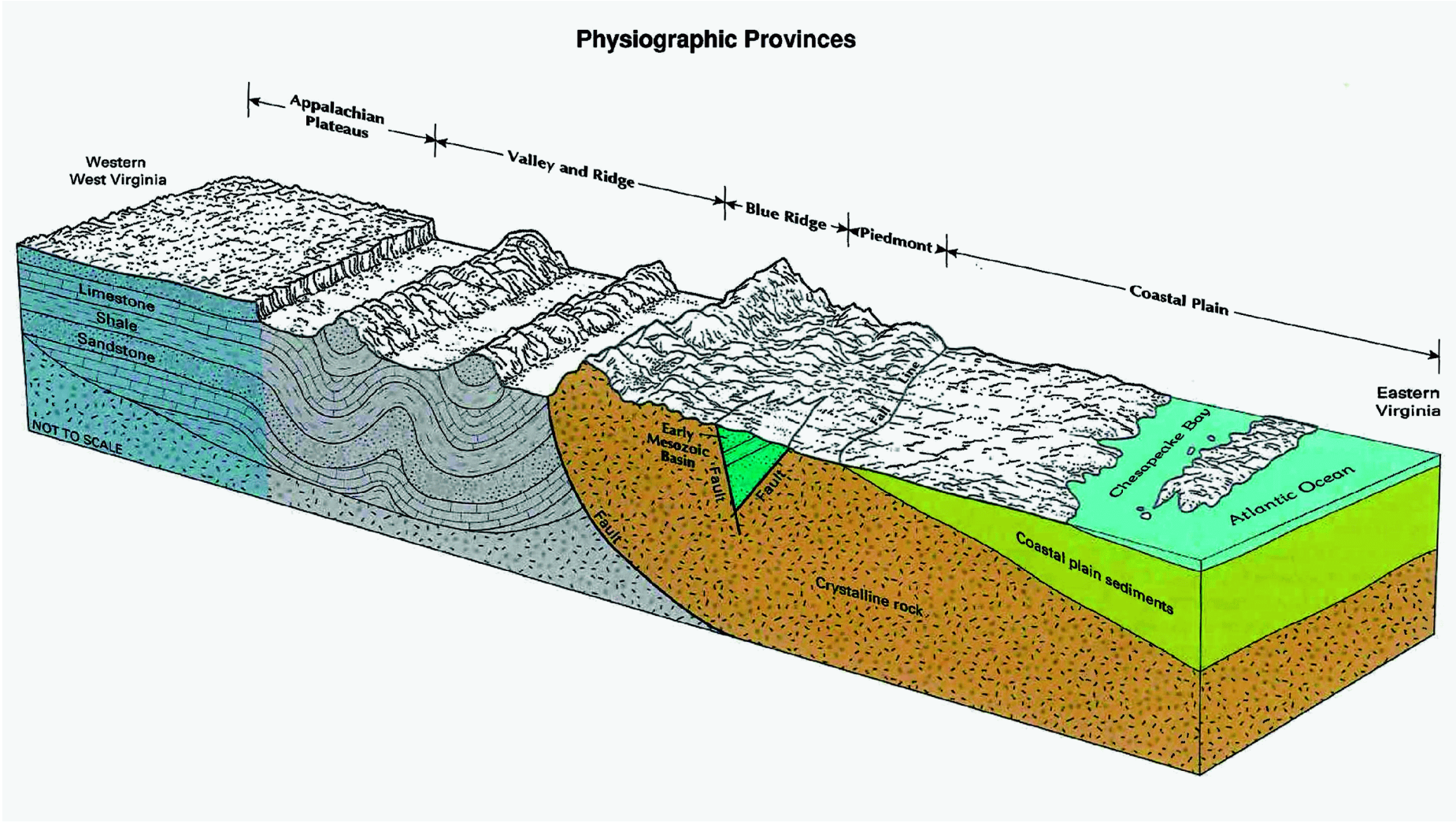


Figure 2.4-66 — {Southern Maryland Schematic Hydrostratigraphic Section}

ERATHEM	SYSTEM	SERIES	FORMATION		THICKNESS (feet)	LITHOLOGY	HYDROSTRATIGRAPHIC UNIT
CENOZOIC	QUATERNARY	Holocene & Pleistocene	Lowland deposits		0-150	Sand, gravel, sandy clay, and clay.	SURFICIAL AQUIFER
	NEOGENE	Pliocene	Upland deposits		0-85	Irregularly stratified cobbles, gravel, sand, and clay lenses.	
		Miocene	Chesapeake Group	St. Mary's Fm.	0-335	Sand, clayey sand, and sandy clay; fossiliferous and diatomaceous.	CHESAPEAKE CONFINING UNIT
				Choptank Fm.			
				Calvert Fm.			
	PALEOGENE	Oligocene		Unnamed Oligocene Beds	0-5	Patchy distribution; clayey, glauconitic sand.	PINEY POINT-NANJEMOY AQUIFER
		Eocene	Pamunkey Group	Piney Point Fm.	0-90	Sand, slightly glauconitic, with intercalated indurated layers; fossiliferous.	
				Nanjemoy Fm.	0-240	Glauconitic sand with clayey layers.	
		Paleocene		Marlboro Clay	0-30	Pink and gray clay.	NANJEMOY CONFINING UNIT
				Aquia Fm.	30-205	Glauconitic, greenish to brown sand with indurated layers; fossiliferous.	AQUIA AQUIFER
				Brightseat Fm.	0-40	Gray to dark-gray micaceous silty and sandy clay.	BRIGHTSEAT CONFINING UNIT
MESOZOIC	CRETACEOUS	Upper	Monmouth Group / Matawan Group	Formations undifferentiated	20-105	Sandy clay and sand, dark gray to black, with minor glauconitic; fossiliferous.	
			Magothy Fm.		0-230	Light gray to white sand and fine gravel with interbedded clay layers; contains pyrite and lignite. Includes two sand units in southern Anne Arundel County where the formation is the thickest.	MAGOTHY AQUIFER
		Lower	Potomac Group	Patapsco Fm.	0-1,200	Interbedded sand, clay, and sandy clay; color variegated, but chiefly hues of red, brown and gray; consists of several sandy intervals that function as separate aquifers.	Patapsco aquifer system: UPPER PATAPSCO CONFINING UNIT / UPPER PATAPSCO AQUIFER / MIDDLE PATAPSCO CONFINING UNIT / LOWER PATAPSCO AQUIFER
				Arundel Fm.	0-400	Red, brown, and gray clay; in places contains ironstone nodules, carbonaceous remains, and lignite.	ARUNDEL CONFINING UNIT
				Patuxent Fm.	100-600	Interbedded gray and yellow sand and clay; kaolinized feldspar and lignite common. Locally clay layers predominate.	PATUXENT AQUIFER
PALEOZOIC / PRECAMBRIAN	Undifferentiated pre-Cretaceous consolidated-rock basement				Unknown	Igneous and metamorphic rocks; sandstone and shale.	NOT RECOGNIZED

Figure 2.4-67 — {Schematic Cross-Section of Southern Maryland Hydrostratigraphic Units}

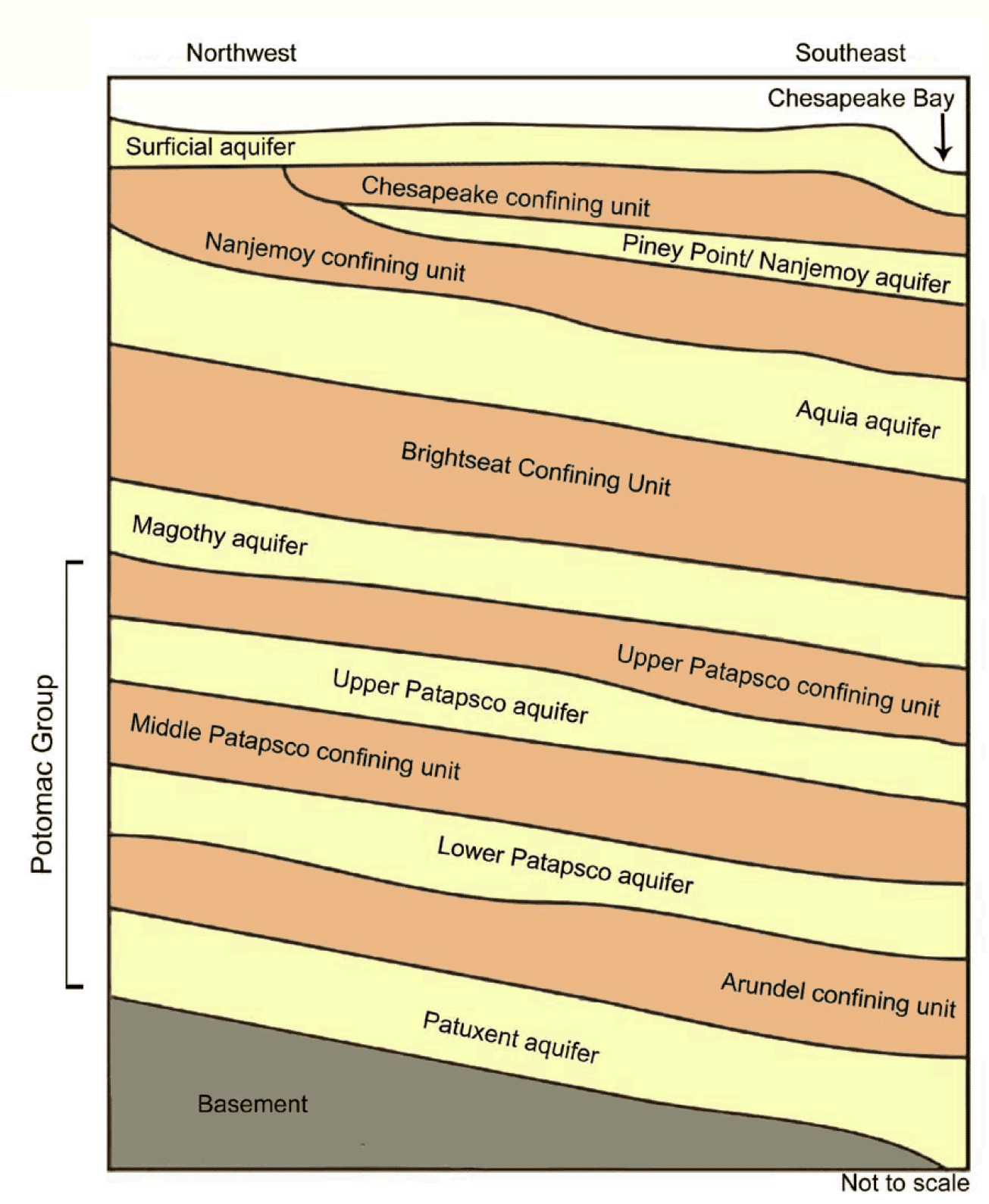


Figure 2.4-68 — {Potentiometric Surface of the Aquia Aquifer in Southern MD, September 2003}

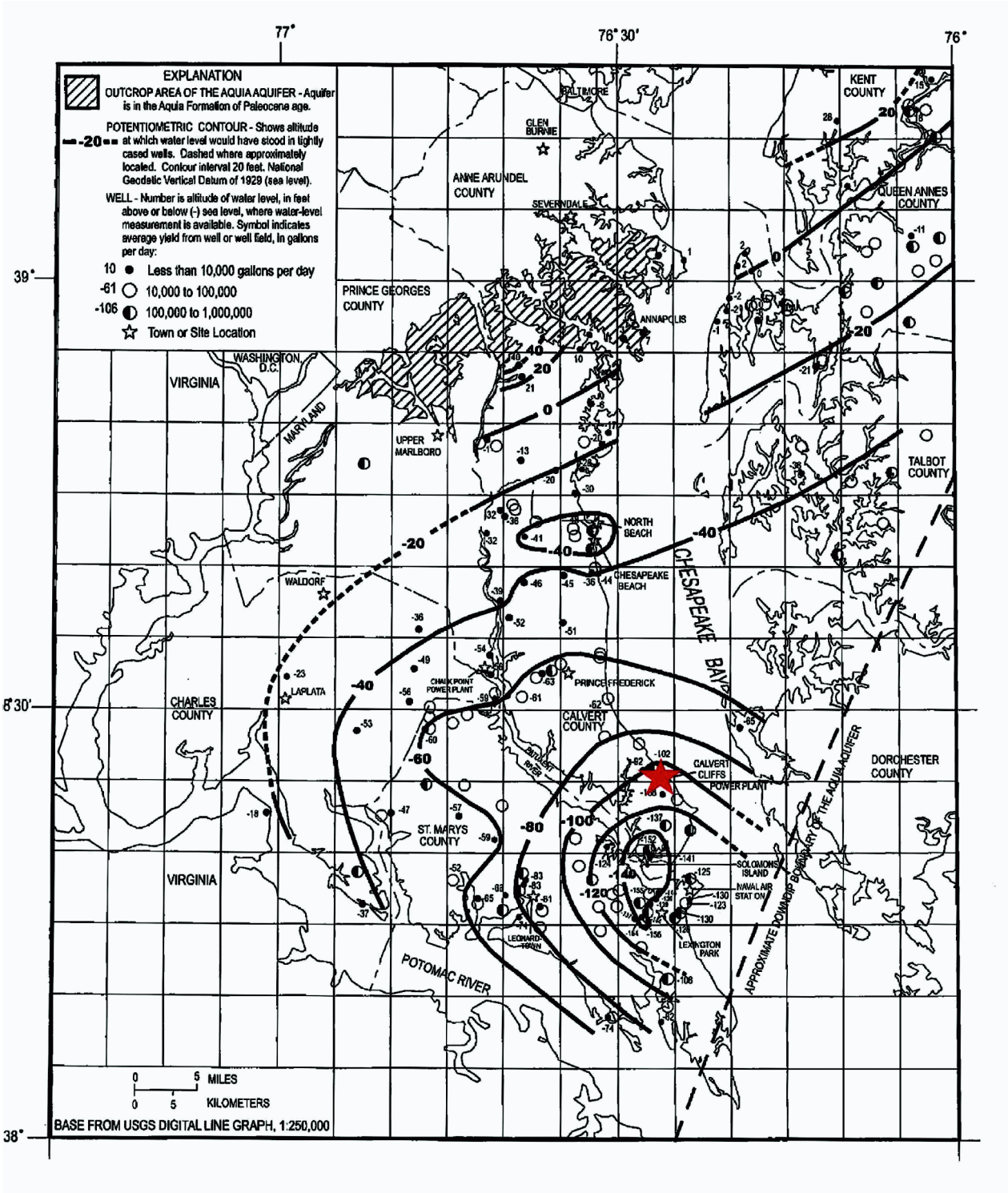


Figure 2.4-69 — {Potentiometric Surface of the Magothy Aquifer in Southern MD, September 2003

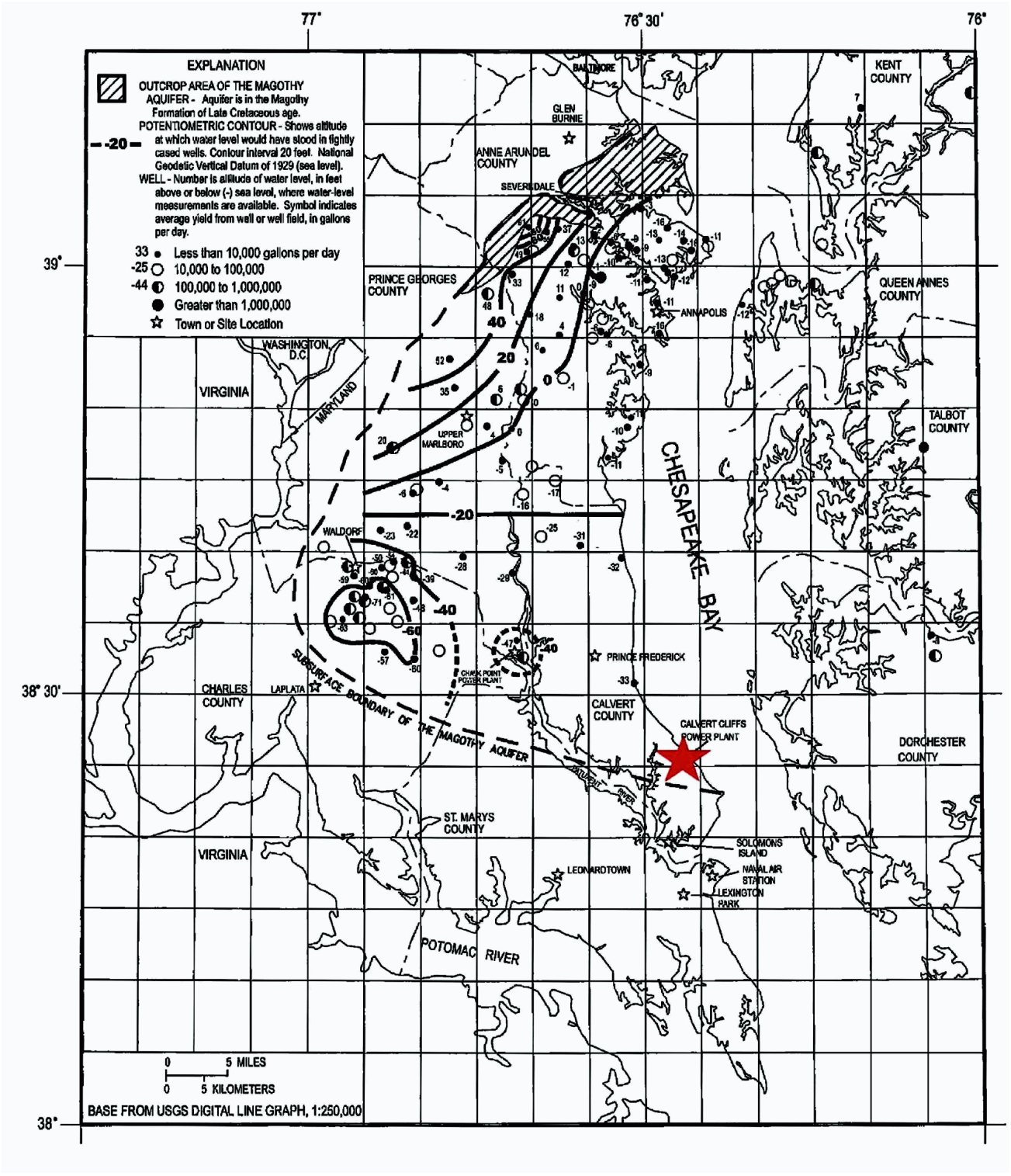


Figure 2.4-70 — {Potentiometric Surface of the Upper Patapsco Aquifer in Southern MD, September 2003}

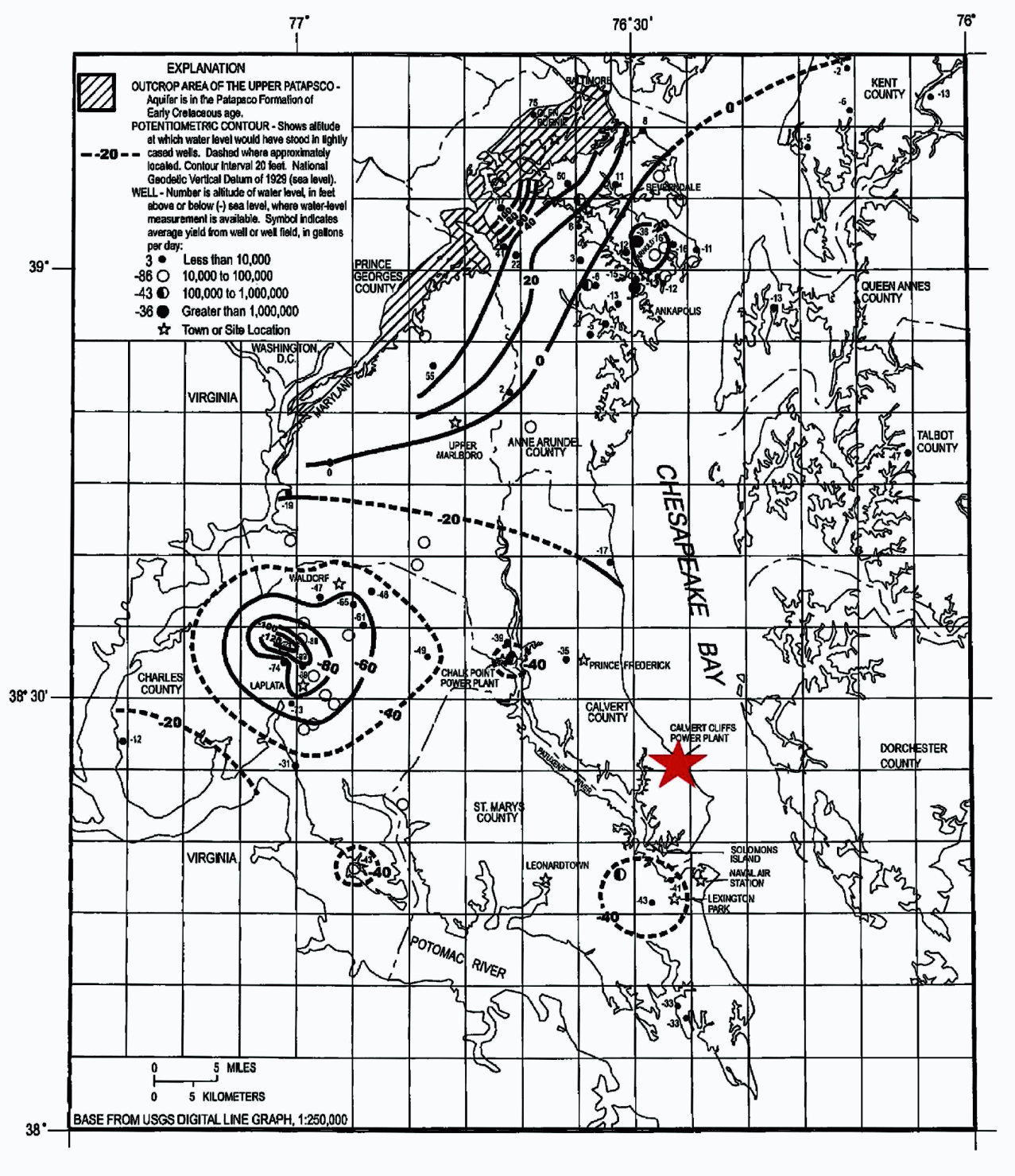


Figure 2.4-71 — {Potentiometric Surface of the Lower Patapsco Aquifer in Southern MD, September 2003}

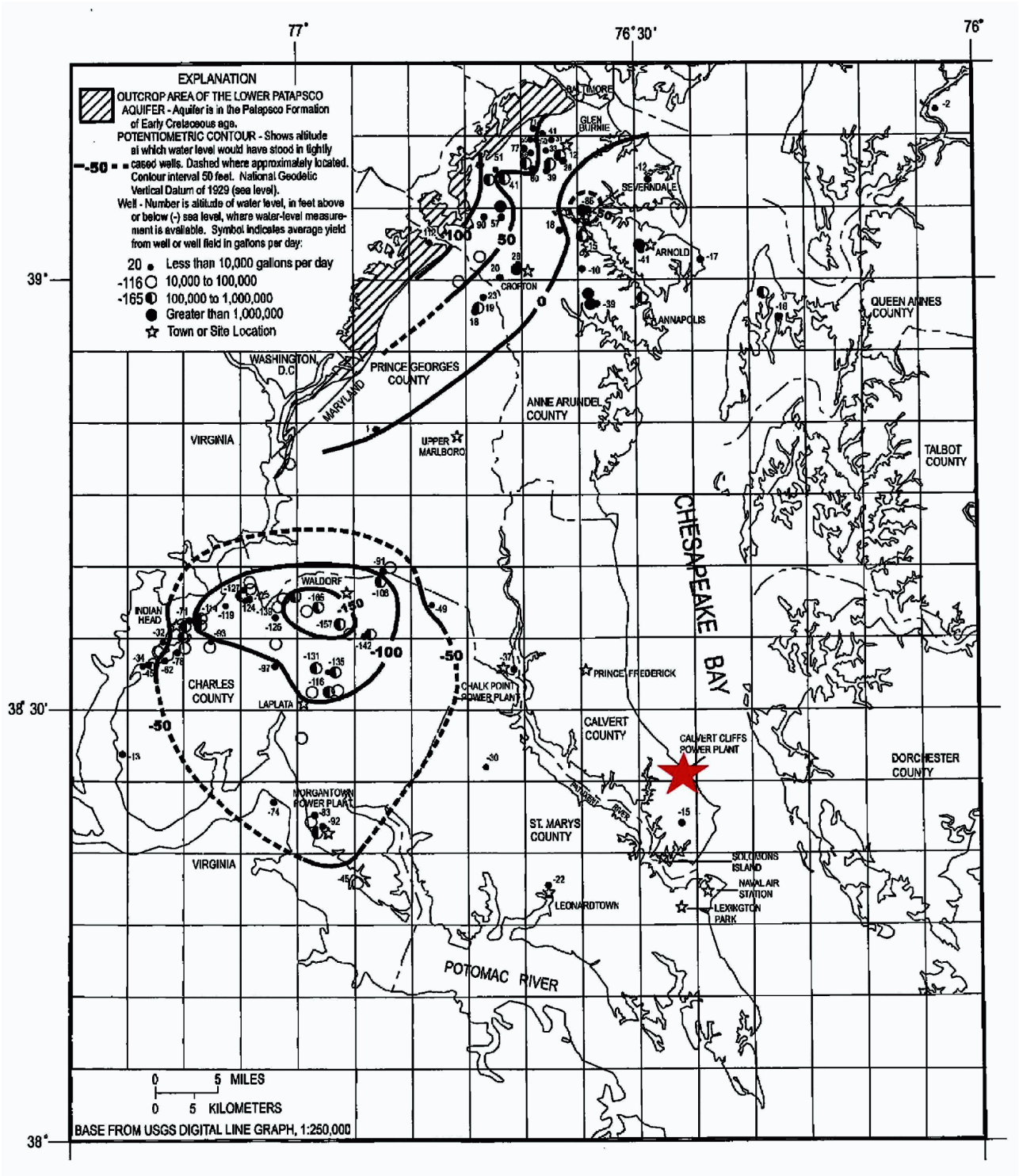
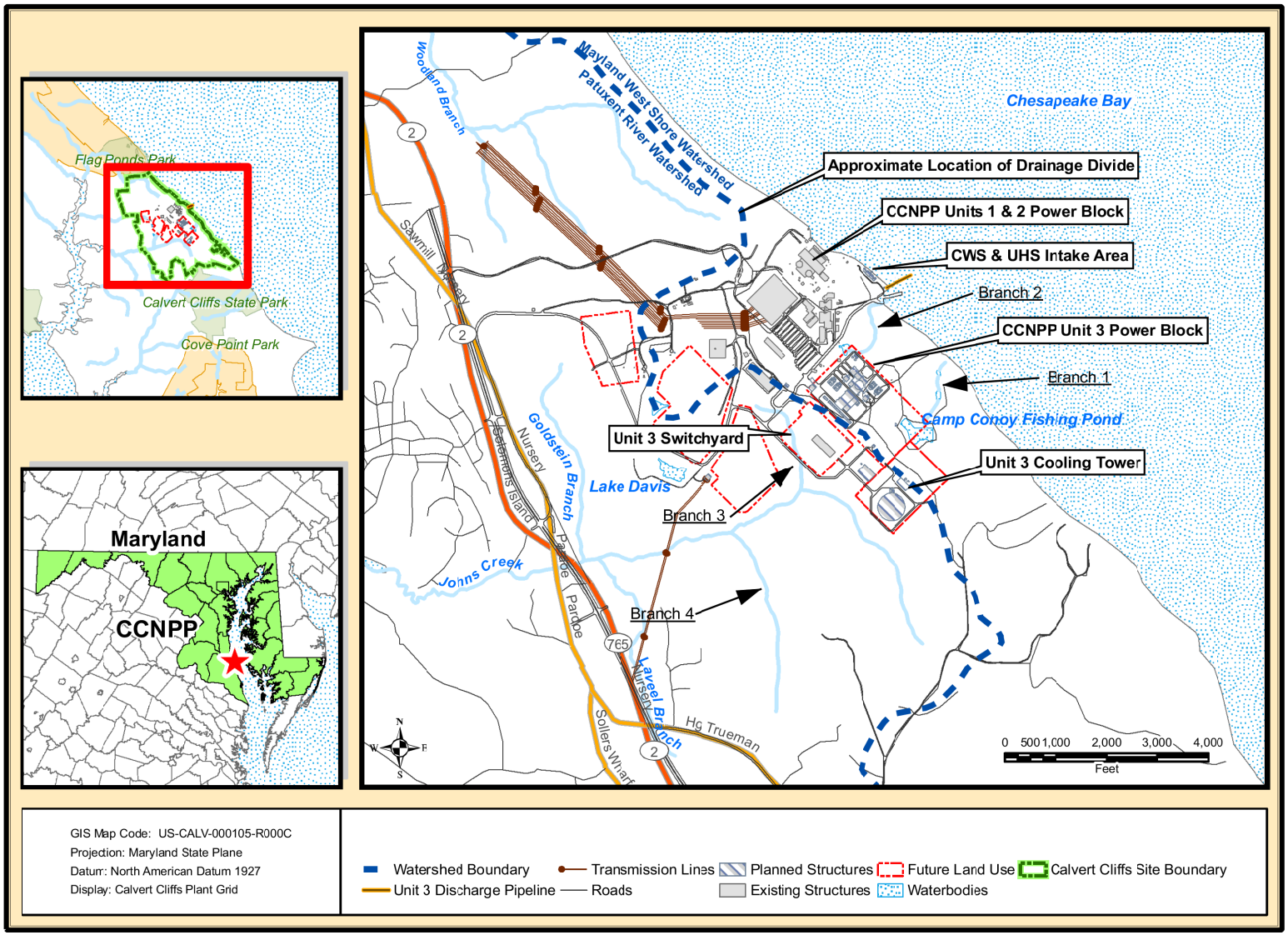
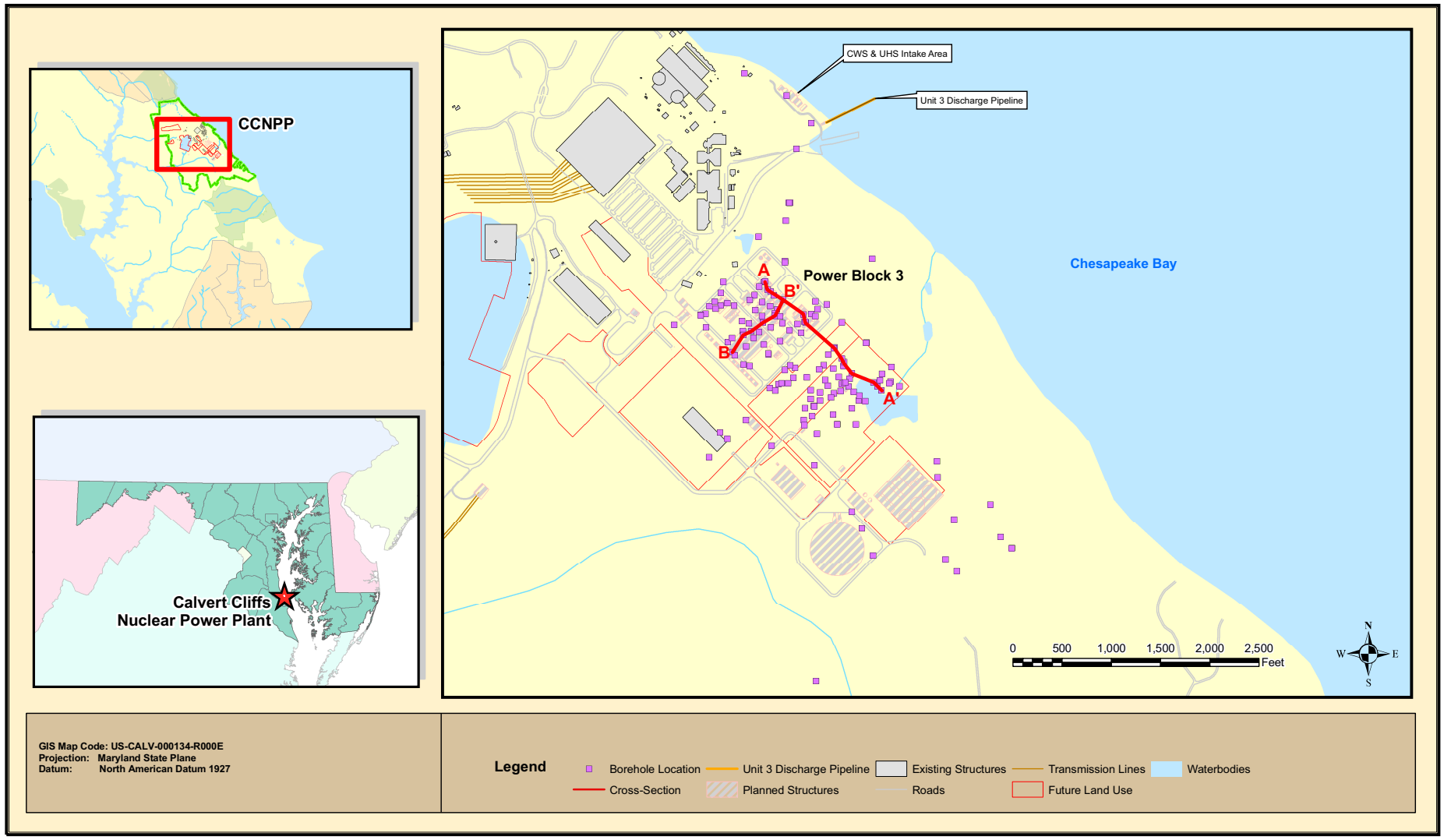


Figure 2.4-72 — {CCNPP Site Area Topography and Drainage}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-73 — {Cross-Section and Soil Boring Locations in the Vicinity of CCNPP Unit 3}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-74 — {Cross-Section A-A' Through Proposed Unit 3 Power Block Area}

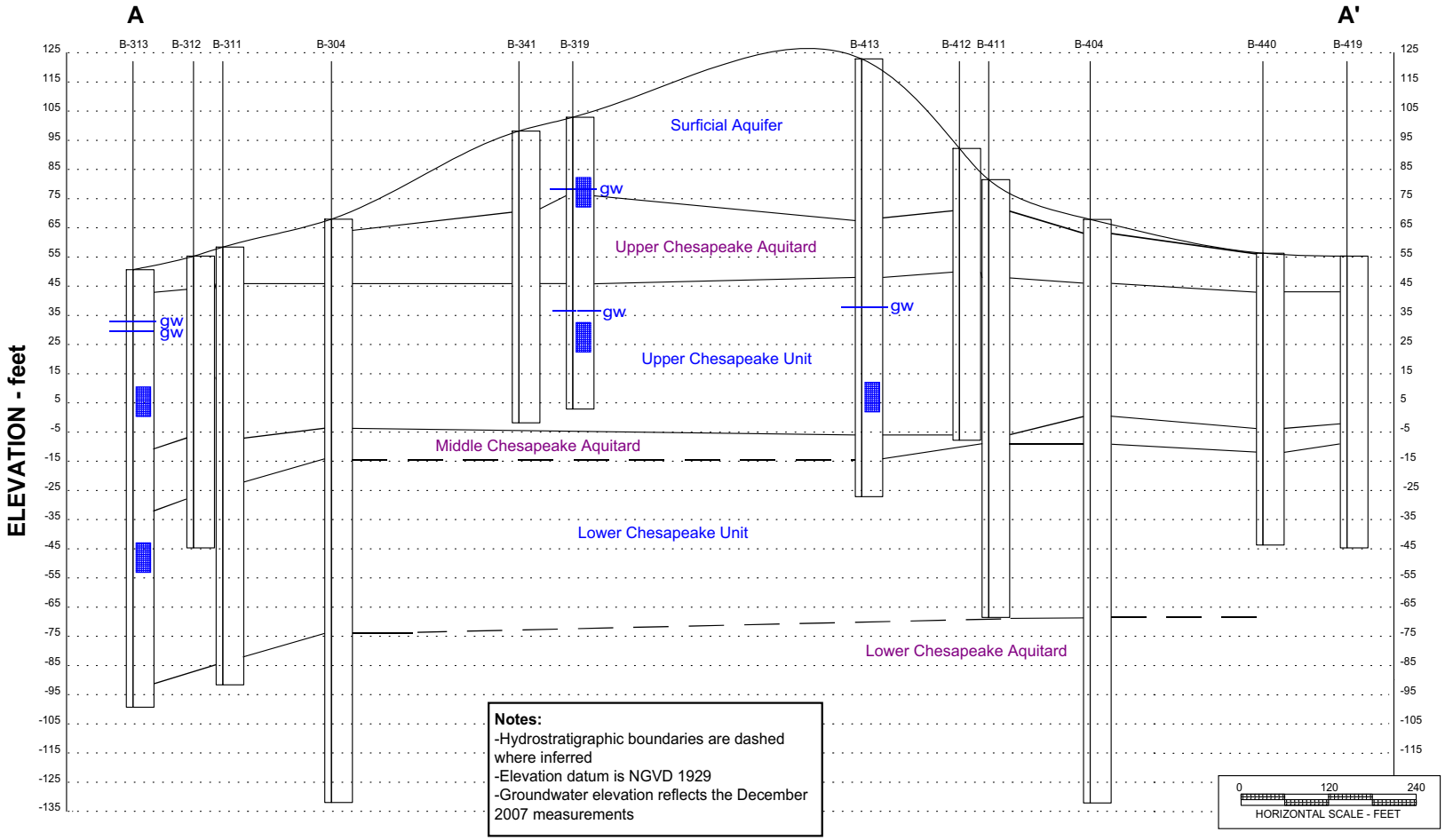


Figure 2.4-75 — {Cross-Section B-B' Through Proposed Unit 3 Power Block Area}

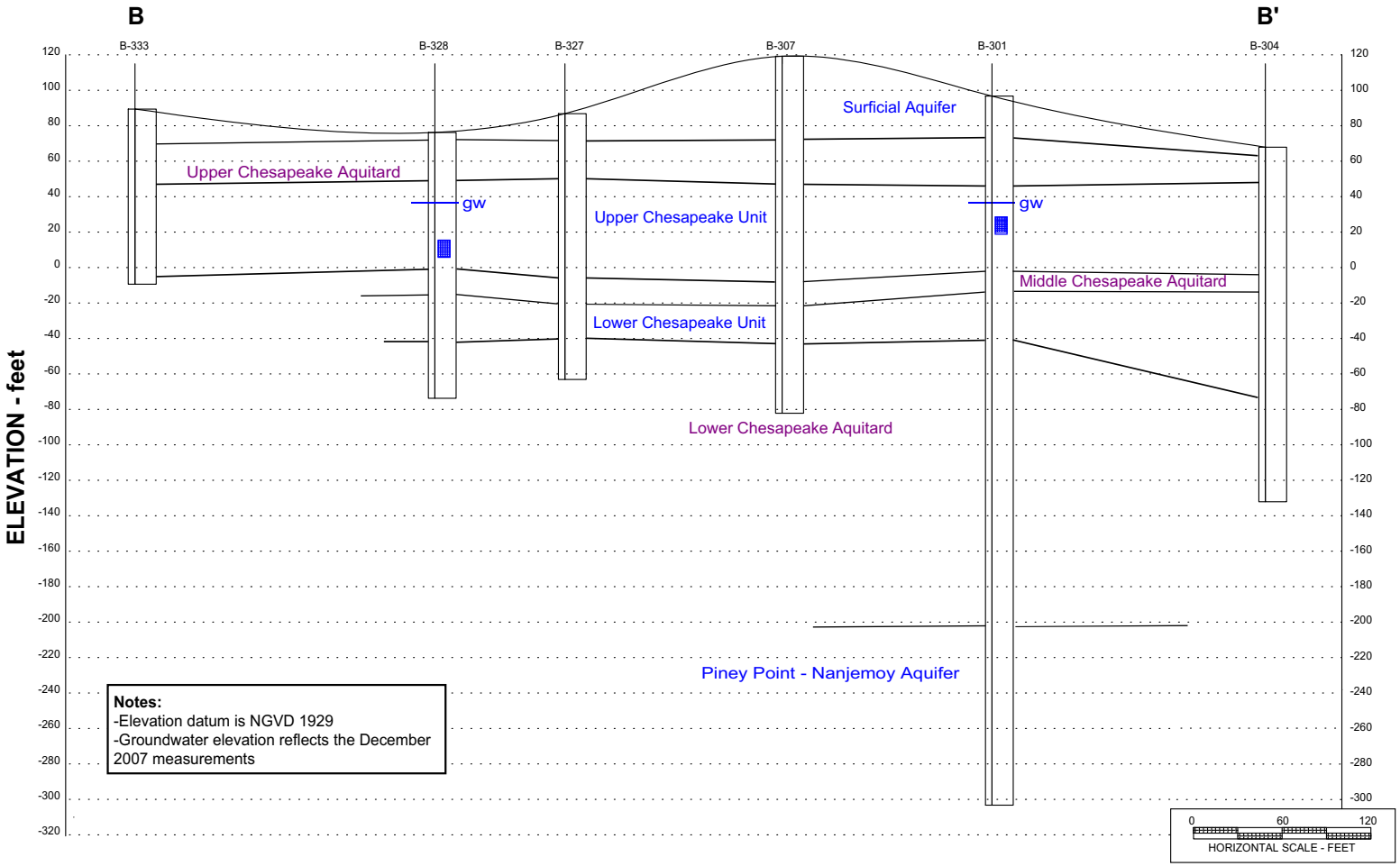
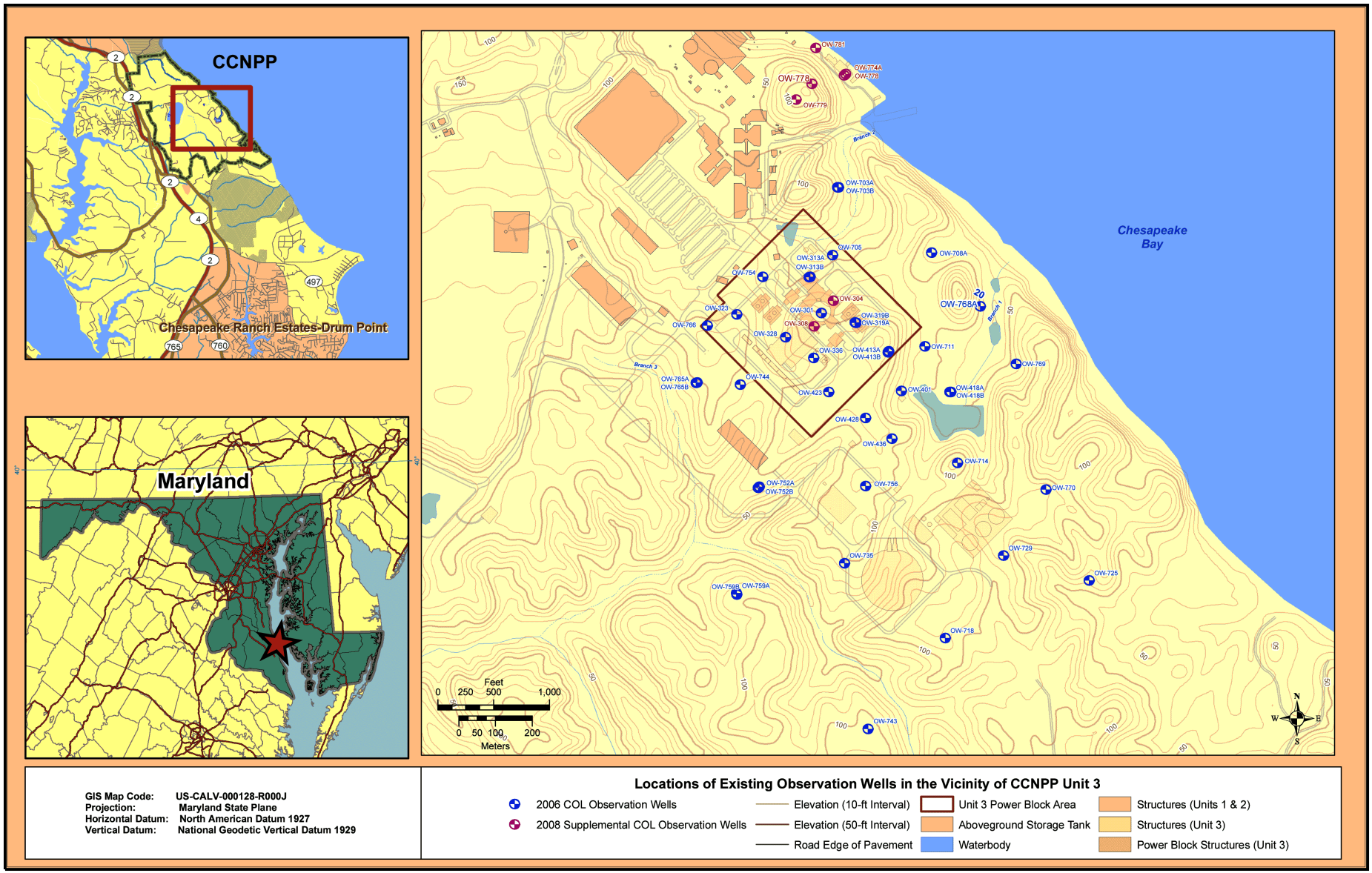


Figure 2.4-76 — {Groundwater Observation Wells and Cross-Section Locations in the Vicinity of CCNPP Unit 3}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-77 — {Ground Water Elevations for the Surficial Aquifer, July 2006 Through October 2009}

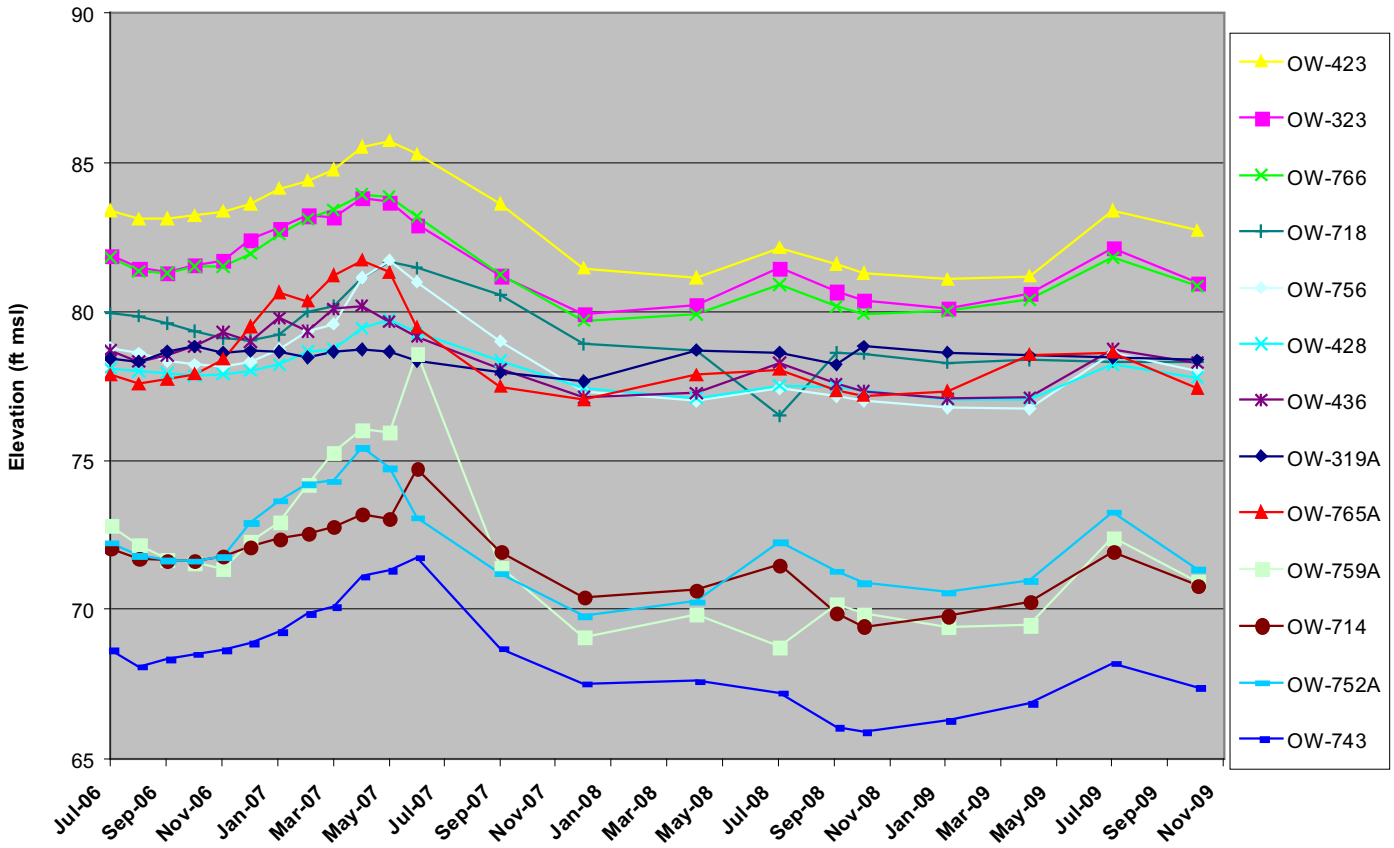
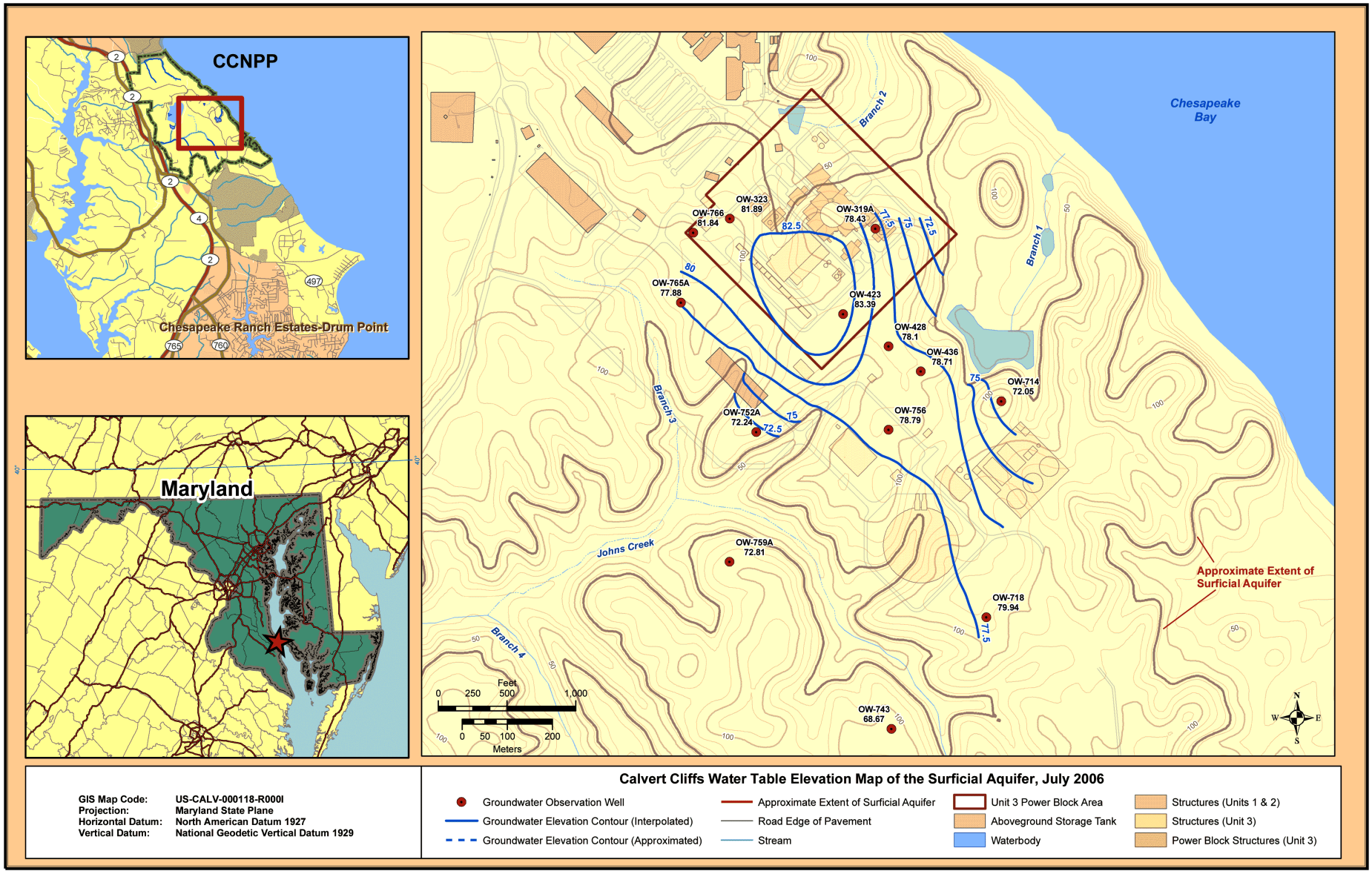
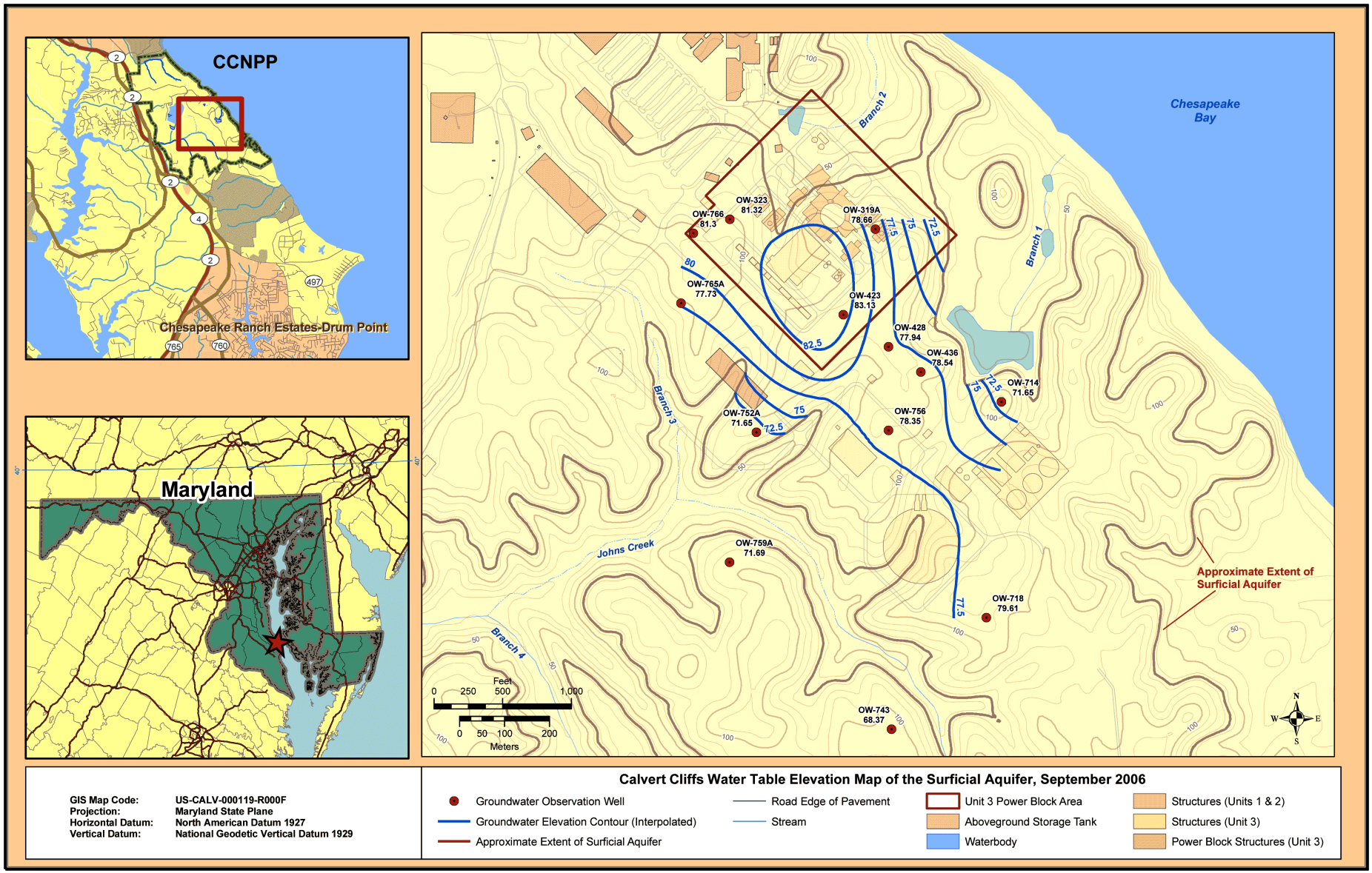


Figure 2.4-78 — {Water Table Elevation Map and Groundwater Flow Direction for the Surficial Aquifer, July 2006}



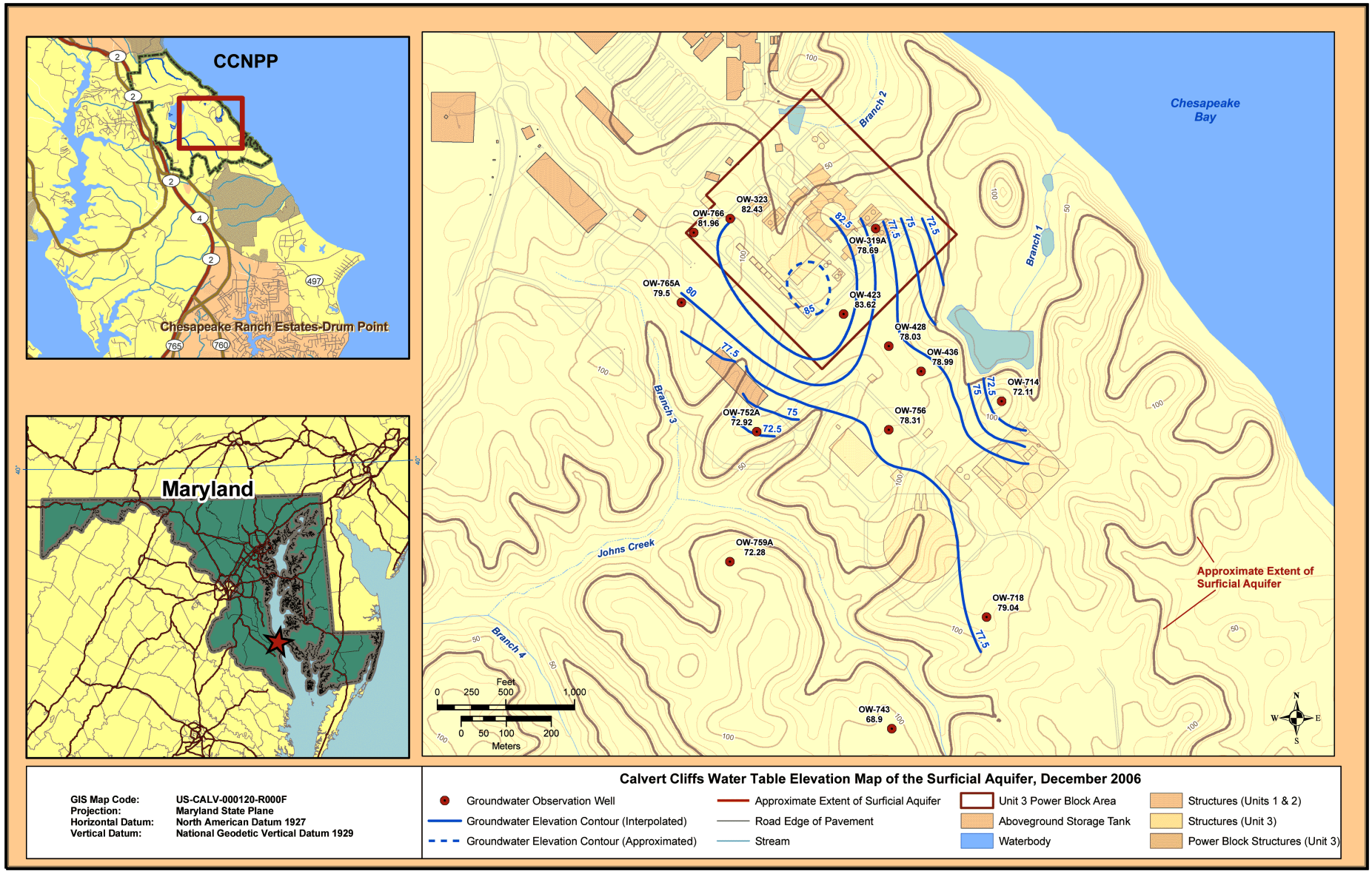
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-79 — {Water Table Elevation Map and Groundwater Flow Direction for the Surficial Aquifer, September 2006}



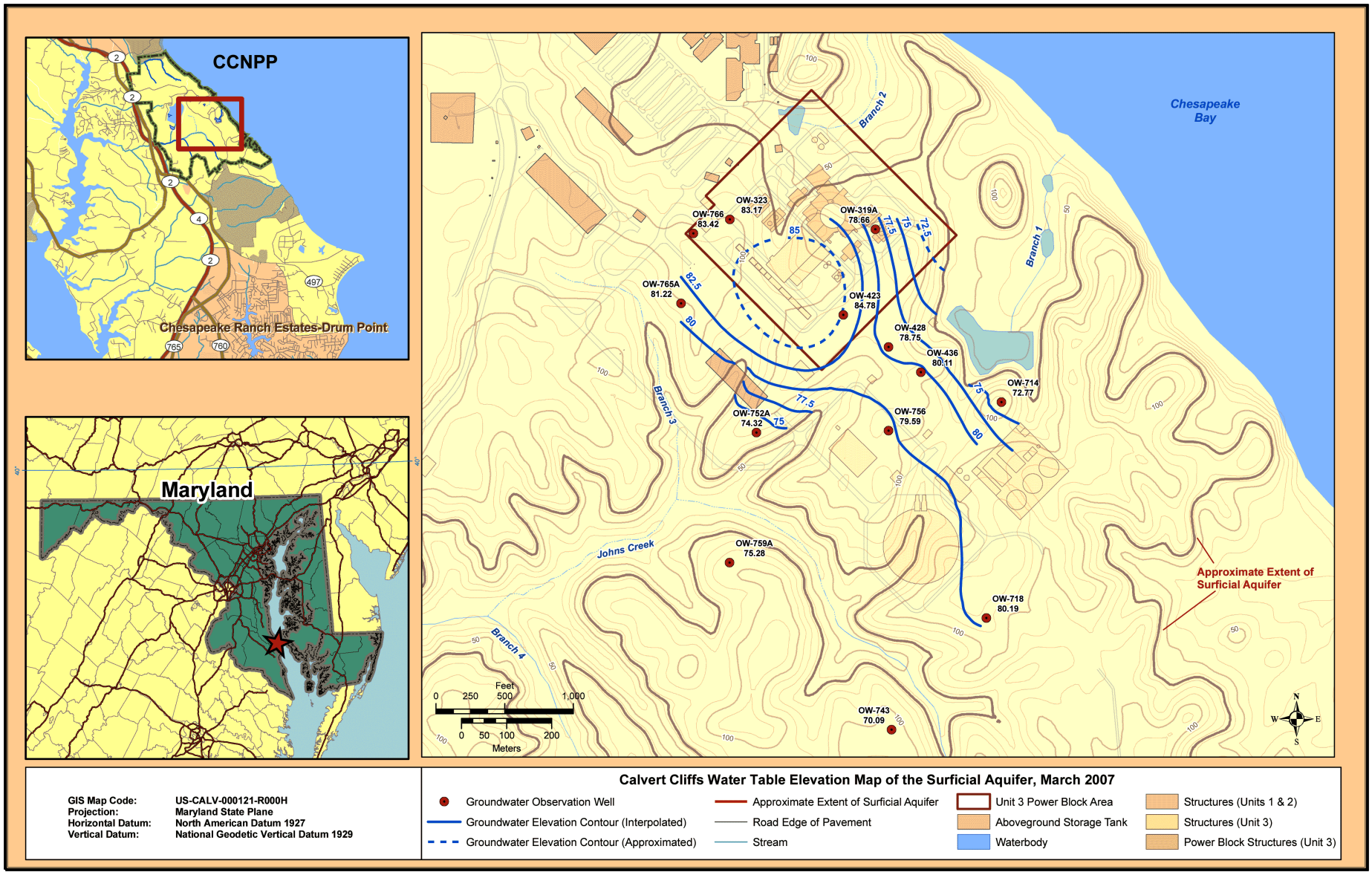
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-80 — {Water Table Elevation Map and Groundwater Flow Direction for the Surficial Aquifer, December 2006}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-81 — {Water Table Elevation Map and Groundwater Flow Direction for the Surficial Aquifer, March 2007}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-82 — {Groundwater Elevations for the Upper Chesapeake Unit, July 2006 Through October 2009}
(Page 1 of 2)

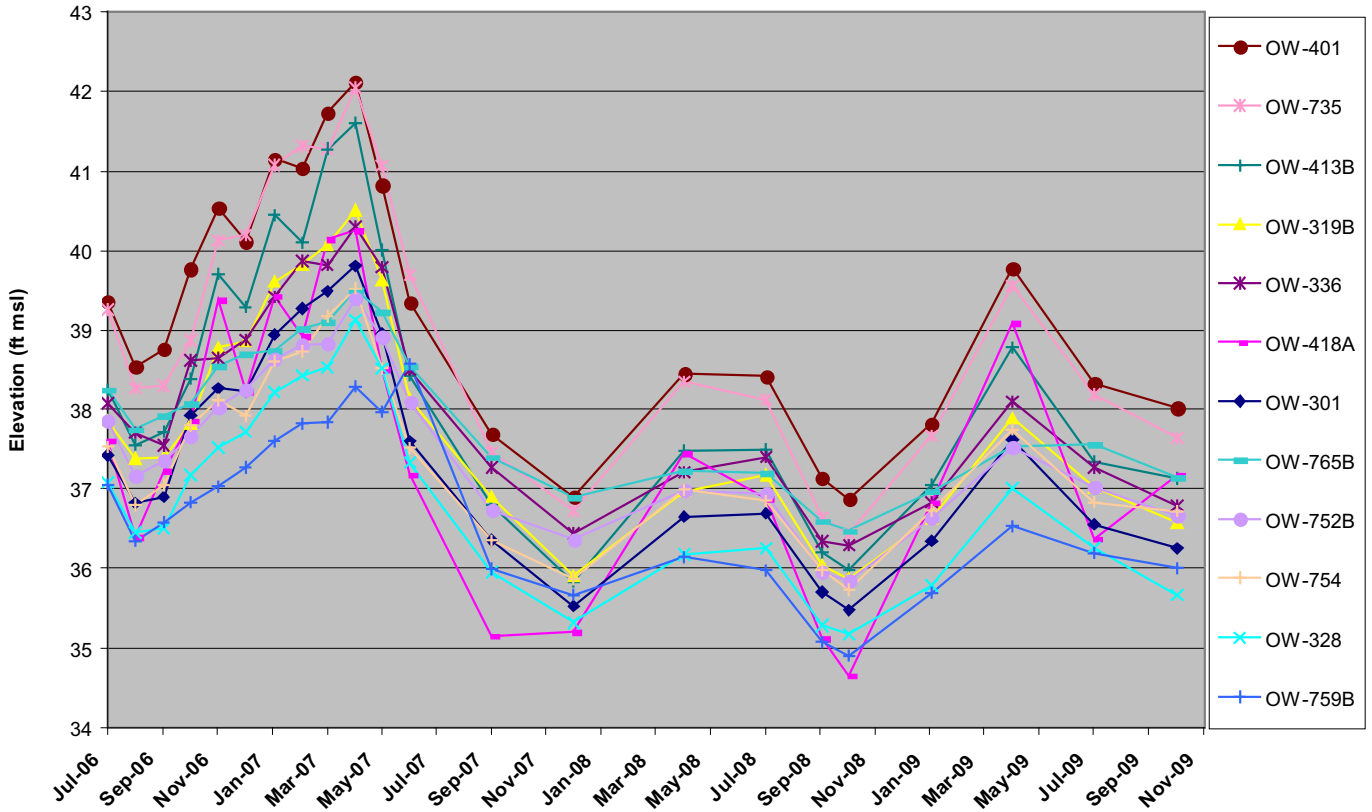


Figure 2.4-82 — {Groundwater Elevations for the Upper Chesapeake Unit, July 2006 Through October 2009}
(Page 2 of 2)

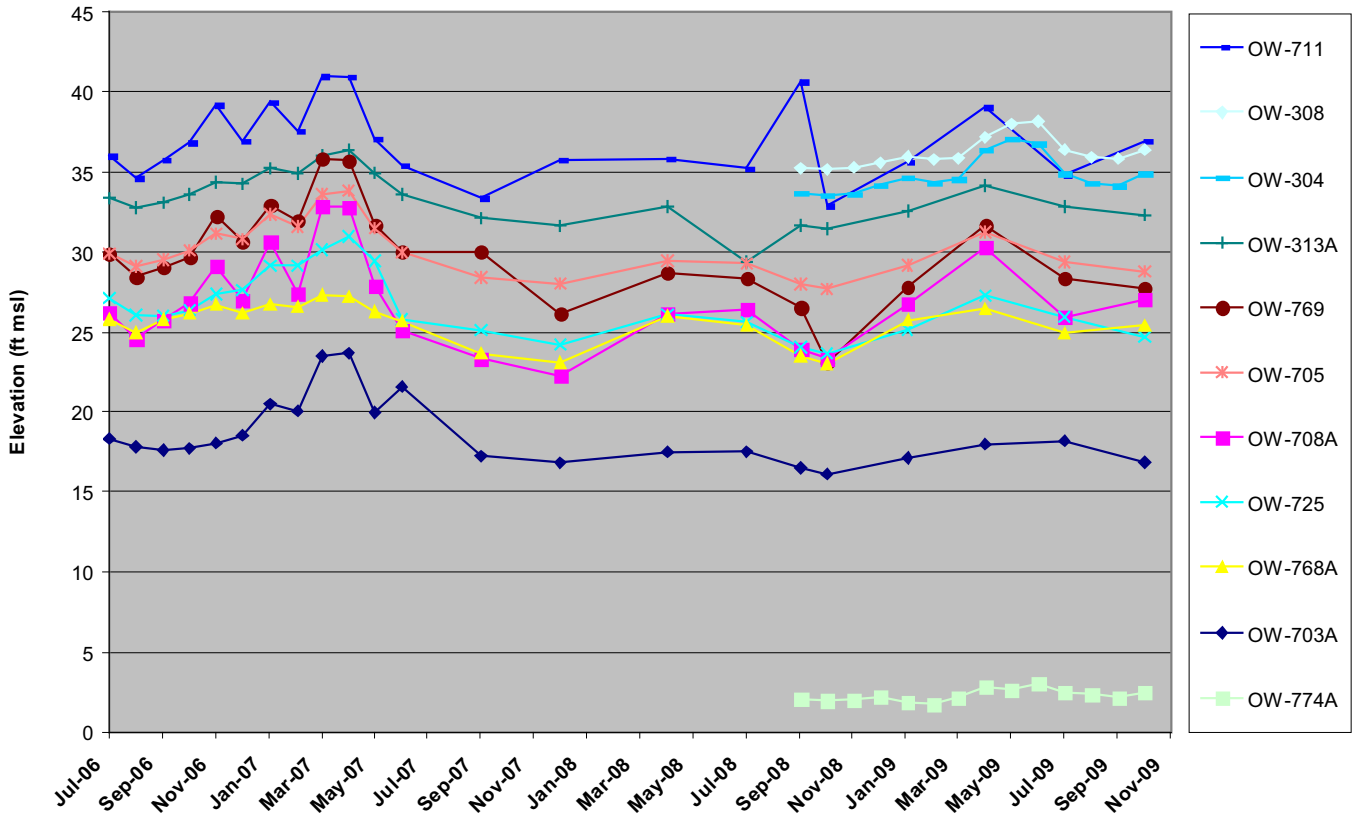
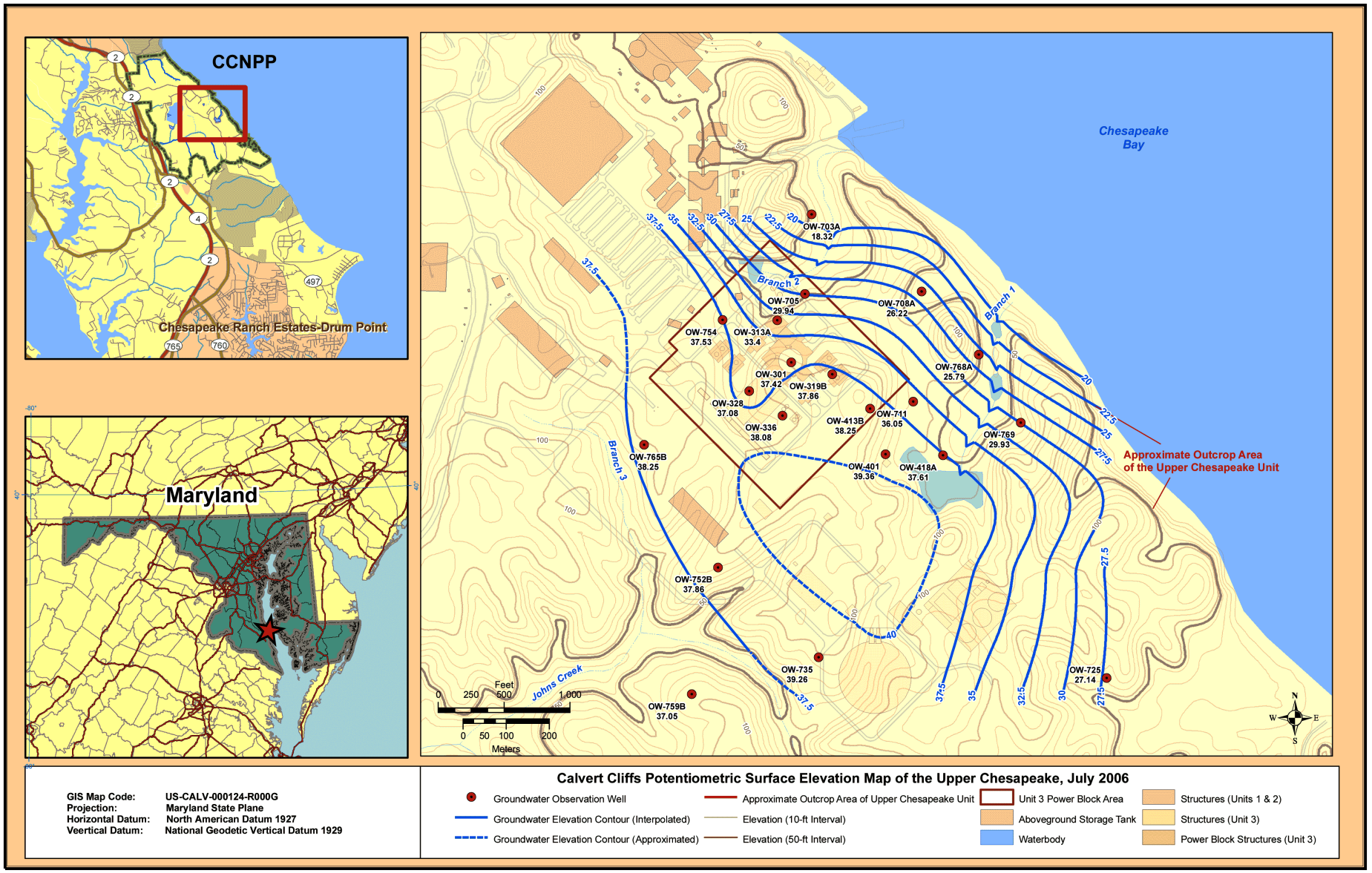
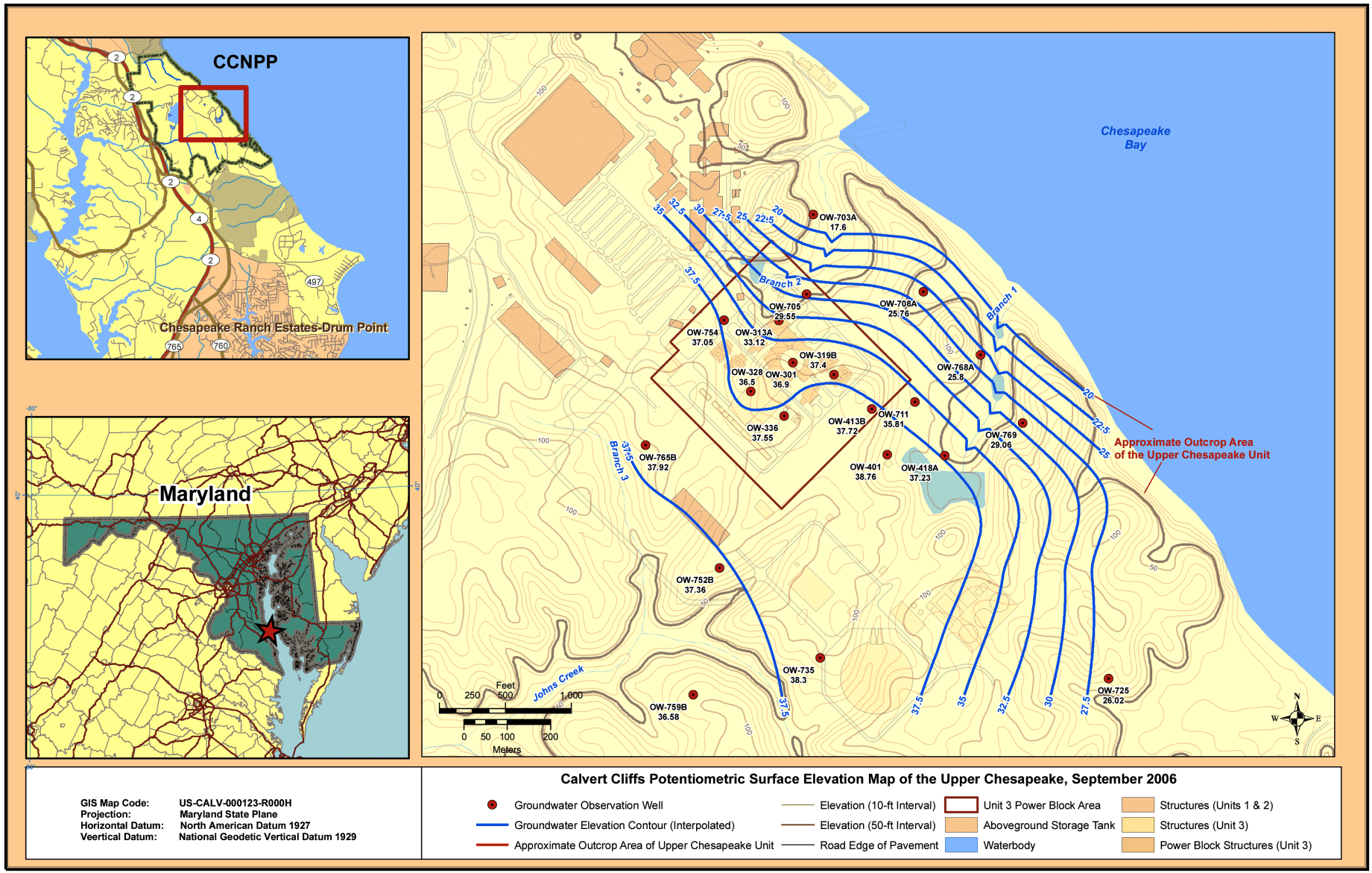


Figure 2.4-83 — {Potentiometric Surface Elevation Map and Groundwater Flow Directions for the Upper Chesapeake Unit, July 2006}



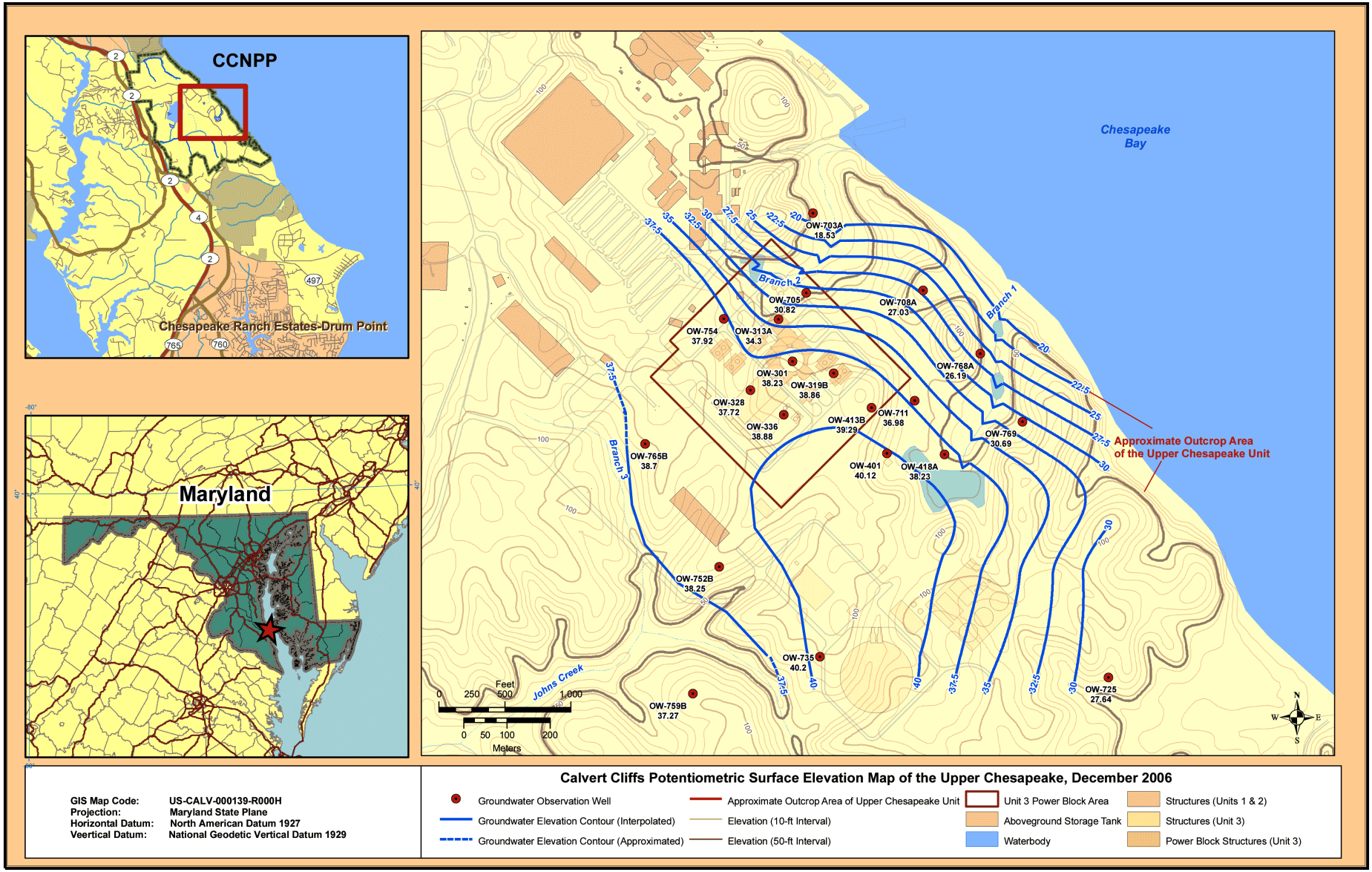
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-84 — {Potentiometric Surface Elevation Map and Groundwater Flow Directions for the Upper Chesapeake Unit, Sept 2006}



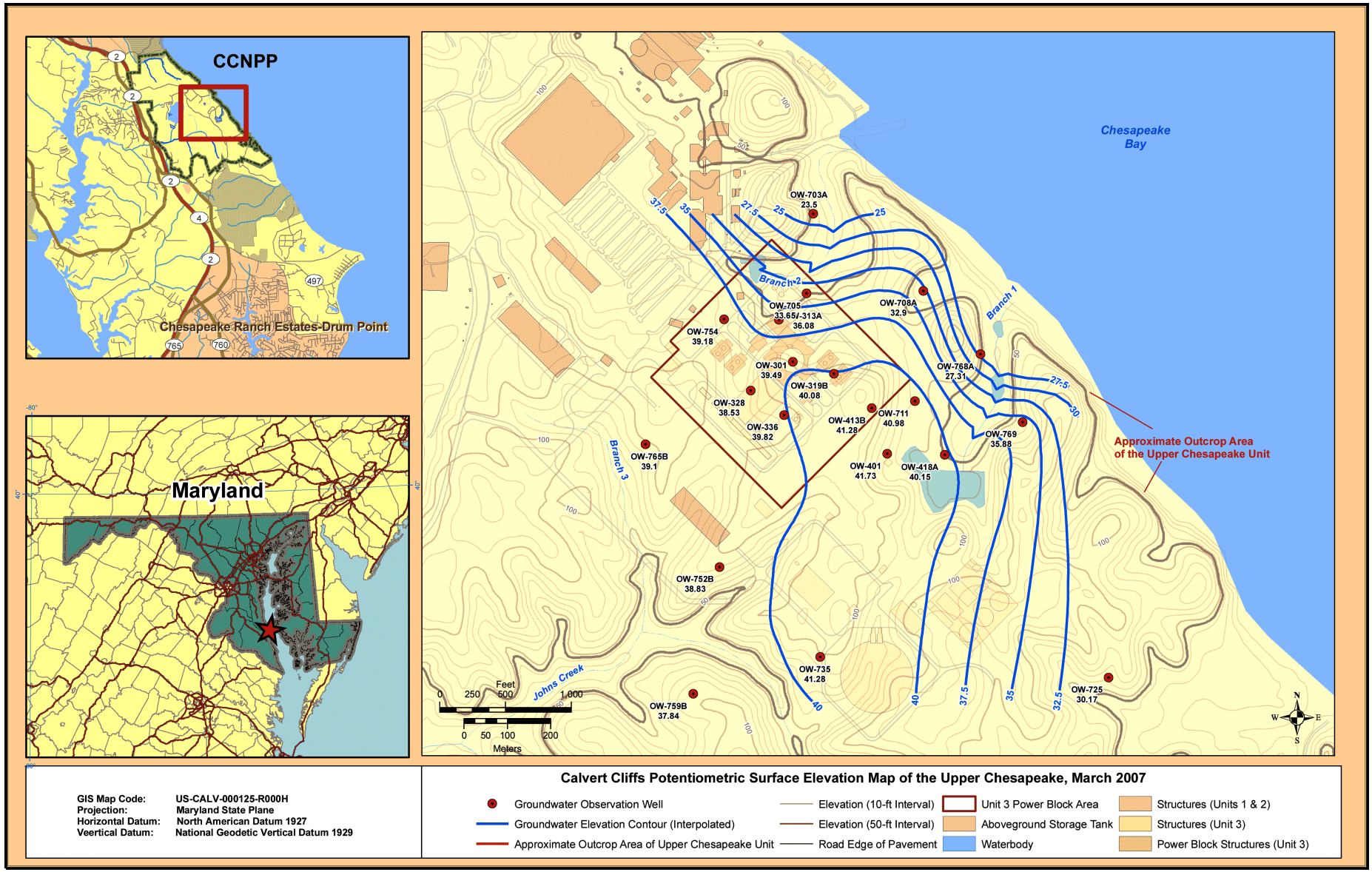
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-85 — {Potentiometric Surface Elevation Map and Groundwater Flow Directions for the Upper Chesapeake Unit, Dec 2006}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-86 — {Potentiometric Surface Elevation Map and Groundwater Flow Directions for the Upper Chesapeake Unit, March 2007}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-87 — {Groundwater Elevations for the Lower Chesapeake Unit, July 2006 Through October 2009}

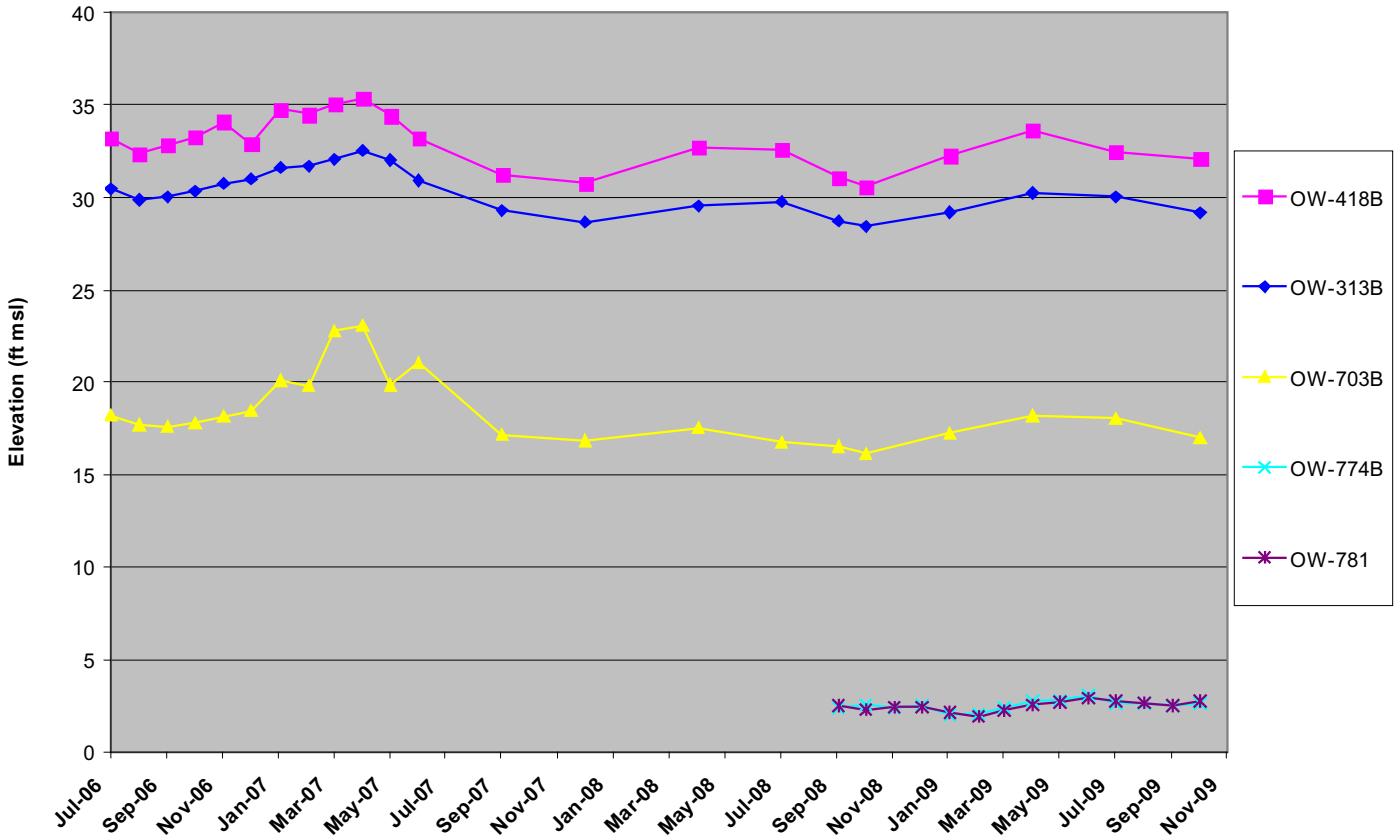
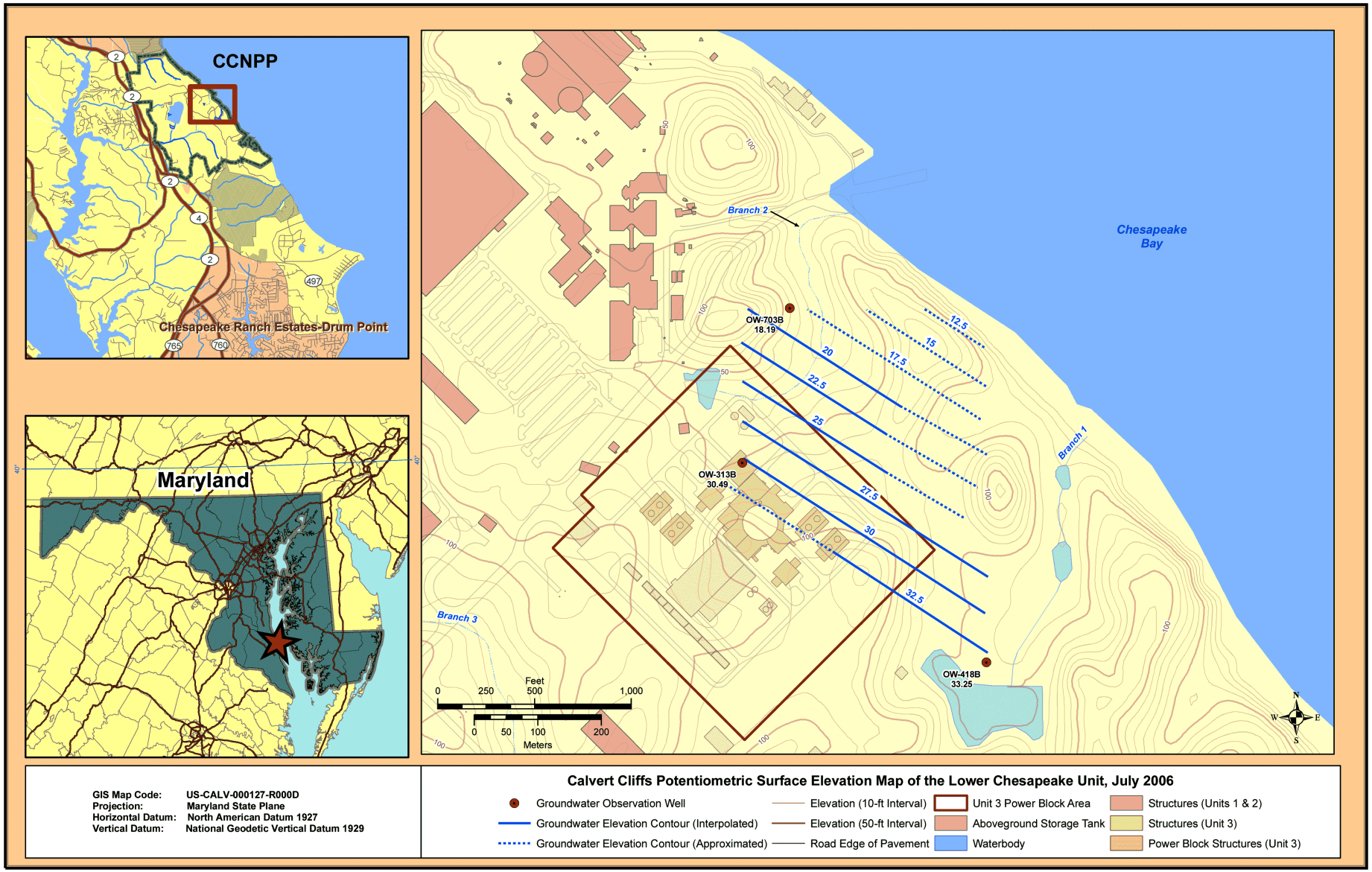
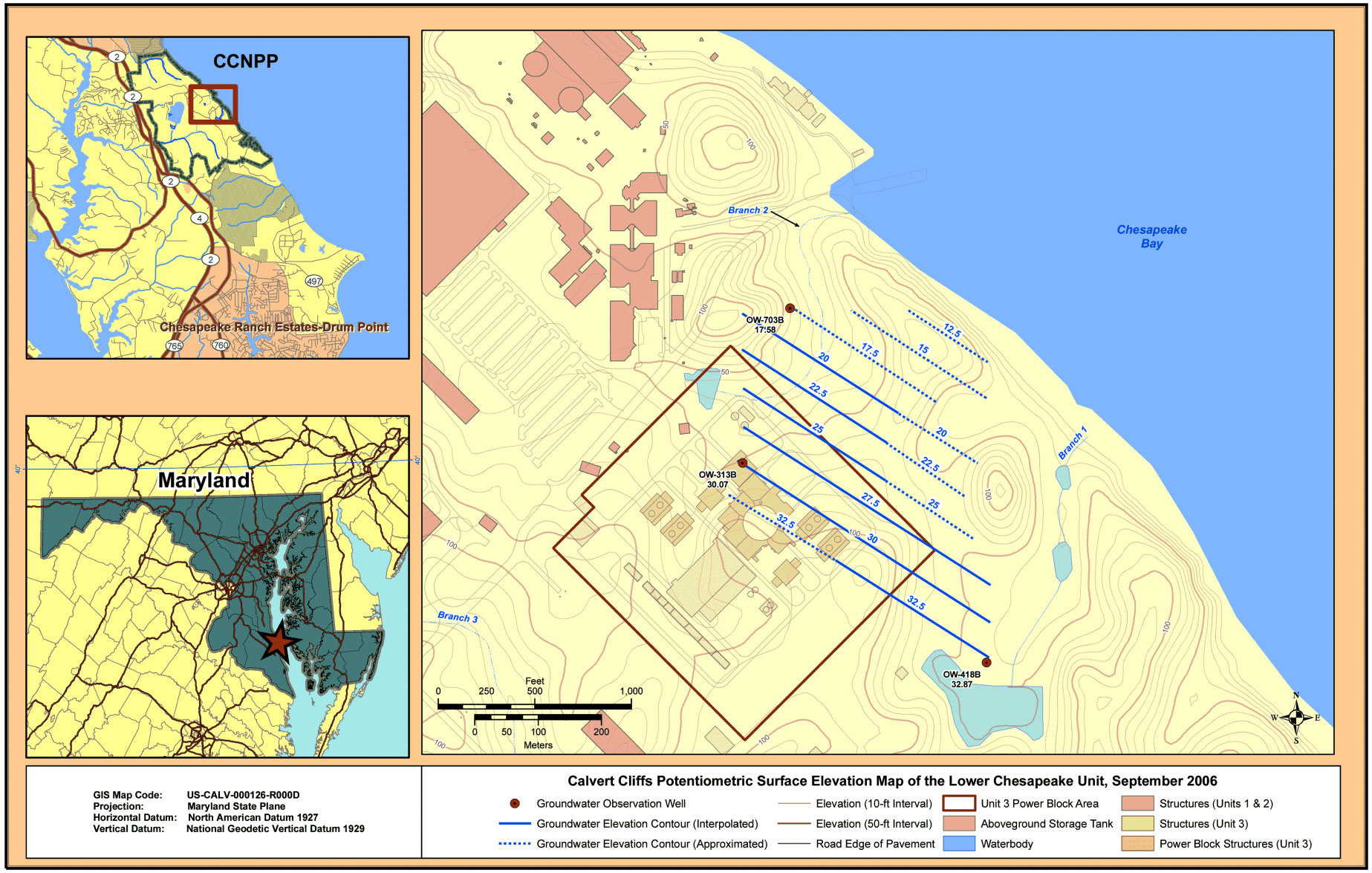


Figure 2.4-88 — {Potentiometric Surface Elevation Map and Groundwater Flow Directions for the Lower Chesapeake Unit, July 2006}



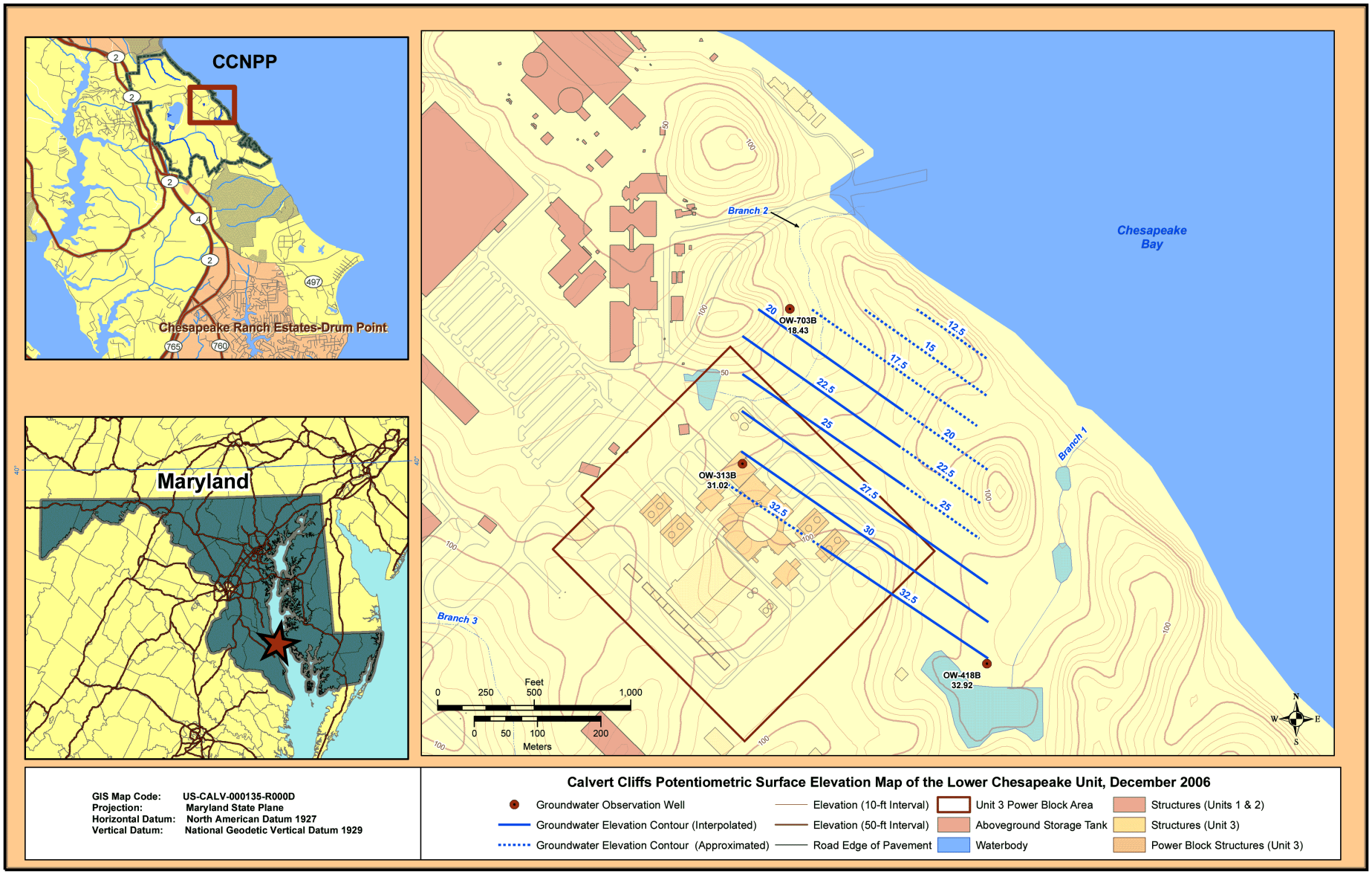
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-89 — {Potentiometric Surface Elevation Map and Groundwater Flow Directions for the Lower Chesapeake Unit, Sept 2006}



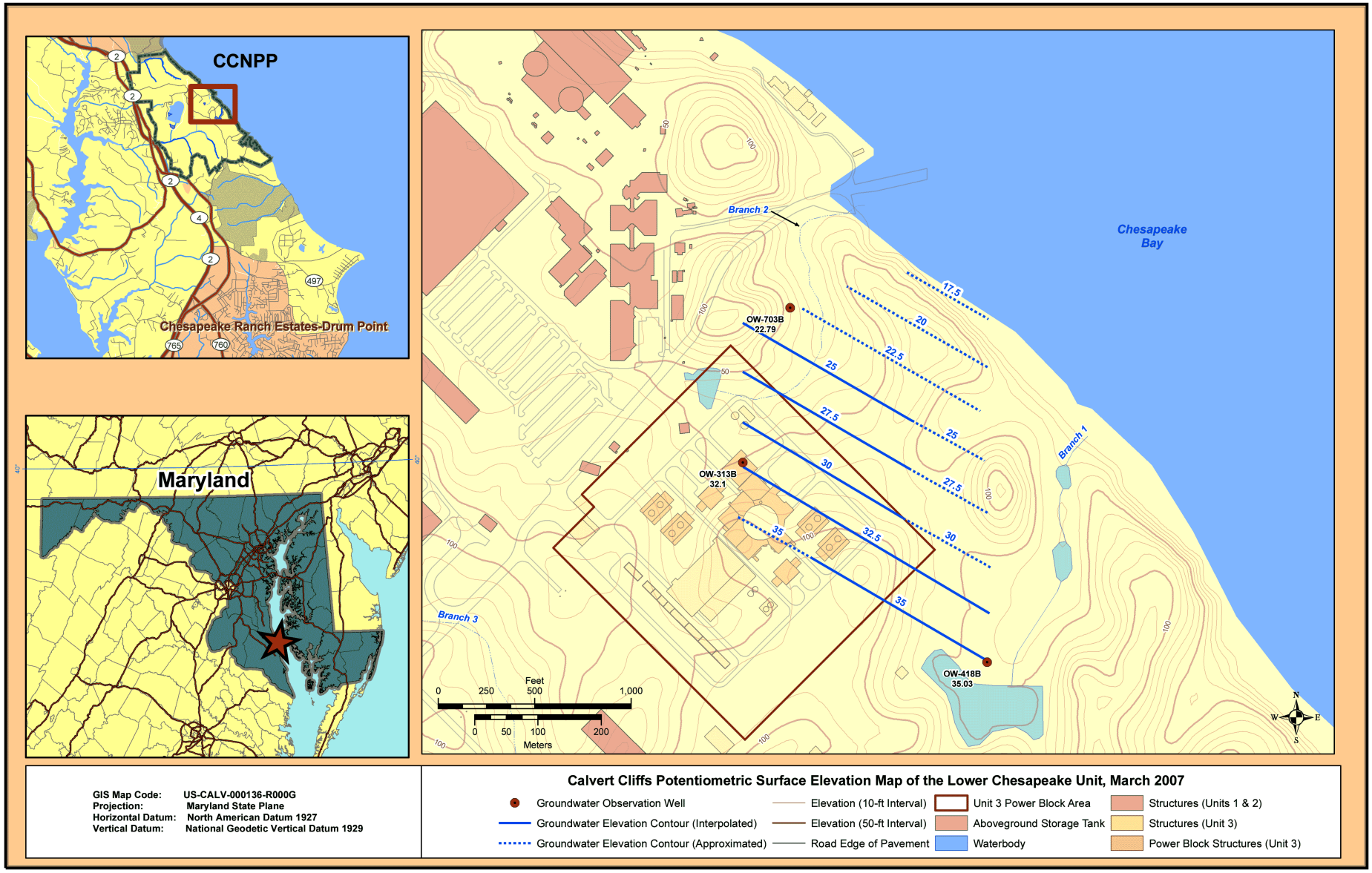
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-90 — {Potentiometric Surface Elevation Map and Groundwater Flow Directions for the Lower Chesapeake Unit, Dec 2006}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-91 — {Potentiometric Surface Elevation Map and Groundwater Flow Directions for the Lower Chesapeake Unit, March 2007}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-92 — {US EPA Region 3 Sole Source Aquifers}

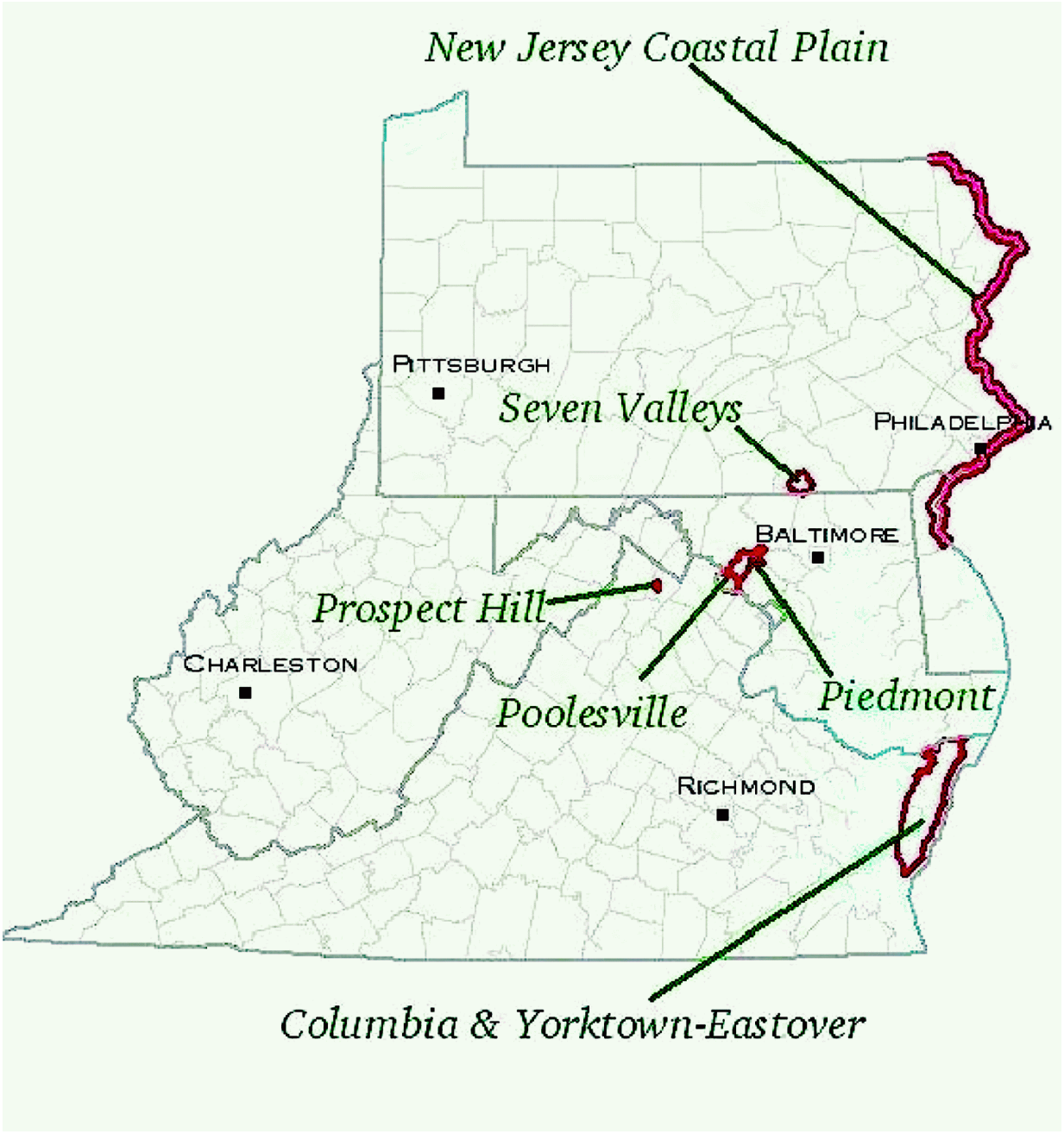
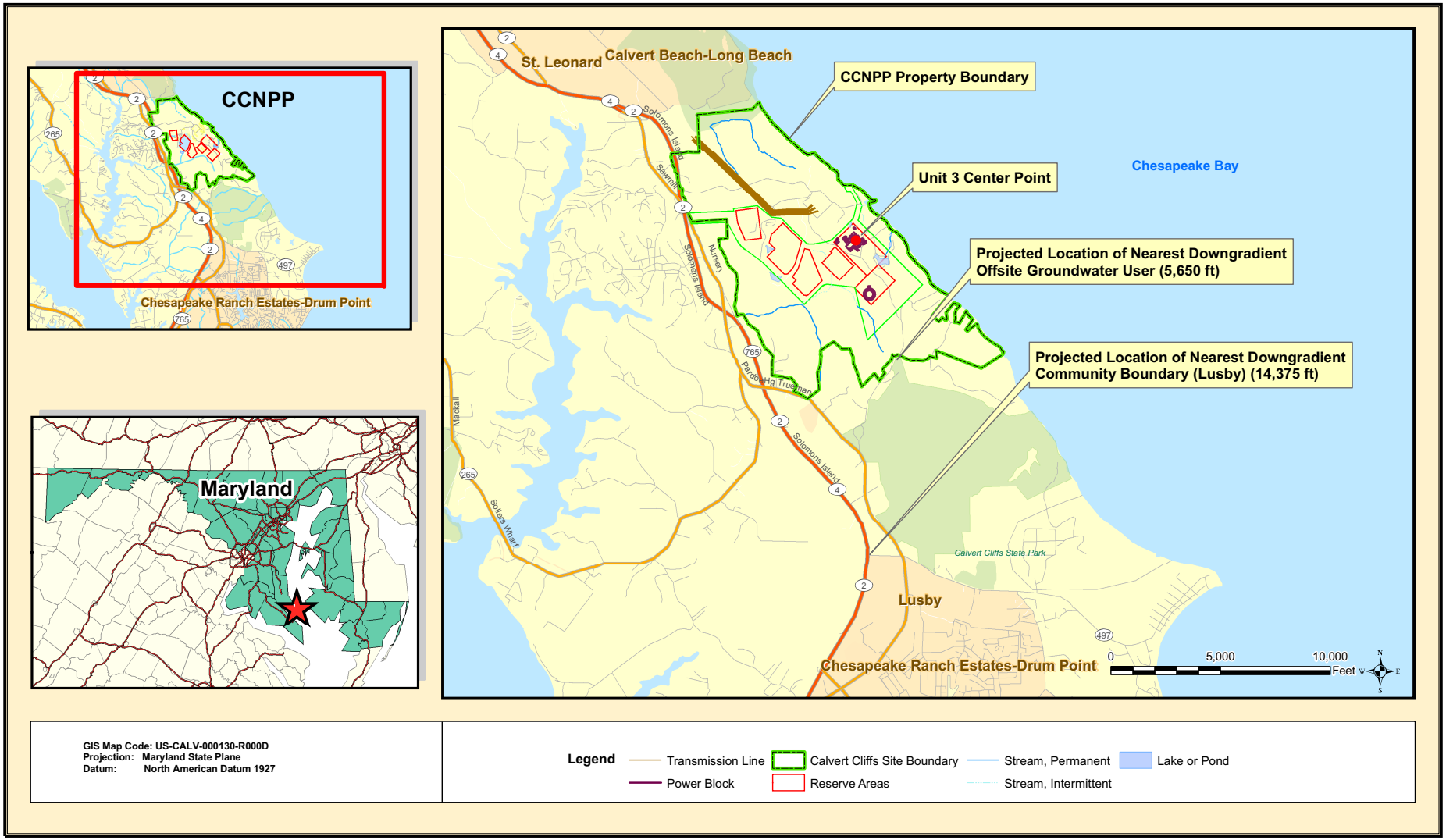
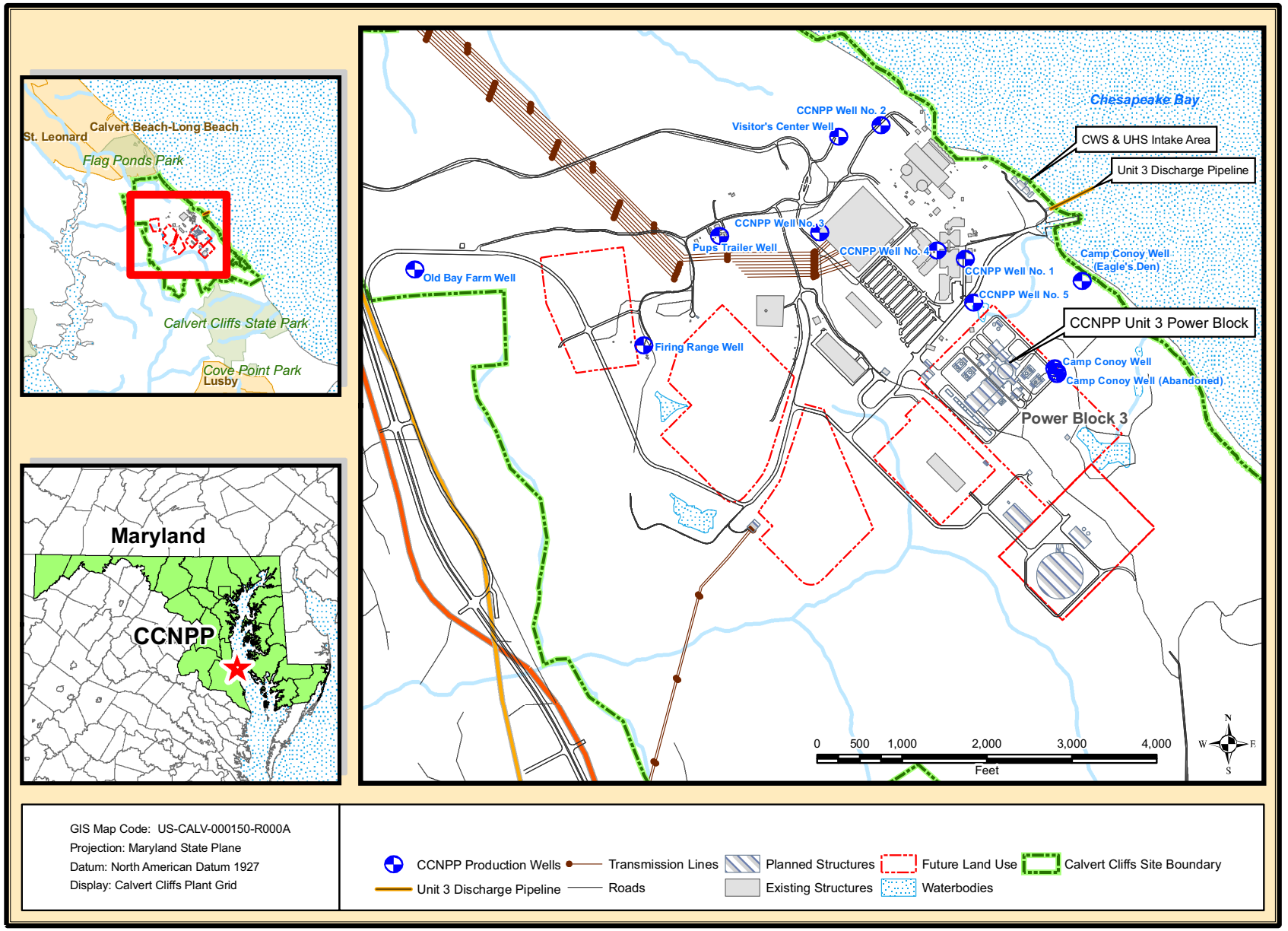


Figure 2.4-93 — {Projected Location of Nearest Off-Site Groundwater Well and Community Water Supply System}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-94 — {CCNPP Water Production Wells}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-95 — {The Differences Between the Potentiometric Surfaces of the Aquia Aquifer, September 1982 and September 2003, in Southern Maryland}

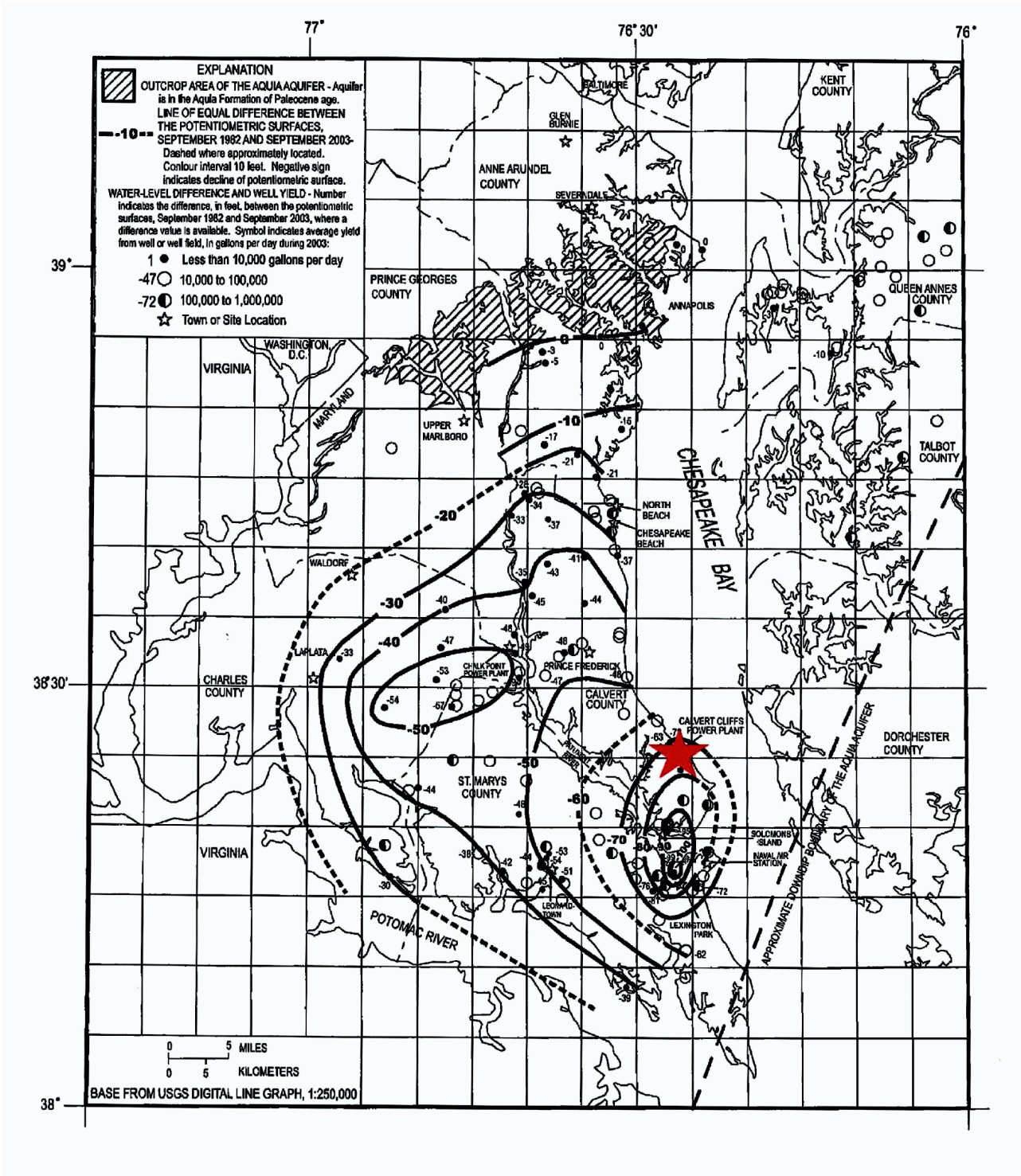


Figure 2.4-96 — {The Differences Between the Potentiometric Surfaces of the Magothy Aquifer, September 1975 and September 2003, in Southern Maryland}

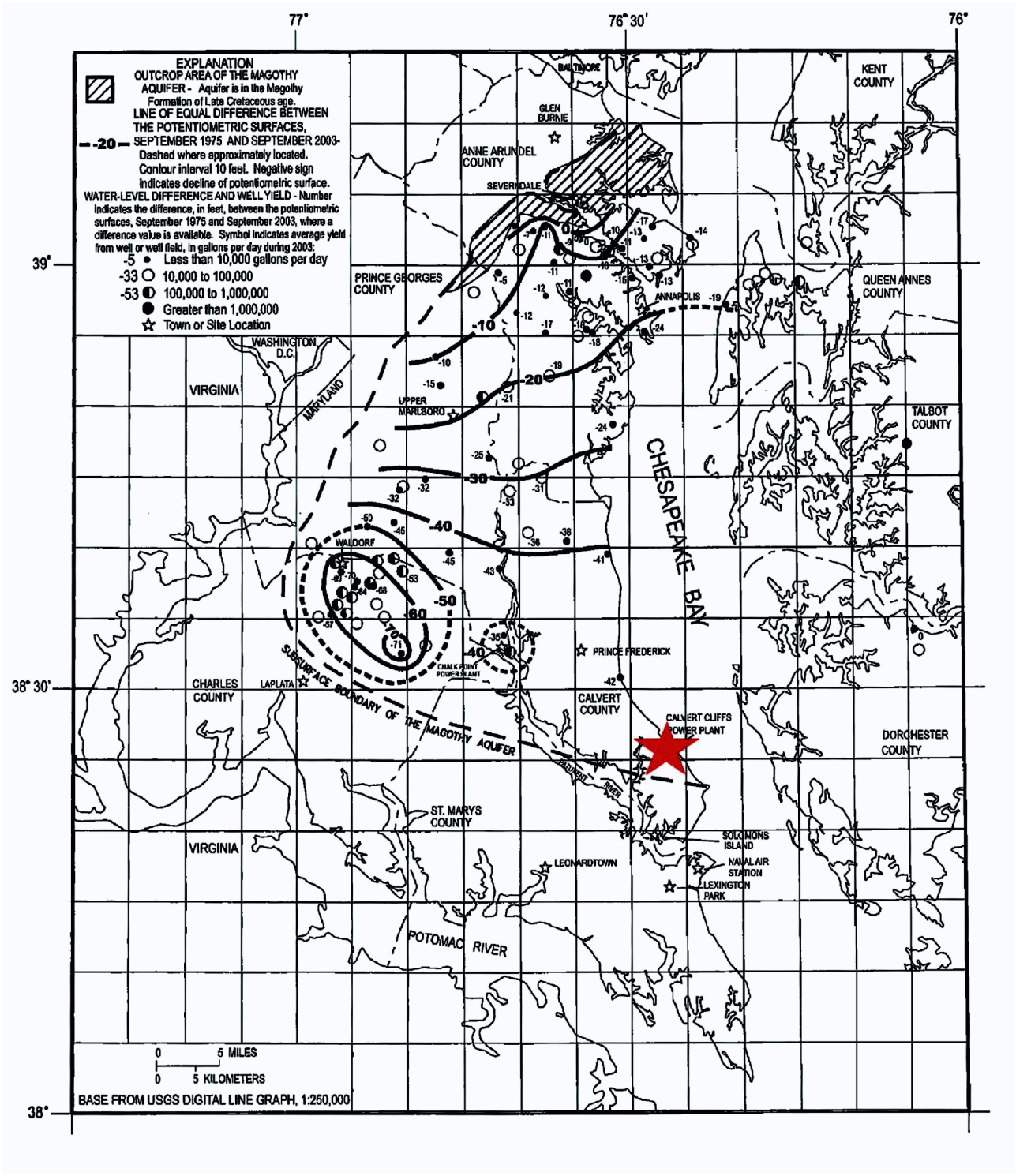


Figure 2.4-97 — {The Differences Between the Potentiometric Surfaces of the Upper Patapsco Aquifer, September 1990 and September 2003, in Southern Maryland}

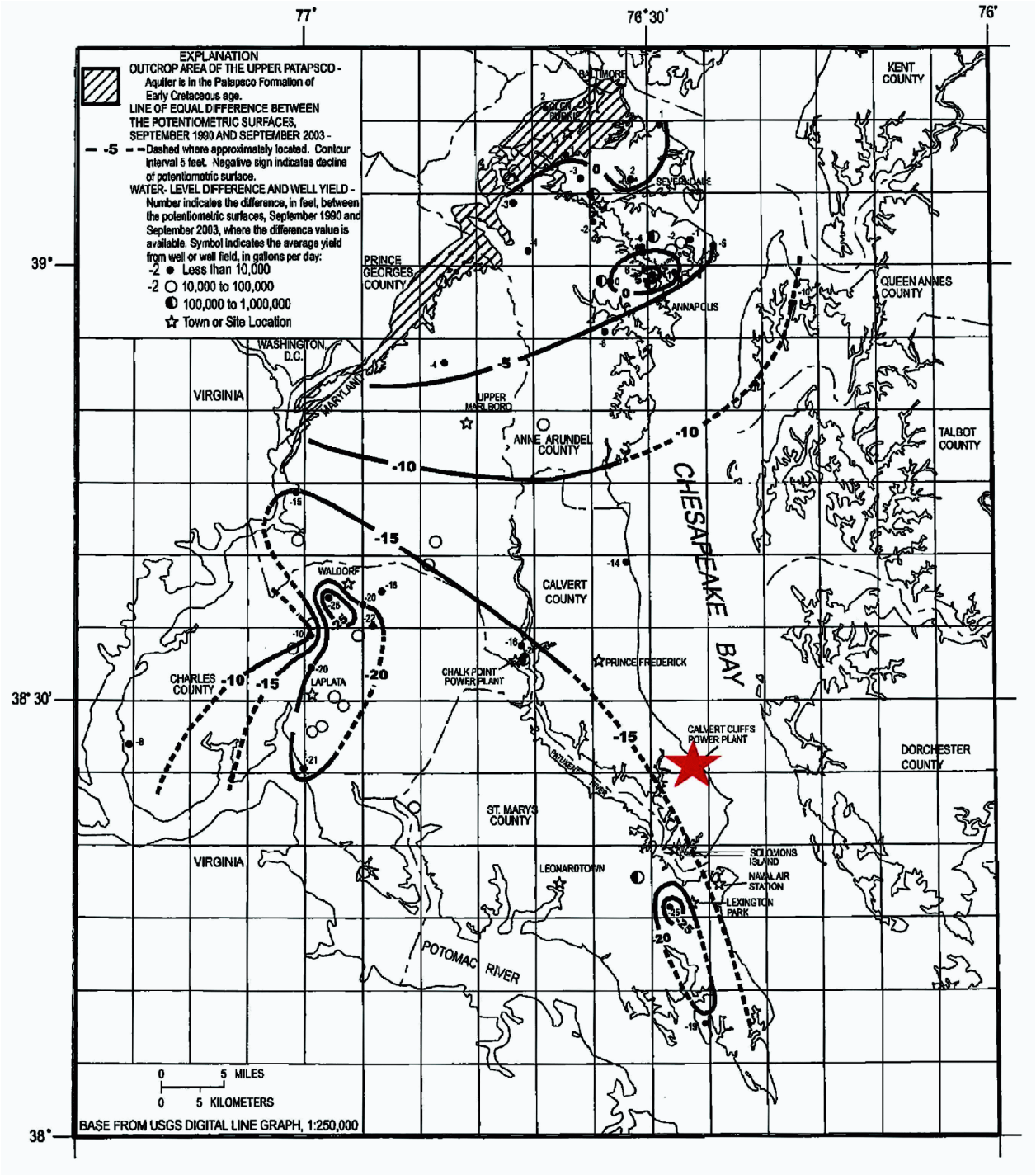


Figure 2.4-98 — {The Differences Between the Potentiometric Surfaces of the Lower Patapsco Aquifer, September 1990 and September 2003, in Southern Maryland}

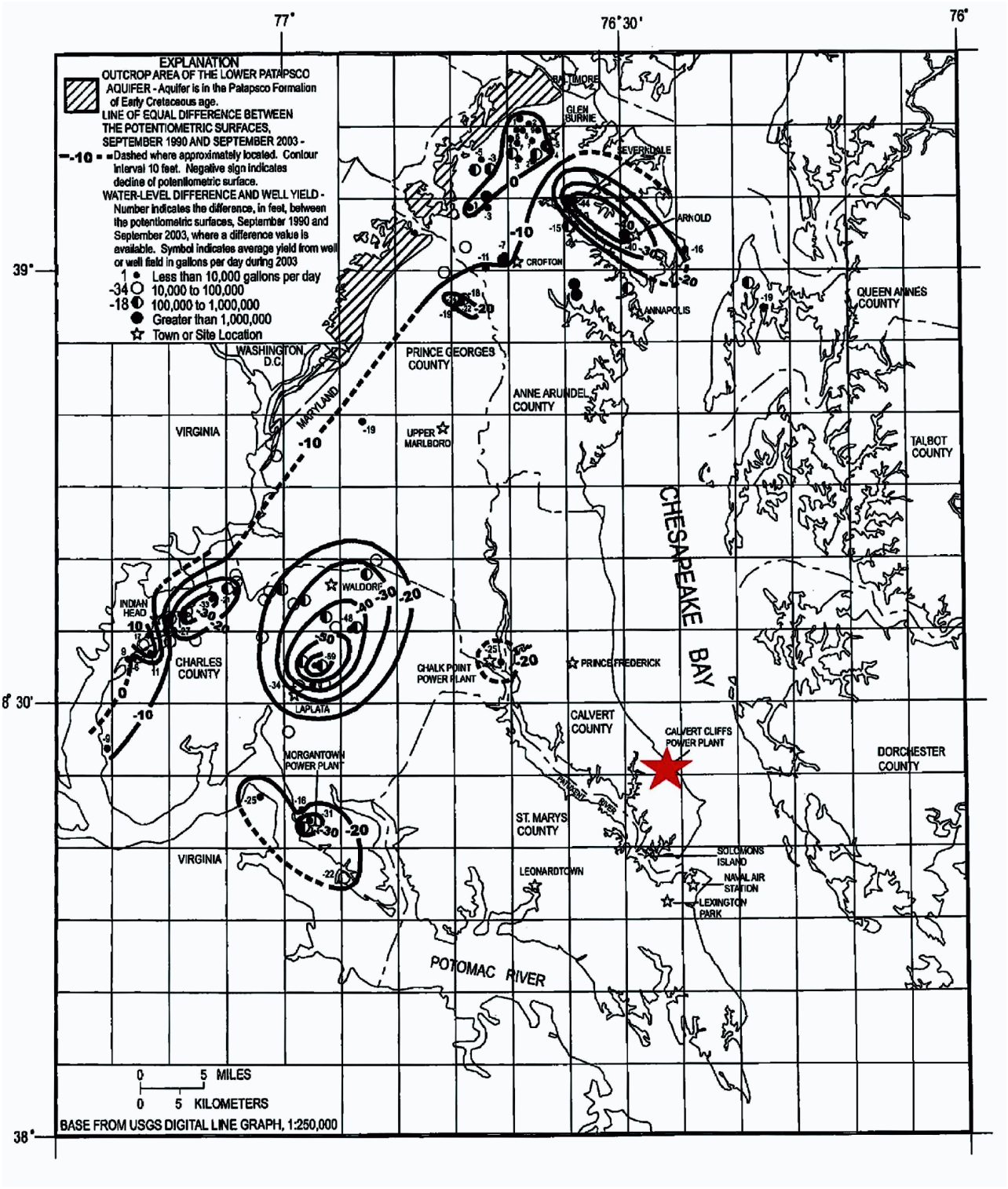


Figure 2.4-99 — {Calvert County Ground-Water-Level Monitoring Network, Location of Selected Water Level Monitoring Wells}

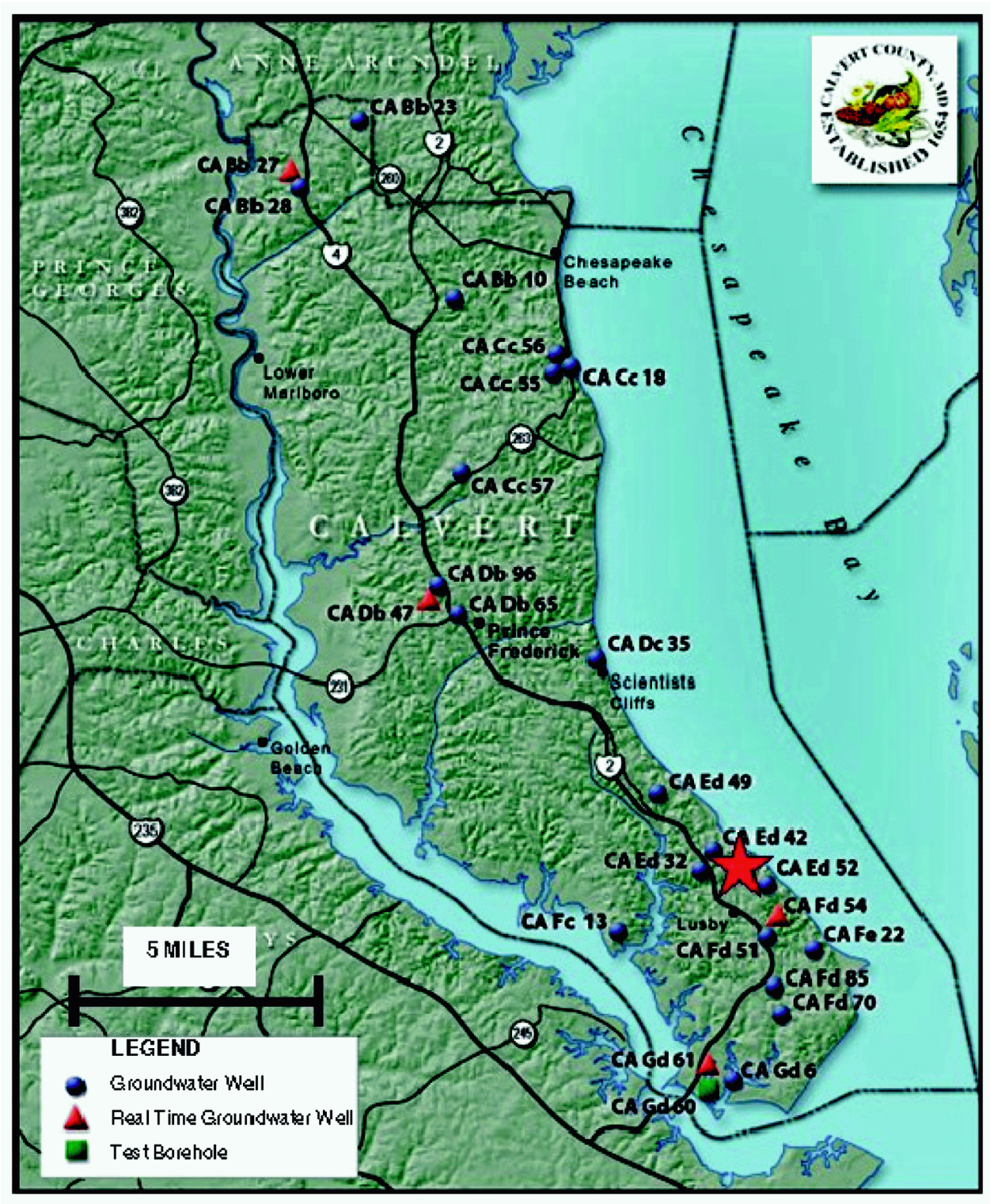


Figure 2.4-100 — {Well Hydrograph for Monitoring Well CA Fd 51 Screened in the Piney Point - Nanjemoy Aquifer at Calvert Cliffs State Park}

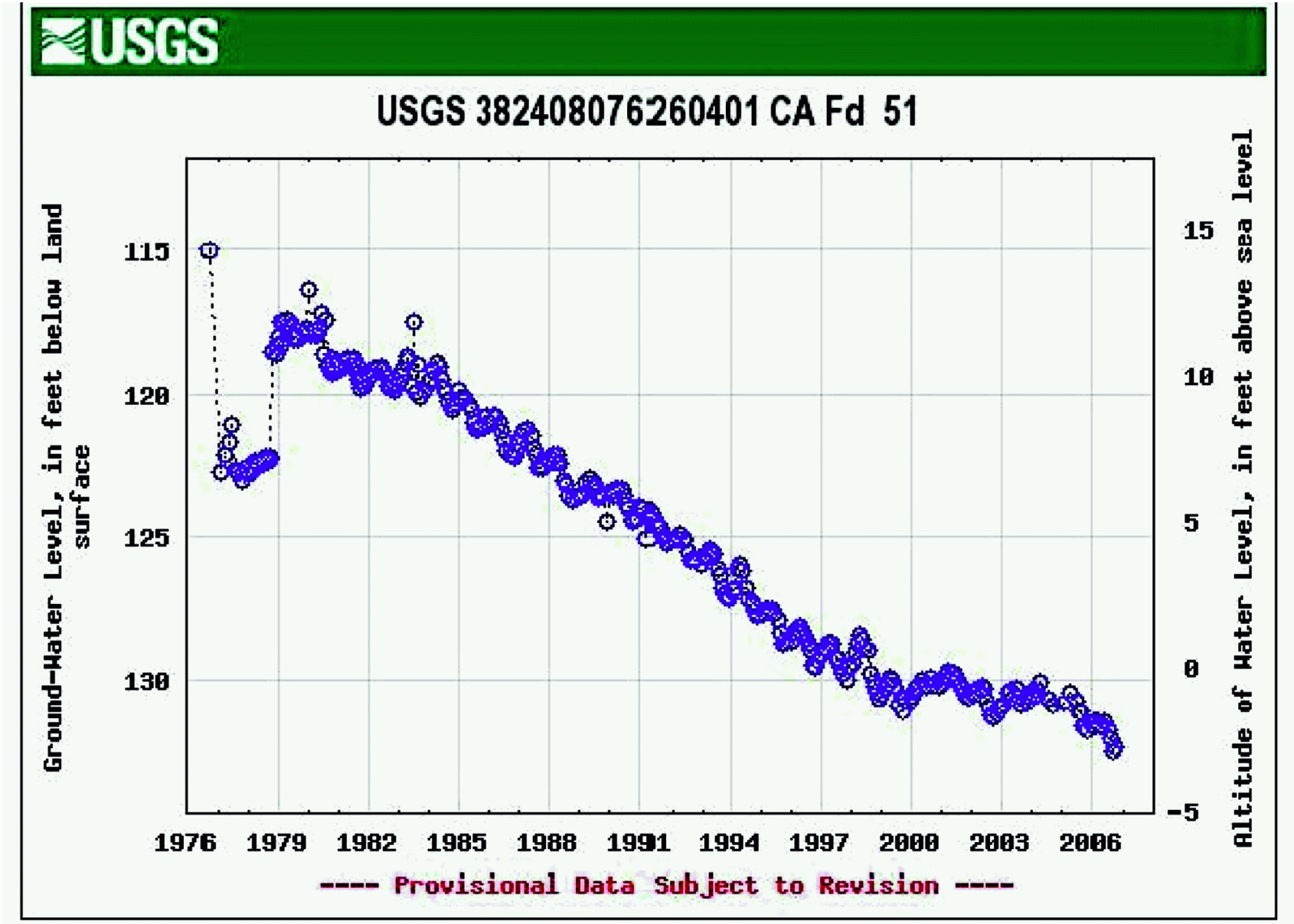


Figure 2.4-101 — {Well Hydrograph for Monitoring Well CA Ed 42 Screened in the Aquia Aquifer at CCNPP}

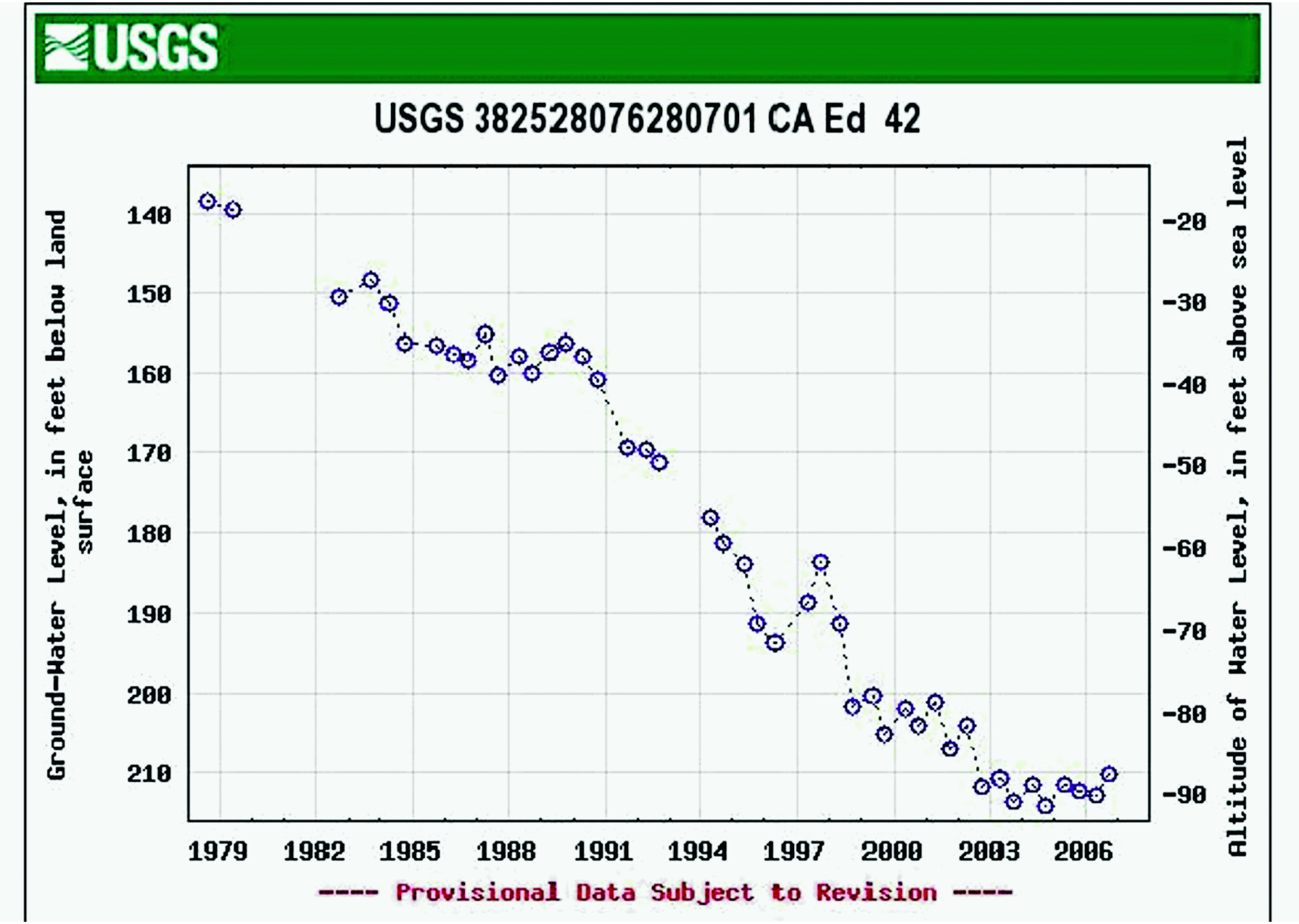


Figure 2.4-102 — {Well Hydrograph for Monitoring Well CA Dc 35 Screened in the Magothy Aquifer at Scientists Cliffs}

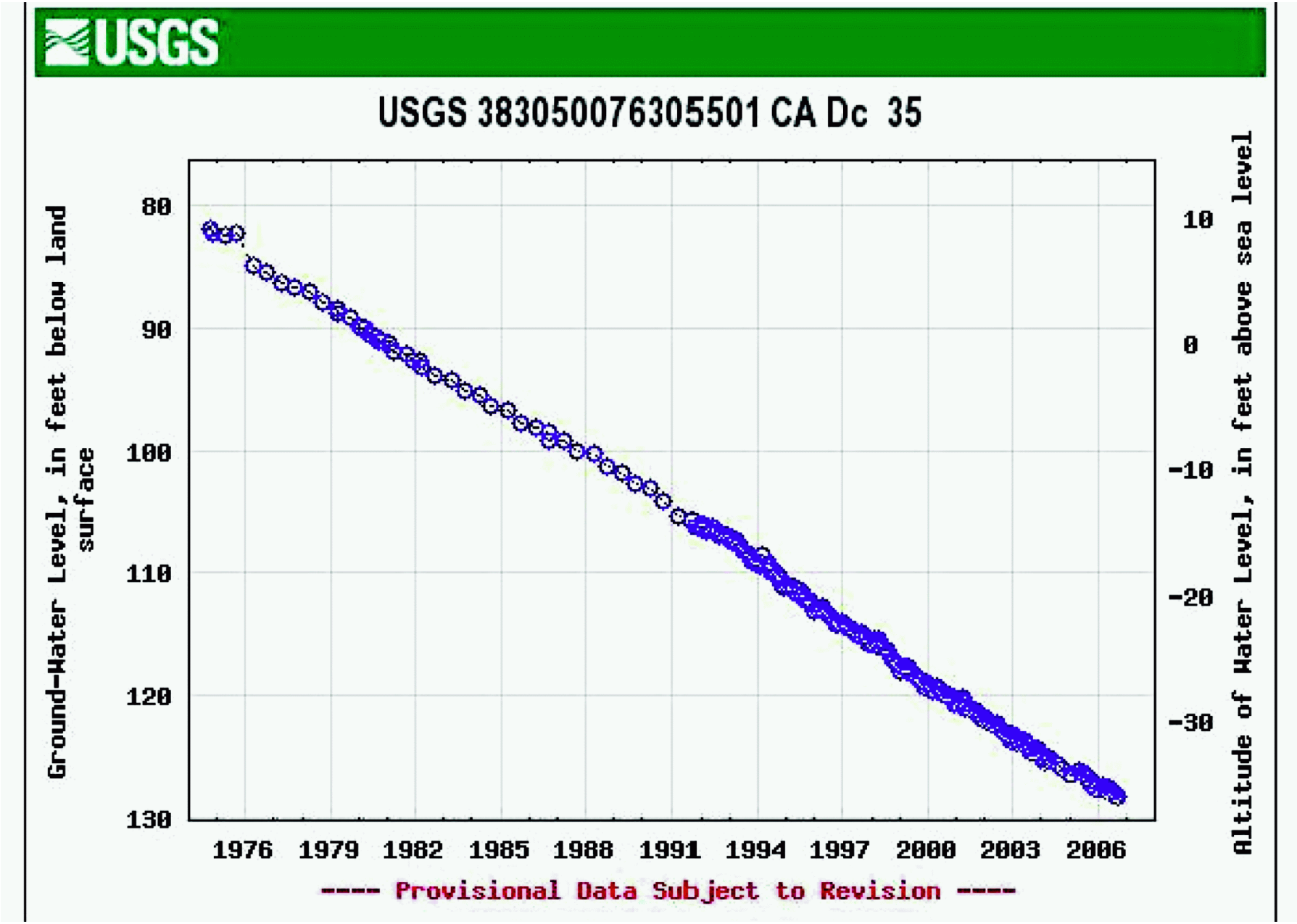


Figure 2.4-103 — {Well Hydrograph for Monitoring Well CA Db 96 Screened in the Upper Patapsco Aquifer at Prince Frederick}

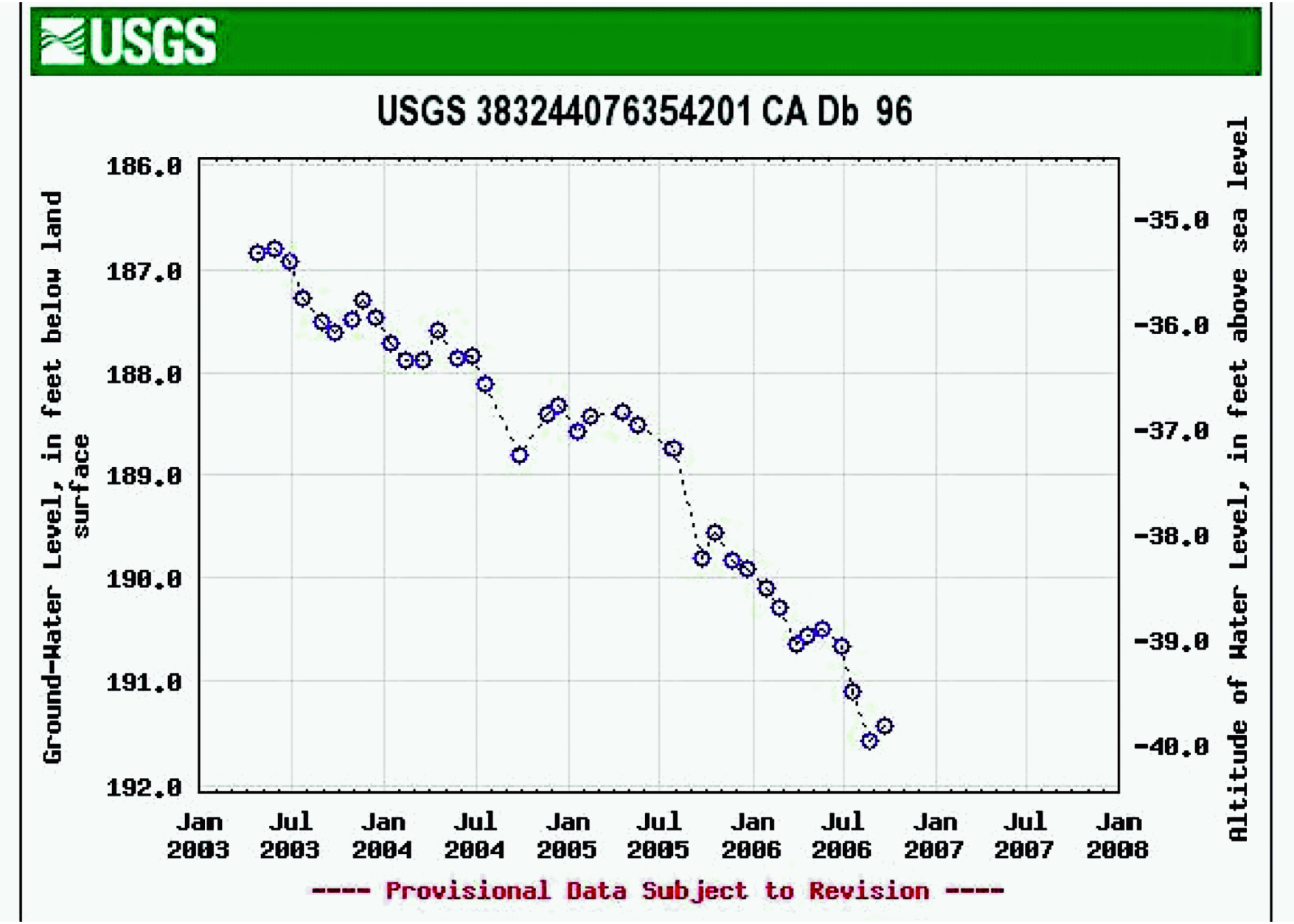


Figure 2.4-104 — {Well Hydrograph for Monitoring Well CA Fd 85 Screened in the Lower Patapsco Aquifer at Chesapeake Ranch Estates}

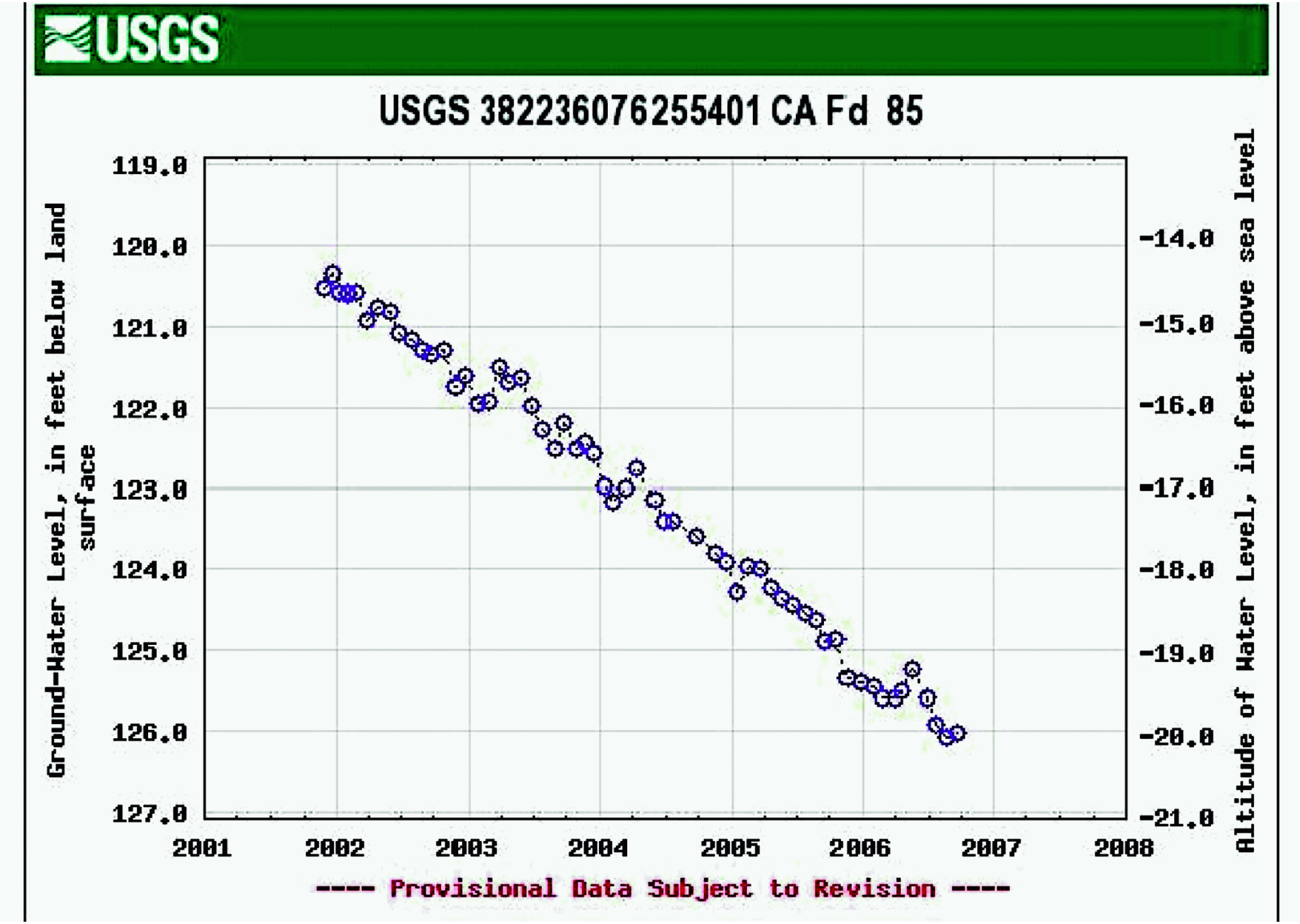
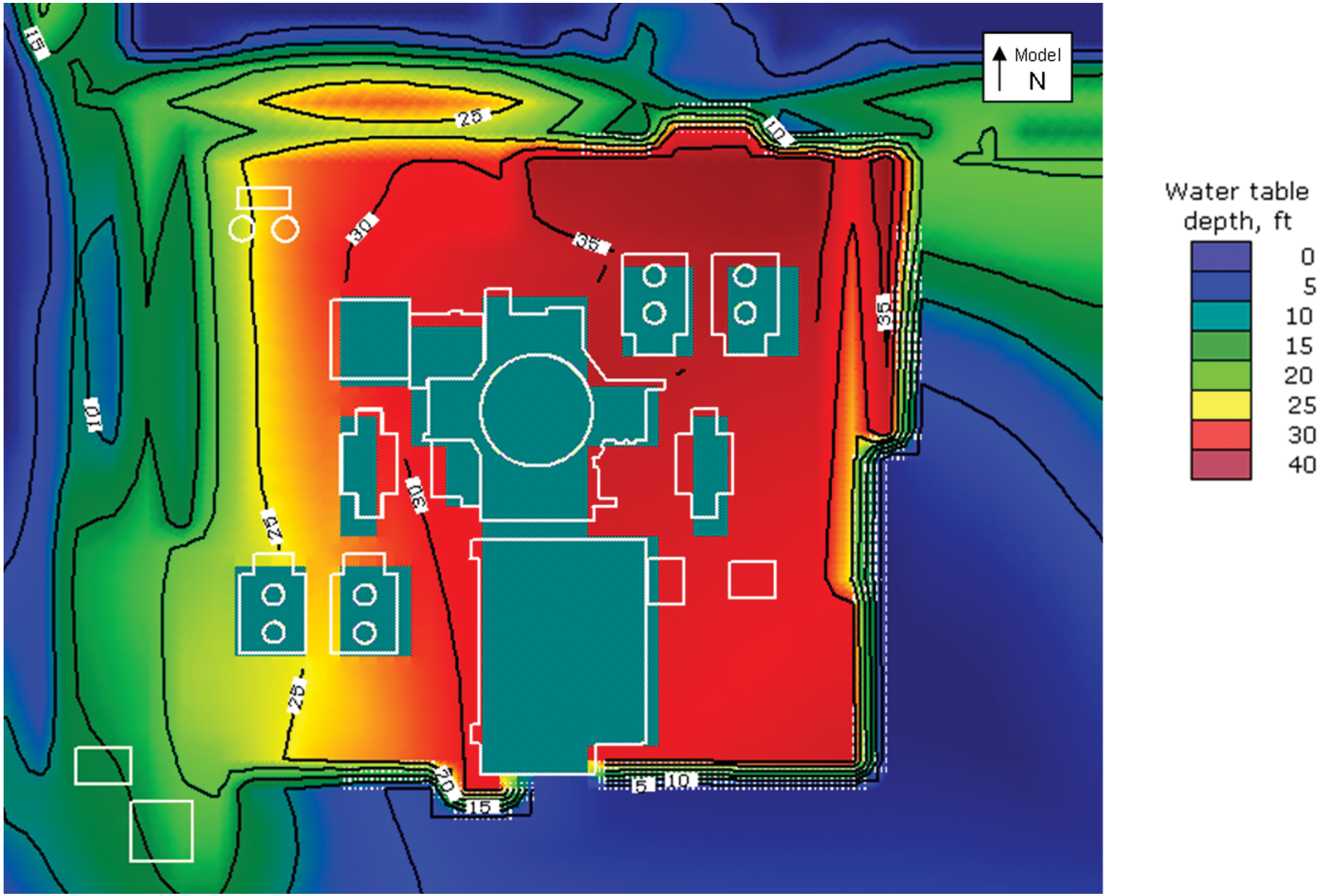
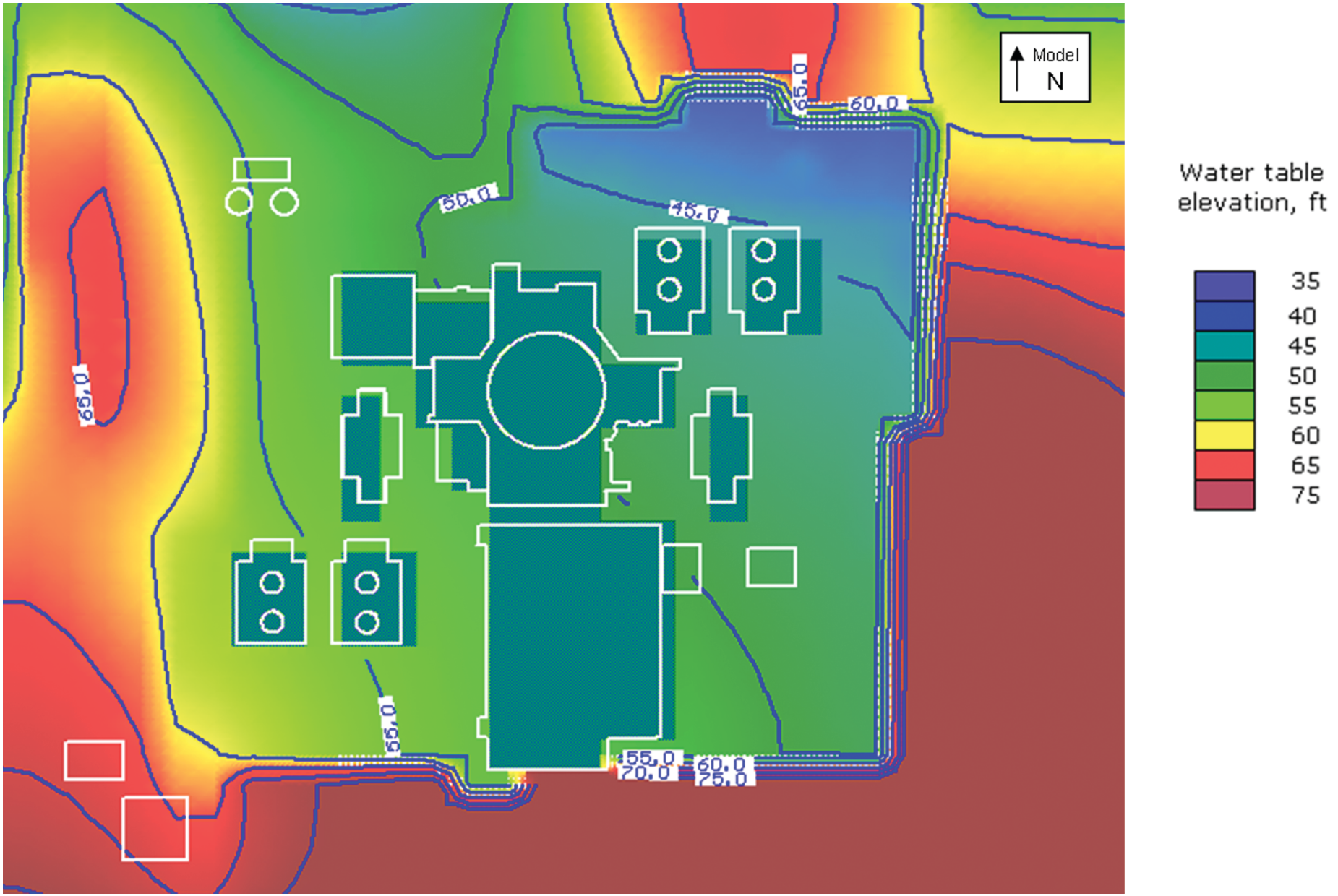


Figure 2.4-105 — {Modeled Post-Construction Depth to the Water Table around the Unit 3 Power Block Area}



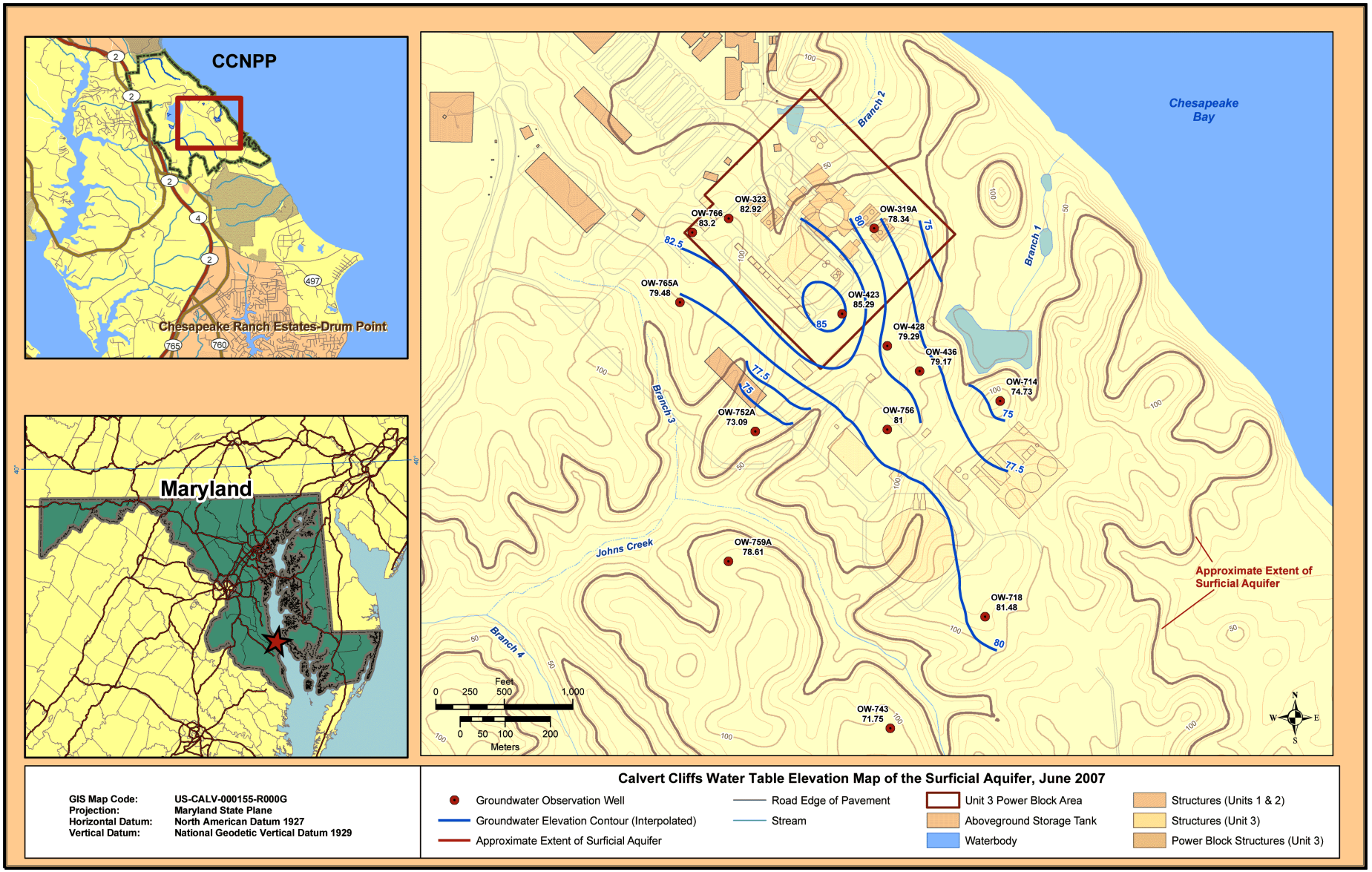
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-106 — {Modeled Post-Construction Elevation of the Water Table around the Unit 3 Power Block Area}



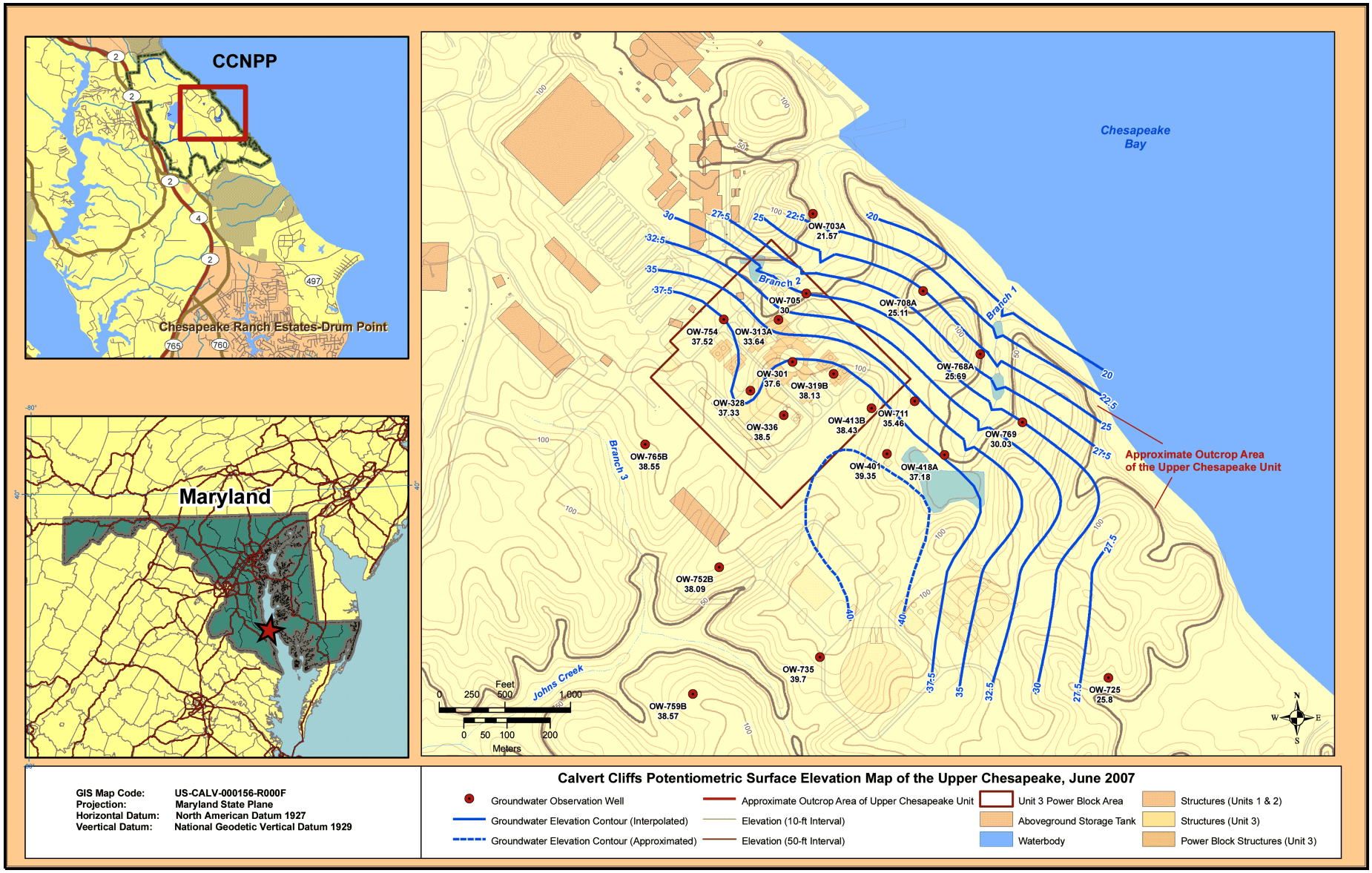
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-107 — {Water Table Elevation Map and Groundwater Flow Direction for the Surficial Aquifer, June 2007}



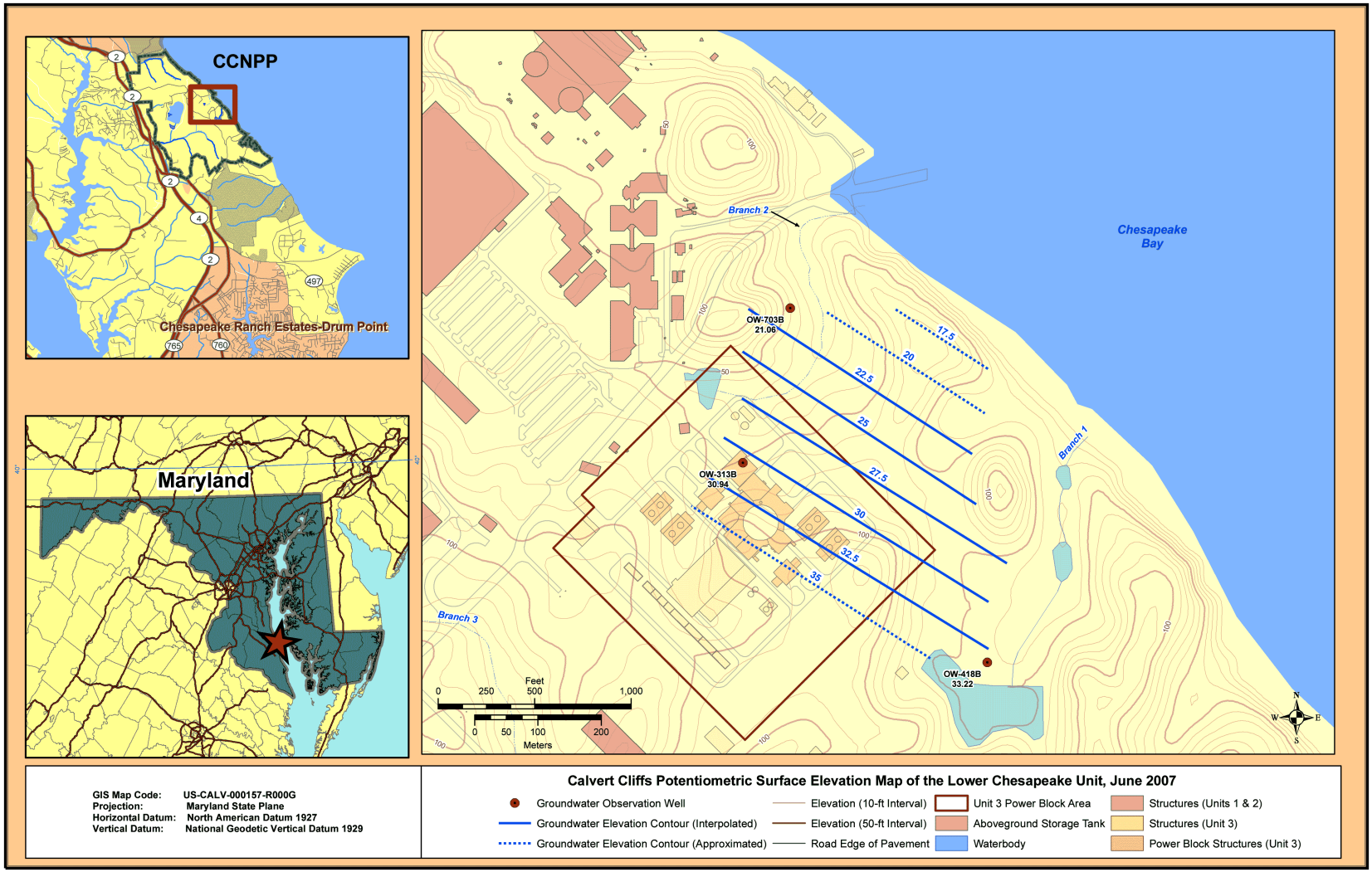
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-108 — {Potentiometric Surface Elevation Map and Groundwater Flow Directions for the Upper Chesapeake Unit, June 2007}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-109 — {Potentiometric Surface Elevation Map and Groundwater Flow Directions for the Lower Chesapeake Unit, June 2007}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-110 — {Conceptual Model of Subsurface Pathways through the Upper Chesapeake Unit To Surface Streams}

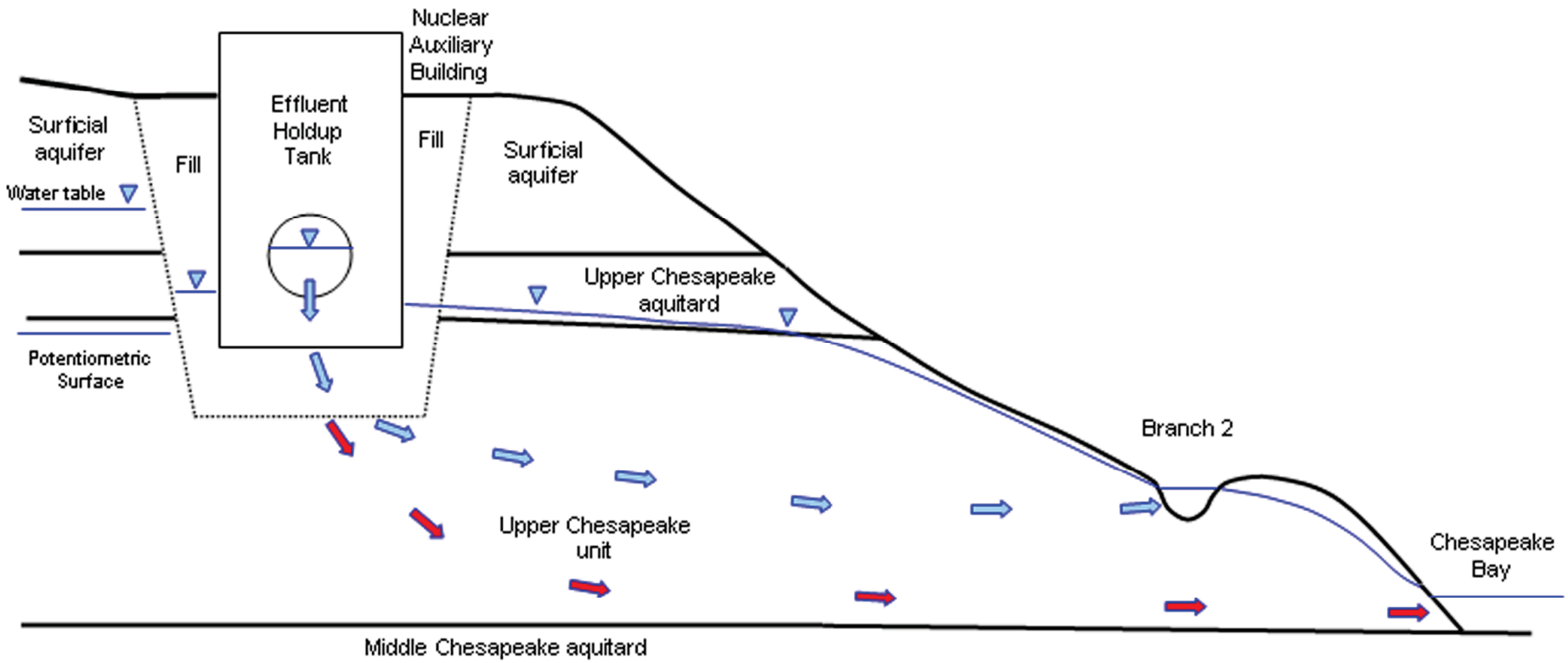
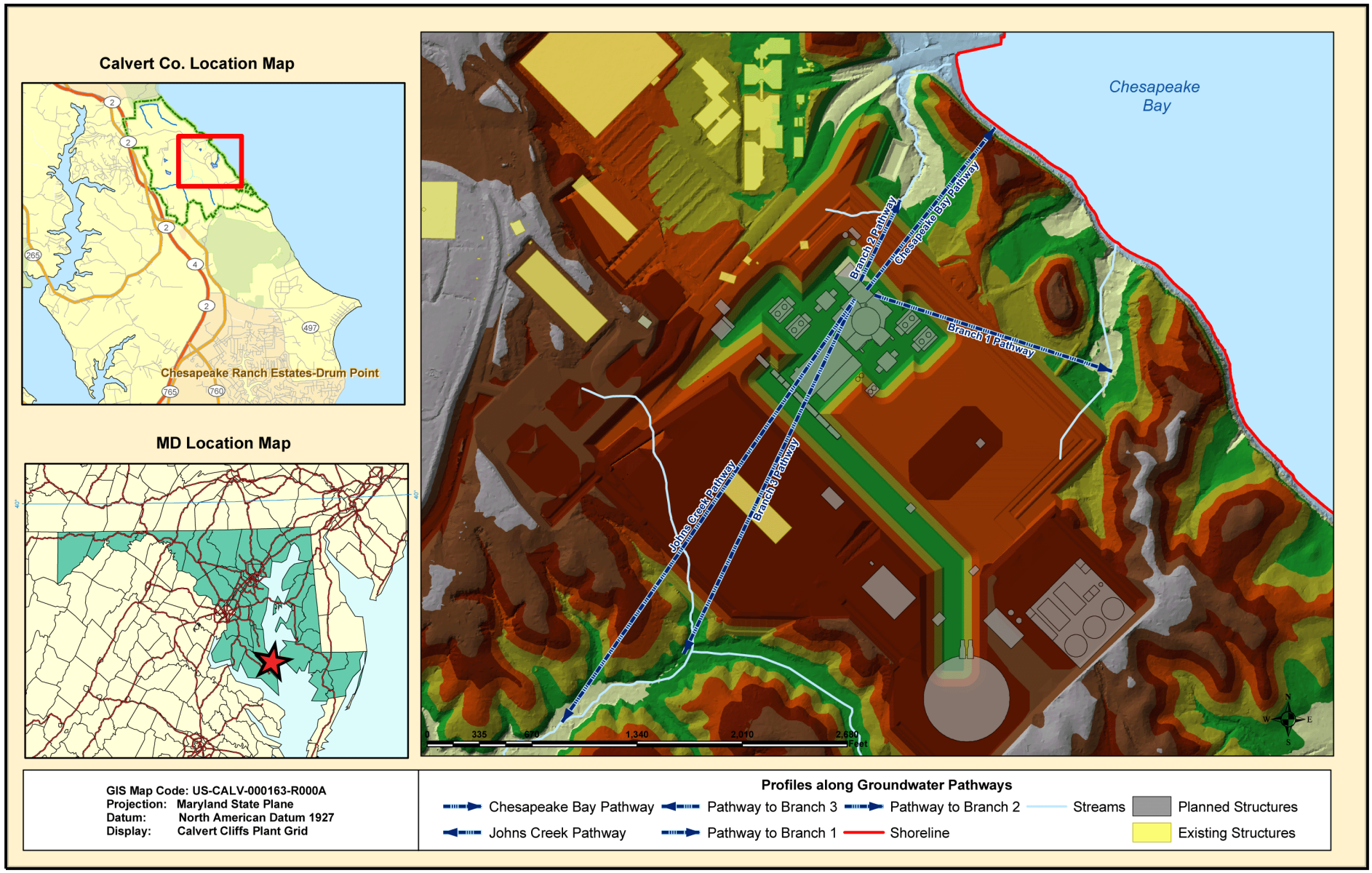
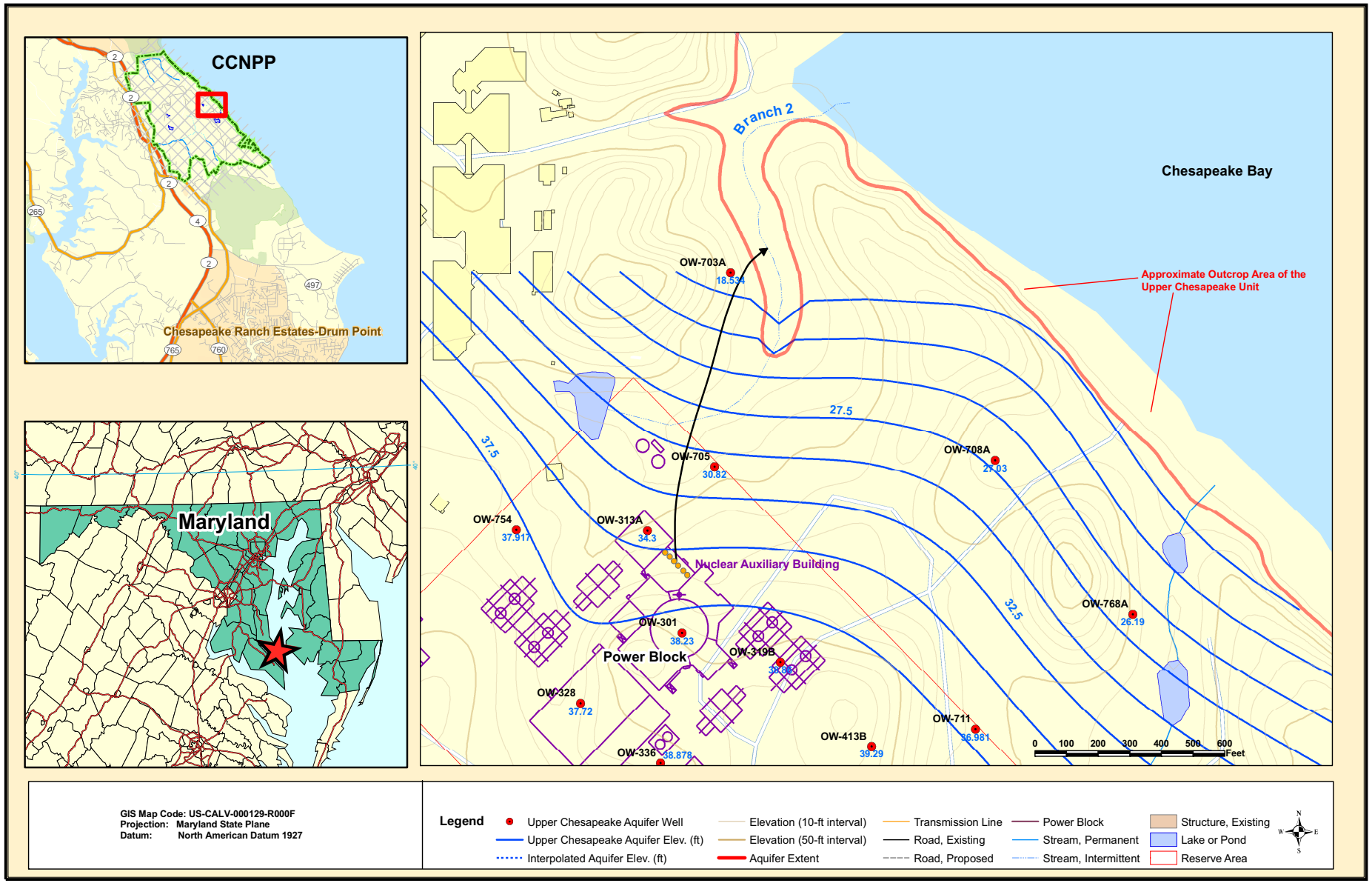


Figure 2.4-111 — {Plan View of Subsurface Contaminant Pathways}



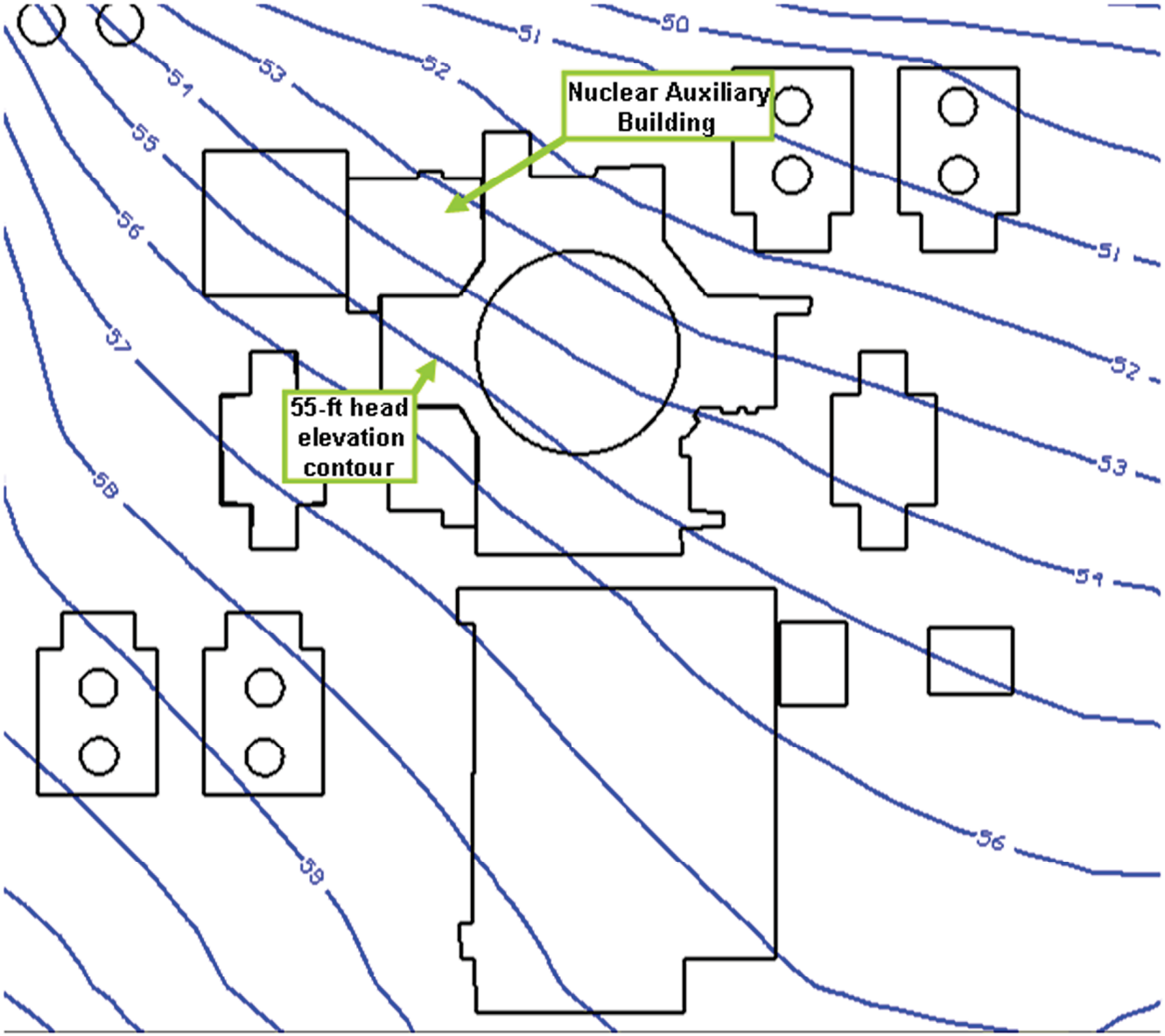
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-112 — {Upper Chesapeake Unit Flow Direction from the Nuclear Auxiliary Building to Branch 2, December 2006}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-113 — {Potentiometric Surface Contours from Groundwater Model of Post-Construction Conditions}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-114 — {Cross Section Showing Pathlines through the Upper Chesapeake Unit in the Post- Construction Groundwater Model}

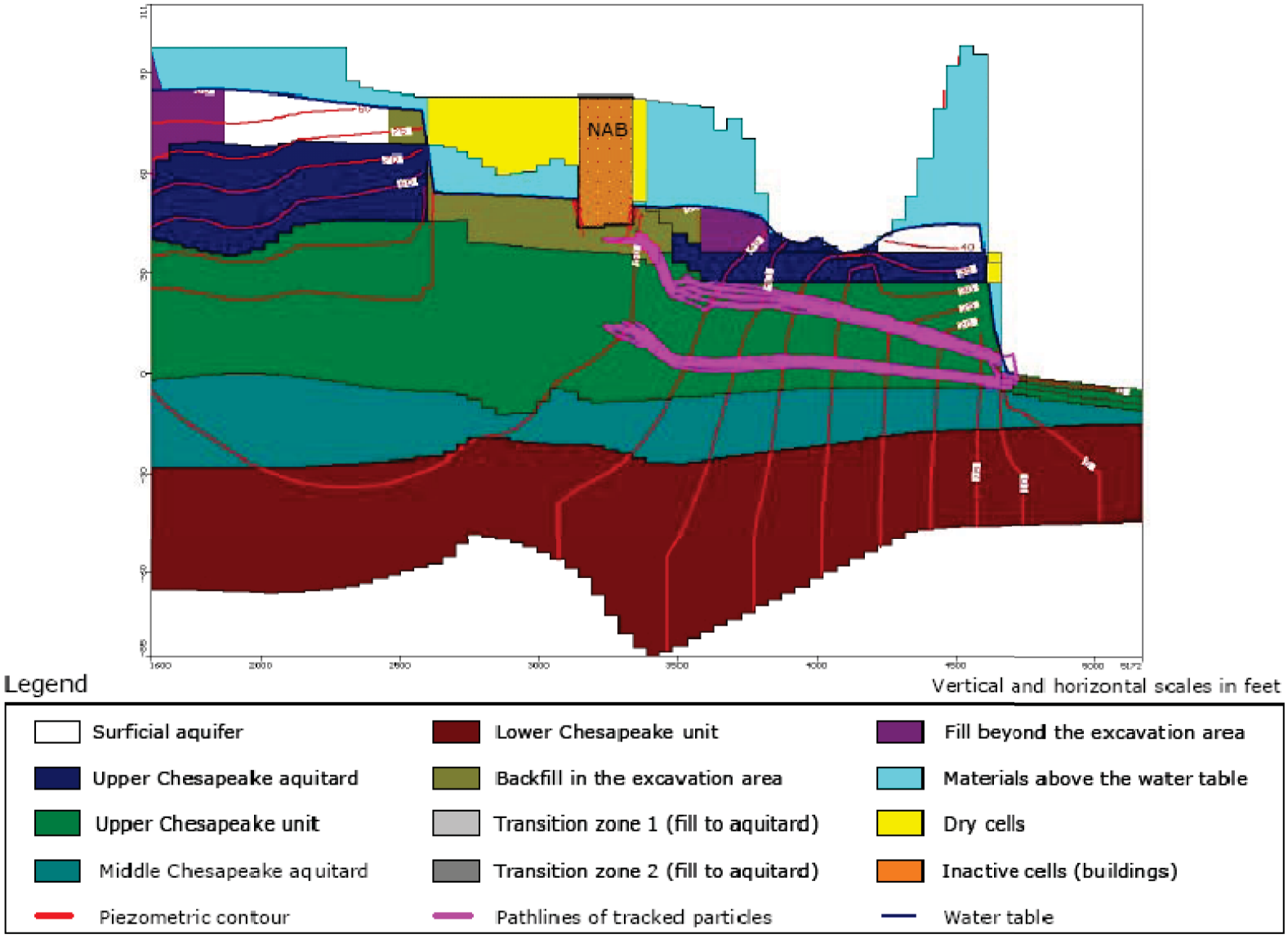
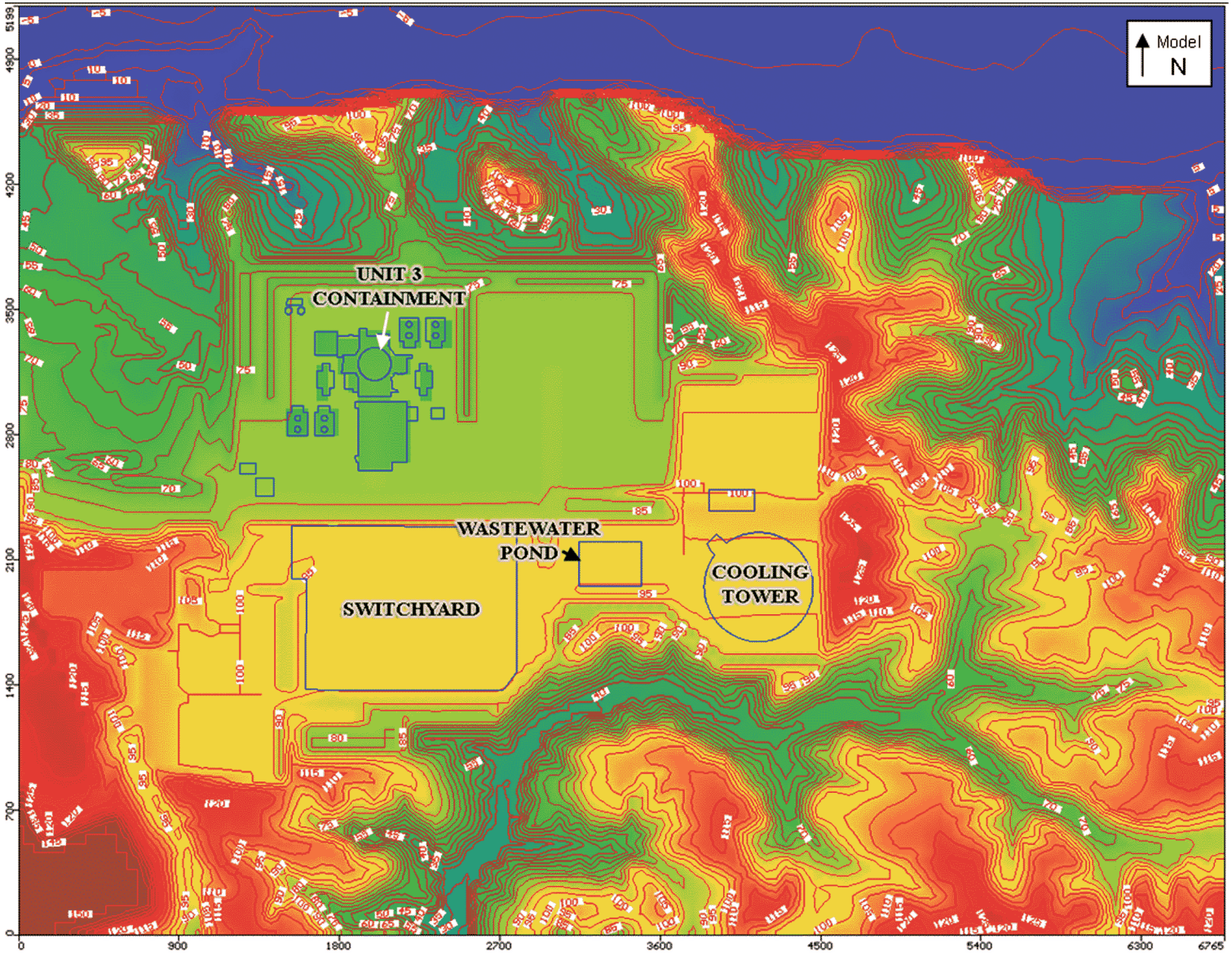
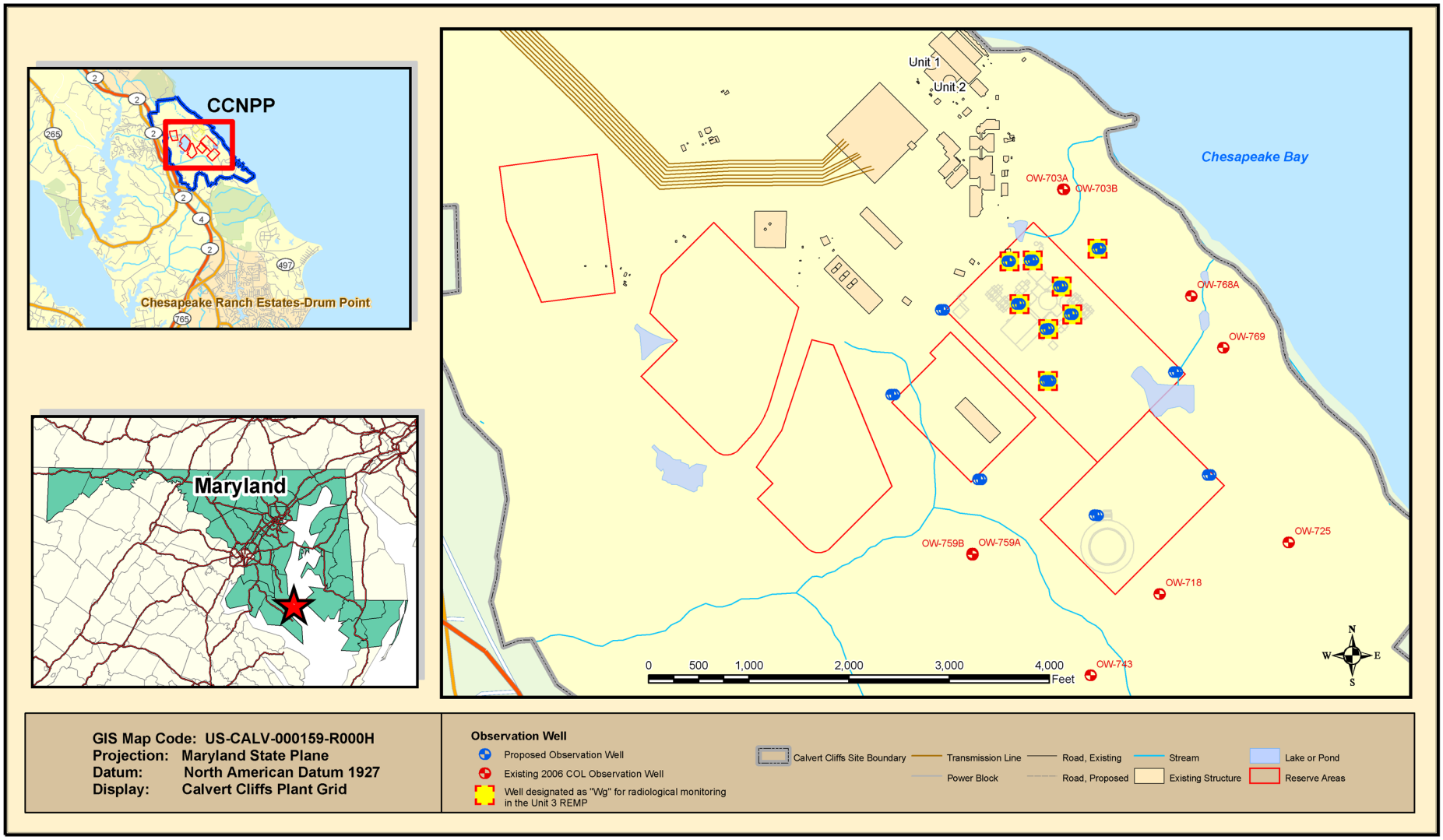


Figure 2.4-115 — {Topography of the Post-Construction Groundwater Flow Model Domain}



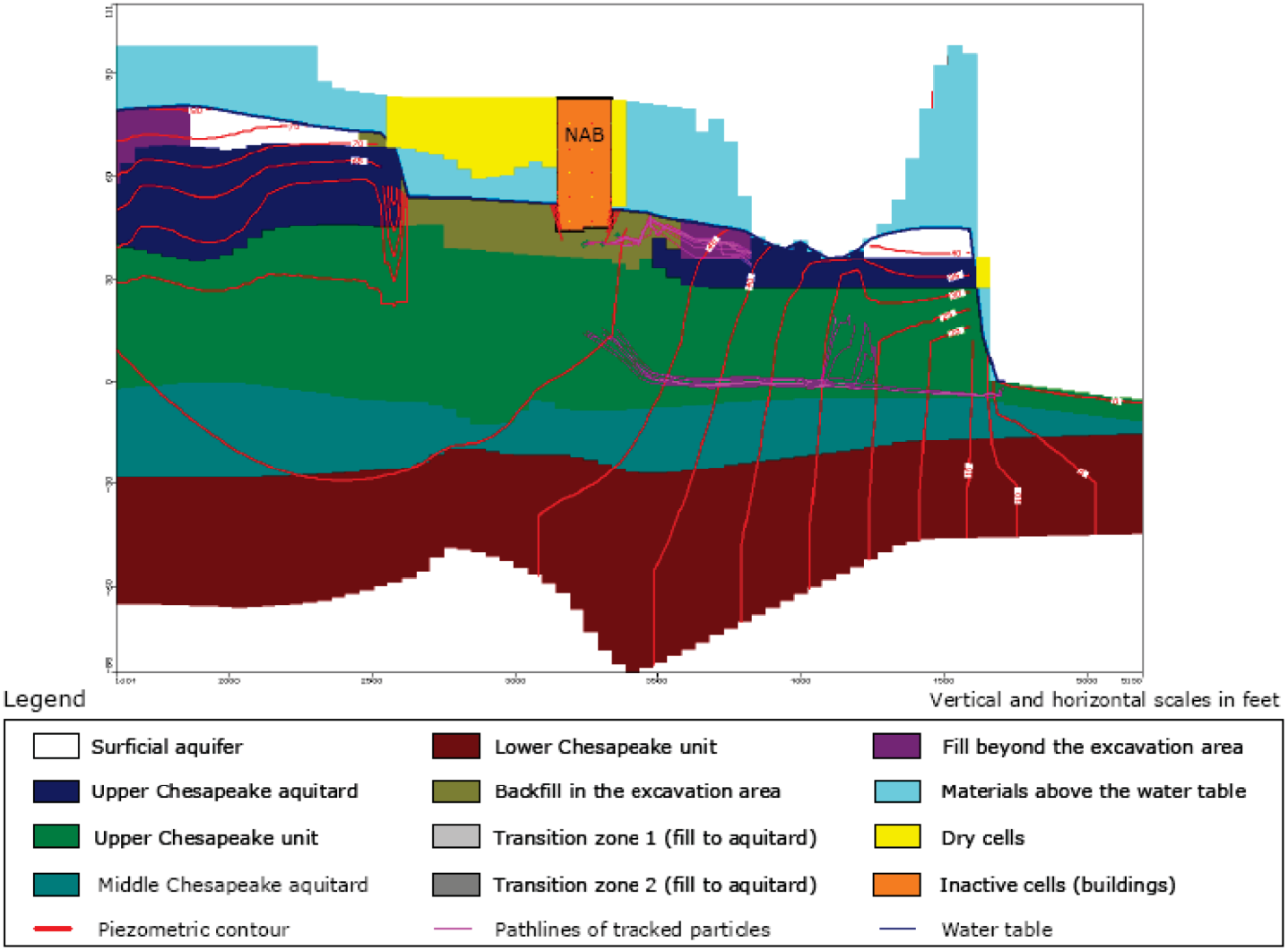
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-116 — {Proposed Post Construction Observation Well Locations}



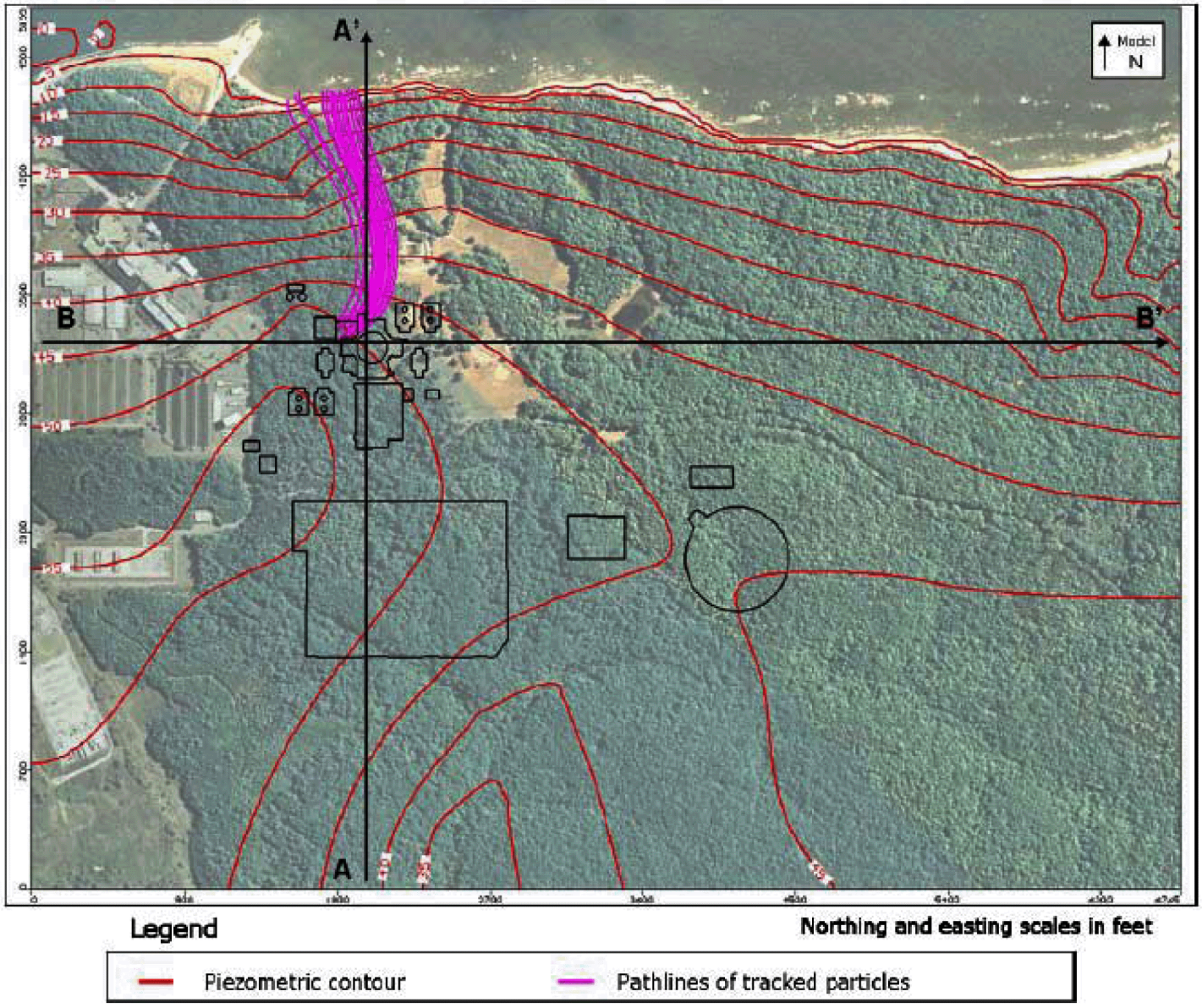
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-117 — {Cross-Section Showing Pathlines through Engineered Fill in Post-Construction Groundwater Model, for the Simulation Using the Maximum Hydraulic Conductivity of the Fill Material}



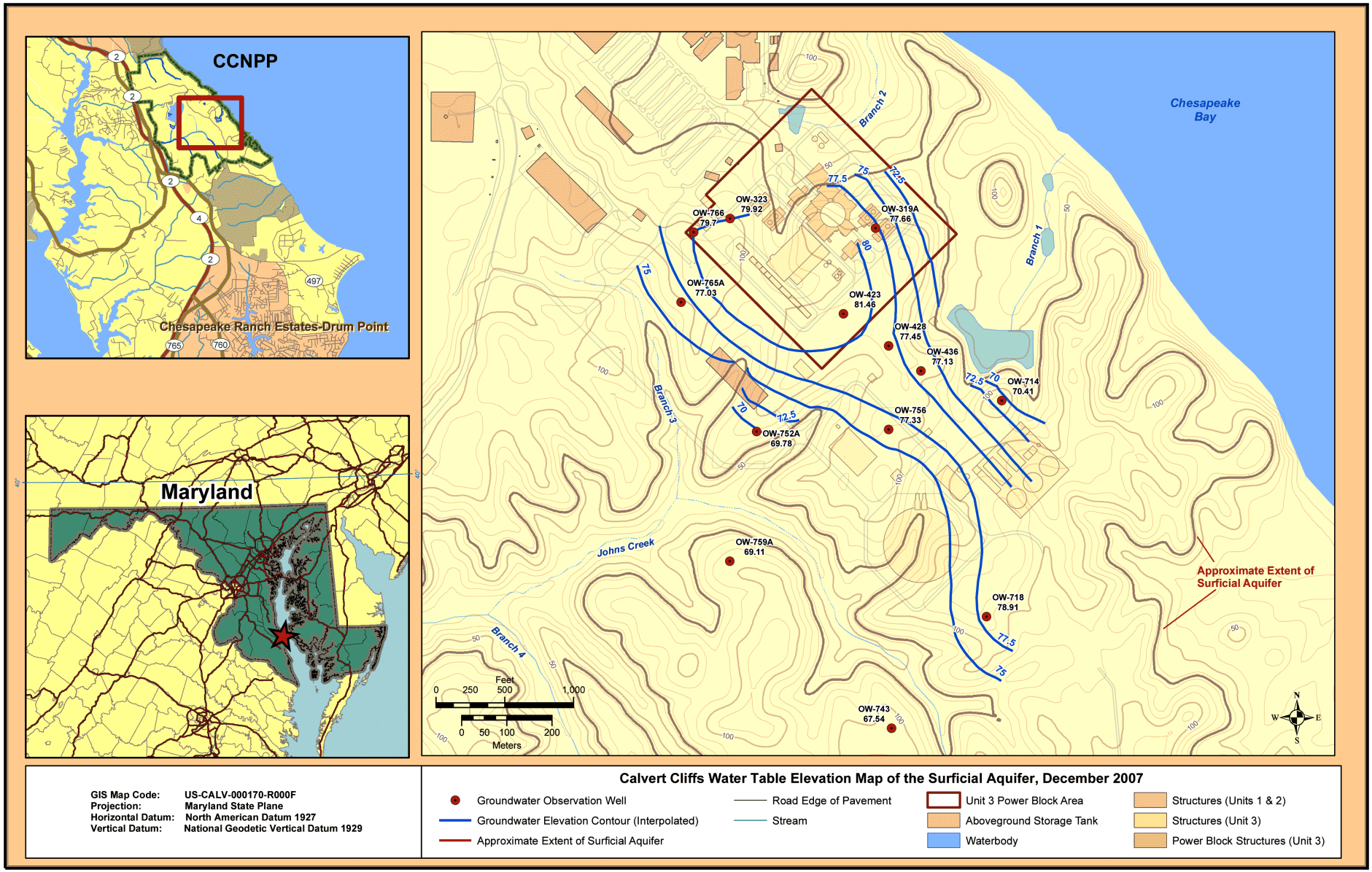
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-118 — {Pathlines from Nuclear Auxiliary Building Obtained from Groundwater Model of Post-Construction Conditions}



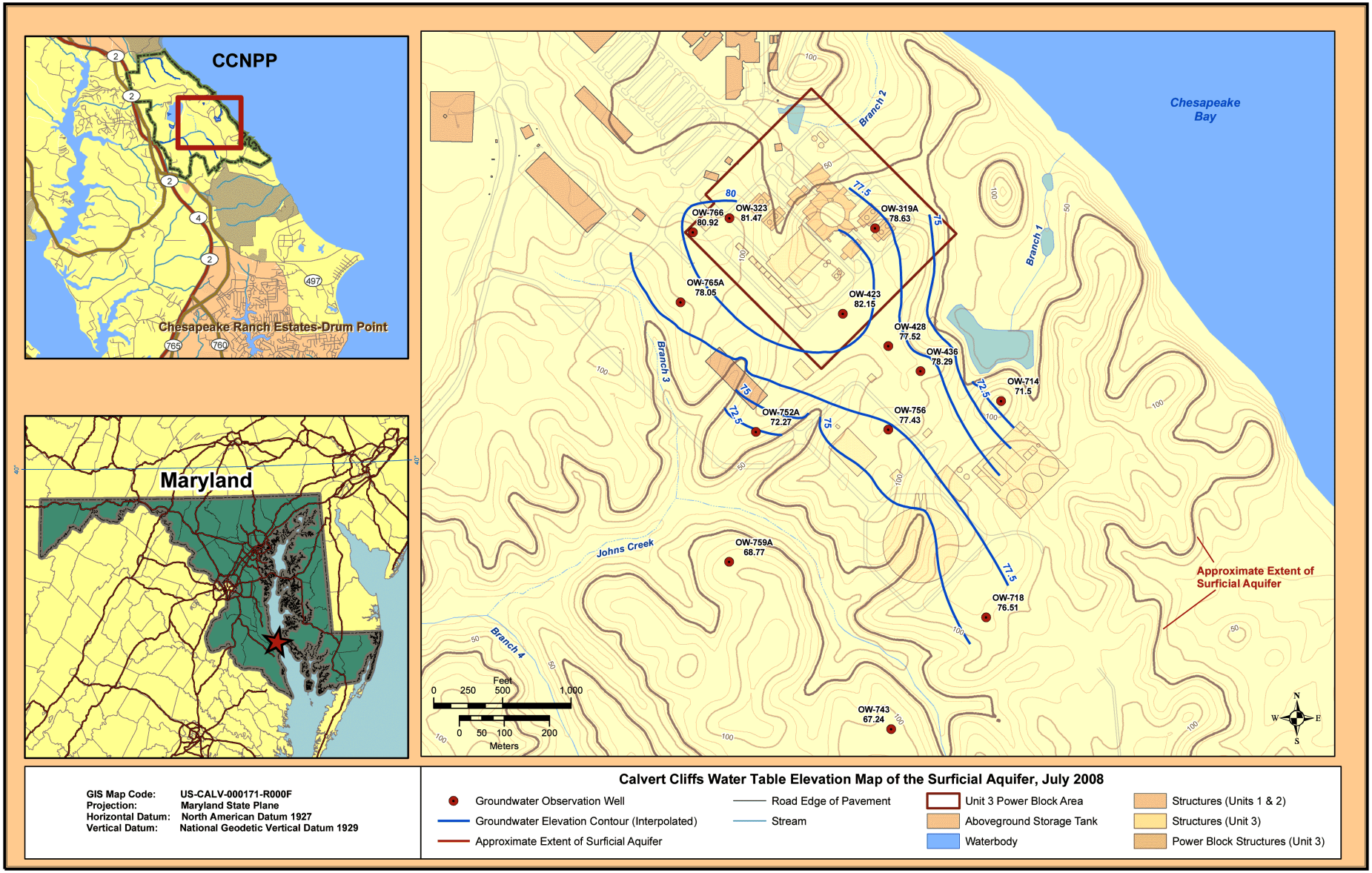
See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-119 — {Water Table Elevation Map for the Surficial Aquifer, December 2007}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout

Figure 2.4-120 — {Water Table Elevation Map for the Surficial Aquifer, July 2008}



See Figure 1.1-3 and Figure 1.2-1 for Site and Powerblock layout