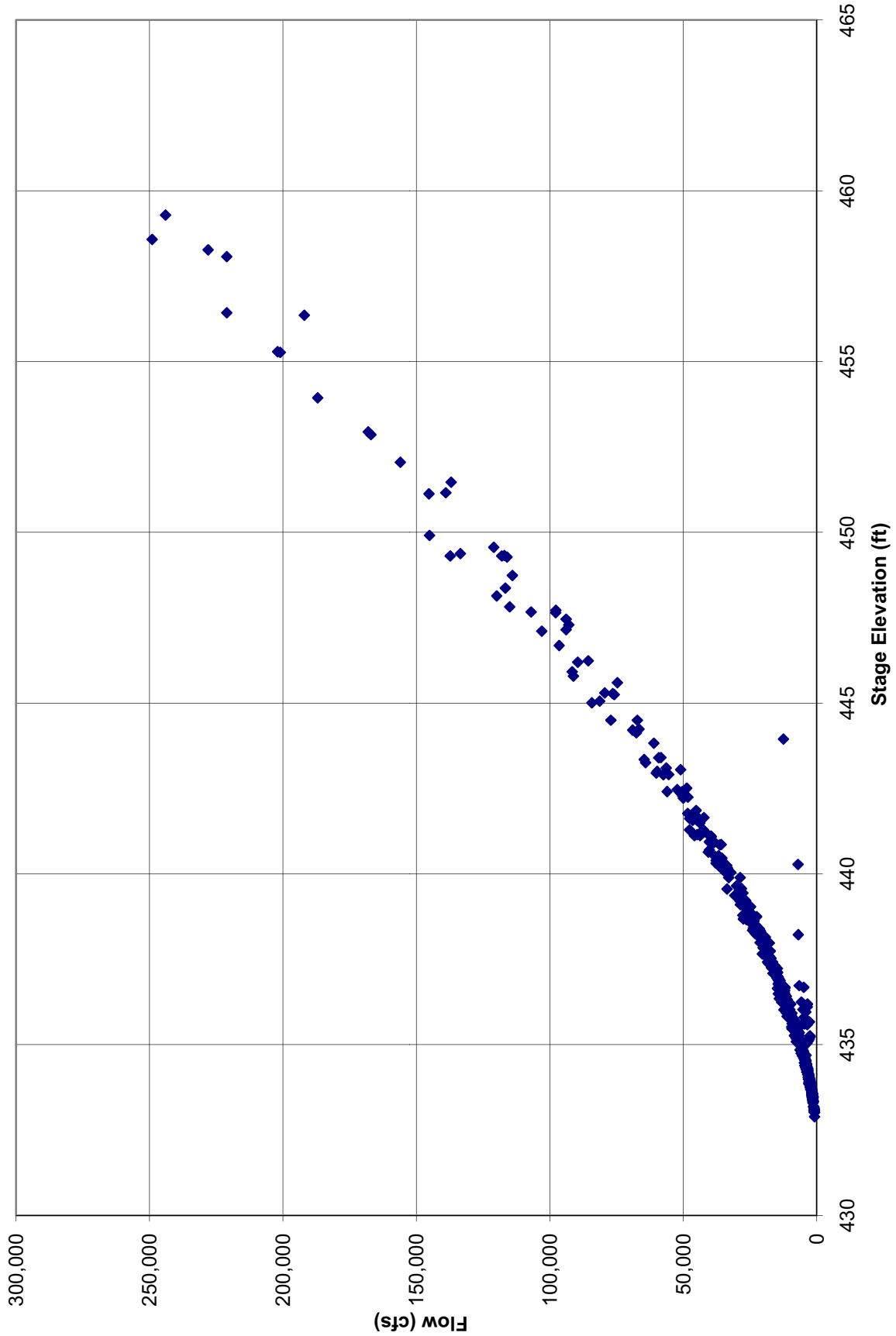

Figure 2.4-44—{Flow Discharge Curve for Danville Station}

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Figure 2.4-45—{Flow Discharge Curve for Wilkes-Barre Station}

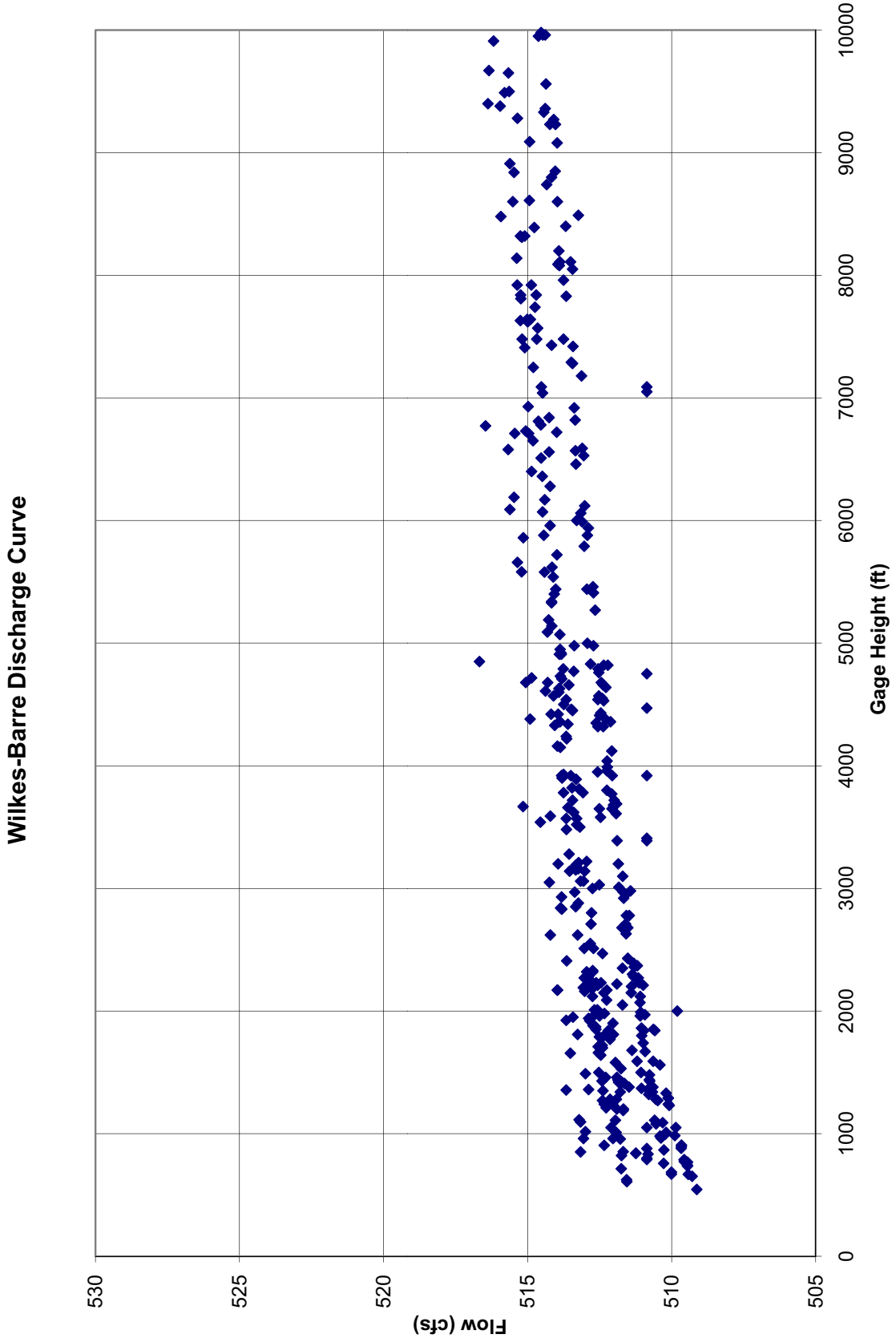

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Figure 2.4-46—{SRBC Water Consumptive Use}

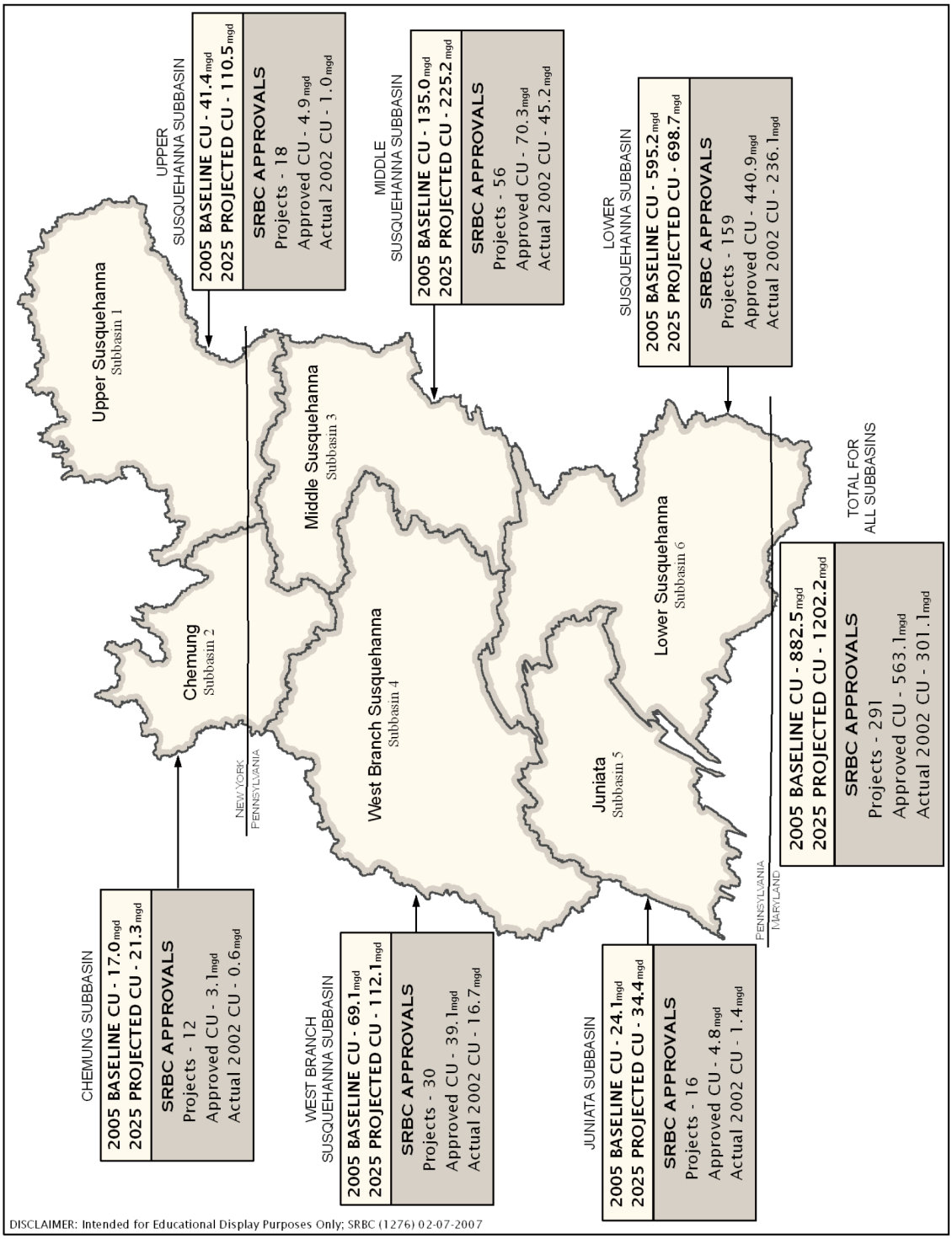

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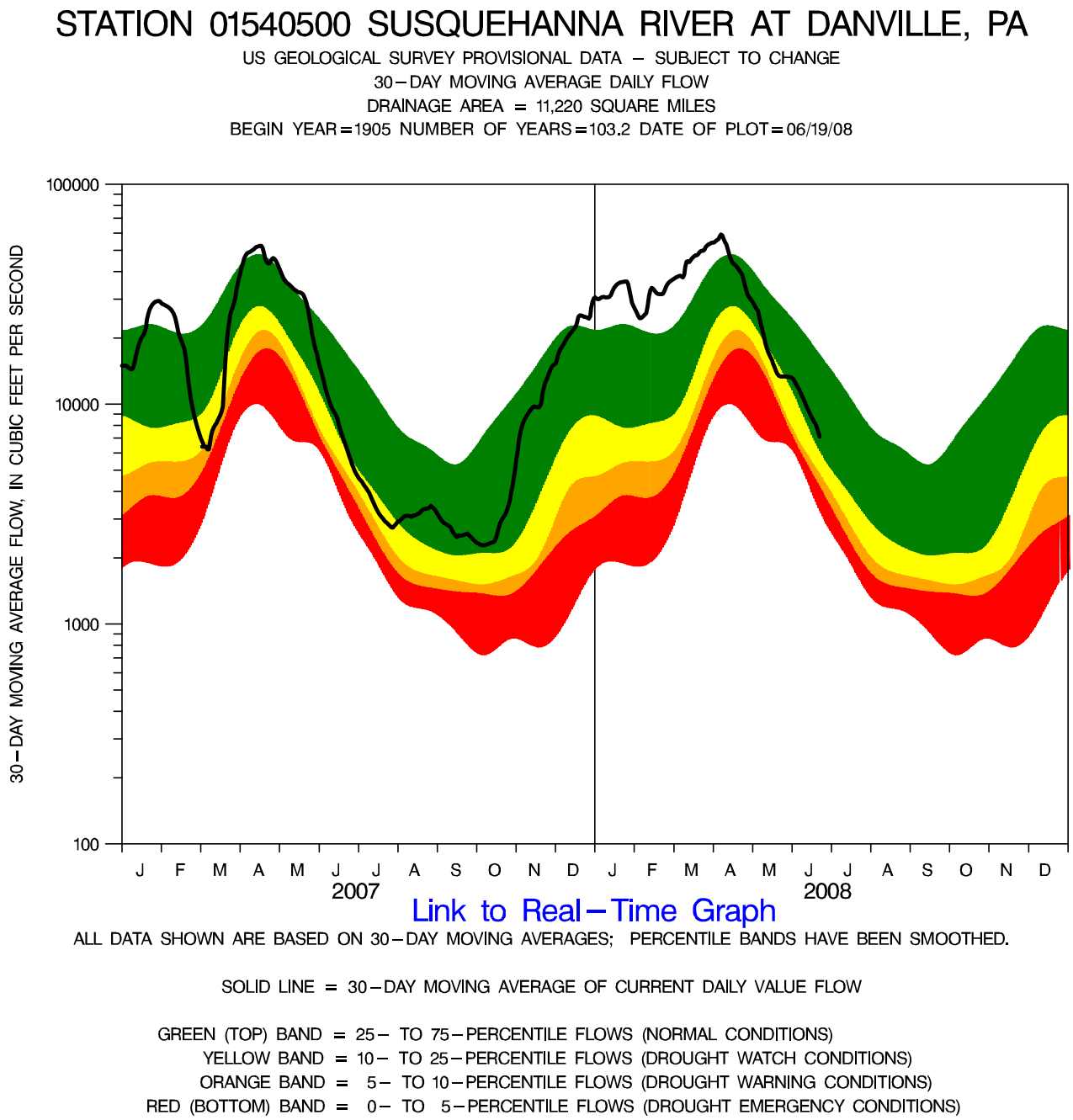
Figure 2.4-47—{30-Day Moving Average for Danville Station}



ALL DATA SHOWN ARE BASED ON 30–DAY MOVING AVERAGES; PERCENTILE BANDS HAVE BEEN SMOOTHED.

SOLID LINE = 30–DAY MOVING AVERAGE OF CURRENT DAILY VALUE FLOW

GREEN (TOP) BAND = 25– TO 75–PERCENTILE FLOWS (NORMAL CONDITIONS)
YELLOW BAND = 10– TO 25–PERCENTILE FLOWS (DROUGHT WATCH CONDITIONS)
ORANGE BAND = 5– TO 10–PERCENTILE FLOWS (DROUGHT WARNING CONDITIONS)
RED (BOTTOM) BAND = 0– TO 5–PERCENTILE FLOWS (DROUGHT EMERGENCY CONDITIONS)

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Figure 2.4-48—{30-Day Moving Average for Wilkes-Barre Station}

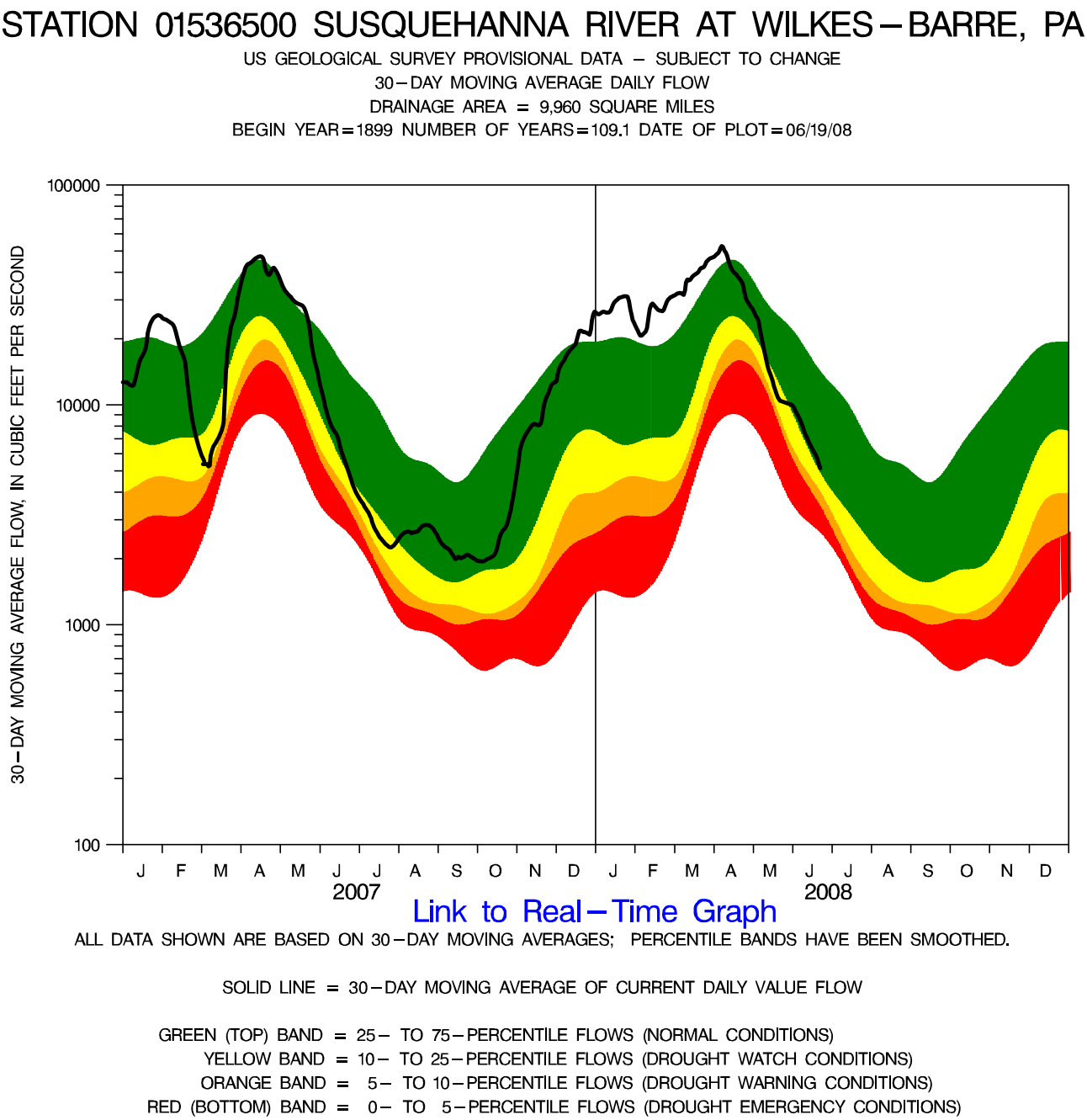

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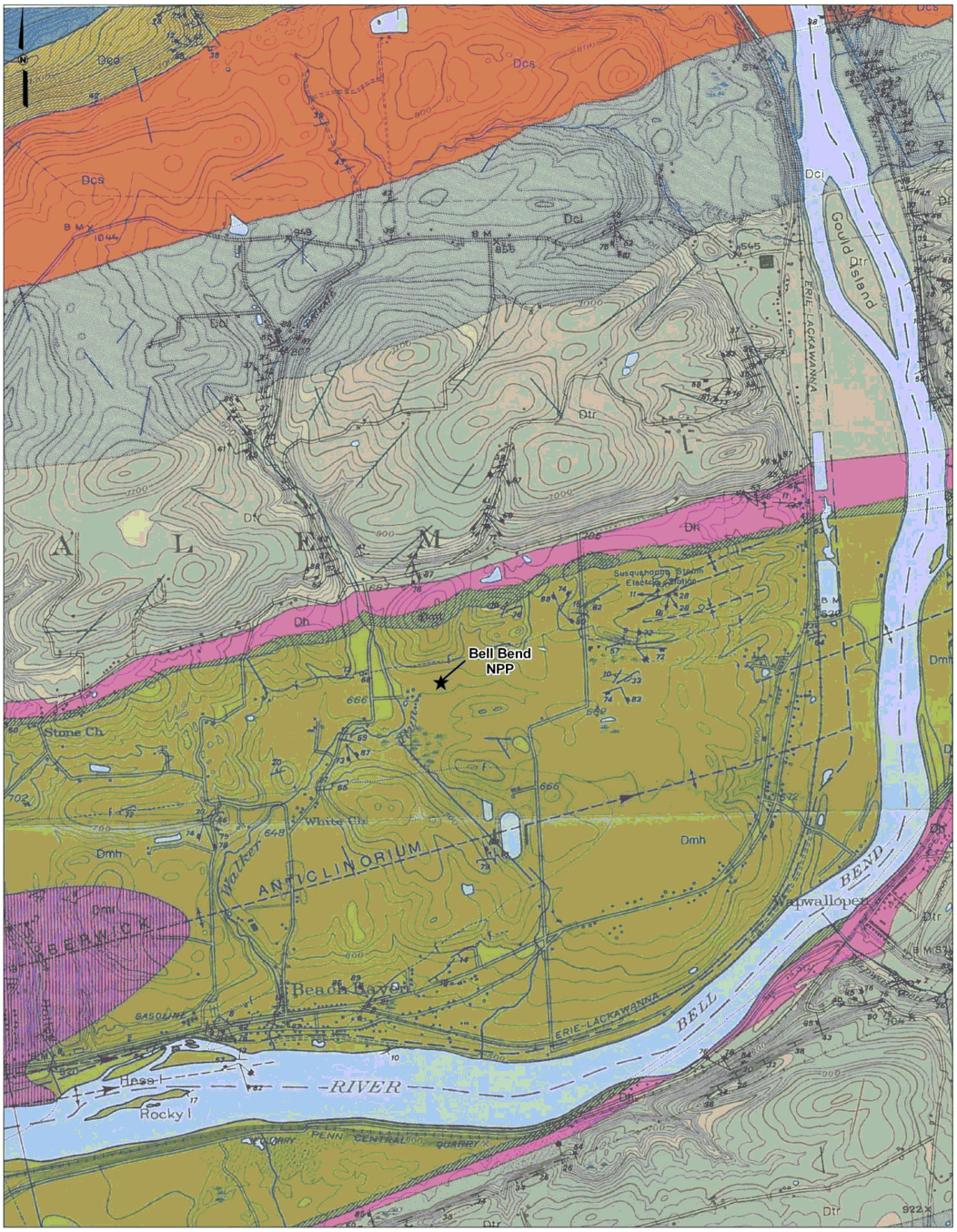
Figure 2.4-49—{Geologic Map of the BBNPP Site and Vicinity}



LEGEND:

★ Proposed Center Point of Bell Bend NPP

0 305 610 Meters

0 2,000 4,000 Feet

Additional legend information for this figure is presented in Figure 2.4.12-2

REFERENCE:
Department of Environmental Resources, 1978, Bedrock of Berwick Quadrangle.

Geologic Map of the BBNPP Site and Vicinity
{BBNPP} FSAR

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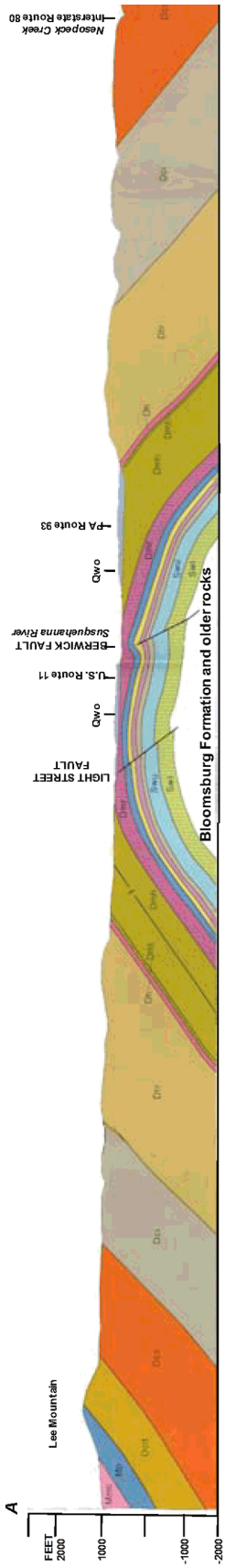
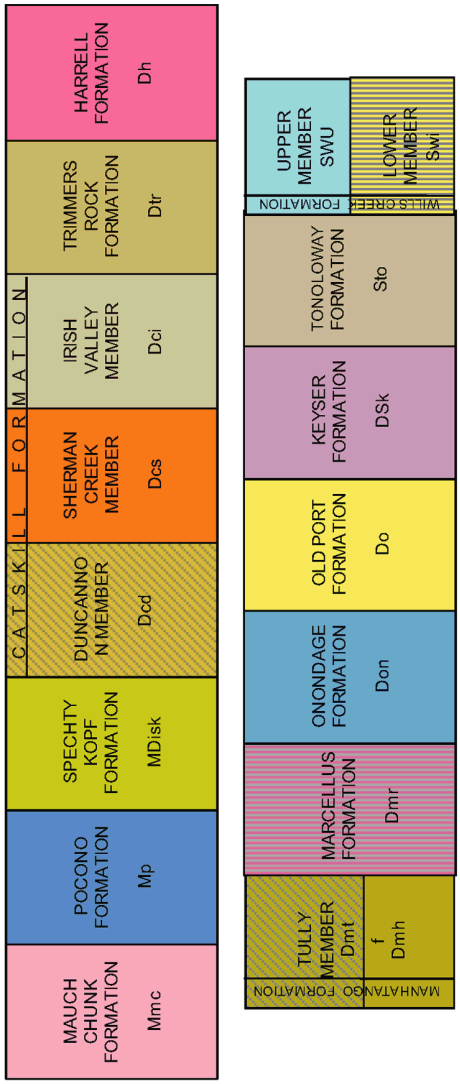
Figure 2.4-50—{Stratigraphy and Geologic Cross Section of Berwick Anticlinorium}



Legend



Location Map of Cross Section
Figure 2.5.3-2

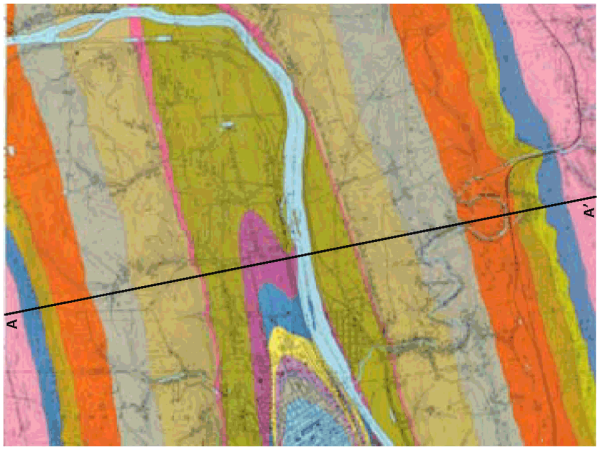


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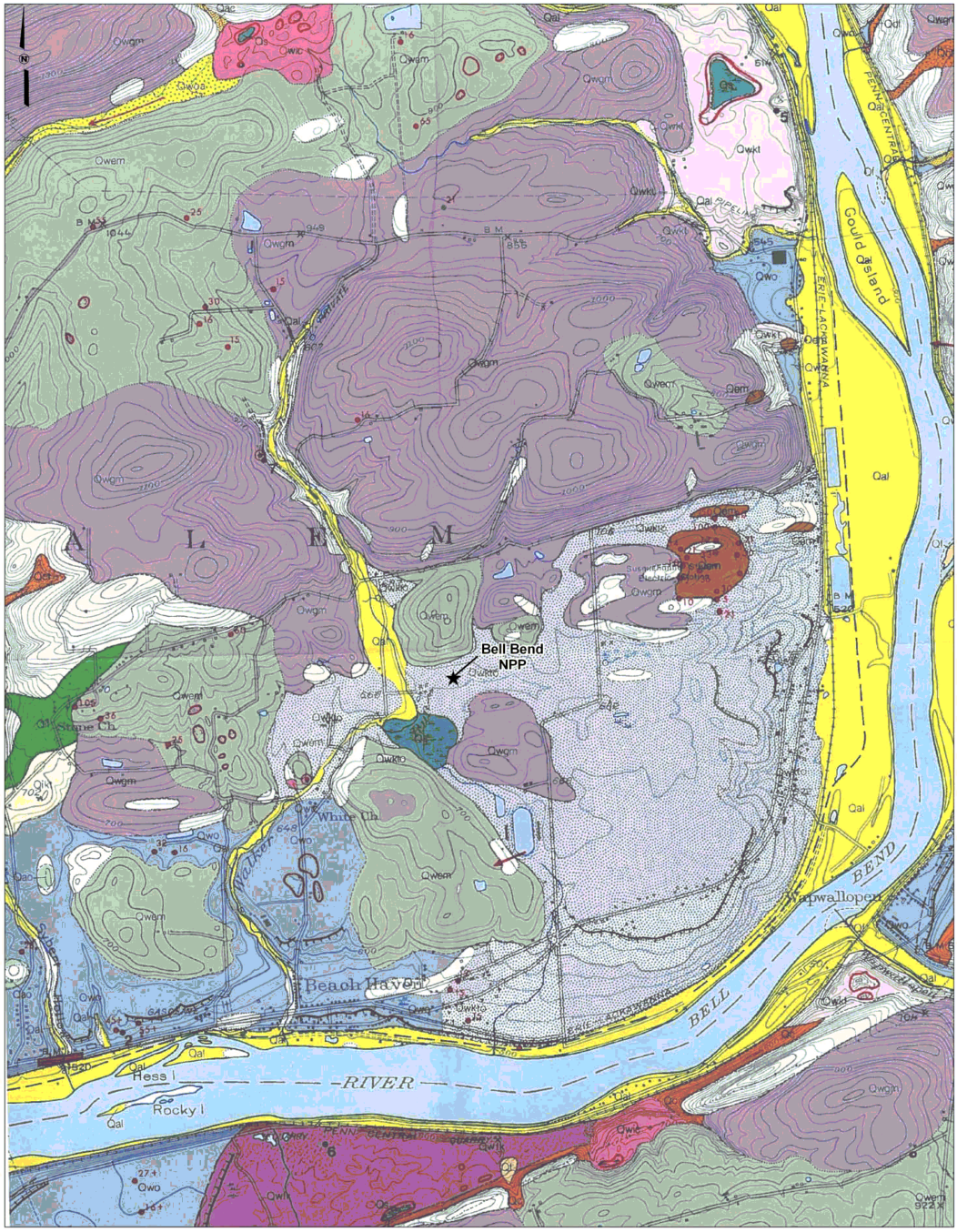
Figure 2.4-51—{Surficial Deposits at BBNPP Site and Vicinity}



LEGEND:

★ Proposed Center Point of Bell Bend NPP

0 305 610 Meters

0 2,000 4,000 Feet

Additional legend information for this figure is presented in Figure 2.4.12-4

REFERENCE:
Department of Environmental Resources, 1978, Surface Deposits of Berwick Quadrangle.

Surficial Deposits at the BBNPP Site and Vicinity

BBNPP FSAR

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Figure 2.4-52—{Legend for Figure 2.4-51}

REFERENCE:
Inners, 1978

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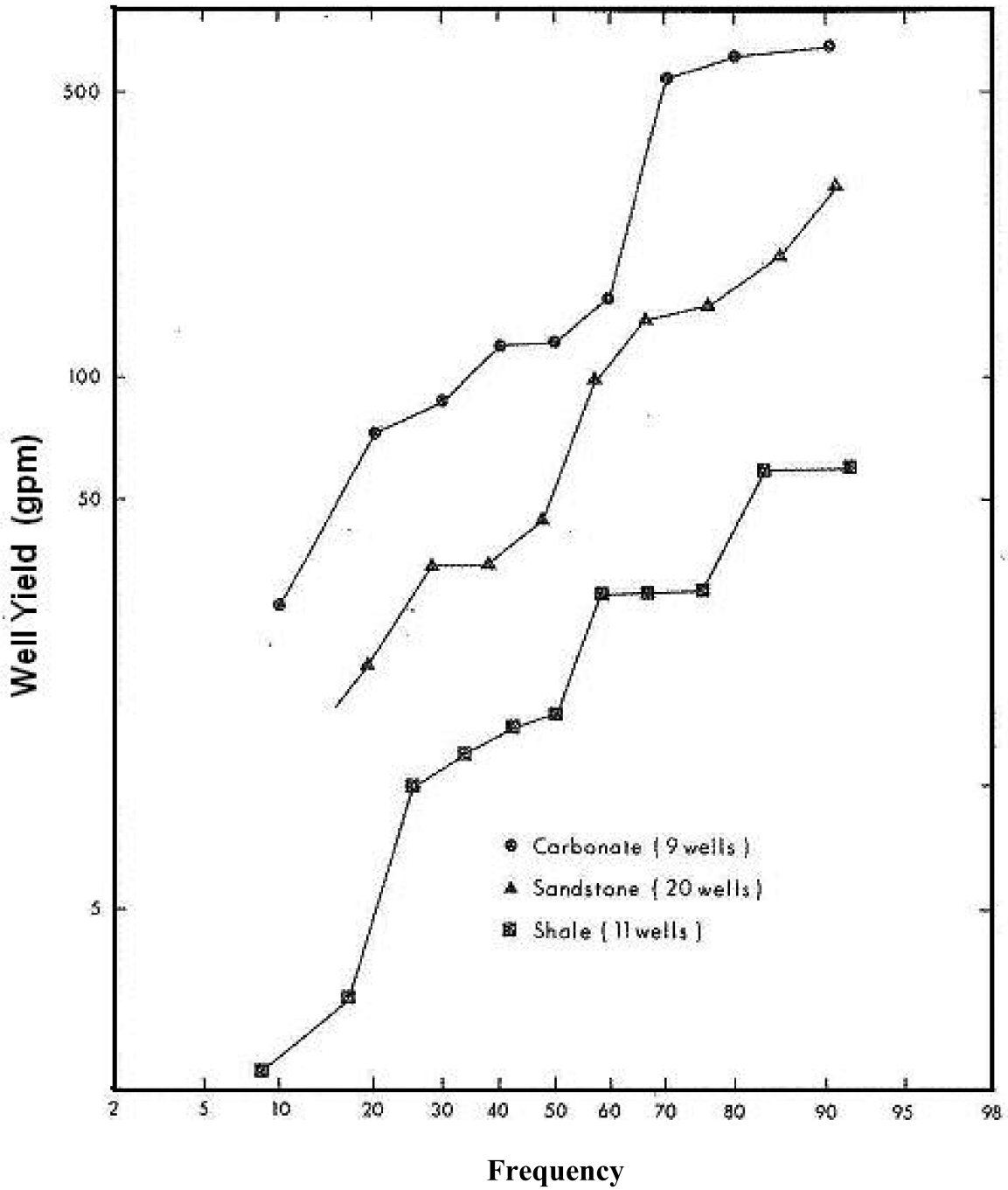
Figure 2.4-53—{Frequency Distribution of Nondomestic Well Yields Grouped According to Dominant Rock Type}



Reference: Taylor, 1984

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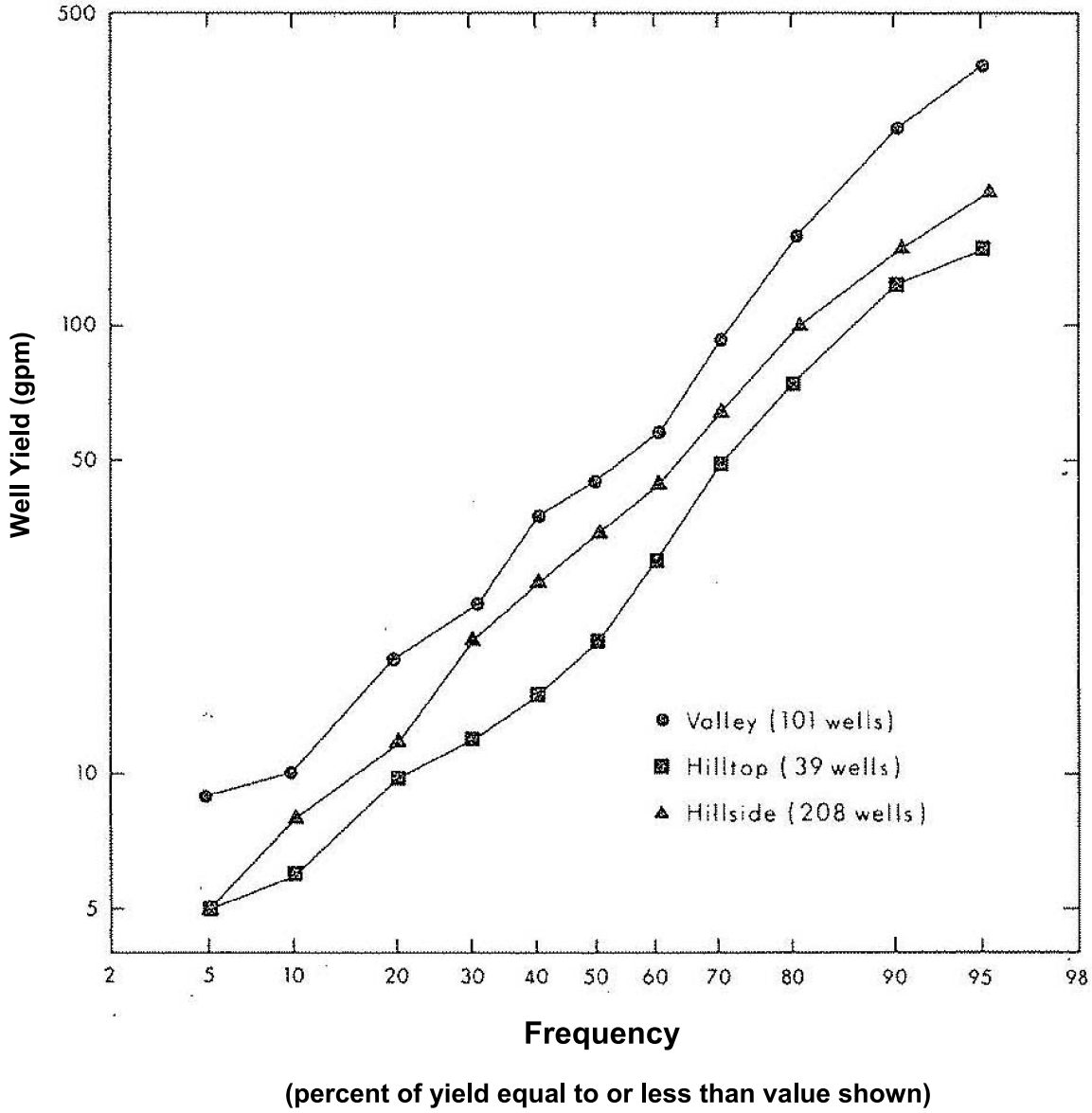
Figure 2.4-54—{Frequency Distribution of Nondomestic Well Yields Grouped According to Topographic Setting}



Reference: Taylor, 1984

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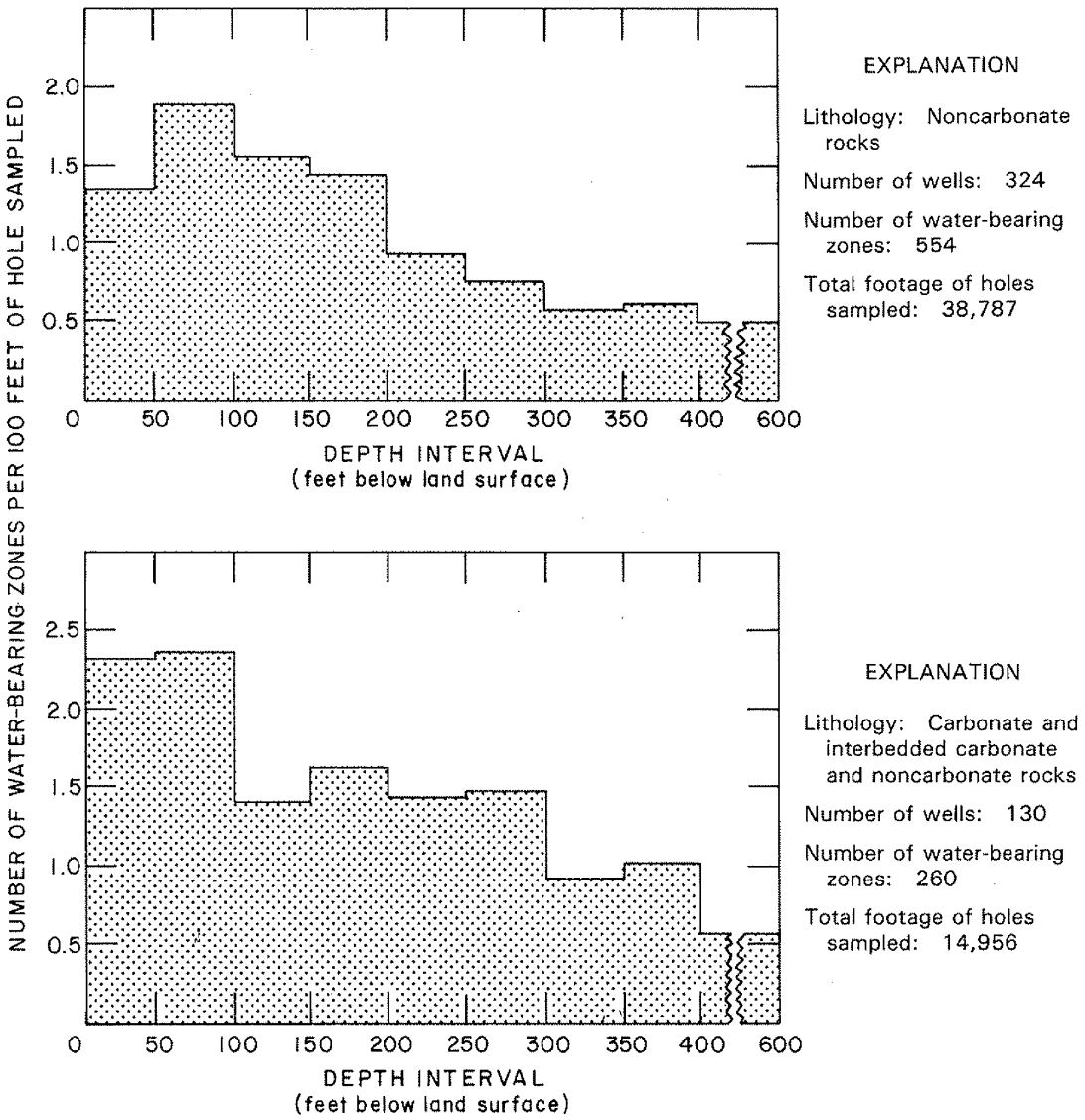
Figure 2.4-55—{Distribution of Water-Bearing Zones with Depth}



Reference: Williams, 1987

Distribution of Water-Bearing Zones With Depth

BBNPP FSAR

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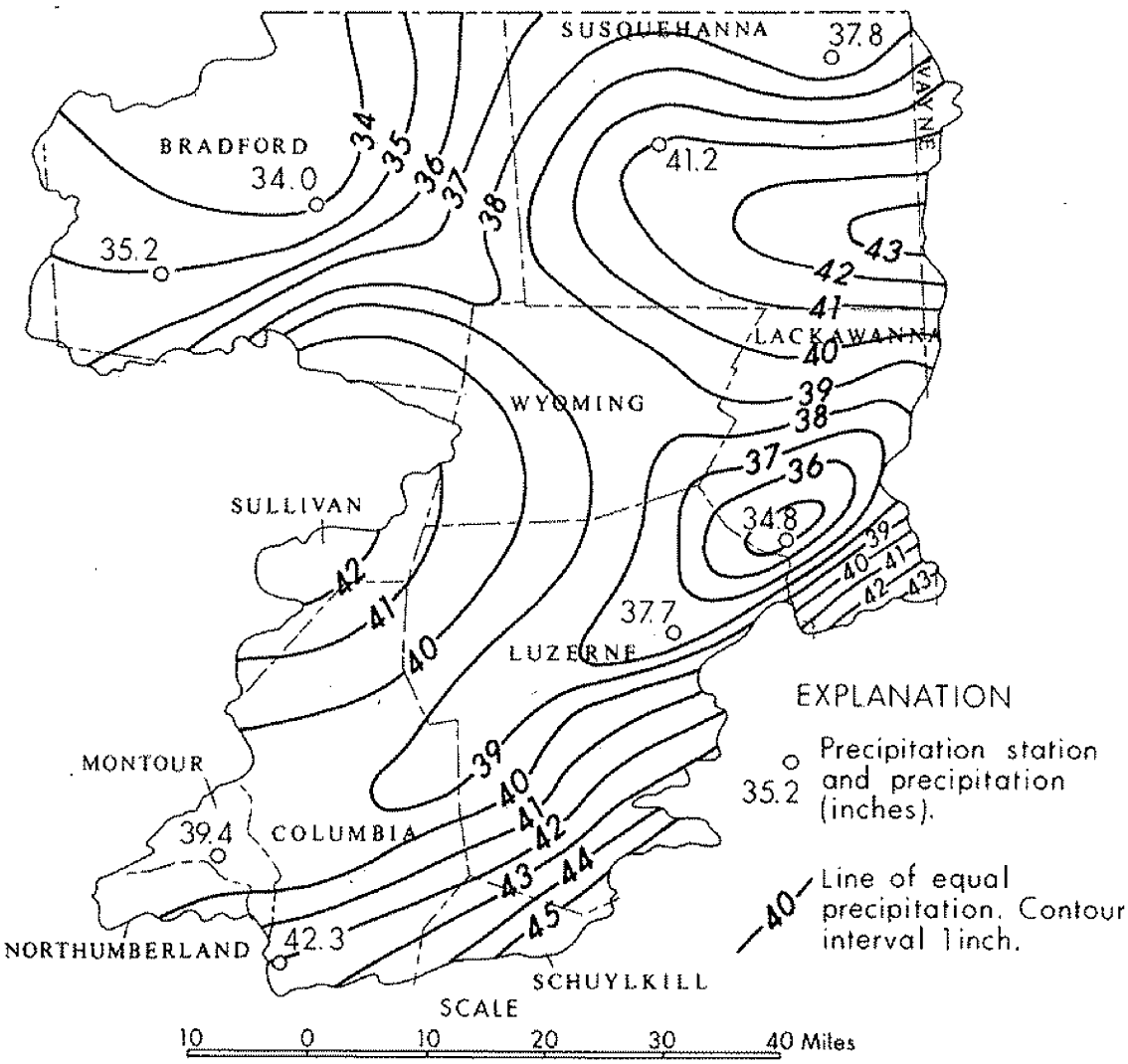
Figure 2.4-56—{Average Annual Precipitation in the North Branch Susquehanna River Basin (1941-1970)}



Reference: Taylor, 1984

Average Annual Precipitation in the North Branch Susquehanna River Basin, 1941 - 1970

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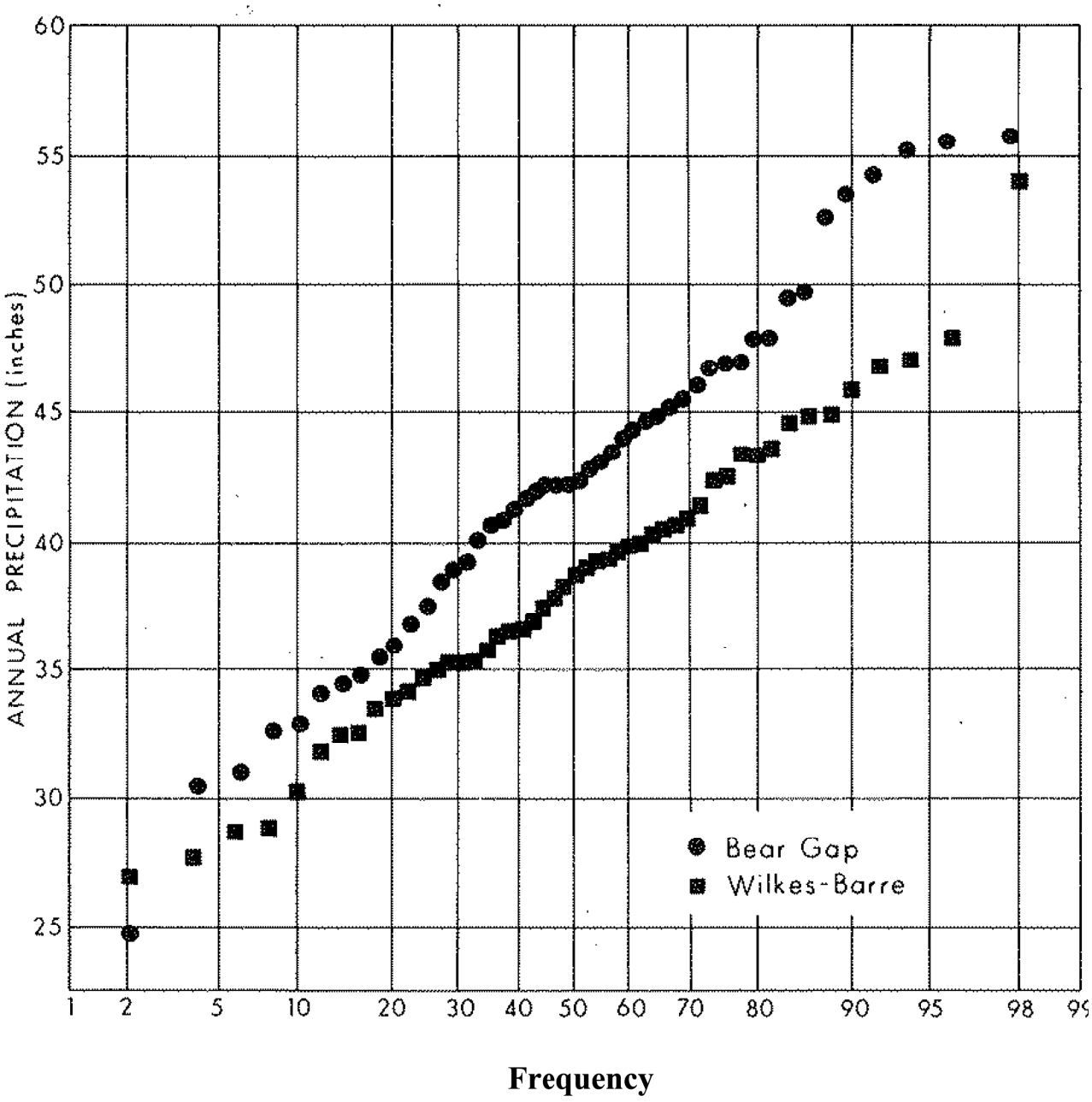
Figure 2.4-57—{Percent Frequency Distribution of Annual Precipitation in the Southern Part of the North Branch Susquehanna River Basin (1931-1980)}



Reference: Taylor, 1984

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Figure 2.4-58—{Locations of Drainage Basins Where Long-Term Water Budget Analyses Have Been Performed}

Reference: Taylor, 1984

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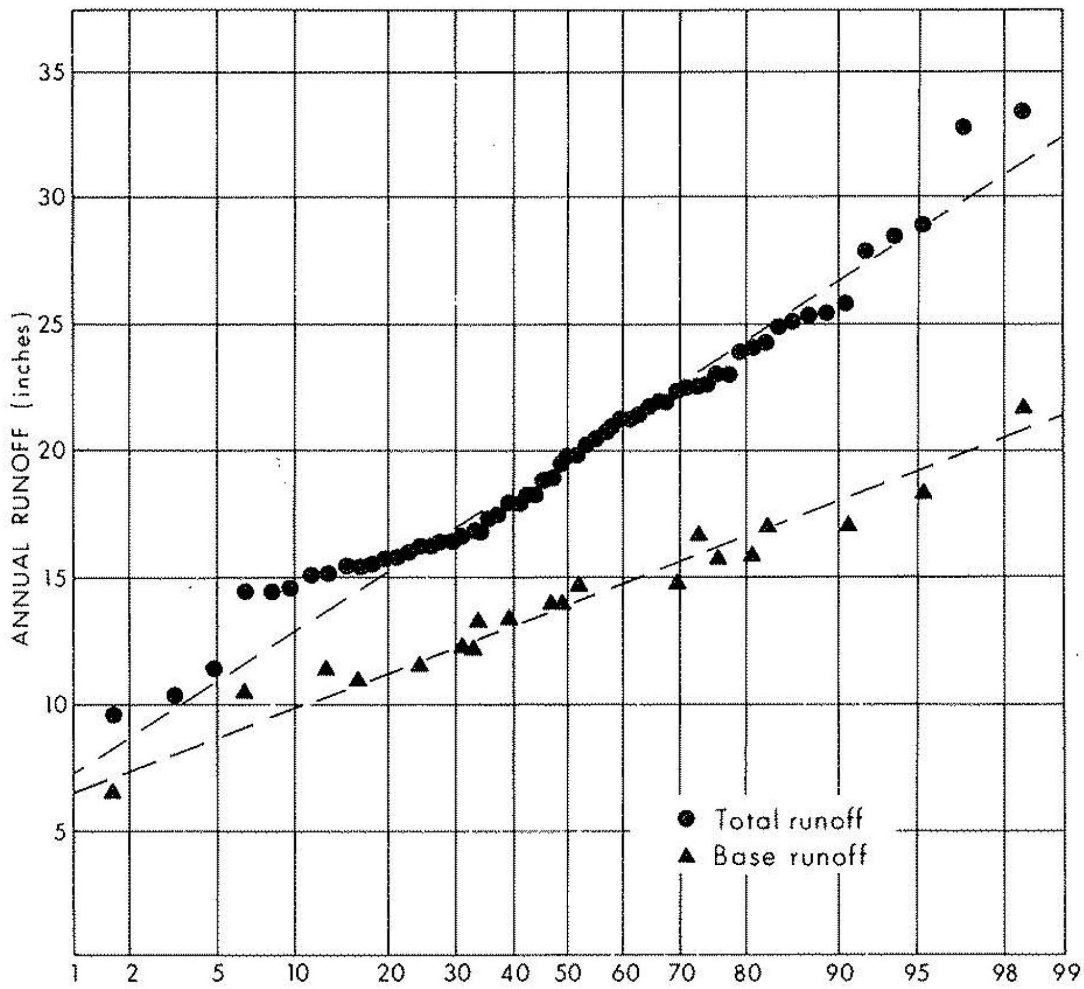
Figure 2.4-59—{Percent Frequency Distribution of Annual Runoff from Wapwallopen Creek, Pennsylvania (1920-1980}



Frequency

(percent of years that runoff is equal to or less than value shown)

Reference: Taylor, 1984

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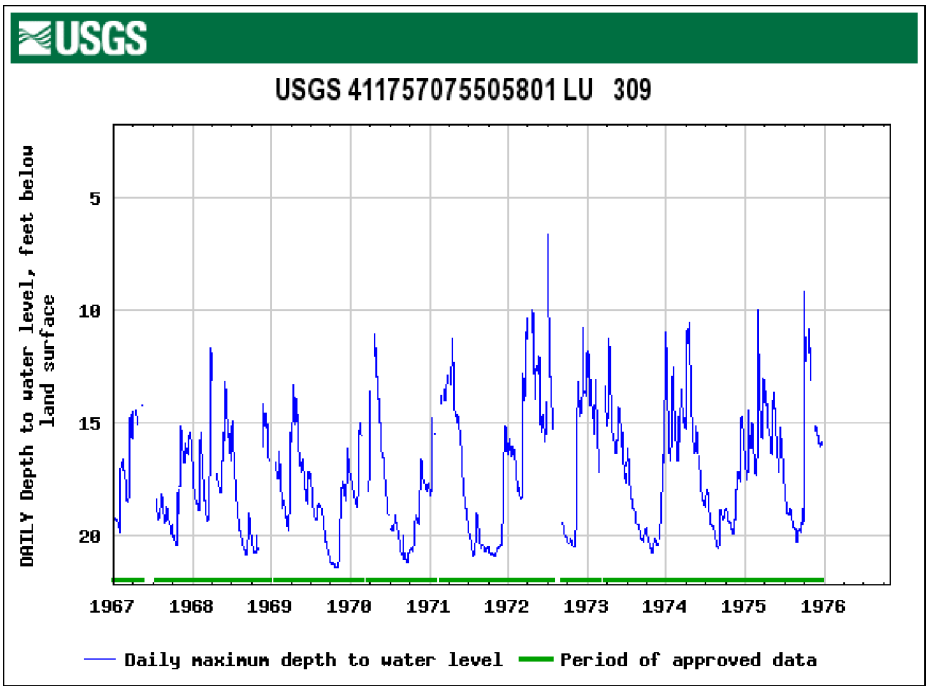
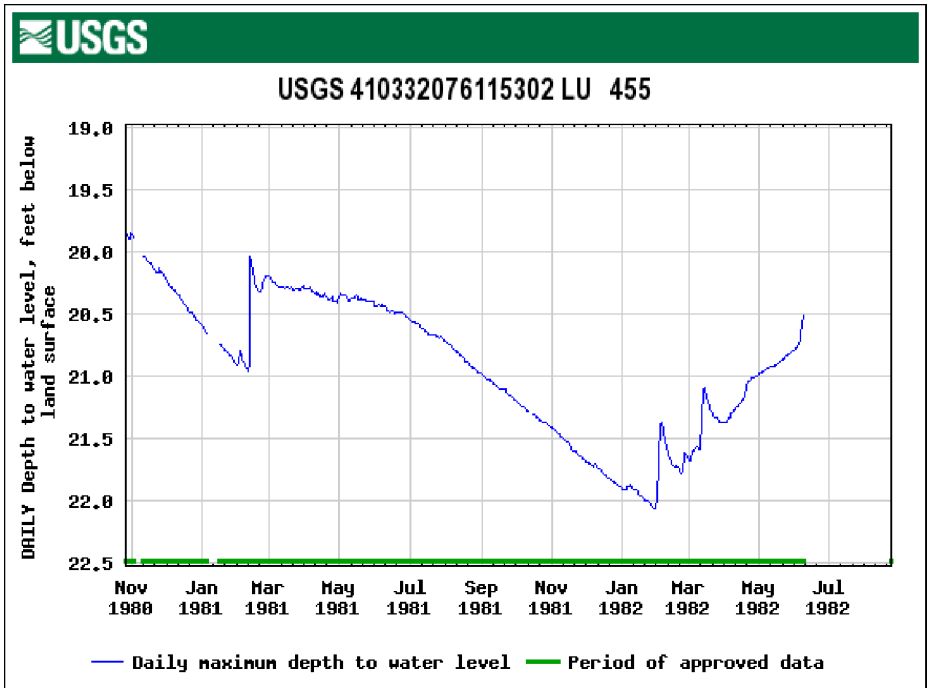
Figure 2.4-60—{Hydrographs of Two USGS Monitoring Wells in Luzerne County Screened in Glacial Overburden}





Reference: USGS, 2008j

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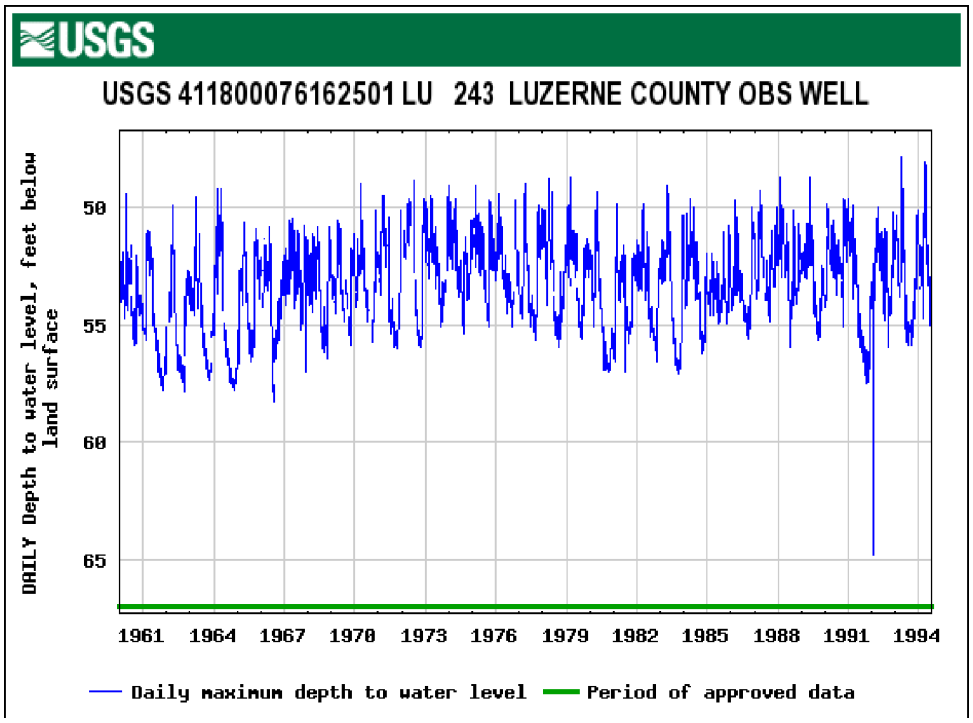
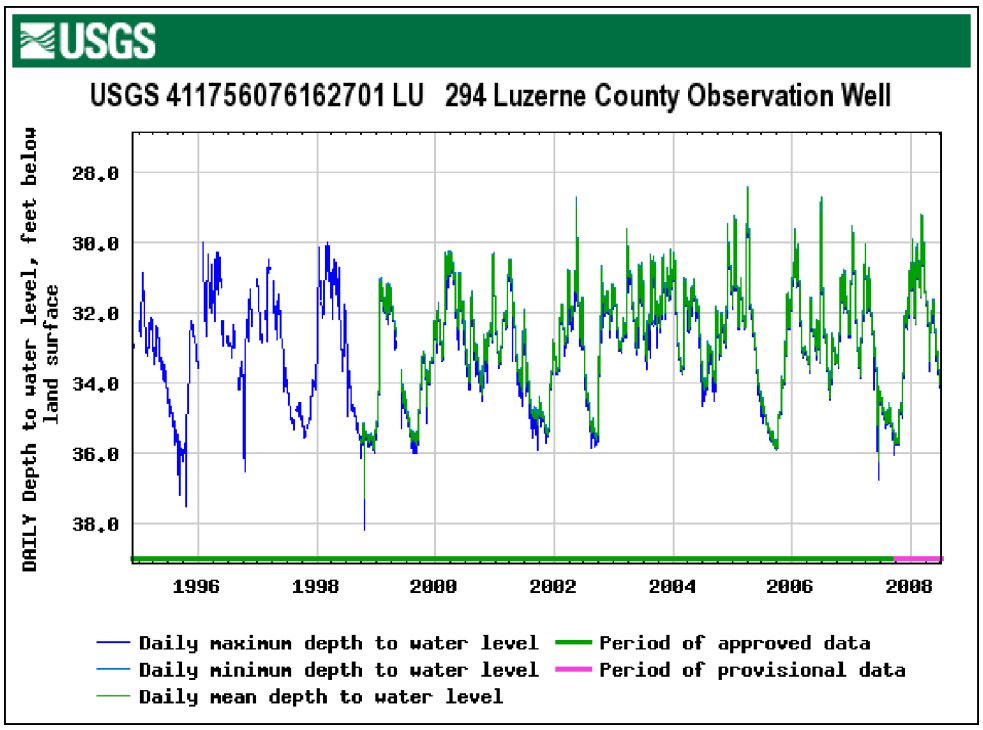
Figure 2.4-61—{Hydrographs of Two USGS Monitoring Wells in Luzerne County Screened in the Catskill Formation}





Reference: USGS, 2008j

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Figure 2.4-62—{Locations of Groundwater Monitoring Wells}

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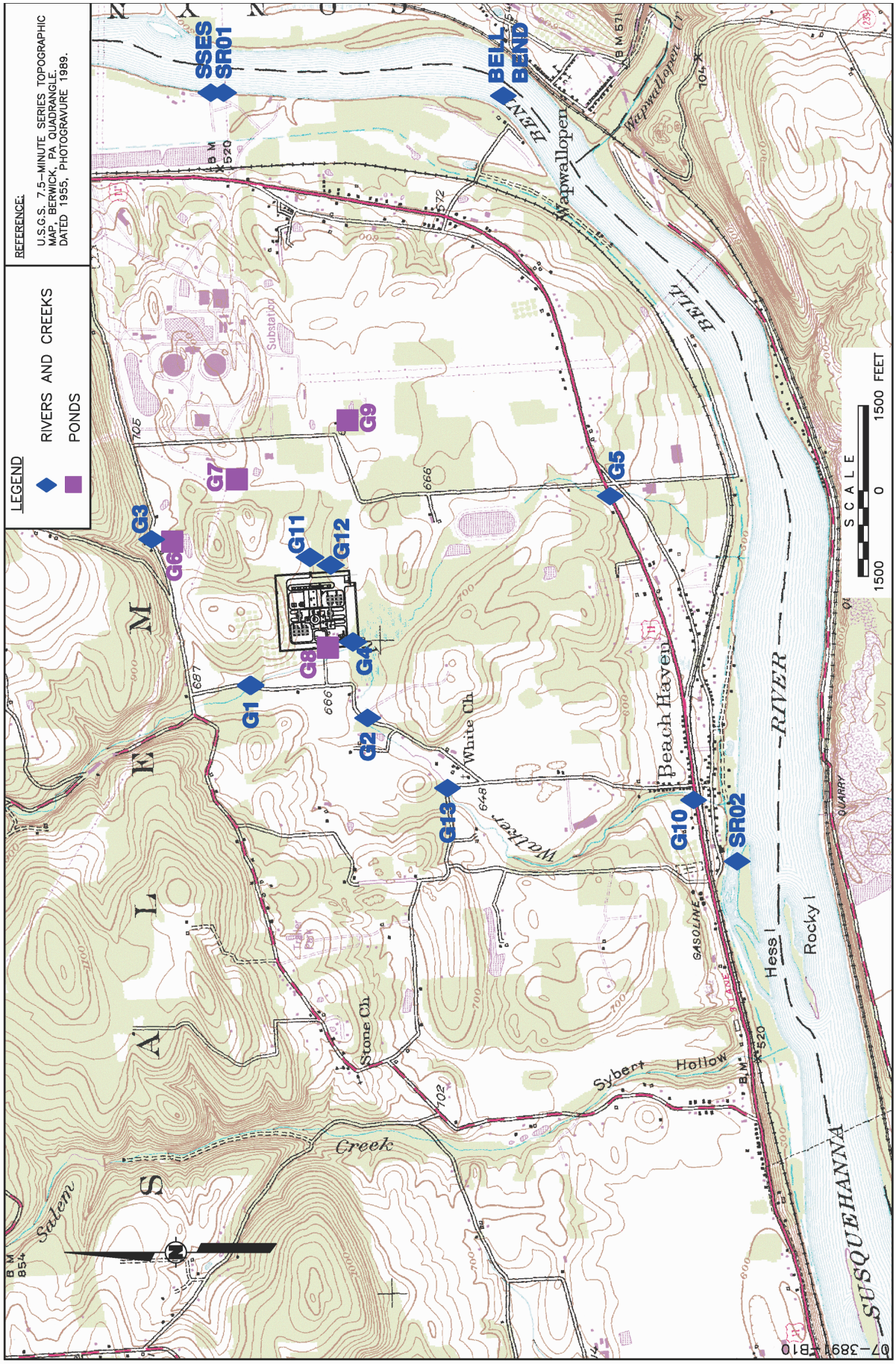

Figure 2.4-63—{Locations of BBNPP Surface Water Monitoring Stations}

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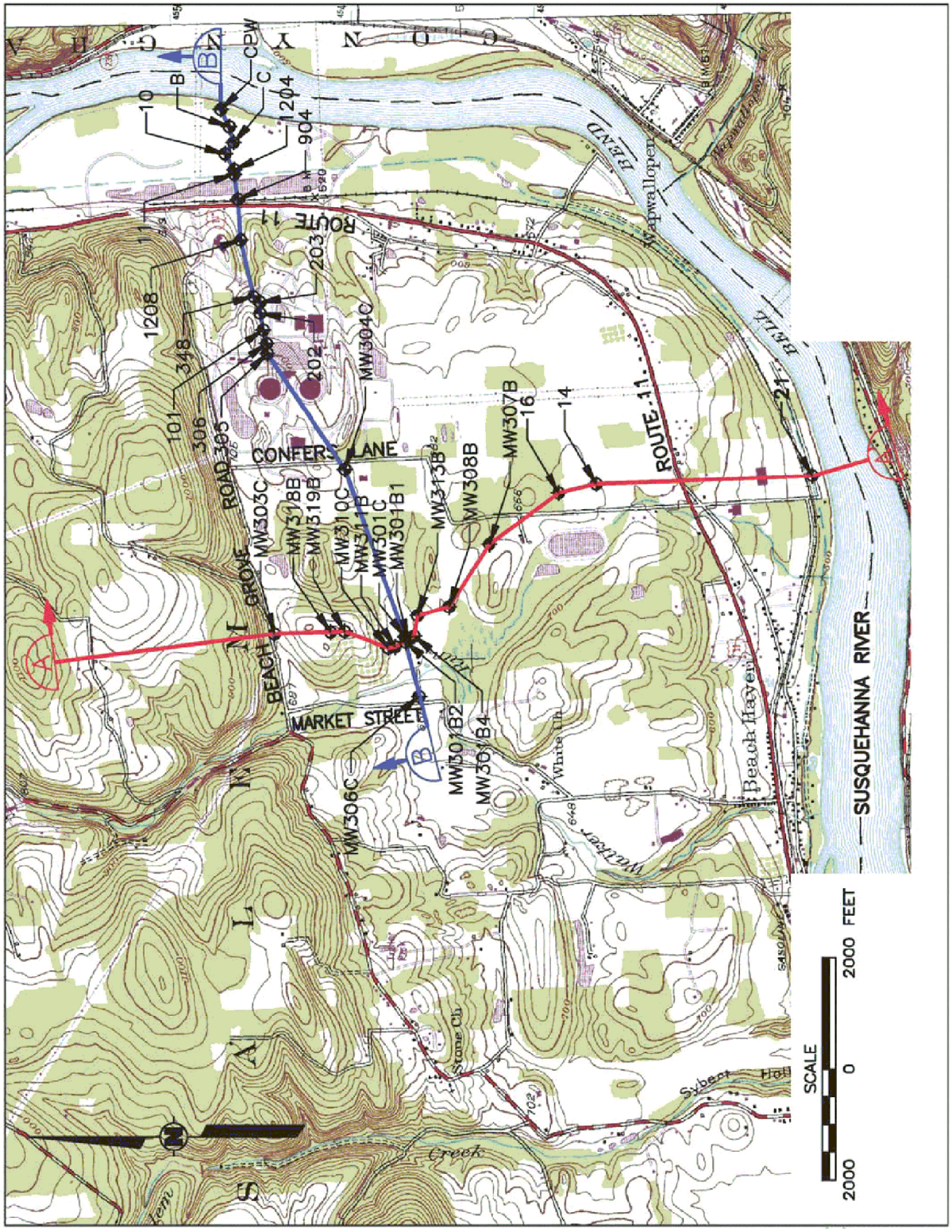

Figure 2.4-64—{Location of Hydrogeological Cross Sections}

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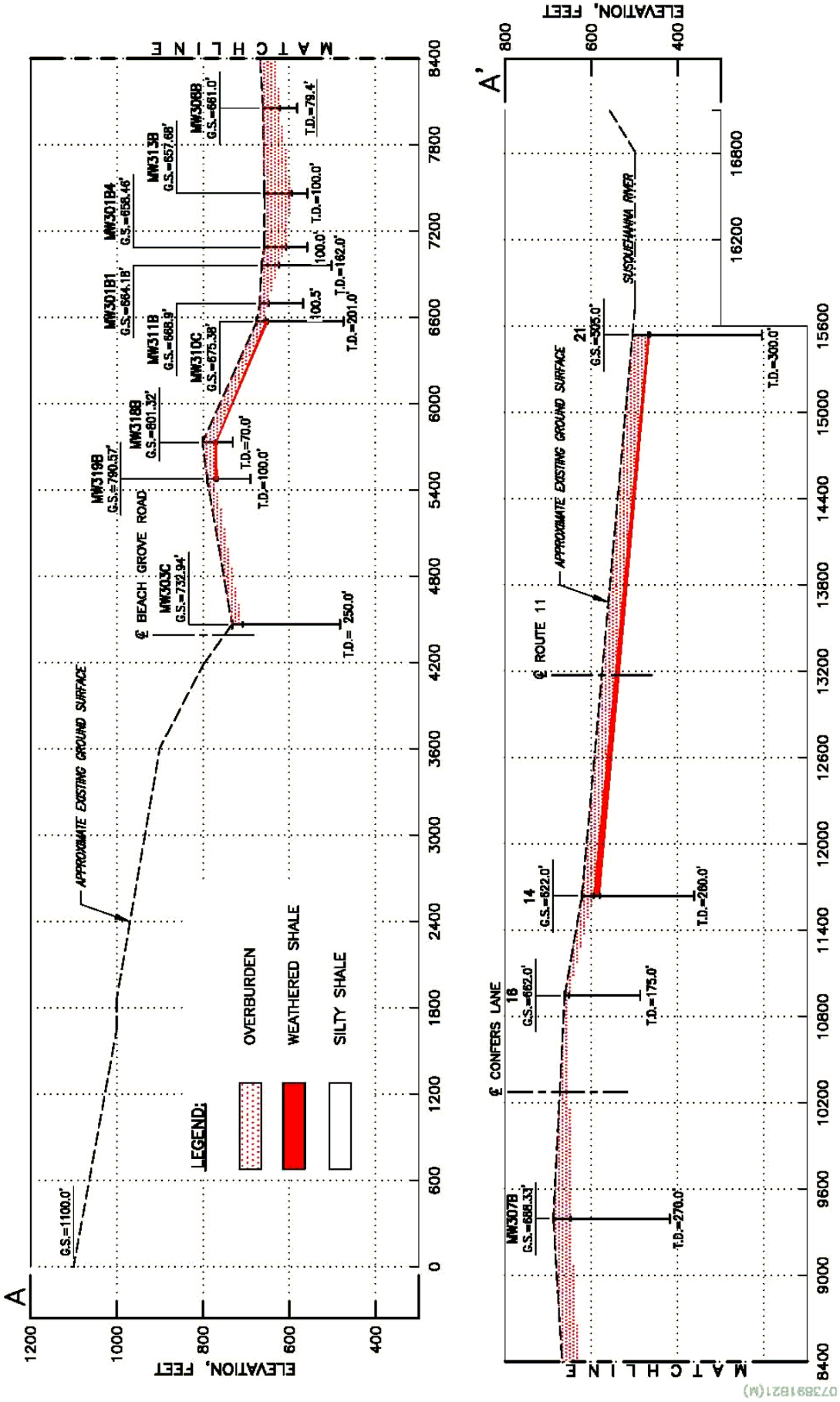

Figure 2.4-65—{Hydrogeological Cross Section A-A'}

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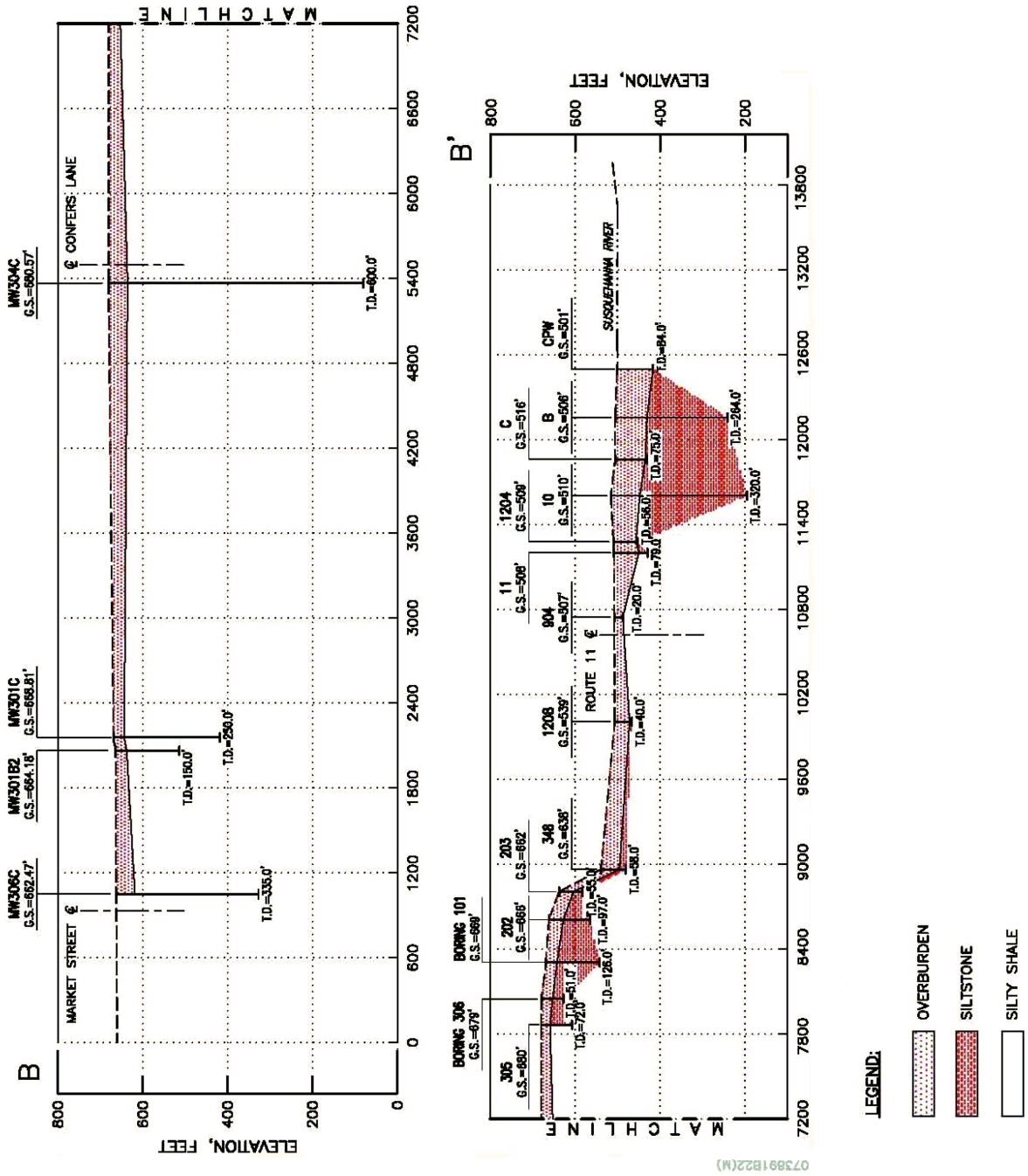
Figure 2.4-66—{Hydrogeological Cross Section B-B'}



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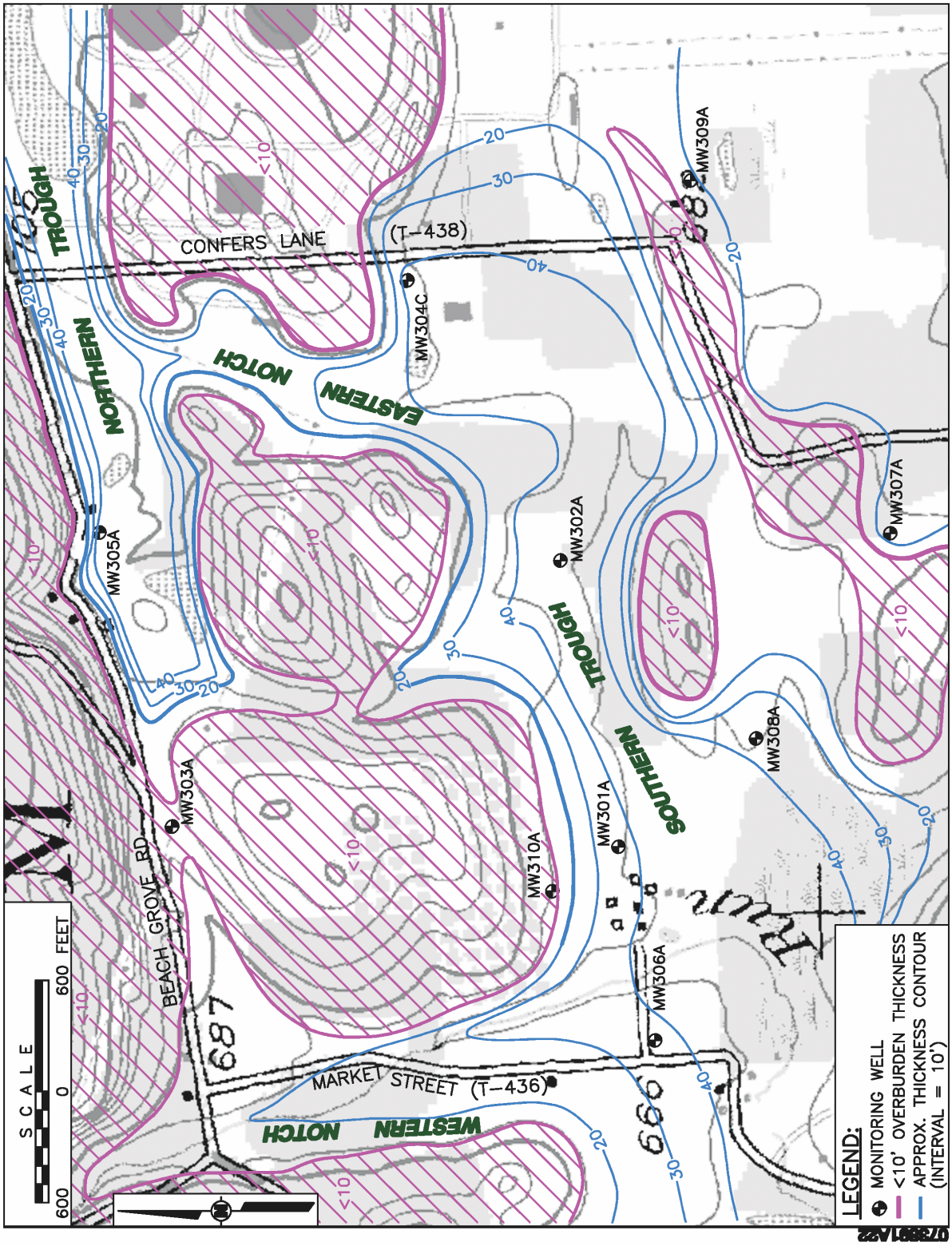

Figure 2.4-67—{Saturated Thickness Map of the Glacial Overburden Aquifer}

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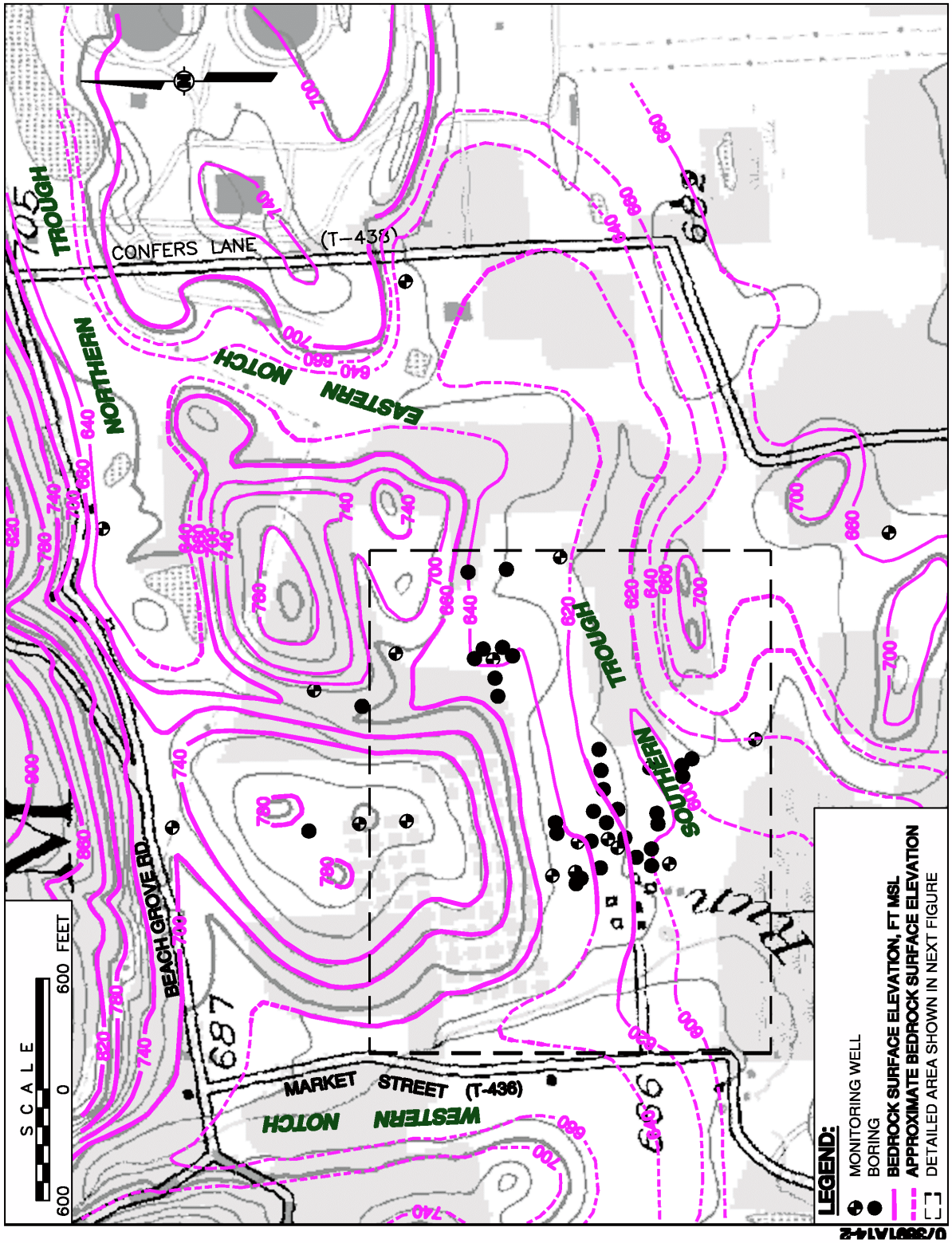

Figure 2.4-68—{Topography of the Bedrock Surface}

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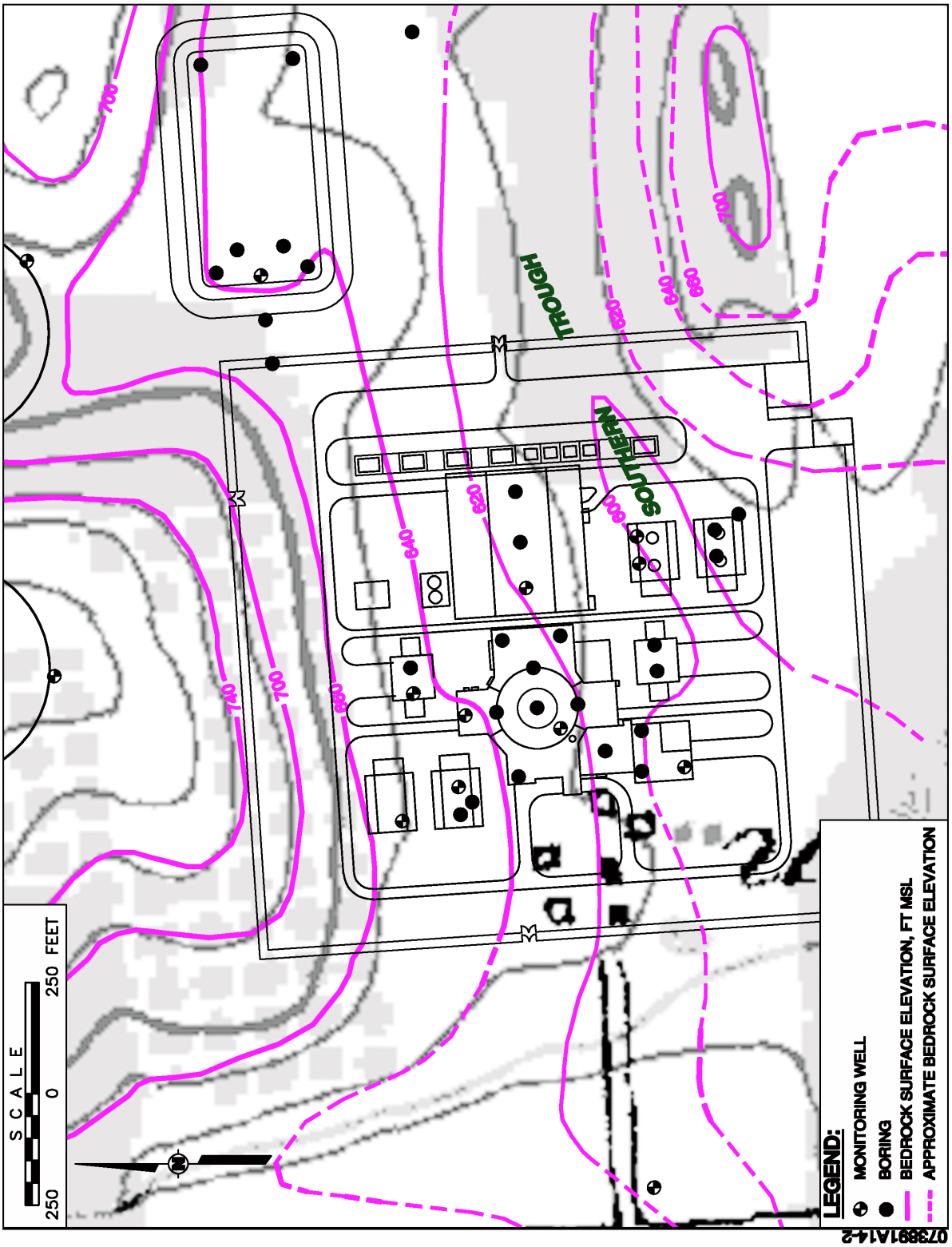

Figure 2.4-69—{Topography of the Bedrock Surface in the Power Block Area}

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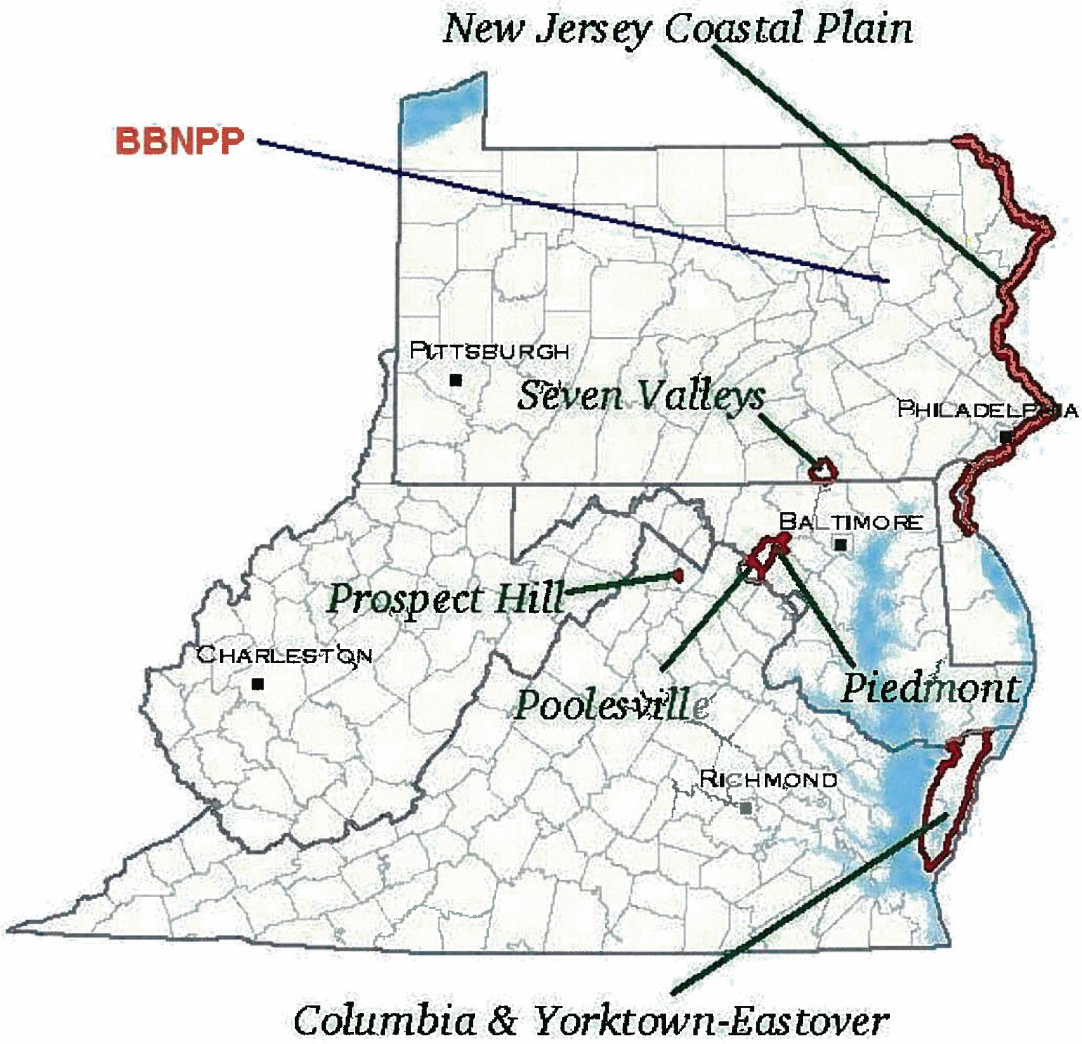
Figure 2.4-70—{Sole Source Aquifers Located in USEPA Region 3}



Reference: USEPA, 2008d

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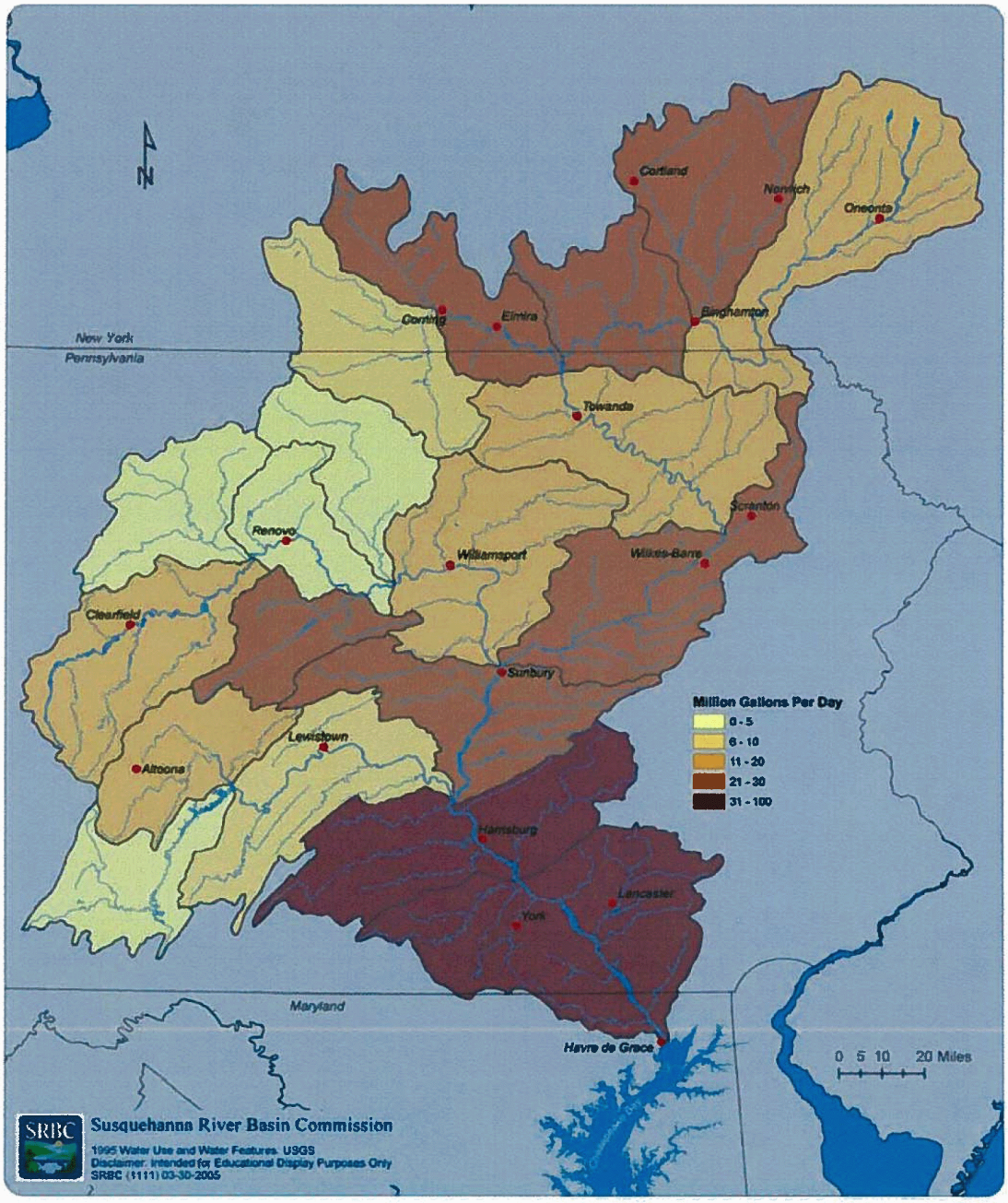
Figure 2.4-71—{Groundwater Use in the Susquehanna River Basin 1995}



Reference: SRBC, 2005

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Figure 2.4-72—{Groundwater Well Locations within a 25-Mile (40 km) Radius (PaGWIS Data)}

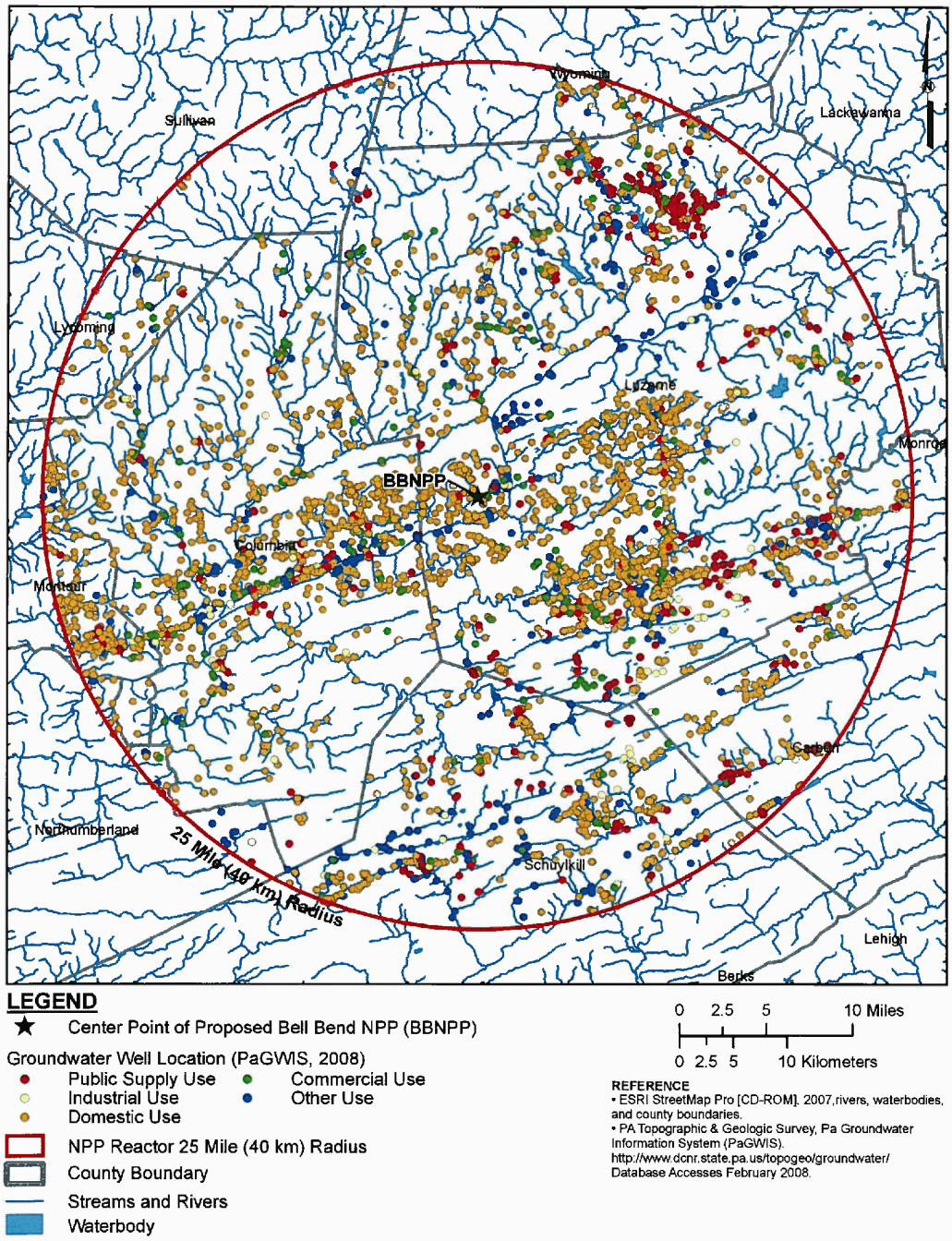

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Figure 2.4-73—{Groundwater Well Locations within a 5 Mile (80 km) Radius (PaGWIS Data)}

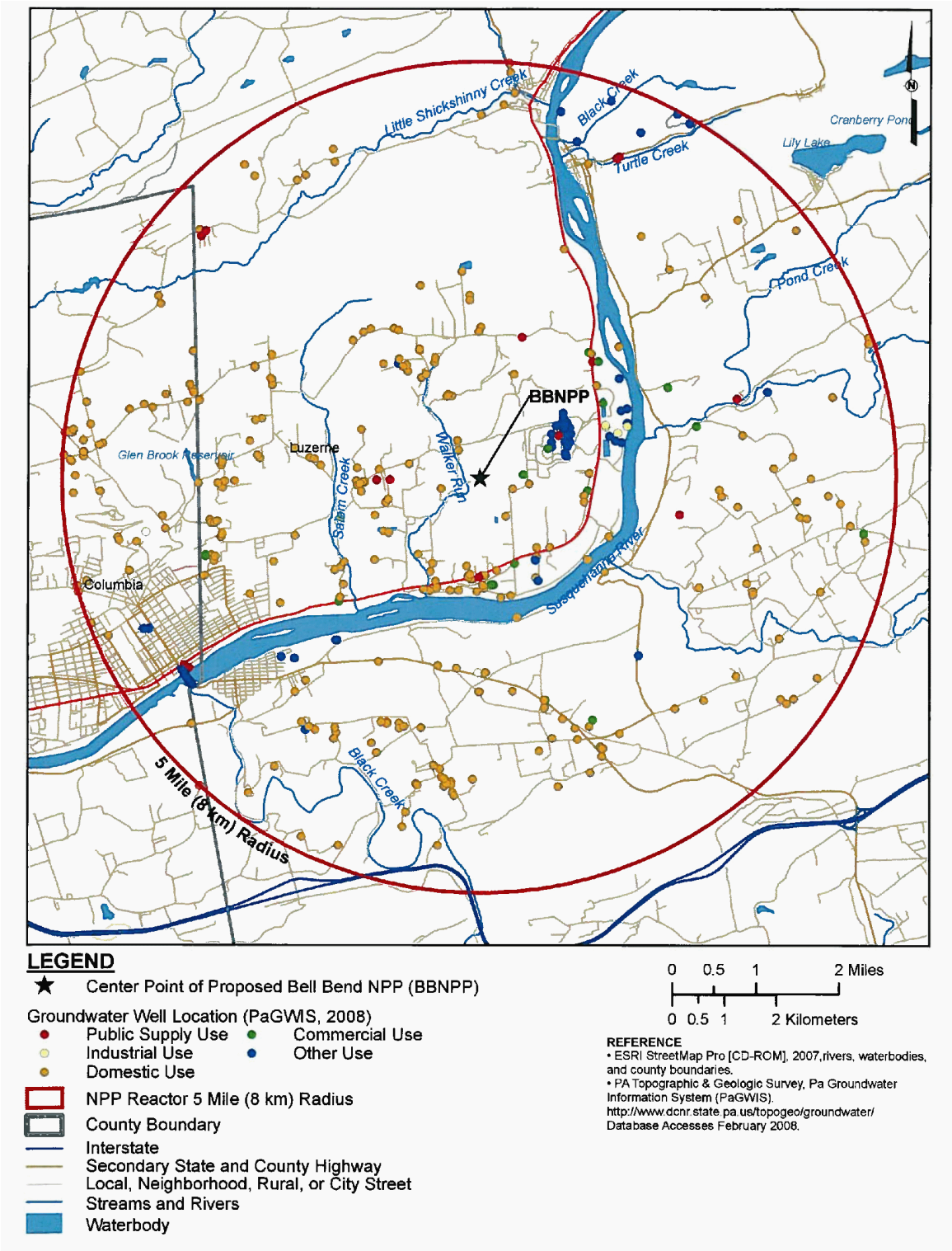

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Figure 2.4-74—{Groundwater Withdrawal within a 25-Mile (40-km) Radius (PaGWIS Data)}

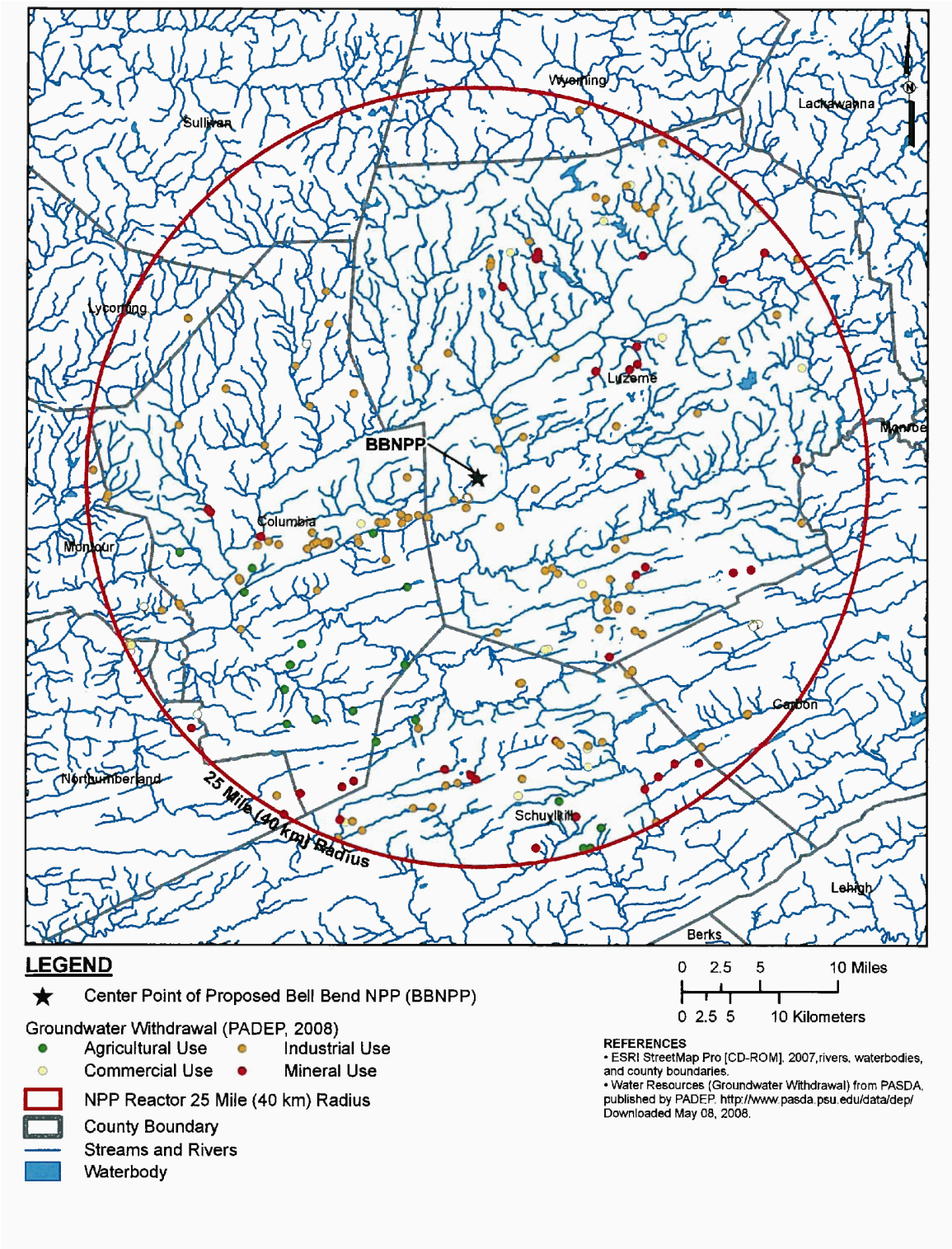

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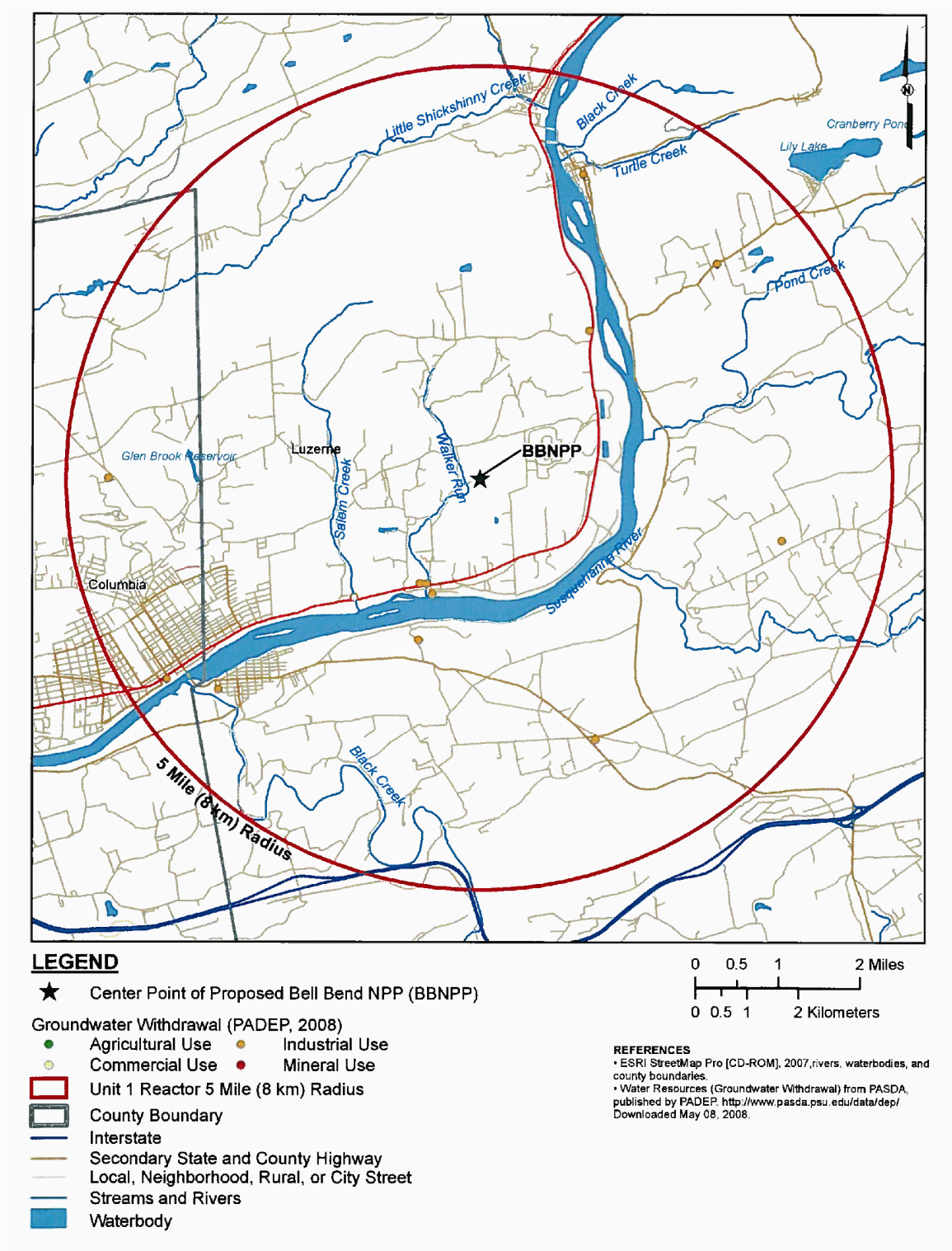
Figure 2.4-75—{Groundwater Withdrawal within a 5-Mile (8-km) Radius (PaDEP Data)}



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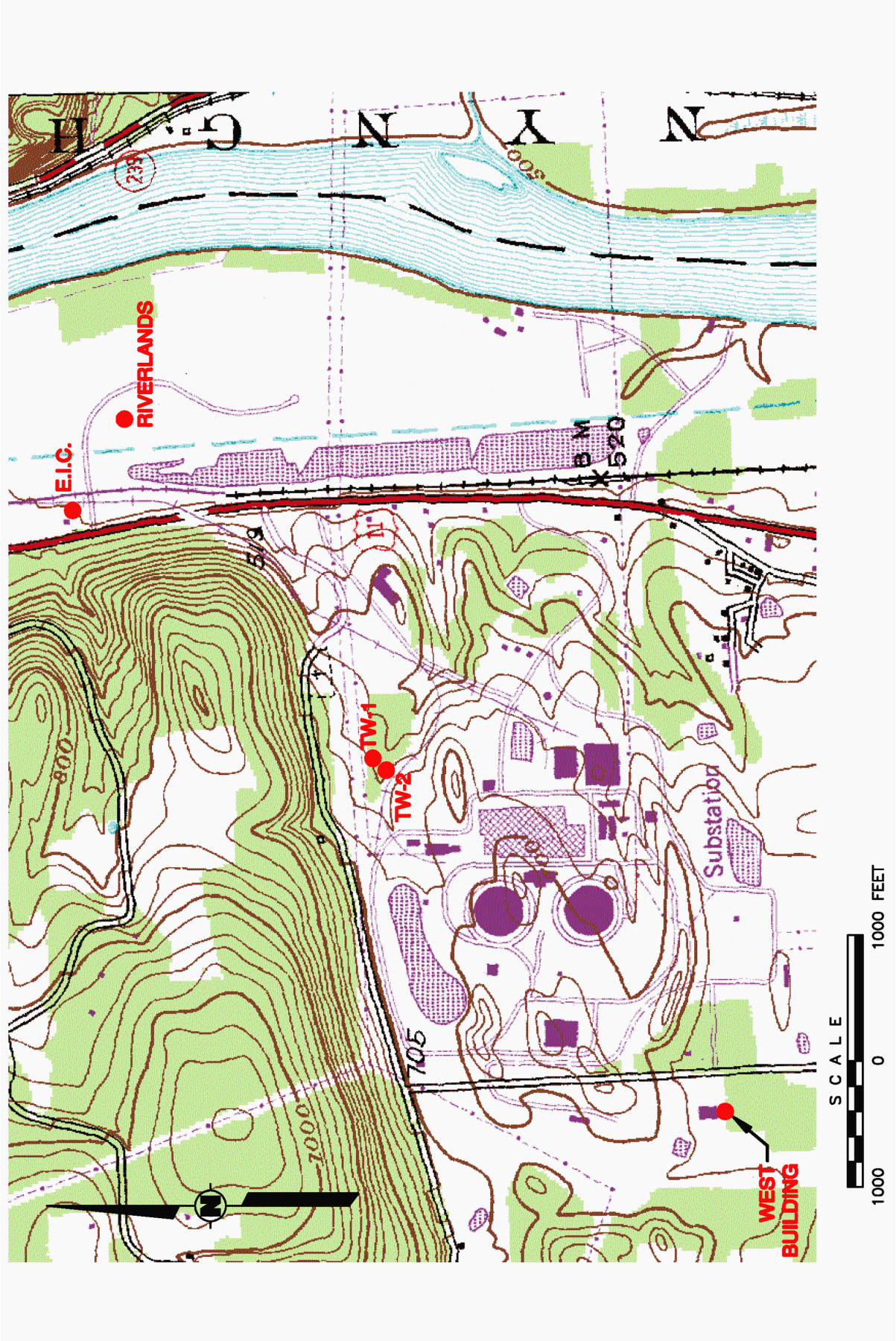

Figure 2.4-76—{Groundwater Production Wells at SSES}

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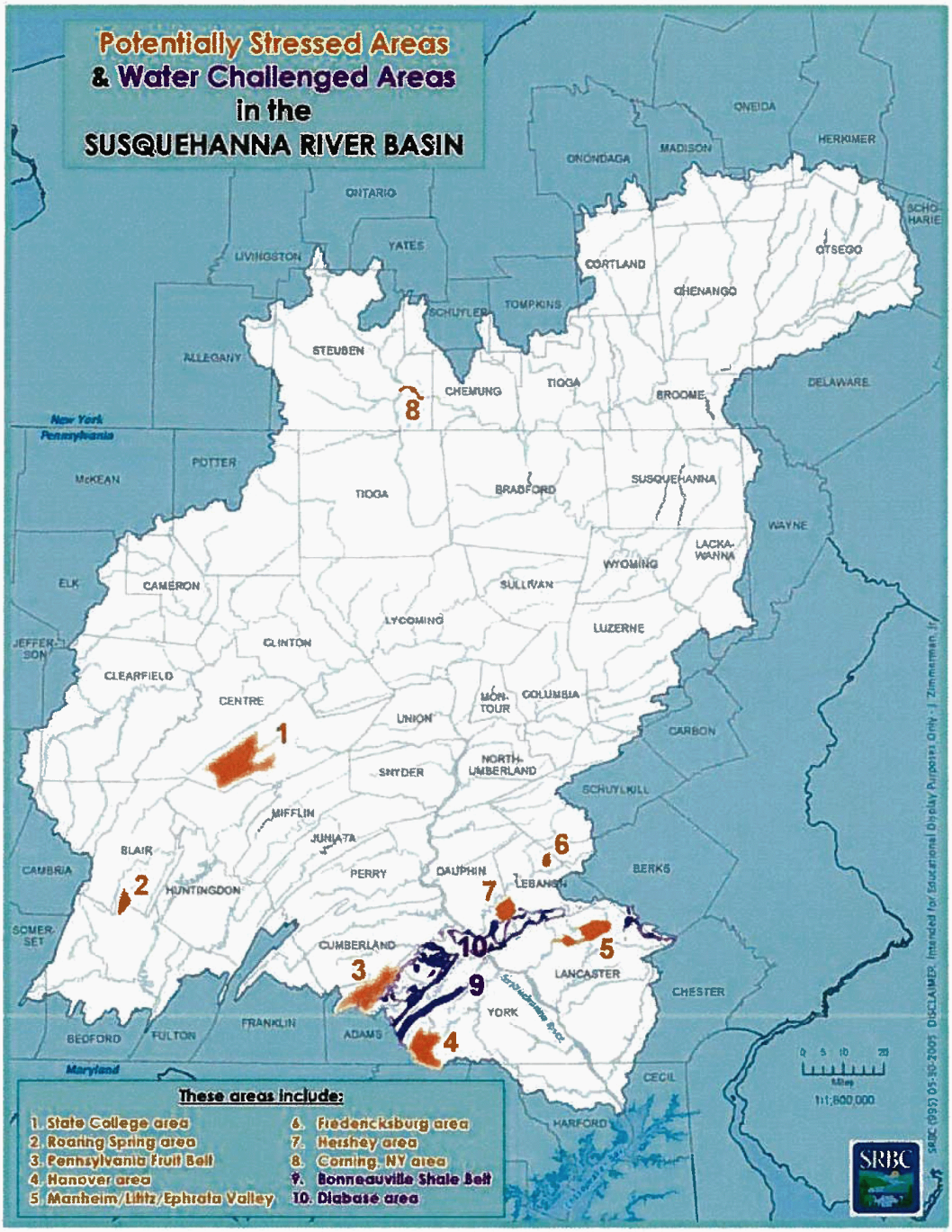
Figure 2.4-77—{Potentially Stressed Areas and Water Challenged Areas in the Susquehanna River Basin}



Reference: SRBC, 2005

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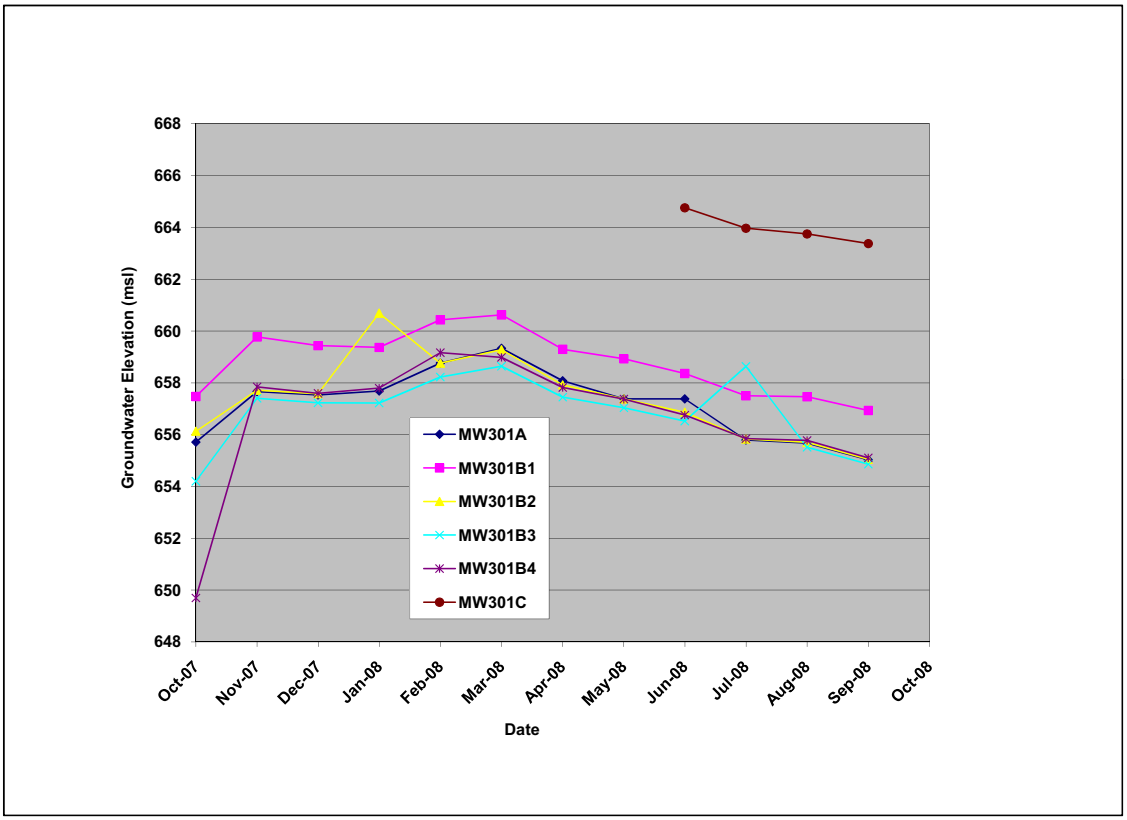
Figure 2.4-78—{Groundwater Elevations versus Time, Well Clusters MW301 and MW302}



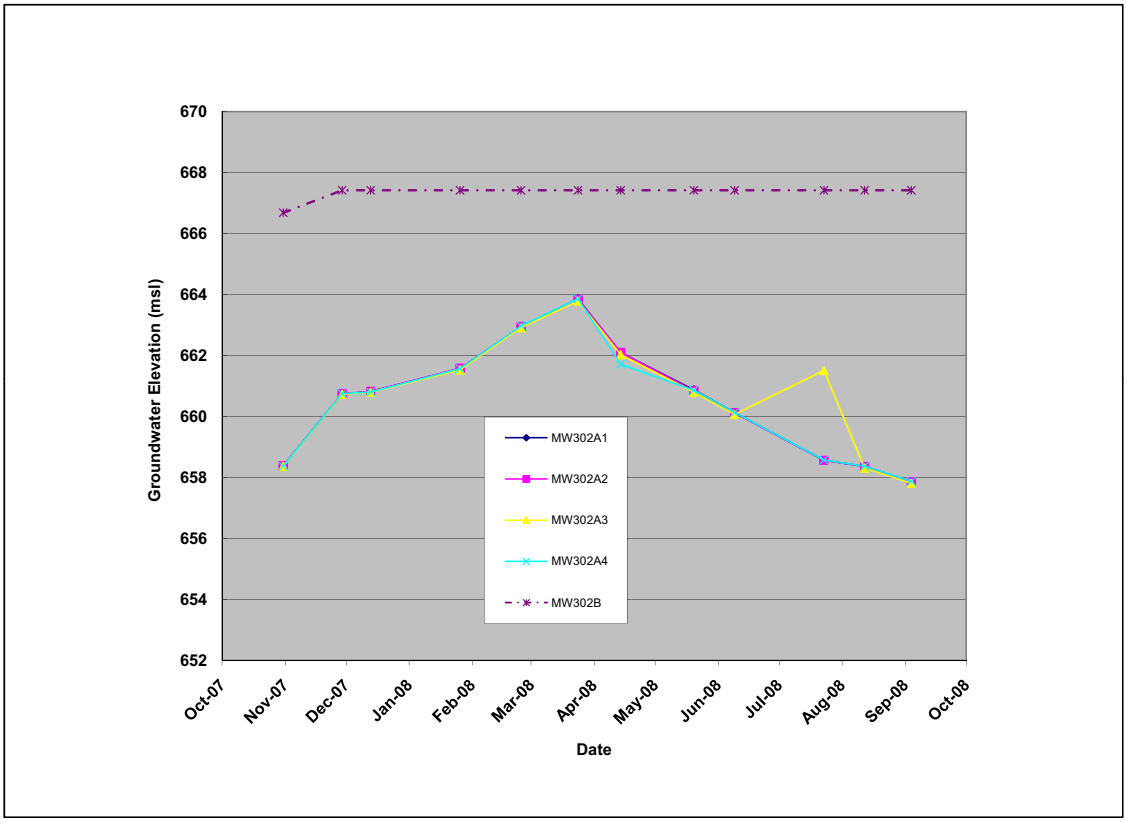


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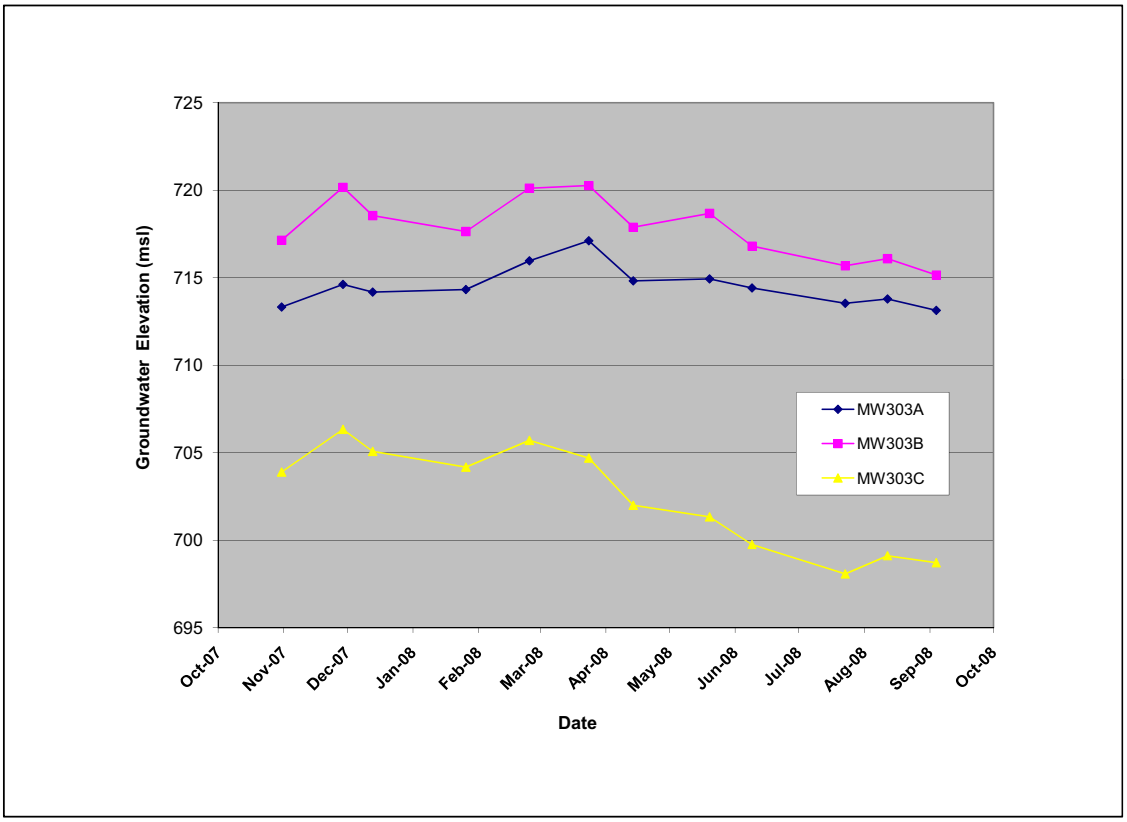
Figure 2.4-79—{Groundwater Elevations versus Time, Well Clusters MW303 and MW304}



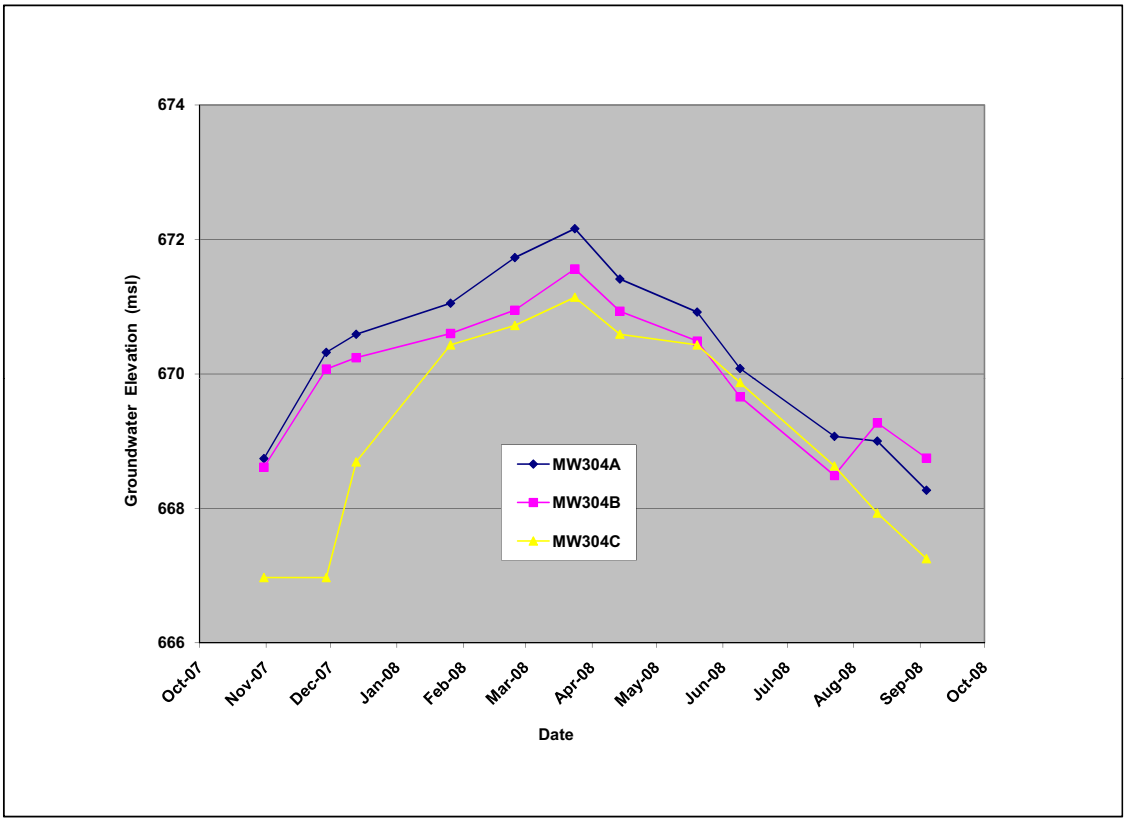


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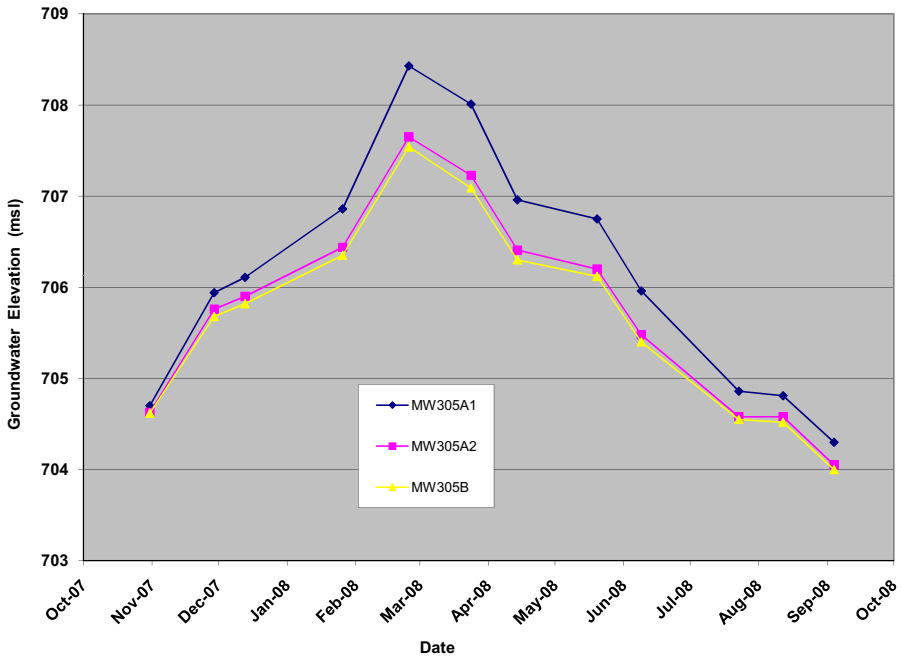
Figure 2.4-80—{Groundwater Elevations versus Time, Well Clusters MW305 and MW306}



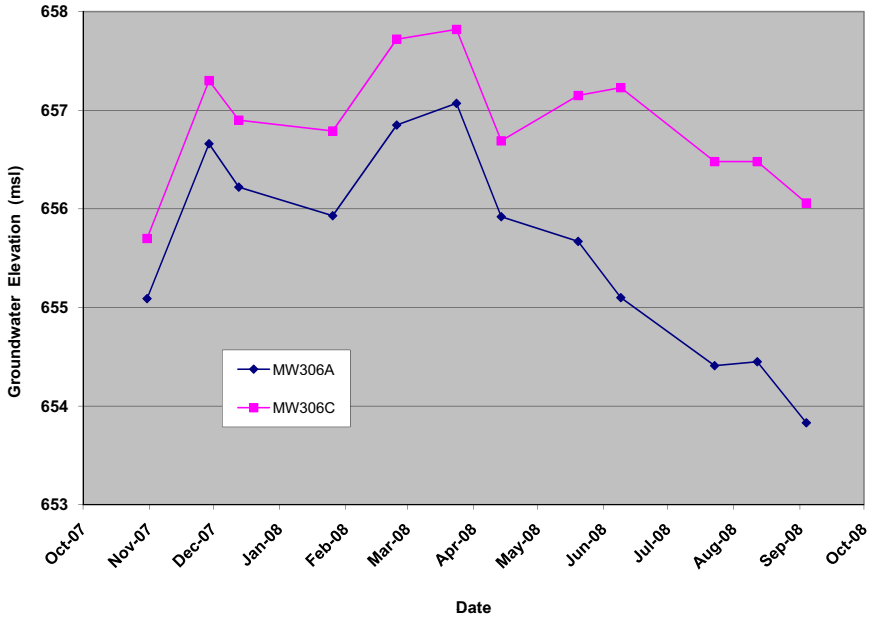


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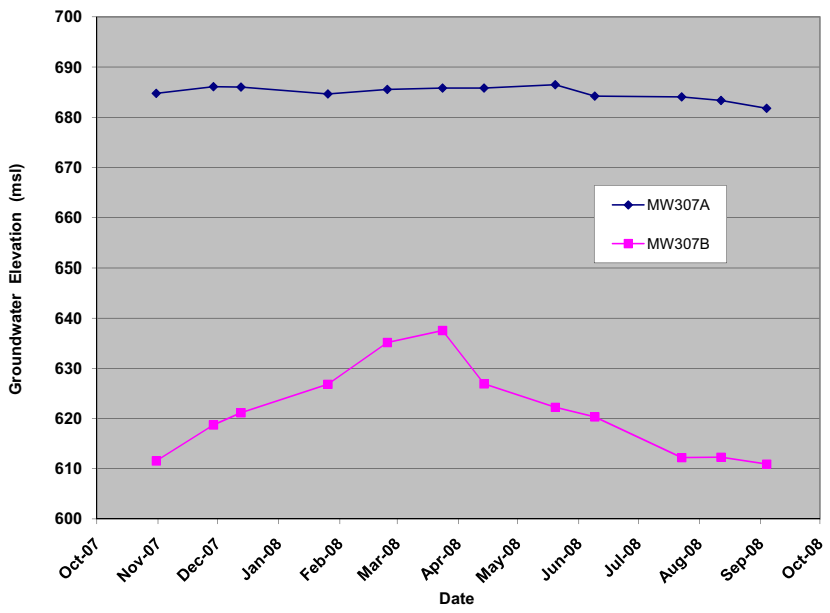
Figure 2.4-81—{Groundwater Elevations versus Time, Well Clusters MW307 and MW308}



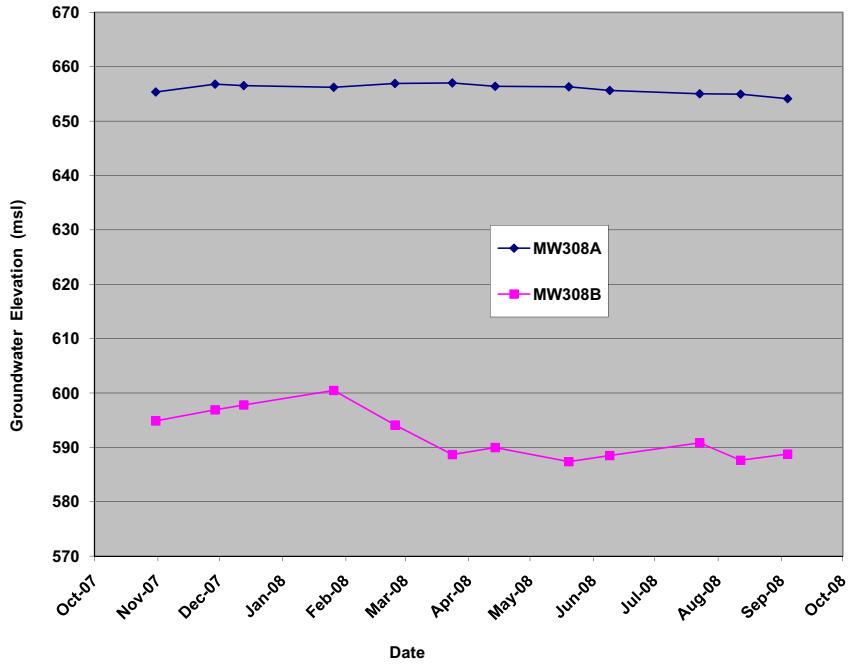


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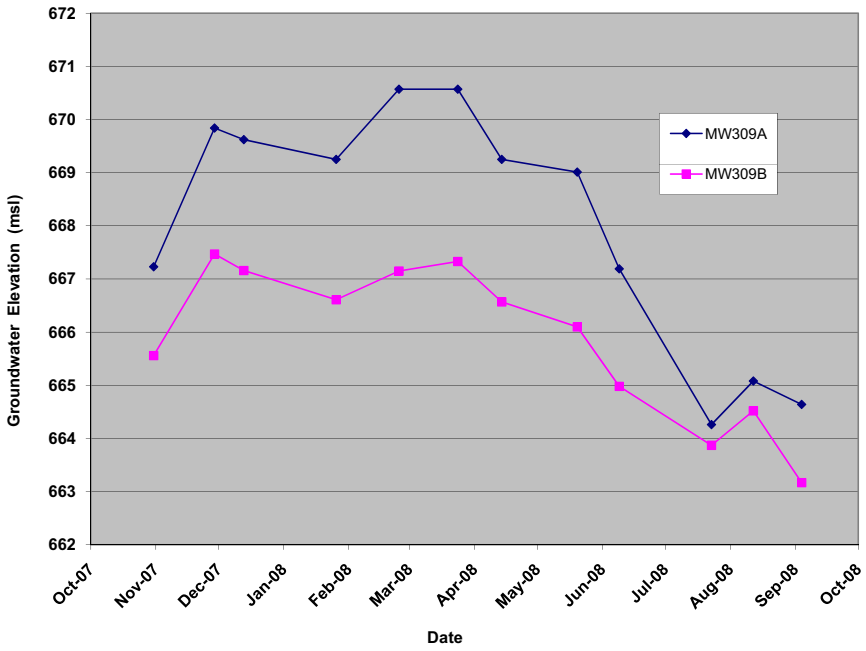
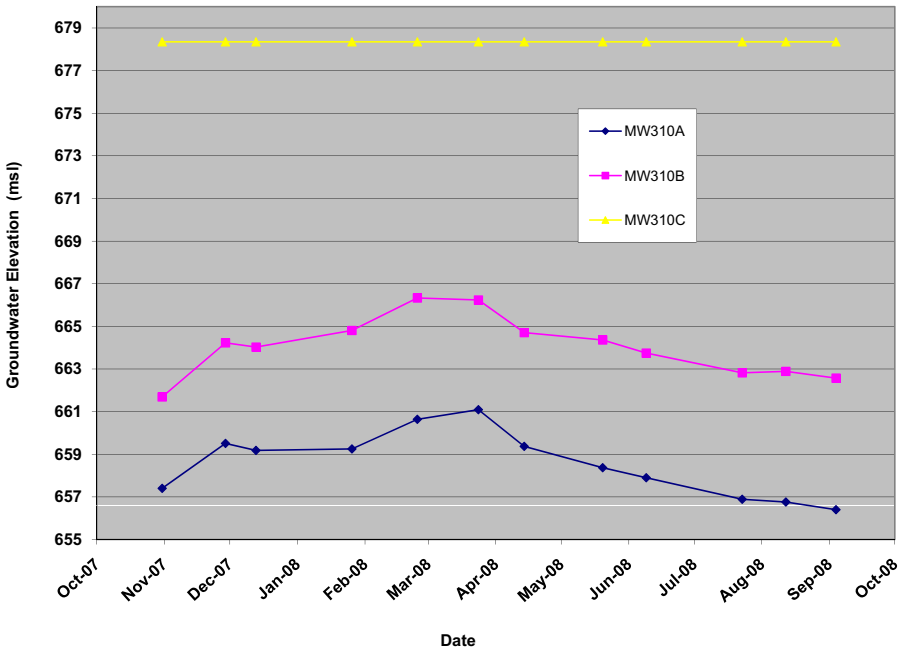
Figure 2.4-82—{Groundwater Elevations versus Time, Well Clusters MW309 and MW310}





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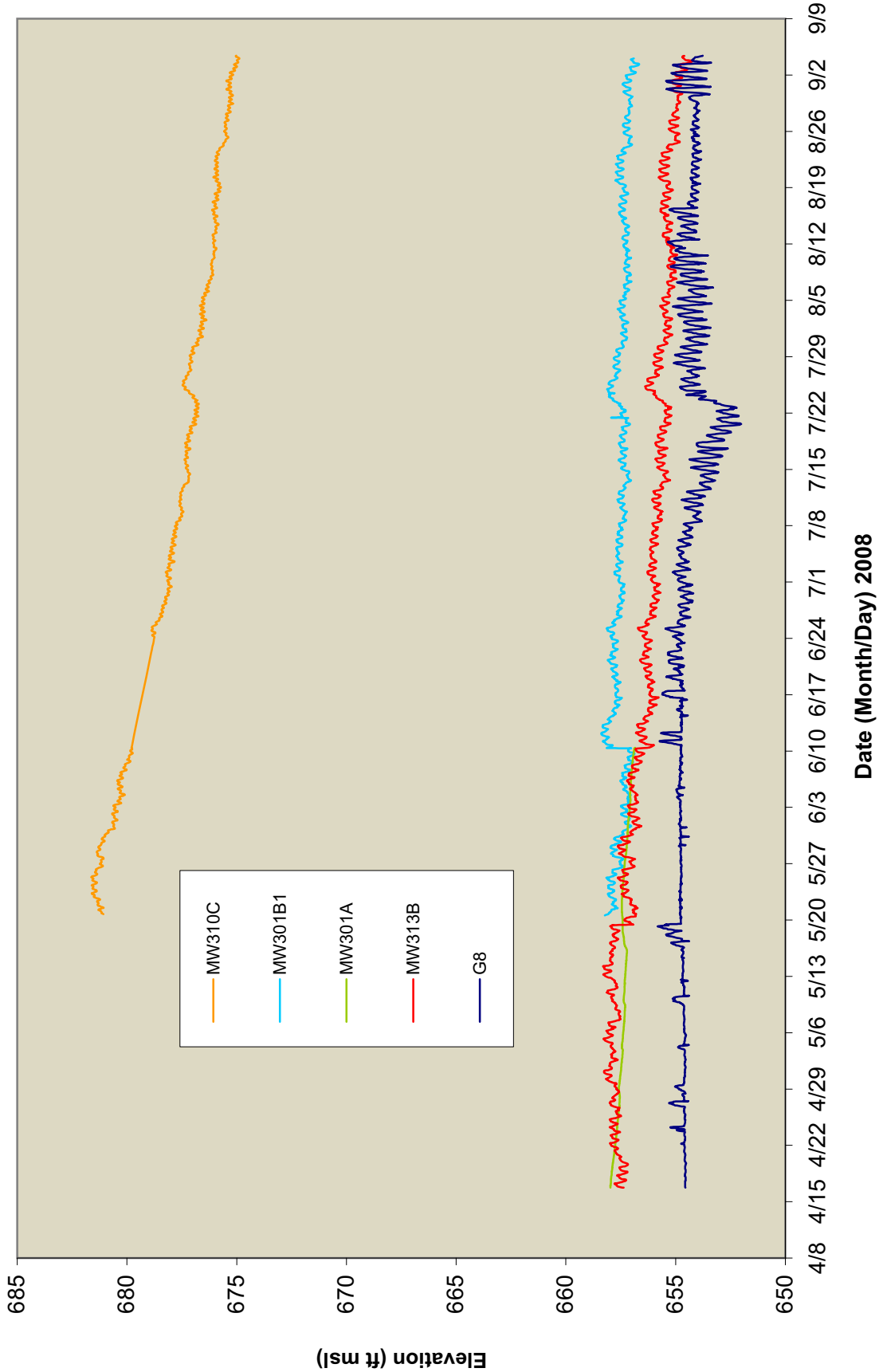

Figure 2.4-83—{Water Level Fluctuations in MW301 Cluster Area Based on Pressure Transducer Data}

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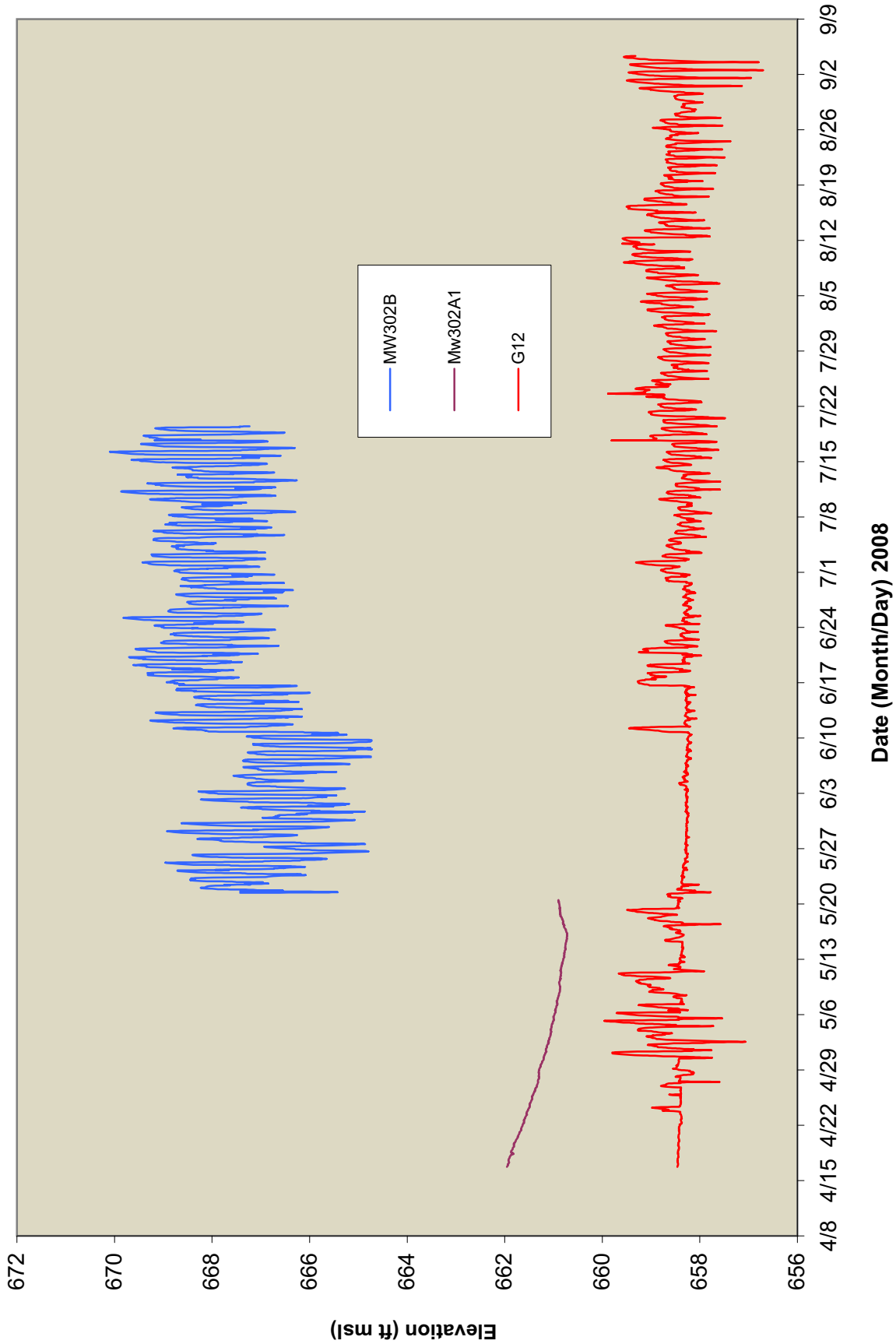

Figure 2.4-84—{Water Level Fluctuations in MW302 Cluster Area Based on Pressure Transducer Data}

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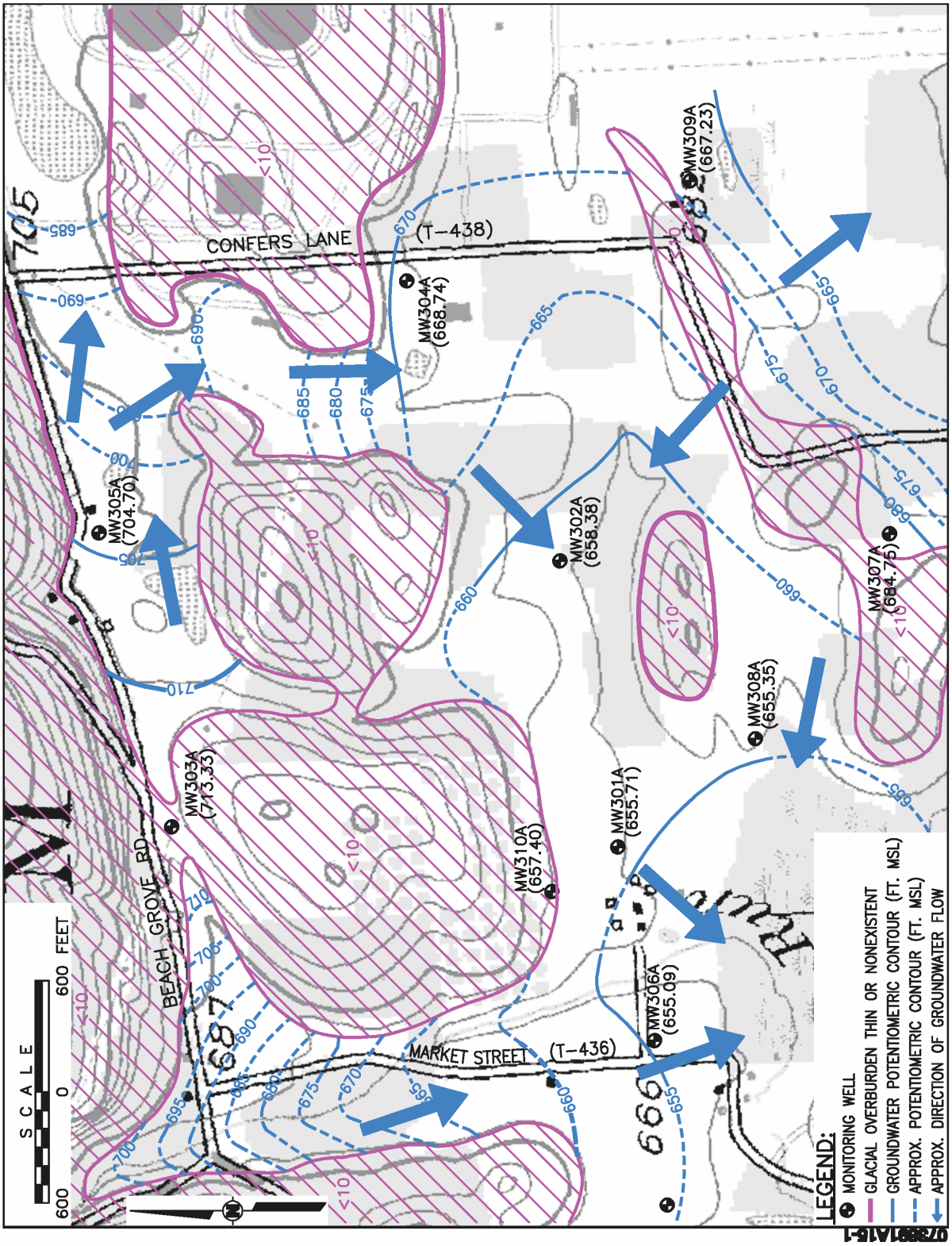

Figure 2.4-85—{Potentiometric Surface Map of Glacial Overburden Aquifer, October 2007}

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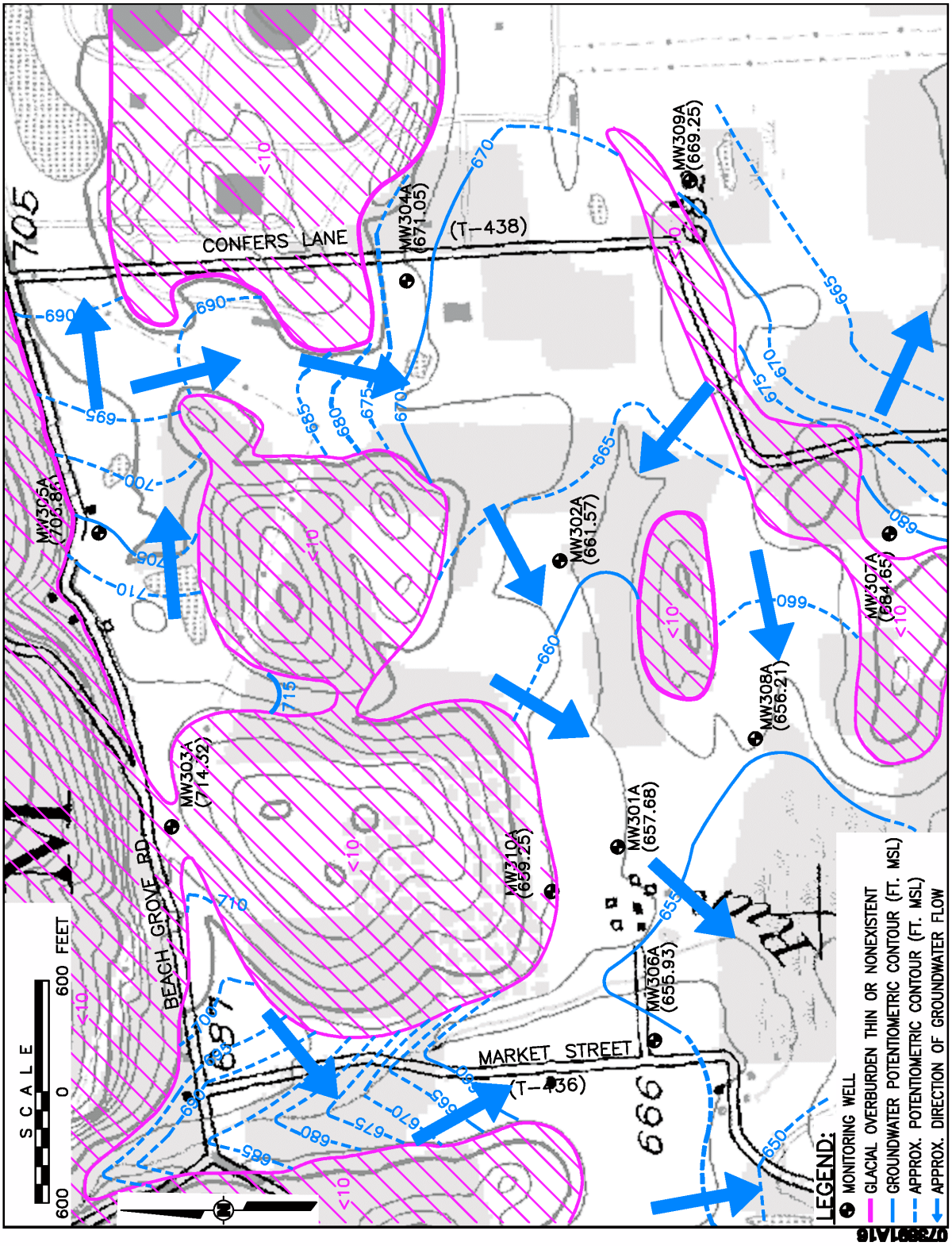

Figure 2.4-86—{Potentiometric Surface Map of Glacial Overburden Aquifer, January 2008}

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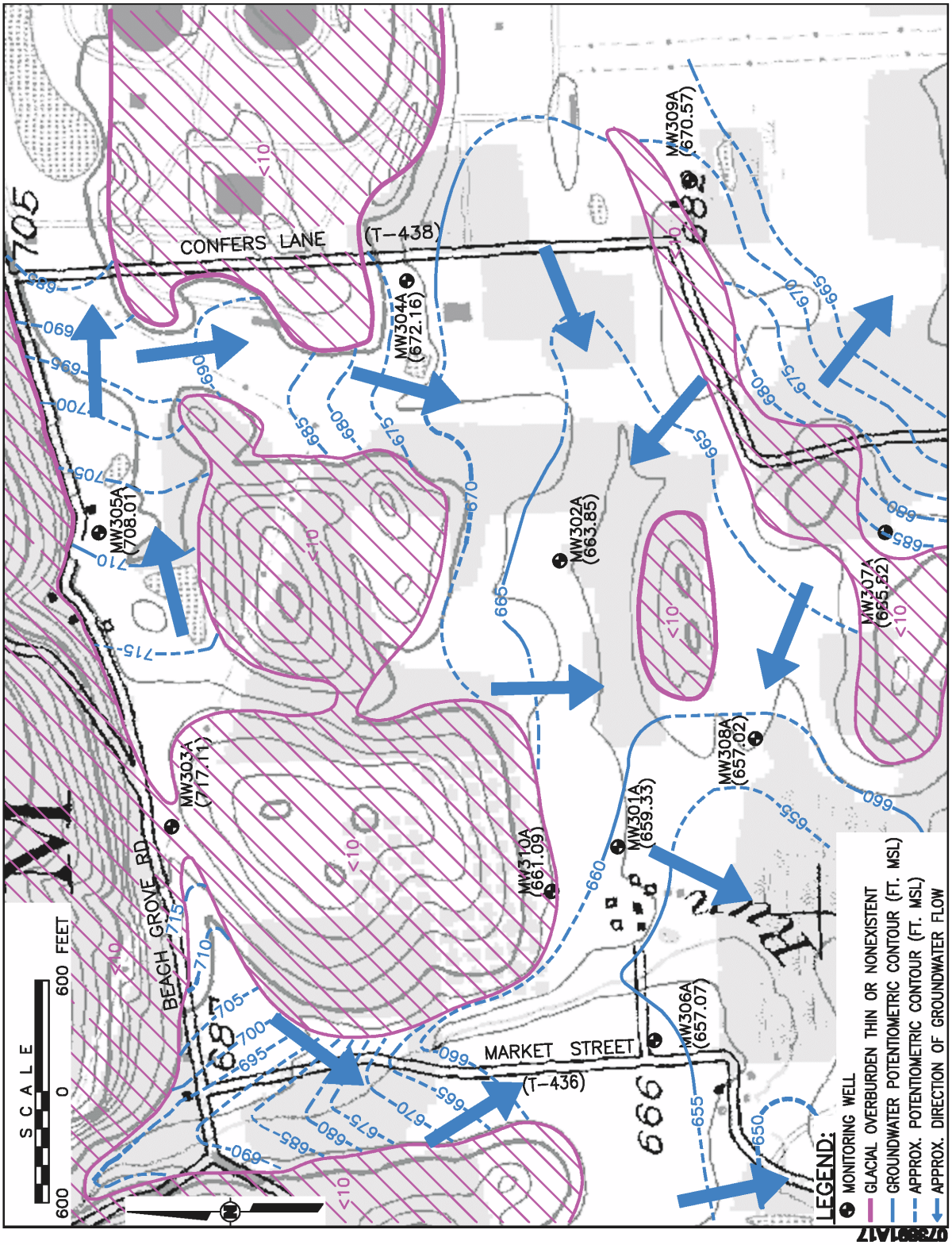

Figure 2.4-87—{Potentiometric Surface Map of Glacial Overburden Aquifer, March 2008}

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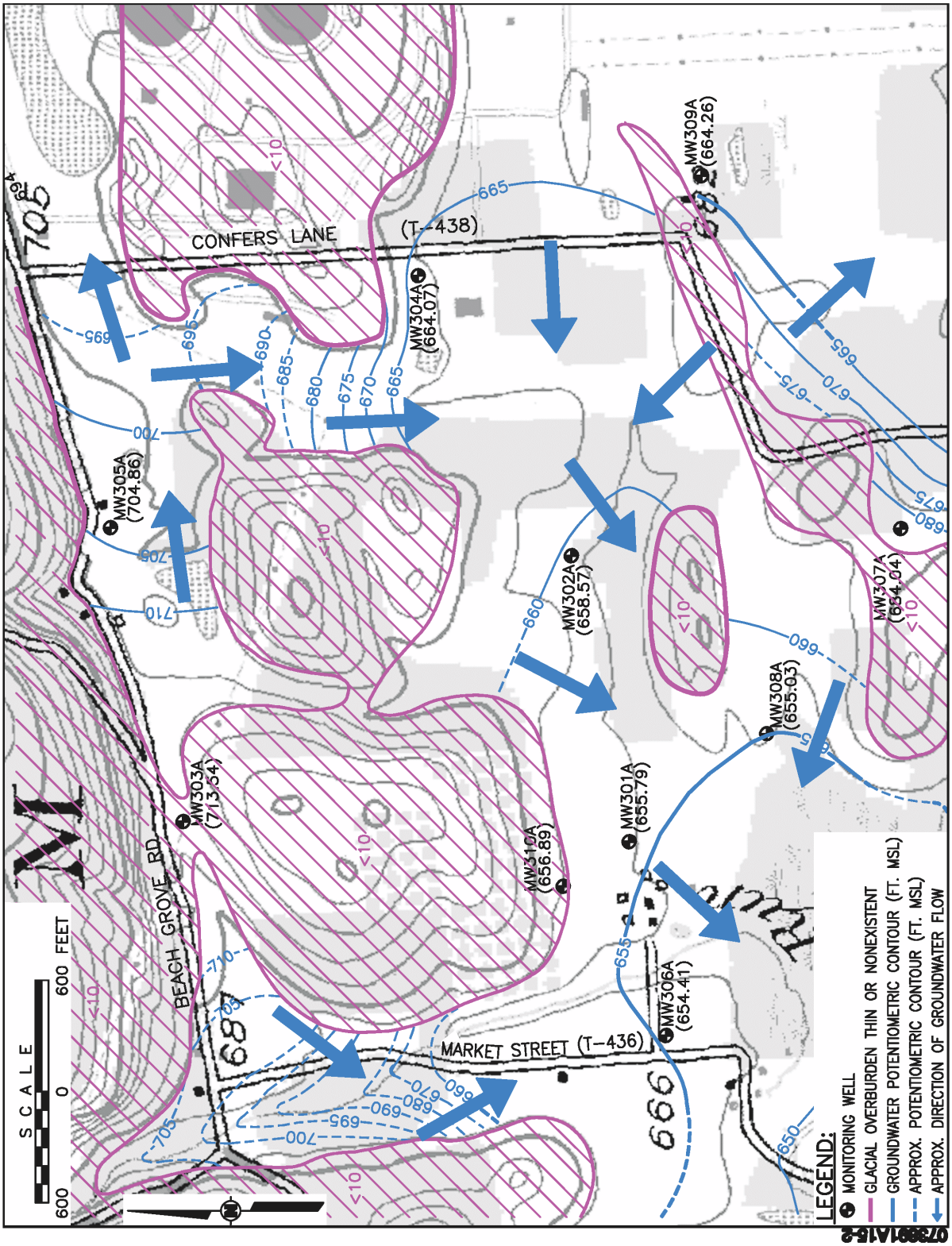

Figure 2.4-88—{Potentiometric Surface Map of Glacial Overburden Aquifer, July 2008}

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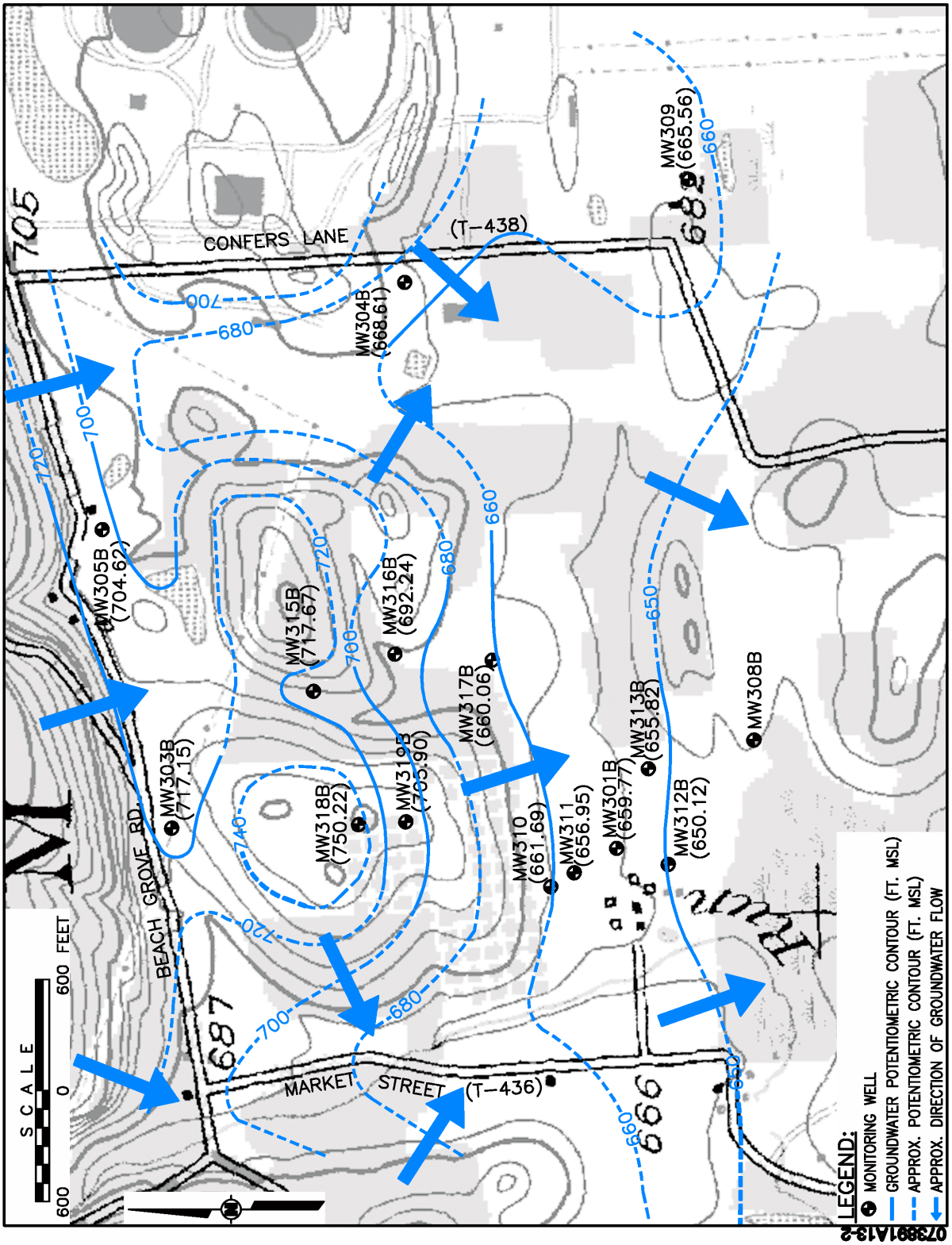

Figure 2.4-89—{Potentiometric Surface Map of Shallow Bedrock Aquifer, October 2007}

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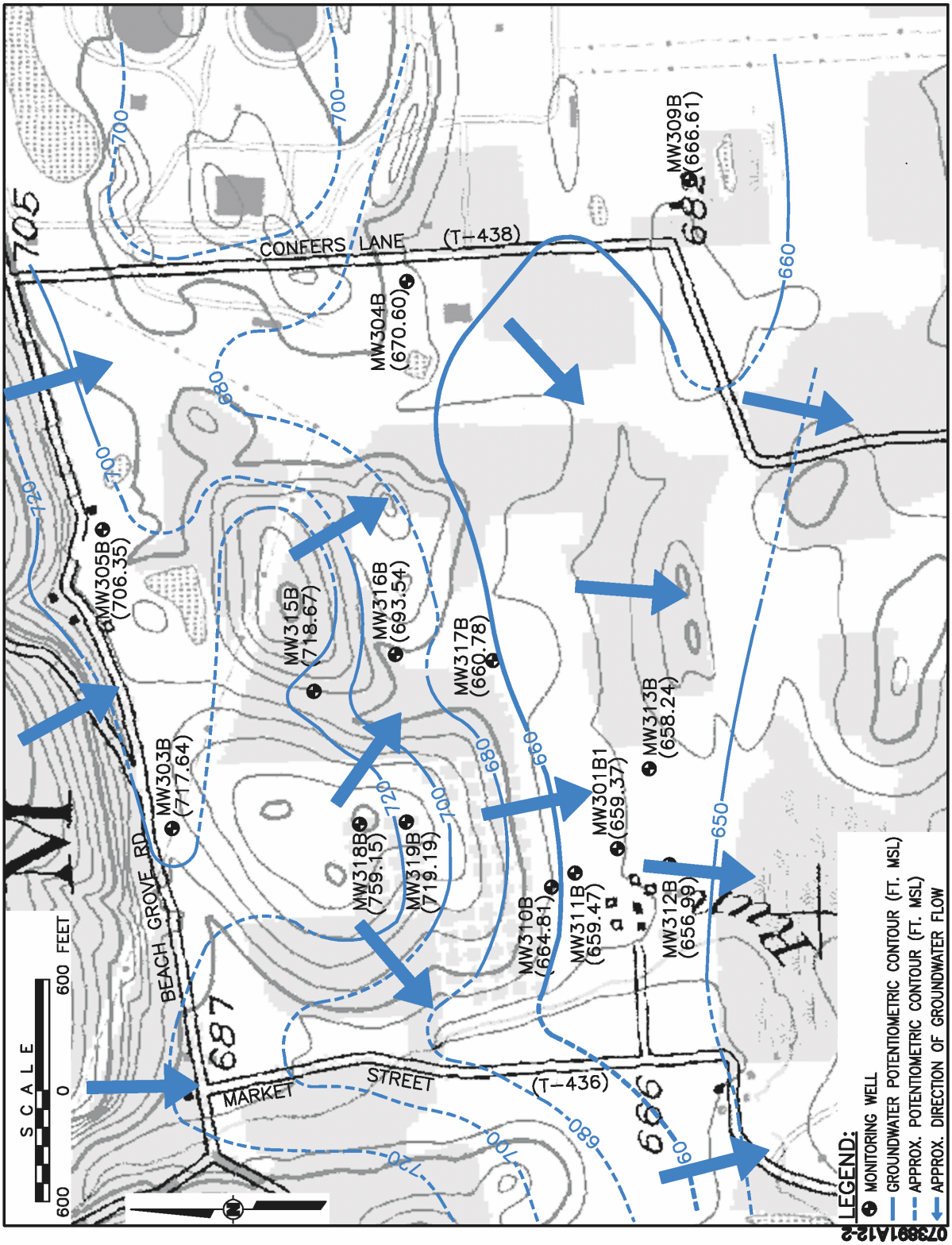

Figure 2.4-90—{Potentiometric Surface Map of Shallow Bedrock Aquifer, January 2008}

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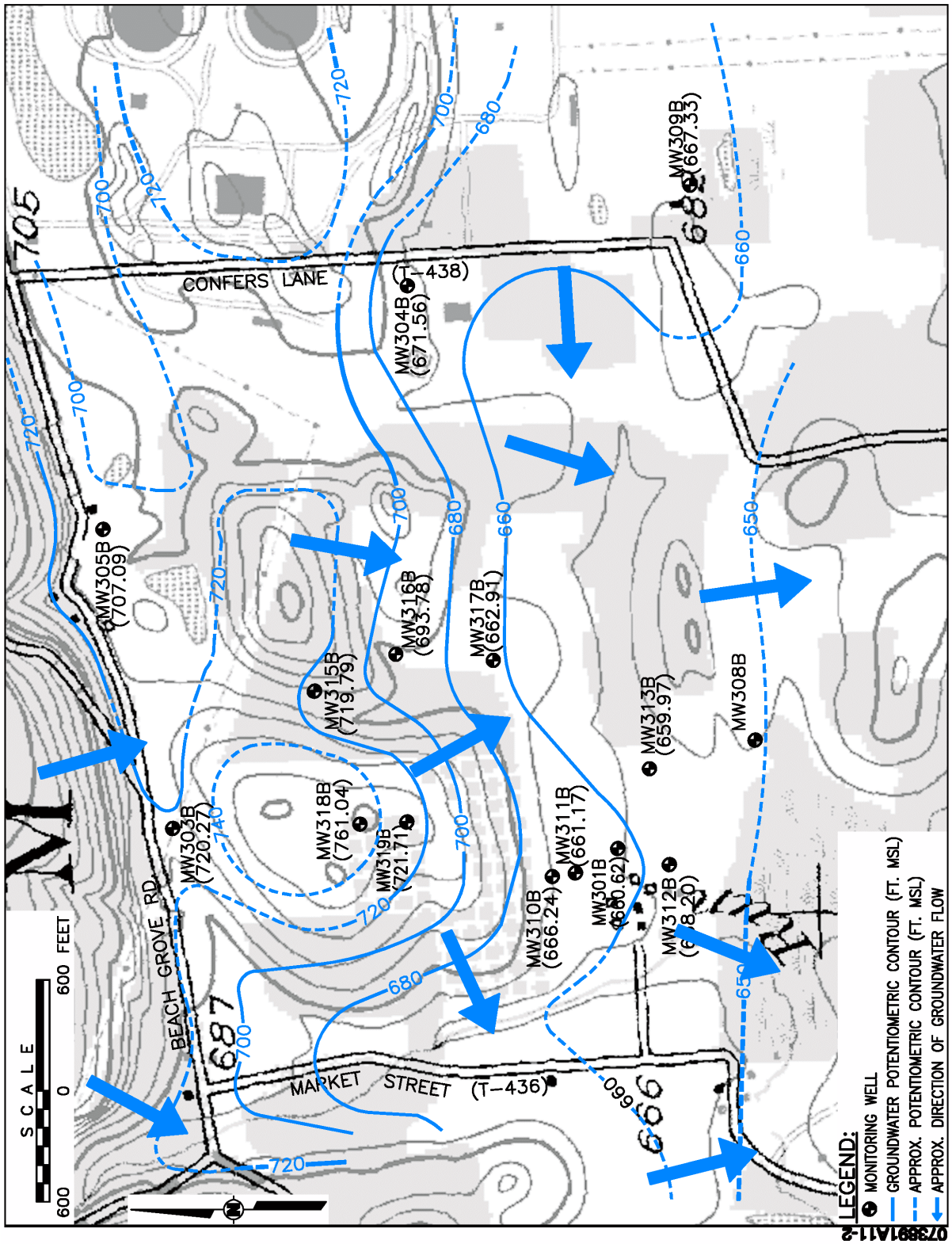

Figure 2.4-91—{Potentiometric Surface Map of Shallow Bedrock Aquifer, March 2008}

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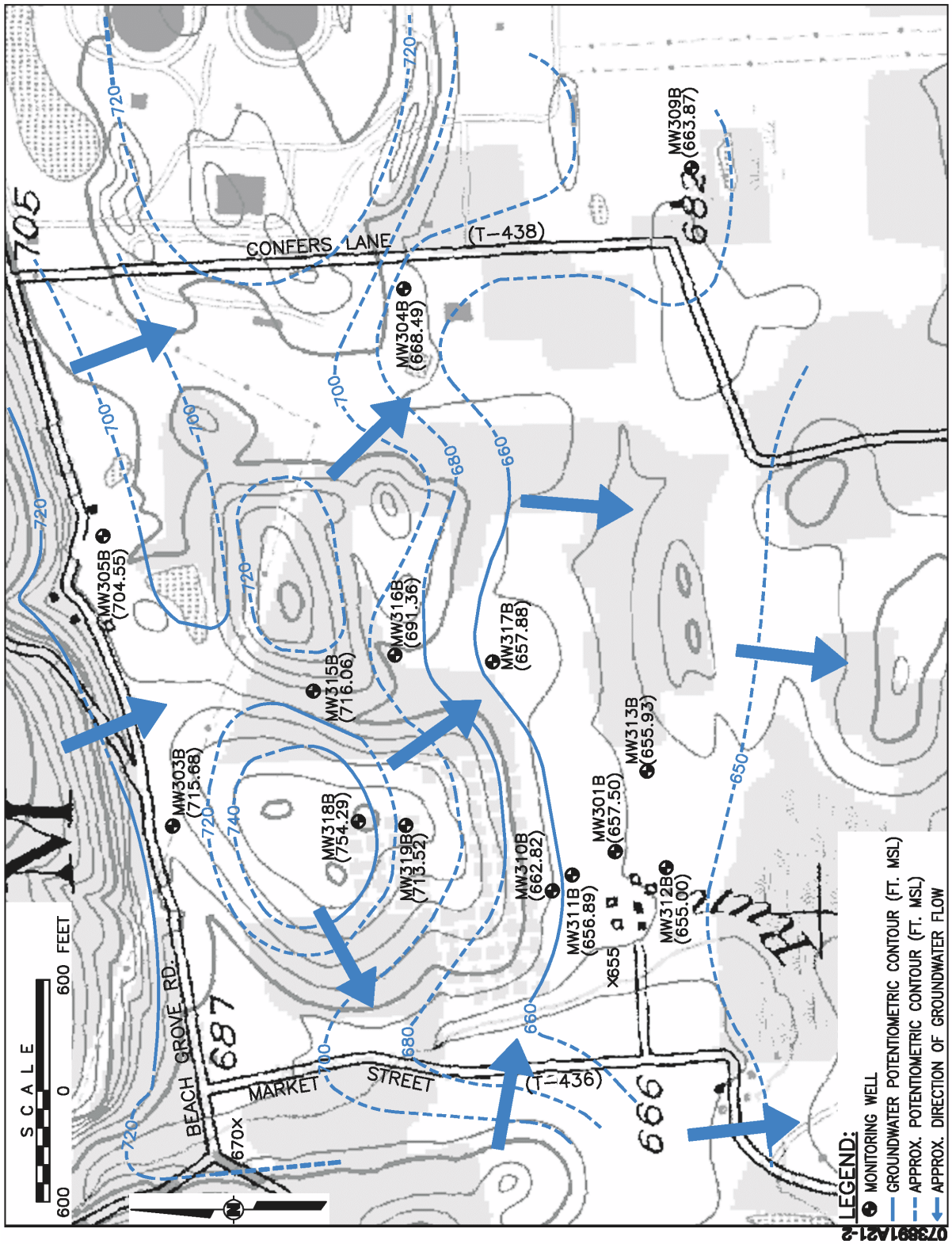

Figure 2.4-92—{Potentiometric Surface Map of Shallow Bedrock Aquifer, July 2008}

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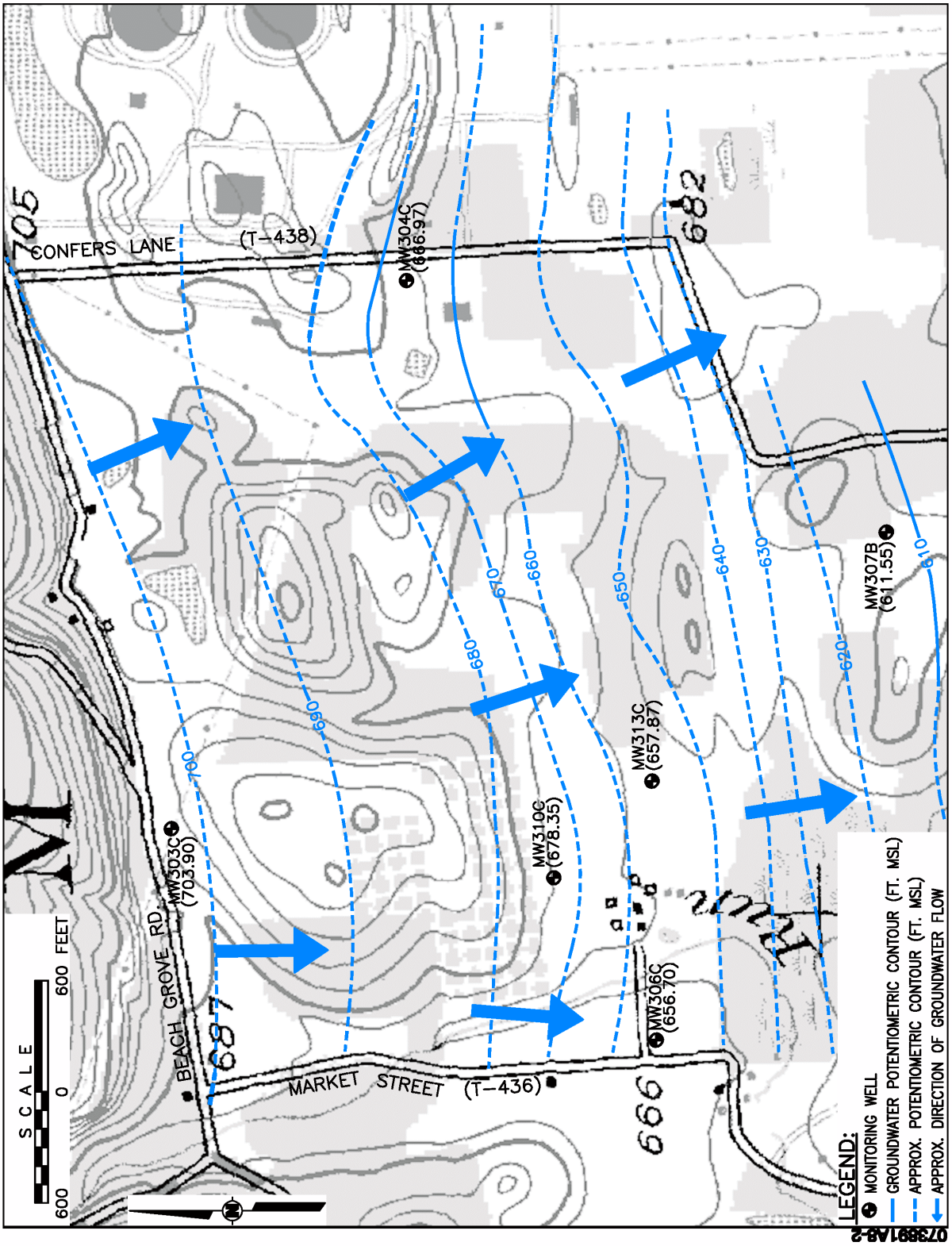

Figure 2.4-93—{Potentiometric Map of Deep Bedrock Aquifer, October 2007}

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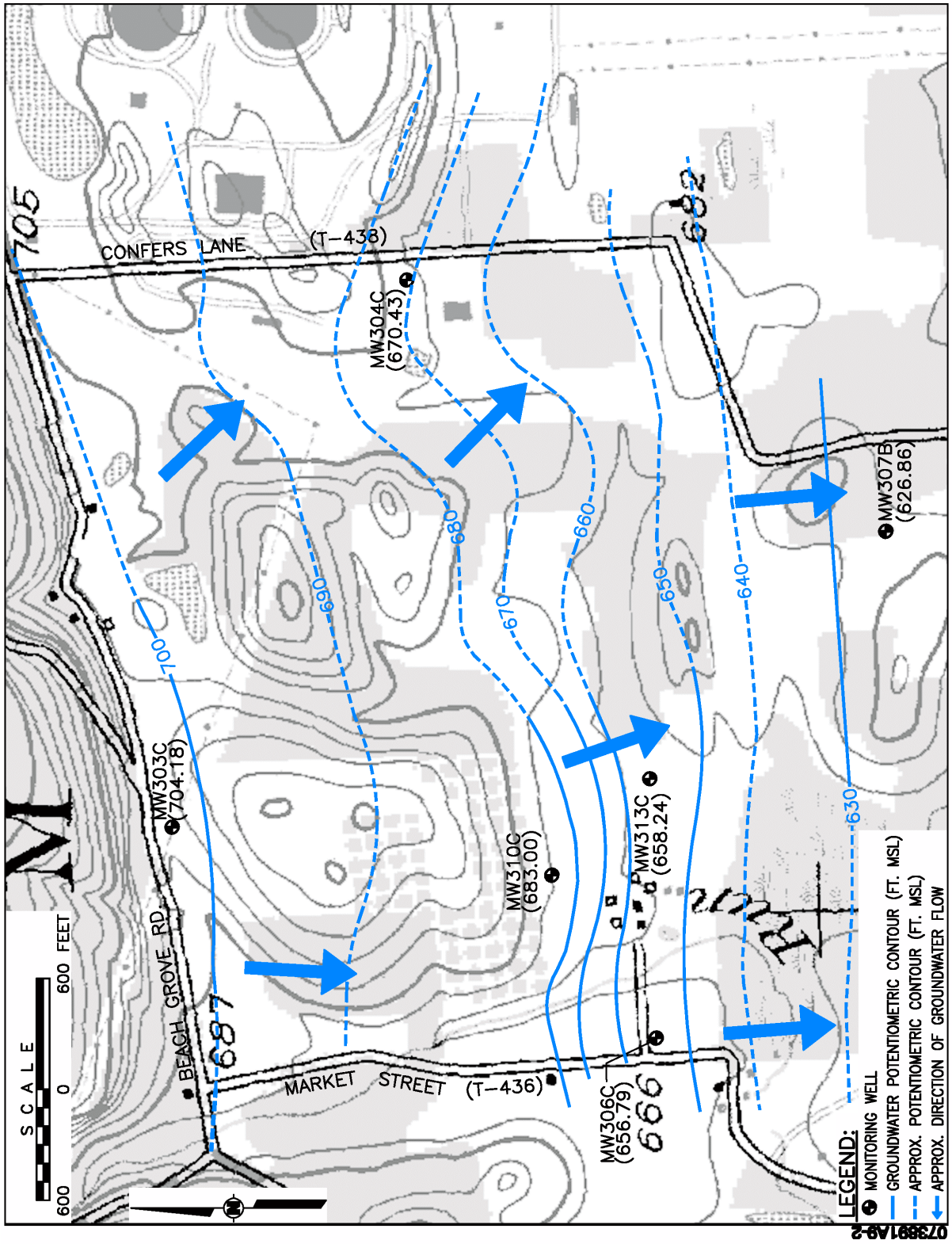

Figure 2.4-94—{Potentiometric Map of Deep Bedrock Aquifer, January 2008}

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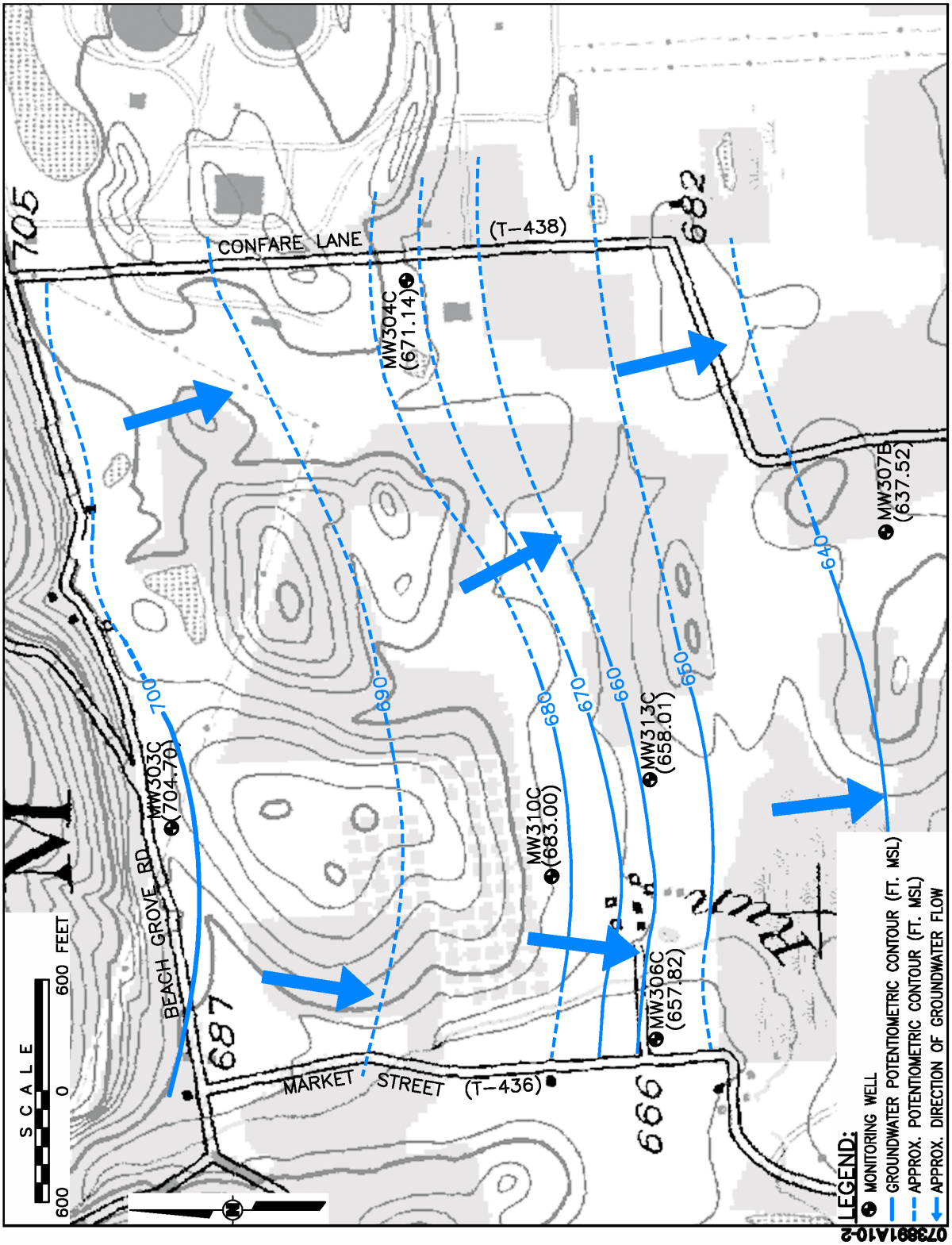

Figure 2.4-95—{Potentiometric Map of Deep Bedrock Aquifer, March 2008}

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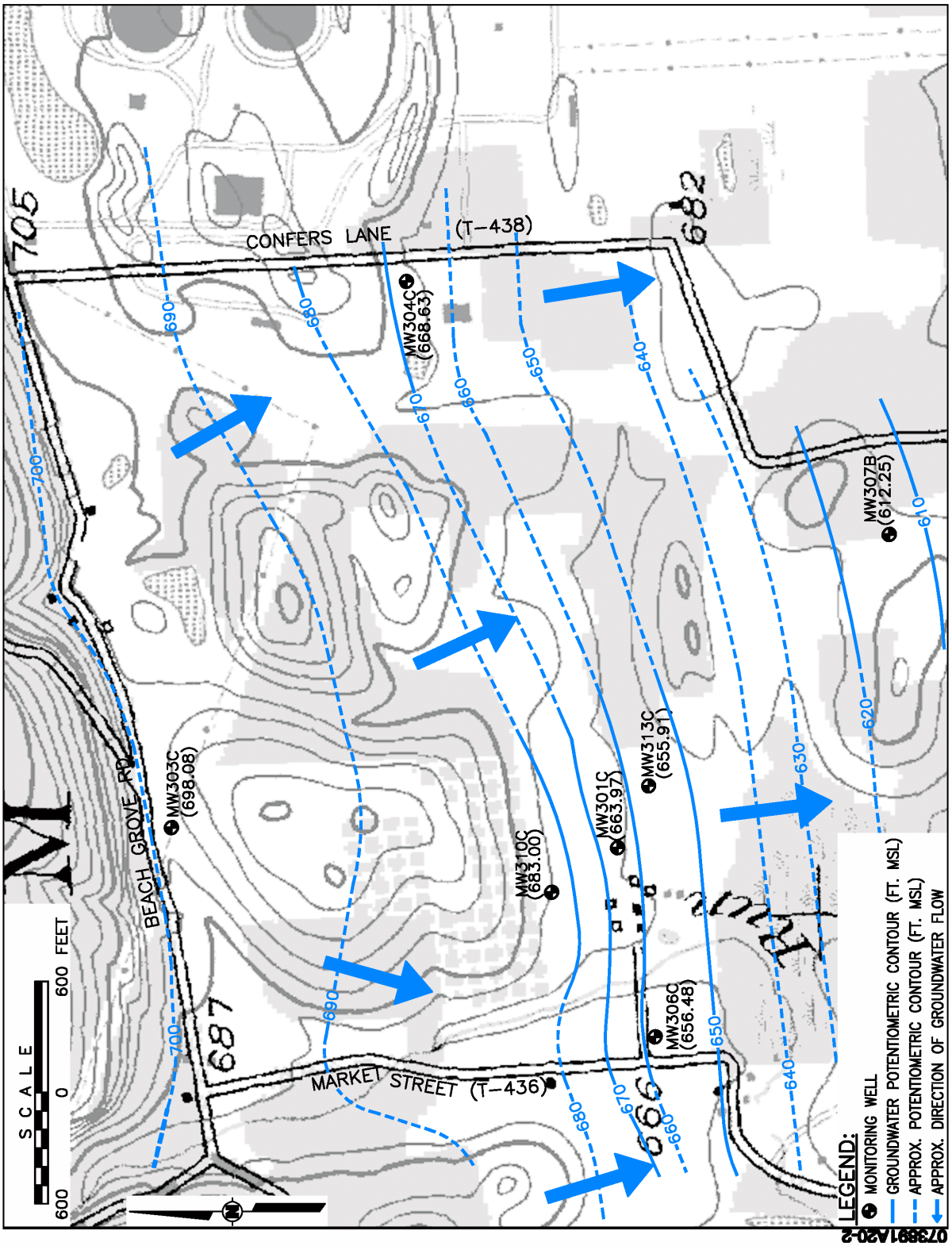

Figure 2.4-96—{Potentiometric Map of Deep Bedrock Aquifer, July 2008}

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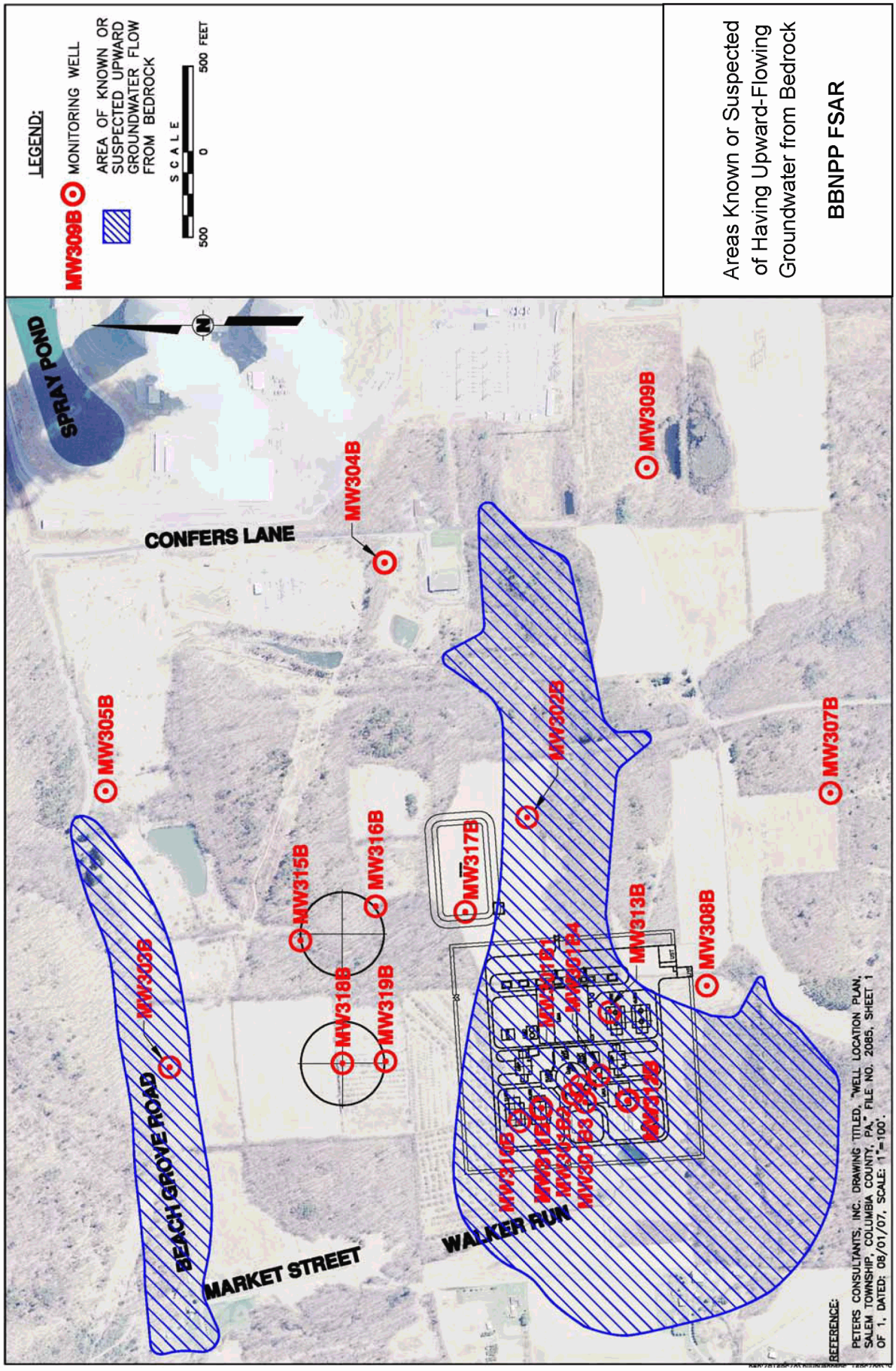

Figure 2.4-97—{Areas Known or Suspected of Having Upward-Flowing Groundwater from Bedrock}

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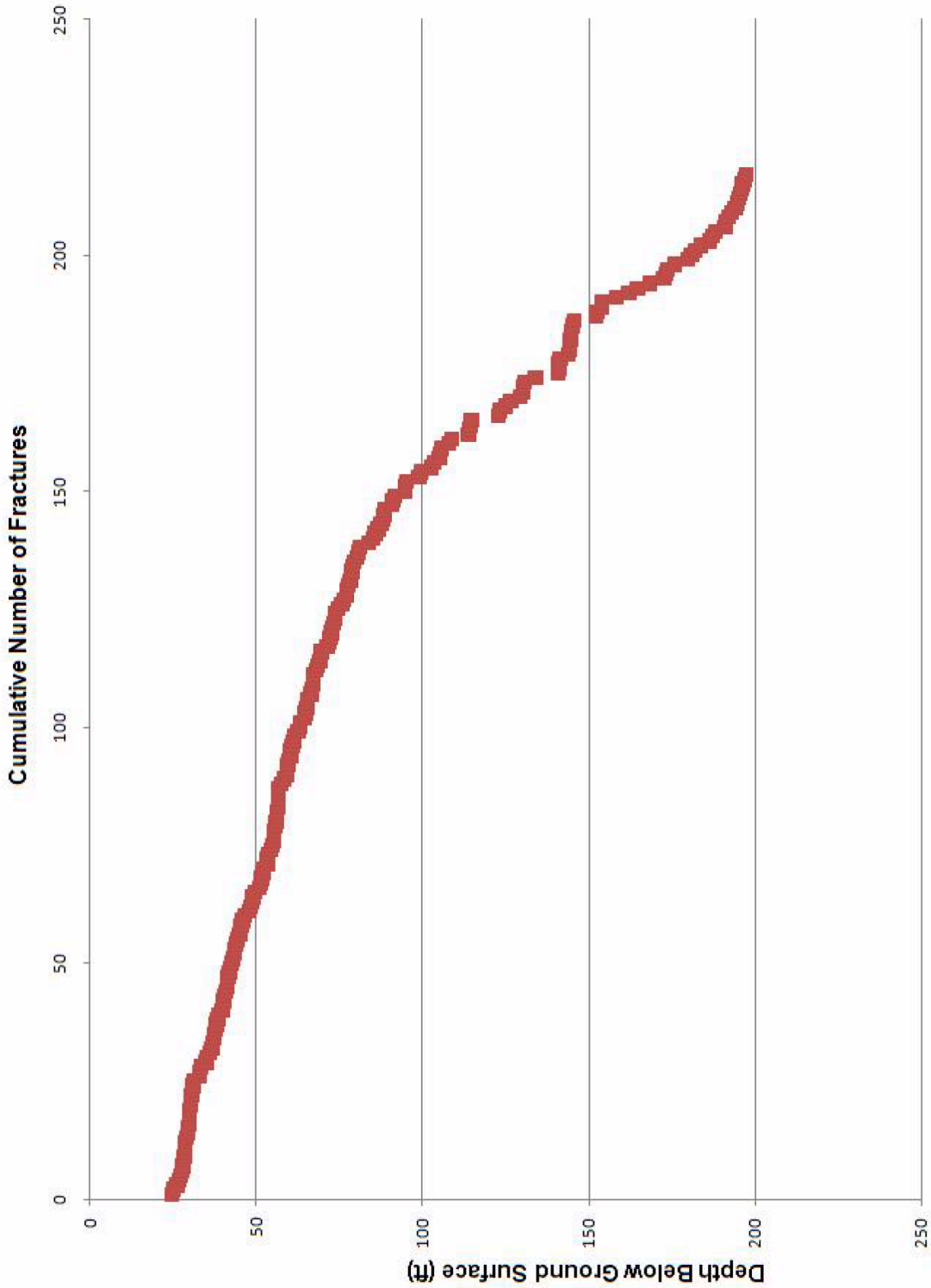

Figure 2.4-98—{Vertical Distribution of Fractures in MW301C Between 45 and 345 Feet Below Ground Surface}

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Figure 2.4-99—{Distribution of Fracture Dip Directions in Monitoring Well MW301C}

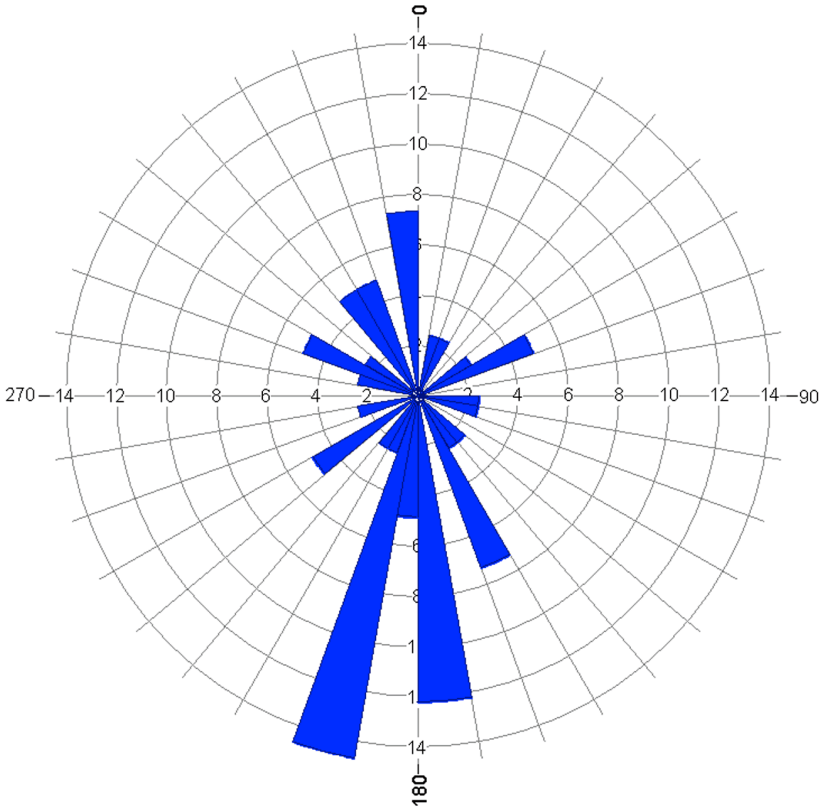

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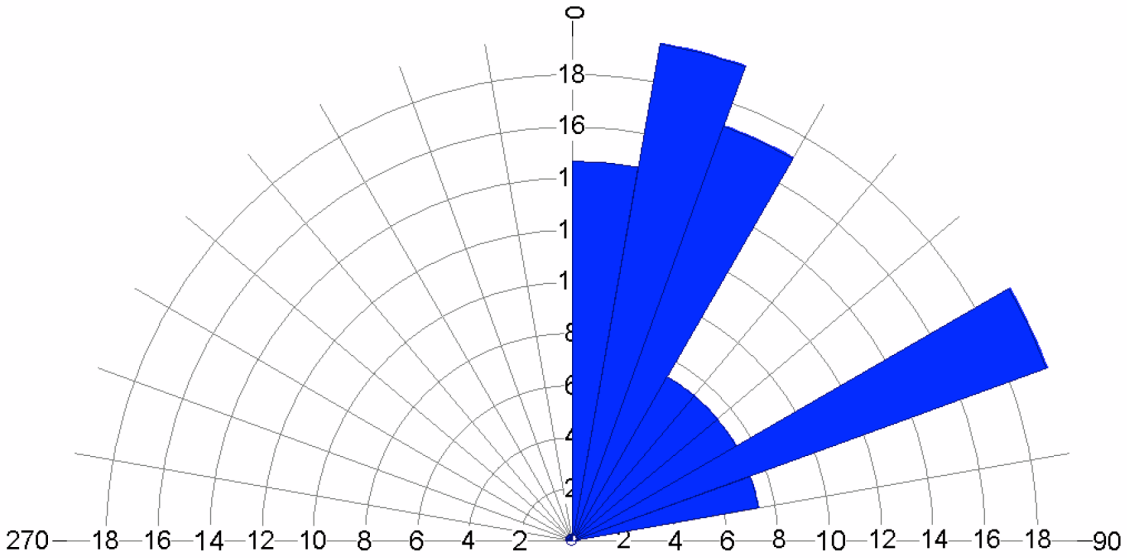
Figure 2.4-100—{Distribution of Fracture Dip Angles in Monitoring Well MW301C}



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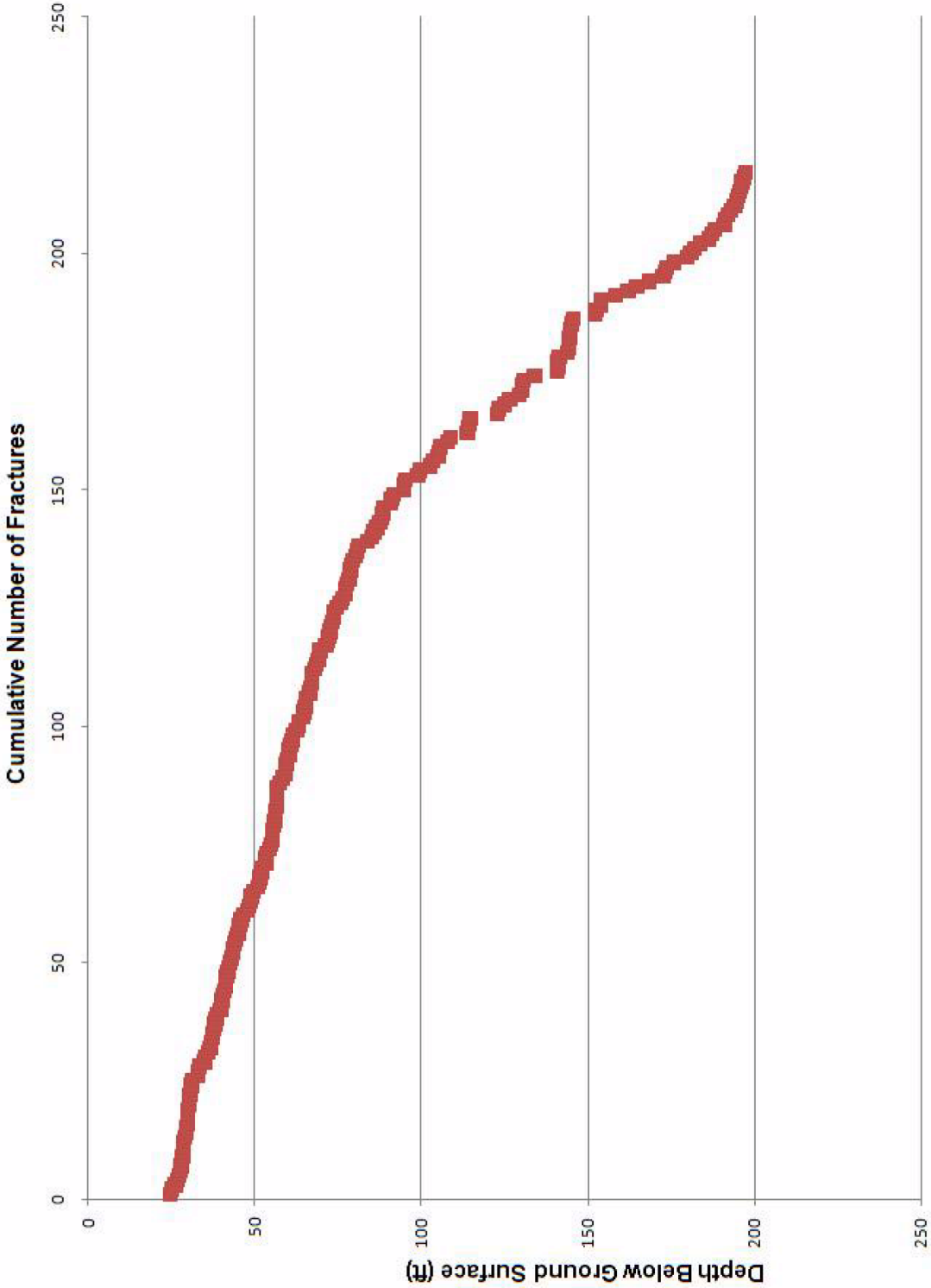

Figure 2.4-101—{Vertical Distribution of Fractures in MW301C Between 45 and 345 Feet Below Ground Surface}

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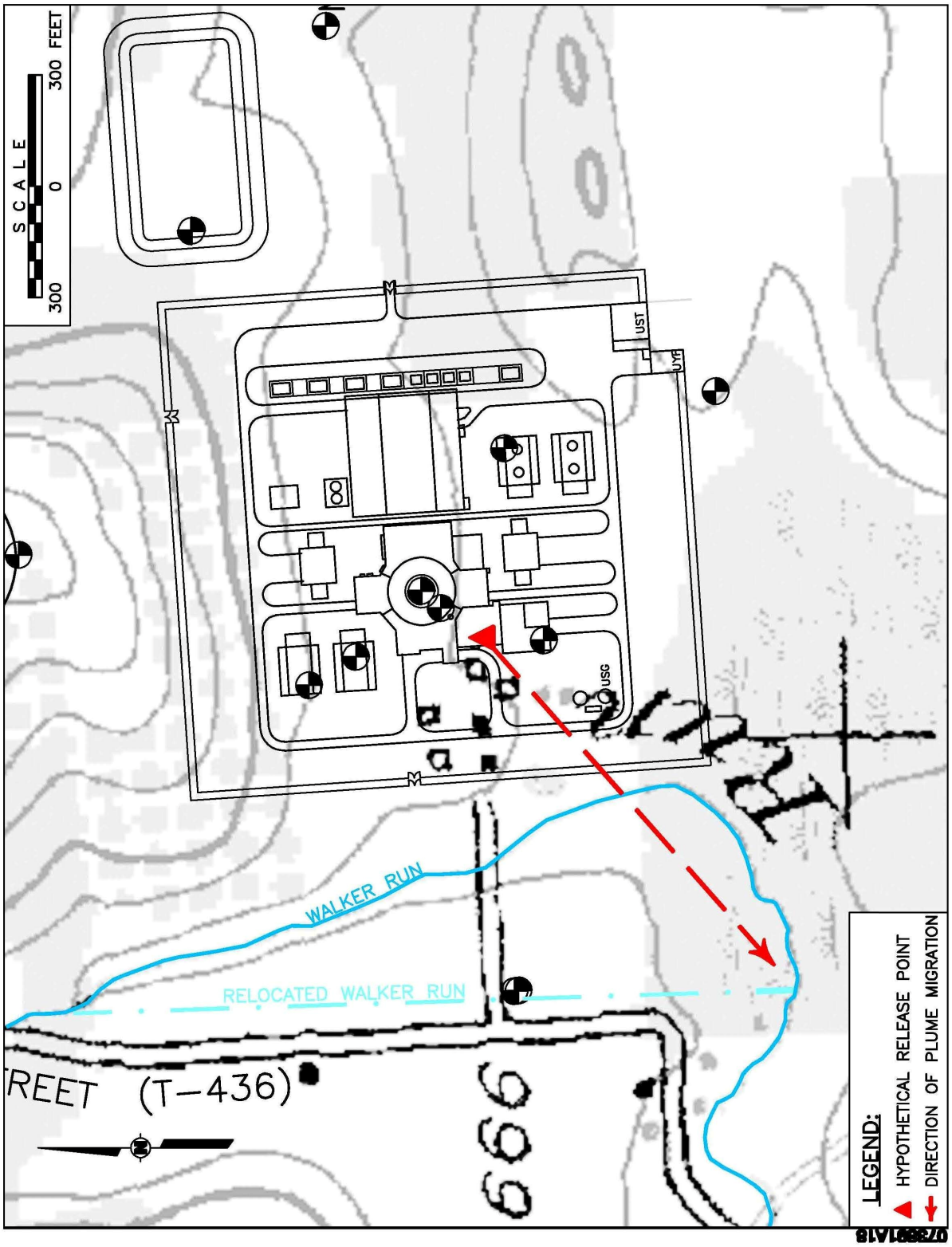

Figure 2.4-102—{Hypothetical Point of Release and Subsurface Migration Path of Accidental Spill}

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Figure 2.4-103—{Distribution of Fracture Dip Directions in Monitoring Well MW310C}

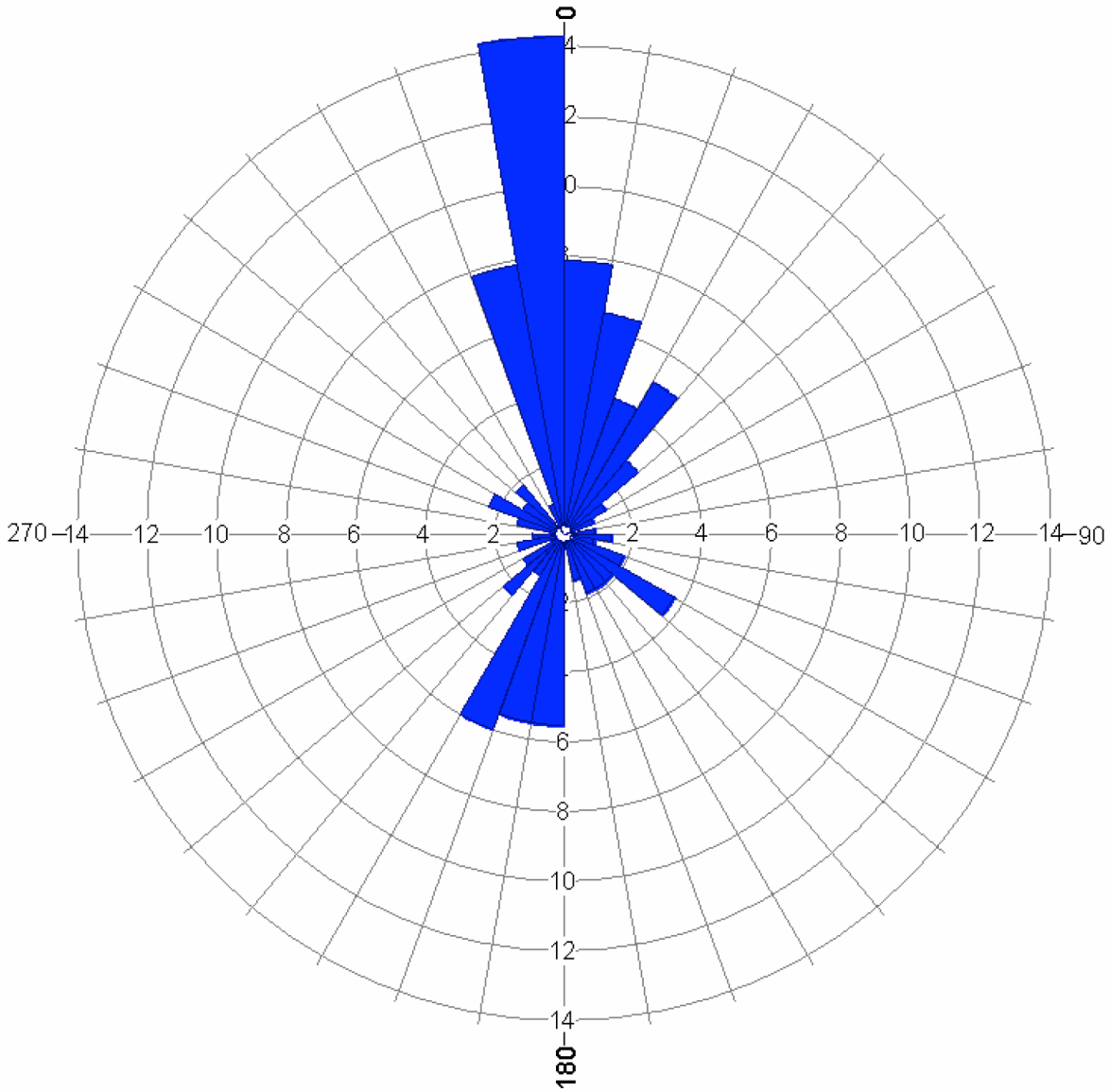

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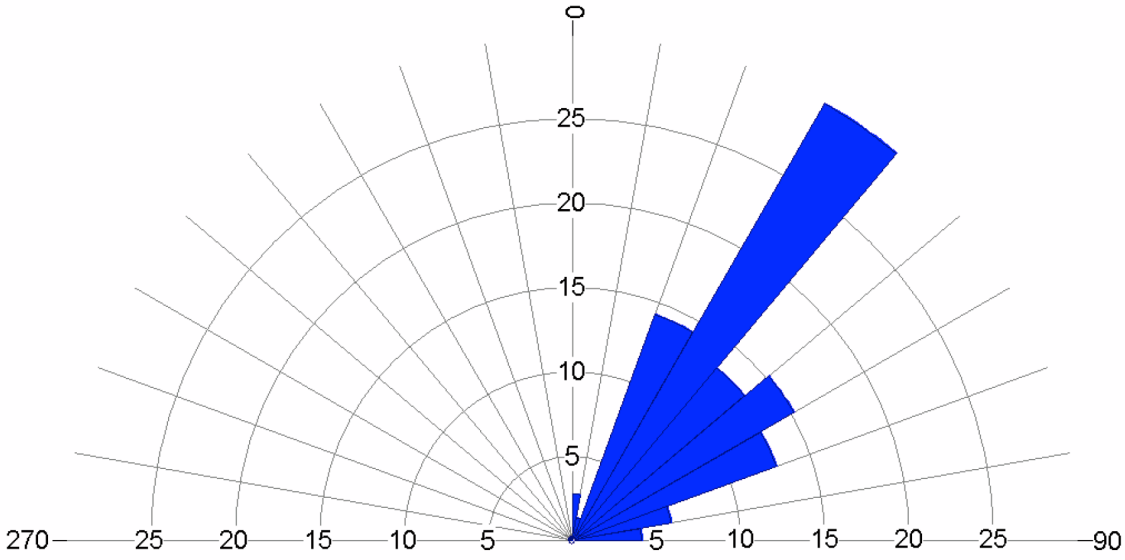
Figure 2.4-104—{Distribution of Fracture Dip Angles in Monitoring Well MW310C}



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