Figure 2.3-39—{Potentiometric Surface Map, Cotter-Jefferson City Aquifer, January 2008}

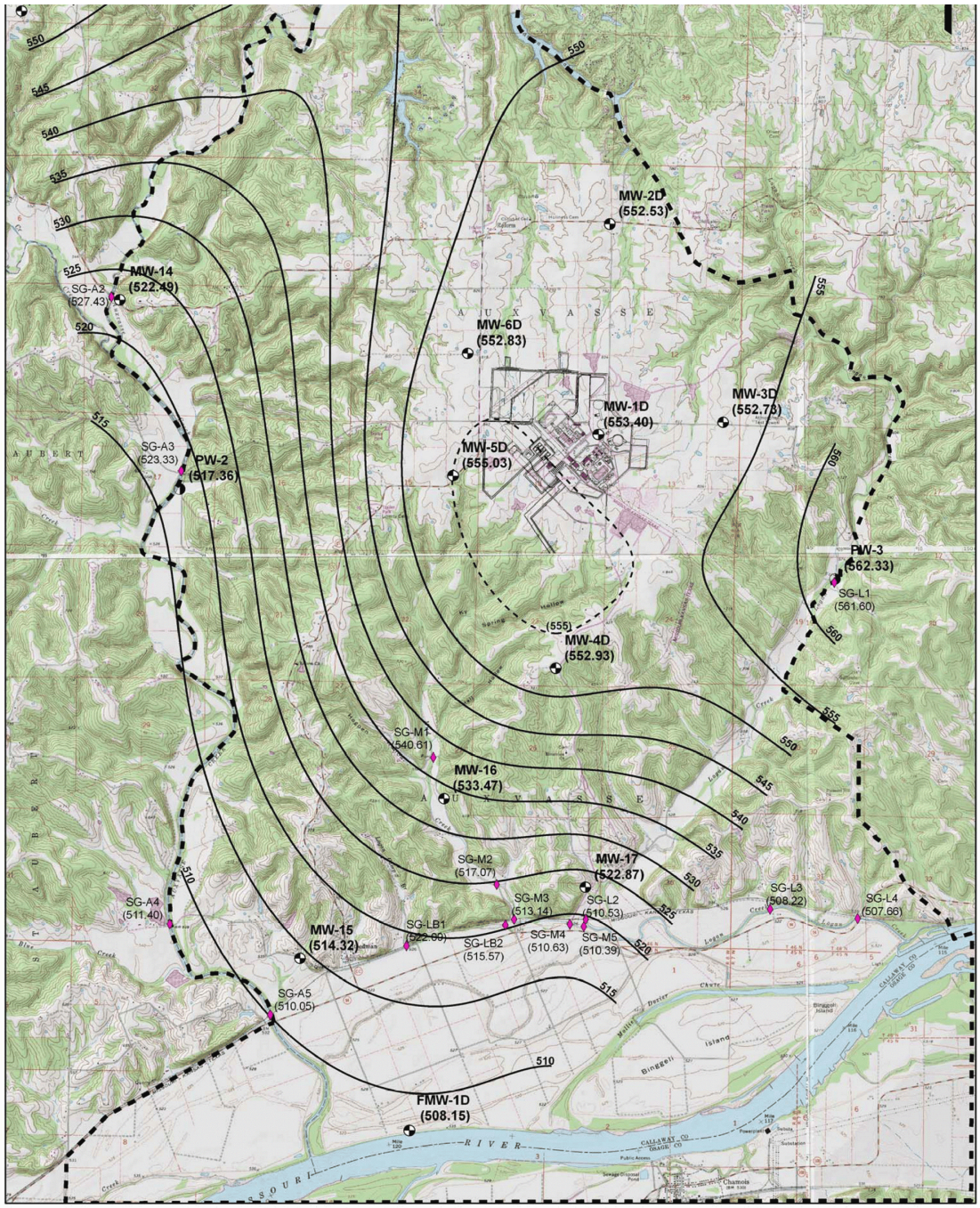
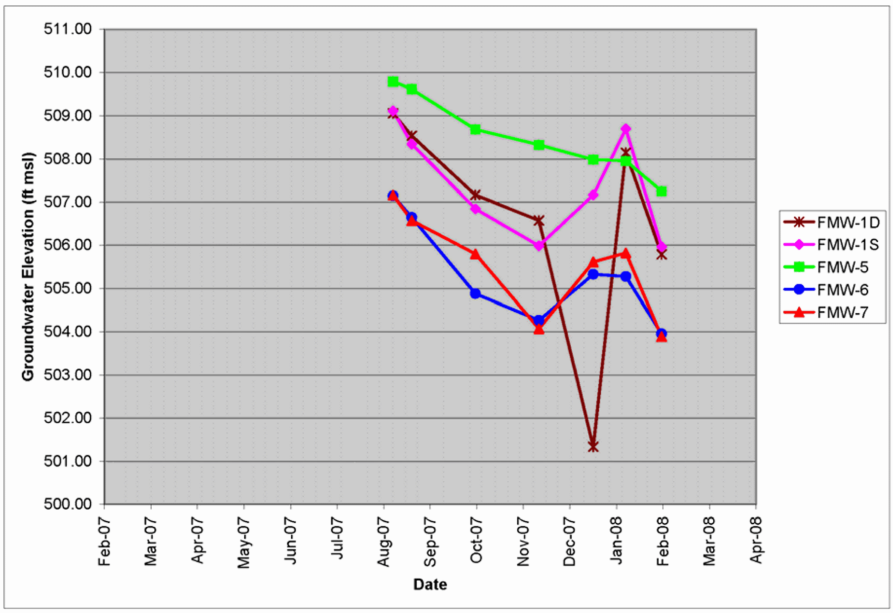
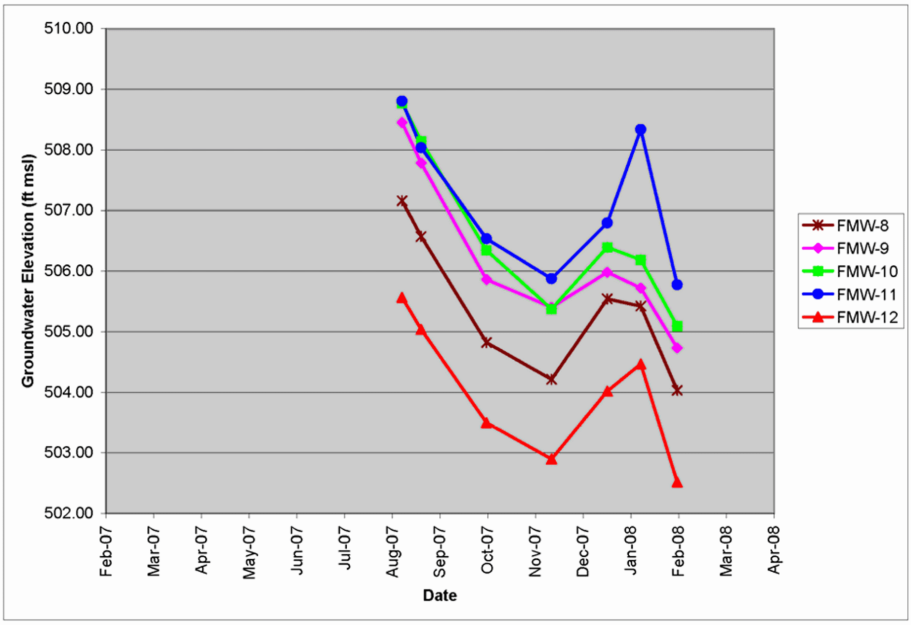


Figure 2.3-40—{Groundwater Elevation versus Date, Missouri River Alluvial Aquifer Wells}





Note: FMW-1S and FMW-1D are a well cluster; FMW-1D is screened in the bedrock beneath the alluvial aquifer.

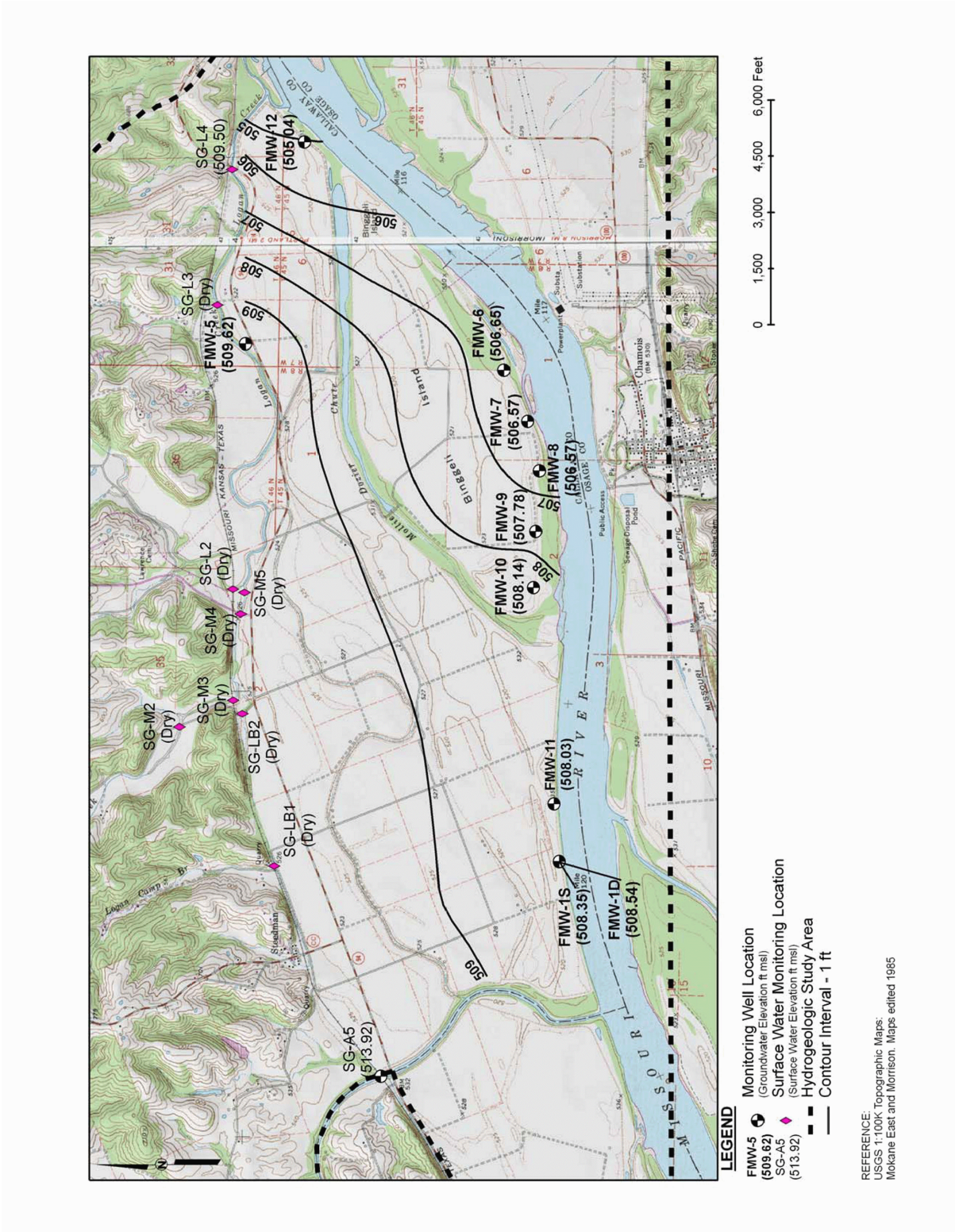


Figure 2.3-41—{Potentiometric Surface Map, Missouri River Alluvial Aquifer, August 2007}

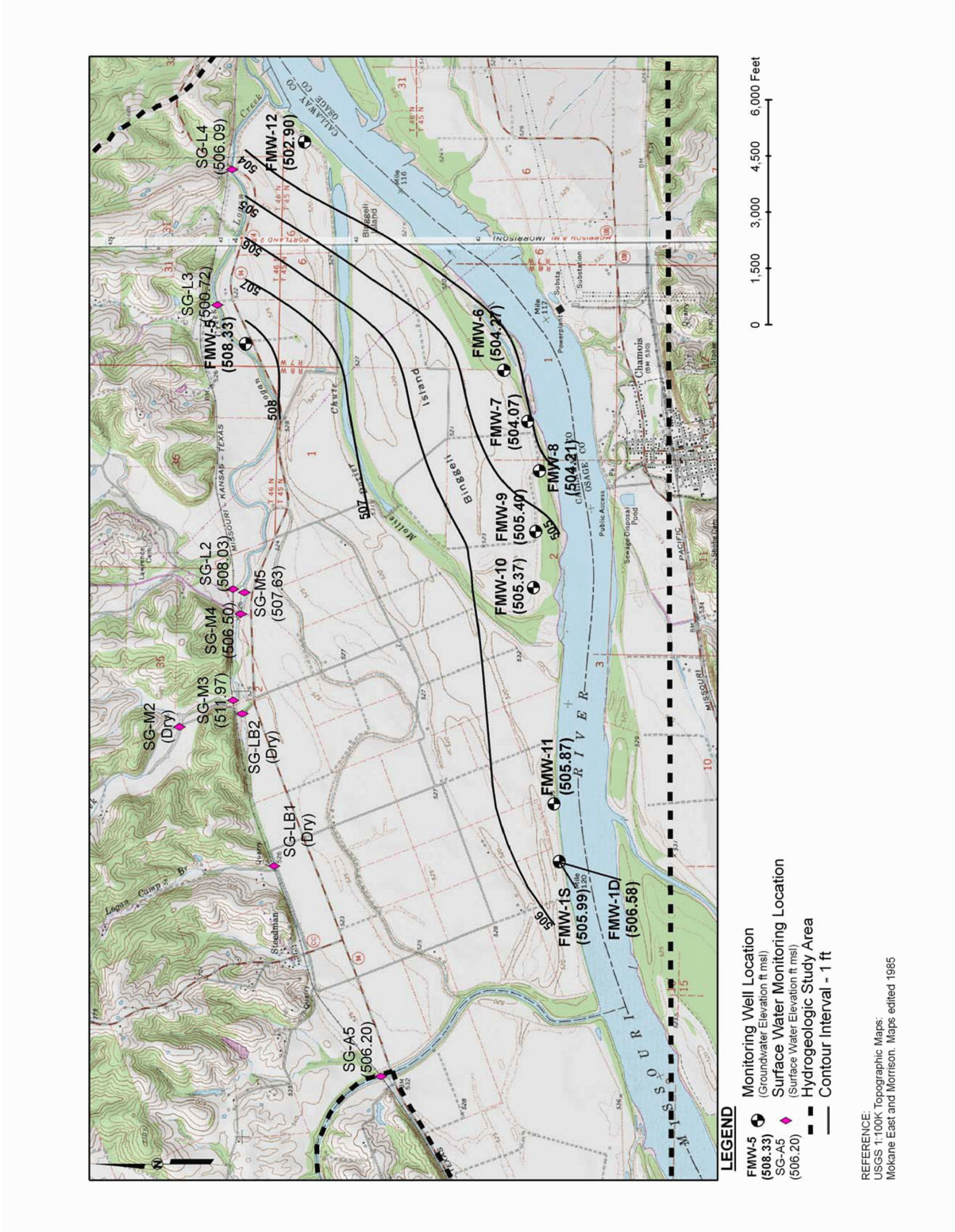


Figure 2.3-42—{Potentiometric Surface Map, Missouri River Alluvial Aquifer, November 2007}

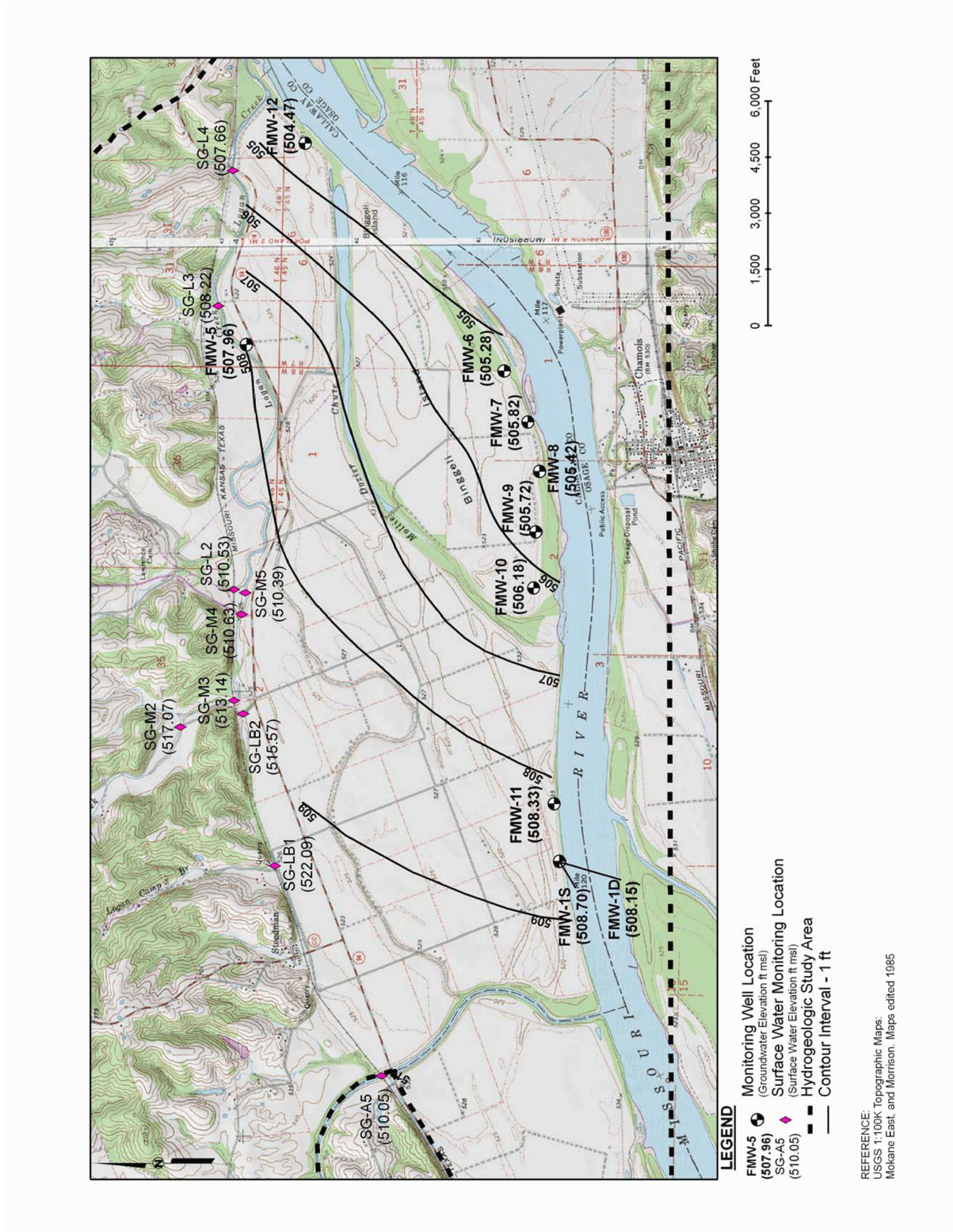
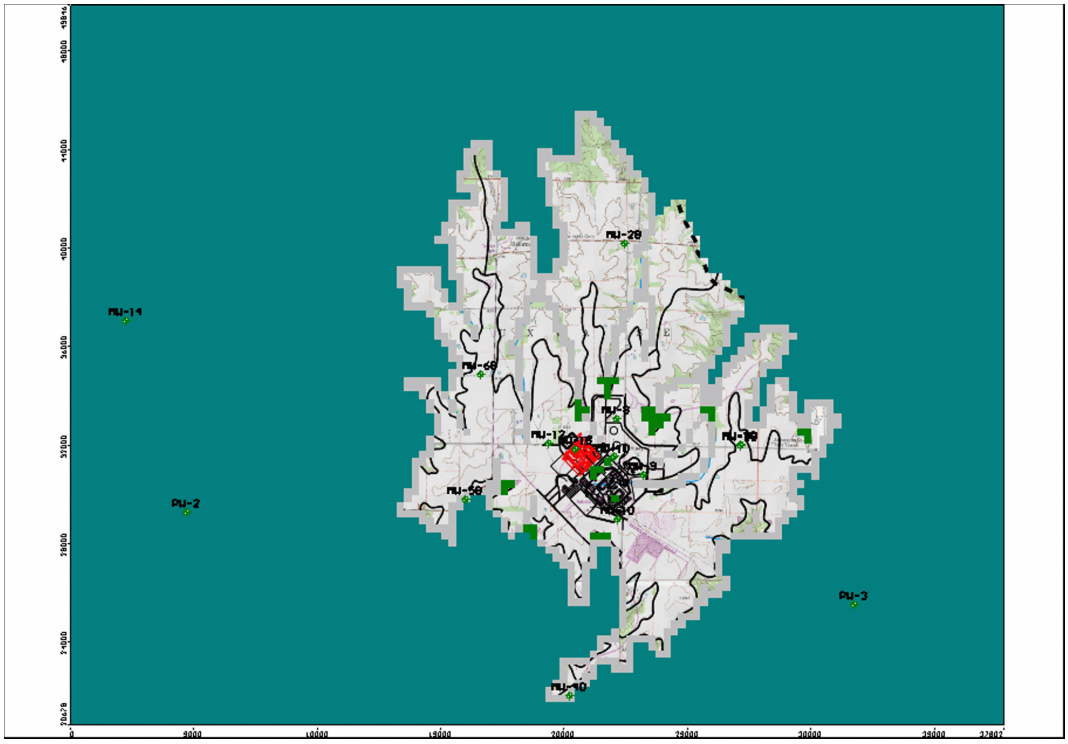


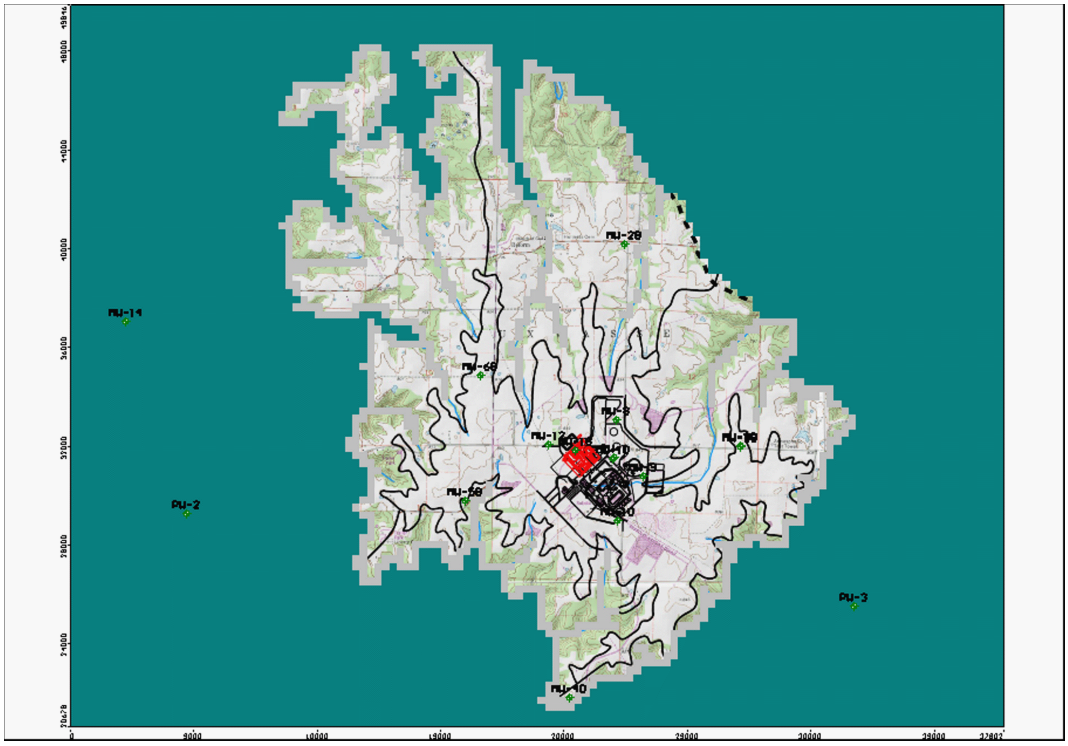
Figure 2.3-43—{Potentiometric Surface Map, Missouri River Alluvial Aquifer, January 2008}

Figure 2.3-44—{Layer 1 Boundary Conditions}



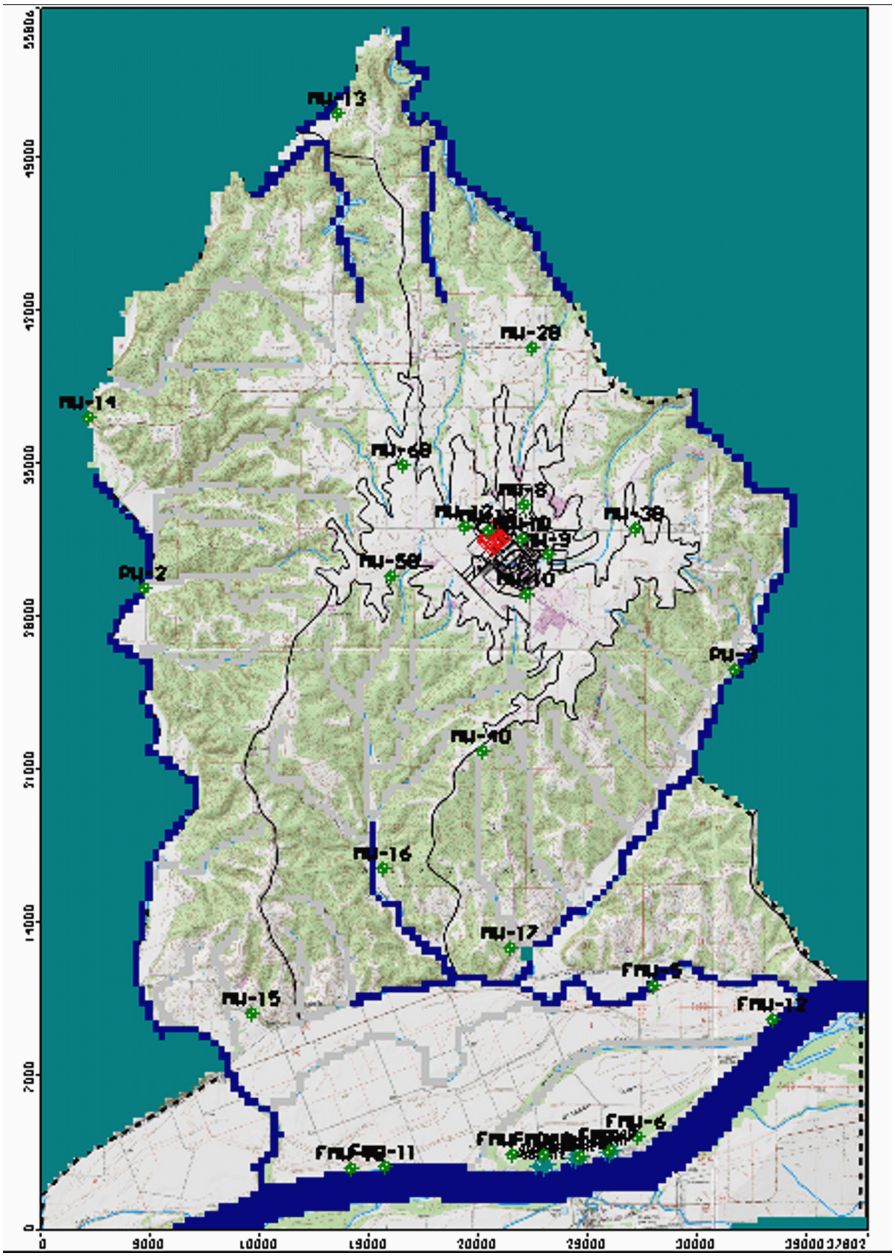
Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Model scale is shown on axes in feet. Refer to text for detailed description.

Figure 2.3-45—{Layer 2 Boundary Conditions}



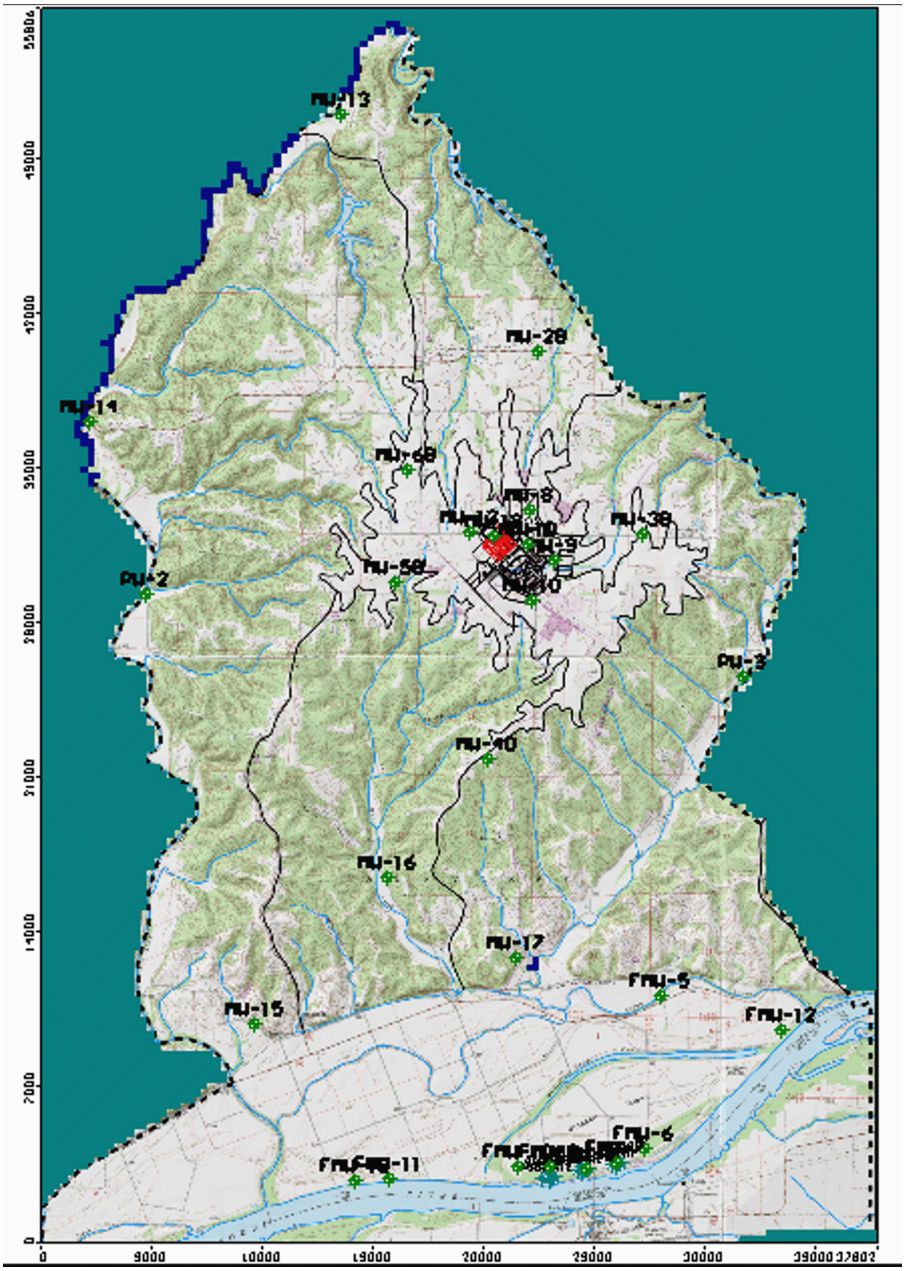
Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Model scale is shown on axes in feet. Refer to text for detailed description.

Figure 2.3-46—{Layer 3 Boundary Conditions}



Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Model scale is shown on axes in feet. Refer to text for detailed description.

Figure 2.3-47—{Layer 4 Boundary Conditions}



Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Model scale is shown on axes in feet. Refer to text for detailed description.

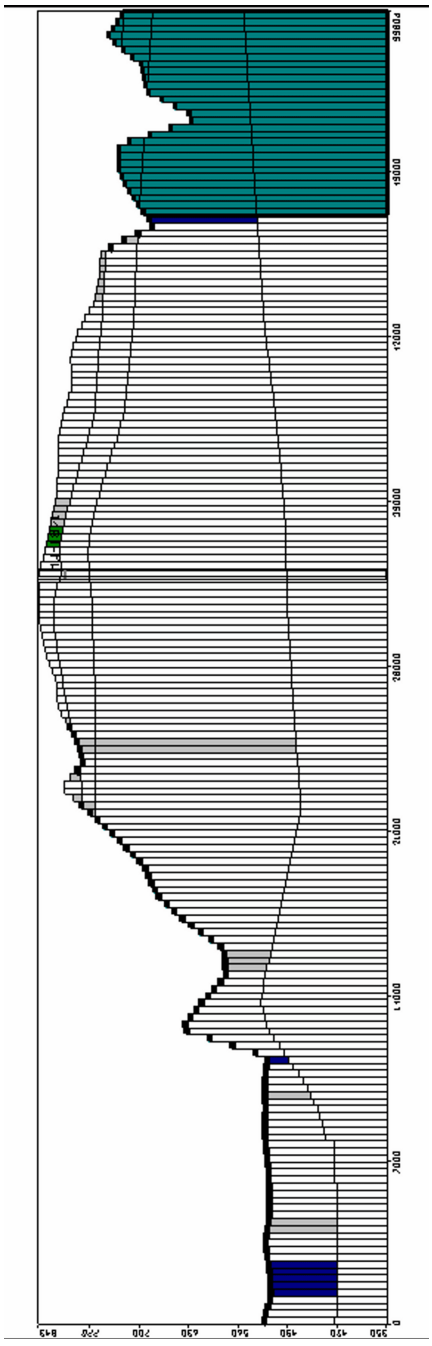


Figure 2.3-48—{South-North Cross-Section}

Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Model scale is shown on axes in feet. Refer to text for detailed description.

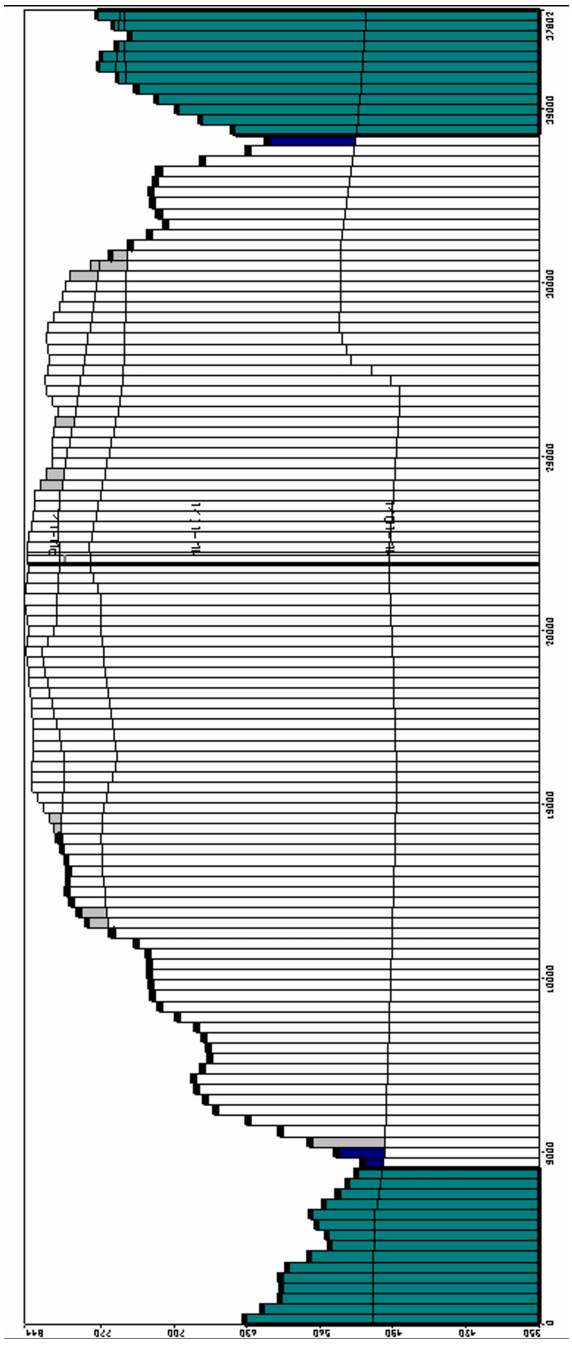
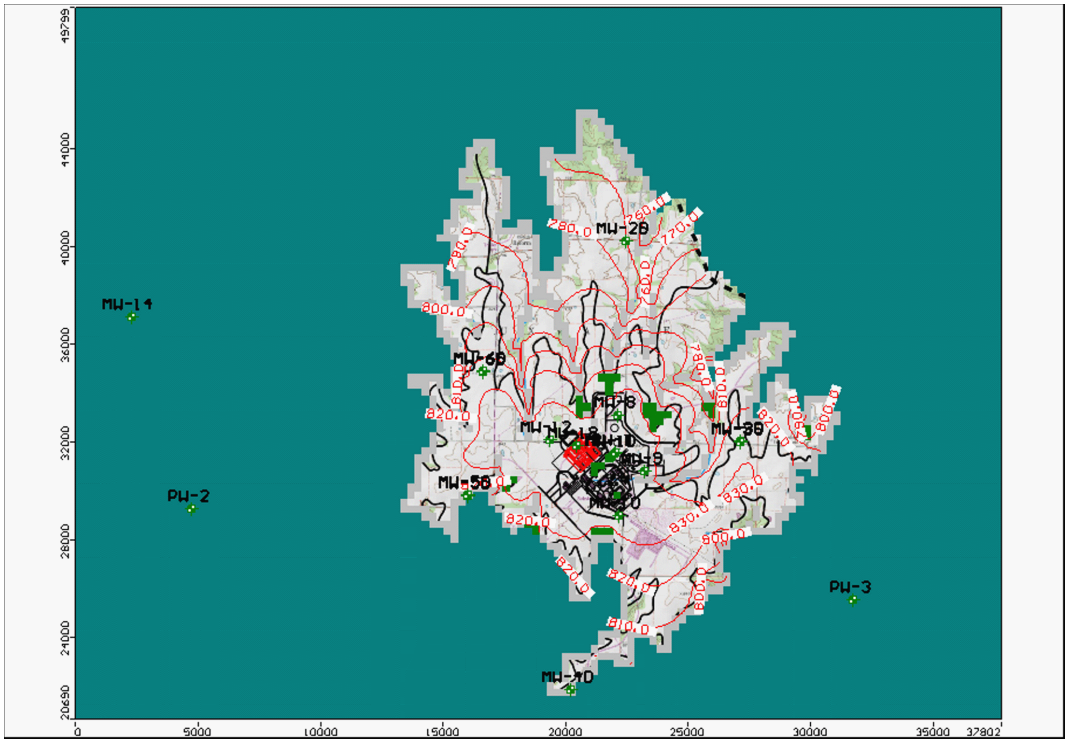


Figure 2.3-49—{East-West Cross-Section}

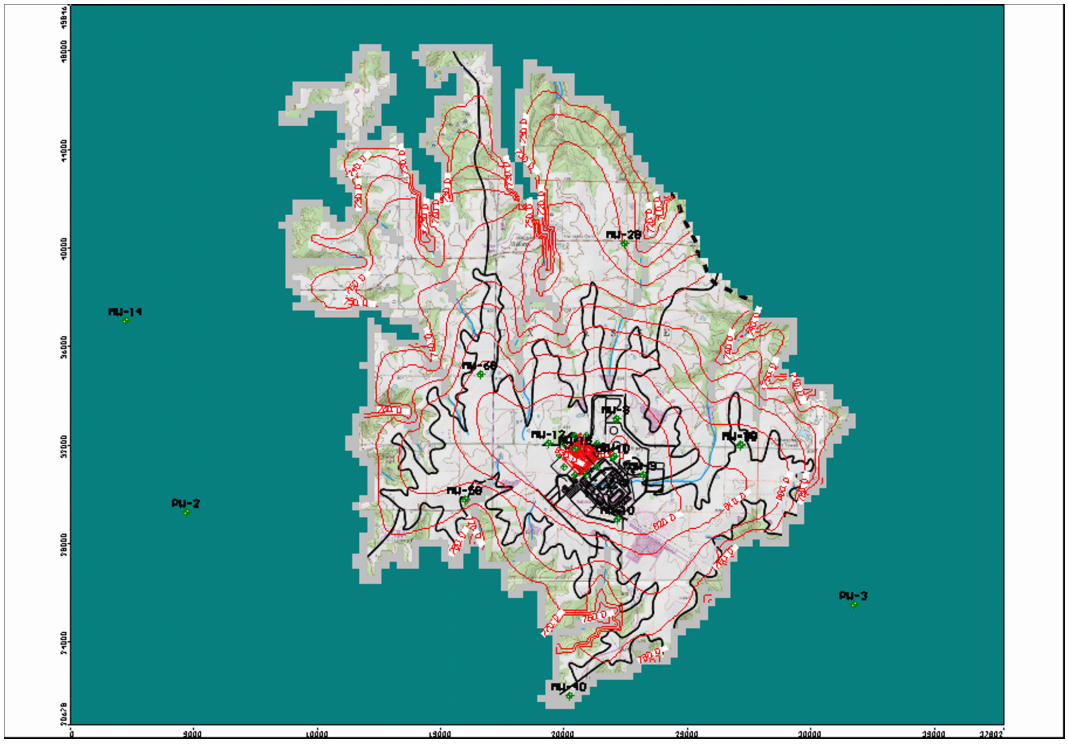
Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Model scale is shown on axes in feet. Refer to text for detailed description.

Figure 2.3-50—{Layer 1 Calibrated Groundwater Elevations}



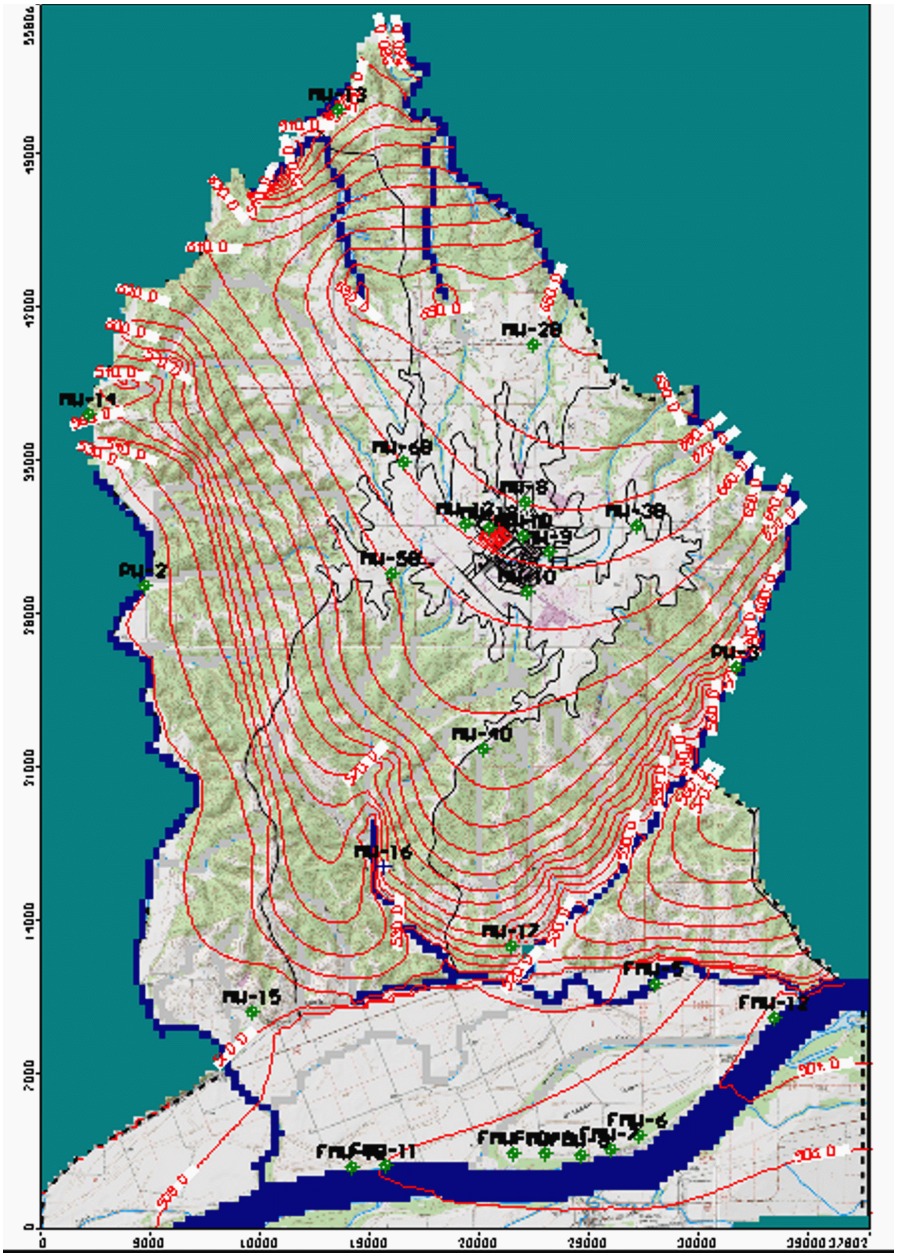
Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Contours are steady-state groundwater elevations in feet msl. Model scale is shown on axes in feet. Refer to text for detailed description.

Figure 2.3-51—{Layer 2 Calibrated Groundwater Elevations}



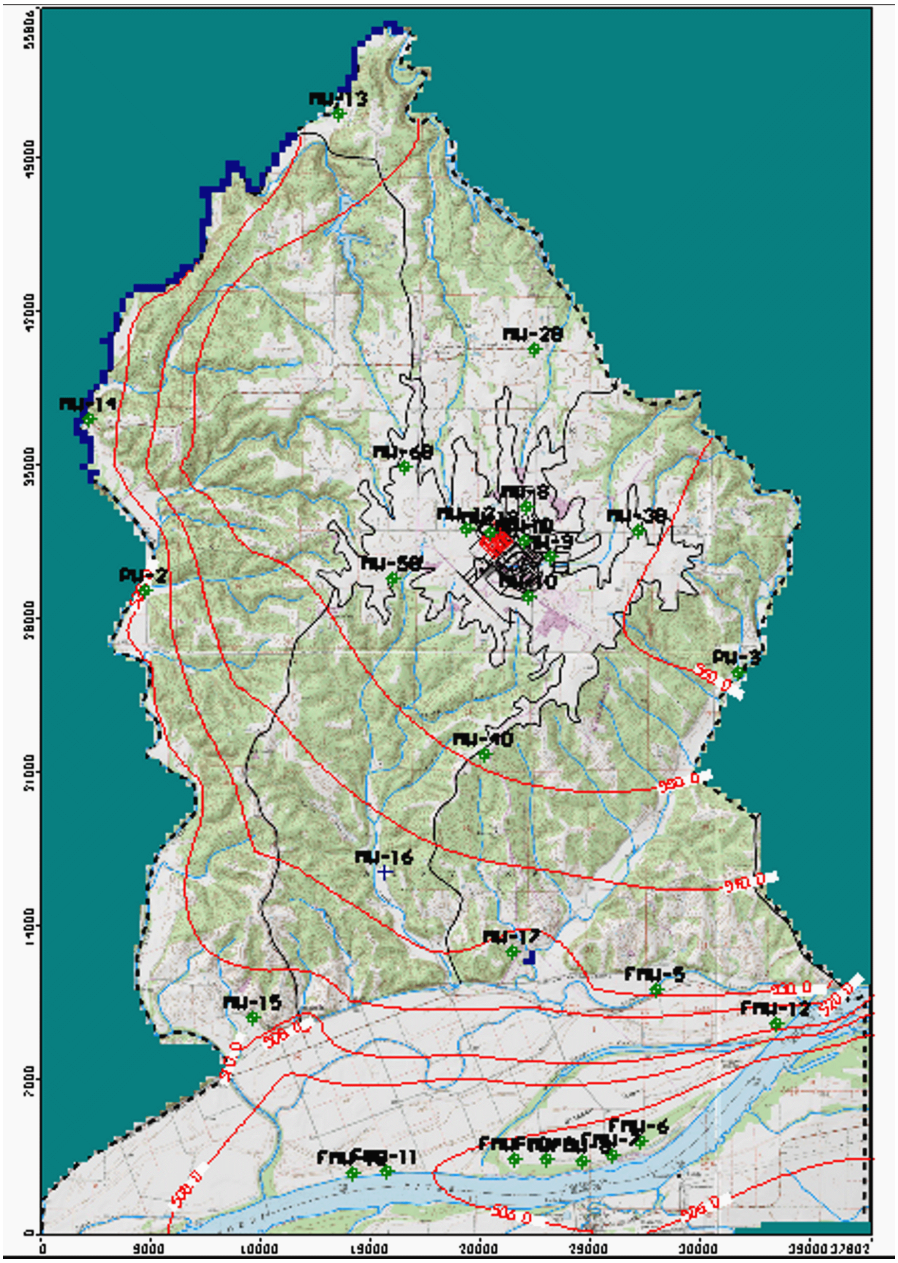
Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Contours are steady-state groundwater elevations in feet msl. Model scale is shown on axes in feet. Refer to text for detailed description.

Figure 2.3-52—{Layer 3 Calibrated Groundwater Elevations}



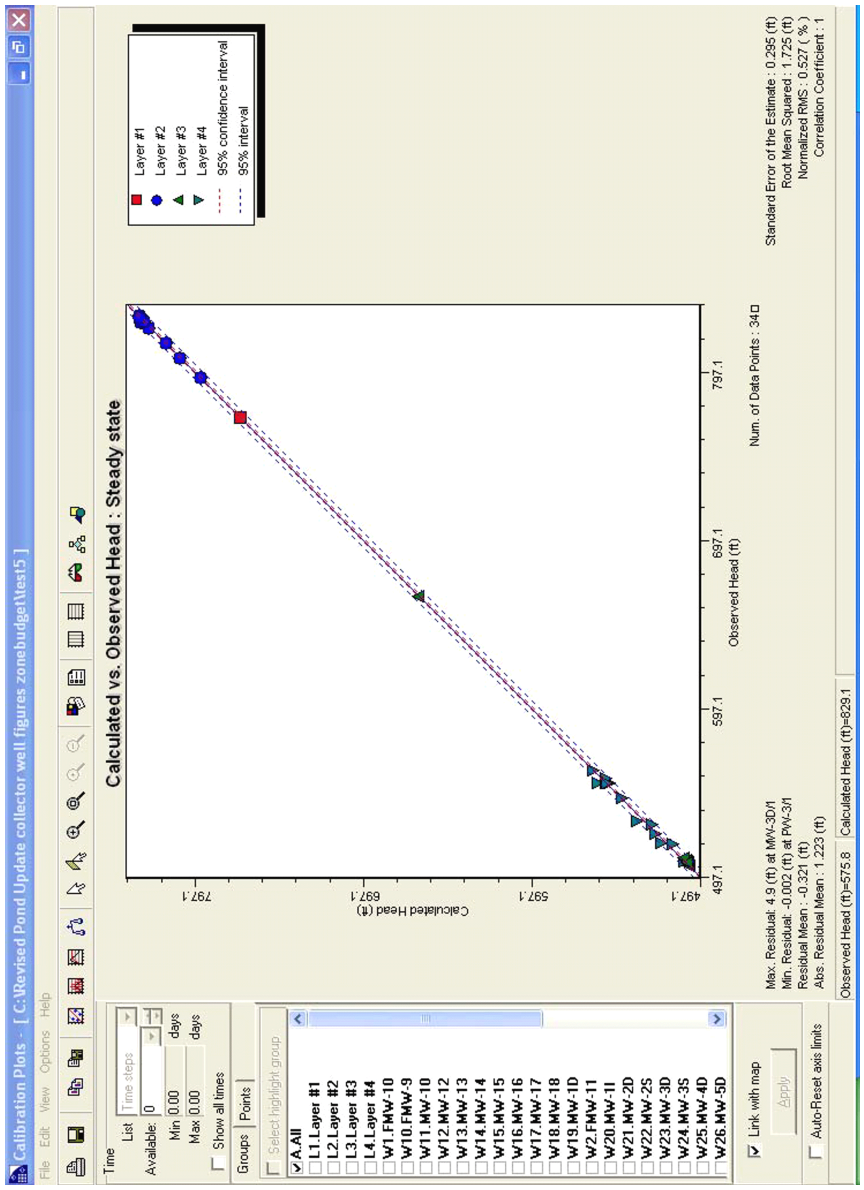
Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Contours are steady-state groundwater elevations in feet msl. Model scale is shown on axes in feet. Refer to text for detailed description.

Figure 2.3-53—{Layer 4 Calibrated Groundwater Elevations}

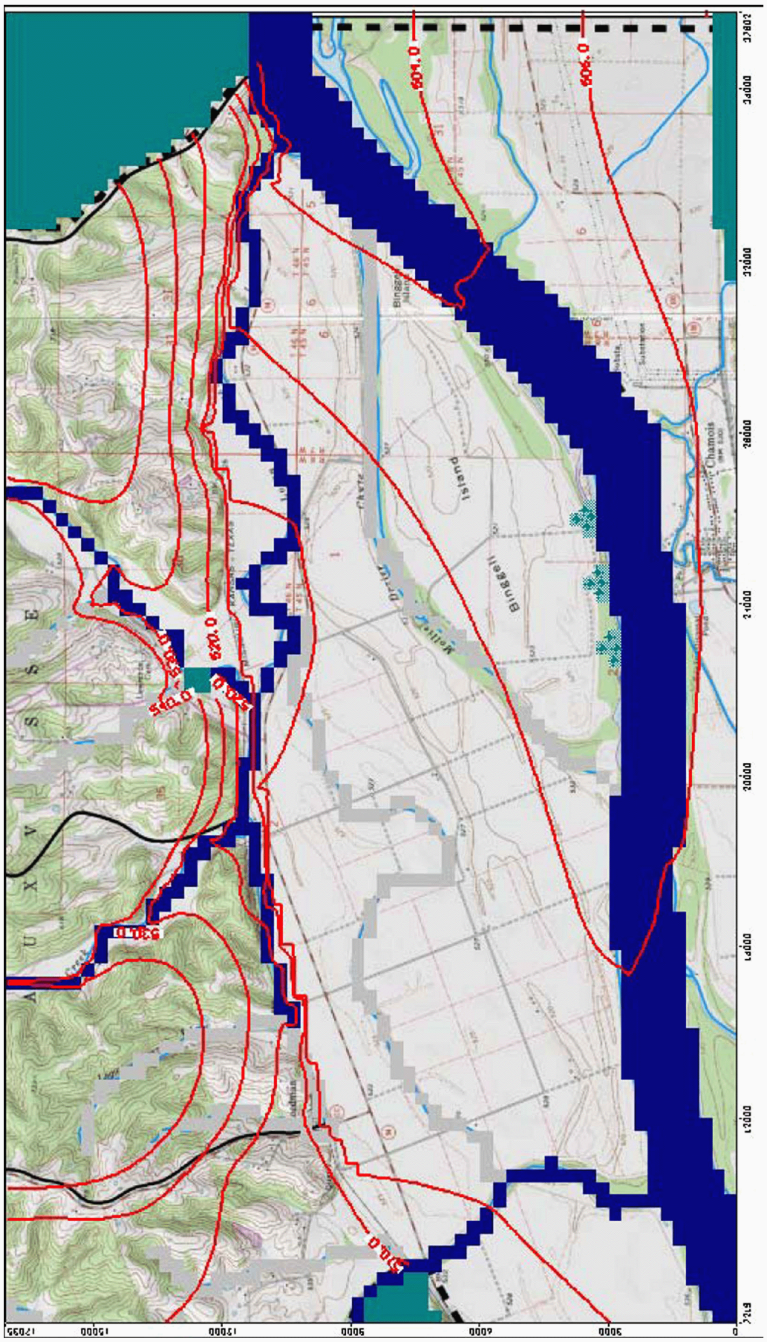


Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Contours are steady-state groundwater elevations in feet msl. Model scale is shown on axes in feet. Refer to text for detailed description.

Figure 2.3-54—{Calibration Graph}



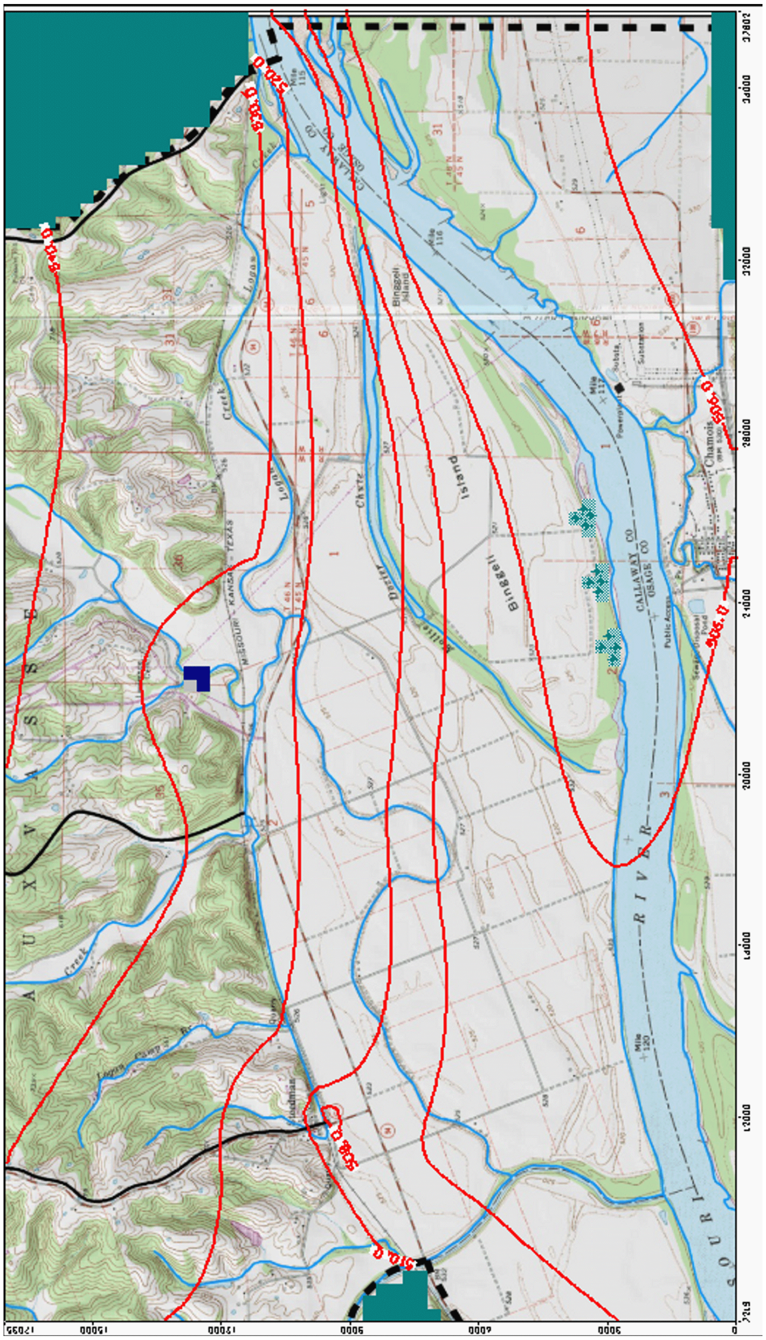
Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Refer to text for detailed description.



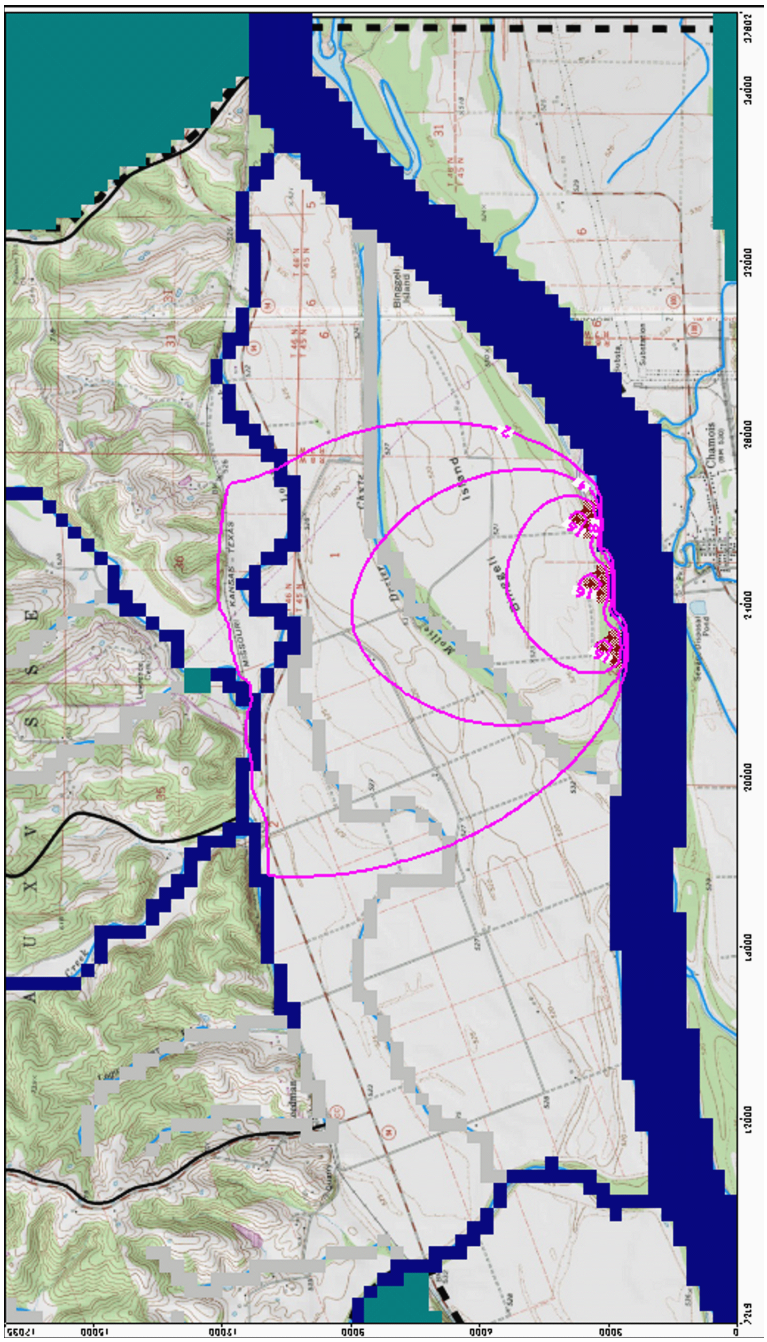
Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Contours are steady-state groundwater elevations in feet msl. Model scale is shown on axes in feet. Refer to text for detailed description.

Figure 2.3-55—{Alluvial Aquifer Pre-Pumping Groundwater Elevations}

Figure 2.3-56—{CJC Aquifer Pre-Pumping Groundwater Elevations}



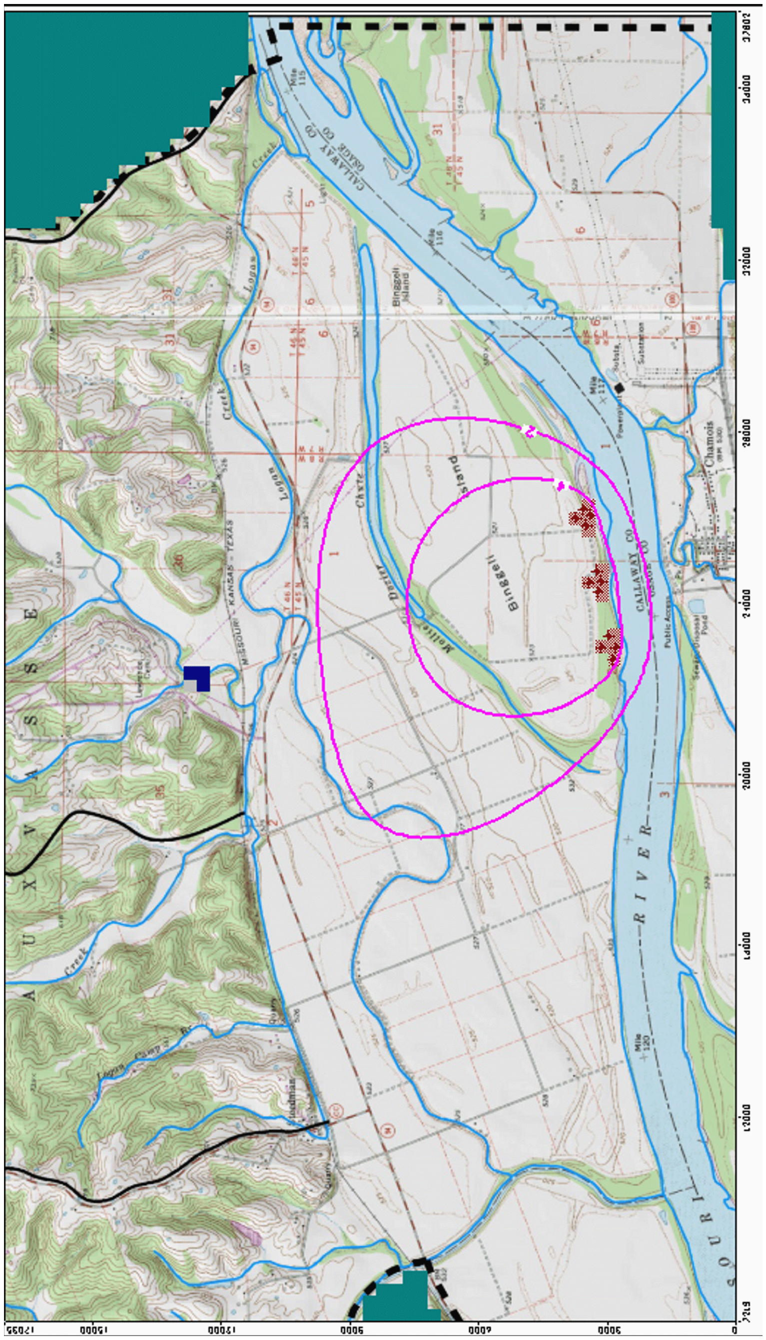
Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Contours are steady-state groundwater elevations in feet msl. Model scale is shown on axes in feet. Refer to text for detailed description.



Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Contours are steady-state drawdown in feet. Model scale is shown on axes in feet. Refer to text for detailed description.

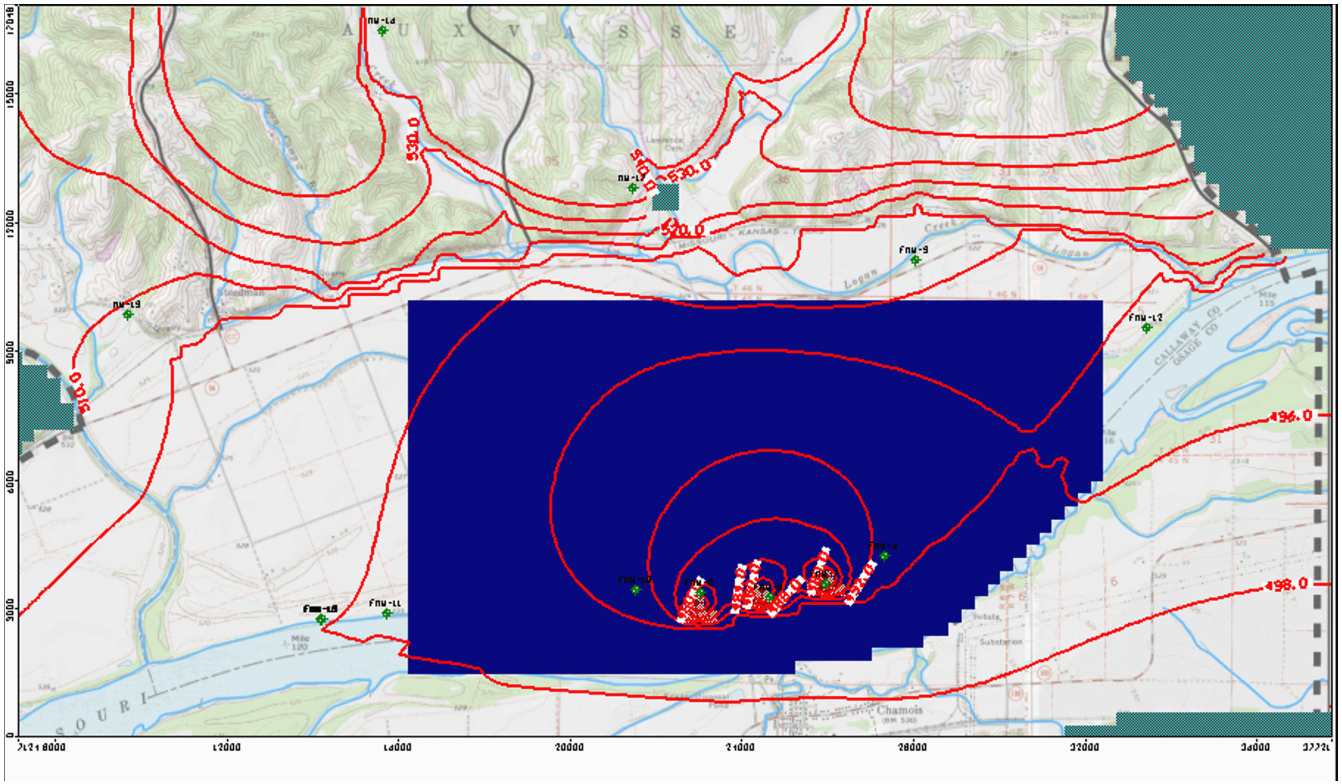
Figure 2.3-57—{Alluvial Aquifer Drawdown}

Figure 2.3-58—{CJC Aquifer Drawdown}



Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Contours are steady-state drawdown in feet. Model scale is shown on axes in feet. Refer to text for detailed description.

Figure 2.3-59—{Alluvial Aquifer Groundwater Elevations and Zone Budget Analysis}

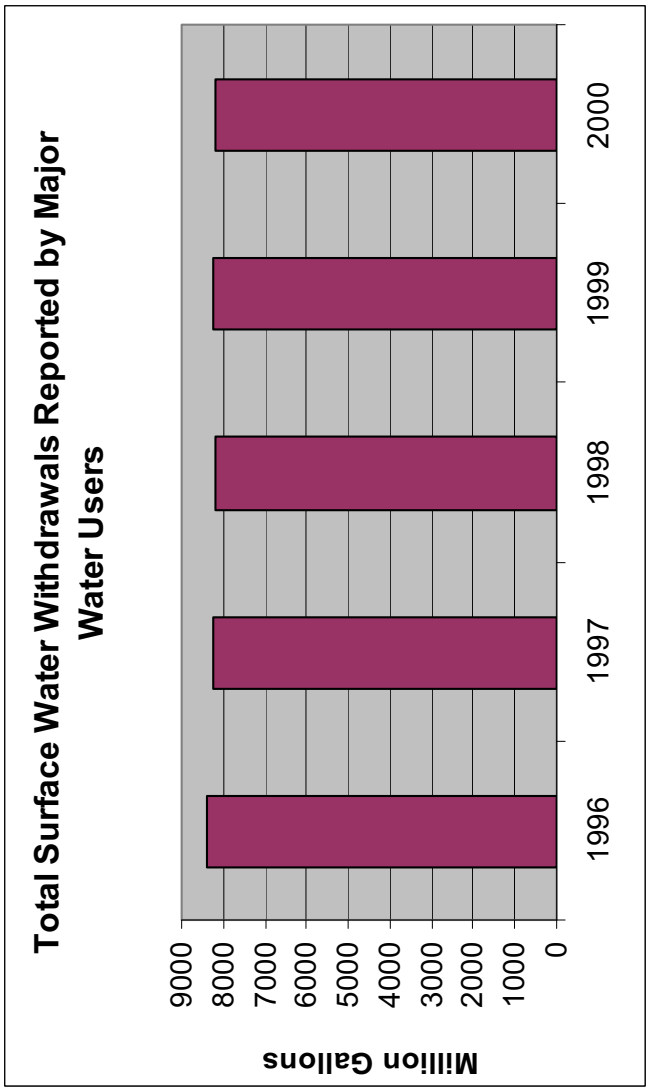


Note: Contours are stead-state groundwater elevations in feet msl with the collector wells pumping during the 100-year drought.

Blue zone is the area over which Zone Budget calculations were performed. Model scale is shown on axes in feet.

Note: Image is a direct export from Visual MODFLOW Premium Version 4.2 Waterloo Hydrogeologic, Inc., Schlumberger Water Services, 2006. Refer to text for detailed description.

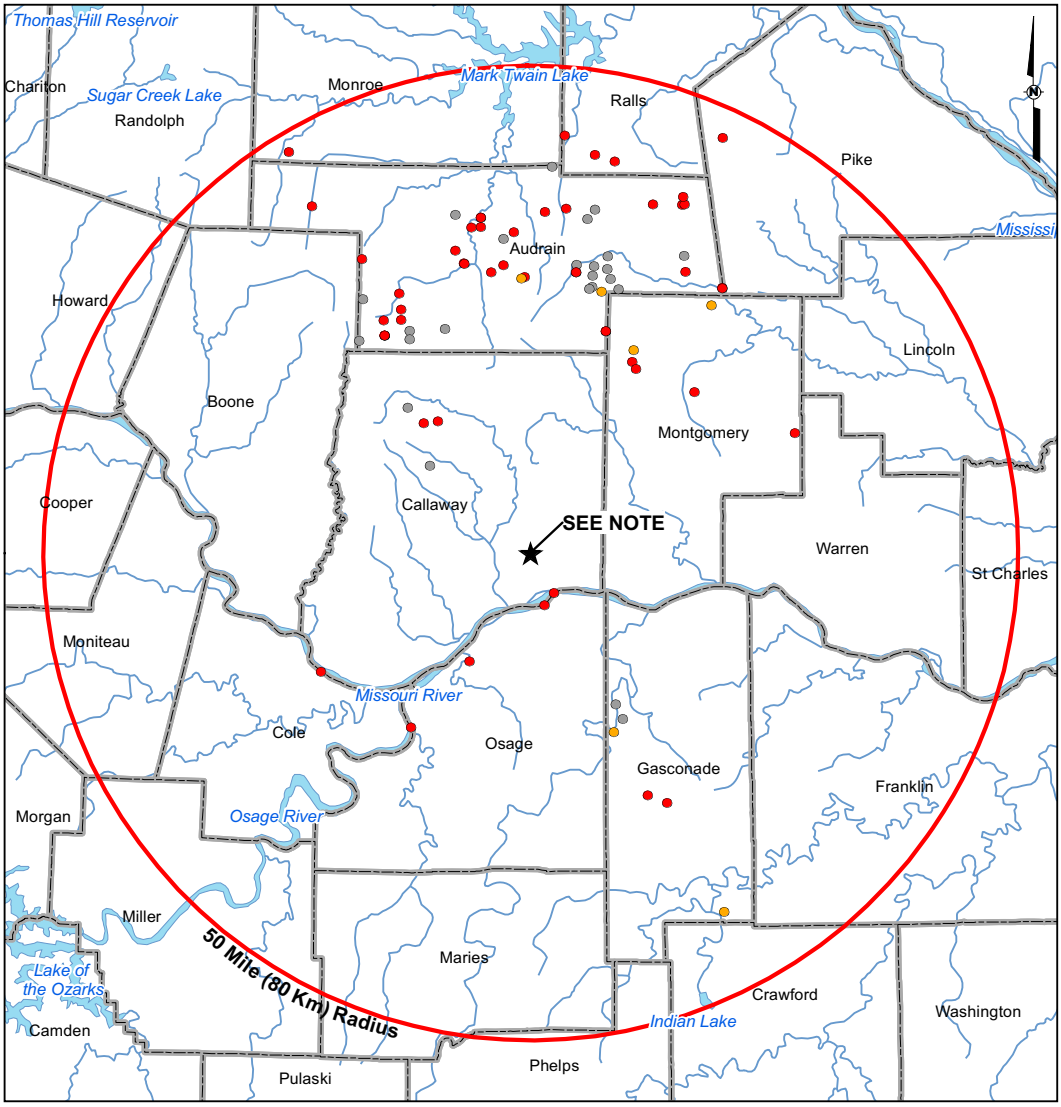
ER Section 2.3



Source: **MODNR, 2003** Major Water Use in Missouri River:1996-2000, Water Resources Report No. 72

Figure 2.3-60—{Callaway County Surface Water Use}

Figure 2.3-61—{Surface Water Intakes 50 Mile (80km) Radius}



LEGEND

Surface Water Intake
- Active
- Inactive (operational but not in use or only used for emergencies)
- Not Sure (no report in over 5 years)

Unit 2 Reactor 50 Mile (80 Km) Radius

County Boundary

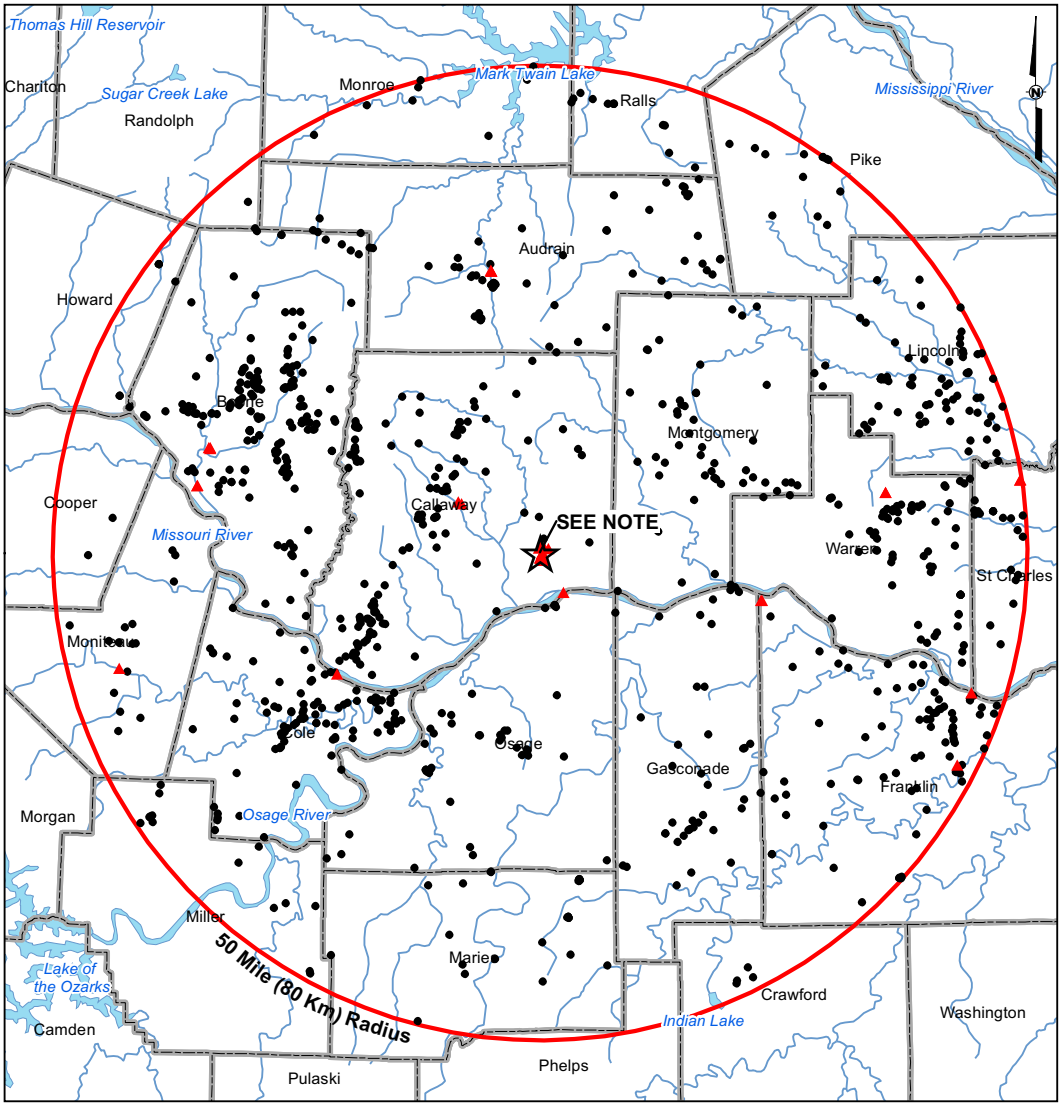
Streams and Rivers

Waterbody

NOTE:
REFERENCE CENTER POINT OF PLANT SITE IS DEFINED AT THE MIDPOINT BETWEEN EXISTING REACTOR FOR CALLAWAY PLANT UNIT 1 AND REACTOR FOR CALLAWAY PLANT UNIT 2.

REFERENCE:
ESRI StreetMap Pro [CD-ROM], 2007,rivers, waterbodies, and county boundaries.
Missouri Department of Natural Resources, November 2007,Surface Water Intakes

Figure 2.3-62—{NPDES Locations 50 Mile (80km) Radius}



LEGEND

NPDES Location
- Major Location
- Minor Location

Unit 2 Reactor 50 Mile (80 Km) Radius

County Boundary

Streams and Rivers

Waterbody

NOTE:
REFERENCE CENTER POINT OF PLANT SITE IS DEFINED AT THE MIDPOINT BETWEEN EXISTING REACTOR FOR CALLAWAY PLANT UNIT 1 AND REACTOR FOR CALLAWAY PLANT UNIT 2.

REFERENCE:
ESRI StreetMap Pro [CD-ROM], 2007,rivers, waterbodies, and county boundaries.
Missouri Spatial Data Information Service, NPDES, 2006
http://www.msdis.missouri.edu

Figure 2.3-63—{Hydrogeologic Study Area Public and Private Wells}

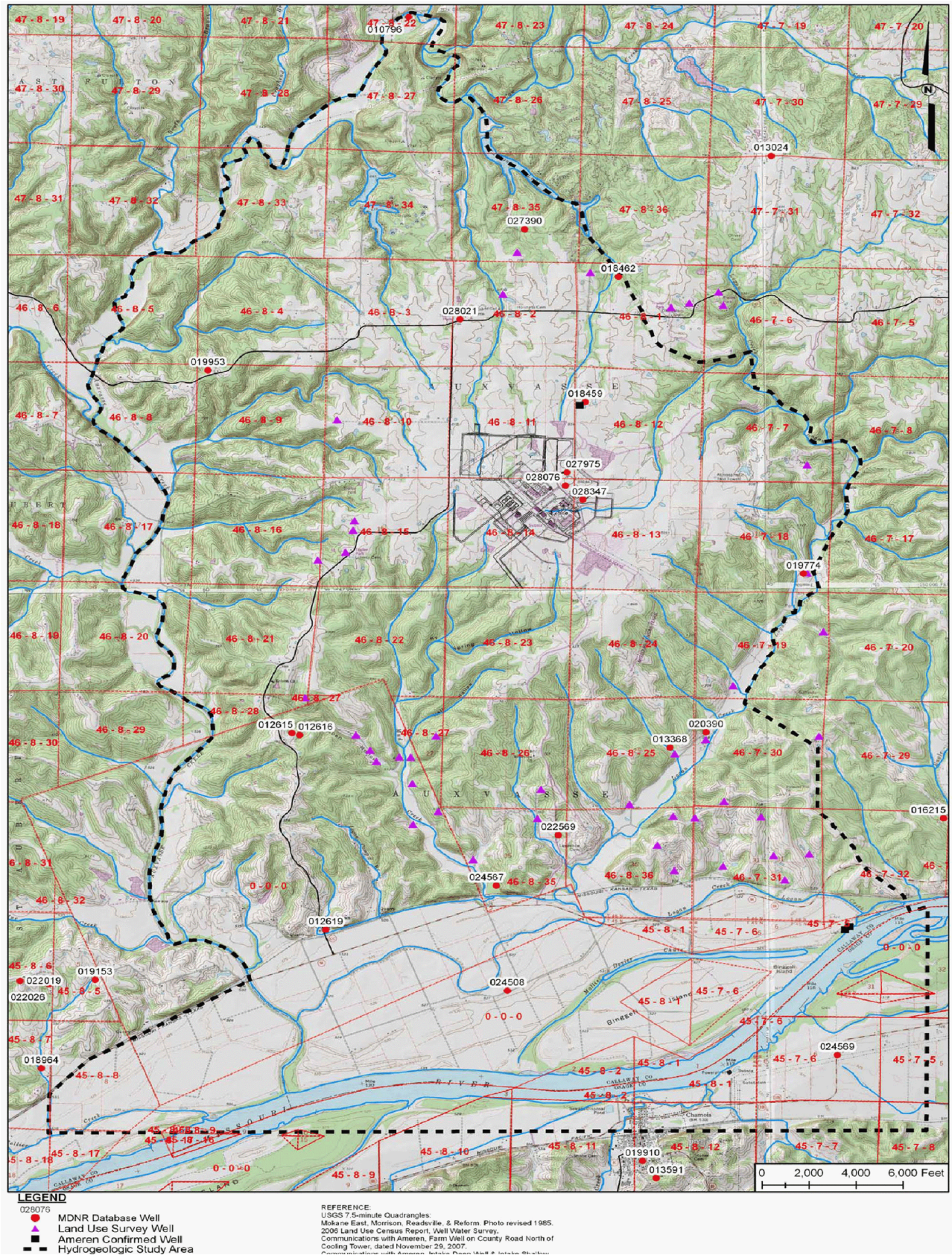
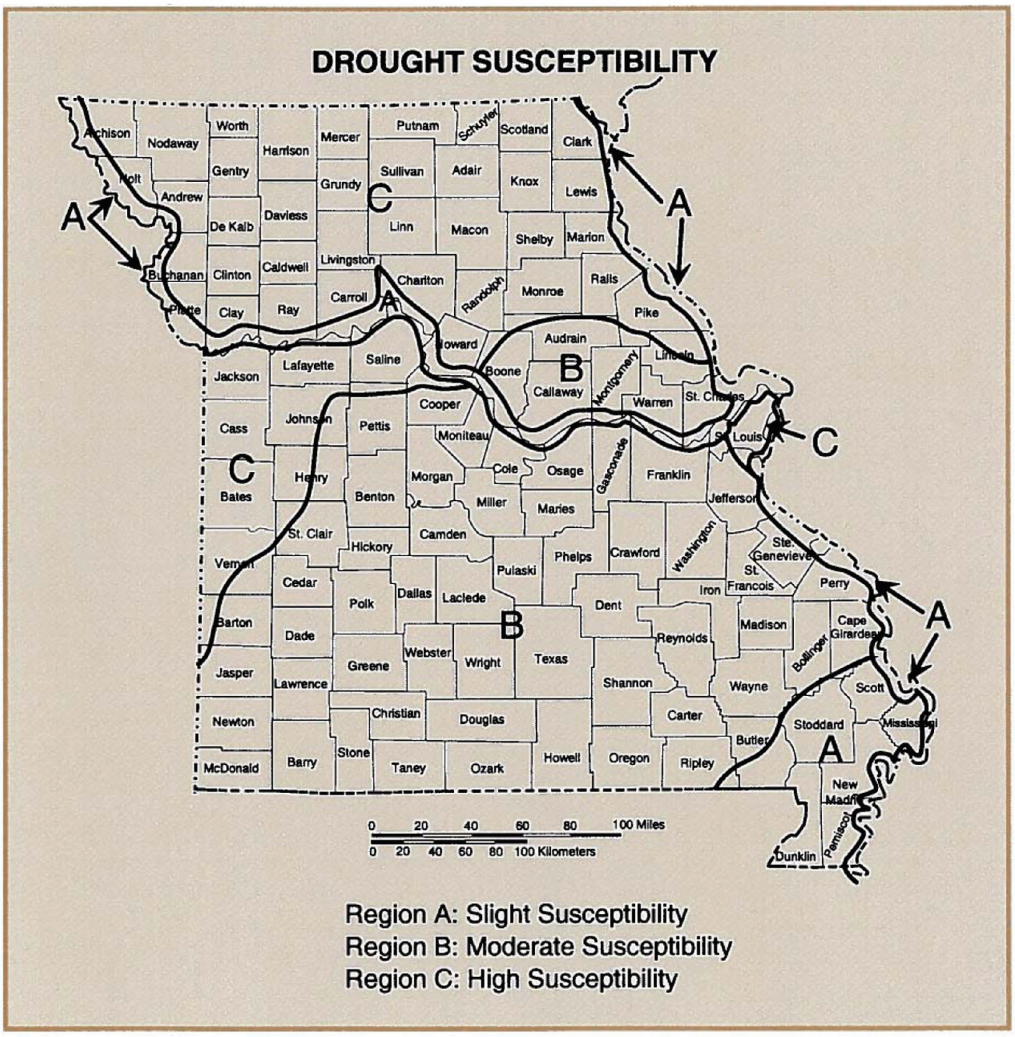
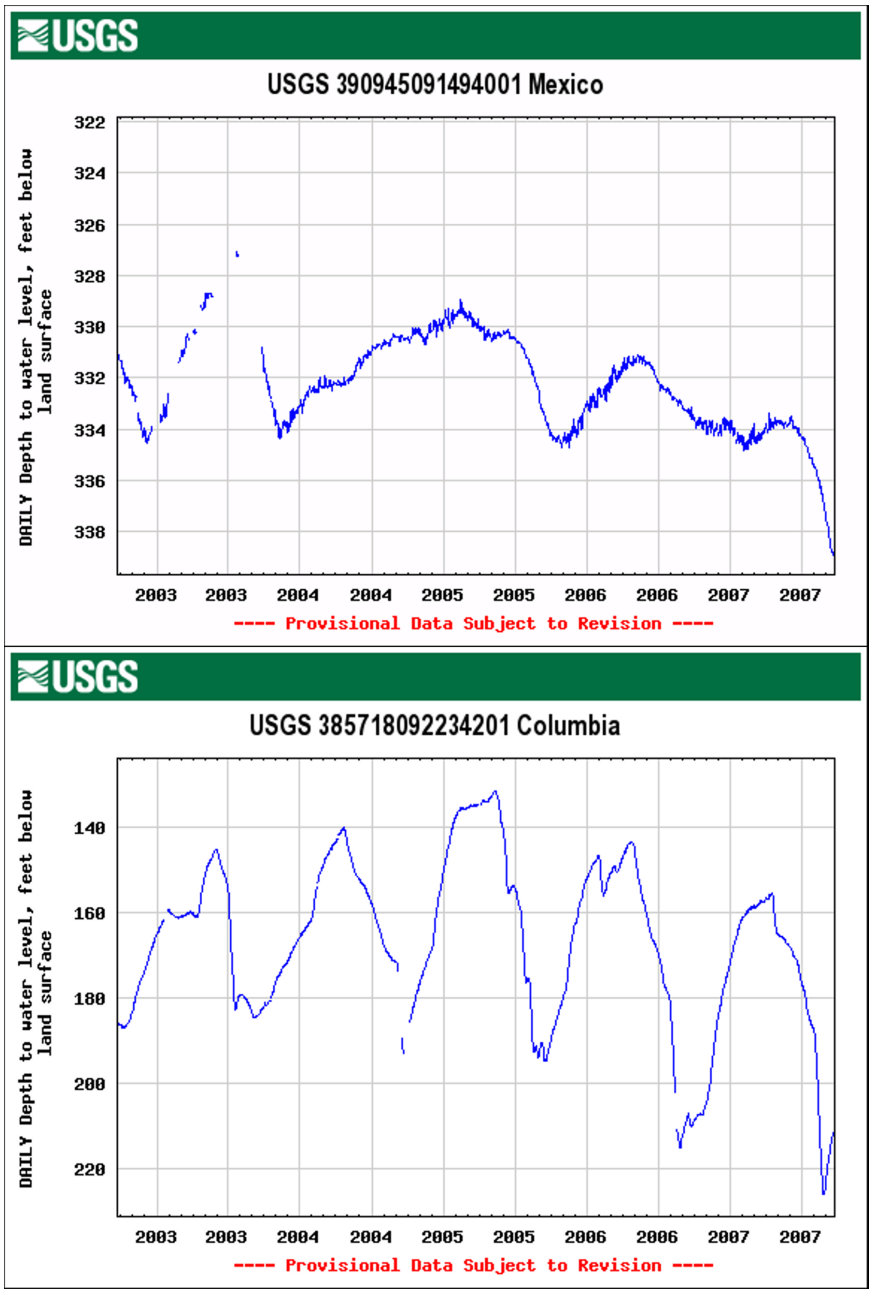


Figure 2.3-64—{Missouri Drought Susceptibility}



Reference: Missouri Drought Plan, MDNR, 2002.

Figure 2.3-65—{Groundwater Monitoring Hydrographs for Audrain and Boone Counties}

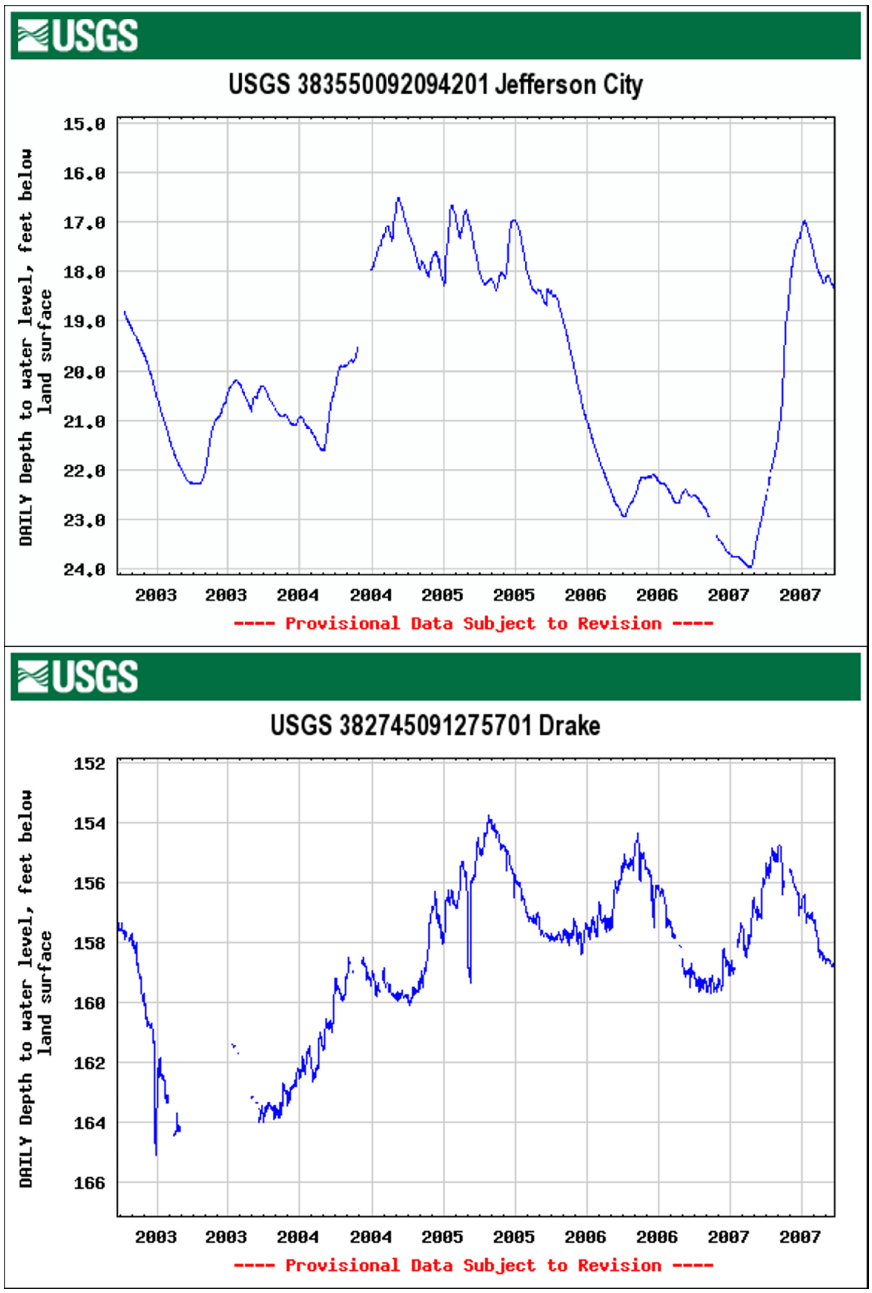


Audrain County

Boone County

Note: MDNR operates a water-level monitoring well network at sites throughout Missouri. The monitoring wells are equipped with data collection platforms that transmit the data to a GOES satellite which relays the data to a USGS Land Receiving Ground Station so that the data can be provided cooperatively by the DNR and USGS on a real-time basis. Reference: USGS National Water Information System, http://nwis.waterdata.usgs.gov/mo/nwis/, September 24, 2007.

Figure 2.3-66—{Groundwater Monitoring Hydrographs for Callaway and Gasconade Counties}

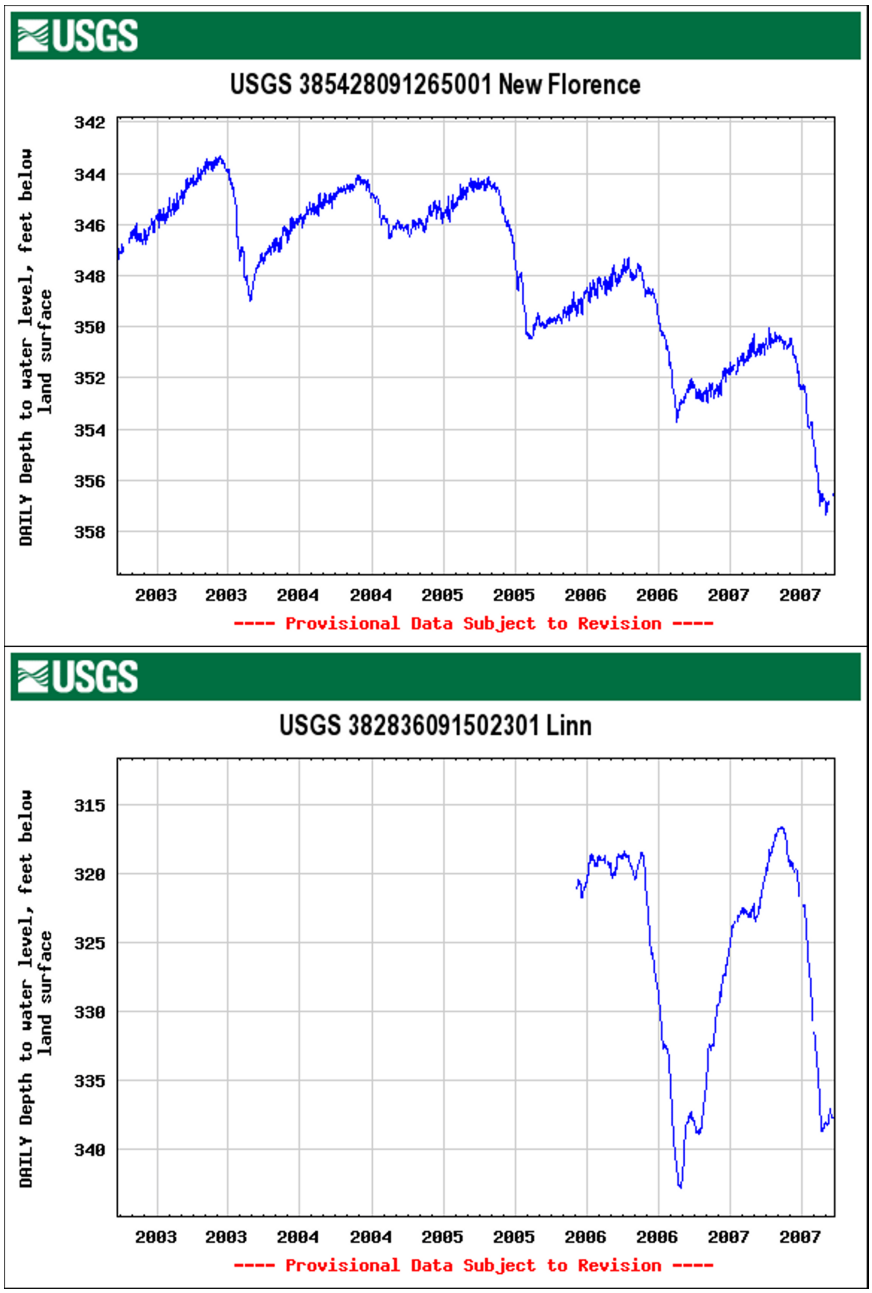


Callaway County

Gasconade County

Note: MDNR operates a water-level monitoring well network at sites throughout Missouri. The monitoring wells are equipped with data collection platforms that transmit the data to a GOES satellite which relays the data to a USGS Land Receiving Ground Station so that the data can be provided cooperatively by the DNR and USGS on a real-time basis. Reference: USGS National Water Information System, http://nwis.waterdata.usgs.gov/mo/nwis/, September 24, 2007.

Figure 2.3-67—{Groundwater Monitoring Hydrographs for Montgomery and Osage Counties}



Montgomery County

Osage County

Note: MDNR operates a water-level monitoring well network at sites throughout Missouri. The monitoring wells are equipped with data collection platforms that transmit the data to a GOES satellite which relays the data to a USGS Land Receiving Ground Station so that the data can be provided cooperatively by the DNR and USGS on a real-time basis. Reference: USGS National Water Information System, http://nwis.waterdata.usgs.gov/mo/nwis/, September 24, 2007.

Figure 2.3-68—{Sampling Locations}

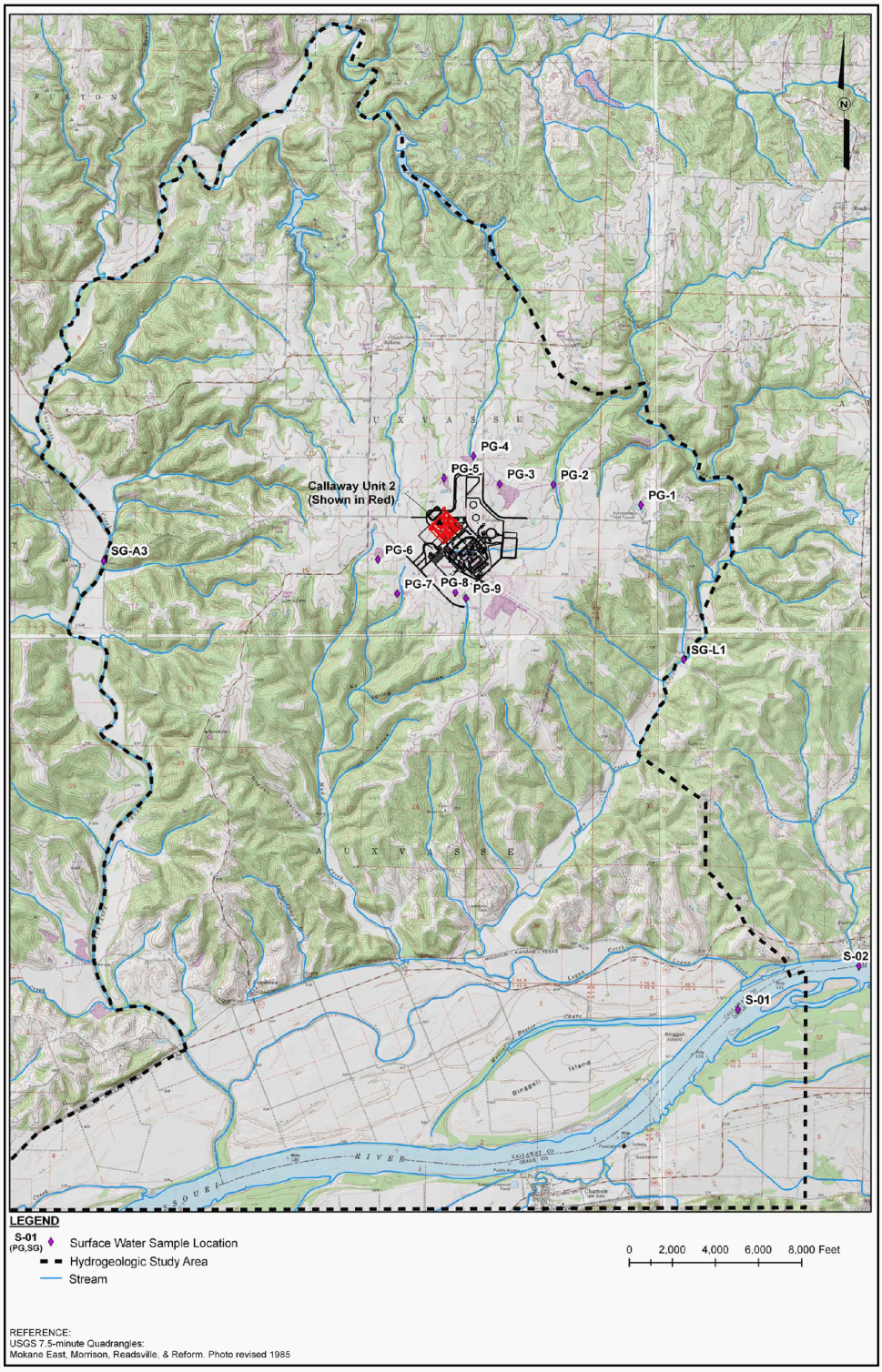
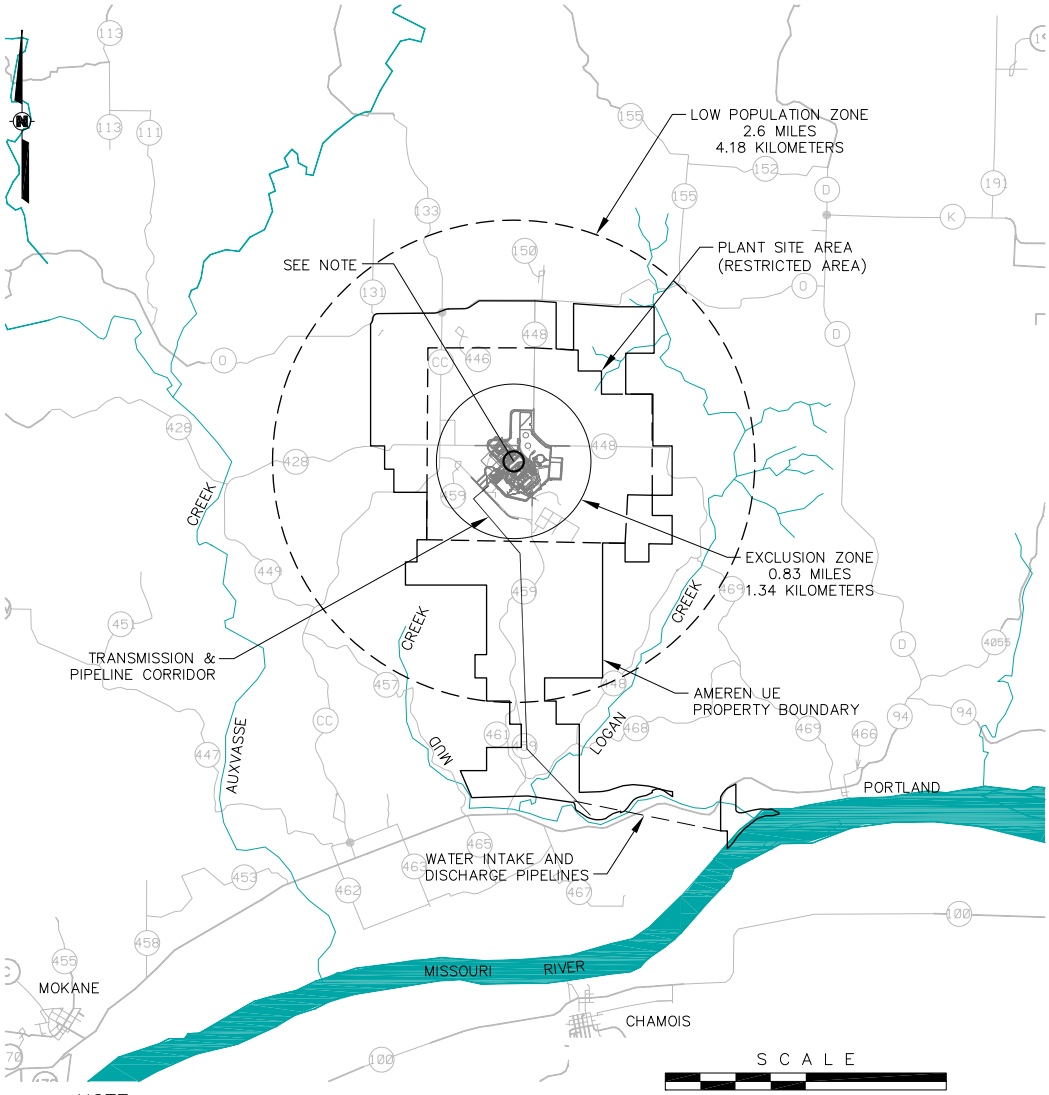


Figure 2.3-69—{Corridor Area}



NOTE:

REFERENCE CENTER POINT OF PLANT SITE IS DEFINED AS 38°45'45.53" NORTH LATITUDE, 91°46'56.34" WEST LONGITUDE AND IS THE MIDPOINT BETWEEN EXISTING REACTOR FOR CALLAWAY PLANT UNIT 1 AND REACTOR FOR CALLAWAY PLANT UNIT 2.

REFERENCE:
AMEREN DRAWING
FMT–001–STATE
DATED 3/12/97

063624A40