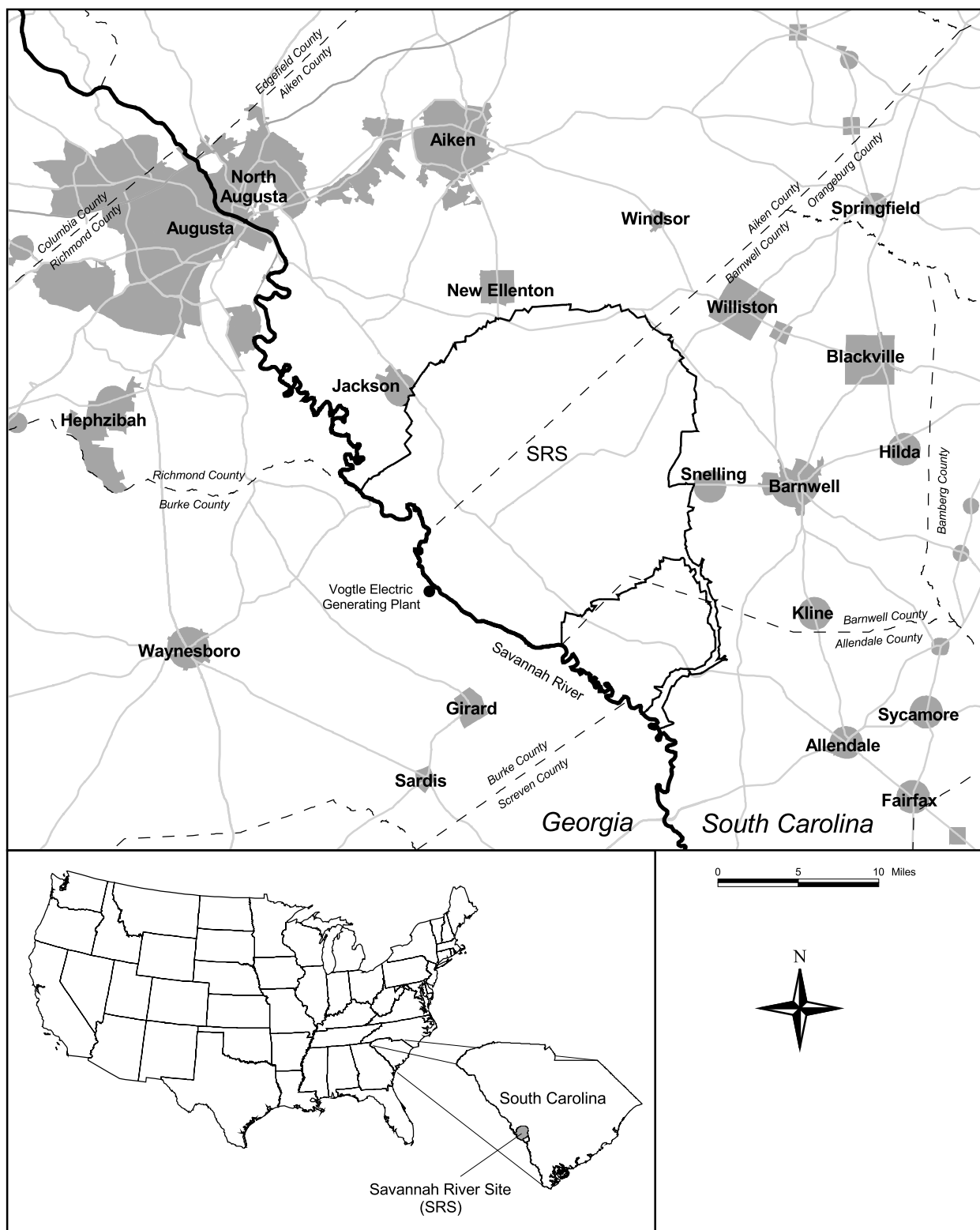


SRS Maps

- **Site**
- **Sampling Locations**
- **Doses**
- **Groundwater**

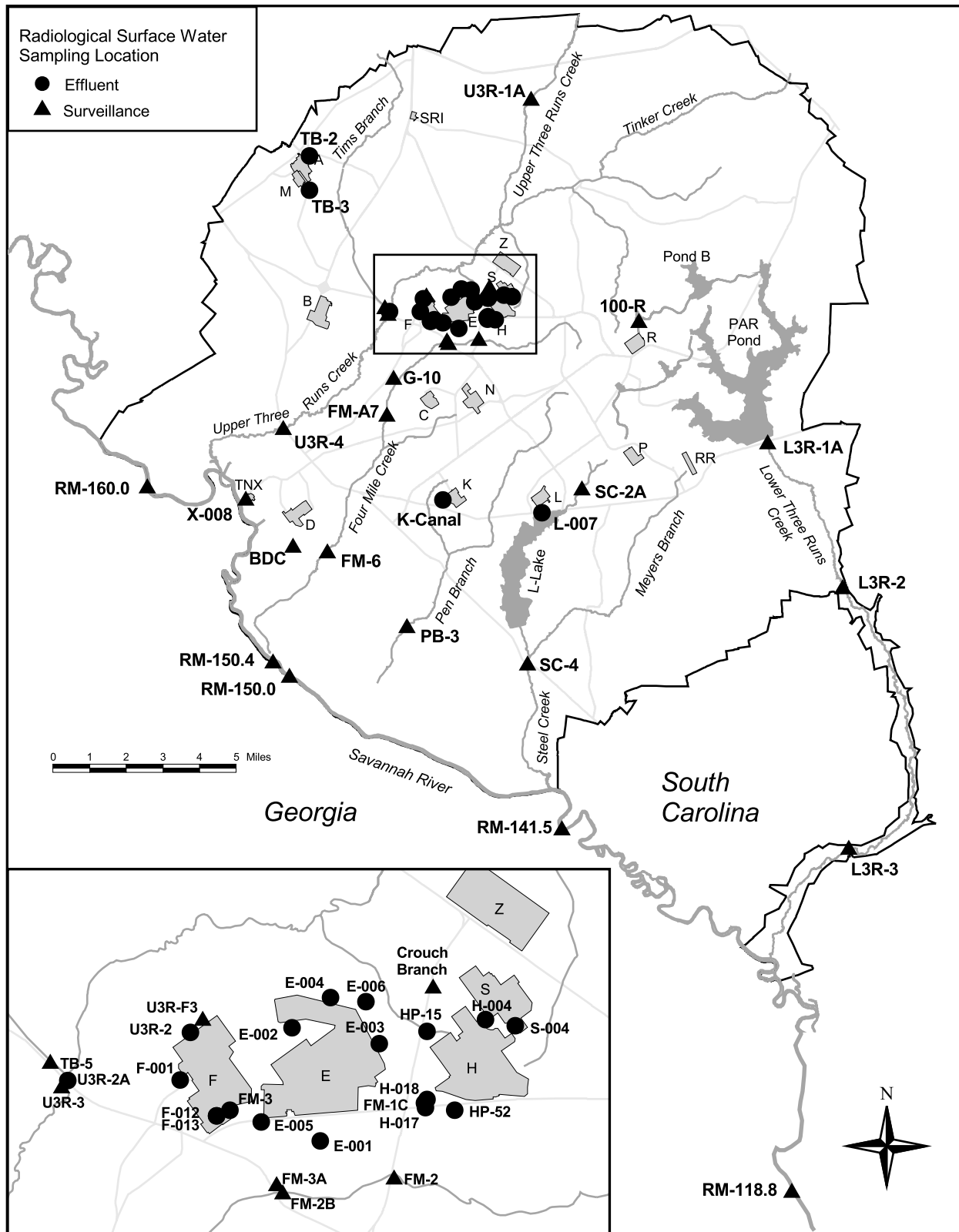
Savannah River Site Environmental Report for 2004



SRNL Map

Figure 1 The Savannah River Site

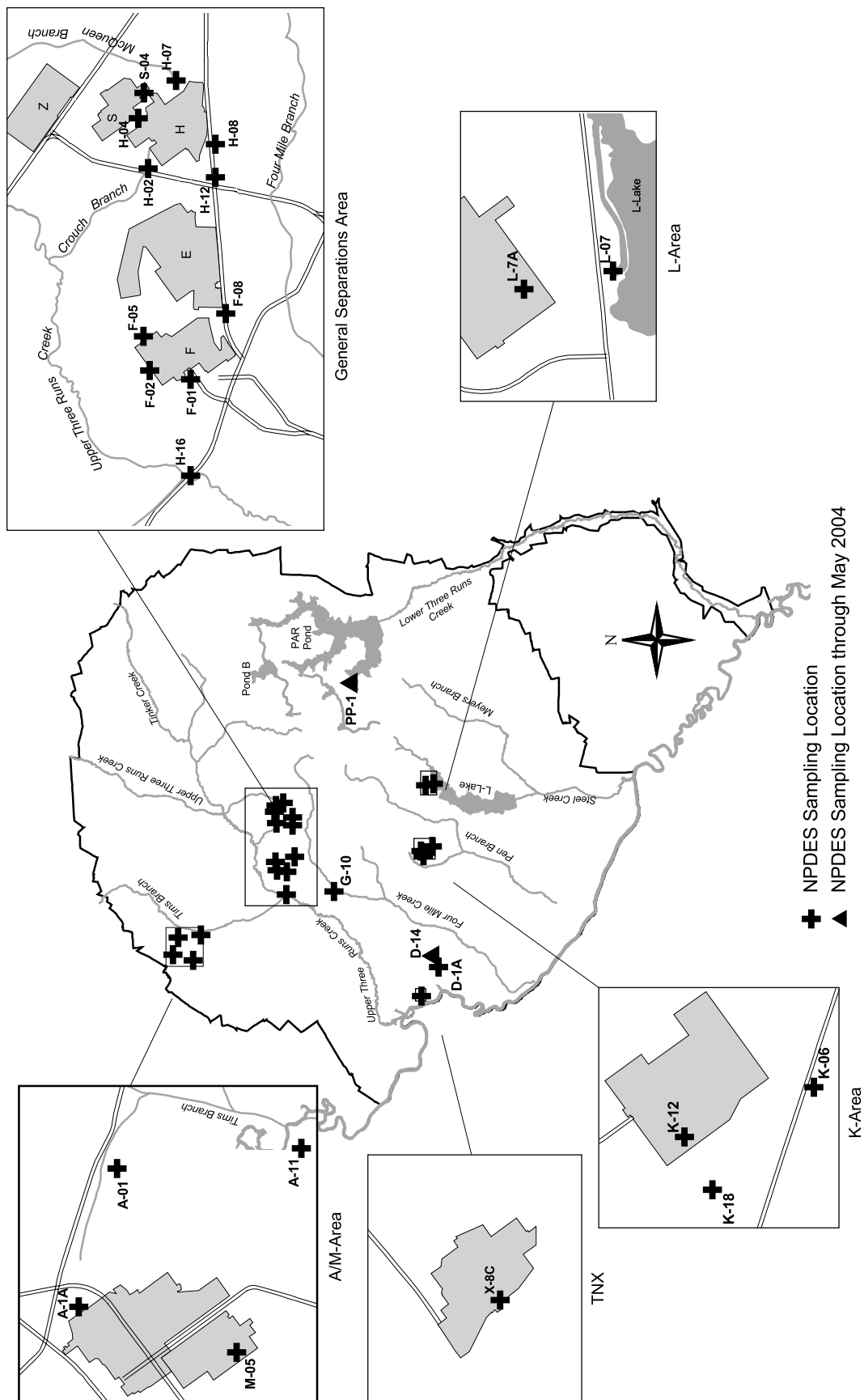
SRS is located in South Carolina, about 12 miles south of Aiken, South Carolina, and about 15 miles southeast of Augusta, Georgia. The Savannah River flows along a portion of its southwestern border.



ESS/SRNL Map

Figure 2 Radiological Surface Water Sampling Locations

Surveillance and effluent sampling points are near SRS facilities, on site streams, and on the Savannah River.



ESS/SRNL Map

Figure 3 NPDES Sampling Locations

Twenty-five industrial wastewater outfalls were regulated at SRS under NPDES Permit SC0000175 through May 2004. In June, SCDHEC removed outfalls D-14 and PP-1 from the permit, which reduced the number of regulated outfalls to 23.

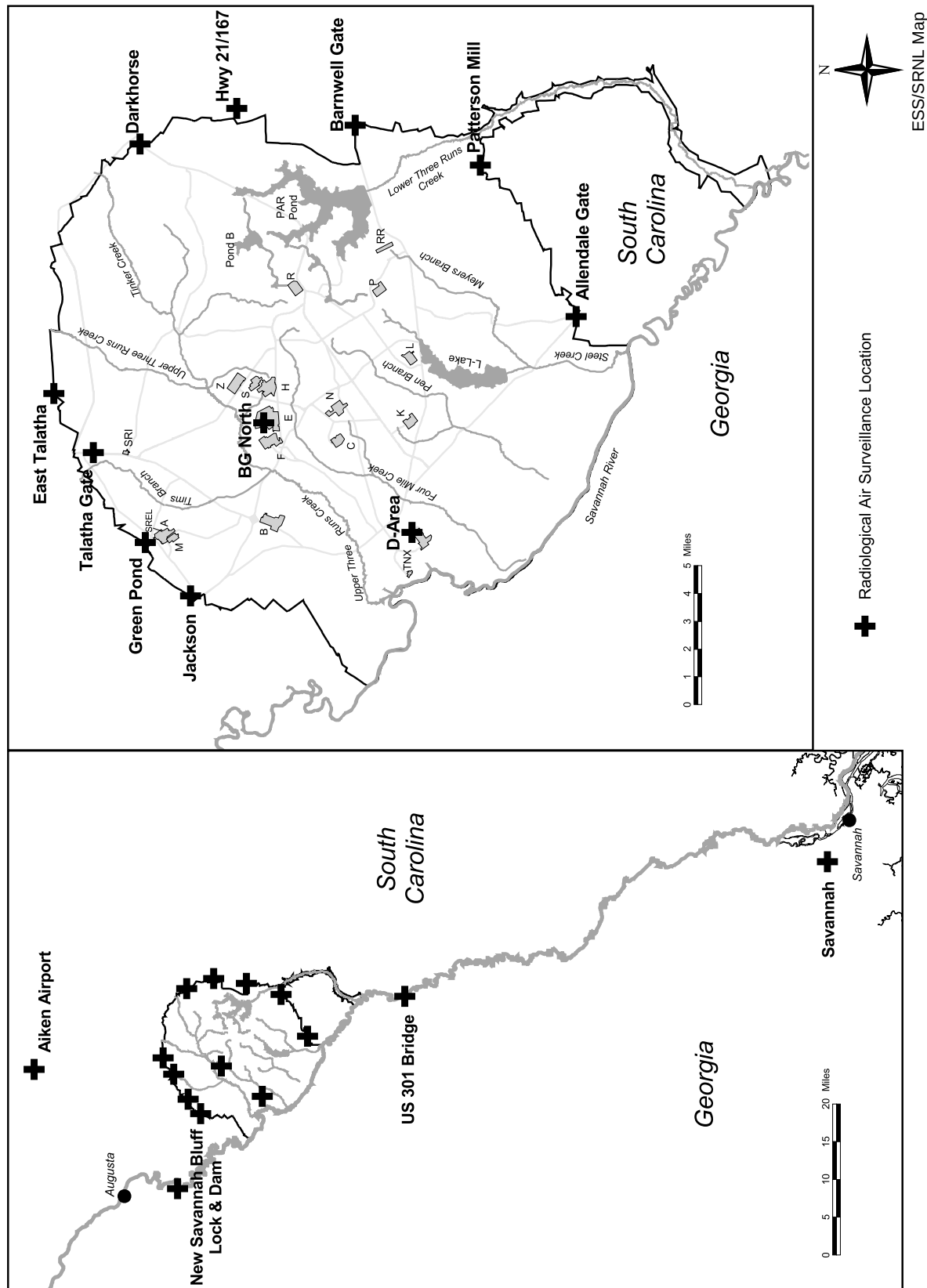
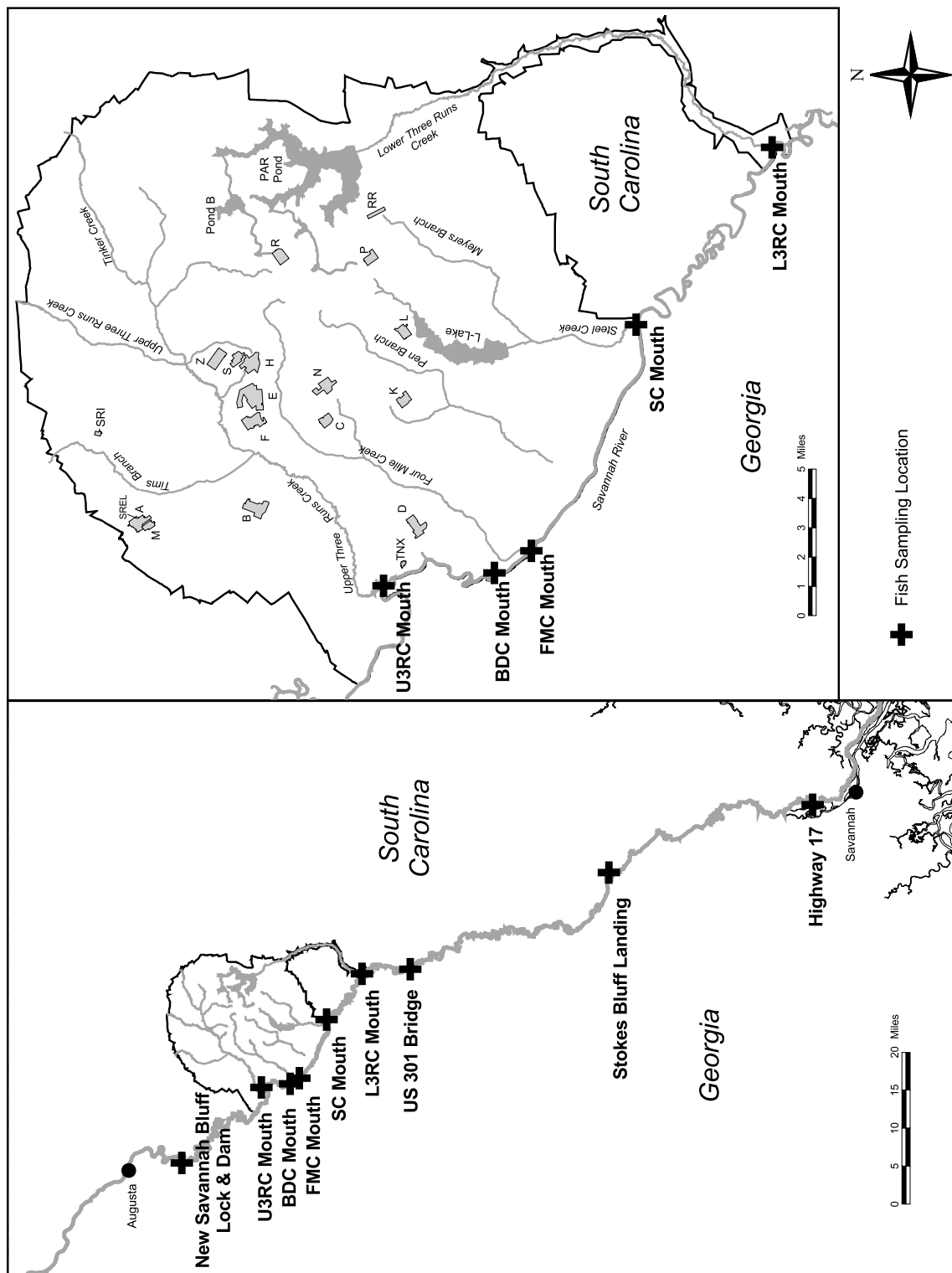
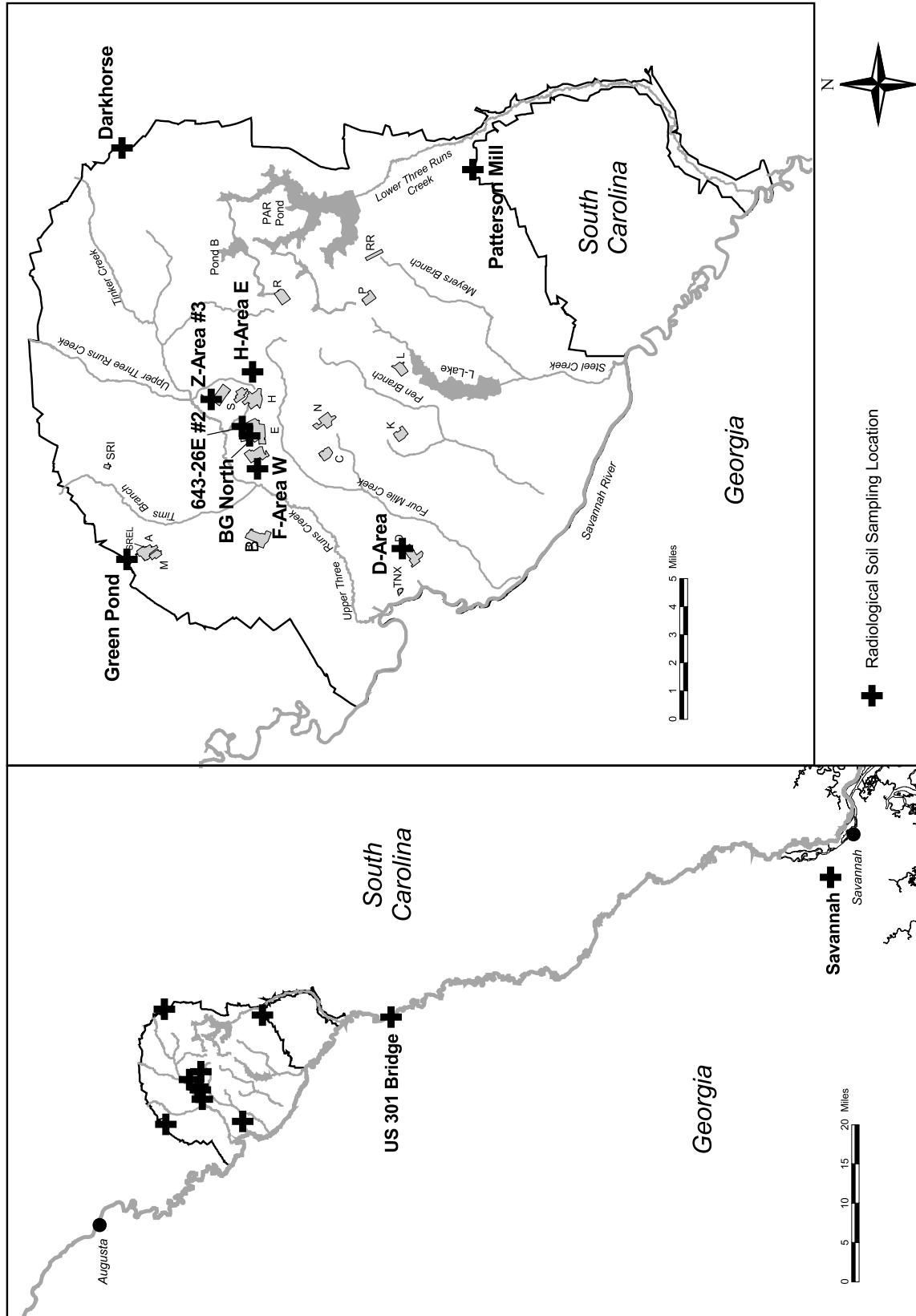


Figure 4 Radiological Air Surveillance Sampling Locations
The SRS air surveillance program consists of 11 stations located on site or along the site perimeter, as well as three stations approximately 25 miles from the site perimeter (located near the U.S. Highway 301 Bridge over the Savannah River; the New Savannah Bluff Lock and Dam, also known as the Augusta Lock and Dam; and the Aiken airport) and one about 100 miles from the site perimeter (near Savannah, Georgia).



ESS/SRNL Map

Figure 5 SRS Fish Sampling Locations
SRS collects fish (for both radiological and nonradiological analyses) from the Savannah River above, adjacent to, and below the site, as well as at Stokes Bluff Landing and near Savannah, Georgia.



ESS/SRNL Map

Figure 6 Radiological Soil Sampling Locations
SRS collected soil samples in 2004 from five onsite locations, four site perimeter locations, and two offsite locations—one near the U.S. Highway 301 Bridge over the Savannah River and one near Savannah, Georgia.

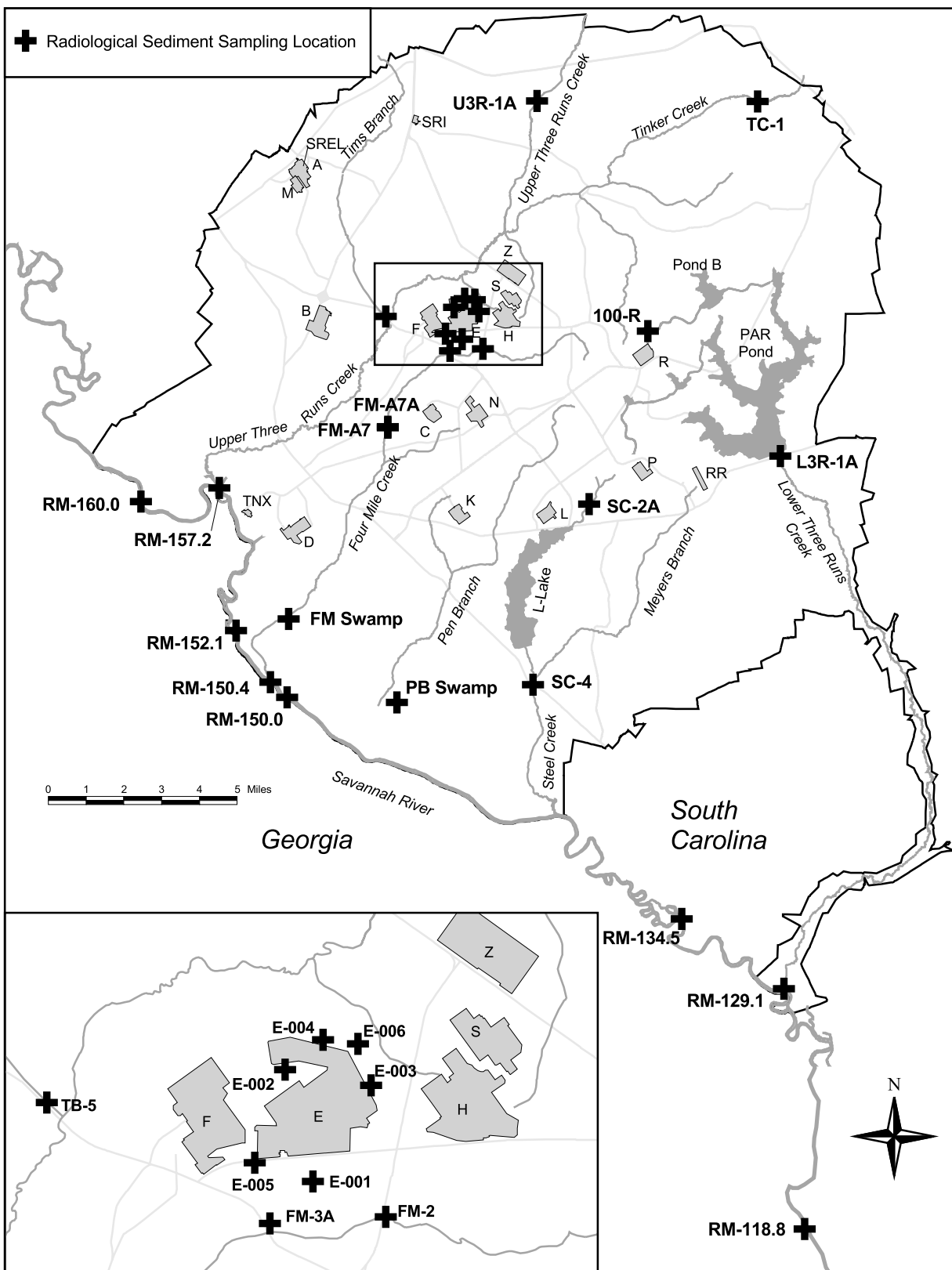


Figure 7 Radiological Sediment Sampling Locations

Sediment samples were collected in 2004 at eight Savannah River locations—upriver of, adjacent to, and downriver of the site—and 19 onsite locations.

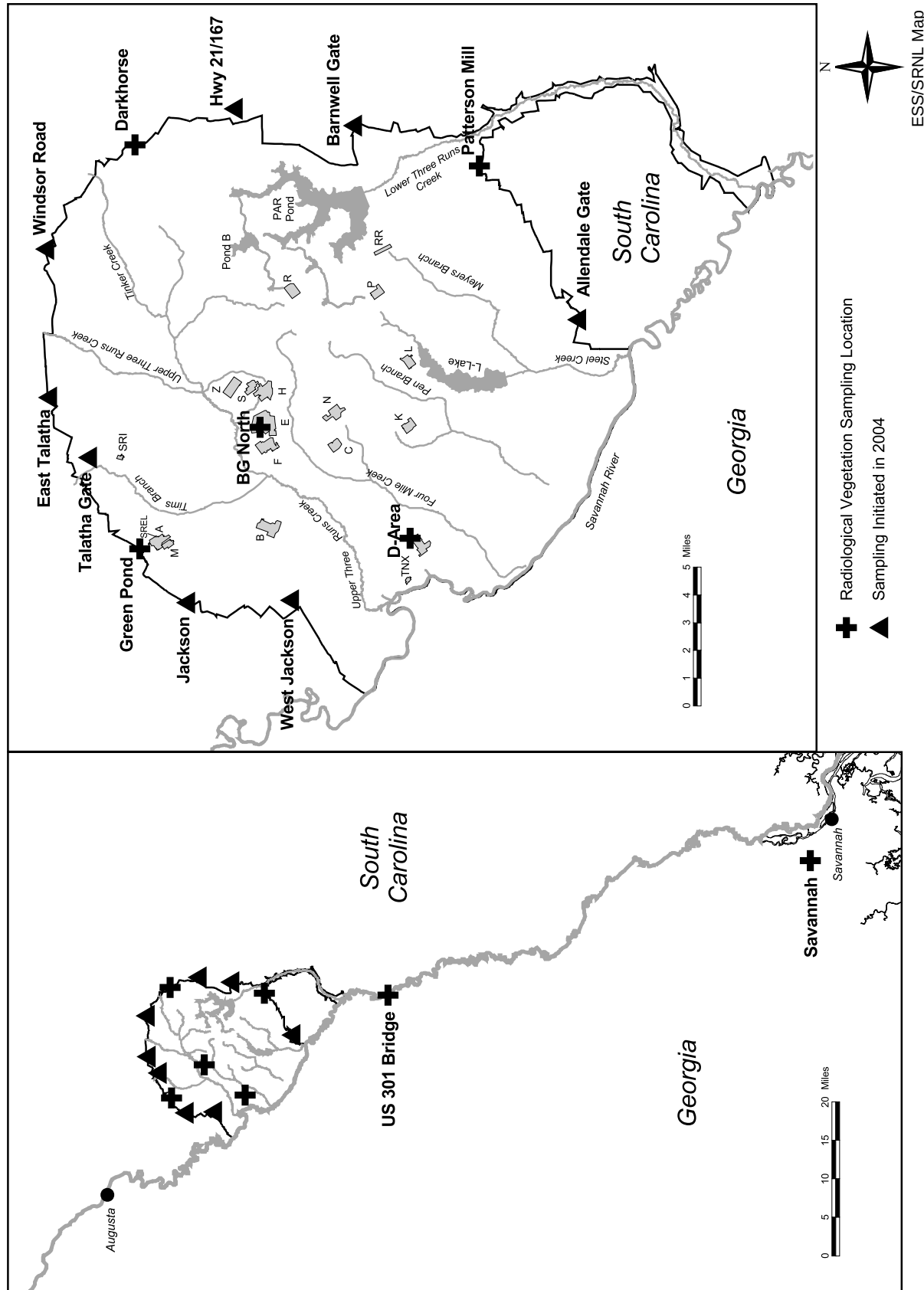
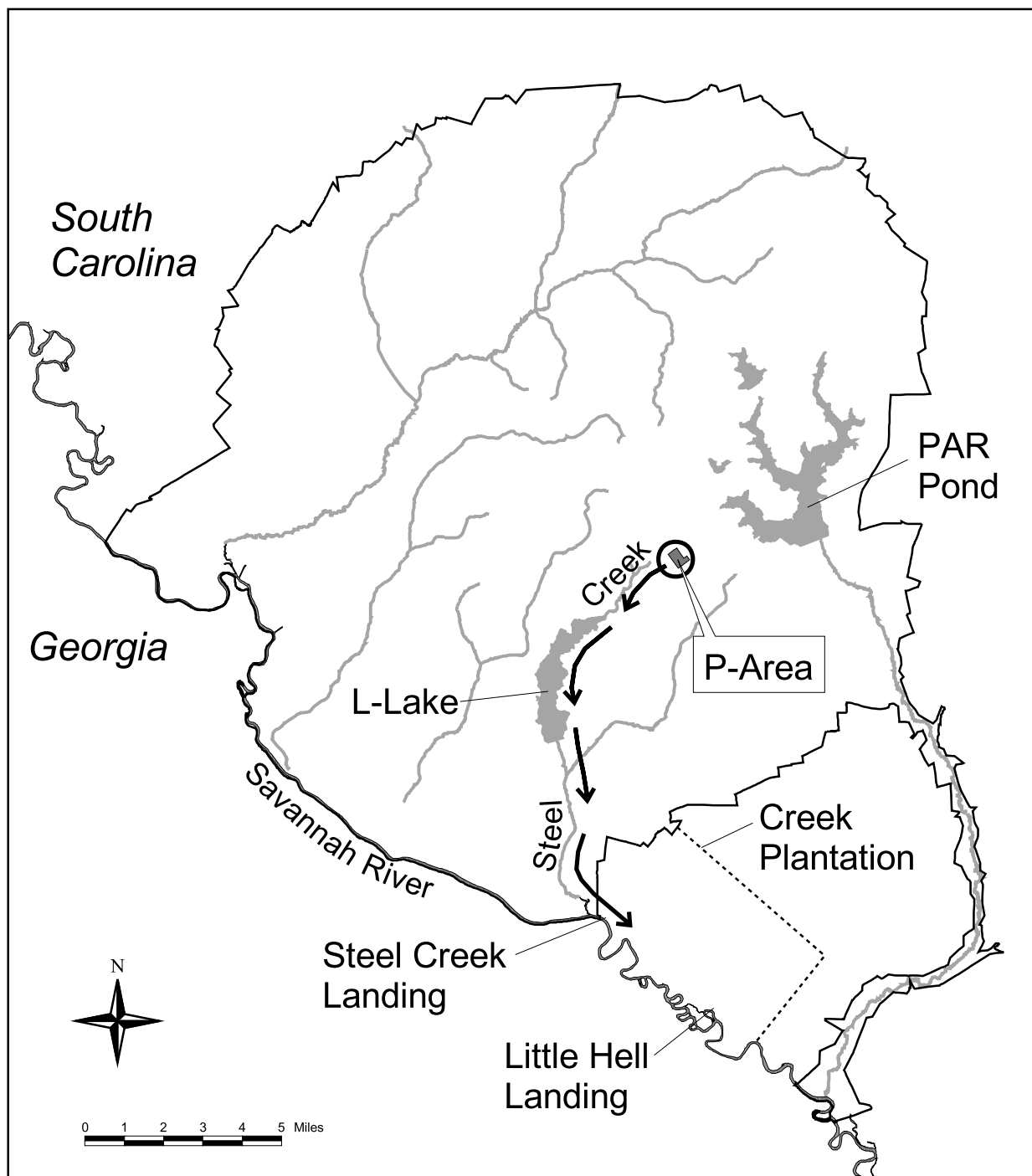


Figure 8 SRS Vegetation Sampling Locations
Vegetation samples were collected for radiological analysis in 2004 from 13 locations on site and two off site (near Savannah, Georgia, and at the U.S. Highway 301 Bridge over the Savannah River).



SRNL Map

Figure 9 Swamp Contamination

Radioactivity released from SRS operations contaminated the Savannah River Swamp between Steel Creek and Little Hell Landing—an area outside the SRS boundary—during the 1960s. Approximately 25 Ci of cesium-137 and 1 Ci of cobalt-60 were released from the P-Area storage basin to Steel Creek—L-Lake did not exist at the time of the release—and migrated downstream to a part of the swamp.

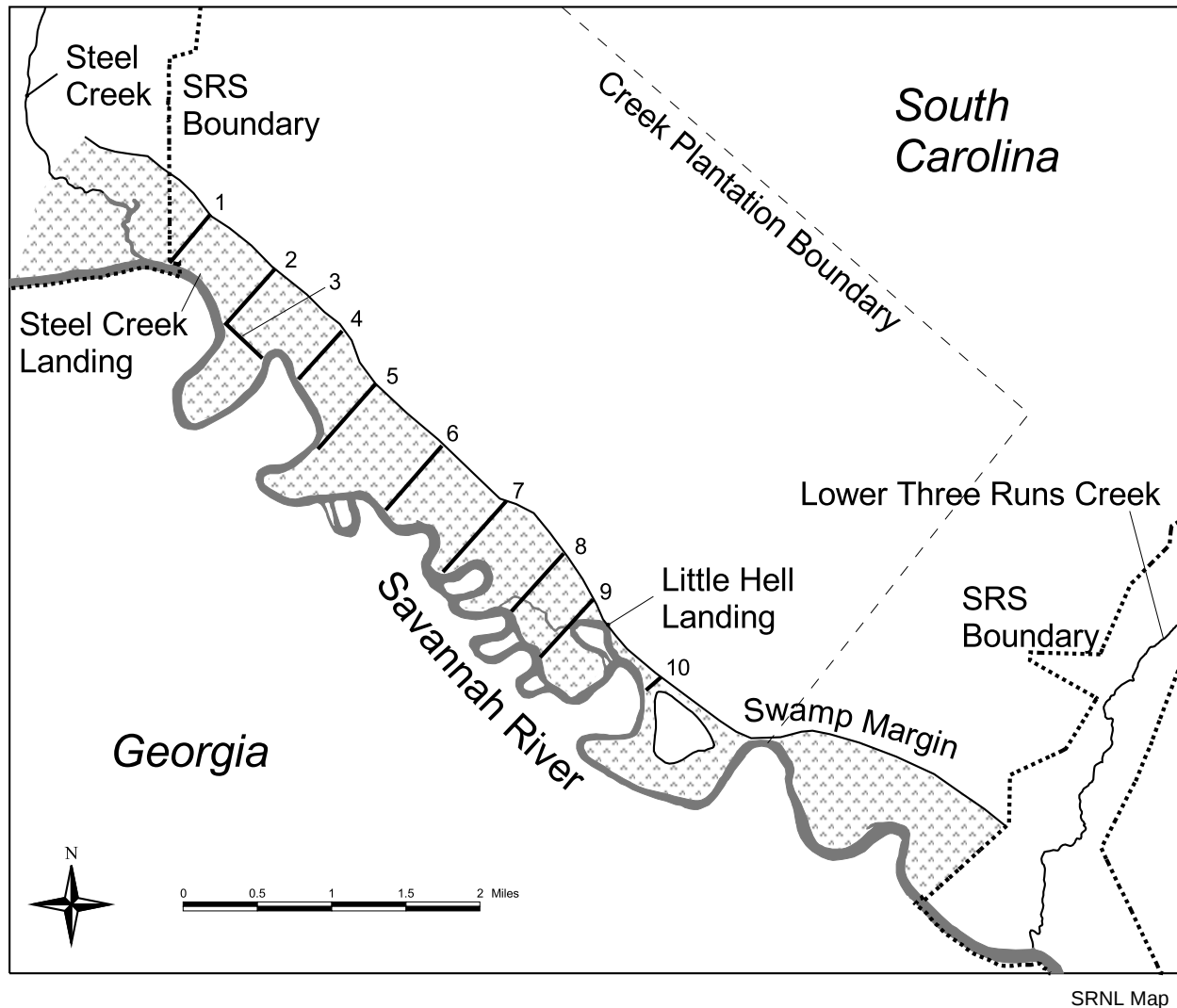
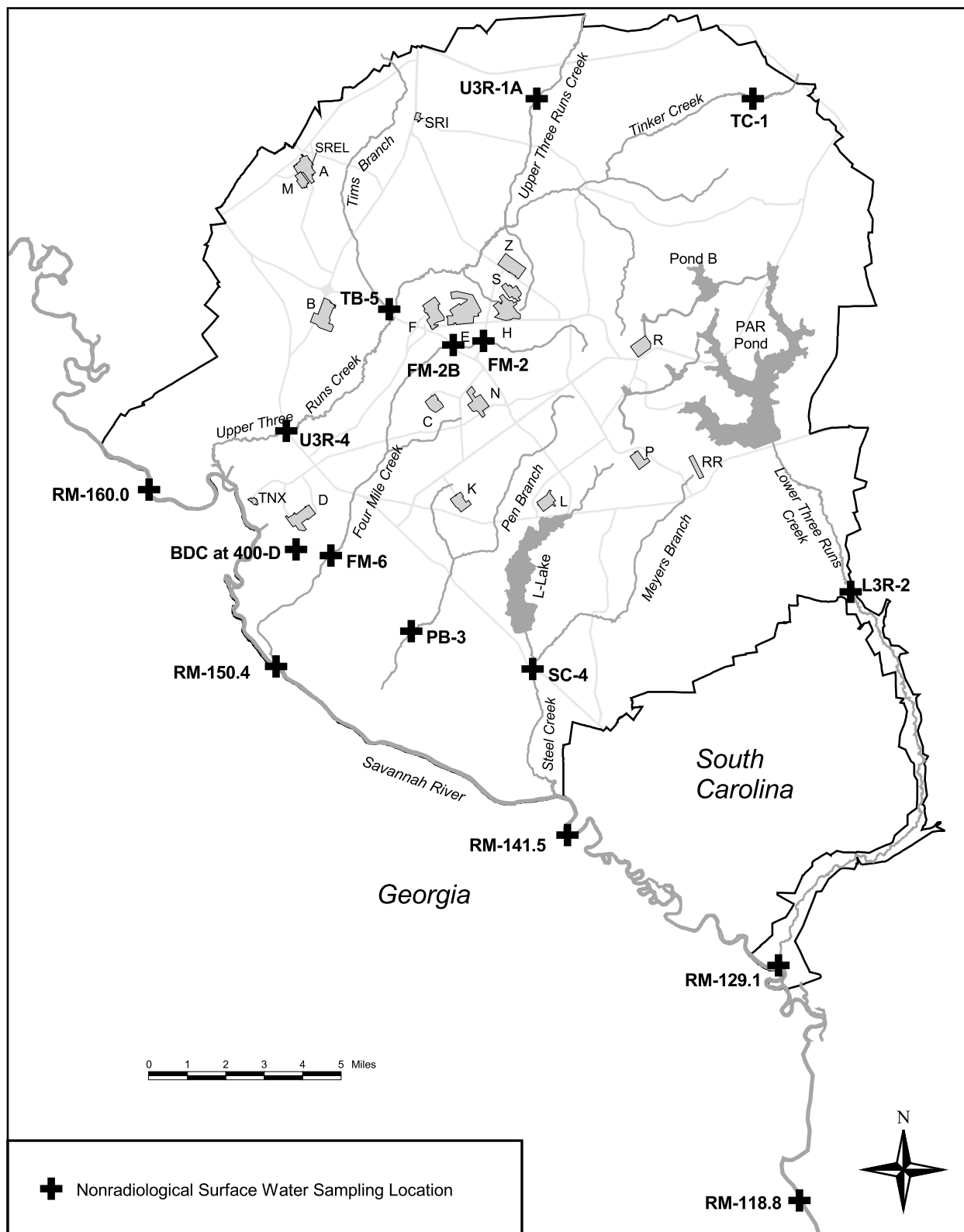


Figure 10 Savannah River Swamp Sampling Trails

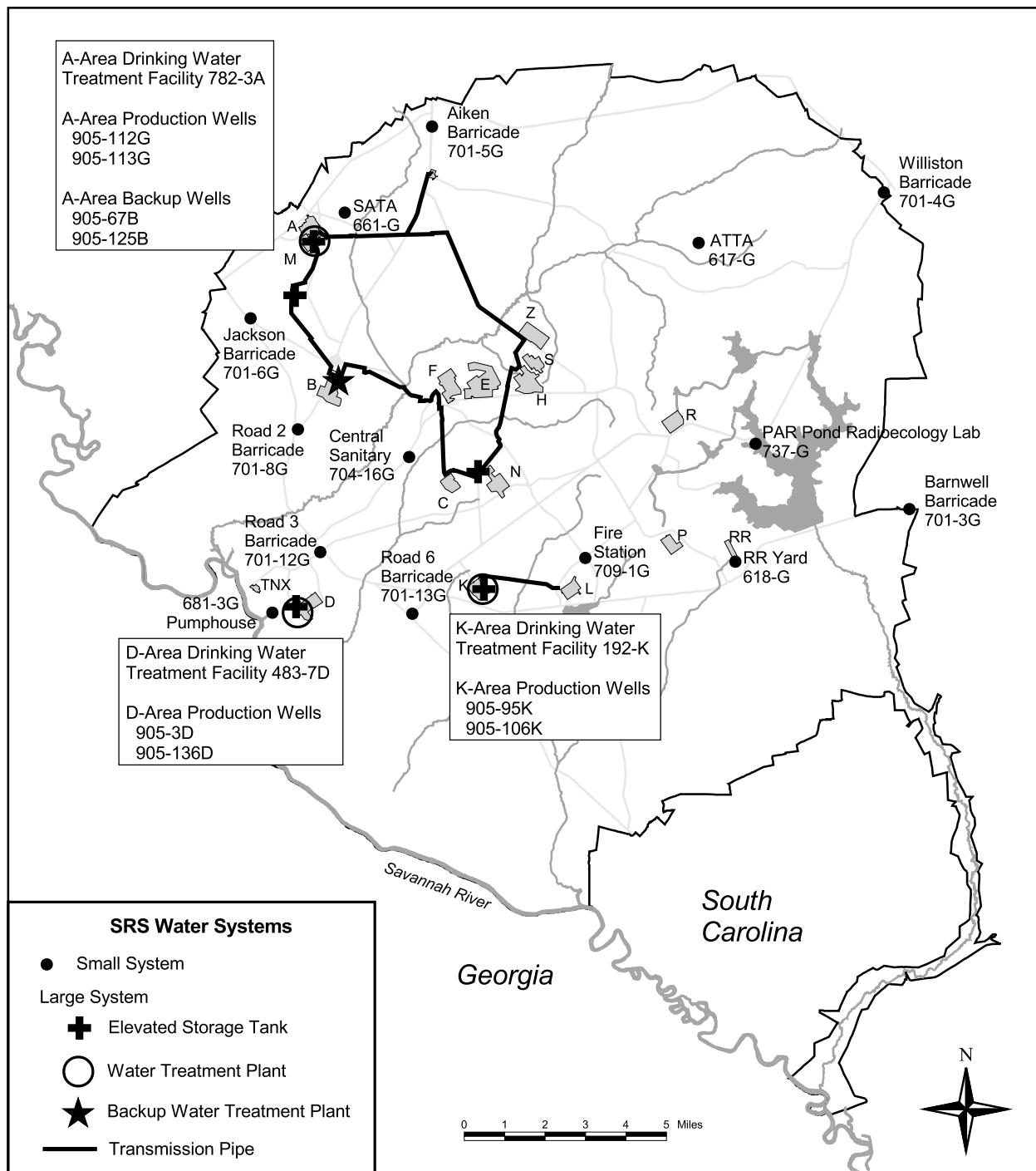
Ten sampling trails were established in the Savannah River Swamp in 1974 so that surveys could be conducted on the movement of contamination from SRS operations.



ESS/SRNL Map

Figure 11 Nonradiological Surface Water Sampling Locations

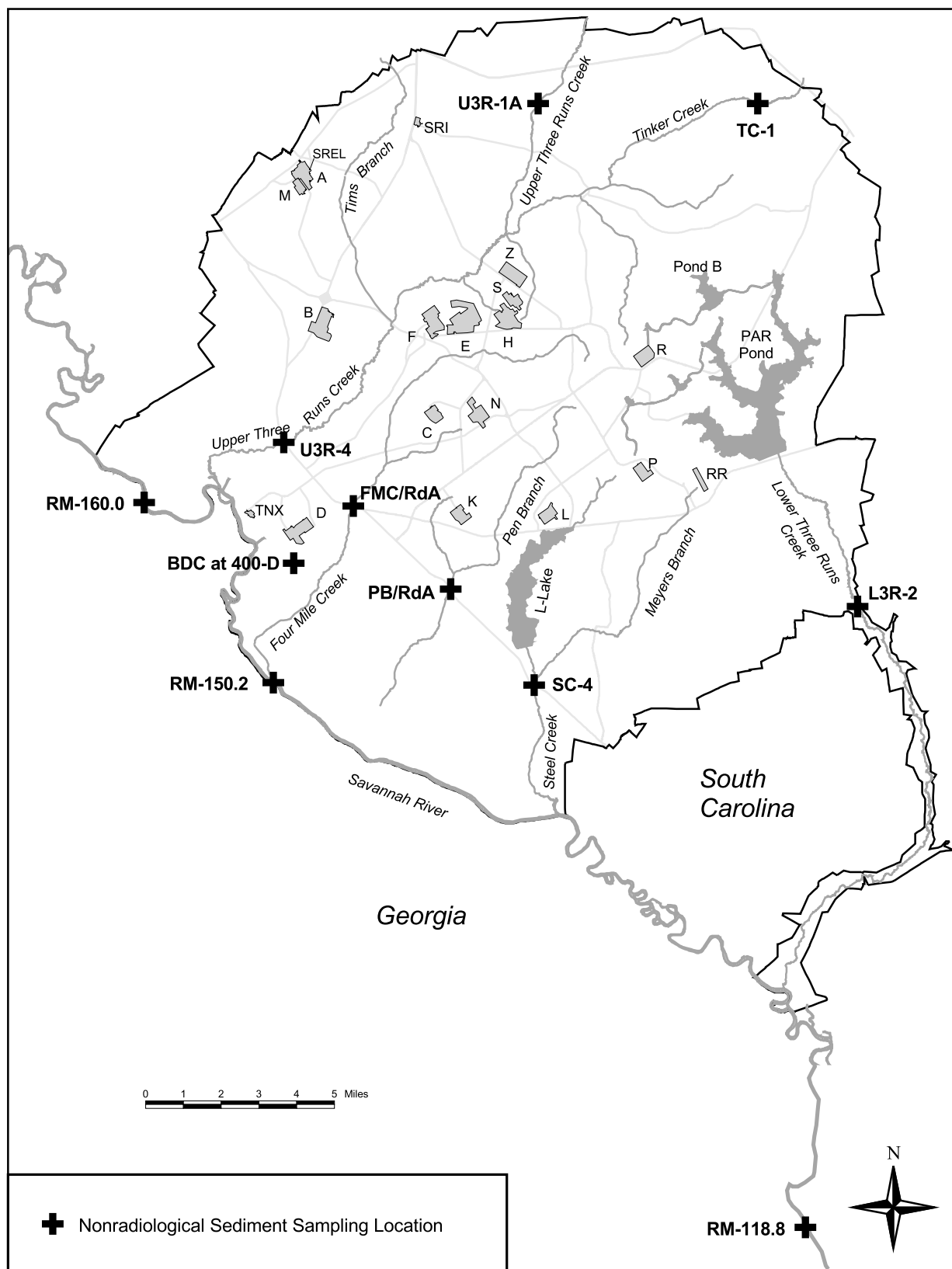
Surface water samples are collected from five Savannah River and 11 SRS stream locations and are analyzed for various chemical and physical properties.



ESS/SRNL Map

Figure 12 Domestic Water Systems

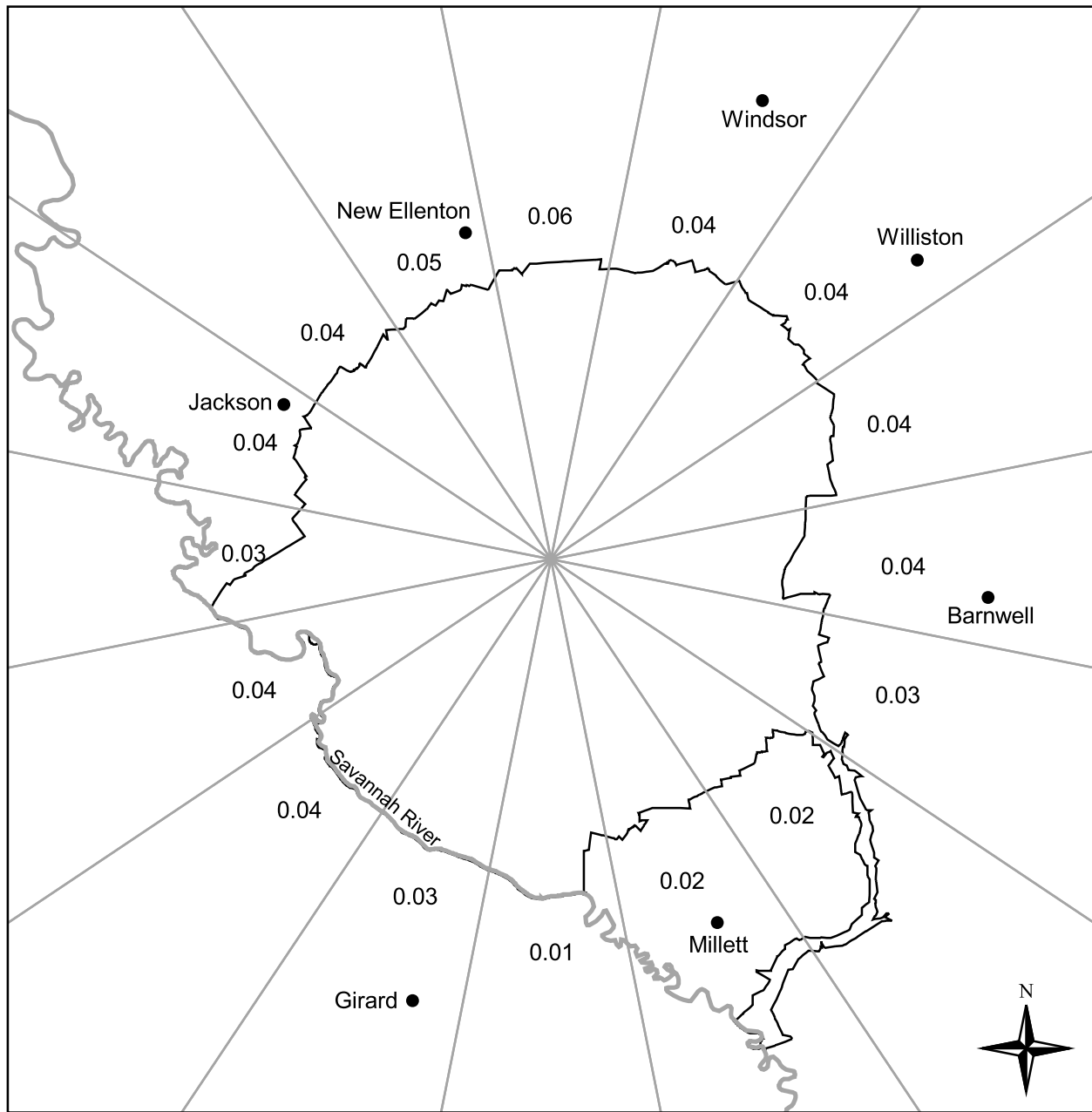
Most of the drinking water at SRS is supplied by three “large” systems. The site also has 14 “small” domestic water facilities, which serve populations of fewer than 25 persons and require a reduced level of regulatory oversight. The three larger systems have transmission pipes, elevated storage tanks, water treatment plants, and a backup water treatment plant.



ESS/SRNL Map

Figure 13 Nonradiological Sediment Sampling Locations

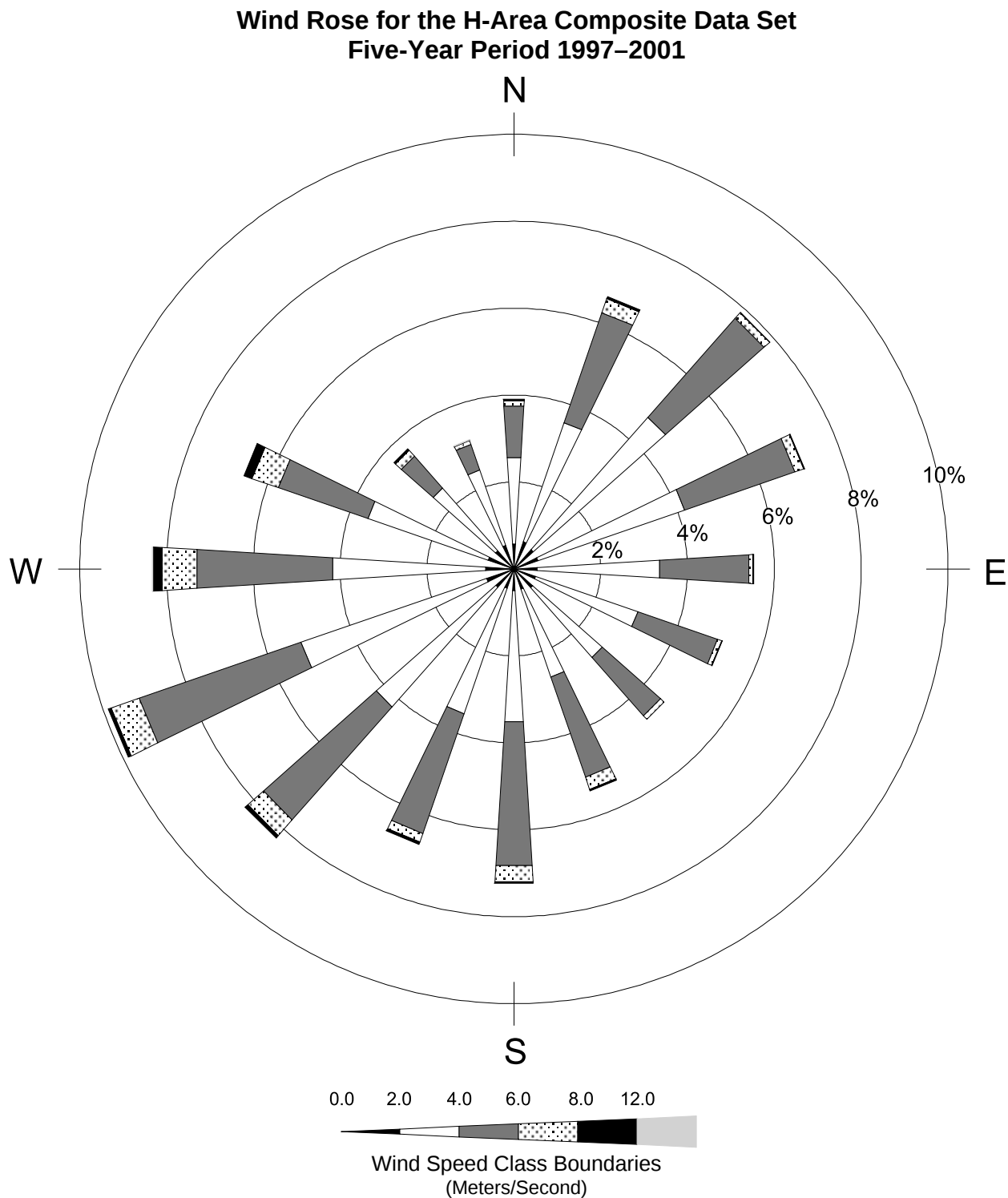
Sediment samples are collected at eight onsite stream locations and three Savannah River locations. The samples are analyzed for various inorganic contaminants (metals) and pesticides/herbicides.



SRNL Map

Figure 14 Sector-Specific Adult Maximally Exposed Individual Air Pathway Doses (in mrem) for 2004

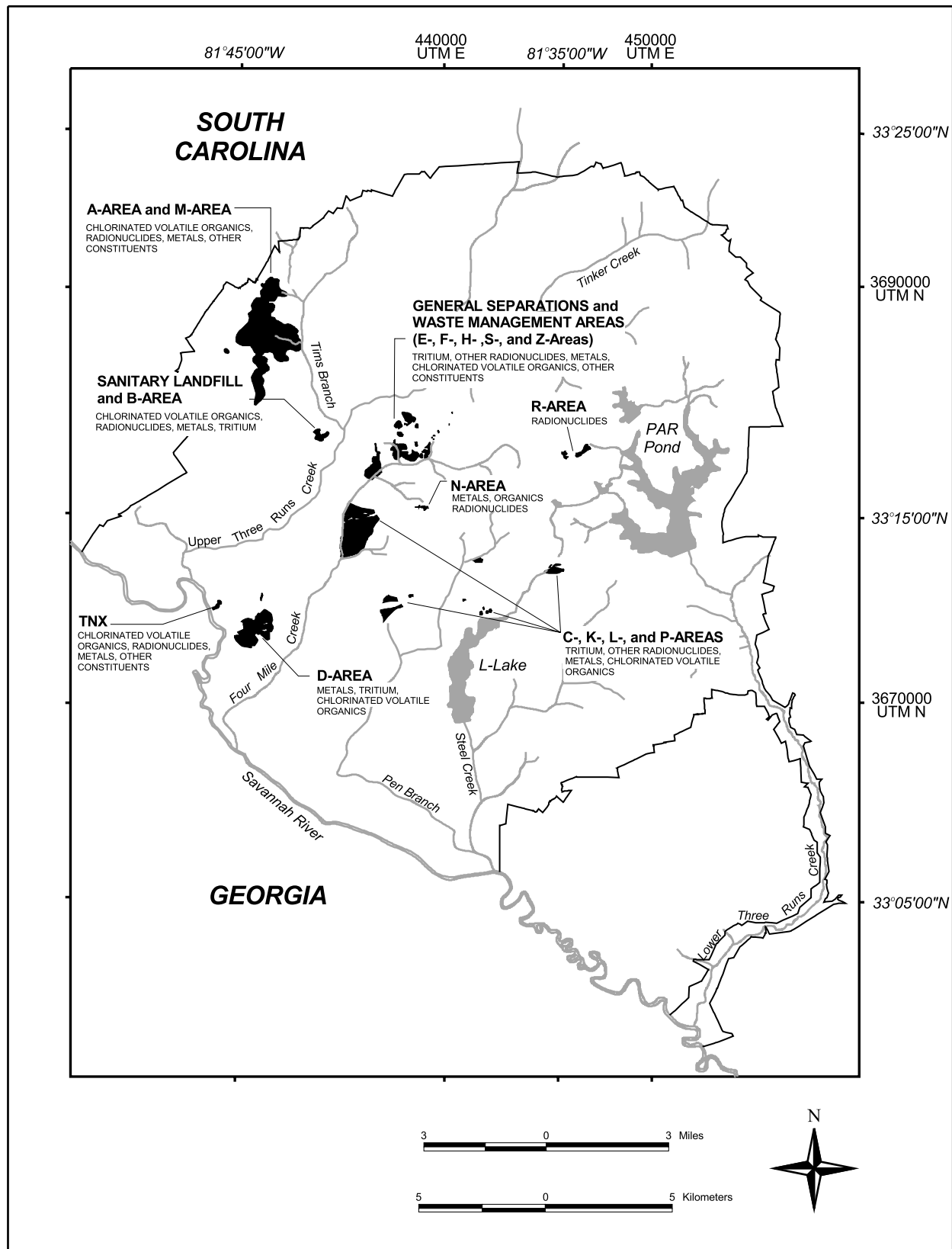
Maximally exposed individual (MEI) site boundary doses from airborne releases are shown for each of the 16 major compass point directions surrounding SRS. For 2004, the due north sector had the highest MEI dose of 0.06 mrem.



SRNL Atmospheric Technologies Graphic

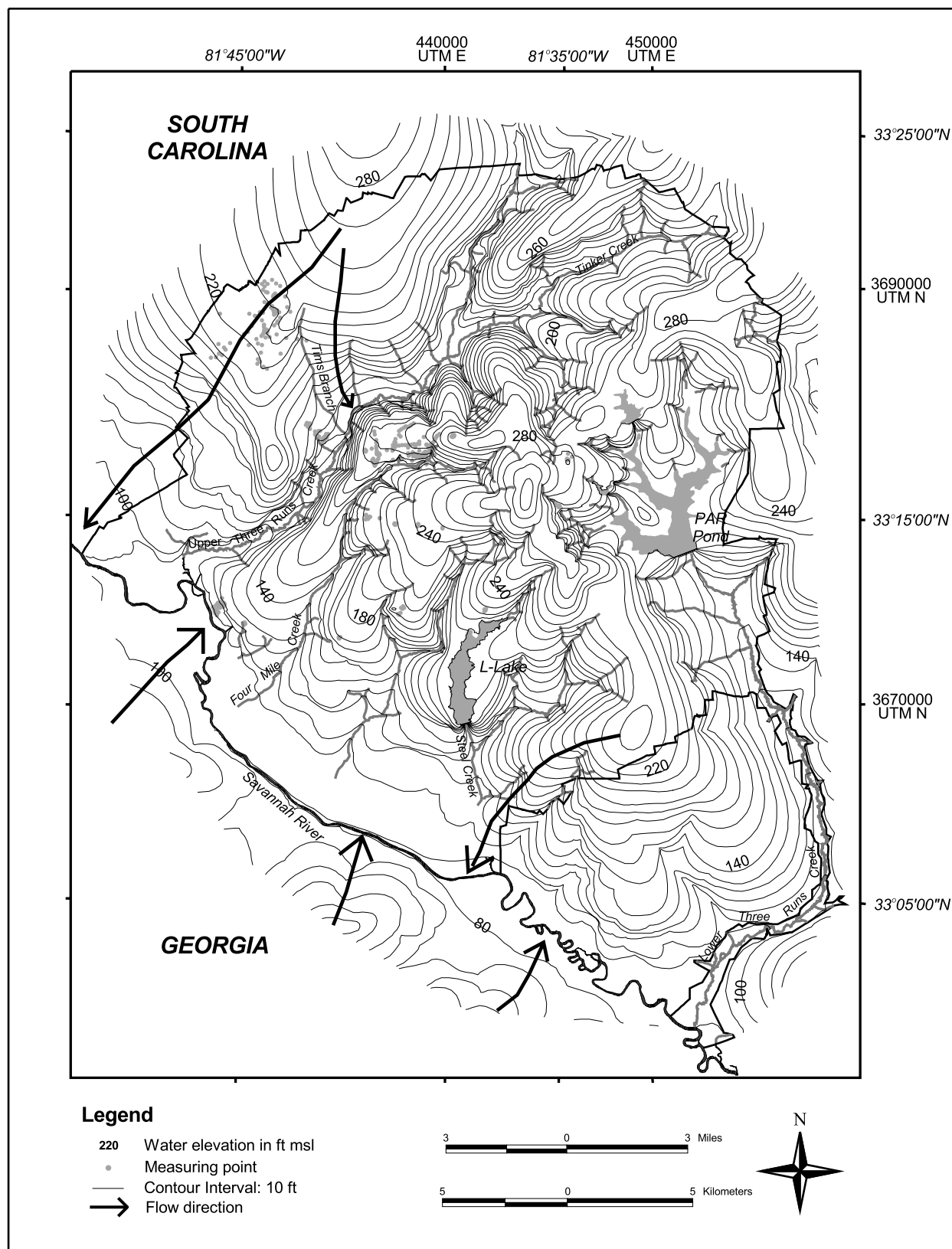
Figure 15 Wind Rose for SRS, 1997–2001

This wind rose graphically depicts the percent of occurrence frequencies of six wind speed categories by 16 cardinal wind direction sectors at SRS. The wind speed categories are defined on the plot; direction is defined as the sector *from* which the wind blows. The data used to generate the wind rose consist of hourly averages of wind speed and direction at the H-Area meteorological tower for the 5-year period 1997–2001; measurements were taken 200 feet above the ground.



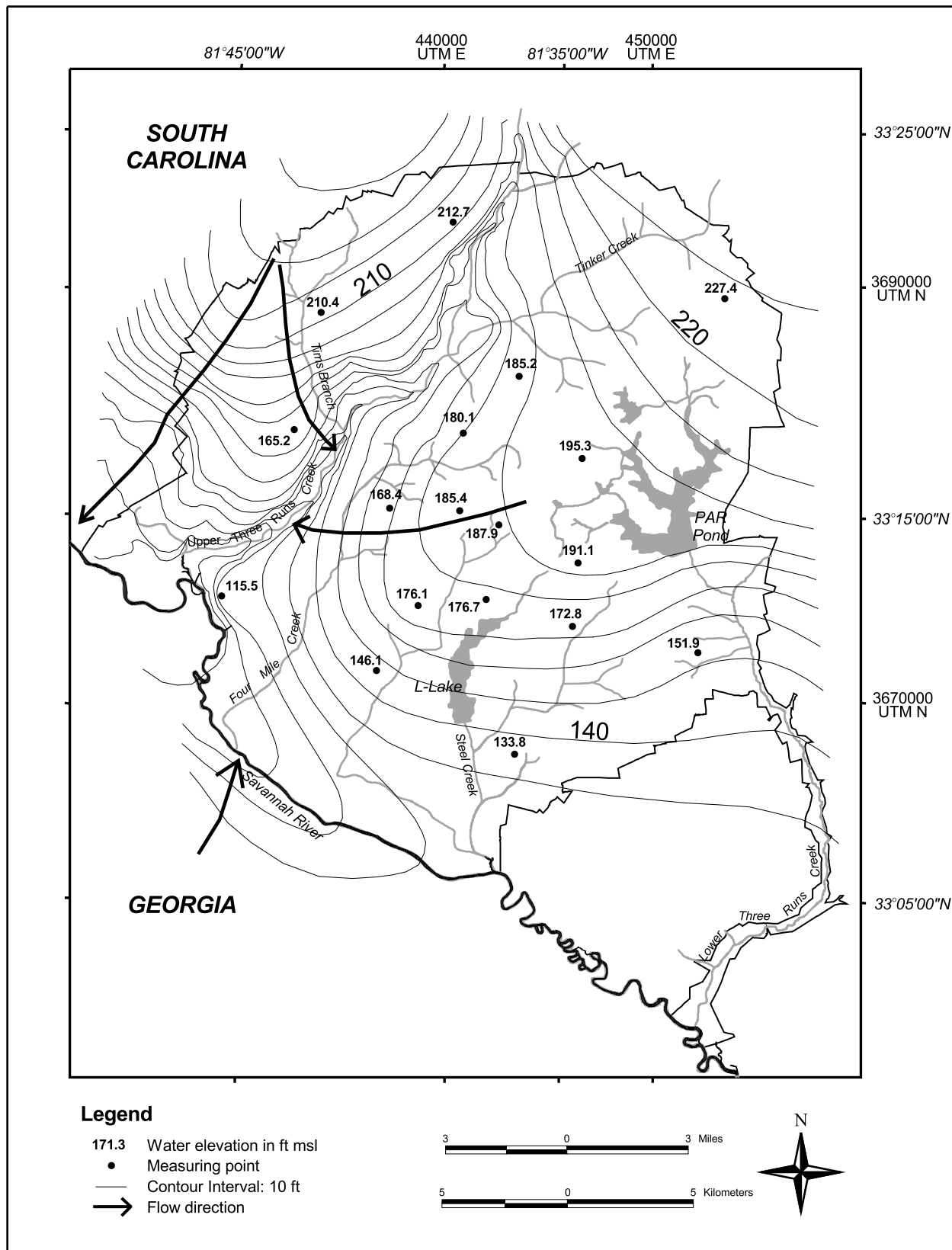
SRNL/SGCP Map

Figure 16 Facilities Monitored by the SRS Monitoring Well Network; Shaded Areas Indicate Extent of Groundwater Contamination.



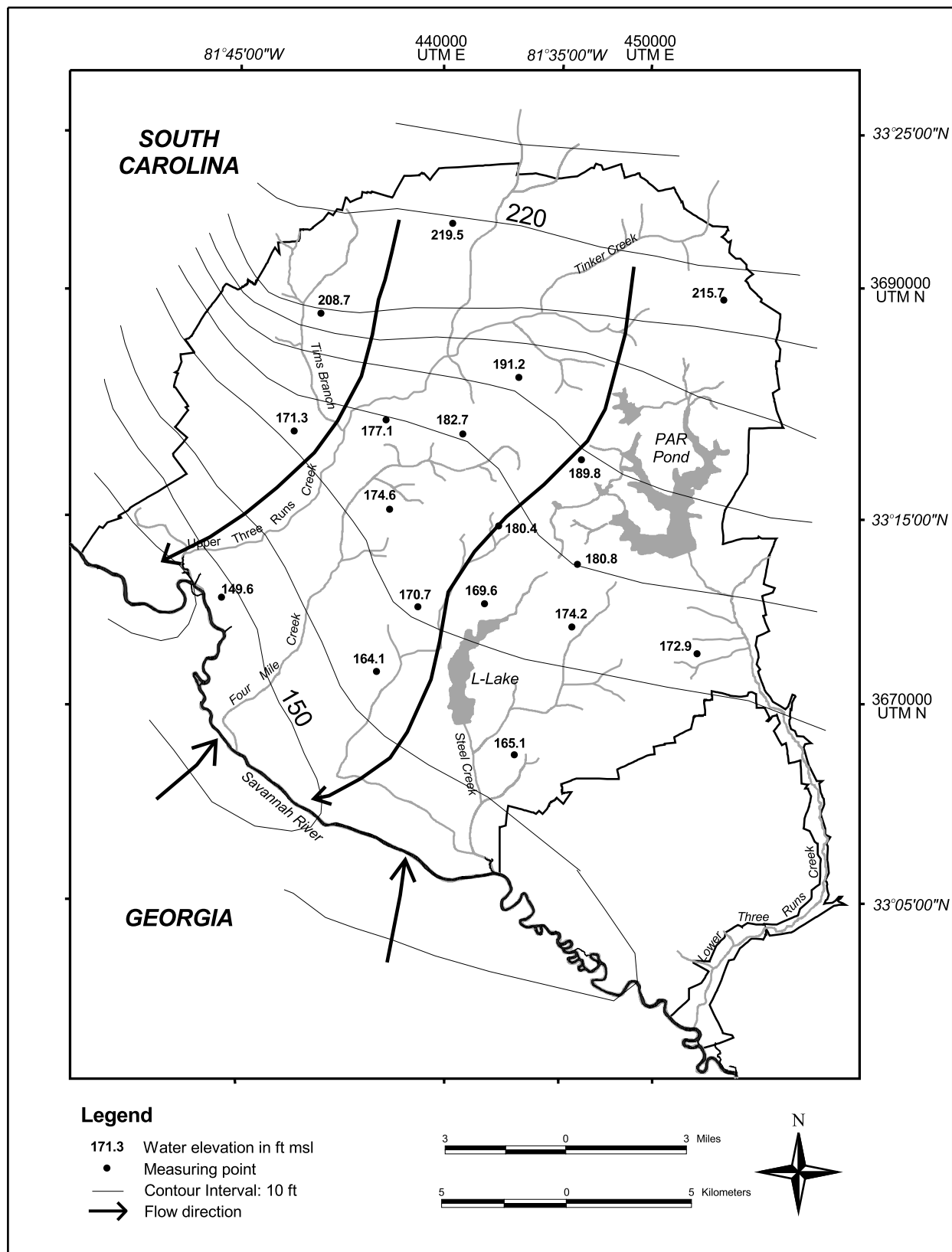
SRNL Map

Figure 17 Water Table Contours at SRS



SRNL Map

Figure 18 Potentiometric Surface of the Gordon Aquifer at SRS



SRNL Map

Figure 19 Potentiometric Surface of the Crouch Branch Aquifer at SRS

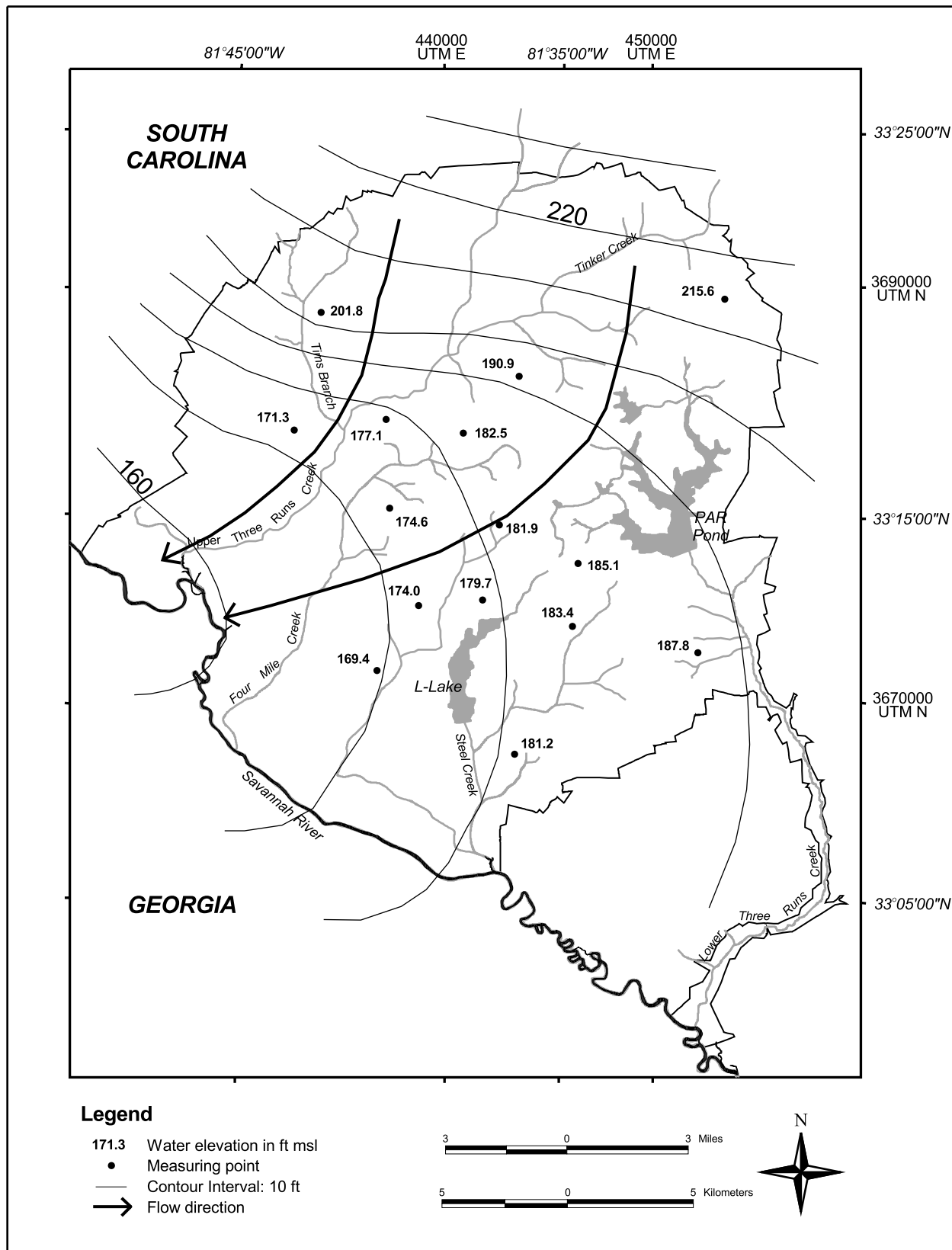


Figure 20 Potentiometric Surface of the McQueen Branch Aquifer at SRS

SRNL Map

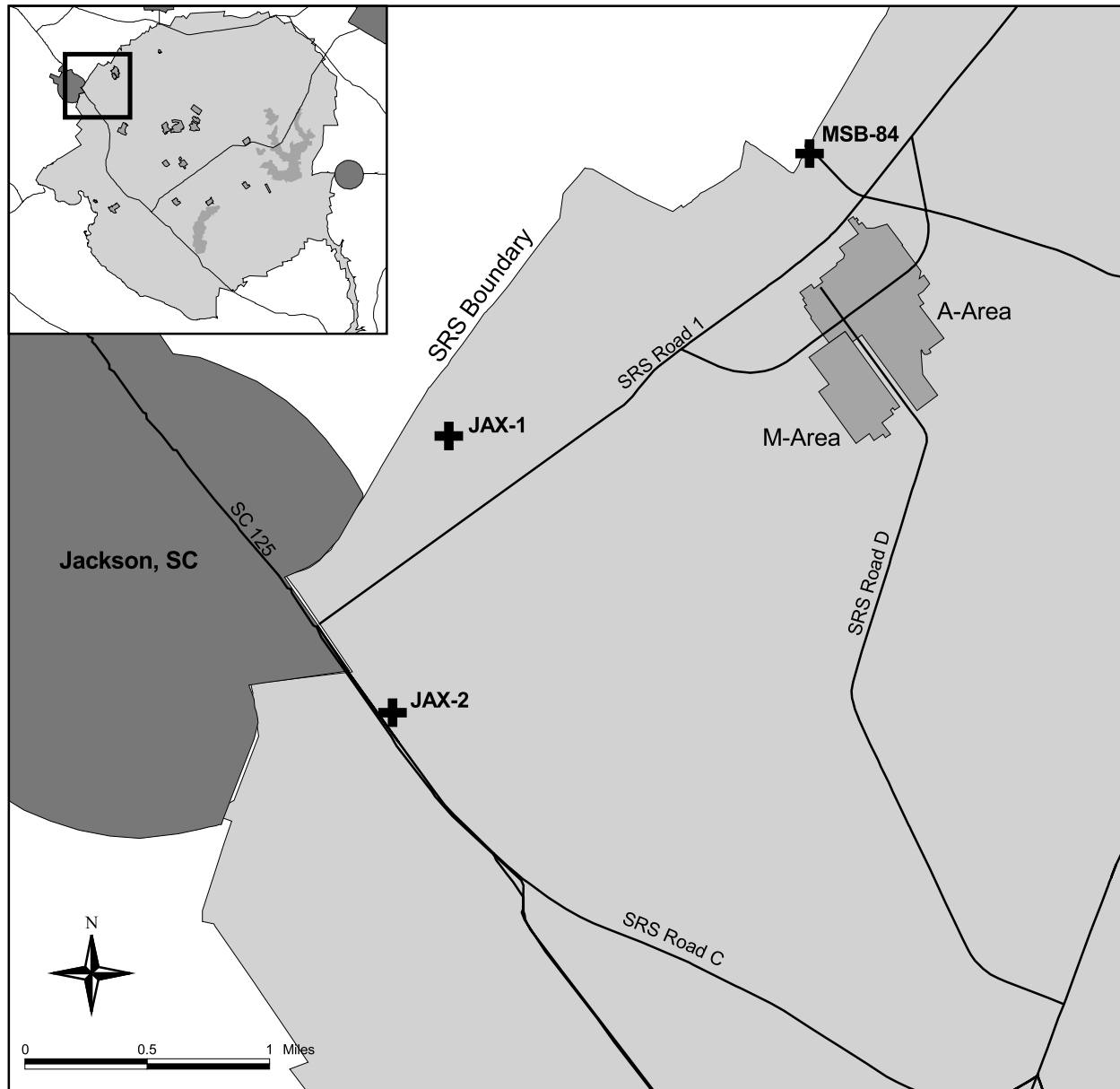


Figure 21 Wells Along Site Boundary Between A-Area/M-Area and Jackson, South Carolina (Nearest Population Center) ESS/SRNL Map

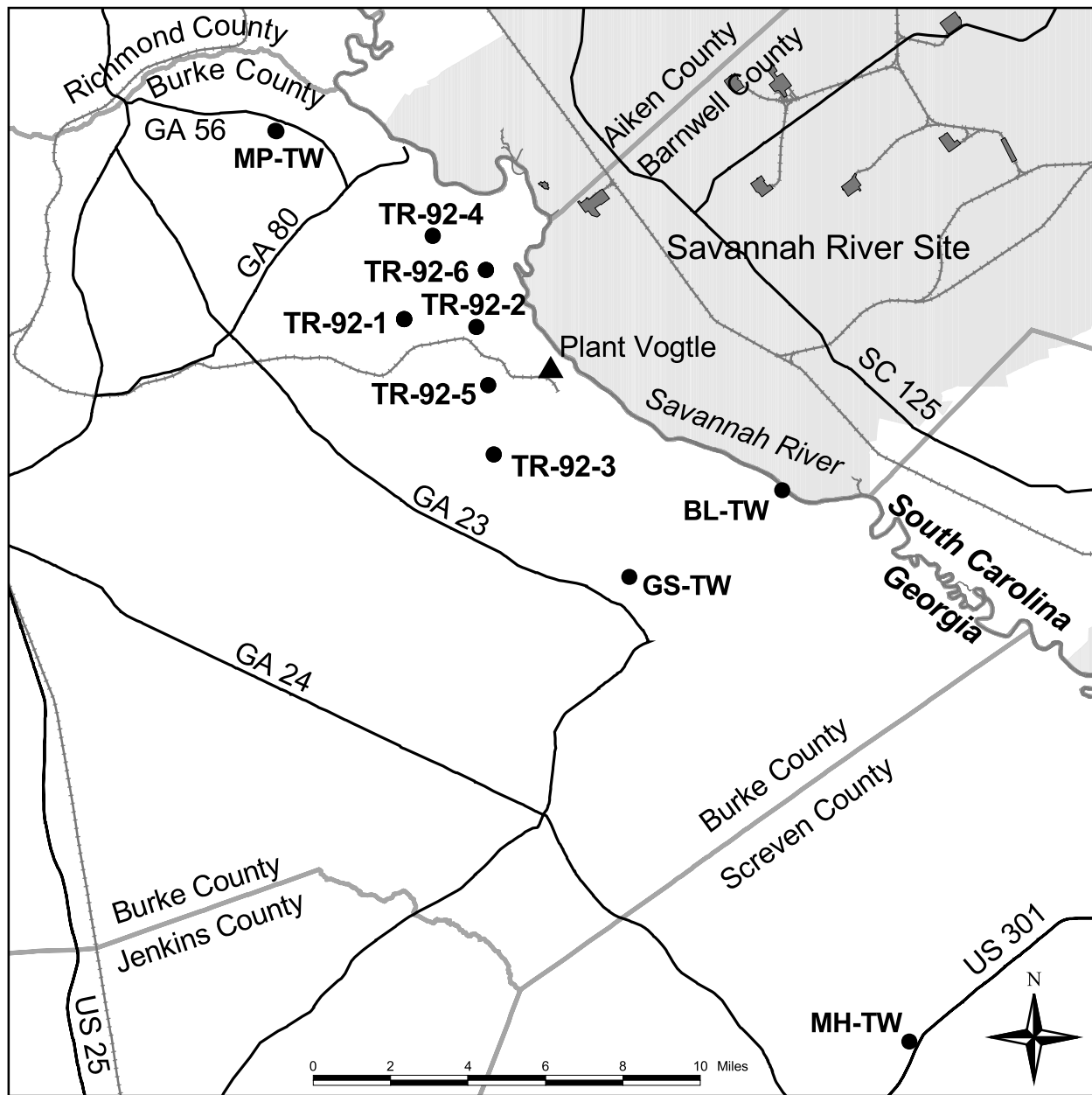


Figure 22 Burke/Screven County, Georgia, Well Locations

ESS/SRNL Map