2.2 LAND

2.2.1 THE SITE AND VICINITY

A map depicting the land use within the Callaway Plant site is presented in Figure 2.2-1. Land use categories for this map are consistent with the National Land Cover Data (NLCD) Land Cover Class Definitions (USGS, 2007). The 2,765 acre (1,119 hectare) Callaway Plant site is that portion of land contained within the 7,354 acre (2,976 hectare) AmerenUE property owned and controlled for the principal purpose of constructing and operating a nuclear power station. The company owns and operates Callaway Plant Unit 1 and will also own and operate Callaway Plant Unit 2.

The areas devoted to major uses of the land within the Callaway site are summarized in Table 2.2-1. The Table is consistent with USGS land use categories. A map showing major land use within the 8 mile (13 km) vicinity of the project is presented in Figure 2.2-2 with land uses classified consistent with the 2007 NLCD Land Cover Class Definitions (USGS, 2007). Major land uses in the 8 mile (13 km) vicinity of the project are summarized in Table 2.2-2. The vicinity is defined as the area encompassed within a radius of 8 miles (13 km) surrounding the plant site. A topographical map of the Callaway Plant site is presented in Figure 2.2-3.

There are no Native American lands within the site boundary or within the 8 mile (13 km) radius of the Callaway site. Federal or State owned lands providing recreational opportunities within the vicinity of the Callaway Plant site are the Katy Trail State Park and the St. Aubert Island Unit of the Big Muddy National Fish and Wildlife Refuge (Figure 2.2-6). The Katy Trail State Park is a linear tract built on the former corridor of the Missouri-Kansas-Texas Railroad. It extends for 225 miles (362 km) from St. Charles to Clinton offering recreation, a place to enjoy nature, and an avenue to discover the past (MDNR, 2007). Within the vicinity the Katy Trail runs north of and roughly parallel to State Route 94. The St. Aubert Island Unit contains 1,124 acres (455 hectares) consisting of about 700 acres (283 hectares) of bottomland and 400 acres (162 hectares) of upland forest and old fields. The unit is not accessible by the public except from the Missouri River (USFWS, 2007). It is anticipated that construction and operation of Callaway Plant Unit 2 project would not interfere with the recreational use of these areas.

There are no other known National Parks, National Forests, or National Monuments within the Callaway Plant site vicinity.

AmerenUE owned lands accessible by the public subject to use restrictions include approximately 6,600 acres (2,700 hectares) of the 7,354 acre (2,976 hectare) AmerenUE property. This property, known as the Reform Conservation Area, is managed by the Missouri Department of Conservation (MDC) in accordance with an agreement for the public use of lands (Ameren, 1994). The agreement "may be renewed in writing as many times as both parties desire". The plan embodied by the agreement allows public recreational use on designated lands within the AmerenUE property boundaries; however, camping and use of firearms (firing a single projectile) are not permitted. The Area may be closed to the public when the National Security Level reaches "orange" or higher (MDC, 2006).

Figure 2.2-7 shows major roads/highways and utility rights-of-way that cross and are in the vicinity of the Callaway Plant site. There is one operating rail line within the 8 mile (13 km) vicinity of the Callaway Plant site. The Union Pacific Railroad operates a line south of and generally parallel to the Missouri River that passes at a distance of 5.97 miles (9.61 km) from the Callaway Plant site at its closest approach in the city of Chamois.

Egress from the site to the north or south is afforded by State Route CC, and County Routes 459 and 448. Egress- to the east and west is afforded by State Route O along the northern site boundary and by State Route 94 on the south boundary. Area evacuation routes in the event of a radiological emergency are shown on Figure 2.2-8 (AmerenUE, 2007b).

The mineral resources on the Callaway Plant site and land in the vicinity are owned by the respective surface landowners. The Mertens Construction Company, Incorporated Reform Quarry, located 4.5 miles (7.2 km) northwest of the Callaway Plant site, extracts approximately 150,000 tons (136,000 metric tons) per year of crushed and broken limestone. The quarry employs 15 persons and has a potential reserve of about 16.5 million tons (15.0 million metric tons) of rock. An inactive limestone mine owned by AmerenUE is located approximately one mile (1.6 km) east of the site.

No comprehensive land use or zoning plans exist covering the rural portions of Callaway County including the Callaway Plant site or vicinity. Legislation authorizing the establishment of Regional Planning Commissions was enacted in 1969 and appears in Chapter 251 of the Revised Statutes of Missouri (RSMo) Part 160 (RSMo, 2007). The functions of a Regional Planning Commission are "solely advisory to the local governments comprising the region" (RSMo 251.300). A total of 19 Regional Planning Commissions have been established in accordance with this legislation (MACOG, 2007). Callaway County is represented by the Mid-Missouri Regional Planning Commission. Comprehensive plans covering unincorporated areas of the State, including the area comprising the site and vicinity, have not been prepared. Enabling legislation establishing County Planning Commissions with the authority to create, adopt, amend and carry out a county plan (Senate Bill [SB] 193, 2007) became effective on August 28, 2007.

2.2.2 TRANSMISSION CORRIDORS AND OFFSITE AREAS

2.2.2.1 Existing Corridors

The Callaway Plant power transmission system consists of three routes; a 23 mile (37 km) long northeast route connecting Callaway Plant Unit 1 with the Montgomery substation (Callaway-Montgomery line), a 32 mile (51 km) long southern route connecting Callaway Plant Unit 1 with the Bland substation (Callaway-Bland Line) and a 17 mile (27.4 km) long southern route connecting Callaway Plant Unit 1 with the Loose Creek Substation (Callaway-Loose Creek line). The Callaway-Montgomery line consists of two 345 kV circuits routed commonly on galvanized steel towers contained within a 200 foot (61 m) wide corridor. The Callaway-Bland and Callaway-Loose Creek circuits each consist of one 345 kV circuit routed commonly on galvanized steel towers contained within a 200 foot (61 m) wide corridor. 6.7 miles (11 km) south of Callaway Plant Unit 1 the Callaway-Loose Creek circuit diverges southwest on wooden H-frame towers contained within a 150 foot (45 m) right of way, while the Callaway-Bland circuit continues south.

2.2.2.2 Proposed Transmission System Modifications

An assessment was made to identify additions and modifications to the transmission system needed to connect Callaway Plant Unit 2 to the power grid. The results of the assessment indicated that no additional transmission corridors would be required. However, an extension of an existing corridor will be required.

In 2005 one of the two original Callaway-Bland circuits was broken apart to allow routing power to a new Loose Creek substation and establishing a Callaway-Loose Creek transmission system. This change was made to reduce transmission line congestion to the south and provide

additional power to Jefferson City. The new transmission line will route power at 345 kV from the Unit 1 switchyard to a tie-in point on the Callaway-Loose Creek line 6.7 miles (10.8 km) south of the Unit 1 switchyard. This action will allow the existing Callaway-Bland line to be restored to its original two circuit design. The existing Callaway-Bland corridor will be widened by 150 ft (46 m) to accommodate the new section of the Callaway-Loose Creek transmission line. This will necessitate obtaining additional easements permitting the widening of the transmission corridor for that portion that is off AmerenUE property. New transmission towers supporting the 345 kV transmission lines will be installed in the widened corridor parallel to and west of the existing Callaway-Bland transmission line, crossing the Missouri River at river mile 116.6 (187.6 km). The following additional facilities and system additions would also be constructed:

- One new 345 kV switchyard to transmit power from Callaway Plant Unit 2;
- Relocate Callaway-Montgomery lines 7 and 8 from the Unit 1 switchyard to the new Callaway Plant Unit 2 switchyard and install two lines between the Unit 1 and Unit 2 switchyards tying them together.

Transmission system expansion planning will conform to the planning process established by the Midwest Independent Transmission System Operator (Midwest ISO).

2.2.2.3 Land Use

The southern Bland/Loose Creek route of the Callaway power transmission system is located in a corridor totaling approximately 32 miles (51 km) of 150 ft to 200 ft (46 m to 61 m) width. The transmission lines extend south from the Unit 1switchyard on AmerenUE property to State Route 94, then within easements through the Missouri River flood plain both north and south of the river, crossing the river at river mile 116.6 (187.6 km). The lines cross mostly secondary-growth oak forests, grassland, and farmland.

The transmission line work being considered to support this project would complete the Callaway-Loose Creek transmission system by installing new facilities within a widened corridor, separating this final section of the Callaway-Loose Creek transmission system from the existing Callaway-Bland transmission system. The work will require new towers and a 345 kV transmission line connecting the Callaway Plant Unit 1 switchyard to a tie-in point on the Callaway-Loose Creek transmission line south of the Missouri River as described above. Land use in the portion of the corridor affected by this change is primarily Deciduous Woody Herbaceous or Deciduous Forest on AmerenUE property and Cropland in the Missouri River floodplain.

Design and construction of transmission lines would be based on the guidance provided by the National Electric Safety Code (NESC) (ANSI/IEEE, applicable version), state and local regulations.

2.2.3 THE REGION

The region within 50 miles (80 km) of the Callaway Plant site includes all or part of 22 Missouri counties. The 50 mile (80 km) region including major waterways and highways is shown in Figure 2.2-9. Interstate 70 (I-70) passes approximately 10.8 miles (17 km) north of the proposed project Site.

Land acreage devoted to major uses within the 50 mile (80 km) region are presented in Table 2.2-3 and shown on Figure 2.2-4. The land use/cover categories used in the table are consistent with USGS land use categories. Principal agricultural commodities, dollar values of

produced commodities, amount of county land within the region used for agriculture, and the average land value based on the last (2002) U.S. Department of Agriculture survey, for these principal agricultural commodities are summarized in Table 2.2-4 (USDA, 2007).

The region is defined as an area within a 50 mile (80 km) radius of the Callaway Plant site, but excludes the site and vicinity. Five incorporated places with populations exceeding 10,000 people are located within the region. Four of these are located within 30 miles (48 km) of the site and of those, three (Fulton, Jefferson City, and Columbia) representing 30% of the total resident population of the region, contribute about 66% of the existing plant labor force of 867. There is a direct relationship between distance from the site and labor force contribution among these three cities.

The three counties within which these cities are located contribute 87% (754 employees) of the current Callaway Plant Unit 1 labor force (AmerenUE full time management and contract employees only) as follows:

- Callaway County (Fulton), 423 employees (49% of the workforce);
- Cole County (Jefferson City), 195 employees (22% of the workforce);
- Boone County (Columbia), 136 employees (16% of the workforce).

It is expected that impacts on land use and population changes would be most significant in these three counties where construction activity would be centered and where plant employees would be expected to live.

Transmission system construction activities are discussed in Section 2.2.2.

Callaway County is bisected in the east/west direction by I-70 and in the north/south direction by U.S Route 54. State Route 94 runs generally in an east/west direction paralleling the Missouri River. A network of smaller lettered State or numbered County roads connects the communities and provides access to the main highways. The most important of these with respect to the Callaway Plant site are State Route D providing access to the site from I-70, State Route O forming much of the northern site boundary, and State Route CC running north/south connecting State Route O to the north with State Route 94 to the south, intersecting County Route 459 which gives access to the site. State Route CC and County Routes 428, 448, 461, and 468 traverse portions of the AmerenUE property. County Route 459 is entirely on AmerenUE property.

Major land-based transportation routes and utility routes within the region are depicted in Figure 2.2-9 and Figure 2.2-10. The Missouri River passes within 5 miles (8 km) of the Callaway Plant site and is used seasonally for barge shipping. Of the 7.61 million short tons (6.90 million metric tons) transported on the Missouri River between Kansas City and the mouth in 2005, approximately 97% (7.32 million short tons (6.64 million metric tons)) consisted of sand and gravel with primary manufactured goods and food and farm products making up 98,000 short tons (89,000 metric tons) while petroleum and petroleum products, chemicals and related products totaled 187,000 short tons (169,600 metric tons) (USACE, 2007).

Two land use classes, forest and grassland, account for between 70% and 74% of the total area at all geographic levels: site, vicinity, or region. When developed land in the cropland class is added to forest and grassland, total land use of between 87% and 91% is accounted for at all geographic levels. Combined, land use classes including impervious, high intensity urban and

low intensity urban range from 9% for the site to 3% for the region. Detailed land use data for the Callaway Plant site, the vicinity and the region are shown Table 2.2-1, Table 2.2-2, and Table 2.2-4, respectively.

Major public lands (over 500 acres (202 hectares)) in the region are shown in Figure 2.2-5 and listed in Table 2.2-5. Federal or State owned lands within 10 miles (16 km) of the Callaway Plant site are the Katy Trail State Park and the St. Aubert Island Unit of the Big Muddy National Fish and Wildlife Refuge as described in Section 2.2.1above.

Federal and State lands in Callaway County beyond 10 miles (16 km) from the Callaway Plant site include Cedar Creek Trail section of the Mark Twain National Forest. This 16,500 acre (6,677 hectare) area provides a variety of wildlife habitats and recreational opportunities in the transition zone between oak-hickory forests and tall grass prairies. Activities include backpacking, bird watching, hunting, and primitive camping (USDA, 2007). The adjacent Dry Fork Recreation Area serves as an equestrian trail head to the Cedar Creek Trail offering camping and picnicking. State lands include the Whetstone Creek Conservation Area occupying 5,140 acres (2,080 hectares) approximately 2 miles (3.2 km) north of I-70 at the Williamsburg exit. The area is part of the Missouri State Park system operated by the Missouri Department of Conservation (MDC). Activities include bird watching, camping, picnicking, canoeing, hunting, fishing, and trapping. The area is more than half forested with grassland savanna, old fields, prairie, and wetland. A wildlife refuge is located in the southwestern portion of the conservation area (MDC, 2007).

2.2.4 REFERENCES

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Table 2.2-1—Land Use on the Callaway Plant Site

Land Use Land Cover Class	Acres	Hectares	Percent of Total Area
Impervious	198	80	7.0%
High Intensity Urban	0.4	0.2	0.0%
Low Intensity Urban	60	24	2.1%
Cropland	471	191	16.8%
Grassland	1,213	491	43.1%
Deciduous Forest	738	299	26.2%
Evergreen Forest	11	5	0.4%
Deciduous Woody/Herbaceous	39	16	1.4%
Herbaceous-Dominated Wetland	1	0.4	0.0%
Open Water	81	33	2.9%
	2,813		

REFERENCES:

Missouri Spatial Data Information Service (MSDIS) web site, http://www.msdis.missouri.edu,Accessed September 2007.

Table 2.2-2—Land Use in the 8 mile (13 km) Vicinity

Land Use Land Cover Class	Acres	Hectares	Percent of Total Area
Impervious	1,509	611	1.17%
High Intensity Urban	0.4	0.2	0.00%
Low Intensity Urban	420	170	0.33%
Cropland	22,027	8,914	17.14%
Grassland	26,672	10,794	20.75%
Deciduous Forest	65,008	26,308	50.58%
Evergreen Forest	3,092	1,251	2.41%
Deciduous Woody/Herbaceous	1,863	754	1.45%
Woody-Dominated Wetland	3,764	1,523	2.93%
Herbaceous-Dominated Wetland	256	104	0.20%
Open Water	3,916	1,585	3.05%
	128,527.4		

REFERENCES:

Missouri Spatial Data Information Service (MSDIS) web site, http://www.msdis.missouri.edu,Accessed September 2007.

Table 2.2-3—Land Use in the 50 mile (80 km) Region

Land Use Land Cover Class	Acres	Hectares	Percent of Total Area
Impervious	80,387.54	32,531.68	1.60%
High Intensity urban	4,459.46	1,804.68	0.09%
Low Intensity Urban	60,205.66	24,364.37	1.20%
Barren or Sparsely Vegetated	5,971.89	2,416.74	0.12%
Cropland	1,214,134.29	491,342.72	24.18%
Grassland	1,617,446.15	654,557.24	32.22%
Deciduous Forest	1,644,314.62	665,430.52	32.75%
Evergreen Forest	85,892.05	34,759.28	1.71%
Mixed Forest	2.45	0.99	0.00%
Deciduous Woody/Herbaceous	104,725.38	42,380.86	2.09%
Evergreen Woody/Herbaceous	5.56	2.25	0.00%
Woody-Dominated Wetland	77,439.05	31,338.47	1.54%
Herbaceous-Dominated Wetland	9,004.01	3,643.79	0.18%
Open Water	116,640.05	47,202.56	2.32%
	5020628.17		

References:

Missouri Spatial Data Information Service (MSDIS) web site, http://www.msdis.missouri.edu,Accessed September 2007.

Table 2.2-4—Callaway Plant Site 50 mi (80 km) Region Values of Agricultural Commodities Produced in 2002

County Name	Farmland within 50 miles Acres	Farmland within 80 km Hectares	Market Value, Land and Buildings (Dollars per acre)	Grains, oilseeds, dry beans and dry peas	Nursery, greenhouse, floriculture, and sod	Other crops and hay	Poultry and eggs	Cattle and calves	Milk and dairy products from cows	Hogs and pigs	Horses, ponies, mules, burros, and donkeys
				Values Listed in 1000's of dollars							
Audrain	415,192	(168,022)	1,601	51,391				20,351		8,884	
Boone	269,605	(109,105)	2,544	14,888				8,979		4,840	
Callaway	357,517	(144,682)	1,780	19,507				15,648		9,221	
Cole	185,689	(75,146)	1,974	3,157				8,297		5,926	
Cooper	80,547	(32,596)	1,332	5,290			1,599	3,918			
Crawford	33,303	(13,477)	1,247			197		1,068			28
Franklin	185,230	(74,960)	2,431	5,454				6,517		4,810	
Gasconade	222,214	(89,927)	1,586	2,899		1,718				2,686	
Howard	4,864	(1,968)	1,334	3,125		142		1,442			
Lincoln	130,133	(52,663)	2,172	9,427	3,019					1,828	
Maries	213,287	(86,314)	1,032			1,239		10,071		3,746	
Miller	103,804	(42,008)	1,479				12,580	5,262		8,707	
Moniteau	199,098)	(80,572)	1,380	4,550			23,899	26,003			
Monroe	106,591	(43,136)	1,183	8,133				3,466		3,885	
Montgomery	258,679	(104,720)	1,639	22,494				6,232		4,709	
Osage	314,788	(127,390)	1,400				17,070	16,745		10,371	
Phelps	18,297	(7,405)	1,519					626	92		55
Pike	116,069	(46,971)	1,618	8,752				6,256		2,396	
Ralls	71,144	(28,791)	1,437	6,275		243				1,269	
Randolph	15,730	(6,366)	1,174	611				751		571	
St Charles	37,690	(15,253)	3,991	4,606	563					521	
Warren	141,665	(57,330)	2,312	8,695				3,868		2,346	

References:
U.S. Department of Agriculture, 2002 Census of Agriculture, Missouri State and County Data, June 2004
Center for Agricultural, Resource, and Environmental Systems (CARES), www.cares.missouri.edu Accessed October 4, 2007

Notes:
Values are for top three agricultural commodities listed for each county. All commodity sales for 2002 Census are not listed.

Farmland area and production values assume uniform distribution throughout the counties

Table 2.2-5—Major Public Lands in the 50 mile (80 km) Region

(Page 1 of 2)

Name	Owner	Leasee	Acres	Hectares	County
State Parks					
Cuivre River State Park	Missouri Department of Natural Resources	unknown	6366.5	2576.5	Lincoln
Finger Lakes State Park	Missouri Department of Natural Resources	unknown	1059.3	428.7	Boone
Mark Twain State Park	Missouri Department of Natural Resources	unknown	1240.9	502.2	Monroe
Mark Twain State Park	Missouri Department of Natural Resources	unknown	801.4	324.3	Monroe, Ralls
Rock Bridge Memorial State Park	Missouri Department of Natural Resources	unknown	2024.9	819.5	Boone
State Forest					
Reifsnider (Frank) SF	Missouri Department of Conservation	Own	1377.8	557.6	Warren
US Corps of Engineers					
Mark Twain Lake USACOE	Corps of Engineers	Missouri Department of Conservation	11148.5	4511.7	Monroe, Ralls
National Forest					
Mark Twain National Forest	US Forest Service	unknown	648.1	262.3	Boone
Mark Twain National Forest	US Forest Service	unknown	2317.8	938.0	Boone, Callaway
Mark Twain National Forest	US Forest Service	unknown	6803.4	2753.3	Callaway
Conservation Areas					
Ben Branch Lake CA	Missouri Department of Conservation	Own	512.5	207.4	Osage
Bennitt (Rudolf) CA	Missouri Department of Conservation	Own	3303.4	1336.9	Boone, Howard, Randolph
Canaan CA	Missouri Department of Conservation	Own	1409.4	570.4	Gasconade
Daniel Boone CA	Missouri Department of Conservation	Own	3615.7	1463.3	Warren
Danville CA	Missouri Department of Conservation	Own	1256.8	508.6	Montgomery
Danville CA - Baldwin Annex	Missouri Department of Conservation	Own	690.5	279.4	Montgomery
Danville CA - Thornhill & Schulze Annex	Missouri Department of Conservation	Own	699.6	283.1	Montgomery
Davisdale CA	Missouri Department of Conservation	Own	2782.7	1126.1	Howard
Diana Bend CA	Missouri Department of Conservation	Own	830.9	336.3	Howard
Diggs (Marshall I.) CA	Missouri Department of Conservation	Own	1031.6	417.5	Audrain, Montgomery
Eagle Bluffs CA	Missouri Department of Conservation	Own	3706.0	1499.8	Boone
Hart Creek CA	Missouri Department of Conservation	Own	658.4	266.5	Boone
Little Dixie lake CA	Missouri Department of Conservation	Own	745.4	301.7	Callaway
Little Lost Creek CA	Missouri Department of Conservation	Own	2906.5	1176.2	Warren

Table 2.2-5—Major Public Lands in the 50 mile (80 km) Region

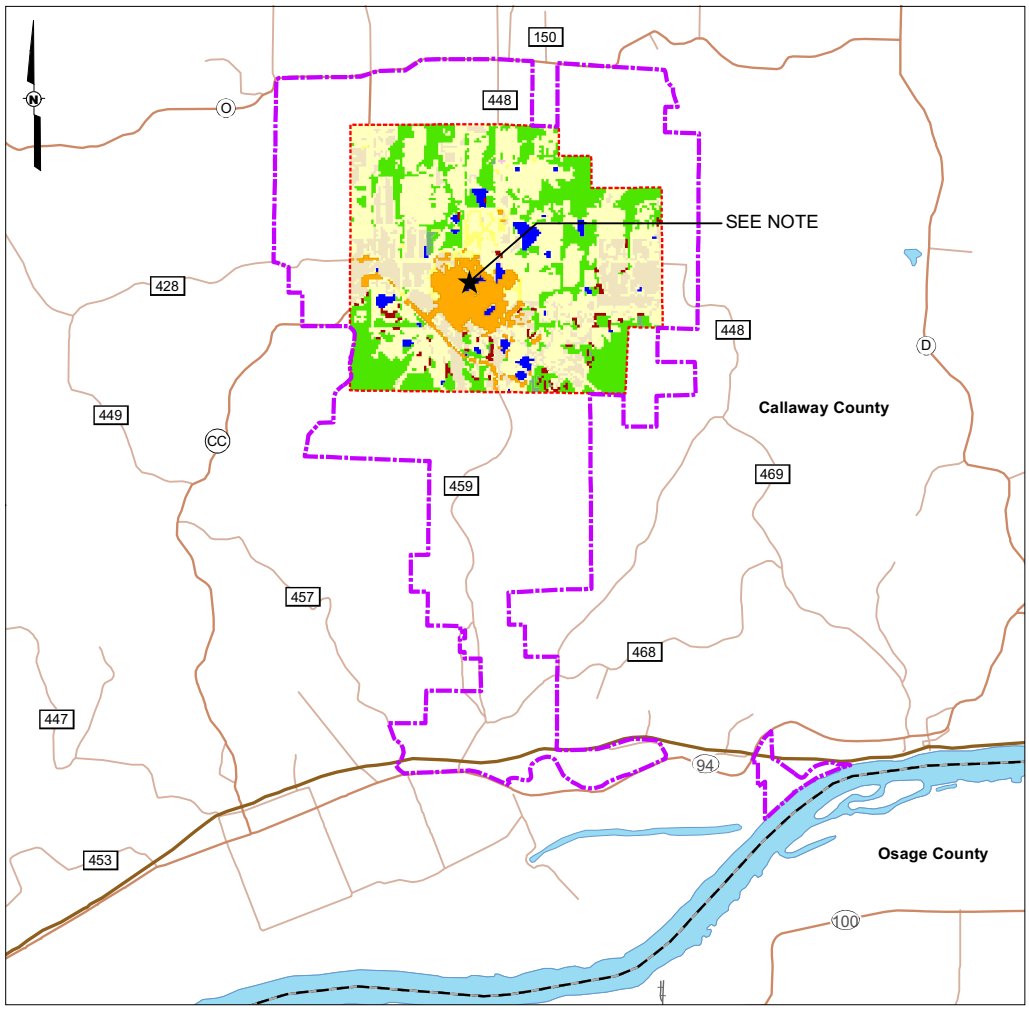
(Page 2 of 2)

Name	Owner	Leasee	Acres	Hectares	County
Logan (William R.) CA	Missouri Department of Conservation	Own	1660.9	672.2	Lincoln
Long Ridge CA	Missouri Department of Conservation	Own	1866.4	755.3	Franklin
Marion Bottoms	Missouri Department of Conservation	Own	2941.0	1190.2	Cole, Moniteau
Moniteau Creek CA	Missouri Department of Conservation	Own	750.6	303.8	Howard
Overton Bottoms	Missouri Department of Conservation	Lease	3726.9	1508.3	Cooper, Moniteau
Painted Rock CA	Missouri Department of Conservation	Own	1487.5	602.0	Osage
Plowboy Bend CA	Missouri Department of Conservation	Own	2676.9	1083.3	Moniteau
Prairie Fork	Missouri Department of Conservation	Own	709.4	287.1	Callaway
Prairie Home CA	Missouri Department of Conservation	Own	1466.8	593.6	Cooper, Moniteau
Reform CA	Missouri Department of Conservation	Lease	6942.8	2809.7	Callaway
Rocky Forks Lakes CA	Missouri Department of Conservation	Own	2234.3	904.2	Boone
Saline Valley CA	Missouri Department of Conservation	Own	4939.7	1999.1	Miller
Scrivner Road CA	Missouri Department of Conservation	Own	922.6	373.4	Cole
Smoky Waters CA	Missouri Department of Conservation	Own	610.8	247.2	Cole, Osage
Spring Creek Gap CA	Missouri Department of Conservation	Own	1783.5	721.8	Maries
Three Creeks CA	Missouri Department of Conservation	Own	1423.7	576.2	Boone
Whetstone Creek CA	Missouri Department of Conservation	Own	5244.0	2122.2	Callaway
White (Robert M., II) CA	Missouri Department of Conservation	Own	1162.8	470.6	Audrain, Monroe
White (Wm. G. & E. P.) MEM WA	Missouri Department of Conservation	Own	800.2	323.8	Lincoln
Federal Wildlife Areas					
Big Muddy National Fish and Wildlife Refuge - Overton Bottoms North Unit	US Fish and Wildlife Service	unknown	2109.3	853.6	Cooper
Big Muddy National Fish and Wildlife Refuge - St. Aubert Island Unit	US Fish and Wildlife Service	unknown	1157.2	468.3	Osage

REFERENCES:

Missouri Spatial Data Information Service (MSDIS) web site, http://www.msdis.missouri.edu.Accessed September 2007

Figure 2.2-1—Land Use on the Callaway Plant Site



LEGEND:

- Callaway Plant Site Area
- Ameren Property Boundary
- Secondary State and County Highways
- Local, Neighborhood, Rural or City Street
- Railroad
- Katy Trail
- Water

Land Use Land Cover

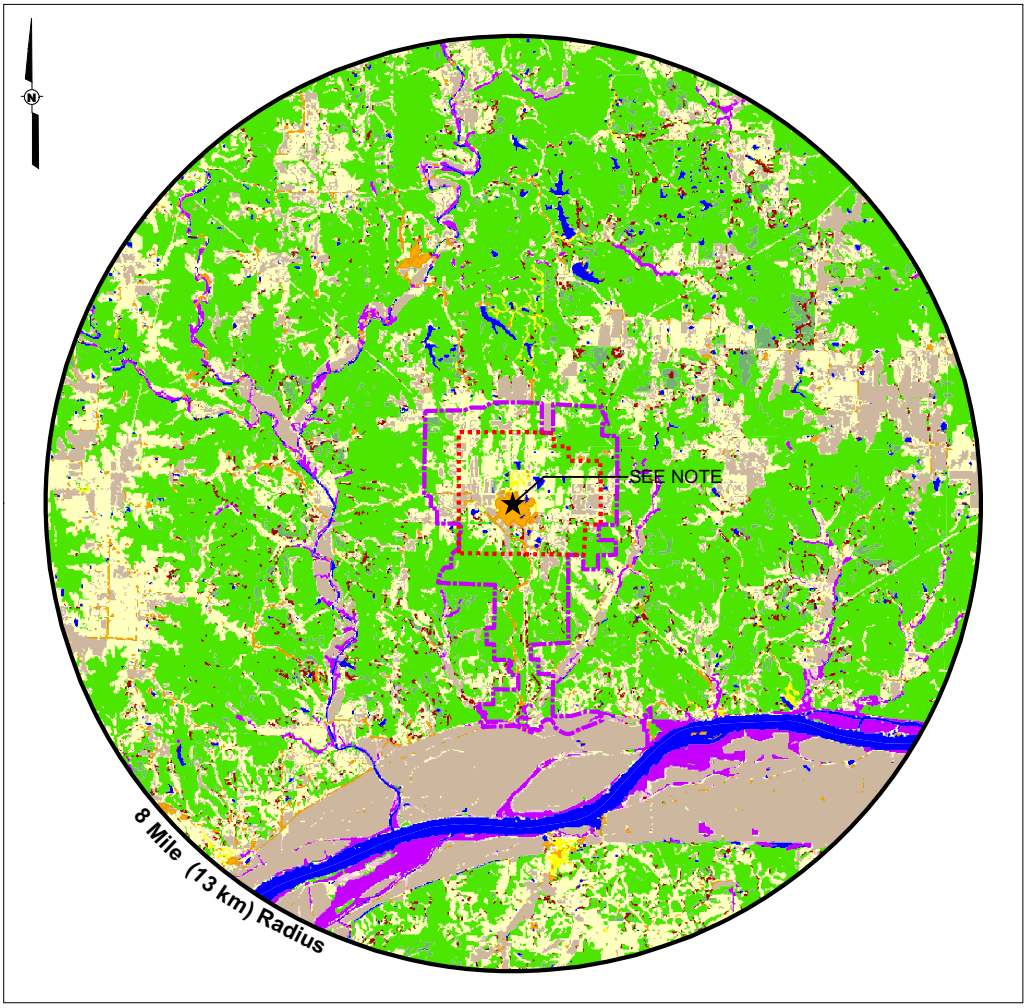
- Impervious
- High Intensity Urban
- Low Intensity Urban
- Barren or Sparsely Vegetated
- Cropland
- Grassland
- Diciduous Forest
- Evergreen Forest
- Mixed Forest
- Evergreen Woody/Herbaceous
- Deciduous Woody/Herbaceous
- Woody-Dominated Wetland
- Herbaceous-Dominated Wetland
- Open Water

0 0.75 1.5 Miles

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

REFERENCE:
ESRI StreetMap Pro [CD-ROM], 2007, Parks,Streets,& Waterbody. Land Cover/Land Use & katy Trail downloaded from Missouri Spatial Data Information Service (MSDIS) web site http://www.msdis.missouri.edu/. Accessed September 2007.

Figure 2.2-2—Land Use in the 8 mile (13 km) Vicinity



LEGEND:

- Callaway Plant Site Area
- Ameren Property Boundary

Land Use Land Cover

- Impervious
- High Intensity Urban
- Low Intensity Urban
- Barren or Sparsely Vegetated
- Cropland
- Grassland
- Diciduous Forest
- Evergreen Forest
- Mixed Forest
- Evergreen Woody/Herbaceous
- Deciduous Woody/Herbaceous
- Woody-Dominated Wetland
- Herbaceous-Dominated Wetland
- Open Water

0 1.25 2.5 Miles

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

REFERENCE:
Land Cover/Land Use downloaded from Missouri Spatial Data Information Service (MSDIS) web site http://www.msdis.missouri.edu/. Accessed September 2007.

Figure 2.2-3—Callaway Plant Site Topography

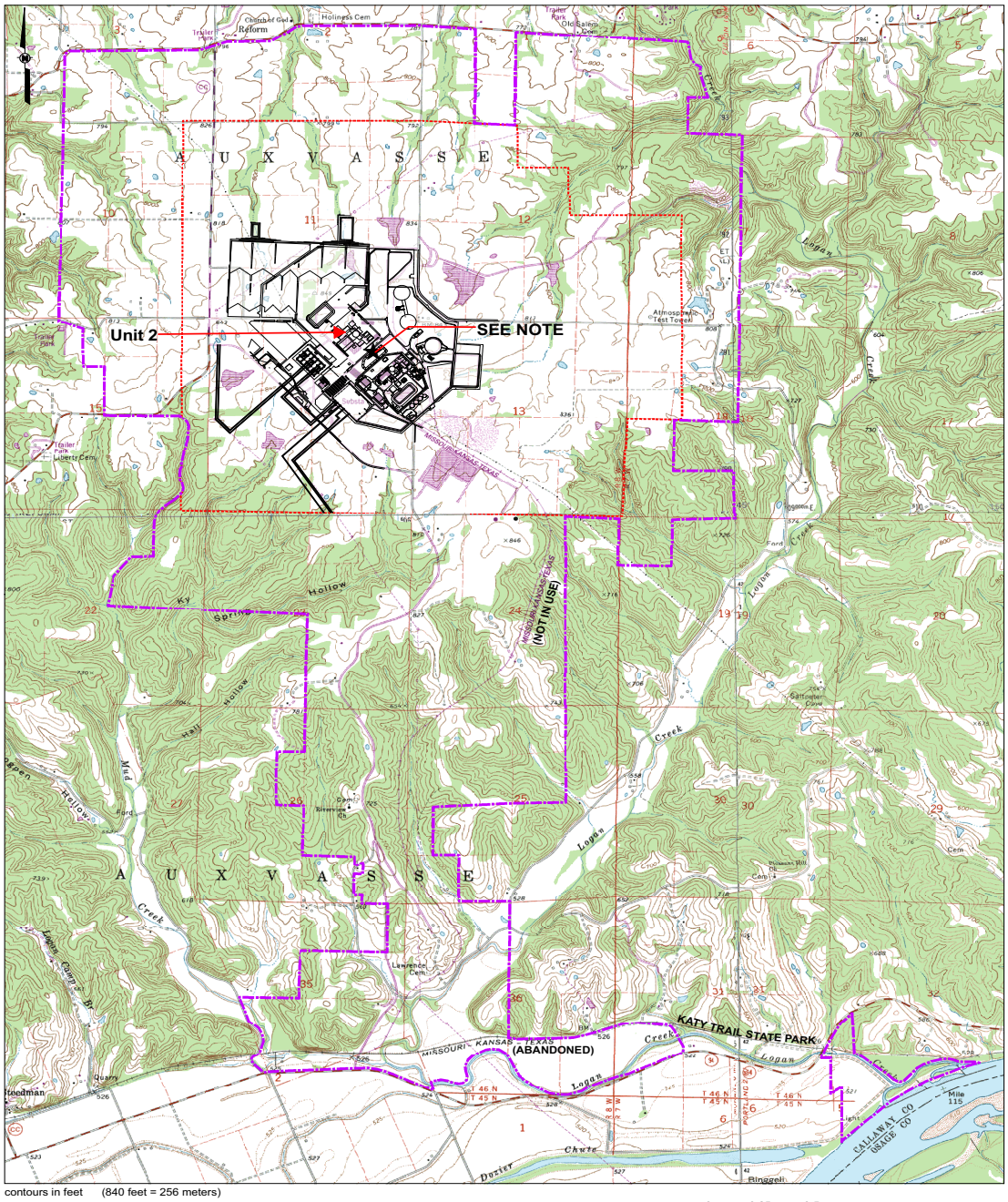
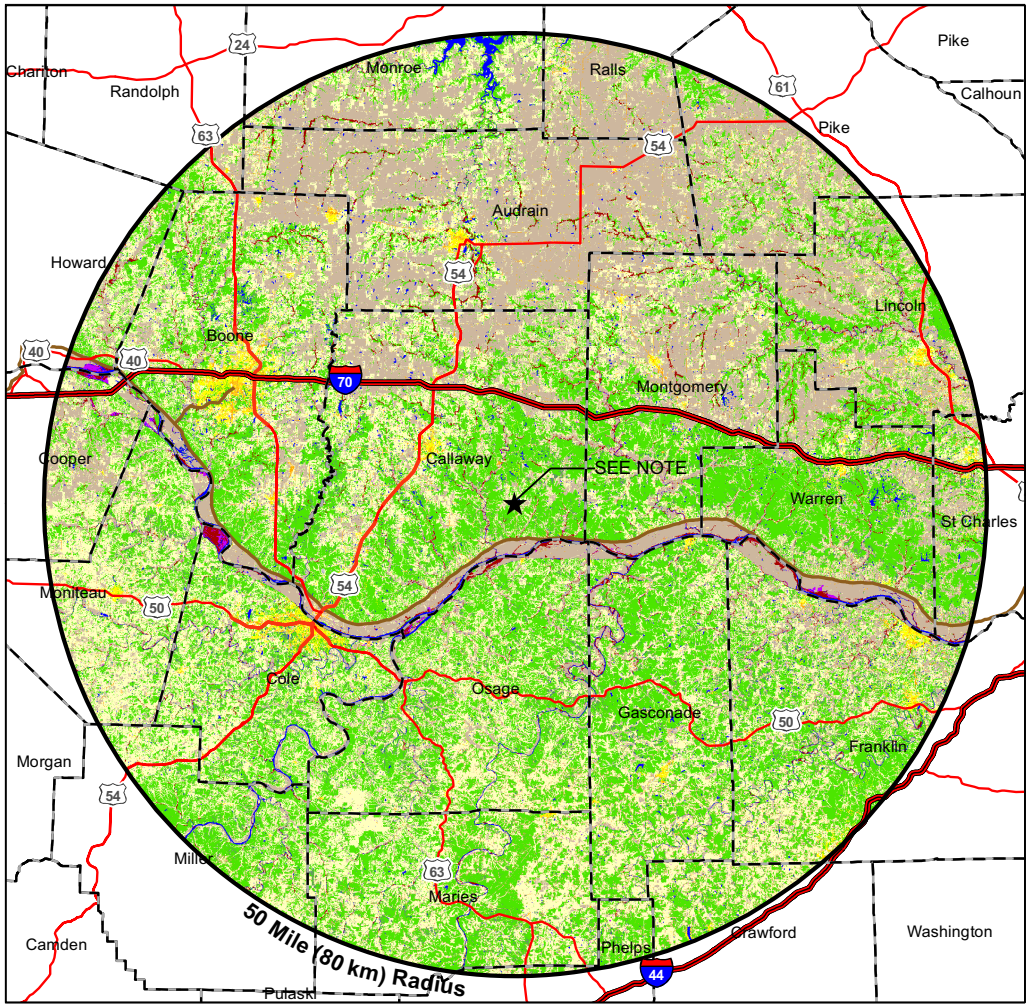


Figure 2.2-4—Land Use in the 50 mile (80 km) Region



LEGEND:

- County Boundary
- Land Use Land Cover
  - Impervious
  - High Intensity Urban
  - Low Intensity Urban
  - Barren or Sparsely Vegetated
  - Cropland
  - Grassland
  - Diciduous Forest
  - Evergreen Forest
  - Mixed Forest
  - Evergreen Woody/Herbaceous
  - Deciduous Woody/Herbaceous
  - Woody-Dominated Wetland
  - Herbaceous-Dominated Wetland
  - Open Water
- Interstate Highway
- US Highway
- Katy Trail

0 5 10 20 Miles

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

REFERENCE:
ESRI StreetMap Pro [CD-ROM], 2007, Roads and County Boundary. Land Cover/Land Use and Katy Trail downloaded from Missouri Spatial Data Information Service (MSDIS) web site http://www.msdis.missouri.edu/. Accessed September 2007. 2006 Missouri USDA NAIP Data.

Figure 2.2-5—Major Public Lands in the 50 mile (80 km) Region

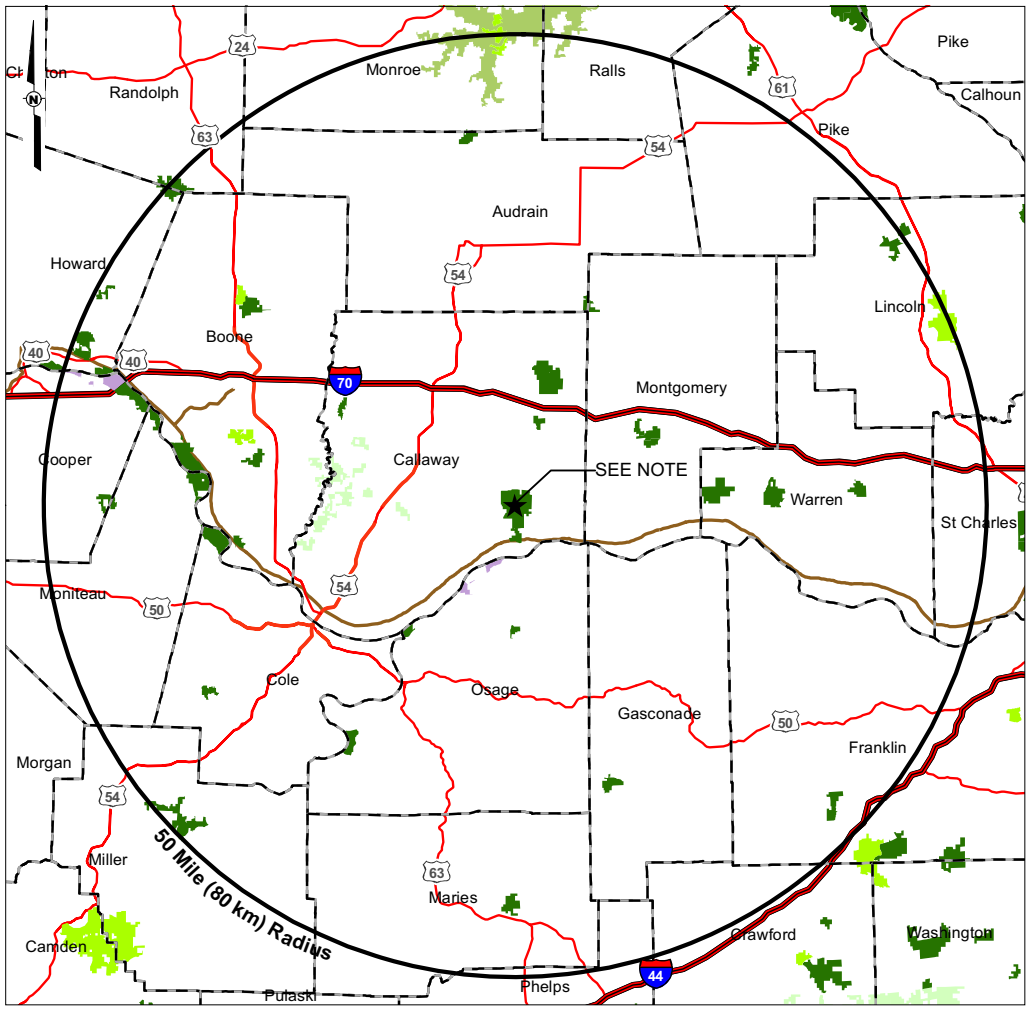
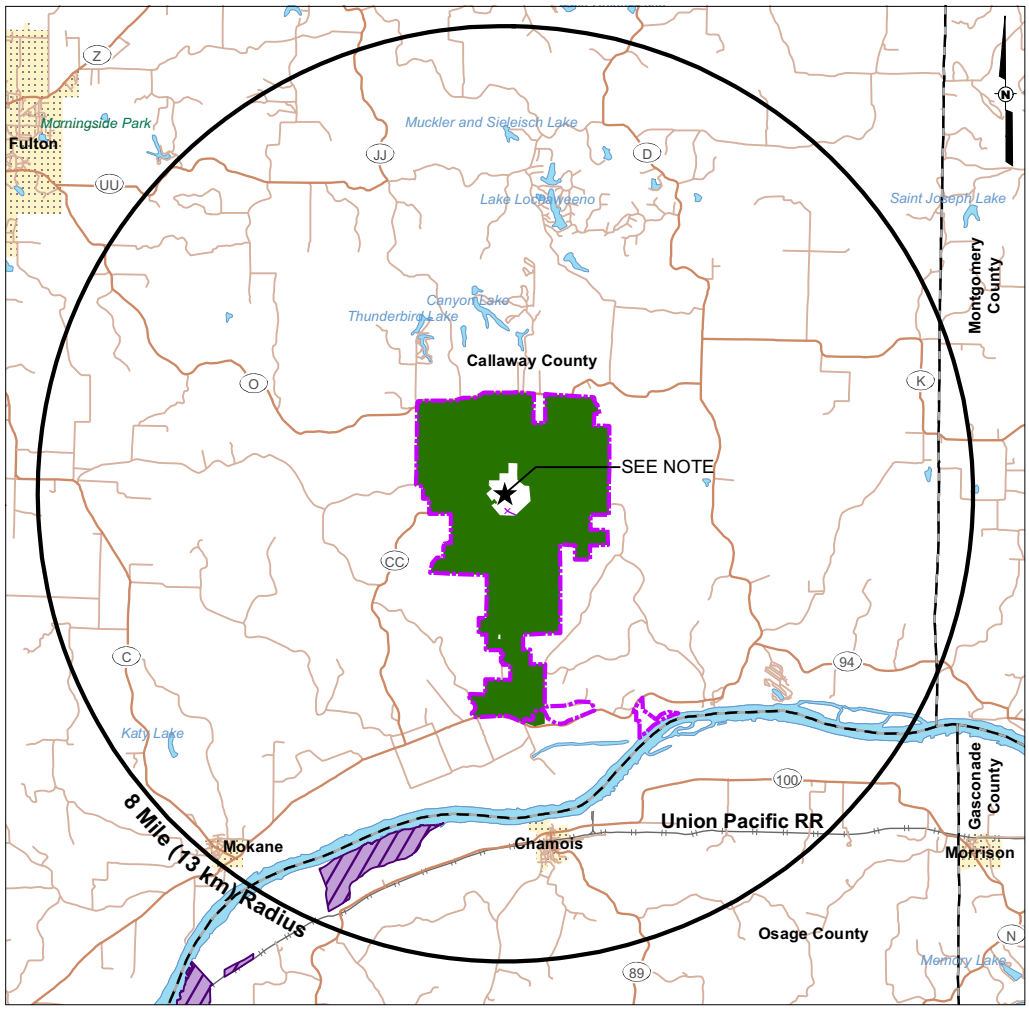


Figure 2.2-6—Public Lands in the 8 mile (13 km) Vicinity



LEGEND:

- County Boundary
- Ameren Property Boundary

Major Public Lands (>=500 Acres)

- Missouri Department of Conservation
- US Fish & Wildlife Service
- Secondary State and County Highways
- Local, Neighborhood, Rural or City Street
- Railroad
- Katy Trail
- Water
- Census Designated Place

0 1.25 2.5 Miles

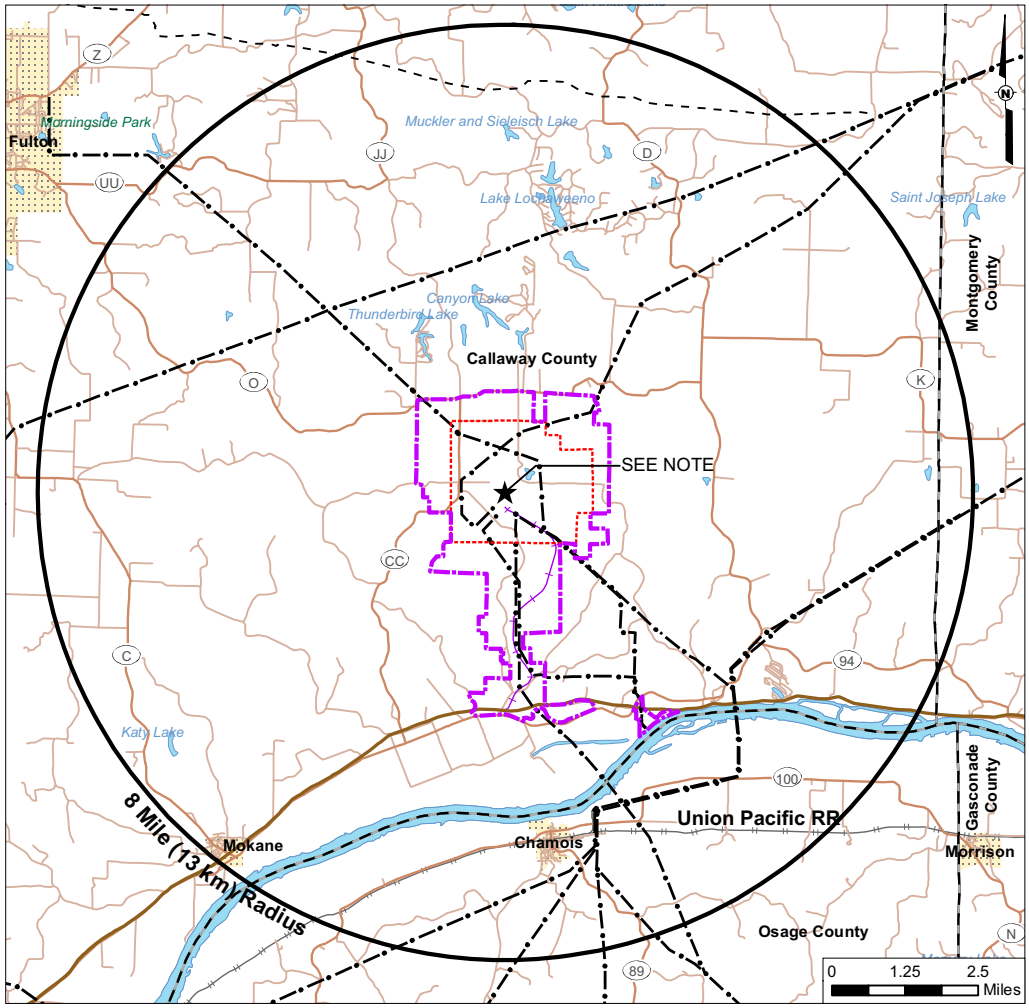
NOTE:

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

REFERENCE:

ESRI StreetMap Pro [CD-ROM], 2007, Parks,Streets,Waterbody, and Census Designated Places.
Katy Trail from Missouri Spatial Data Information Service (MSDIS) web site http://www.msdis.missouri.edu/. Accessed September 2007.
Ameren UE Dwg UE 8600-x-89930 (rev 14).
Ameren UE Dwg UE 8600-x-89931 (rev 12).

Figure 2.2-7—Highways, Railroads, and Utility Rights-of-Way in the 8 mile (13 km) Vicinity



LEGEND:

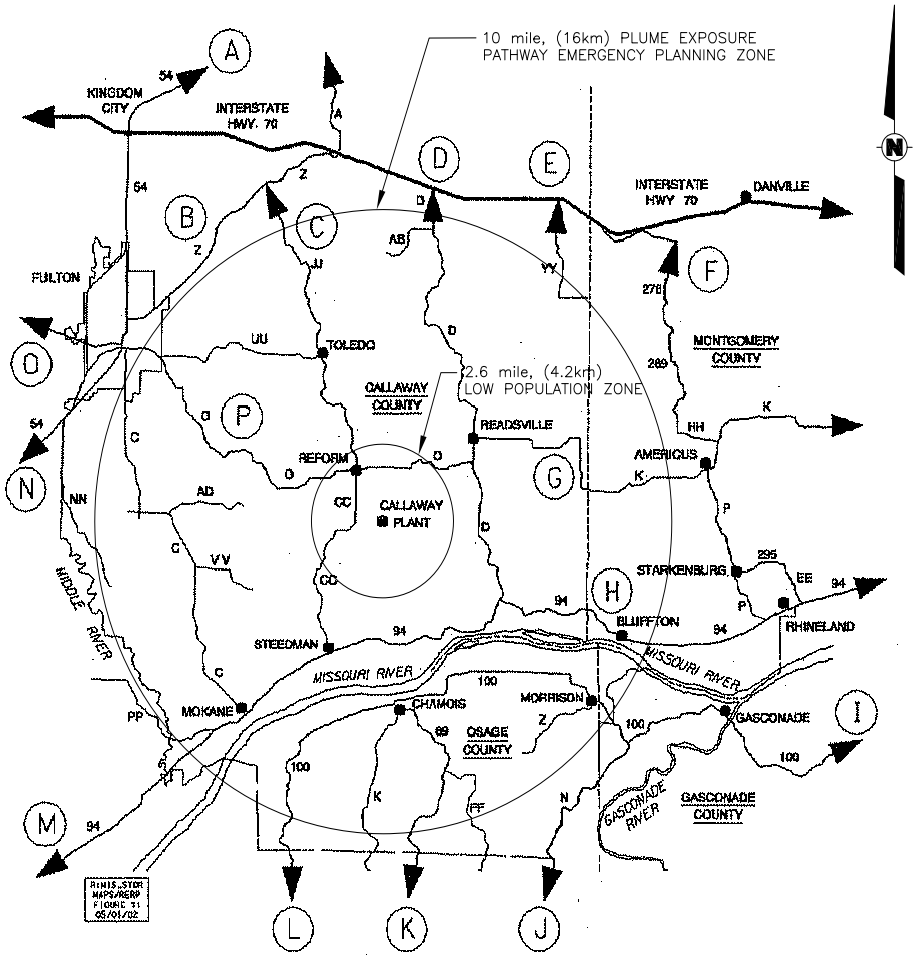
- County Boundary
- Callaway Plant Site Area
- Ameren Property Boundary
- Pipeline (Natural Gas)
- Power Transmission ROW
- Secondary State and County Highways
- Local, Neighborhood, Rural or City Street
- Railroad
- Railroad - NOT IN USE
- Katy Trail
- Water
- Census Designated Place

NOTE:

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

REFERENCE:
ESRI StreetMap Pro [CD-ROM], 2007, Parks,Streets,Waterbody, and Census Designated Places.
Katy Trail from Missouri Spatial Data Information Service (MSDIS) web site http://www.msdis.missouri.edu/. Accessed September 2007.
Utility lines and the railroad not in use digitized from USGS 1:24K Topographic Maps. Pipeline digitzed from 2006 Missouri USDA NAIP Data and National Pipeline Mapping System.
Ameren UE Dwg UE 8600-x-89930 (rev 14).
Ameren UE Dwg UE 8600-x-89931 (rev 12).

Figure 2.2-8—Callaway Plant Site Egress and Evacuation Routes



EVACUATION ROUTE	ROUTE NUMBER
A	U.S. HIGHWAY 54 EAST
B	ROUTE Z
C	ROUTE JJ
D	ROUTE D
E	ROUTE YY
F	ROUTE P
G	ROUTE K
H	STATE ROUTE 94 EAST
I	STATE ROUTE 100 EAST
J	ROUTE N
K	STATE ROUTE 89
L	STATE ROUTE 100 WEST
M	STATE ROUTE 94 WEST
N	U.S. HIGHWAY 54 WEST
O	ROUTE F
P	ROUTE O

REFERENCE:
CALLAWAY PLANT RADIOLOGICAL EMERGENCY RESPONSE PLAN (RERP), REVISION, APRIL, 2008.

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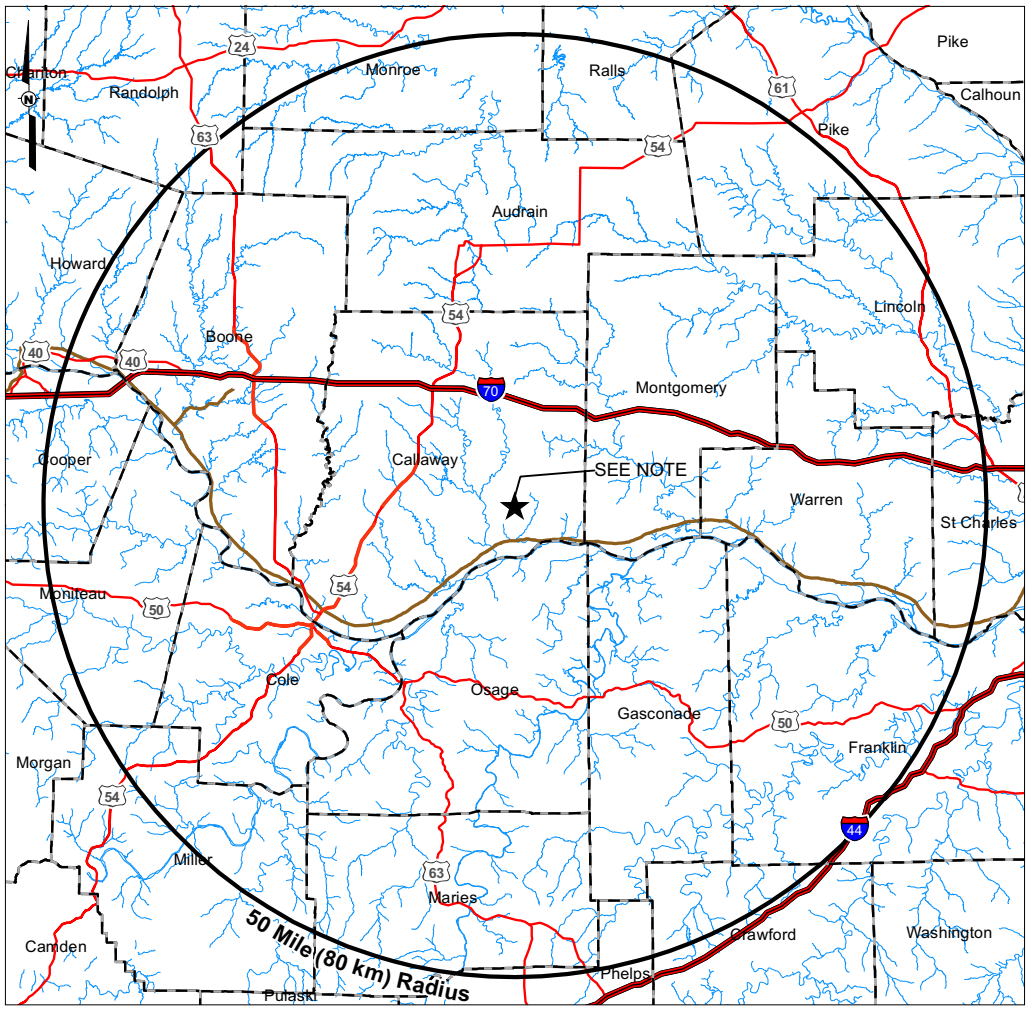
ER Section 2.2

Figure 2.2-9—Highways and Waterways in the 50 mile (80 km) Region



LEGEND:

- County Boundary
- Interstate Highway
- US Highway
- Katy Trail
- Primary Streams

0 5 10 20 Miles

NOTE:

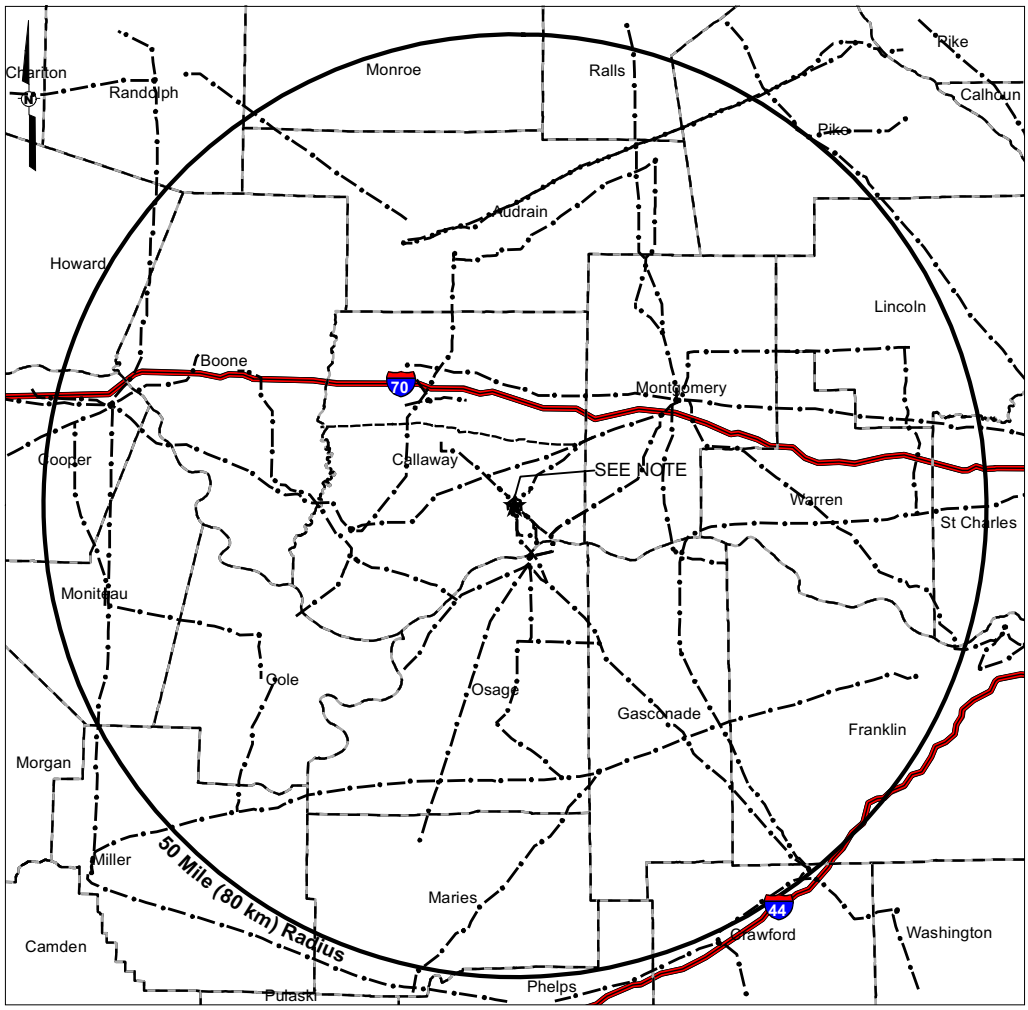
REFERENCE CENTER POINT OF PLANT SITE IS DEFINED AS THE MIDPOINT BETWEEN EXISTING REACTOR FOR CALLAWAY PLANT UNIT 1 AND REACTOR FOR CALLAWAY PLANT UNIT 2.

REFERENCE:

Roads, Katy Trail, and Streams from Missouri Spatial Data Information Service (MSDIS) web site http://www.msdis.missouri.edu/. Accessed September 2007.

ER Section 2.2

Figure 2.2-10—Utility Rights-of-Way in the Region



LEGEND:

- County Boundary
- Interstate Highway
- Pipeline (Natural Gas)
- Power Transmission ROW

0 5 10 20 Miles

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, County Boundary. Roads from Missouri Spatial Data Information Service (MSDIS) web site http://www.msdis.missouri.edu/. Accessed September 2007. Utility lines digitized from USGS 1:24K Topographic Maps. Pipeline digitized from 2006 Missouri NAIP Data and National Pipeline Mapping System.