PMBelCOL PEmails

From: BelCol Resource
Sent: Tuesday, June 30, 2009 1:37 PM
To: PMBelCOL PEmails
Cc: Hood, Mallecia
Subject: FW: COE-4 and -5
Attachments: ER_FIG05_06_01.pdf; BLN COE-4 Information Need Response (3).doc; BLN COE-5 Information Need Response.doc; ER_FIG02_01_01.pdf; ER_FIG02_04_01.pdf; ER_FIG04_01_01.pdf; ER_FIG04_03_01.pdf

note: zip files extracted to allow the document to be processed. no other changes made

---

From: Hood, Mallecia
Sent: Friday, June 26, 2009 2:10 PM
To: 'Fudge, Tammy R LRN'
Cc: PMBelCOL PEmails
Subject: FW: COE-4 and -5

From: Spink, Thomas E [mailto:tespink@tva.gov]
Sent: Friday, June 26, 2009 1:56 PM
To: Hood, Mallecia
Subject: COE-4 and -5

Thomas E. Spink
Licensing Project Manager
Nuclear Generation Development
1101 Market Street, LP 5A
Chattanooga, TN 37402
423-751-7062; FAX (423) 751-6509

Hearing Identifier: Bellefonte_COL_Public_EX
Email Number: 1593

Mail Envelope Properties (5A7F273F3E481245BC055B36939D3463252C248DE8)

Subject: FW: COE-4 and -5
Sent Date: 6/30/2009 1:37:02 PM
Received Date: 6/30/2009 1:37:05 PM
From: BelCol Resource

Created By: BelCol.Resource@nrc.gov

Recipients:
"Hood, Mallecia" <Mallecia.Hood@nrc.gov>
Tracking Status: None
"PMBelCOL PEmails" <PMBelCOL.PEmails@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	574	6/30/2009 1:37:05 PM
ER_FIG05_06_01.pdf	161020	
BLN COE-4 Information Need Response (3).doc	36858	
BLN COE-5 Information Need Response.doc	50170	
ER_FIG02_01_01.pdf	907023	
ER_FIG02_04_01.pdf	237553	
ER_FIG04_01_01.pdf	142486	
ER_FIG04_03_01.pdf	631752	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

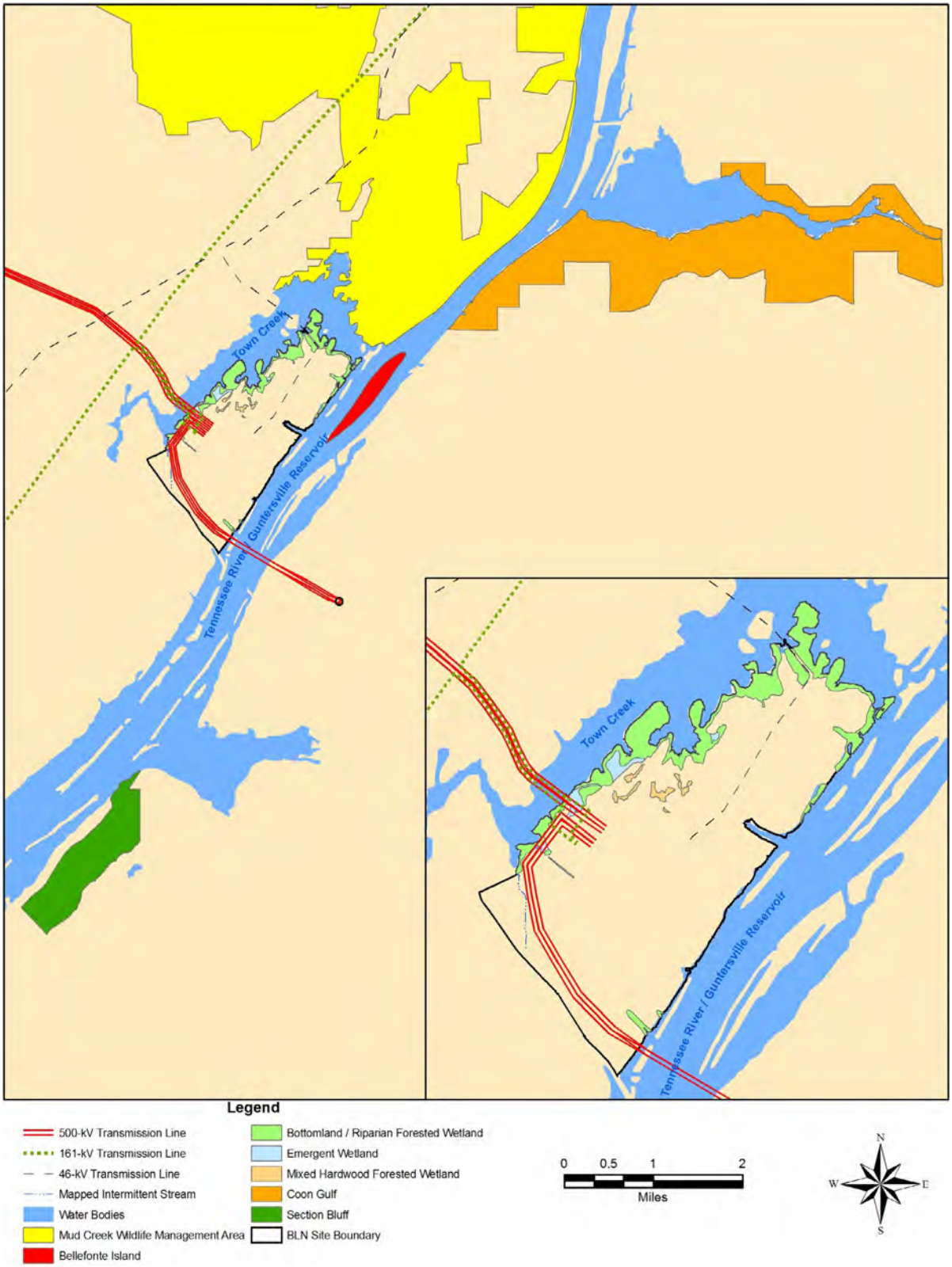

FIGURE 5.6-1
Transmission Sensitive Habitat

U.S. Army Corps of Engineers Information Needs – June 2009

Preparation for Bellefonte Units 3 and 4 Corps of Engineers Site Visit, July 8-10, 2009

COE INFORMATION NEED: COE-4

Provide an SME and supporting data and information to describe any dredging that will need to be done to maintain a channel between the barge slip and the main navigation channel in Guntersville Reservoir.

BLN RESPONSE:

Dredging needed to maintain a channel between the barge slip and the main navigation channel is considered in and conducted as part of the maintenance dredging to maintain the barge slip facility, which is discussed in response to Information Need COE-3. In addition, little/minimal silting has been observed in the area of the barge slip.

ATTACHMENTS:

None.

U.S. Army Corps of Engineers Information Needs – June 2009

Preparation for Bellefonte Units 3 and 4 Corps of Engineers Site Visit, July 8-10, 2009

COE INFORMATION NEED: COE-5

Provide an SME and supporting data and information/references to discuss the techniques to be used by TVA to avoid and minimize impacts to waters of the U.S. at the Bellefonte Site due to the pre- construction, construction and operation of Bellefonte Units 3 and 4. The description should include but not be limited to:

- A description of the criteria used to identify, evaluate, and screen on-site project alternatives regarding structure placement, temporary work areas, haul roads, etc.,
- considerations to reduce project footprint,
- considerations to reuse/upgrade existing infrastructure,
- temporary work areas and staging areas including restoration activities planned,
- construction access and permanent access roads,
- site grading and permanent structures, parking areas, etc.,
- methods to minimize adverse effects to water quality,
- methods to minimize adverse effects to natural and cultural resources,
- methods to minimize shore erosion from discharge line extending into Guntersville Reservoir

BLN RESPONSE:

BLN Units 3 and 4 would use the site originally developed for Bellefonte Units 1 and 2, including existing infrastructure. The reuse of previously disturbed land and existing infrastructure (intake, discharge, cooling towers, switchyard, transmission lines, pipelines, rail spur, and roads) is emphasized throughout the ER. Construction of Units 3 and 4 is contained within disturbed areas to the extent possible. Section 1.1 provides the following description, and Table 1.1-2 lists the acreage (approximately 200 acres) that will be affected by construction of various facilities for Units 3 and 4:

> "The two AP1000 units would be constructed on-site in an area previously disturbed, with a portion extending into an undeveloped wooded area (Figure 1.1-3). The primary land uses in the surrounding area are forestry and agriculture, with some urban-industrial development. The site is already zoned as industrial. Guntersville Reservoir on the Tennessee River is used as the source of makeup water for the BLN. About 400 ac. of the BLN site have been developed with buildings and facilities, roads, parking lots or other uses related to the nuclear option. The remaining approximately 1200 ac. are in various stages of grassland or forest combination, with perhaps 200 – 300 ac. that are considered forest."

Table 1.2-1 identifies the various agencies and their authorities, and the project activities at BLN covered under the regulations to protect resources there.

Sections 2.1 and 2.2 describe the station location and site, including existing structures TVA plans to use that help minimize and avoid impacts. Figure 2.1-1 is the site plot plan and is provided as an attachment.

ER Chapter 4 addresses the impacts of construction, and potential ways to avoid, minimize, or mitigate adverse impacts of construction to the maximum extent practical.

Section 4.1 covers impacts to land use of the site and vicinity from construction. Subsection 4.1.1 includes discussions on site preparation activities, construction access, haul roads, and laydown areas. Figure 4.1-1 illustrates the site plot plan with construction laydown areas and service lines, and is provided as an attachment. Subsection 4.1.3 provides a discussion on the impacts to cultural resources/historic properties and measures to avoid and mitigate construction impacts.

Section 4.2 specifically addresses water-related impacts from construction, and measures to minimize and avoid impacts. Subsection 4.2.1 discusses hydrologic alterations and Subsection 4.2.2 discusses water-use (water use and water quality) impacts. Associated measures and controls are addressed in each subsection. In particular, construction stormwater control and other minimizing actions are provided in Subsection 4.2.1.10.

Construction effects on terrestrial habitat, including wetland habitat, and the use of BMPs and standard construction practices to minimize impacts are addressed in Subsection 4.3.1.1. Construction effects on wetlands as important terrestrial habitats and measures to avoid or minimize impacts, including restoration, are covered in Subsection 4.3.1.4. Figures 2.4-1 and 4.3-1 illustrate vegetative cover (including wetlands) and habitat affected by construction, respectively. The figures are provided as attachments.

Table 4.6-1 summarizes construction impacts, and identifies measures and controls to limit adverse impacts during construction.

ER Chapter 5 addresses the impacts of plant operation, and potential ways to avoid, minimize, or mitigate adverse impacts of construction to the maximum extent practical.

Section 5.1 covers impacts to land use of the site and vicinity from plant operation. No new areas are expected to be disturbed once construction has been completed. Subsection 5.1.3 provides a discussion on the impacts to cultural resources/historic properties and measures to avoid and mitigate impacts.

Section 5.2 specifically addresses water-related impacts (hydrologic alterations and plant water supply, and water use and water quality impacts) from plant operation, along with measures to minimize and avoid impacts.

Section 5.3 focuses on cooling system impacts. The section describes the intake and discharge systems, anticipated impacts, and design parameters that reduce or limit impacts. Subsection 5.3.2.2 provides the following statement regarding operational impacts to wetlands:

> "Thermal blowdown associated with BLN is diffused directly into Guntersville Reservoir and not to any wetlands in the floodplain. Therefore, no impacts to wetlands or the bottomland floodplain are expected."

Effects of transmission corridor maintenance on terrestrial and aquatic ecosystems during operations are addressed in Section 5.6, along with TVA maintenance procedures and measures

to limit impacts. Figure 5.6-1 illustrates habitat that is sensitive to transmission lines/corridor maintenance, and the figure is provided as an attachment.

Table 5.10 summarizes operations impacts, and identifies measures and controls to limit adverse impacts during plant operation.

ER Chapter 6 addresses environmental measurements and monitoring programs. Planned monitoring associated with waters of the U.S. include thermal (Section 6.1), radiological (Section 6.2), hydrological (Section 6.3), ecological (Section 6.5), and chemical (Section 6.6).

Section 6.7 summarizes monitoring programs for Units 3 and 4.

ATTACHMENTS:

Figure 2.1-1 Site Plot Plan

Figure 2.4-1 BLN Vegetation Coverage

Figure 4.1-1 Detailed Site Plot Plan with Construction Laydown Areas and Service Line Locations

Figure 4.3-1 Habitat Affected by Construction

Figure 5.6-1 Transmission Sensitive Habitat

TRUE NORTH
AL EAST GRID (NAD 83)

NEW UNITS 3 & 4 GENERATION FACILITY LEGEND:

1. CONTAINMENT/SHIELD BUILDING
2. TURBINE BUILDING
3. ANNEX BUILDING
4. AUXILIARY BUILDING
5. SWS COOLING TOWERS
7. RADWASTE BUILDING
10. DIESEL GENERATOR BUILDING
13. FIRE WATER/CLEARWELL STORAGE TANK
14. FIRE WATER STORAGE TANK
15. TRANSFORMER AREA
17. CONDENSATE STORAGE TANK
18. DIESEL GENERATOR OIL STORAGE TANKS
19. DEMINERALIZED WATER STORAGE TANK
20. BORIC ACID STORAGE TANK
22. TURBINE BUILDING LAYDOWN AREA
25. PASSIVE CONTAINMENT COOLING ANCILLARY WATER STORAGE TANK
26. DIESEL-DRIVEN FIRE PUMP/ENCLOSURE
99. T-PAD FOR CRANE

BUILDING LEGEND:

1. NEW PRIMARY ACCESS PORTAL & SECONDARY ALARM STATION
2. NEW ADMINISTRATION BUILDING
3. REMOVE EXIST BLDGS.
4. NEW MAINTENENCE BUILDING
5. NEW MATERIAL RECEIVING & SALLY PORT BUILDING
6. EXISTING SIMULATOR BUILDING
7. EXISTING UNIT 1 & 2 BUILDINGS
8. EXISTING SITE TRAINING BLDG
9. NEW SITE PARKING
10. EXISTING SWITCHYARD
11. NEW OUTAGE PARKING
12. EXISTING COOLING TOWERS
13. NEW SECURITY FENCE ASSY.
14. NEW SWITCHYARD BUILDING
15. EXISTING STORAGE AREA
16. NEW SECURITY ACCESS BLDG
17. NEW CIRCULATING PUMPS
18. NEW PSO SWITCHYARD FACILITY
19. EXISTING SECURITY RANGE FACILITY
20. NEW SECURITY TRAINING BUILDING
21. NEW TECH SUPPORT CENTER (WITHIN MAINTENECE BUILDING)
22. NEW H2 STORAGE BUILDING
23. NEW HAZ. WASTE STORAGE BUILDING
24. EXISTING INTAKE PUMPING STATION
25. NEW TSC DIESEL GENERATOR BUILDING

POND LEGEND:

POND A - YARD DRAINAGE POND
WWRB - WASTE WATER RETENTION BASIN
POND C - CONCENTRATED CHEMICAL TREATMENT POND (LINED)
POND D - DESILTING POND
POND E - ALUM SLUDGE PONDS

NOTES:

1. ELEVATIONS SHOWN ARE BASED ON MEAN SEA LEVEL (MSL).
2. EXISTING CONDITIONS AND TOPOGRAPHIC CONTOURS BASED UPON THE SANBORN MAP COMPANY, INC. PHOTOGRAMMETRIC SURVEY PERFORMED ON MARCH 26,2006 PROJECT NO. 060319.
3. CONTOUR INTERVAL IS 5 FEET.
4. 1000 FOOT GRID AND COORDINATE VALUES ARE BASED UPON AL EAST STATE PLANE COORDINATE SYSTEM NAD 83.

0 300 600 900
GRAPHIC SCALE (FEET)
1 INCH = 300 FT

FIGURE 2.1-1
Site Plot Plan

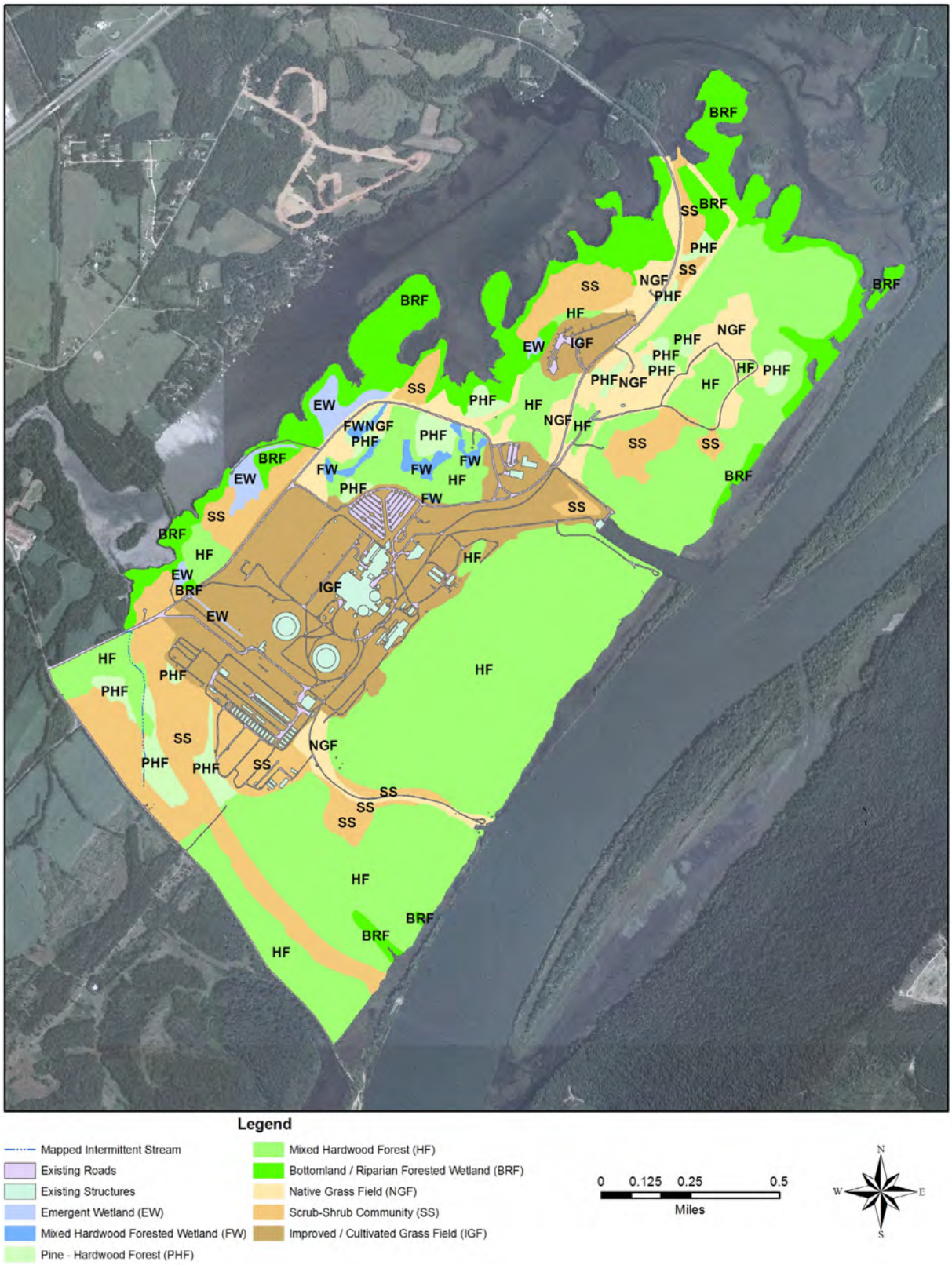

FIGURE 2.4-1
BLN Vegetation Coverage

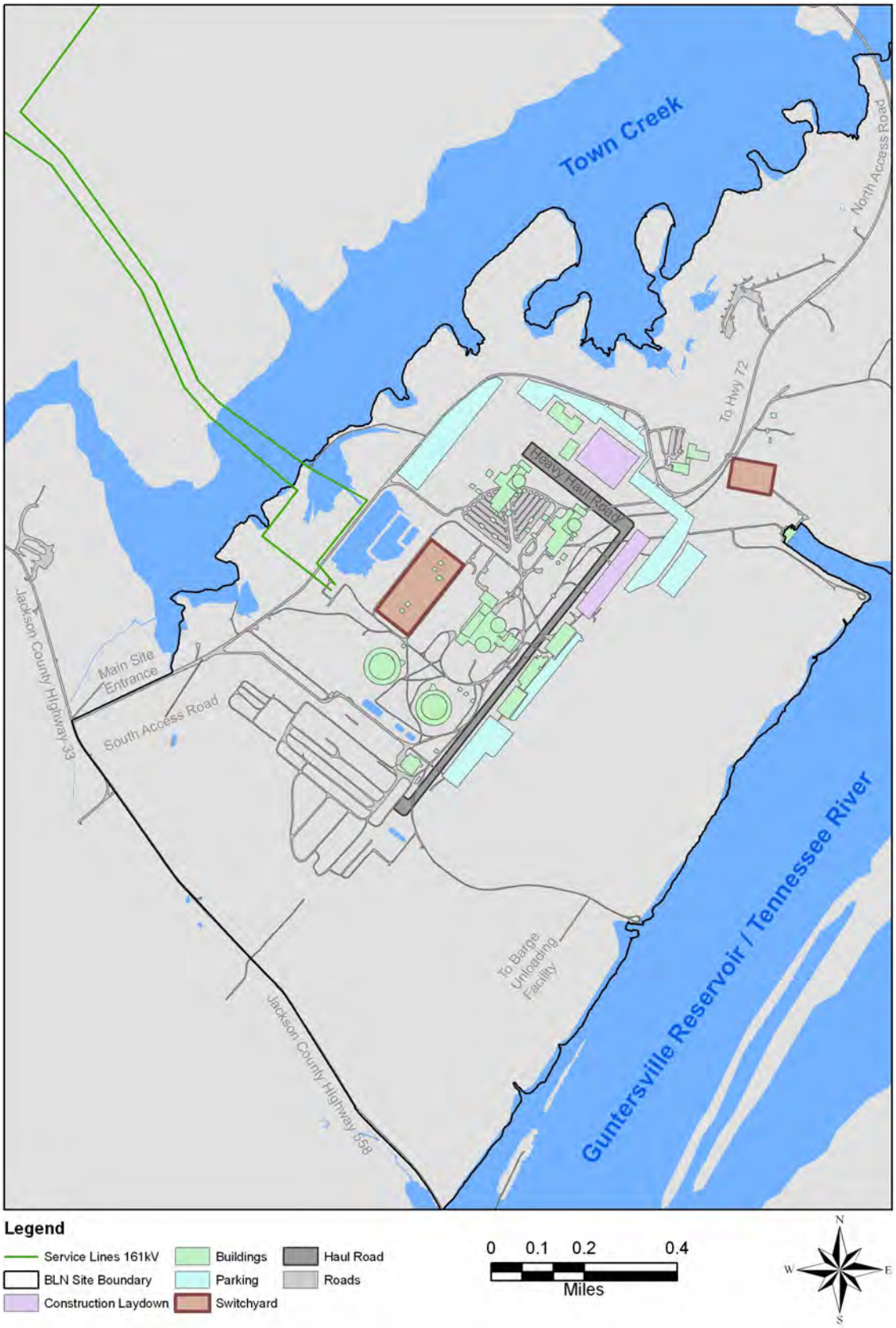

FIGURE 4.1-1
Detailed Site Plot Plan with Construction Laydown Areas and Service Line Locations

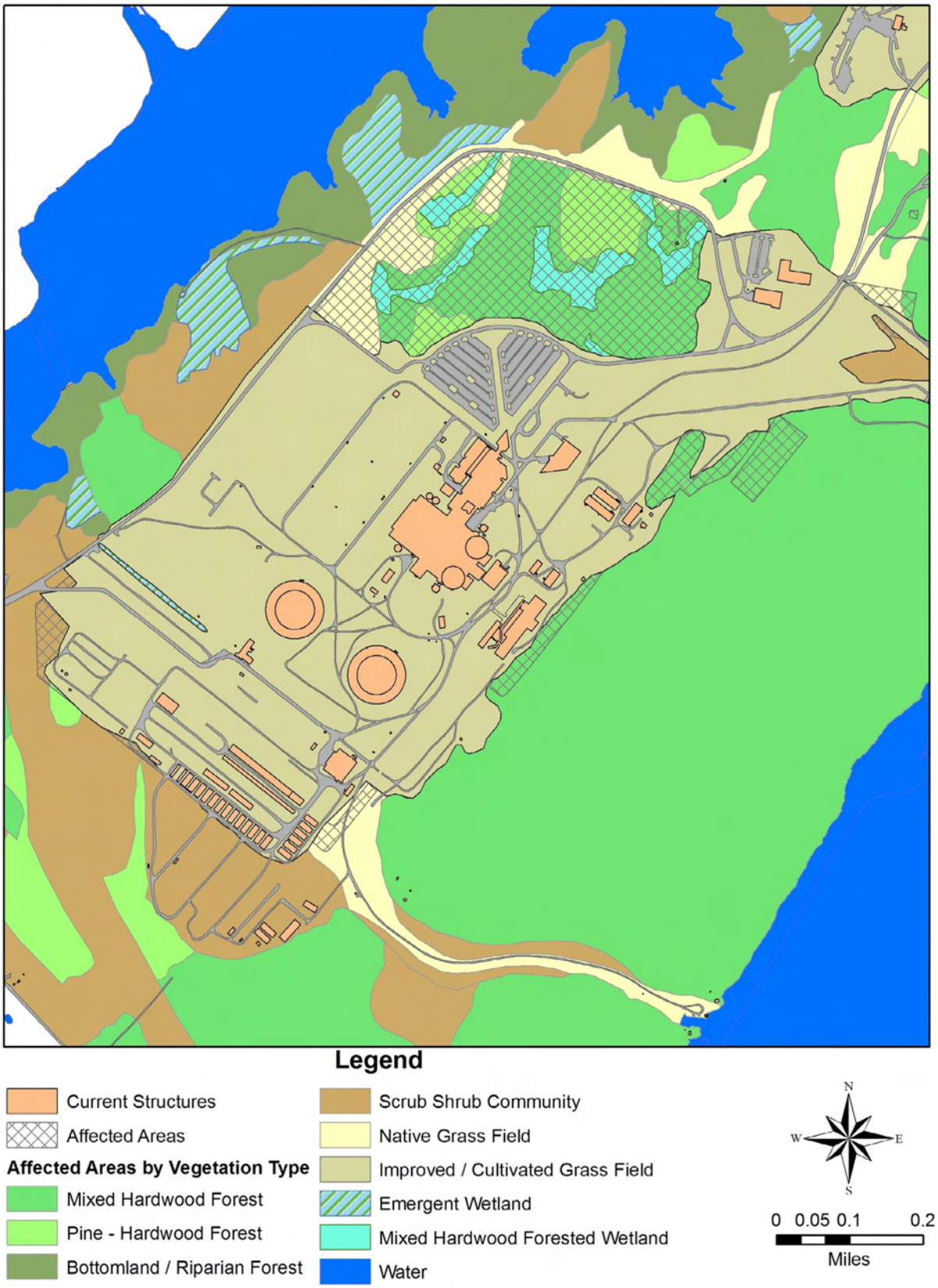

FIGURE 4.3-1
Habitat Affected by Construction