

April 7, 2005

Mr. Richard Nelson, Field Supervisor  
Rock Island Field Office  
U.S. Fish and Wildlife Service  
4469 48<sup>th</sup> Avenue Court  
Rock Island, IL 61201

SUBJECT: BIOLOGICAL ASSESSMENT FOR AN EARLY SITE PERMIT (ESP) FOR THE  
EXELON ESP SITE AND A REQUEST FOR INFORMAL CONSULTATION

Dear Mr. Nelson:

The U.S. Nuclear Regulatory Commission (NRC) has prepared the enclosed biological assessment (BA) to evaluate whether the proposed action of issuing an ESP for the Exelon ESP site would have adverse effects on listed species. The Exelon ESP site is located within the Clinton Power Station (CPS) site along the shore of Clinton Lake, near the town of Clinton in DeWitt County, Illinois. The proposed Federal action is the issuance, under provisions of Title 10 of the *Code of Federal Regulations*, Part 52 (10 CFR Part 52), of an ESP for a new nuclear unit at the Exelon ESP site, which would authorize Exelon to conduct site preparation and limited construction activities. The site preparation and limited construction activities allowed by 10 CFR 52.25 include clearing, grading, and constructing non-safety-related facilities. The proposed action does not include approval to construct and operate a new nuclear unit. Therefore, the BA does not analyze the environmental impacts that could result from such construction and operation. Impacts associated with construction and operation of a new nuclear unit will be assessed during the NRC staff's review of an application for a combined license or construction permit, should an applicant choose to go forward with the project.

Exelon has indicated that the addition of four new 345-kilovolt (-kV) transmission lines likely would be required to accommodate the proposed new nuclear unit, and that these would likely be sited within the existing utility rights-of-way. Because the site preparation and limited construction activities noted above may include the addition of new transmission lines to and expansion of the existing CPS transmission corridor, these impacts are analyzed in the enclosed BA.

By letter dated March 17, 2004, the NRC requested that the U.S. Fish and Wildlife Service (FWS) provide a list of Federally threatened or endangered species that may occur in the vicinity of the Exelon ESP site and transmission line corridors. In a letter dated April 6, 2004, the FWS provided a list of Federally listed species. The FWS identified one threatened species, the bald eagle (*Haliaeetus leucocephalus*); and one endangered species, the Indiana bat (*Myotis sodalis*) as being present. For documentation purposes, the NRC has addressed the potential impacts of site preparation and limited construction activities on these two species in its BA.

R. Nelson

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The NRC has determined that site preparation and limited construction activities are not likely to adversely affect the bald eagle because bald eagles are not known to nest or roost in DeWitt County, and no concentrations of foraging eagles have been reported on or in the vicinity of the Exelon ESP site. The staff has also determined that site preparation and limited construction activities are not likely to adversely affect the Indiana bat. Indiana bats potentially occur anywhere in Illinois where there is forest habitat. Indiana bats likely would not be adversely affected if habitat suitability and occupancy were determined prior to construction and appropriate actions were taken to avoid disturbing the species.

We are placing this BA in our project files and are requesting your concurrence with our determination. In reaching our conclusion, the NRC staff relied on information provided by the applicant, on the independent review performed by NRC staff, and on information provided by the FWS in its correspondence to NRC.

If you have any questions regarding this BA or the staff's request, please contact Mr. Thomas Kenyon, Environmental Project Manager, at 301-415-1120, or by e-mail at [tjk2@nrc.gov](mailto:tjk2@nrc.gov).

Sincerely,

/RA/

Pao-Tsin Kuo, Program Director  
License Renewal and Environmental Impacts Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket No.: 52-007

Enclosure: As stated

cc w/encl.: See next page

R. Nelson

-2-

The NRC has determined that site preparation and limited construction activities are **not likely to adversely affect the bald eagle** because bald eagles are not known to nest or roost in DeWitt County, and no concentrations of foraging eagles have been reported on or in the vicinity of the Exelon ESP site. The staff has also determined that site preparation and limited construction activities are not likely to adversely affect the Indiana bat. Indiana bats potentially occur anywhere in Illinois where there is forest habitat. Indiana bats likely would not be adversely affected if habitat suitability and occupancy were determined prior to construction and appropriate actions were taken to avoid disturbing the species.

We are placing this BA in our project files and are requesting your concurrence with our determination. In reaching our conclusion, the NRC staff relied on information provided by the applicant, on research performed by NRC staff, and information provided by FWS in its correspondence to NRC.

If you have any questions regarding this BA or the staff's request, please contact Mr. Thomas Kenyon, Environmental Project Manager, at 301-415-1120, or by e-mail at [tjk2@nrc.gov](mailto:tjk2@nrc.gov).

Sincerely,

/RA/

Pao-Tsin Kuo, Program Director  
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cc w/encl.: See next page

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Adams accession no.: **ML050980127**

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OFFICIAL RECORD COPY

Letter to Mr. Richard Nelson, U.S. Fish and Wildlife Service, Dated: April 7, 2005

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Clinton Early Site Permit

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Clinton Early Site Permit

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# **Biological Assessment**

**Exelon Generation Company, LLC**

**Early Site Permit**

**Exelon Early Site Permit Site**

**DeWitt County, Illinois**

**April 2005**

**Docket Number 52-007**

**U.S. Nuclear Regulatory Commission  
Rockville, Maryland**

# **Biological Assessment of the Potential Effects on Threatened or Endangered Species from the Proposed Exelon Generation Company Early Site Permit (ESP) for the Exelon ESP Site**

## **1.0 Introduction**

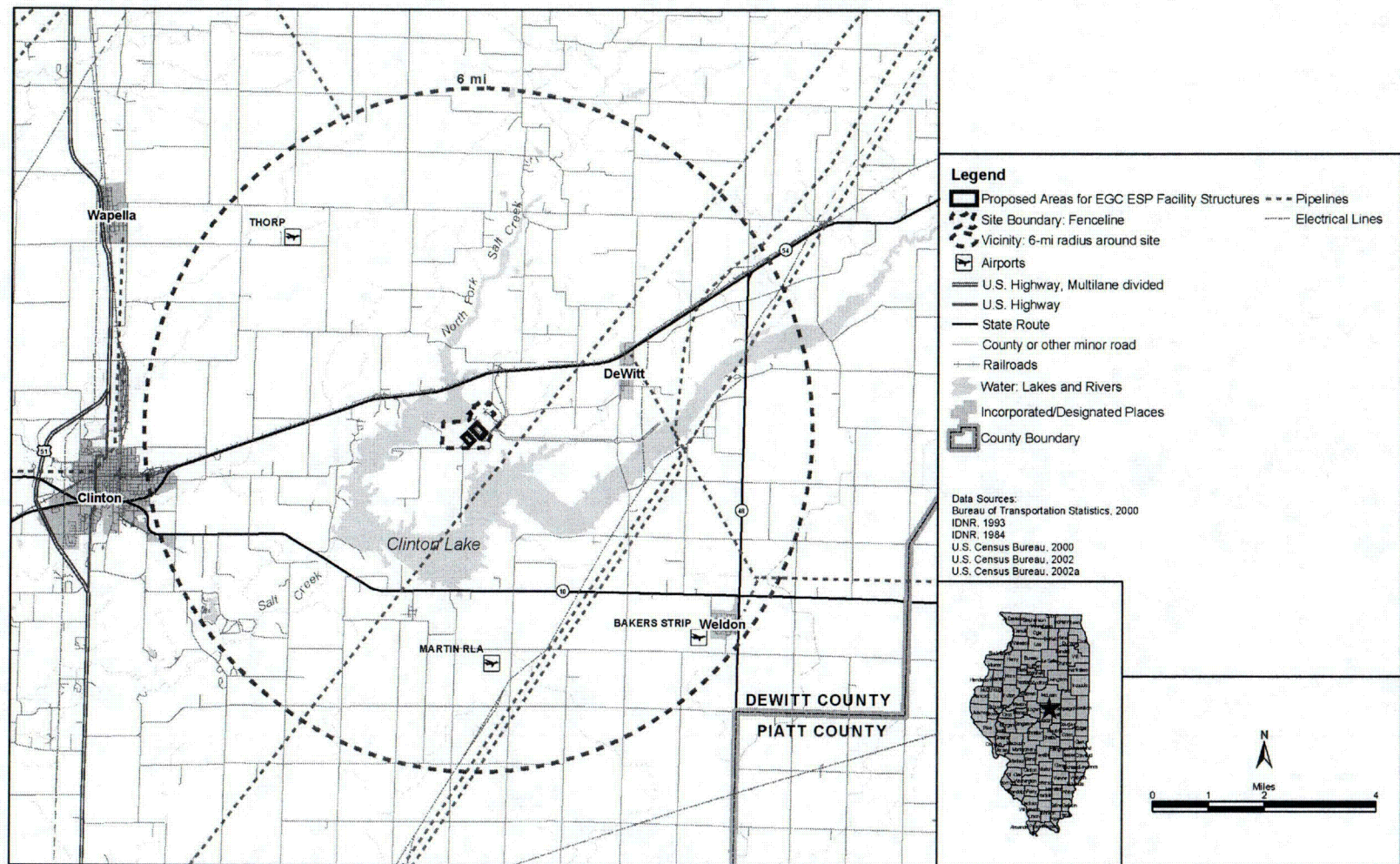
The U.S. Nuclear Regulatory Commission (NRC) is reviewing an application submitted by Exelon Generation Corporation, LLC (Exelon) for an early site permit (ESP) for the potential future construction and operation of a new nuclear power unit. As part of the review of this application pursuant to Title 10 of the *Code of Federal Regulations* Part 51 (10 CFR Part 51), the NRC has issued a draft environmental impact statement (EIS) (NRC 2005). The impact analysis in the EIS includes an assessment of the potential environmental impacts of the construction and operation of a new nuclear power unit at the proposed site, including potential impacts to threatened or endangered species. The proposed location of the new unit, if built, would be on the existing Clinton Power Station (CPS) site near the town of Clinton in DeWitt County, Illinois, located approximately 10 kilometers (km) (6 miles [mi]) east of the City of Clinton along the shore of Clinton Lake (Figure 1). If approved, the ESP would not authorize the applicant to begin construction of the new unit; however, it would authorize limited site-preparation activities. Thus, only site-preparation activities are considered in this biological assessment (BA). The site under consideration is hereafter referred to as the Exelon ESP site.

Exelon submitted its ESP application on September 25, 2003, pursuant to NRC requirements in 10 CFR Part 52. By letter dated March 17, 2004 (NRC 2004), the NRC requested that the U.S. Fish and Wildlife Service (FWS) Rock Island, Illinois, Field Office provide information regarding Federally listed species at the proposed Exelon ESP site. The Rock Island Field Office responded by letter dated April 6, 2004 (FWS 2004).

## **2.0 Proposed Action**

If approved, an ESP would authorize the permit holder to perform, at its discretion, the limited preconstruction site-preparation activities described in the site redress plan (Exelon 2003a). The site redress plan describes the measures that may be necessary to restore (redress) the site to a condition suitable for other appropriate use in the event the project does not proceed to construction or the site is abandoned.

Prerequisites to preconstruction activities that must be fulfilled include, but are not limited to, documentation of existing site conditions within the Exelon ESP site and acquisition of the necessary permits (e.g., local building permits, Illinois Environmental Protection Agency [IEPA] National Pollutant Discharge Elimination System [NPDES] permit, IEPA Clean Water Act permit, IEPA General Stormwater Permit, etc.).



**Figure 1.** Location of the proposed Exelon ESP site

Once these prerequisites have been achieved, site-preparation activities may proceed and may include none, some, or all of the following activities (Exelon 2003a):

- preparation of the site for construction of a new nuclear unit (including clearing, grading, and construction of temporary access roads and borrow areas)
- installation of temporary construction-support facilities
- evacuation plans for facility/structures
- construction of service facilities
- drilling sample/monitoring wells
- construction of plant cooling towers that are not safety related
- construction of plant intake structures that are not safety related
- installation of non-safety-related fire detection and protection equipment
- expansion of the existing CPS switchyard
- expansion of the existing CPS transmission system
- modification of the existing CPS discharge flume
- construction of any other additional structures, systems, and components that do not prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public.

Site redress activities are specific to the effects of preconstruction site-preparation activities. Redress activities also reflect specific land use and zoning requirements of local municipal, county, and state jurisdictions, in addition to more broadly applicable Federal requirements and industry standards. Redress activities take into account both pre-existing site conditions and a range of potential future-use scenarios, including habitat replacement, recontouring, revegetating, and replanting cleared areas. If necessary (e.g., because the new nuclear unit is not constructed or the site is abandoned), Exelon would restore the site to pre-existing conditions or to the specifications of the future owners in accordance with applicable regulations (contained in 10 CFR Part 50 and 10 CFR Part 52). The protection of critical ecological elements would be maintained in compliance with applicable regulations (Exelon 2003a).

### **3.0 Potential Environmental Impacts of Preconstruction Site-Preparation Activities**

#### **3.1 Potential Habitat Destruction on the Proposed Exelon ESP Site**

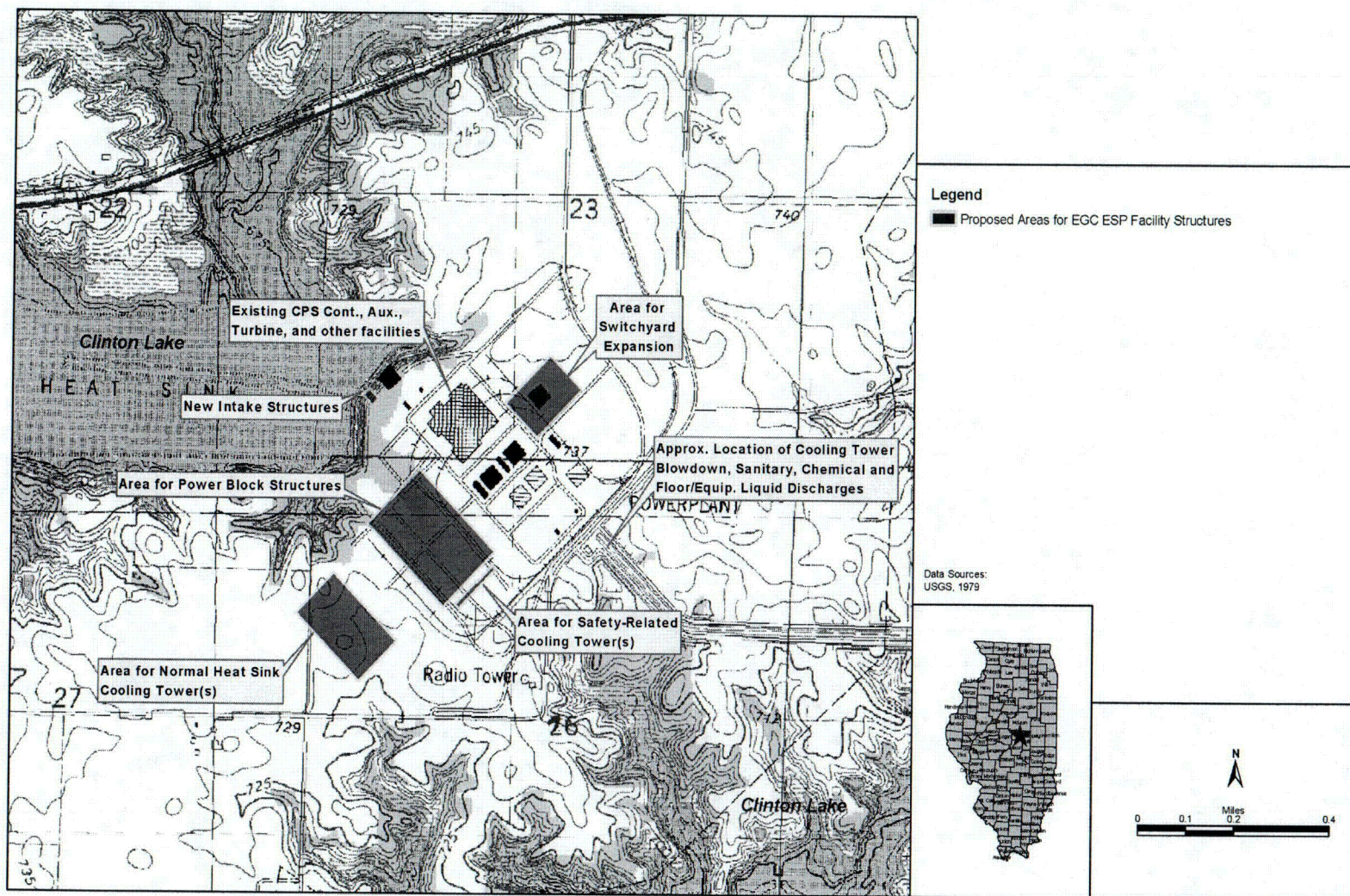
A total of 187 hectares (ha) (461 acres [ac]) are located within the Exelon ESP site boundary. Most of the footprint of the proposed new nuclear unit consists of areas that would be occupied by the power block structures, normal heat sink cooling towers, switchyard expansion, new intake structures, and safety-related cooling towers. Figure 2 depicts the anticipated footprint of these structures. Existing access roads and infrastructure would primarily be used for construction of the proposed new nuclear unit (Figure 2). The site preparation activities described in Section 2.0 could disturb up to approximately 39 ha (96 ac), most of which would occur about 213 meters (m) (700 feet [ft]) south of the CPS (Figure 2) (Exelon 2003b).

Preconstruction site-preparation activities for the new nuclear unit would occur primarily in previously-disturbed areas that currently support virtually no biota (e.g., impervious surfaces, crushed stone, existing structures, etc.) and in open fields (e.g., previously used as equipment lay-down areas during construction of the CPS, etc.) (Exelon 2003b). However, it would be necessary to clear two small forest stands of about 1.25 ha (3 ac) and about 0.2 ha (0.5 ac) in the northern corner of the power block footprint and within the new intake footprint (Figure 2), respectively.

Site-preparation activities for the new nuclear unit would not be anticipated to adversely affect wetlands (and hence any associated forests) onsite. The four minor wetlands (less than 0.4 ha [1 ac]) listed in the National Wetlands Inventory database that are located on the CPS site do not occur within the power block, cooling tower, switchyard expansion, or new intake footprint areas, and, therefore, would not be impacted by preconstruction site-preparation activities for these structures (Exelon 2003b). However, there is currently no proposed route for the conduit from the new intake to the new power block. Thus, ground clearing for this conduit could impact some wetland and forest habitat, depending on its ultimate location.

#### **3.2 Potential Habitat Destruction along the Transmission Line Corridor Supporting the Proposed New Nuclear Unit**

The actual need for and nature of any transmission-system improvements would be determined definitively by the transmission and distribution system owner and operator (currently Illinois Power Company) under Federal Energy Regulatory Commission (FERC) Order 2003 (18 CFR Part 35), *Standardization of Generator Interconnection Agreements and Procedures* (FERC 2003). This order mandates performance of feasibility, system impact, and facilities studies when there is a proposed load increase on the existing transmission system of at least 20 megawatts electric (MWe). Any transmission system improvement studies required by FERC Order 2003 would be carried out prior to construction of the transmission line improvements. The location, nature, and magnitude of environmental impacts associated with the construction of any transmission system improvements would be definitively established by the transmission and distribution system owner and operator at that time. However, to support the



**Figure 2.** Footprint of the proposed new nuclear unit

environmental review of the ESP application, Exelon has stated that it is likely that the addition of four new 345-kilovolt (-kV) transmission lines (two parallel, double-circuit lines running north to the Brokaw Substation near Bloomington and two running south to the Oreana Substation [Figure 3]) would be required to accommodate the proposed new nuclear unit (Exelon 2003c).

The actual amount of disturbance associated with any preconstruction site-preparation activities for anticipated transmission system improvements would be contingent on the techniques used. It is anticipated that any site-preparation activities for transmission system modifications would be located within or immediately adjacent to the existing CPS substation (requiring the switchyard expansion) and within or along the existing transmission line corridor (Figure 3). Transmission line improvements, such as the addition of two new lines and support structures, such as towers, would be sited within the existing CPS transmission corridor to the greatest extent possible. However, it is anticipated that widening the existing corridor about 40 m (130 ft) to 76 m (250 ft) would be required (Exelon 2003b).

Based on the assumption that a maximum of 12 percent of the total length (69 km [43 mi]) of the existing transmission line corridor crosses forest habitat, and the width of the potential expansion is 36 m [120 ft], a loss of no more than about 30 ha (74 ac) of forest habitat is expected by Exelon. It should be noted that forest cutting could be tapered to minimize disturbance and eliminate the need to clear-cut the entire width of the corridor expansion area (Exelon 2003b).

### **3.3 Traffic-Related Wildlife Mortality**

Daily traffic on IL Route 54 and IL Route 10 near the Exelon ESP site currently consists of 2,750 and 2,000 vehicles (cars and trucks), respectively. During construction, daily traffic on Routes 54 and 10 would be expected to increase by an additional 1650 cars and trucks on each highway (an increase of about 60 and 83 percent for Routes 54 and 10, respectively) (Exelon 2003b). The increase in daily traffic for preconstruction site-preparation activities would be substantially less than during construction. Thus, traffic-related wildlife mortalities would be expected to increase marginally.

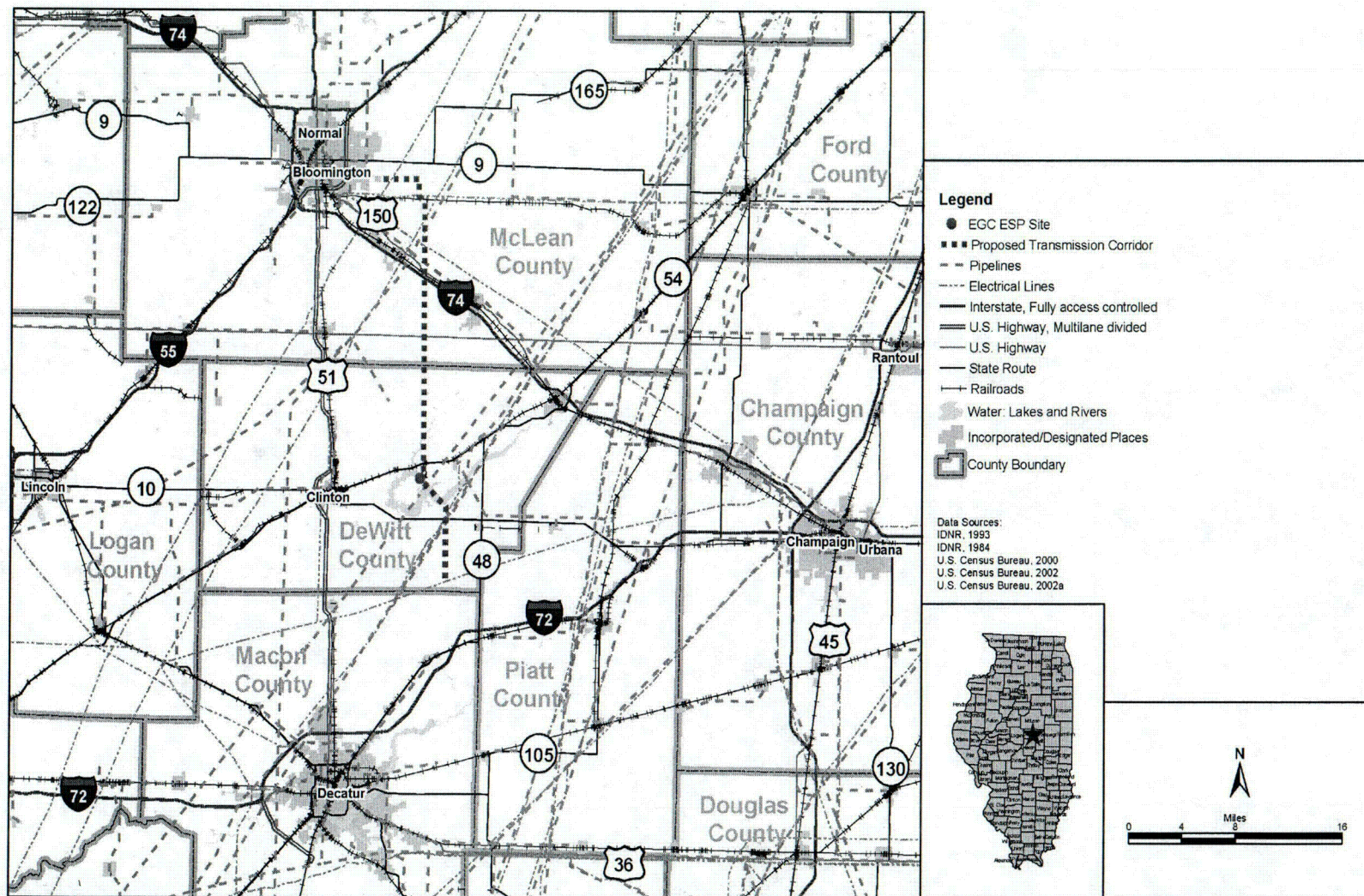
### **3.4 Avian Collisions with Transmission Lines**

Exelon currently anticipates adding two new transmission lines to the existing CPS transmission corridor to support a new nuclear unit (Exelon 2003b), as discussed in Section 3.2. This could be done as part of site preparation activities (see Section 2.0). These two new lines present additional opportunities for avian collisions beyond those of the existing transmission lines.

## **4.0 Description of the Project Area**

### **4.1 Exelon ESP Site and Vicinity**

The proposed Exelon ESP site consists of 187 ha (461 ac) located on Clinton Lake, which is 10 km (6 mi) east of the City of Clinton, Illinois (Figure 1). The 1983-ha (4900-ac) Clinton Lake was designed and built to be a source of cooling water for the CPS, by constructing an earthen



**Figure 3.** Location of the transmission line corridor for the proposed new nuclear unit

dam 366 m (1200 ft) below the confluence of North Fork Salt Creek and Salt Creek (Figure 1), about 90 km (56 mi) east of the confluence of Salt Creek and the Sangamon River (Exelon 2003b).

Clinton Lake is the main attraction for the Clinton Lake State Recreation Area, a 3764-ha (9300-ac) facility. The park land is owned by AmerGen Energy Company, LLC (AmerGen), the owner and operator of the CPS. Since 1978, the Illinois Department of Natural Resources (IDNR) has operated the recreation area through a lease agreement with AmerGen (IDNR 2004a).

Clinton Lake and its environs are situated within the Central Cornbelt Plains ecoregion (Omernik 1987). This ecoregion consists of glaciated plains that were once dominated by extensive prairie communities intermixed with oak-hickory forests. Farms are now extensive over the ecoregion where little native prairie remains.

Topography at and in the vicinity of the proposed Exelon ESP site is generally flat, except along Salt Creek and North Fork of Salt Creek, where it is gently rolling to steeply sloped. A variety of vegetation communities in various stages of ecological succession occur on the site and in the vicinity. Agriculture (including hay, row crops, and small grains) is the predominant land use (82 percent) within 10 km (6 mi) of the site. Open lands that are not used for active agricultural purposes are commonly used as pasture. Open field habitats dominate the landscape on and adjacent to the site. Upland forest communities in the vicinity harbor overstory and herbaceous species that are common and typical of the region (Exelon 2003b).

Besides agriculture, other land use on and in the vicinity of the proposed Exelon ESP site is recreational (about 17 percent), which is accounted for by the Clinton Lake State Recreation Area, and industrial (about 1 percent).

Important terrestrial and aquatic habitats in the vicinity of the proposed Exelon ESP site include the Clinton Lake State Recreation Area, portions of Tenmile Creek and Salt Creek, Weldon Springs State Recreation Area, and several small wetland areas. Major habitat types of the Clinton Lake State Recreation Area include forest (38 percent of the area), grassland (32 percent), shrubs (21 percent), cropland (6 percent), and wetlands (3 percent). In addition, there are several habitats that are important for a variety of birds, including wet meadows, pine forest, and a marsh (Exelon 2003b).

Illinois designates some environmentally-sensitive areas as natural areas under the jurisdiction of the Illinois Nature Preserves Commission. Two environmentally-sensitive areas are near the proposed Exelon ESP site. The first includes a portion of Tenmile Creek west of the city of Clinton and approximately 8 km (5 mi) from the site. It is designated as an important medium-gradient creek by the IDNR and as a unique aquatic resource by the Illinois Environmental Protection Agency. The second environmentally-sensitive area is along Salt Creek, approximately 5 km (3 mi) from the site (Exelon 2003b).

Several wetland and 100-year-floodplain areas are located within 10 km (6 mi) of the proposed Exelon ESP site and transmission line corridor, and contain forest, emergent, and scrub-shrub

communities. These generally are associated with small tributaries of Salt Creek and North Fork of Salt Creek (Exelon 2003b).

Important terrestrial and aquatic habitats within the Exelon ESP site boundary include four minor wetlands (less than 0.4 ha [1 ac]) documented in the National Wetland Inventory database (<http://wetland.fws.gov/>). These generally consist of open water in association with constructed sediment basins and have palustrine unconsolidated bottom (Exelon 2003b). Some of these are used by the IDNR as fish-rearing ponds.

#### **4.2 Transmission Line Corridor Supporting the New Nuclear Unit**

The anticipated transmission line corridor for the proposed new nuclear unit is an existing corridor used to transmit power generated by the CPS. The transmission line corridor is divided into two sections. The northern section is approximately 37 km (23 mi) long and the southern section is approximately 30 km (20 mi) long; both sections are about 40 m (130 ft) wide. The northern section runs north of the proposed Exelon ESP site, and then turns west and terminates at the Brokaw Substation, just west of Bloomington. The southern section runs southeast of the site past Clinton Lake, and then turns south and terminates at the Oreana Substation, just north of Decatur. Figure 3 depicts this transmission line corridor.

Land use within the existing transmission line corridor is predominantly agricultural (about 88 percent), with a small portion (about 1 percent) being industrial, consisting primarily of CPS structures and rail and highway crossings. A portion of the southern section of the transmission line corridor crosses Clinton Lake (Figure 3). About 11 percent of the land use is recreational.

Exelon currently anticipates that four new 345-kV transmission lines (two parallel, double-circuit lines running north to the Brokaw Substation near Bloomington and two running south to the Oreana Substation) would be required to accommodate the bounding case of an output of 2,200 MWe from the new nuclear unit at the Exelon ESP site. The actual amount of disturbance associated with any transmission system improvements would be contingent on, among other factors, the construction techniques used. Transmission-line improvements, such as the addition of two new lines and support structures, would be sited within the existing CPS rights-of-way to the greatest extent possible. However, it is anticipated that widening the existing rights-of-way from 40 m (130 ft) to 76m (250 ft) would be required (Exelon 2003b).

#### **5.0 Species Potentially Affected**

The FWS identified one threatened species, the bald eagle (*Haliaeetus leucocephalus*) which is currently proposed for delisting (64 FR 36453-36464 [1999]); and one endangered species, the Indiana bat (*Myotis sodalis*) as potentially occurring at the Exelon ESP site and along the transmission line corridor (FWS 2004). No critical habitat has been designated for the bald eagle. Although critical habitat has been designated for the Indiana bat (FWS 2004), the only critical habitat in Illinois is the Blackball Mine in LaSalle County (41 FR 41914 [1976]) located approximately 160 km (100 mi) from CPS.

### **5.1 Bald eagle (*Haliaeetus leucocephalus*), threatened (60 FR 35999-36010 [1995])**

The bald eagle is a bird often associated with aquatic ecosystems. It frequents estuaries, large lakes, reservoirs, major rivers, and some coastal habitats. Fish is the major component of its diet, but the bald eagle also eats waterfowl, seagulls, and carrion. The species may also use prairies if adequate food is available. Bald eagles usually nest in trees near water but are known to nest on cliffs and (rarely) on the ground. Nest sites are usually in large trees along shorelines in relatively remote areas that are free of disturbance. In winter, bald eagles often congregate at specific wintering sites that are generally close to open water and offer good perch trees and night roosts (64 FR 36453 [1999]).

The bald eagle is known to winter along large rivers, lakes, and reservoirs in DeWitt County (FWS 2004), and has been observed in the vicinity of the Exelon ESP site (Exelon 2003b). During the winter, this species feeds on fish in open-water areas created by dam tailwaters, warm water effluents of power plants and municipal and industrial discharges, or power plant cooling ponds. The more severe the winter, the greater the ice coverage and the more concentrated the eagles become. Bald eagles generally roost at night in groups in large trees adjacent to such associated bodies of water in areas that are protected from harsh winter weather. During the day, they perch in large shoreline trees to rest or feed on fish (FWS 2004).

### **5.2 Indiana Bat (*Myotis sodalis*), endangered (32 FR 4001 [1967])**

The Indiana bat is known to occur in LaSalle County. Because potential habitat for this species occurs statewide, however, Indiana bats are considered to potentially occur in any area with forested habitat (FWS 2004). Consequently, this species could occur at and in the vicinity of the Exelon ESP site, although there are no records of its occurrence within 16 km (10 mi) (IDNR 2004b).

During the summer, the Indiana bat frequents the corridors of small streams with well-developed riparian woods as well as mature upland forests. It forages for insects along stream corridors, within the canopy of floodplain and upland forests, over clearings with early successional vegetation (old fields), along the borders of croplands, along wooded fence rows, over farm ponds, and in pastures. The foraging range (up to 33 ha [81 ac]) for the species varies by season, age, and sex. It roosts and rears its young beneath the loose bark of large dead or dying trees, and the species tends to be philopatric, i.e., returning to the same roosting area year after year. Indiana bats winter in caves and abandoned mines (FWS 2004).

Suitable summer habitat in Illinois is considered to have the following four characteristics within a 0.8-km (0.5-mi) radius of any project site:

- forest cover of 15 percent or greater
- permanent water
- one or more of the following tree species: shagbark and shellbark hickory (*Carya ovata* and *C. laciniosa*, respectively) that may be dead or alive, and dead bitternut hickory (*C. cordiformis*), American elm (*Ulmus americana*), slippery elm

(*U. rubra*), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), white oak (*Quercus alba*), red oak (*Q. rubra*), post oak (*Q. stellata*), and shingle oak (*Q. imbricaria*) with slabs or plates of loose bark

- at least one potential roost tree per one ha (2.5 ac), where potential roost trees have greater than ten percent coverage of loose bark (FWS 2004).

## **6.0 Evaluation of Potential Impacts**

### **6.1 Bald eagle (*Haliaeetus leucocephalus*)**

Although the bald eagle is known to winter along large rivers, lakes, and reservoirs in DeWitt County, there are no known nests or night roosts in DeWitt County (FWS 2004). Therefore, bald eagles would not be impacted by removal of potential nest/roost trees along Clinton Lake during preconstruction site-preparation activities [see Section 2.0].

No concentrations of foraging eagles have been reported on or in the vicinity of the Exelon ESP site (IDNR 2004b; Exelon 2003b; FWS 2004). Thus, it is likely that only low numbers of eagles utilize food resources in the vicinity of the Exelon ESP site, and then only on an infrequent basis. These would be expected to be minimally affected, if at all, by disturbance (e.g., noise, human presence, etc.) associated with preconstruction site-preparation activities on the Exelon ESP site and along the associated transmission line corridor.

Few bald eagles frequent the Exelon ESP site, and eagles only occasionally feed on carrion. Hence, any eagle mortalities associated with an increase in traffic during preconstruction site-preparation activities would be expected to be negligible.

Bird collisions with transmission lines were evaluated previously in the *Generic Environmental Impact Statement for License Renewal of Nuclear Plants* (NRC 1996) and were found not to be a problem at operating nuclear power plants, which have variable numbers of transmission corridors and variable numbers of lines within corridors. Thus, incremental eagle mortalities, if any, due to collisions with the additional two transmission lines that would support the new nuclear unit would be expected to be negligible.

In summary, the impacts of preconstruction site-preparation activities on bald eagles are expected to be negligible.

### **6.2 Indiana bat (*Myotis sodalis*)**

Suitable Indiana bat summer habitat has the specific characteristics previously described in Section 5.2. At least some tree species, such as shagbark hickory, silver maple, several species of oak and elm (Exelon 2003b), and upland white oak forest (Illinois Power 1982), listed previously as being important for roosts and rearing of young are known to occur in the vicinity of the Exelon ESP site. If suitable summer habitat occurs in any area of the Exelon ESP site or associated transmission line corridor where preconstruction site-preparation activities would occur and the species is present, then impacts could occur if the forests are cleared. Large-scale habitat alterations within known or potential Indiana bat summer habitat should not

be undertaken without a bat survey and/or consultation with the FWS Rock Island, Illinois, Field Office. Minor alterations of summer habitat (e.g., clearing of small timber stands such as those described in Section 3.1) should be limited to non-maternity periods between September 16 and April 14. However, before initiating forest-clearing activities, all potentially suitable habitat should be surveyed to determine if it is suitable and, if so, whether it is occupied by Indiana bats, following the steps recommended by the FWS (FWS 2004) and outlined below.

The staff expects that Exelon would determine, prior to initiation of site preparation activities, whether the small stands of forest within the footprint of the new power block and intake structure and potential expansion area for the transmission line corridor are potentially suitable for Indiana bats, i.e., whether they potentially satisfy all four criteria listed in Section 5.2 or any other contemporaneous criteria established by the FWS. If these forest stands are not potentially suitable, they may be cleared without any timing restrictions for Indiana bats. (Note that compliance with other timing restrictions imposed for other species that are not subject of this BA, e.g., migratory birds, would still be necessary). However, if the forest stands are determined to be potentially suitable, they would be surveyed by Exelon to determine their suitability (e.g., to determine percent forest canopy cover, tree species present, density of potential roost trees, percentage of loose bark of potential roost trees, etc.). If these forest stands are found to be unsuitable, they may be cleared without any timing restrictions. However, if they are found to be suitable, it would be determined whether or not they are occupied. If the forest habitat is suitable and unoccupied, clearing could be undertaken during the non-maternity period between September 16 and April 14. However, if the habitat is suitable and occupied, the staff expects that Exelon would first consult with the FWS Rock Island, Illinois, Field Office before undertaking any forest clearing activities.

Indiana bats winter in caves and abandoned mines (FWS 2004), but such habitat features are not known to occur on the Exelon ESP site or along its transmission line corridor.

In summary, if the above guidelines regarding the determination of presence and occupancy of summer habitat are followed, adverse impacts to the Indiana bat from site preparation activities are expected to be negligible.

## 7.0 Conclusions

### 7.1 Bald eagle (*Haliaeetus leucocephalus*)

Bald eagles are not known to nest or roost in DeWitt County (FWS 2004) and no concentrations of foraging eagles have been reported on or in the vicinity of the Exelon ESP site (IDNR 2004b; Exelon 2003b; FWS 2004). Thus, it is likely that only a low number of eagles utilize food resources in the vicinity of the Exelon ESP site, and then only on an infrequent basis. These would be expected to be minimally affected, if at all, by disturbance associated with preconstruction site-preparation activities on the Exelon ESP site (including mortality due to increased traffic) and along the associated transmission line corridor (including mortality due to collisions with new power lines).

The staff concludes that preconstruction site-preparation activities for a new nuclear unit are not likely to adversely affect the bald eagle.

### 7.2 Indiana bat Indiana Bat (*Myotis sodalis*)

Indiana bats are considered to occur potentially anywhere in Illinois in any area with forested habitat (FWS 2004). Consequently, this species could occur on and in the vicinity of the Exelon ESP site; however, there are no records of its occurrence within 16 km (10 mi) (IDNR 2004b).

The staff concludes that preconstruction site preparation activities for an Exelon ESP new nuclear unit are not likely to adversely affect the Indiana bat. However, this determination is contingent on Exelon's implementation of the measures recommended by FWS and described in Section 6.2 above for determination of the presence and occupancy of summer habitat.

## 8.0 References

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