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Wildlife Resources on the
East Bear Creek Valley Site
for a Proposed On-Site
Waste Management Facility**

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**EVALUATION OF TERRESTRIAL WILDLIFE RESOURCES ON
THE EAST BEAR CREEK VALLEY SITE
FOR A PROPOSED ON-SITE
WASTE MANAGEMENT FACILITY**

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INTRODUCTION

The U.S. Department of Energy proposes to construct an on-site waste disposal facility on the Oak Ridge Reservation (ORR). East Bear Creek Valley is the preferred location for the facility. The proposed site (Figure 1) is located immediately north of Bear Creek Road and west of the Oak Ridge Y-12 Plant, in administrative grid locations D10, D11, E10, and E11 of U.S. Geological Survey Map S-16A. During the week of April 6, 1998, I surveyed the site of the proposed facility with regard to terrestrial wildlife habitat and the potential presence of state or federal sensitive threatened and endangered (T&E) species.

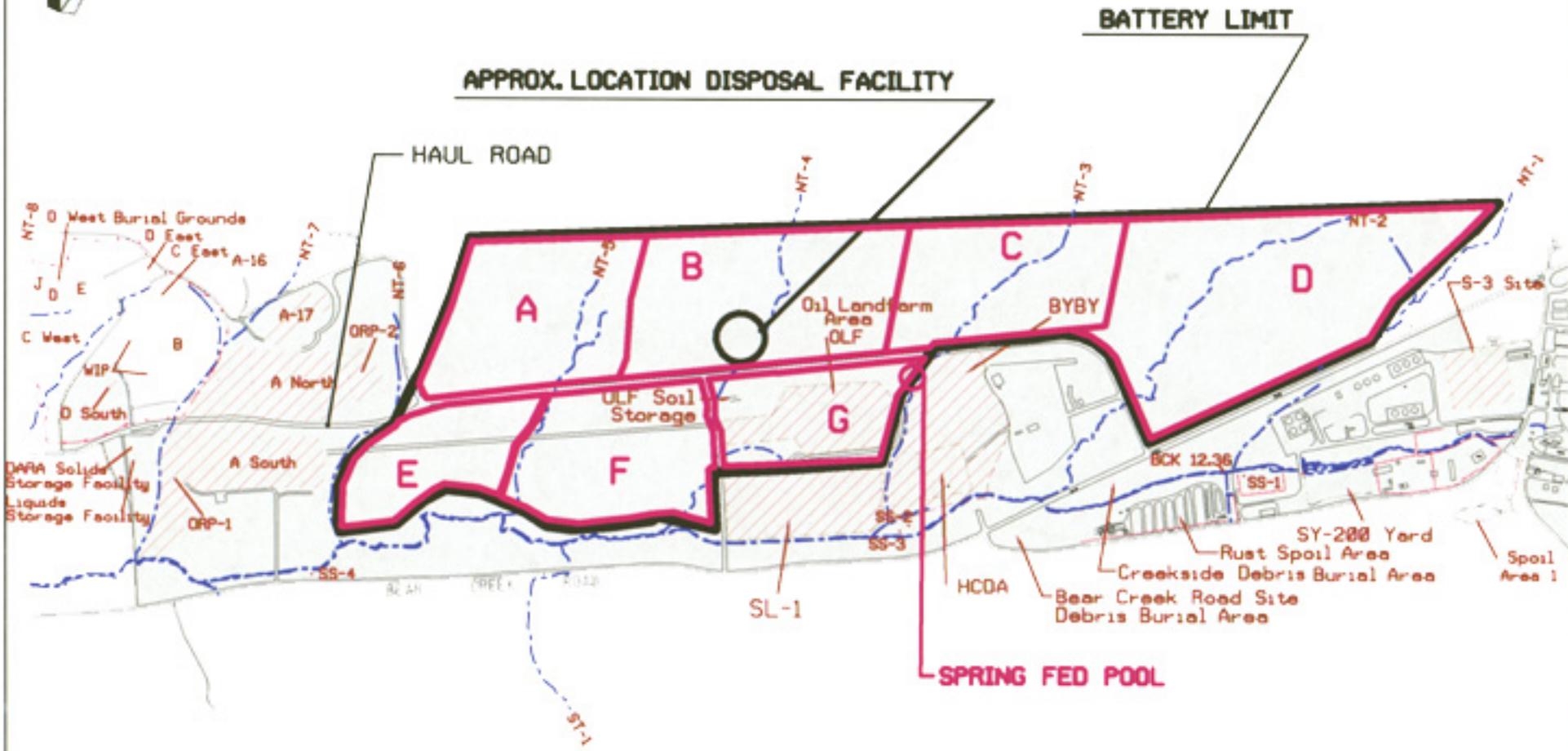
GENERAL SITE DESCRIPTION

The portion of the site north or east of Haul Road (Fig. 1, Area A–D) is primarily natural vegetation of types common on the Reservation. Deer, turkey, and other common forest animals are present. Hardwoods (e.g., oaks, hickories, yellow poplar, red maple, sweet gum) dominate in most areas. Area A on the westernmost portion of the site includes a knoll that slopes northward to a small creek bottom; this area includes large, widely spaced hardwoods, providing good food and cover conditions for a variety of wildlife. In Area D, east of Haul Road (Fig. 1), the forest is bisected by a cleared utility right-of-way. Hill tops and some other areas are mixed hardwoods and yellow, white, or Virginia pines. Occasional red cedars also occur. Wetlands occur along and at the heads of streams. No major areas of rock outcrop exist.

Much of the area south of Haul Road is in buildings, lawns, gravel, or pavement, only a portion of which is within the footprint of the proposed facility (Fig. 1, Area G). Areas E and F (Fig. 1) are largely loblolly pine plantation. Many of the trees, especially in Area F, have been killed by southern pine beetles. The pine plantation has wetlands along two northern tributaries of Bear Creek (i.e., NT-5 and NT-6) and in another low area.

RESULTS

No terrestrial vertebrate T&E species are known to be present on the site. Potential habitat exists on or adjacent to the site for several species listed by the State of Tennessee as “In Need of Management.” None of this potential habitat is critical for these listed species; if all such habitat were removed, other similarly suitable areas would remain on the ORR. Nonetheless, development of the site, particularly as the second-growth forest north of Haul Road (Fig. 1, Areas A–D), would further fragment wildlife habitat and incrementally add to cumulative impacts on ORR wildlife.



EAST BEAR CREEK VALLEY PLAN
 FIGURE 1: PROPOSED DISPOSAL FACILITY SITE SHOWING
 TERRESTRIAL WILDLIFE DESIGNATIONS REFERRED TO IN TEXT.

Sensitive species (all state-listed as “In Need of Management”) that could be present on the site because of the presence of suitable habitat include the following:

- southeastern shrew (*Sorex longirostris*), which may be present in any of the wooded portions of the site, including pine plantation (Fig. 1, Areas E and F);
- sharp-shinned hawk (*Accipiter striatus*) and Cooper’s hawk (*A. cooperii*), which probably forage over the site and could nest in the forested portions of the site; and
- four-toed salamander (*Hemidactylium scutatum*) and mole salamander (*Ambystoma talpoideum*), which could occur in the major tributaries and associated wetlands north of Haul Road, especially where ponded behind the road; possibly in wetlands and moist areas in the pine plantation; or in a spring-fed pool south of Haul Road associated with NT-3 (Fig. 1, east boundary of Area G immediately south of Haul Road).

RECOMMENDATIONS

The primary ecological concern with using this area is the further fragmentation of remaining forest by intrusion into the block of continuous forest existing north and to either side of the site. Such fragmentation incrementally reduces the ecological value of the area to desirable wildlife and should be avoided whenever and to the extent possible.

In particular, the western part of the site (Fig. 1, Area A) includes an open hardwood stand on a knoll sloping into an open bottomland area. This area is an excellent wildlife habitat especially for interior forest bird species. Use of this area should be avoided. Other forested areas on the site (Fig. 1, Areas B–D) should be developed starting at Haul Road and working north to limit forest destruction as much as possible. Wetlands should be avoided throughout the site, including the pine plantation (Fig. 1, Area E and Area F).