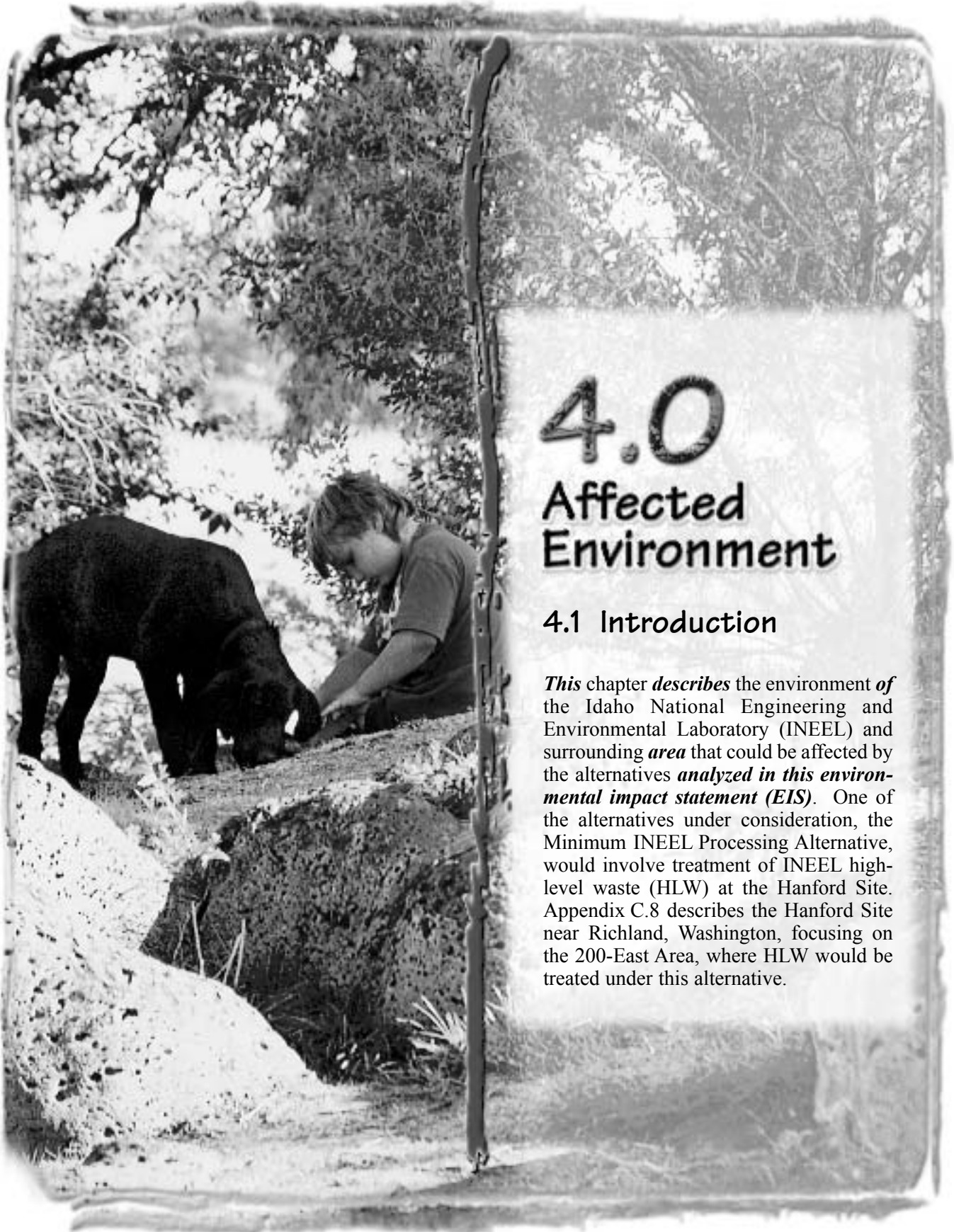


4.0

Affected  
Environment



# 4.0

## Affected Environment

### 4.1 Introduction

*This* chapter *describes* the environment of the Idaho National Engineering and Environmental Laboratory (INEEL) and surrounding *area* that could be affected by the alternatives *analyzed in this environmental impact statement (EIS)*. One of the alternatives under consideration, the Minimum INEEL Processing Alternative, would involve treatment of INEEL high-level waste (HLW) at the Hanford Site. Appendix C.8 describes the Hanford Site near Richland, Washington, focusing on the 200-East Area, where HLW would be treated under this alternative.

## Affected Environment

This chapter tiers from the U.S. Department of Energy (DOE) *Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Final Environmental Impact Statement* or SNF & INEL EIS (DOE 1995). **Information has been updated where necessary.** The sections in this chapter support the analysis of potential environmental consequences in Chapter 5.

## 4.2 Land Use

This section contains a brief description of existing and planned land uses at INEEL and the surrounding area, focusing on the Idaho Nuclear Technology and Engineering Center (INTEC), the proposed site of HLW management activities. Current and projected land uses are described extensively in the SNF & INEL EIS, Volume 2, Part A, Section 4.2 (DOE 1995) and the *Idaho National Engineering and Environmental Laboratory Comprehensive Facility and Land Use Plan* (DOE 1997).

### 4.2.1 EXISTING AND PLANNED LAND USES AT INEEL

INEEL occupies approximately 890 square miles (570,000 acres) of land in Bingham, Bonneville, Butte, Clark, and Jefferson counties in southeastern Idaho. Approximately 2 percent of this land (11,400 acres) has been developed to support INEEL facility and program operations associated with energy research and waste management activities (DOE 1995). **DOE is the designated federal agency with the responsibility and authority for effectively managing the INEEL lands in accordance with a series of Land Withdrawal Public Land Orders (PLO), PLO 318, PLO 545, PLO 637, and PLO 691 that include approximately 506,000 acres. In addition, approximately 21,000 acres of state land and 43,000 acres of private land were transferred to DOE ownership and management, for a total of approximately 570,000 acres (Peterson 1995). DOE will continue to ensure that the future use and management of these lands are in accordance with the PLOs.** INEEL operations are performed within the site's primary facility areas (i.e., Central Facilities Area, Test Reactor Area, INTEC, etc.),

which occupy 2,032 acres. A 345,000-acre security and safety buffer zone **surrounds** the developed area. Approximately 6 percent of INEEL (34,000 acres) is devoted to utility rights-of-way and public roads, including Highway 20 that runs east and west and crosses the southern portion of INEEL, Highway 26 that runs southeast and northwest intersecting Highway 20, and Idaho State Highways 22, 28, and 33 that cross the northeastern part of INEEL (DOE 1995).

Up to 340,000 acres of INEEL are leased for cattle and sheep grazing (DOE 1995); grazing permits are administered by the Bureau of Land Management. However, grazing of livestock is prohibited within one-half mile of any primary facility boundary and within 2 miles of any nuclear facility. In addition, 900 acres located at the junction of Idaho State Highways 28 and 33 are used by the U.S. Sheep Experiment Station as a winter feedlot for sheep (DOE 1997). Figure 2-3 shows **selected** land uses in the vicinity of the INEEL.

On July 17, 1999, the Secretary of Energy and representatives of the U.S. Fish & Wildlife Service, Bureau of Land Management, and Idaho State Fish & Game Department designated 73,263 acres of the INEEL as the Sagebrush Steppe Ecosystem Reserve. The sagebrush steppe ecosystem was **identified** as critically endangered across its entire range by the National Biological Service in 1995. The INEEL Sagebrush Steppe Ecosystem Reserve was designated to ensure this portion of the ecosystem receives special consideration. The designated INEEL Sagebrush Ecosystem Reserve is located in the northwest portion of the area. The southern boundary of the reserve, which runs east and west along section lines, is about eleven miles north of INTEC at the closest point. **A natural resources management plan is being developed for the reserve.**

Land use at INEEL is in a state of transition. Emphasis is moving toward radioactive and hazardous waste management, environmental restoration and remedial technologies, and technology transfer, resulting in more development of INEEL within some facility areas and less development in others. DOE projected land use scenarios at INEEL for the next 25, 50, 75, and 100 years. Future industrial development is projected to take place in the central portion of