

## 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

INEEL within existing major facility areas. For further review, see the *Idaho National Engineering Laboratory Long-Term Land Use Future Scenarios* (DOE 1993) and the *Idaho National Engineering and Environmental Laboratory Comprehensive Facility and Land Use Plan* (DOE 1997).

Facilities at INTEC, where activities associated with the HLW projects would be conducted, occupy approximately 250 acres. INTEC consists of more than 150 buildings. Primary facilities include storage and treatment facilities for spent nuclear fuel, mixed HLW, and mixed transuranic waste/sodium bearing waste (SBW), and process development and robotics laboratories.

INTEC's original mission was to function as a one-of-a-kind processing facility for government-owned nuclear fuels from research and defense reactors. INTEC recovered uranium and rare gases from spent nuclear fuel so that these materials could be reused. Currently, INTEC operations include receipt and storage of DOE-assigned spent nuclear fuels; management of HLW prior to disposal in a repository; technology development for final disposition of spent nuclear fuel, mixed HLW, and mixed transuranic waste/SBW; and development of new waste management technologies.

Recreational uses of the INEEL include public tours of general facility areas and the Experimental Breeder Reactor-I, a National Historic Landmark. Controlled hunting is also permitted on INEEL but is restricted to *specific locations*. These restricted hunts are intended to assist the Idaho Department of Fish and Game in reducing crop damage on adjacent private agricultural lands caused by wild game. INEEL is a designated National Environmental Research Park, functioning as a field laboratory set aside for ecological research and evaluation of the environmental impacts from nuclear energy development.

INEEL does not lie within any of the land boundaries established by the Fort Bridger Treaty of 1868. The entire INEEL is land occupied by DOE; therefore, the provision in the Fort Bridger Treaty that allows the Shoshone-Bannock Tribes to hunt on unoccupied lands of the United States does not presently apply to any

land upon which the INEEL is located.

#### 4.2.2 EXISTING AND PLANNED LAND USE IN THE SURROUNDING REGION

Approximately 75 percent of the land adjacent to the INEEL is *managed* by the Federal government and administered by the Bureau of Land Management. This federally-*managed* land *provides* wildlife *habitat and uses such as* mineral and energy production, grazing, and recreation. Approximately 1 percent of the adjacent land is owned by the State of Idaho *and* used for *the same purposes*. The remaining 24 percent of the land adjacent to INEEL is privately owned and is primarily used for grazing and crop production.

Small communities and towns near INEEL boundaries include Mud Lake and Terreton to the east; Arco, Butte City, and Howe to the west; and Atomic City to the south. The larger communities of Idaho Falls, Rexburg, Rigby, Blackfoot, and Pocatello, along with the Fort Hall Indian Reservation, are located to the east and southeast of INEEL. Recreation and tourist attractions in the surrounding region include Craters of the Moon National Monument and Wilderness Area, Hell's Half Acre Wilderness Study Area, Black Canyon Wilderness Study Area, Camas National Wildlife Refuge, Market Lake Wildlife Management Area, North Lake State Wildlife Management Area, Targhee and Challis National Forests, *and* the Snake River, as shown in Figure 2-1. Additional recreation and tourist attractions in the surrounding region include Yellowstone National Park, Grand Teton National Park, the Jackson Hole recreation complex, Sawtooth National Recreation Area, Sawtooth Wilderness Area, and Sawtooth National Forest.

*On November 9, 2000, President Clinton signed a Presidential Proclamation that expanded the boundaries of Craters of the Moon National Monument (Clinton 2000). The expansion adds 661,000 acres to the existing 54,000-acre monument. The boundary enlargement (DOI 2000) is shown on Figure 2-1.*

Lands surrounding INEEL are subject to Federal and State planning laws and regulations governed by Federal rules and regulations requiring

public involvement in their implementation. Land use planning in the State of Idaho is derived from the Local Planning Act of 1975. Currently, the State of Idaho does not have a land-use planning agency. Therefore, the Idaho legislature requires that each county adopt its own land use planning and zoning guidelines. All county plans and policies encourage development adjacent to previously developed areas in order to minimize the need to expand infrastructure and to avoid urban sprawl. Because INEEL is remotely located, adjacent areas are not likely to experience residential and commercial development, and no new development is planned. However, recreational and agricultural uses are expected to increase in the surrounding area in response to greater demand for recreational areas and the conversion of rangeland to crop land.

### 4.3 Socioeconomics

This section presents an overview of current socioeconomic conditions within a seven-county region of influence comprised of Bannock, Bingham, Bonneville, Butte, Clark, Jefferson, and Madison counties, and the Fort Hall Indian Reservation and Trust Lands (home of the Shoshone-Bannock Tribes). Figure 2-1 presents a map of the area showing towns and major

routes in the region of influence. This section discusses population, housing, employment, income, and community services. This section tiers from the SNF & INEL EIS, Volume 2, Part A, Section 4.13 (DOE 1995). *Since the publication of the Draft EIS, Census 2000 and related data have been incorporated into the socioeconomic analyses. Population figures, housing characteristics, labor information, and economic multipliers (such as employment and earnings multipliers) have been updated to reflect the most current socioeconomic environment in the region of influence.*

#### 4.3.1 POPULATION AND HOUSING

##### 4.3.1.1 Population

From 1960 to 1990, population growth in the region of influence paralleled statewide growth. During this period, the region of influence’s population increased an average rate of approximately 1.3 percent annually, while the annual growth rate for the State was 1.4 percent (BEA 1997). From 1990 to 2000, State population growth accelerated to 2.9 percent per year, and region of influence growth *increased to 1.4* percent (DOC 1997a, 2000a). Population growth for both the region of influence and the State are projected to slow after the year 2000. Table 4-1 presents population estimates for the region of

**Table 4-1. Population of the INEEL region of influence and Idaho: selected years 1980-2025.<sup>a</sup>**

County	1980	1990	1995	2000 <sup>b</sup>	2005	2010	2015	2020	2025
Bannock	65,421	66,026	72,043	<b>75,565</b>	81,303	84,474	90,894	96,802	102,710
Bingham	36,489	37,583	40,950	<b>41,735</b>	46,214	48,016	51,666	55,024	58,382
Bonneville	65,980	72,207	79,230	<b>82,522</b>	89,415	92,902	99,963	106,460	112,958
Butte	3,342	2,918	3,097	<b>2,899</b>	3,495	3,631	3,907	4,161	4,415
Clark	798	762	841	<b>1,022</b>	948	985	1,060	1,129	1,198
Jefferson	15,304	16,543	18,429	<b>19,155</b>	20,798	21,609	23,251	24,763	26,274
Madison	19,480	23,674	23,651	<b>27,467</b>	26,692	27,733	29,841	31,780	33,720
Region of influence	206,814	219,713	238,241	<b>250,365</b>	268,865	279,350	300,582	320,119	339,657
Idaho	944,127	1,006,749	1,164,887	<b>1,293,953</b>	1,277,000	1,335,000	1,395,000	1,514,000	1,725,000

a. Source: DOC (1997a,b); BEA (1997) *except as noted*.  
 b. Source: **DOC (2000a)**.