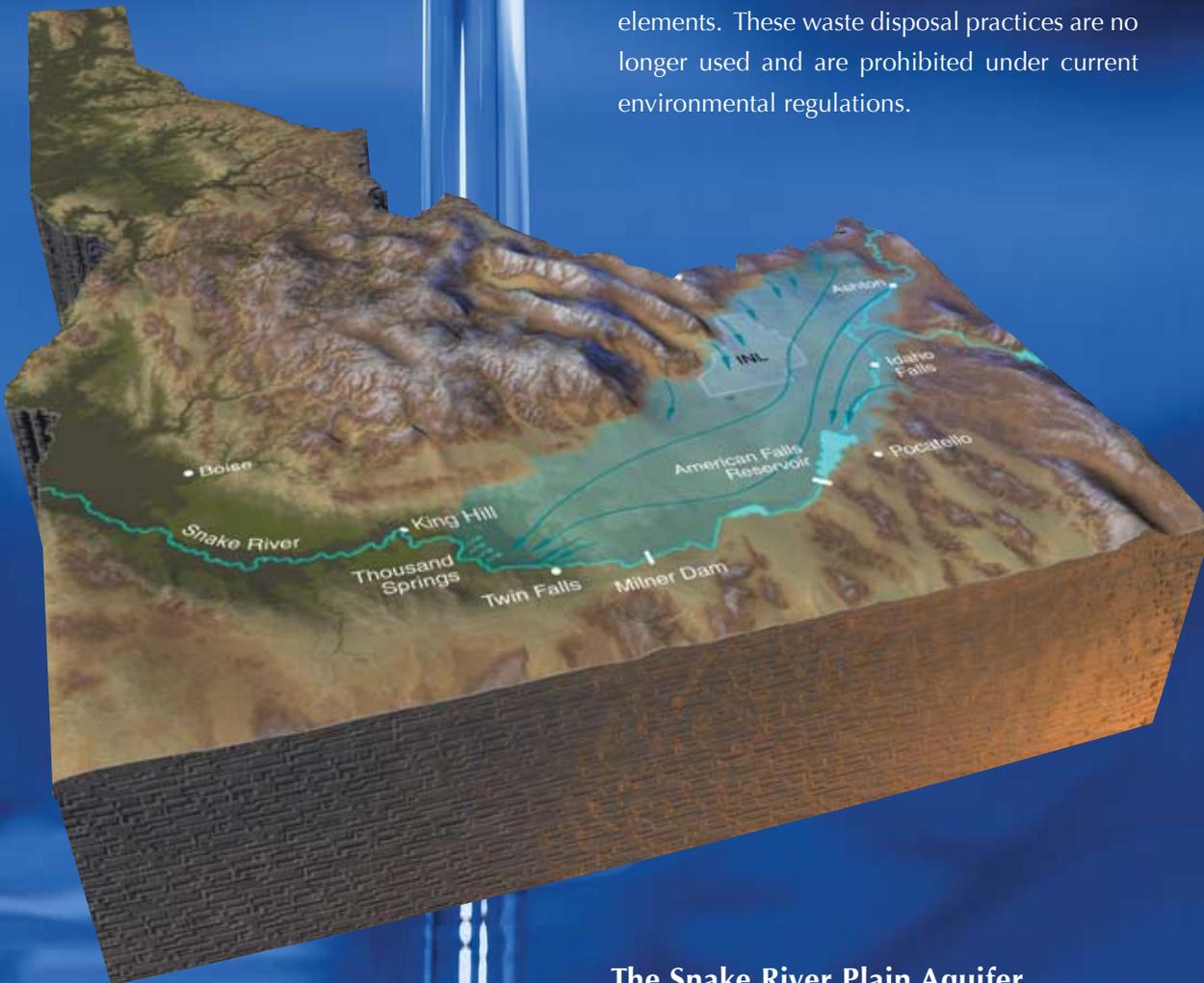


# THE INL & THE SNAKE RIVER PLAIN AQUIFER

The Snake River Plain Aquifer underneath the Idaho National Laboratory is one of the most productive groundwater resources in the U.S. Each year, about 2 million acre-feet of water is drawn from the aquifer. Approximately 95 percent of the water is used for irrigation, 3 percent for domestic water, and 2 percent for industrial purposes. The aquifer is the primary water source for more than 280,000 people in southeastern Idaho.

Although not the only source of contamination, historic activities at the Idaho National Laboratory have affected the quality of the aquifer water. In the past, the INL employed industrial waste disposal practices common at the time that included injecting contaminated waste water directly into the aquifer. Some of these practices led to contamination of the groundwater below some areas of the INL with heavy metals, chemicals and radioactive elements. These waste disposal practices are no longer used and are prohibited under current environmental regulations.



The Snake River Plain Aquifer



For more than a decade, the U.S. Department of Energy, governed by federal and state laws, has been cleaning up the aquifer below the INL and taking actions to protect it from additional contamination. While some of the groundwater below the INL is still contaminated, in more than 50 years of groundwater monitoring no contaminants have been detected near or outside the INL boundary in concentrations exceeding federal safe drinking water standards.

DOE and its regulating agencies, the U.S. Environmental Protection Agency and the Idaho Department of Environmental Quality, embarked upon studies at the nine facility areas at INL to understand the extent to which past activities contaminated the groundwater. The studies required under the federal Superfund law were to determine if cleanup is needed to reduce risks to within legally acceptable levels, and if so, what cleanup measures are appropriate.

With seven studies completed, the agencies determined that past activities at Test Area North, the Reactor Technology Complex (formerly called the Test Reactor Area), and the Central Facilities Area contributed contaminants to the aquifer in concentrations requiring cleanup of the aquifer and/or of sources of the contamination. Those cleanups are either underway and progressing well, or are complete and undergoing monitoring to confirm effectiveness.

Studies show that the aquifer doesn't require remedial actions at four other facilities: the Naval Reactors Facility, Experimental Breeder Reactor-I, the Power Burst Facility/Auxiliary Reactor Area, and the Materials and Fuels Complex (formerly called Argonne National Laboratory-West).

Studies continue at two facilities: the Idaho Nuclear Technology and Engineering Center, and the Radioactive Waste Management Complex. Contaminants from both of these facilities are in the aquifer.

A Remedial Investigation/Baseline Risk Assessment for the Radioactive Waste Management Complex was completed and made public in May of 2006. The study found that a small portion of the aquifer below the facility has been contaminated, and that additional contaminants will reach the aquifer if no protective action is taken. Based on this risk assessment, the department is evaluating options for remedial actions to mitigate the risks identified.

A similar investigation has found that contaminants in the soil at the Idaho Nuclear Technology and Engineering Center pose a risk to human health and the environment through contamination of the aquifer. While some interim actions have already been performed to decrease this risk, the department has issued a proposed plan involving additional cleanup actions at this facility.

The INL and the Department of Energy are keenly aware of the importance of the Snake River Plain Aquifer to those who rely on it to provide irrigation and drinking water throughout southern Idaho. We are working together with our regulators to make sure no contaminants ever leave INL site boundaries in concentrations that exceed federal safe drinking water standards.