4.6.2 Impacts of Proposed Action

4.6.2.1 *Impacts of the Continued Operations*

Weapons-Related Activities

Surface Water. Operations at Pantex Plant have not substantially impacted delineated flood-prone areas in the past, and continued operations are not expected to cause impacts in the future. The proposed areas of activity are outside of 100-year, 500-year, and Standard Project Flood boundaries. Pantex Plant is in compliance with current wastewater and stormwater discharge permits. Wastewater discharge associated with operations on 2,000, 1,000, or 500 weapons per year is expected to continue. These discharges are not expected to impact surface water quality because, while the projected annual wastewater discharges represent a 36 percent increase over fiscal year (FY) 1994 usage for the 2,000 weapons level, the levels of contaminants in the wastewater are held by current regulations to levels that do not impact the environment. This increase is only 48 percent of the site's remaining wastewater treatment capacity. The 500 weapons level would represent an 8 percent decrease in wastewater production (Table 4.6.2.1–1).

Groundwater. Section 4.6.1.2 provided an assessment of the existing (baseline) hydrogeologic and water quality conditions that exist at Pantex Plant. The existing groundwater contamination that has been detected in the perched aquifer is the result of over 40 years of past activities and waste generation at Pantex Plant. Over this time period, contaminants that were previously released at the ground surface had to percolate through unsaturated soil and sediments to the perched aquifer. Groundwater contamination of the perched aquifer has been detected offsite to the east and southeast. As stated in section 4.6.1.2, if contaminated groundwater from the Zone 12 perched aquifer is used in the future for domestic or agricultural purposes, a potential exposure pathway (i.e., ingestion, bathing, or irrigation) could result (Argonne 1995a:5-37). Pantex Plant's Groundwater Protection Project was implemented to ensure the integrity of offsite water quality by sealing homestead wells, upgrading some monitoring wells, and drilling additional monitoring wells (MH 1996a).

Assessment of the impacts of the continued operations to groundwater resources at the plant involves the evaluation of the potential for additional groundwater contamination from wastewater discharge activities, and the

TABLE 4.6.2.1–1.—*Current and Projected Annual Water Usage and Capacities, Pantex Plant (million liters [million gallons])*[1]

	FY 1994 USAGE	FY 1994 CAPACITY	2,000 WEAPONS LEVEL	1,000 WEAPONS LEVEL	500 WEAPONS LEVEL
Wastewater	477 (126)	830 (219)	647 (171)	522 (138)	439 (116)
Water	836 (221)	1,890 (500)	1011 (267)	791 (209)	689 (182)

[1]Water consumption and capacity are shown in liters to be consistent with the units used in section 4.3, Plant Facilities and Infrastructure. (Liters can be converted to cubic meters by multiplying with 0.001.) Projected annual rates include a 10 percent margin.
FY – fiscal year

Sources: DOE 1995j:10; DOE 1994f:7