

ESTIMATED USE OF WATER IN THE UNITED STATES IN 1995

By Wayne B. Solley, Robert R. Pierce, and Howard A. Perlman

ABSTRACT

Estimates indicate that after continual increases in the Nation's total water withdrawals for the years reported from 1950 to 1980, withdrawals declined from 1980 to 1995. The withdrawal of fresh- and saline water in the United States during 1995 is estimated to have been 402,000 million gallons per day (Mgal/d) for all offstream uses—2 percent less than the 1990 estimate. The 1995 withdrawal estimate is nearly 10 percent less than the 1980 estimate, which is the peak year of water use documented in this 5-year compilation series that began in 1950. This decline in water withdrawals occurred even though population increased 16 percent from 1980 to 1995. Total freshwater withdrawals are an estimated 341,000 Mgal/d for 1995, or about the same as in 1990. Per-capita use for all offstream uses in 1995 was 1,500 gallons per day (gal/d) of fresh- and saline water combined and 1,280 gal/d of freshwater, compared to 1990 when per-capita use was 1,620 gal/d of fresh- and saline water and 1,340 gal/d of freshwater.

Estimates of withdrawals by source indicate that during 1995, total surface-water withdrawals were 324,000 Mgal/d, which is about the same as during 1990, and total ground-water withdrawals were 77,500 Mgal/d, or 4 percent less than during 1990. Total saline-water withdrawals during 1995 were 60,800 Mgal/d, or 12 percent less than during 1990, most of which was saline surface water. The use of reclaimed wastewater is estimated to have been 1,020 Mgal/d during 1995, which is 36 percent more than the 750 Mgal/d used during 1990.

Offstream water-use categories are classified in this report as public supply, domestic, commercial, irrigation, livestock, industrial, mining, and thermoelectric power. The two largest water-use categories continue to be thermoelectric power and irrigation. In 1995, the most water (190,000 Mgal/d, of which 57,900 Mgal/d was saline) was withdrawn for thermoelectric power cooling, whereas the most freshwater (134,000 Mgal/d) was withdrawn for irrigation. The estimate of total (fresh, saline) self-

supplied withdrawals for "other" industrial uses during 1995 is 29,100 Mgal/d, or about 3 percent less than during 1990. Industrial withdrawals declined from 1980 to 1995 after remaining about the same for the years reported from 1965 to 1980. In fact, self-supplied withdrawals for "other" industrial use during 1995 are the lowest since records began in 1950.

Water for hydroelectric power generation, the only instream use compiled in this report, is estimated to have been about 3,160,000 Mgal/d during 1995. This is 4 percent less than the 1990 estimate.

Total freshwater consumptive use is estimated to have been about 100,000 Mgal/d during 1995, or 6 percent more than during 1990. Consumptive use by irrigation accounts for the largest part of total consumptive use and is an estimated 81,300 Mgal/d for 1995. Freshwater consumptive use in the East (water-resources regions east of and including the Mississippi regions) is about 12 percent of freshwater withdrawn in the East and accounts for only 20 percent of the Nation's consumptive use. By comparison, freshwater consumptive use in the West is about 47 percent of freshwater withdrawals. The higher consumptive use in the West is attributable to the 90 percent of the water withdrawn for irrigation that occurs in the West.

A comparison of total withdrawals by water-resources region indicates that the California, South Atlantic-Gulf, and Mid-Atlantic regions account for one-third of the total water withdrawn in the United States. The largest amount of irrigation occurs in the California, Pacific Northwest, and Missouri regions; and the largest withdrawals for thermoelectric power occur in the Mid-Atlantic and South Atlantic-Gulf regions. A similar comparison of total withdrawals by State indicates that California accounts for the largest withdrawal, which is about 45,900 Mgal/d, followed by Texas, Illinois, and Florida. Some 24 States and Puerto Rico had less water withdrawn for offstream uses during 1995 than during 1990.