

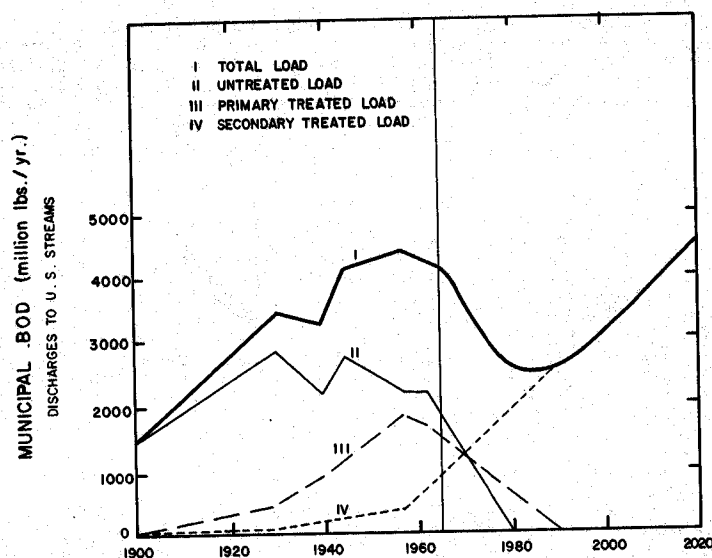


FIGURE 6. Estimate of BOD discharges to U.S. streams from municipal outfalls (A.D. 1900-2020).

The Water Supply Problem

An enormous amount of commentary on the water supply problem has been published in both the popular and the technical press. However, for the purposes of this paper, only one or two examples of this problem will be cited. First, it should be very clear to New Yorkers that water shortages occur not only in arid areas but also in water-rich areas of the world such as the eastern coast of the United States. It should also be clear that water supply problems may be more severe in regions of occasional shortage than in regions where such problems are an expected occurrence. Water supply can be a real problem in an area such as New York City, even without a "northeast drought." On Long Island, for example, water is pumped from the ground, and prospects of importing water overland are becoming progressively more difficult and more expensive as the New York City metropolitan area grows and forms an ever-widening barrier to importation. Population, industry, and water demand are growing; ground water levels are falling; and salt water is progressively intruding into the present underground supplies of fresh water.

In regard to the nationwide water supply, FIGURE 7 illustrates an estimate of the withdrawal rate of water for various uses as against the nation's dependable and developable supply during the twentieth century. This rather oversimplified projection indicates that we have already run out of water. In fact, it indicates we ran out of water in 1957, when our withdrawal of fresh water exceeded our "dependable supply." By 1983, our withdrawal will equal our estimated *total* developable supply, and we shall *really* be out of water!