

Dam removal

The 1992 National Inventory of Dams lists more than 75,000 large dams and about 2 million smaller dams in the United States. Dams generate power, provide flood control and water supply, facilitate community development, and create opportunities for recreation. Dams also profoundly change ecological communities and degrade river systems. They turn riverine communities into lacustrine communities. Over time, im-



poundments create severe water-quality problems due to nutrient enrichment and increased productivity, accumulation of contaminants, and sedimentation with concomitant shallowing. Highly eutrophic conditions can lead to algal blooms and excessive growth of aquatic vegetation. These problems substantially raise the cost of maintenance or rehabilitation. Furthermore, tens of thousands of small dams are old and deteriorating; their repair and removal are expensive. To date, dams have typically been removed for reasons of public safety and prohibitive costs of repair. However, an awareness of the harmful effects of dams on the environment and high cost of repair is increasing, and the restoration of river ecosystems has gained attention.

An article published in the journal *Environmental Management* (Socioeconomic and institutional dimensions of dam removals: The Wisconsin experience. *Environmental Management* 22(3):359-370) reports that more than 30 of 3,600 dams in Wisconsin were removed in the past few decades. It also documents the related legal, financial, and socioeconomic issues associated with the removals.

Community support for dam removal and loss of impoundments is limited. Yet, the estimated cost of repair has been three times higher than the cost of removal. Watershed-scale ecology raises little local interest. Nevertheless, contemporary watershed management and restoration more and more include the option of dam removal. The socioeconomic factors and stakeholder perspectives are variables that strongly influence the viability of management alternatives and must therefore be given more attention. **P_S**