

DECOMMISSIONING METHODS

Appropriate methods of dam decommissioning depend on project attributes (such as size, type and location of dam), river characteristics, and intended objectives (such as fisheries restoration, land reclamation and recreation). Dam decommissioning is thus highly site-specific. Careful planning minimizes public health and safety risks to downstream communities.

Destruction of St. Etienne du Vigan Dam © Roberto Epple, ERN

- Complete removal is often accomplished by first temporarily diverting the river, then using heavy equipment (e.g., wrecking ball, backhoe, and hydraulic hammer) to dismantle the dam. The removal of the 7-meter-high, 280-meter-long Edwards Dam on Maine's Kennebec River was accomplished in a matter of days using this technique.
- Breaching of dams allows the river to flow around existing dam structures. Heavy machinery is typically used to breach earthen portions of dams located in relatively wide river corridors. Breaching is recommended for partial dam removal, such as the Lower Snake River dams, and represents a relatively inexpensive decommissioning option for larger structures, when feasible.
- In the case of concrete dams, controlled explosives are occasionally used for demolition. Explosives were used to remove dams on the Clearwater (1963), Clyde (1996), Loire (1998), and Kissimmee (2000) rivers, among others. A combination of explosives and heavy machinery may be required, especially with larger projects.
- Campaigns promoting decommissioning of barrage-type dams with radial gates, such as the Nagara Estuary Dam in Japan and Thailand's Pak Mun Dam, advocate simply raising the gates. This re-creates more natural river conditions without the immediate cost of removal.



What is dam decommissioning?

Dam "decommissioning" means the deactivation of a dam project's principle functions and may include: dismantling power generating equipment, permanently opening dam gates, partial breaching of earthen structures, or complete and permanent removal. Dam removal is neither as rare, nor as radical, as dam defenders claim. To date, a variety of dam types designed for a range of functions have been successfully removed.