



## Background on Dam Removal and River Restoration

Riverkeeper is working to raise awareness of the benefits of dam removal for restoring streams. Perceptions about the value of dams are changing today and we now understand the negative impacts dams have on our waterways. By removing dams, we are actually restoring our rivers.

### ***Facts you should know***

#### ***Dams harm rivers.***

Dams were often built on prime spawning habitat. They fragment habitat and block the movement of fish, mussels, and other species. Dams also affect water quality, negatively changing water temperature, dissolved oxygen content, turbidity and salinity. Dams also affect a river's natural function of transporting sediment and nutrients downstream.

#### ***Dam removal improves stream health.***

Fish and other species have increased access to river habitat. Water temperatures are more natural and stable. Dissolved oxygen levels increase and sediments and nutrients are able to move naturally through the stream system rather than accumulating in the impoundment.

#### ***Dam removal does not turn streams into dry creek beds.***

To predict a creek's width and flow after dam removal, look at the stream's current width and flow before it reaches the impoundment as well as just downstream from the dam.

#### ***Dam removal will not flush accumulated sediments downstream.***

Most dam removals involve a gradual draw-down of the impoundment. If the dam has a flow control structure, the impoundment will be drawn down until the dam removal can be done under dry conditions. For dams with no flow control structure, the first step in removal is to notch the dam to enable the height of the water behind the dam to decrease and gradually re-expose the flooded lands. Some dam removals can cause higher than normal sediment loads to the river for short periods of time.

#### ***Former impoundments revegetate within one growing season following removal.***

Newly exposed lands will revegetate within weeks during the growing season, thanks to the many plant seeds that have accumulated in the rich sediments over the years. Once exposed to sunlight and oxygen, the plants grow very quickly and the sediments dry up in the process.

#### **Delaware Riverkeeper Network**

300 Pond Street, Second Floor  
Bristol, PA 19007

tel: (215) 369-1188

fax: (215) 369-1181

[drkn@delawariverkeeper.org](mailto:drkn@delawariverkeeper.org)

[www.delawariverkeeper.org](http://www.delawariverkeeper.org)

***A dam's life expectancy is typically designed to be about 50 years.***

The life expectancy of any given dam depends on how the dam is maintained. A well-maintained structure may endure longer than 50 years. Poorly maintained dams will surely endure less.

***Dam removal eliminates the need for long-term maintenance.***

Dam owners are responsible to keep the dam safe. When a dam begins to fail, or breach, a decision must be made as to whether to keep or repair the structure. When a dam generates no revenue, the long-term costs of liability insurance, dam and impoundment maintenance, and operation weigh heavily on the side of dam removal. On average, dam removal costs 3 - 5 times *less* than repair.

***Although they can be popular places, dams are also very dangerous.***

Typical dangers at a dam site include fast moving water, an open spillway, and thin ice. A particularly dangerous area is the base of the spillway. Deceiving currents at the base of dam spillways kill swimmers, anglers, paddlers, hikers and others every year. Even people that understand the dangers of dams can become disoriented and trapped in waters around dams. Because of these dangers, owning a dam involves a substantial amount of financial and legal responsibility.

***Dam removal improves paddling and other recreational opportunities.***

Dam removal allows people to enjoy rivers as flowing waters. People can paddle or float local streams without being faced by dangerous barriers. Birders and other wildlife watchers are able to enjoy animals that require healthy rivers and associated habitats to thrive.