



Historically, Wisconsin has been a leader in developing our waterways to harness energy and generate hydropower. Today, we have about 3,800 dams in our rivers and streams, and we are leading the nation once again -- this time in restoring our rivers through selective dam removal. While once serving a valuable function, many of these dams have outlived their economic usefulness and have become structurally unsafe, leaving hundreds of communities facing the decision of whether to repair or remove their dams. Removing these dams that no longer make sense is now considered an important alternative by dam owners, local officials, citizens and resource agencies. Public appreciation for free-flowing rivers is increasing, and more communities now realize that a healthy river can be the focal point of a healthy community.

Why remove dams?

For safety reasons. Dams are under the constant pressures of water and time and gradually deteriorate. Many of Wisconsin's dams have not been properly maintained and are now public safety hazards. The DNR is responsible for dam inspections, compliance with safety standards and issuing repair and removal orders.

Dam removal makes good economic sense. In Wisconsin, repairing a dam typically costs 3 to 5 times more than the cost of removal. The on-going costs of maintenance, repairs, operation, liability and dredging the impoundment further increases the true cost of a dam.

Dam removal can restore a river's recreational and natural values. Dams severely fragment river ecosystems, degrade water quality and devastate fisheries. The DNR has identified dams as one of the biggest threats to Wisconsin's aquatic biodiversity.

Dam removal re-creates recreational and aesthetic opportunities -- from canoeing and kayaking to fishing and wildlife watching. Restoring the land that is flooded by dams has also created parks and wildlife habitat, like those at **Woolen Mills** on the **Milwaukee River**, and **Fulton** on the **Yahara River**.

Dam Facts

- More than 3,800 dams block Wisconsin's rivers and streams; some more than 150 years old.
- In Wisconsin, dam removal typically costs 3 to 5 times less than dam repair.
- Fewer than 200 dams in the state produce hydropower.
- Dams harm rivers by fragmenting river ecosystems, degrading water quality, destroying critical habitats, depleting oxygen levels, and killing migrating fish.
- More than 130 dams have been removed in Wisconsin since 1950.
- Removal of 4 dams on the Baraboo River improved water quality, smallmouth bass fishing and restored all 115+ miles to a free-flowing river.
- The River Alliance of Wisconsin has successfully helped 35 communities with dam removals.

Why is dam removal such a big deal?

Hundreds of Wisconsin communities face this decision. Today, hundreds of Wisconsin's dams are functionally obsolete, unsafe and face repair costs of at least \$300,000 within the next few years. Repair and removal decisions are made locally, so informed citizen involvement and input is critical to the decision process.

Dam removal can be a difficult issue for communities. Because the dam has "always been there" the idea of removing it may seem radical at first, but communities are learning that dam removal can create new recreational opportunities, dramatically improve water quality, increase parkland, and lead to community revitalization and economic development opportunities.

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Won't the river turn into a trickle of water that a person could jump across?

Unless there are substantial changes in the geology or topography in the restored stretch of the river, you can expect that the river will not become significantly wider or narrower after dam removal. The river's natural size is comparable to the width and flow just before it reaches the impoundment and directly downstream of the dam.

Won't we have more flooding problems? This depends on whether the dam was built to provide flood control. The majority of dams in Wisconsin were not built for this purpose and may actually increase the risk of flooding because of serious disrepair and/or mis-operation during storm events. In order to find out if your dam provides flood control, contact your regional DNR Dam Safety Engineer.

Won't we be left with stinking mud flats?

When the impoundment is drawn down during dam removal, bottom sediments are exposed to air for the first time and they may emit an odor of decomposing vegetation for a short period of time, ranging from a few days to a few weeks. Over the years the dam was in place, plant seeds accumulated in the rich bottom sediment. Once they are exposed to sunlight and oxygen, these plants grow quickly, revegetating the exposed lands and absorbing the excess moisture in the sediments. The rate of revegetation can be variable depending upon the time of year and the characteristics of the river.

Who will own the 'new' land? Ownership of the newly exposed land can be determined from the property boundary descriptions in the deeds and titles for the waterfront and dam properties. To avoid ownership conflicts, it is best to answer this question early in the removal process.

Won't wildlife habitat be lost causing wildlife to suffer?

The habitat created by the dam will change with dam removal, but not necessarily in a negative way. Dam removal enables a river to function naturally, re-creating historic fisheries and wildlife habitat. For example, high quality, rare trout fisheries have been reestablished on the **Kickapoo River, Black Earth Creek and Tomorrow River** in part by dam removals. To find out how your restored river segment may look, refer to local historical records or contact your regional DNR office about predicted changes and site-specific information.

Will property values plummet? This is a valid concern of private waterfront property owners, however, in some cases predicted decreases in property values never occurred. In order to determine these effects, it is best to investigate property values at other former dam sites with similar community attributes. Studies are underway to better document the effects of dam removal on property values.

Who will pay for the dam's removal? In Wisconsin, there are both state and private funds available for dam removal, but in some cases the dam owner pays (i.e. an individual, tax payers, or a business). Even so, removing a dam costs on average 3-5 times less than repairing it, so removal is a more cost effective solution. To find out about funding opportunities, contact the River Alliance or your local DNR office.

Doesn't the dam have historical value? Because of the large number of dams in the state and the cumulative repairs made to a dam over the years, very few are considered historic sites. In fact, there are only three dams in Wisconsin with a historical status. If historical issues are a likely concern, early involvement of the Wisconsin State Historical Society is recommended.

Won't the dam removal introduce exotic or diseased species?

Certain dams have been known to act as barriers, protecting upstream areas from invading species. This is a site-specific issue that should be addressed by the DNR or US Fish and Wildlife Service.

Won't the best fishing spots be lost if the dam is removed?

Anglers who fish just below the dam are often concerned they will lose good fishing opportunities if the dam is removed. But the fish aren't there because it's good habitat, they're usually "stacked up" trying to get upstream. Dam removal actually improves the aquatic habitat and the overall health of the river, providing improved angling opportunities along a much longer stretch of the river. In many cases, dam removal will allow a variety of warm water, cool water and cold water species to seasonally occupy the same stretch of river, providing anglers with a greater fishing variety.

What can you do?

- **Contact the River Alliance** to learn how to proceed. Visit the website at www.wisconsinrivers.org or contact Helen Sarakinos, Dams Program Manager at: 608.257.2424 or email wisrivers@wisconsinrivers.org. Also, consider purchasing a copy of the video, **Taking a Second Look: Communities and Dam Removal**, and handbook, **Dam Removal: the Citizen's Guide to Restoring Rivers**, which are both comprehensive resources for anyone interested in restoring their river through dam removal.
- **Contact the DNR for information about the dam.** Call your nearest DNR office (check the state government section of your phone book) and ask to speak with the dam safety engineer for your area. Describe the dam's location. Ask them who owns the dam. Find out the dam's safety record and if the dam was built for flood or erosion control. Is the dam owner under orders to repair or remove it? Have cost estimates been done on both options? Who would pay the cost of repair? What economic values (if any) does the dam provide? What are the potential benefits to the community and resources through dam removal?