

## Frequently Asked Questions

### **Will removing a dam create increased flooding either up or downstream?**

Very few dams in Michigan provide flood control and Argo Dam does not. If water is constantly flowing over the spillway of the dam, it is likely the dam has no flood storage capacity. Dams also provide no flood protection for upstream communities—in fact, they tend to exacerbate upstream flooding. Additionally, during removal, the impoundment can be gradually drawn down to prevent any increases in downstream flooding.

### **Will the dam removal matter if other dams in the system are not removed?**

Some rivers are so heavily developed and dammed that removal of one dam on that river will only return flows to a small portion of the river. Generally, dams that have been targeted for removal are strategically located—removal will open up a section of the river critical to fish and wildlife and/or recreation. In some cases, this additional section of river is enough to sustain crucial populations of endangered or threatened species of fish, mollusks, and other wildlife.

### **How does dam removal affect fish?**

Dam removal benefits riverine fish in many ways, including: (1) removing obstructions to upstream and downstream migration; (2) restoring natural riverine habitat; (3) restoring natural seasonal flow variations; (4) eliminating siltation of spawning and feeding habitat above the dam; (5) allowing debris, small rocks and nutrients to pass below the dam, creating healthy habitat; (6) eliminating unnatural temperature variations below the dam; and (7) removing turbines that kill fish.

### **What are the potential downsides to dam removal?**

Dam removal does result in fundamental changes to the local environment. The reservoir will be eliminated, and with it the flat-water habitat that had been created. Wetlands surrounding the reservoir will also be drained, although new wetlands are often created both in the newly restored river reach above the former dam site and in the river below. Sediment that collects behind a dam, sometimes over hundreds of years, may contain toxics such as PCBs, dioxin, and heavy metals. Re-suspension of these toxic-laden sediments in the process of dam removal has the potential to damage downstream water quality and threaten the health of fish and wildlife and water users. Short-term impacts of the dam removal itself can include increased water turbidity and sediment buildup downstream if large amounts of sediment from the reservoir, are released, and water quality impacts from sudden releases of water and changes in temperature. These impacts, however, can be prevented through proper removal techniques.

### **How quickly do rivers recover after dam removal?**

Rivers are very dynamic and resilient systems. Experience has shown that natural river systems can be restored relatively rapidly after dam removal. For example, spawning fish returned to the Souadabscook River in Maine only months after a dam was removed. Locally, fish in Mill Creek passed through the former dam site within days of the dam's removal.

### **What will it look like with the dam removed?**

Many people envision a stinky, muddy flat where the pond used to be. In fact, the riverbed responds quickly and fills with plants, wetlands, and floodplains mixed with parks, paths, and

benches along a free-flowing, fast, and cool river. In a preliminary study of Argo Dam removal, an estimated 50 acres will be reclaimed by the City as parkland with dam removal. Whether it's a whitewater park, a great canoeing or kayaking stretch, a nice place to walk, bike, bird watch or sit, dam removal will change the view of the river for us all, but in the process, add attractive amenities to our communities, improving the quality of the life in the area and the quality of the Huron River.

Argo Dam was placed at a high gradient reach (steep) and will go back to drops, pool, riffles, etc. much like the river looks upstream at Delhi Metropark.

### **Who is opposed to dam removal?**

In discussions about Argo dam/impoundment, the rowing community is opposed to removal. While Argo pond was not the rowing community's first choice they are now settled and happy on the pond. They do struggle with overcrowding and weed growth. Two high schools, Pioneer and Huron, the UM Mens club team and the Ann Arbor Rowing Club all share the pond for rowing. The UM women's team is a varsity team and they practice at Belleville Lake. EMU crew teams practice at Ford Lake. With the new high school, Skyline, another team will be practicing on the pond. The rowing course on Argo is not long enough to hold regattas.

### **Could the rowers move to another pond?**

Yes, Barton, Gallup and Superior Ponds are other options. Like Argo, no pond is quite long enough for a rowing course; rowing would have to move to Ford or Belleville Lakes to meet the straight and long distance requirements. Argo provides a rowing distance of 3,200 feet. Barton is wider but a bit shorter due to the lower bridge at an upstream RR crossing (3,000 feet of water and a longer race course). Gallup is constrained by the pedestrian bridges as a "pinch point" where 2 rowing skulls could not pass at the same time (shorter length). Superior pond has shorter rowable water and some impassable or difficult bridges=. The UM and high school teams row in April-May and September-October and do not conflict with other recreational canoeists and kayakers.

### **Is it cost effective to remove a dam?**

In most cases where dams have been removed or are being considered for removal, money is actually saved over the long term compared to rehabilitating and maintaining a dam. Removal eliminates the expenses associated with maintenance and safety as well as direct and indirect expenses associated with fish and wildlife protection (e.g. fish ladders and mitigation for fish mortality). In addition, removal often generates income from newly available recreation opportunities—including fishing, kayaking, and rafting—which may actually result in a net economic benefit. The restored Kickapoo River in Wisconsin has experienced a growth in recreational canoeing and fishing since the removal of the Ontario Dam in the early 1990s. According to a university study, non-local canoeists have added \$1.2 million to the community while non-local angler expenditures are more than \$1 million annually.

### **If river water quality has improved so much over the past 30 years, why do we need to do more?**

Water quality has improved over the past 30 years due to the passage of the Clean Water Act. It regulated "point source" pollution and required that those entities (manufacturers, sewage

treatment plants, etc.) get permits and adhere to certain clean water standards. Now, the primary sources of pollution to the river are “nonpoint source,” meaning they do not come from one point. It is stormwater runoff from parking lots and streets, phosphorus rich runoff from fertilized lawns, and agricultural runoff. This is much more difficult to control and will INCREASE as development increases in the Huron River watershed.

City of Ann Arbor residents rely on the Huron River for drinking water and discharge of their treated wastewater to the Huron River. We need a Huron River that can function as a healthy ecosystem AND better assimilate the affects of this additional development.

### **Isn't the real water quality problem the sewage discharge to the river, not dams?**

It's true that some communities, including Ann Arbor, send treated wastewater into the Huron River. This discharge is regulated by the MDEQ through a federal permit program. Over the past 35 years, this program has been largely responsible for significant improvements in water quality in the Huron River.

The water quality problems posed by dams are no less serious than those caused by treated sewage discharge. Dams constrict a river and put a chokehold on the life within the river. **1. Dams block rivers**

Dams prevent the flow of plants and nutrients, impede the migration of fish and other wildlife, and block recreational use.

#### **2. Dams slow rivers**

Many fish species depend on steady flows to flush them downriver early in their life and guide them upstream years later to spawn. Stagnant reservoir pools disorient migrating fish and significantly increase the duration of their migration.

#### **3. Dams alter water temperatures**

By slowing water flow, dams increase water temperatures. Fish and other species are sensitive to these temperature irregularities, which often destroy native populations.

#### **4. Dams alter timing of flows**

The Huron River at Argo Dam has one of the top two most erratic flow regimes in Michigan according to the USGS. These irregular releases destroy natural seasonal flow variations that trigger natural growth and reproduction cycles in many species.

#### **5. Dams decrease oxygen levels in reservoir waters**

When oxygen-deprived water is released from behind the dam, it kills fish downstream.

#### **6. Dams hold back silt, debris, and nutrients**

By slowing flows, dams allow silt to collect on river bottoms and bury fish spawning habitat. Silt trapped above dams accumulates heavy metals and other pollutants. Gravel, logs and other debris are also trapped by dams, eliminating their use downstream as food and habitat.

#### **7. Dam turbines hurt fish**

Following currents downstream, fish can be injured or killed by turbines.

#### **8. Dams increase predator risk**

Warm, murky reservoirs often favor predators of naturally occurring species. In addition, passage through fish ladders or turbines injure or stun fish, making them easy prey for flying predators like gulls and herons.