

# CASE Study - US

## Chronology of US Dam Removals

### Milestones in US Dam Removals

#### **1991 -1999 Prairie River, Dells Dam (13m height) and Ward Paper Mill Dam (5,5m high and 25m length), Wisconsin**

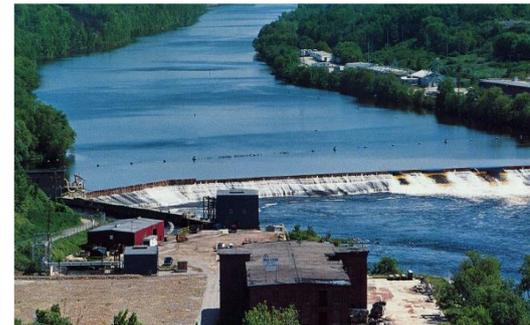
Wisconsin has had more experience with dam removal than most states in the US. A relatively aggressive state agency dam safety program has led to the removal of 30 dams already in the past few decades before 1999. Rivers like the Prairie River were opened again for fish migration. However the major reasons for dam removal were the costs of repairing old dams which averaged more than three times the cost of removal ([Born 1998](#)). The effects of Wisconsin dam removal also of small scale dams had positive effects on fish, macro invertebrates and vegetation ([Doyle 2005](#)).



Ward Paper Mill, Prairie River

#### **1999 Kennebec River, Edwards Dam (7 m), Maine**

The removal of the Edwards Dam on the Kennebec River Maine is considered as the trigger of the dam removal policy in the US. 1999, for the first time in 150 years, the Kennebec River flowed unimpeded to the ocean, allowing the free passage of fish from the Atlantic to spawn upstream in headwaters tributaries. Within a year after the removal large numbers of American eel, alewife, Atlantic and shortnose sturgeon, and striped bass were observed in upstream habitats ([Hart et al 2002](#)). The success of the Edwards Dam removal led to increased interest in dam removal and an accelerating number of proposals for river restoration (BLUMM and ERICKSON, 2012).



Edwards Dam, Kennebec River

#### **2011 White Salmon River, Condit dam (38m), Washington**

The Condit removal was a result of a 1999 settlement between the Yakama Nation and other tribes, the dam's owner operator PacifiCorp, federal agencies, and environmental groups, regarding salmon access to traditional fishing areas upstream. In 2011 the 38m high Condit Dam (constructed in 1913) was dismantled by blasting a 5m wide hole into the base of the dam. 53km of river habitat were opened and White Salmon River is once again home to abundant wild salmon and steelhead fish ([American River](#)).



Condit Dam, White Salmon River©  
Wikimedia, GFDL

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### 2009 -2014 Elwha River, Elwha (33m) and Glines dam (64m), Washington

The largest dam removal and ecosystem restoration project in American history was the removal of the Elwha Dam (108feet or 33m) and Glines Canyon Dam (210feet or 64m) on the Elwha River in Washington in 2009-2014. This has given endangered salmon, trout and other fish access to more than 113 km of their historic migration and spawning habitat. [Read more on: Case study US Dam Removal – Elwha River.](#) Watch the Elwha dam removal movie "[Return of the River](#)" and the US Dam removal movie "[Damnation](#)".



Elwha Dam, Elwha River© Ben Knight, Patagonia

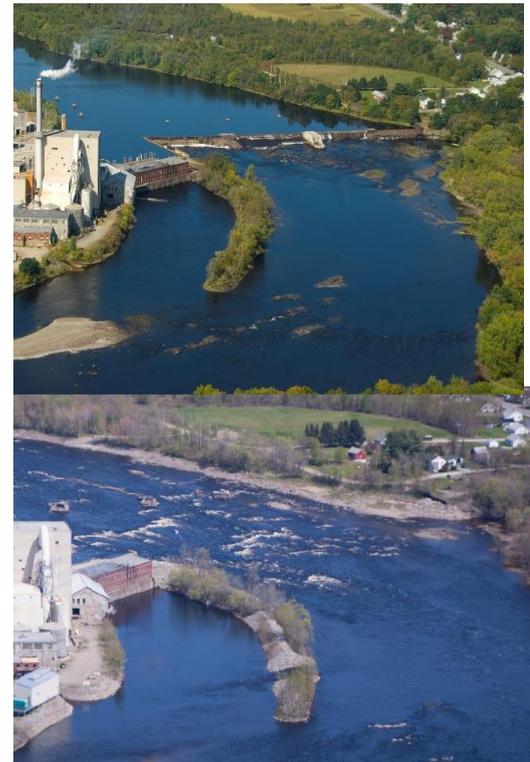
### 2013 Penobscot River, Veazie Dam (9m) and Great Works Dam (305m length), Maine

Another major success in US dam removal movement was achieved in 2012 and 2013 at the Penobscot River, when the Veazie Dam (30 feet or 9m) and Great Works Dam (1000ft or 305m length) were dismantled.

Through these removals and improvements in the fish passages more than 2.600 river kilometers are now accessible for migratory fish species, such as short-river herring, atlantic salmon, nose sturgeon and American shad.

Some of the species were thought to be gone, but were coming back after removal. River herring for instance, counted less than 1000 individuals prior removal and numbers raised up to more than 1,8 Million (!) in 2016 and generating 200.000 USD local fishery revenues.

In the same time the existing hydropower plants were rehabilitated and energy production could even be increased eventhough 2 large dams were removed ([Royte, 2016, DRE Conference](#)).



Great works dam, before and after removal, Penobscot River© Nature Conservancy

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**REMOVE**   
**THE DAMS**  
**FREE OUR RIVERS**

### Dams to be removed soon:

#### **Klamath Dams, Klamath River (OR, CA) – 7m to 50m (25 to 162 feet)**

After a twenty year long fight for removal, the start of dismantling works of four hydropower dams is scheduled for 2020. Read more on: <https://www.americanrivers.org/river/klamath-river/>

<http://news.nationalgeographic.com/2016/04/160411-klamath-glen-canyon-dam-removal-video-anniversary/>



Klamath River, IronGate ©Matt Stoecker, Patagonia

#### **Matilija Dam, Ventura River (CA) – 48m (160 feet)**

The Matilija dam an out of service drinking water reservoir is trapping sediments and blocking fish migration. The Surfrider Foundation and the Matilija Coalition, along with other agencies and organizations, have developed three dam removal concepts which focus on reducing the removal cost and also maximizing benefits. Ventura County official set the course for removal of the dam as early as 1998, currently (2016) still no funding for removal works is available. Read more on: <http://matilija-coalition.org/>



Ventura River, Matilija Dam © Ben Knight, Patagonia

#### **Lower Snake dams, Snake River (WA) – 30m (100 feet)**

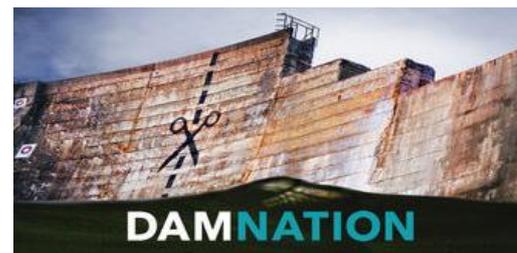
Conservation and fishing groups have gone to court and challenged federal fish restoration plans which have cost billions of dollars but not one fish species has recovered. In March 2016 the court has rejected the federal plans. Now the government must change course and remove: Ice Harbor, Lower Monumental, Little Goose and Lower Granite Dams. read more on: <http://earthjustice.org/features/remove-four-lower-snake-river-dams>



Lower Snake Dams © Patagonia

#### **US Dam Removal Movie DAMNATION**

The award winning [environmental documentary film DAMNATION](#) (Matt Stoecker, Ben Knight and Travis Rummel, produced by Patagonia) is a powerful movie raising awareness on river ecology and highlighting dam removal stories.



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