



American Rivers
RIVERS CONNECT US®

**AMERICA'S
MOST
ENDANGERED
RIVERS®**

**TOP
25**



2019

America's Most Endangered Rivers®

Climate change is the most **consequential environmental challenge** facing our planet.

Introduction

Water scarcity due to global warming could displace 700 million people worldwide by 2030. In the same time frame, 54 million lives globally could be impacted by river floods. In the United States, our climate has warmed by 1.8 degrees in the past century.

It's time to get real about what this means: Forest fires are growing more destructive, cities are struggling to do more with less water, fish and wildlife are struggling to survive and storms are triggering more life-threatening floods. Moreover, the harshest impacts of climate change are often most prevalent in economically disadvantaged communities and communities of color.

We must heed the warnings of the scientific community and quickly move away from reliance on dirty fossil fuels. And, we must unite for the clean water our families and ecosystems need to survive. Healthy rivers are key to protecting this life-giving resource for future generations. Rivers provide clean drinking water, water our crops, power our homes and businesses, provide wildlife habitat, reduce the severity of floods and droughts and provide wild places for us to fish, boat and explore.

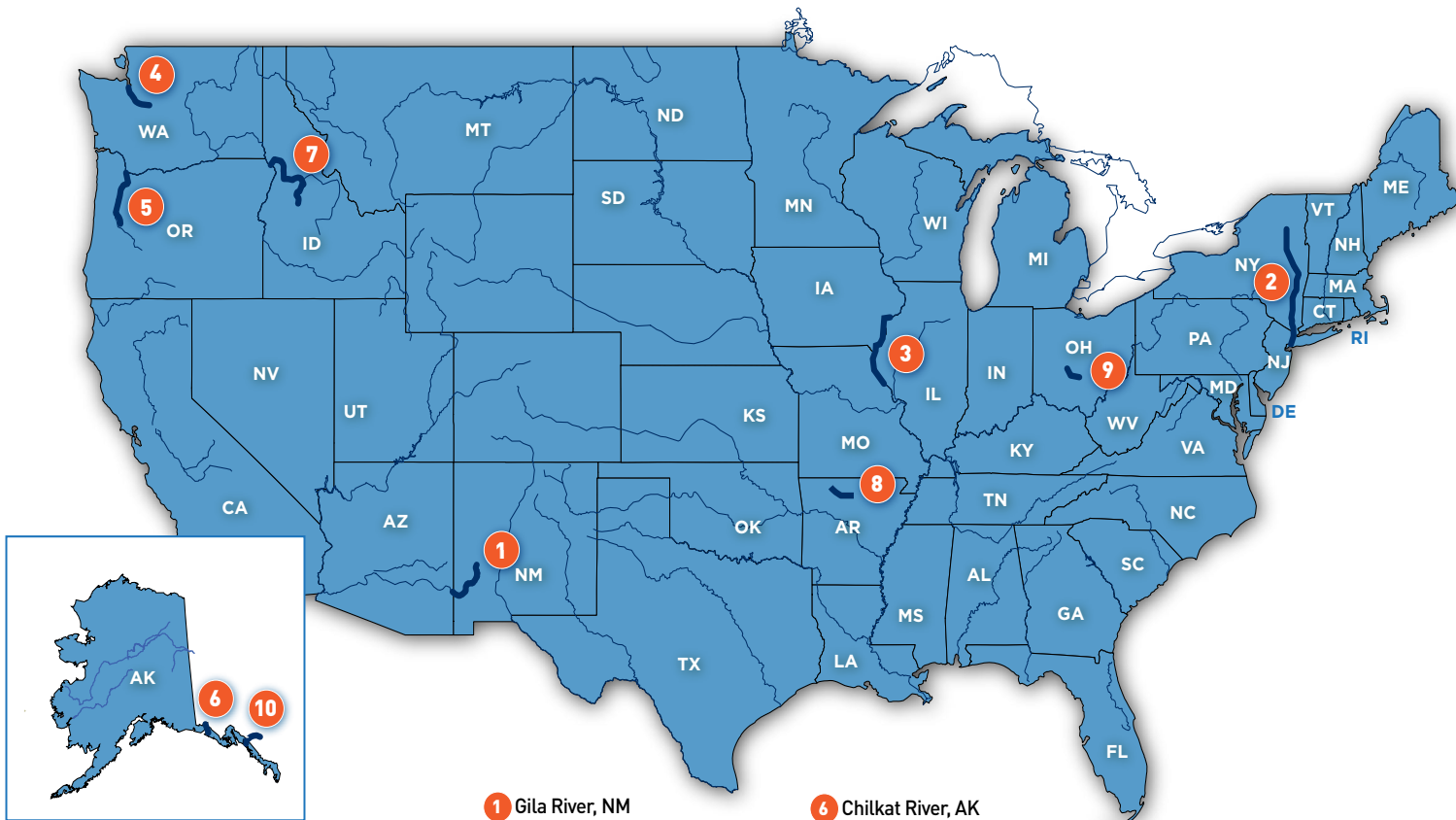
Today, our nation is at a crossroads: Will we act to protect rivers and strengthen our communities, or will we continue to exploit and damage our rivers, making ourselves more vulnerable to the impacts of climate change?

America's Most Endangered Rivers® of 2019 highlights what's at stake and the critical choices we face for our future.

The time to act — for healthy rivers and for future generations — is **NOW**.

Background

The America's Most Endangered Rivers® report is one of the best-known and longest-lived annual reports in the environmental movement. Each year since 1984, grassroots river conservationists have teamed up with American Rivers to use the report to save their local rivers, consistently scoring policy successes that benefit these rivers and the communities through which they flow.



- | | |
|---------------------------------------|-------------------------------|
| 1 Gila River, NM | 6 Chilkat River, AK |
| 2 Hudson River, NY | 7 South Fork Salmon River, ID |
| 3 Upper Mississippi River, IL, IA, MO | 8 Buffalo National River, AR |
| 4 Green-Duwamish River, WA | 9 Big Darby Creek, OH |
| 5 Willamette River, OR | 10 Stikine River, AK |

About American Rivers

American Rivers believes every community in our country should have clean water and a healthy river. Since 1973, we have been protecting wild rivers, restoring damaged rivers and conserving clean water for people and nature. With headquarters in Washington, D.C., and offices across the country, we are the most effective river conservation organization in the United States, delivering solutions that will last for generations to come.

For More Information

www.AmericanRivers.org/EndangeredRivers

For Press Inquiries

Amy Kober
Senior Communications Director
(503) 708-1145

American Rivers reviews nominations for the America's Most Endangered Rivers® report from river groups and concerned citizens across the country. Rivers are selected based upon the following criteria:

- A major decision (that the public can help influence) in the coming year on the proposed action
- The significance of the river to human and natural communities
- The magnitude of the threat to the river and associated communities, especially in light of a changing climate

The report highlights ten rivers whose fate will be decided in the coming year, and encourages decision-makers to do the right thing for the rivers and the communities they support.

The report is not a list of the nation's "worst" or most polluted rivers, but rather it highlights rivers confronted by critical decisions that will determine their future.

The report presents alternatives to proposals that would damage rivers, identifies those who make the crucial decisions and points out opportunities for the public to take action on behalf of each listed river.

1

Gila River



PHOTO: WICK BEAVERS

GILA RIVER, NEW MEXICO

State: New Mexico

Threat: Water diversion

At Risk: New Mexico's last free-flowing river and water security for southwest New Mexico

Summary

The Gila River is New Mexico's last major free-flowing river and one of the few remaining wild rivers in the Colorado River Basin. The river's health is threatened by a new diversion project that could suck the river dry. Local municipalities and districts are proposing to spend federal funds to divert the Gila River to benefit a small number of farms and a mining company rather than spending the money on cost-effective, sustainable community water projects that meet the needs of southwest New Mexico. Governor Lujan Grisham must permanently stop the diversion project and advance more cost-effective, innovative water supply solutions.

The River

Flowing out of the nation's first Wilderness Area, the Gila River supports outstanding examples of southwestern riparian forest, cold-water fisheries and a remarkable abundance of wildlife. Its cottonwood gallery forests are high-value bird habitat supporting one of the highest concentrations of breeding birds in America, including the federally-endangered southwestern willow flycatcher and federally-threatened yellow billed cuckoo. The Gila River also supports one of the most intact native fish communities in the Lower Colorado River Basin including the federally-endangered loach minnow, spike dace and federally-threatened Gila trout, as well as a naturally reproducing sport fishery. Federally-endangered northern Mexican garter snake, narrow headed garter snake and Chiricahua leopard frog also live in the area. As a result, the Gila River provides significant economic value to the region with superb opportunities for outdoor recreation, nature-based specialty travel and wilderness experience.

The Gila River is important to indigenous peoples who have lived in southwestern New Mexico for thousands of years. Many cultural sites are found along the Gila River and throughout its watershed. Furthermore, the Hispanic community has a culture, heritage and way-of-life tied to the river and forest, where generations continue to hunt, fish, hike and enjoy family time together.

The Threat

The Gila River is threatened by a diversion that could dry up New Mexico's last wild river and impact the local outdoor recreation and tourism economy dependent upon a healthy river. The diversions and infrastructure would harm critical habitat for seven threatened or endangered species. Declining groundwater levels caused by the diversion and new groundwater pumping could threaten the health of the cottonwood-sycamore-willow bosque, some of the last remaining intact riparian forest in the Lower Colorado River Basin. The diversion dams would also limit recreational opportunities, like river running, and potentially impact irrigators.

1

Gila River

CONTINUED

For More Information

Sinjin Eberle
American Rivers
(720) 373-0864
SEberle@AmericanRivers.org

Allyson Siwik
Gila Conservation Coalition
(575) 590-7619
Allysonsiwik@gmail.com

Donna Stevens
Upper Gila Watershed Alliance
(575) 590-5698
Director@ugwa.org

Todd Schulke
Center for Biological Diversity
(575) 574-5962
TSchulke@biologicaldiversity.org

Take Action:

www.AmericanRivers.org/Gila2019

PHOTO: COURTESY OF SILVER CITY ARTS & CULTURAL DISTRICT



GILA RIVER, NEW MEXICO

In 2004, Congress passed the Arizona Water Settlements Act (AWSA) that authorized diversion of the Gila River if New Mexico agreed to pay for delivery of Central Arizona Project (CAP) water to downstream users in Arizona to replace what is taken out of the river in New Mexico. There is a collective group of counties, municipalities, irrigation districts and soil and water conservation districts called the New Mexico CAP Entity. The CAP Entity proposes to spend federal funds from the AWSA to divert the Gila River to benefit a small group of farmers and the mining giant Freeport-McMoRan. The proposal includes infrastructure for future

expansion of up to about 14,000 acre-feet, or approximately 4.6 billion gallons per year of water.

Scientists estimate that due to climate change, the Gila River will cease to be a snowpack-fed river by mid-century. The proposed a diversion project would put greater strain on Gila River flows already altered and reduced by the impacts of climate change. In turn, climate change likely will limit the amount and availability of water that can be developed by the proposed diversion, calling into question the project's long-term viability. Use of the federal AWSA funds on a questionable diversion project is folly, especially when these dollars can be spent on cost-effective priority water projects that would build long-term water security and resiliency.

Currently, \$66 million from the AWSA is available to meet local water needs. These community water projects, such as the Grant County Regional Water Supply Project, would secure the long-term water supply for the 60,000 people of southwest New Mexico.

What Must Be Done

After more than a decade of planning and more than \$15 million spent, the diversion project is in the last year of review under the National Environmental Policy Act. A draft Environmental Impact Statement is expected in April 2019 with a Record of Decision by the end of 2019. Despite the projected high costs, severe delays in schedule and feasibility issues with multiple iterations of the diversion proposal, this project continues to move forward with likely support from the Trump administration.

In this critical year, New Mexico Governor Michelle Lujan Grisham can eliminate the threat to the Gila River by withdrawing the project from the AWSA process and instead spending available AWSA funding on non-diversion projects to meet the water needs of communities throughout southwest New Mexico. Governor Lujan Grisham has pledged to end work on the diversion by using these funds more efficiently on other projects and ensure that the Gila River is protected by federal law. She must fulfill this promise. This would save taxpayers and water users' money, provide direct benefits for area farmers and businesses and protect the Gila River for future generations.



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

2

Hudson River

State: New York

Threat: Storm surge barriers

At Risk: Fish and wildlife;
river health

Summary

The Hudson River Estuary, heartbeat of New York City, is a biologically rich tidal system that provides essential habitat for many species of fish and wildlife. This river has faced many challenges, the latest of which is a potential project by the U.S. Army Corps of Engineers to build massive storm surge barriers that could have catastrophic consequences for the river and region. These giant ocean gates threaten to choke off tidal flow and restrict the migration of fish, changing the ecology of the Hudson River forever. The Army Corps must expand its approach and find solutions that protect New York City, the Port of New York and New Jersey and shoreline communities without harming the river.



PHOTO: JOHN LIPSCOMB

HUDSON RIVER, NEW YORK

The River

The Hudson River flows 315 miles from the Adirondack Mountains in upstate New York through the Hudson Valley and into New York Harbor. As the second largest estuary on the East Coast, the Hudson provides critical habitat for many species, including endangered Atlantic and shortnose sturgeon and threatened banded sunfish. It also supports fisheries of both migratory and resident species. In addition, the Hudson is a drinking water source for more than 100,000 New Yorkers who reside in Poughkeepsie, Rhinebeck, Esopus, Hyde Park and Lloyd. The river is at the heart of a \$5.5 billion tourism industry, attracting visitors who come to experience the river itself and to explore the regional history, forests, shorelines and communities throughout the Hudson Valley.

The environmental movement had its origins on the Hudson with a fight over a power plant on Storm King Mountain, where for the first time in U.S. history the law required consideration of environmental impacts during construction of a hydropower project. In the mid-1900s, General Electric (GE) infamously discharged polychlorinated biphenyls (PCBs) into the upper Hudson River, contaminating sediments, fish and wildlife, and negatively affecting local communities for generations to come. Recently, the New York State Department of Environmental Conservation concluded that the PCB cleanup is still incomplete and not protective of public health and the environment. GE is adamant that it has fulfilled its obligation. The U.S. EPA is expected to issue decisions imminently on whether the cleanup is complete and protective of human health and the environment. The fight goes on.

The Threat

Ever more extreme weather events and rising sea levels, the predicted impacts of climate change, are threatening cities and communities on the Atlantic Coast. In 2012, Hurricane Sandy devastated New York City and surrounding communities. The hurricane, and the storm surge it brought with it, caused large-scale flooding and cost billions in damage. In response, the U.S. Army Corps of Engineers is considering six plans involving various scales of massive in-water barriers and/or land-based measures, like dunes, levees and floodwalls, intended to “manage the risk of coastal storm damage” to the New York – New Jersey Harbor and the Hudson Valley.



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

2

Hudson River

CONTINUED



HUDSON RIVER, NEW YORK

PHOTO: JUAN ALBERTO PUENTES PUERTA

For More Information

Eileen Shader
American Rivers
(570) 856-1128
eshader@americanrivers.org

Leah Rae
Hudson Riverkeeper
(914) 478-4501 ext. 238
lrae@riverkeeper.org

Take Action:
www.AmericanRivers.org/Hudson2019

Unfortunately, the Army Corps' approach is far too limited. It only addresses half of the problem. In addition to facing increasing risks from coastal storms, communities face increasing flood risk from sea level rise caused by climate change. The in-water barriers, with gates that remain open for ships to pass except during occasional large storms, would do nothing to prevent the inevitable regular flooding that will increasingly come with sea level rise. Without fully considering the 155-mile Hudson Estuary and its vast network of tributaries as a dynamic system, the Army Corps' proposal could have catastrophic ecological consequences for the Hudson River and New York Harbor.

The storm surge barrier designs that the Army Corps is considering are essentially massive sea walls with gates. These walls could act like partial dams, blocking fish and wildlife, including Atlantic and shortnose sturgeon, American shad, American eel, river herring and sea lamprey, from moving up- and downstream, and restricting the natural flow of the river. Furthermore, barriers across New York Harbor would dramatically alter the tidal exchange essential to transport sediment, nutrients and contaminants. Obstructed by barriers, sewage and other contaminants could flush into the ocean more slowly, increasing localized pollution in the Harbor. With inhibited tidal energy, higher nutrient levels could lead to more frequent algae blooms and lower dissolved oxygen that would impact the health of the estuary and upriver tidal marshes. The tides are the heartbeat and respiration of the 155-mile estuary. Tides are essential to the river's ecology. In-water barriers could strangle this ecosystem. They could also undo ongoing efforts to restore fisheries and habitats throughout the estuary.

Moreover, this approach would leave communities vulnerable to ever more frequent and inevitable flooding from climate change-related sea level rise. According to the ClimAID (2014) report, prepared by academic researchers and utilized by New York State Department of Environmental Conservation, New York has experienced at least a foot of sea level rise since 1900. New York City is planning for up to 75 inches – more than six feet – of sea level rise by 2100. Furthermore, as the impacts of climate change become more severe, future major storms on top of increasing sea level rise will one day overwhelm in-water barriers, ending the storm surge protection they once provided. The people of New York City and the Hudson Valley need rational, adaptable flood management plans that protect against both storm surge and sea level rise while allowing the river to run free.

What Must Be Done

In Spring 2020, the Army Corps will release a Draft Feasibility Report / Tier 1 Environmental Impact Statement on coastal storm surge plans. This step will have enormous consequences, as it will limit the scope of the measures under consideration moving forward and could eliminate the only acceptable scenario presented thus far: on-shore measures, which can include natural features and other environmentally-friendly technologies. The Army Corps must expand its approach to include options intended to prevent coastal flooding from both storm surge and sea level rise, without any in-water barriers or structures that would restrict the critical connection between the river and the sea. A comprehensive, adaptable plan of this magnitude must include a full suite of management approaches to reduce the impacts of rising floods, including natural infrastructure that restores natural features like floodplains, wetlands, barrier islands, and oyster reefs; nonstructural approaches that relocate, flood-proof and elevate buildings and infrastructure; and where necessary, land-based approaches to protect buildings and infrastructure that cannot be relocated.



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

3

Upper Mississippi River

State: Iowa, Illinois, Missouri

Threat: Illegal levee development

At Risk: Public safety

Summary

The Upper Mississippi River is vital to the nation's economy and is a globally significant ecosystem. However, this iconic river is threatened by illegal raises to the levee system that cut the river off from more than 170,000 acres of floodplain, increasing flood risk for communities and degrading vital fish and wildlife habitat. In order to safeguard communities and restore river health, state and federal agencies must enforce laws that prohibit reckless raising of levees and prioritize use of natural and nature-based flood protection solutions.



The River

The Mississippi River has been the lifeblood of many cultures throughout history and has served as the inspiration for a rich heritage of American music, art and literature. The Mississippi is also a globally-significant flyway used by hundreds of species of birds and provides unique habitat for fish, mussels, reptiles, amphibians and mammals. This significant ecosystem supports commercial and recreational fishing, hunting and boating, which contribute \$24.6 billion to the region's economy and an estimated 421,000 jobs.

Floodplain loss on the Upper Mississippi River is a major contributor to the decline of numerous federally-protected species, including the pallid sturgeon, Indiana bat, decurrent false aster and several types of mussels that rely on the complex aquatic habitat provided in natural floodplains.

The Threat

The Upper Mississippi River is threatened by levees that are being raised (i.e., made taller) without required permits and approvals. Several agricultural levee and drainage districts on the Upper Mississippi have acted outside of the law by increasing the heights of their levees. This is to the detriment of neighboring communities and the environment. Some communities lack resources to handle increasingly damaging floods, especially when they are unaware of the risks because the neighboring levee districts have acted outside of the required public review and regulatory process.

Eighty miles of levees between Muscatine, Iowa, and Hamburg, Illinois, have been raised without obtaining the required state or federal approvals or complying with state and federal laws designed to protect people and the environment. As a result, these levee raises perpetuate a century of habitat degradation on the Upper Mississippi River. Failure to come into compliance disregards clear requirements to study, identify and start to reverse the ongoing damages to the Upper Mississippi River ecosystem that have been caused by floodplain disconnection.

3

Upper Mississippi River

CONTINUED

For More Information

Eileen Shader
American Rivers
(570) 856-1128
eshader@americanrivers.org

Elliot Brinkman
Prairie Rivers Network
(217) 344-2371, ext 202
ebrinkman@prairierivers.org

Christine Favilla
Sierra Club
(618) 462-6802
cfavilla10@gmail.com

David Stokes
Great Rivers Habitat Alliance
(314) 918-1007
dstokes@grha.org

Melissa Samet
National Wildlife Federation
(415) 762-8264
sametm@nwf.org

Rob Moore
Natural Resources Defense Council
(312) 651-7923
rmoore@nrdc.org

Maisah Khan
Missouri Coalition for the
Environment
(314) 727-0600, ext 113
mkhan@moenviron.org

Take Action:

[www.AmericanRivers.org/
UpperMississippi2019](http://www.AmericanRivers.org/UpperMississippi2019)

The threats posed by these unlawful changes are real and getting worse as climate change is leading to more frequent floods and intense storms in the Upper Mississippi River Basin and across the country. The three highest-volume rain storms ever recorded in the U.S. have occurred in the last three years, in line with climate scientists' projections that extreme downpours in the U.S. could increase by 400 percent by the end of this century. Munoz et al. (2018) determined that the magnitude of 100-year flood events in the Mississippi Basin have increased by 20 percent over the past 500 years, with much of that increase being caused by the combination of river engineering and climate change. The increased risk of flooding is the reason some levee districts have pursued higher levees, but their actions are intensifying the impacts of flooding for their neighbors. For example, during the most extreme flood events, communities in and around Hannibal, Missouri, are projected to experience an additional foot or more of floodwaters because their neighbors have raised levees.

Though they have been aware of the problem for years, state and federal agencies have failed to stop the illegal activity. Only the U.S. Army Corps of Engineers has taken some action by removing some of the levee districts from a beneficial program that helps pay for damages to levees following a disaster. Unfortunately, the Army Corps' actions have had little effect.

The Federal Emergency Management Agency (FEMA) has repeatedly looked the other way, extending temporary approvals of heightened levees despite the lack of the necessary permits. In Illinois, instead of pursuing enforcement action, former Governor Rauner proposed to dramatically roll back oversight of levees and retroactively permit the unlawful levee raises.

What Must Be Done

The Army Corps, FEMA and the states of Illinois, Iowa and Missouri need to take corrective action to stop and resolve these levee violations. Violators also must be held accountable for their illegal activities. Furthermore, state and federal agencies must work with all stakeholders to develop effective flood risk management strategies for urban and rural communities that avoid the environmental damage and increased risks created by levees and floodwalls. The decision cannot be made by a single group, especially since the actions of these levee districts are placing people and wildlife at risk.

The Upper Mississippi region needs to move beyond an early 20th Century vision of flood control that foolishly relies on bigger and higher levees and floodwalls. Instead, the Upper Mississippi River needs a flood risk management plan that incorporates natural and nature-based solutions to deliver the flood and habitat protection needed for both healthy communities and healthy rivers. This becomes even more urgent as the effects of climate change and the danger of increasingly intense rain events take hold. Federal and state agencies should advance natural and nature-based solutions, such as wetland and floodplain restoration and levee setbacks, to protect vulnerable communities from flooding and deliver a wide range of benefits, including improved water quality, fish and wildlife habitat and recreation, fishing and hunting opportunities.



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

4

Green-Duwamish River

State: Washington

Threat: Outdated flood management

At Risk: Chinook salmon and public safety

Summary

Washington's Green-Duwamish River provides important habitat for chinook salmon — vital to local tribes and communities and critical to the diet of endangered southern resident killer whales (orcas). However, decades of contamination, floodplain development and dams have devastated the salmon population. Further, current flood management is inadequate to protect local communities from increasing flood risks due to climate change. As the King County Flood Control District develops the Lower Green River Corridor Flood Hazard Management Plan, it must select community supported alternatives for the plan that will promote sustainable flood management and significantly increase salmon habitat.



The River

The Green River flows unimpeded for 30 miles through forested mountains before reaching two dams: Howard Hanson Dam, a U.S. Army Corps of Engineers flood control facility, and Tacoma Headworks Diversion Dam for the city of Tacoma's drinking water supply.

Downstream of the dams, the river provides some of Puget Sound's best salmon and steelhead spawning habitat as it flows through forests, farms and the scenic Green River Gorge. At the city of Auburn, the river transforms into a channelized urban river with limited natural habitat. As the river approaches Seattle, it becomes the Duwamish River. The tidally-influenced Duwamish River provides critical nursery habitat for young salmon and a historically rich estuary before emptying into Elliot Bay and Puget Sound.

The river's salmon are especially essential to the culture and well-being of the Muckleshoot Indian Tribe, whose reservation lies on the divide between the Green and White river watersheds. Tribal members harvest fish from the Green-Duwamish River for subsistence, commercial and ceremonial use under fishing rights reserved by the 1855 Treaty of Point Elliott.

The Threat

For the past 40 years, wild chinook salmon returns have averaged less than 10 percent of the historic average adult return of 38,000, with as few as 800 chinook returning in recent years. Salmon declines are having devastating impacts on the southern resident orcas. Returning salmon face a daunting journey up the river. Extensive industrial development has resulted in the loss of approximately 97 percent of the historical estuarine habitat, and industrial pollution from polychlorinated biphenyls (PCBs), arsenic and other toxic chemicals has led to the designation of two contaminated Superfund sites in the estuary. Moving



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

4

Green-Duamish River

CONTINUED

For More Information

Brandon Parsons
American Rivers

(512) 517-4001

bparsons@americanrivers.org

Doug Osterman
Green/Duamish & Central Puget
Sound Watershed (WRIA 9)(206)
477-4793

Doug.osterman@kingcounty.gov

Cathy Cochran
Puget Sound Partnership
(360) 790-7958

cathy.cochrane@psp.wa.gov

Mindy Roberts
Washington Environmental Council
(206) 631-2600

mindy@wecprotects.org

Take Action:

[www.AmericanRivers.org/
GreenDuamish2019](http://www.AmericanRivers.org/GreenDuamish2019)

upstream, salmon must navigate a highly leveed and confined channel, largely devoid of vegetation and natural floodplain habitat. The extensive levee system separates the river from its historic floodplain, negatively impacting water quality, reducing rearing habitat and dramatically decreasing the amount of shade-giving trees along the river. Compounded by climate change, this has led to high water temperatures that can be lethal to salmon.

The Howard Hanson Dam is only capable of providing protection from a 140-year flood event, and climate change will cause the region to experience more intense and frequent flooding. The King County Flood Control District has chosen to upgrade the levee system in the Lower Green River to provide 500-year flood level protection for the communities and industry throughout the valley. The District has initiated development of a flood hazard management plan, which in its current form would lead to a larger and more extensive levee system. This would result in further loss of habitat and almost certain continued decline of salmon. Improving habitat and reducing flood hazards can both be achieved by setting back levees from the shoreline and creating side channels and more functional riparian areas.

In addition, nearly half of the historic salmon habitat in the Green-Duamish watershed lies above Howard Hanson Dam, which still lacks adequate fish passage despite years of negotiations. Without access to the abundant, forested spawning habitat above the dams, and without improved water quality and quantity of juvenile rearing habitat in the Lower Green River, salmon and steelhead will continue their precipitous decline.

What Must Be Done

The public must hold agencies accountable to follow through on their promises to clean up the Lower Duamish Superfund Site and improve fish passage at Howard Hanson Dam over the next ten years. Moreover, King County Flood Control District must develop a truly integrated plan for the Lower Green River. The District recently released the draft scope for a Programmatic Environmental Impact Statement (PEIS) for the Lower Green River Corridor Flood Hazard Management Plan, a plan that will guide flood hazard reduction actions for several decades. The scope, as currently drafted, intensifies river bank armoring and levee construction, and fails to include habitat restoration goals or specific habitat improvements in its alternatives.

More than \$163 million has been invested to restore vital chinook salmon habitat as part of the Green-Duamish Salmon Habitat Plan (2005). The Watershed Ecosystem Forum, which oversees the recovery of salmon habitat in the Green-Duamish River, and many other groups invested heavily in salmon recovery, are united in calling for a plan that will promote sustainable flood risk management, salmon recovery, water quality, aquifer recharge, public access and recreational and educational opportunities. The King County Flood Control District must strengthen the plan by defining integrated goals, maximizing the number of levee setbacks to increase flood storage capacity and salmon habitat, and offering clear habitat restoration actions to address the critical needs of salmon rearing habitat and riparian shade in the Lower Green River.



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

5

Willamette River



State: Oregon

Threat: Dam operations

At Risk: Water quality; salmon and steelhead

Summary

In the Willamette River basin, wild spring chinook salmon and winter steelhead populations are on the brink of extinction, and we can do something to save them. Many of the measures necessary to help salmon, steelhead and Pacific lamprey, such as passage at dams, improved water quality and more natural river flows, have already been identified in a 2008 plan created by federal agencies. Yet for more than a decade, the U.S. Army Corps of Engineers, the federal agency responsible for executing these beneficial measures, has failed to fully implement the plan. The Corps must take immediate action to improve operations at its dams to stem the tide of decline, and Congress must fund this critical work.

The River

The Willamette River in Oregon flows 187 miles out of the Cascades and Coast Range Mountains to its confluence with the Columbia River in the city of Portland. The river drains 11,487 square miles, nearly 12 percent of the state, flowing through a wide, fertile valley that is home to 75 percent of Oregon's population and is the state's agricultural powerhouse. Thirteen significant tributaries, including the Clackamas, Molalla, McKenzie and North and South Santiam rivers, feed the mainstem Willamette.

Half a million fish once returned to the Willamette each year, a silver thread of life extending from the Pacific, surging above the pounding waters of Willamette Falls, weaving up Cascade and Coast Range streams to spawn the next generation and supporting Native Americans for millennia. Pacific lamprey, an important food source for Native American tribes, also rely on the health of the Willamette River. There are 25 major dams in the Willamette Basin, thirteen of which are operated by the U.S. Army Corps of Engineers. Dams block access to 90 percent of historic, high quality salmon and steelhead habitat in some Willamette tributaries.

The Threat

Built and operated by the U.S. Army Corps of Engineers, a network of thirteen dams are located throughout the Willamette basin blocking access to critical salmon and steelhead spawning habitat. Adult chinook salmon and steelhead cannot get over the dams — there are no functioning fish ladders. Juvenile fish struggle to migrate downstream through the large reservoirs and often cannot move past the dams without being forced through turbines.

Along with the physical barriers these dams impose, they further harm fish and the river by altering natural flows, contributing to diminished water quality and degrading riparian environments.



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

5

Willamette River

CONTINUED

In 2008, following litigation from Willamette Riverkeeper, the federal government agreed to make significant improvements to water quality and fish passage at the Army Corps' dams. In addition, funds were provided over a period of years to make improvements to habitat affected by the dams. At present, improved fish collection facilities have been constructed on the North and South Santiam. Plans are underway to build downstream fish passage structures at Cougar Dam in the McKenzie System, and at Detroit Dam on the North Santiam — both projects will not be completed until after 2022. Unfortunately, after nearly a decade of work, the Army Corps continues to delay needed and agreed to improvements at these dams. The result — Willamette salmon and steelhead populations are circling the drain and Pacific lamprey populations continue to suffer.

Over many years, estimated historic runs of nearly 300,000 spring chinook and 200,000 winter steelhead were reduced to a few thousand naturally reproducing fish. Last year, fewer than 5,000 wild spring chinook and less than 1,000 wild winter steelhead made it back to the river. This represents just one to two percent of the historic populations that once returned to spawn in the system's cold, forested

streams like the Molalla, Santiam and McKenzie rivers. Willamette salmon and steelhead face a high probability of disappearing forever with a ninety-nine percent chance of local extinction in some tributaries. Without drastic action now, we will lose these icons of our landscapes and Northwest heritage forever.

What Must Be Done

The Army Corps is conducting a comprehensive analysis of the operations and maintenance of the Willamette Valley System, but we must act immediately to save these iconic species. The agency must make structural modifications to the dams to facilitate downstream passage for juvenile salmon. The Army Corps must also continue to improve upstream passage for adult fish so that they can gain access to their historic spawning habitat. Congress must secure the necessary federal funding and ensure that the Army Corps and key action agencies identify and implement the changes that are necessary to save and recover the Willamette and its wild fish.

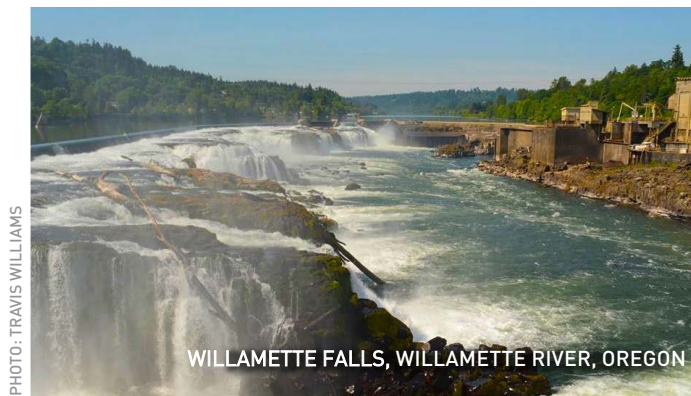


PHOTO: TRAVIS WILLIAMS

WILLAMETTE FALLS, WILLAMETTE RIVER, OREGON

For More Information

David Moryc
American Rivers
(503) 307-1137
dmoryc@americanrivers.org

Travis Williams
Willamette Riverkeeper
(503) 890-1683
travis@willametteriverkeeper.org

Bob Rees
Willamette Salmon & Steelhead
Recovery Coalition
Representing the Association of
Northwest Steelheaders
(503) 812-9036
brees@pacifier.com

Take Action:

www.AmericanRivers.org/Willamette2019



PHOTO: AARON HOCKLEY

WILLAMETTE RIVER, OREGON



American Rivers
AMERICA'S MOST ENDANGERED RIVERS®

6

Chilkat River



PHOTO: COLIN ARISMAN

CHILKAT RIVER, ALASKA

State: Alaska

Threat: Mining

At Risk: Salmon and local cultures

Summary

Every year, hundreds of thousands of salmon swim from the Pacific Ocean into Alaska's Chilkat River to spawn. Local tribes and other communities depend upon the river and salmon for their culture and economy. A proposed copper-zinc mine could change this forever, polluting the river with toxic acid mine drainage. Federal and state agencies have abandoned their responsibility to protect the Chilkat. The local community is trying to resist, and the last hope is to convince the project's corporate investor, DOWA, that the only responsible course is to back out of this mine to preserve the health of the Chilkat for future generations of wildlife and people.

The River

What makes the Chilkat River and its abundant salmon runs truly unique are warm, geothermal upwellings that prevent areas of the river from freezing until much later in the winter, after other salmon streams are long-covered in ice. The river's magnificent runs of king, sockeye, coho, pink and chum salmon prompt the largest gathering of bald eagles in the world every fall in the Alaska Chilkat Bald Eagle Preserve. The Tlingits of the Chilkat Indian Village of Klukwan, who have lived along the Chilkat River for thousands of years, named the eagle gathering area on the Chilkat the "Council Grounds." Klukwan is one of the longest continually inhabited places in North America. The Chilkat River salmon also support one of the largest brown bear populations close to human habitation — 350 brown bears live in the Chilkat Valley alongside the 2,500 people living in Haines and Klukwan.

The Chilkat River's salmon, eagles and bears are the cultural and economic backbone of the entire region. The value of the subsistence, sport and commercial harvests of salmon are rivaled in importance and economic impact only by the tens of thousands of tourists that come to the Chilkat River every year to fish, paddle rafts, kayaks and canoes, and photograph the river and its wildlife.

The Threat

A Canadian-based company is securing permits to develop a copper-zinc mine just outside the Chilkat Bald Eagle Preserve and the Tlingit Village of Klukwan. The deposit, known as the Palmer Project, would be a stone's throw from the Klehini River, one of the Chilkat's main tributaries. The mine site is only a few miles from the confluence of the Klehini and the Chilkat as it approaches the Haines Highway, a National Scenic Byway paralleling the river as it races down the valley to Haines and the Lynn Canal.

6

Chilkat River

CONTINUED

Based on experiences at other similar mines, the extraction of copper-zinc-silver-gold-barite ore will likely generate sulfuric acid, which will mobilize heavy metals from mine waste and surface deposits. Given the high levels of rain and snowfall every year in the Chilkat Valley, it is inevitable that metals toxic to salmon will migrate into groundwater and surface waters. To make matters worse, the region is on a major seismic fault and experiences significant earthquakes on a regular basis; several of the largest earthquakes ever recorded were centered within a short distance of the Chilkat Valley. Any storage facility for millions of gallons of contaminated tailings and wastewater would be under constant threat of catastrophic failure.

When salmon are returning from the ocean, they must find their home streams to spawn. They accomplish this amazing feat by detecting the natural profile of minerals present in the water of their home river. If that mineral profile changes,

they become disoriented, burning up the precious energy they need to reach their upriver spawning beds. Any higher level of contamination and they become sick, produce deformed offspring or die. Any runoff, leakage or even permitted discharges from the mine would significantly alter the water quality and chemistry of the river, and threaten the Chilkat's salmon runs forever.

Any significant impact to the Chilkat salmon runs would mean the end of the annual eagle gathering, the loss of critical habitat for the valley's brown bears and drastic changes to a culture and lifestyle that has been central to the people of the Chilkat Valley for millennia. The mine might only be in operation for a decade, but it would put at risk the survival of this incredibly special place for hundreds if not thousands of years.

CHILKAT RIVER, ALASKA



PHOTO: CONNOR GALLAGHER

What Must Be Done

It is impossible for the mining industry to guarantee that this mine will not at some point result in major impacts to the Chilkat River and the entire valley ecosystem. Unfortunately, both federal and state administrations have shown little interest in protecting this special place from mining. However, a Japanese minerals investment firm, DOWA Holdings Company, has been backing the Canadian effort to develop this prospect for the past eight years. DOWA claims on its website to commit to, "hand-over the sound global environment to the next generation through our business activities...We will minimize the environmental impact and environmental risk in our business activities..."

We are challenging DOWA to live up to its claim of protecting the environment. They must reevaluate their support for the Palmer Project and leave the Chilkat River and its salmon, eagles, bears and people intact for generations to come.

CHILKAT RIVER, ALASKA



PHOTO: ADAM SARACENO

For More Information

Jessie Thomas-Blate
American Rivers
(202) 347-7550

jthomas@americanrivers.org

Dr. Gershon Cohen
Alaska Clean Water Advocacy
(907) 314-0228

gershon@aptalaska.net

Take Action:

www.AmericanRivers.org/Chilkat2019



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

7

South Fork Salmon River

State: Idaho

Threat: Mining

At Risk: Clean water; endangered species; recreation; wilderness

Summary

The South Fork of the Salmon River is a major tributary to the beloved Wild and Scenic Salmon River—the second longest free-flowing river in the lower 48 states. The South Fork provides habitat for threatened and endangered fish and some of the state's best expert-level whitewater. A Canadian mining company's proposal for a massive open pit gold and antimony mine in the river's headwaters threatens to pollute this Idaho treasure, adversely impacting all the downstream communities and tribal nations that rely on it for jobs, economic livelihood and cultural heritage. The U.S. Forest Service must protect the South Fork of the Salmon, the Wild and Scenic Salmon River and endangered fish by denying this mining proposal.

PHOTO: DANIEL PATRINELLIS



SOUTH FORK SALMON RIVER, IDAHO

The River

The South Fork of the Salmon River headwaters flow from high in the Salmon River Mountains east of Cascade, Idaho. This river, found to be Wild and Scenic eligible and suitable by the U.S. Forest Service, travels for approximately 86 miles north to where it meets the Salmon River at Mackay Bar. The Shoshone Bannock, Shoshone Paiute and Nez Perce tribes have used the river for fishing and hunting since time immemorial.

The South Fork of the Salmon River is home to westslope cutthroat trout and is designated as critical habitat for endangered chinook salmon, steelhead and threatened bull trout. The South Fork Salmon watershed is the cornerstone in ongoing efforts to restore endangered salmon and steelhead to Idaho.

A long history of extensive logging, road building and mining have taken a toll on the river's health. Despite this legacy, the South Fork Salmon is on the mend. It boasts clear, free-flowing waters and undisturbed spawning habitat for migratory fish populations. The river is a magnet for expert whitewater paddlers from around the world and supports a thriving recreation economy in central Idaho.

The Threat

The demand for Idaho's precious gems and metals continues to threaten the state's public lands and rivers. At the headwaters of the South Fork Salmon is an old open-pit mine called Stibnite. Reclamation of the site has been under way since the mid-1990's. Federal, state and tribal agencies have spent millions of dollars cleaning up the mess left by previous mining companies.

Midas Gold Corp., a company based in Vancouver, Canada, has submitted a proposal to the U.S. Forest Service to reopen the mine. The proposal includes expanding two existing open pits and digging a third to extract gold and antimony. Ore will be processed on site and waste deposited into a 450-acre tailings storage facility that will be built on top of undisturbed bull trout habitat in Meadow Creek,



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

7

South Fork Salmon River

CONTINUED

For More Information

Mike Fiebig
American Rivers
(406) 600-4061
mfiebig@americanrivers.org

Kevin Lewis
Idaho Rivers United
(208) 343-7481
kevin@idahorivers.org

Evan Stafford
American Whitewater
(970) 420-5377
evan@americanwhitewater.org

Nate Ostis
South Salmon Alliance
(208) 630-4221
nate@southsalmonalliance.org

Take Action:

[www.AmericanRivers.org/
Salmon2019](http://www.AmericanRivers.org/Salmon2019)

a major tributary of the river. The 400-foot tall dam constraining the tailings will be constructed of waste rock from the mining operation. Other waste rock dumps will bury smaller undisturbed tributaries hundreds of feet deep.

Mining began at Stibnite in the late 1800s. Since that time, elevated levels of arsenic, mercury and antimony are present in the tributaries surrounding Stibnite. A recent study by the U.S. Geological Survey indicates that concentrations of these metals are declining. Reopening and expanding the mine will destroy any previous work done to restore the health of the river's ecosystem.

Mining operations are inherently toxic for water quality and the environment. The scale at which this project is proposed could have catastrophic repercussions for the South Fork of the Salmon River and downstream communities that depend upon a healthy Salmon River ecosystem.

What Must Be Done

In July 2017, the Payette National Forest completed a public scoping process and received hundreds of comments opposing the mine from people who would be directly and negatively impacted by its operations, including business owners, campers, hunters, anglers, rafters, kayakers and others. Since that time, a coalition of local residents and South Fork enthusiasts have come together to fight the mine. The Nez Perce Tribe has formally opposed Midas Gold's mining operation, which lies within their 1855 treaty territory, arguing that a project of this scale is too high risk for the health of the watershed. The town of McCall, Idaho, recently declined to join a community partnership with Midas Gold, citing overwhelming opposition by its residents, though many other rural communities are still being actively courted by Midas. Stopping the development of this mine will take a significant effort.

In August 2019, the Payette National Forest will release a Draft Environmental Impact Statement (DEIS) on Midas Gold's proposed project, followed by a public comment period. The U.S. Forest Service must protect the health of, and investment in, the South Fork of the Salmon River, the water quality of the Wild and Scenic Salmon River, and the long-term recovery of endangered fish by prohibiting the reopening and expansion of the Stibnite Mine.



PHOTO: WENDY JONES

8

Buffalo National River



BUFFALO RIVER, ARKANSAS

State: Arkansas

Threat: Pollution from massive hog operation

At Risk: Clean water

Summary

The Buffalo National River is one of the longest undammed rivers west of the Mississippi and a beautiful destination for more than one million visitors each year. But the river's clean water, recreation opportunities and fish and wildlife are threatened by a nearby Concentrated Animal Feeding Operation (CAFO) generating waste equivalent to that of 30,000 people. The CAFO owners are refusing to comply with the law and continuing to store waste in manure ponds that are leaking into groundwater. Arkansas Governor Hutchinson must act now to close the facility down and save the Buffalo National River and its clean water for future generations.

The River

Winding its way through the forested Ozark Mountains of northwest Arkansas, the 153-mile-long Buffalo National River flows through soaring bluffs, deep pools and gravel bars that lure millions of visitors annually from all over the world. People come to camp, paddle, hike and enjoy the river's sparkling waters, vistas and clean air. In 2017, more than 1.47 million people visited the Buffalo National River, generating \$62 million in revenue and employing over 900 people in tourism related activities (e.g., cabins and hotels, restaurants, kayak/canoe rental).

The upper reach, flowing from the headwaters through the Upper Buffalo Wilderness to the boundary of Ozark National Forest, is protected as a Wild and Scenic River. From the National Forest boundary to its confluence with the White River, the Buffalo is designated as the first National River in the U.S. and is managed as a unit of the National Park Service. The Park Service's mandate is to, "preserve, conserve and interpret a clear, clean, free-flowing river and its Ozark Mountain setting of deep valleys, towering bluffs, wilderness and pastoral landscapes."

The Buffalo River supports more than 300 species of fish and wildlife, including beaver, elk, black bear, smallmouth bass and catfish. The federally-endangered gray bat, Indiana bat and Northern long-eared bat are found in the karst cave networks surrounding the river.

The Threat

CAFOs are one of the largest sources of pollution to streams and waterways across the U.S., according to the Environmental Protection Agency (EPA). In 2012, a 6,500-head hog CAFO was permitted and constructed by C&H Hog Farms, Inc. without public debate or input. The hog CAFO, including massive indoor feedlots and two manure filled ponds, sits on a hill along one of Buffalo National River's main tributaries, Big Creek, less than six miles from the mainstem of the river.

8

Buffalo National River

CONTINUED

For More Information

Jessie Thomas-Blate
American Rivers
(202) 347-7550
jthomas@americanrivers.org

Lin Wellford
Ozark River Stewards
(870) 438-5537
linwellford@gmail.com

Take Action:

[www.AmericanRivers.org/
Buffer2019](http://www.AmericanRivers.org/Buffer2019)

Each year, millions of gallons of liquid hog waste are sprayed onto pastures and fields, some of which lie in a floodplain. This manure spreading is particularly harmful where topsoil is thin and the underlying geology is a porous limestone (karst) that is prone to fissures, sinkholes and rapid transmission of groundwater into the water table. In fact, dye tracing studies around the hog CAFO have shown that water can travel under mountains across 13 miles of the watershed. Consequently, contaminants in the manure fields and ponds are having far reaching effects, including polluting groundwater wells and threatening endangered species. In the past three years, unprecedented algal blooms have stretched over 70 miles downstream of the CAFO. In 2018, Arkansas Department of Environmental Quality (ADEQ) identified Big Creek and sections of the Buffalo River as impaired due to high *E. coli* bacterial concentrations and low dissolved oxygen.

Following the listing of the Buffalo as one of *America's Most Endangered Rivers*® of 2017, the state denied the permit for the CAFO's operations and ordered it to shut down. Rather than comply, the owners have decided to fight the issue in court. Depositions taken during these legal proceedings revealed that C&H did not provide a geological assessment, draft an emergency response plan or follow other legal requirements for waste management. Due to incorrect carrying capacity estimates, nutrient levels on original spray fields far exceed levels required to avoid water contamination. Excessive phosphorus is of particular concern because it binds with soil and will continue to enter the waterway during rain events and leach underground for many years to come, increasing the urgency to end this operation now.

What Must Be Done

In an unprecedented move, lawyers for corporate industrial agriculture interests are questioning the right of ADEQ to do its job. As the state's designated arm of the Environmental Protection Agency, ADEQ is the sole regulator of permits designed to protect the waters of the state. ADEQ has denied the new permit for this facility.

Arkansas Governor Asa Hutchinson faces pressure from agricultural lobbyists who want to frame this as a 'right to farm' issue. The American Farm Bureau is a key player in this legal fight, and they must be called to account for defending an operation that should never have been established in such a sensitive and invaluable place.

Governor Hutchinson needs to know that he will be supported by public opinion if he stands up for the river. Science, not greed, should be the deciding factor. With ample scientific evidence of harm, it is time to close this operation and let the healing of America's first national river begin. The governor must demand the closure of this facility now. The Buffalo National River flows in Arkansas, but it belongs to every citizen of our country. Continued support from a well informed and concerned citizenry will be necessary to stop this power grab by a corporation that clearly does not care about the health and well-being of this national treasure.

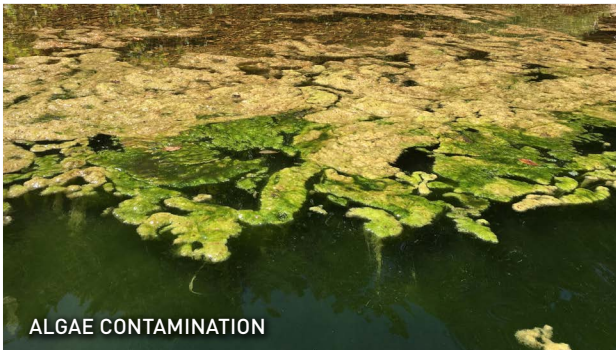


PHOTO: TERESA TURK

ALGAE CONTAMINATION



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

9

Big Darby Creek

State: Ohio

Threat: Urban sprawl

At Risk: Clean water and endangered species

Summary

Big Darby Creek in central Ohio has long been recognized and protected as one of the most pristine streams in the Midwest. However, local leaders are poised to exploit a loophole that would allow an explosion of urban sprawl across the lands surrounding the creek. Poorly planned development would result in polluted runoff, harming water quality and the sensitive wildlife that call the creek home. The City of Columbus, Plain City, West Jefferson and Madison and Union Counties must produce a science-based plan to determine how much, and what type, of development makes sense for the area, if they want to safeguard Big Darby Creek and the priceless benefits its clean waters provide to the region.



PHOTO: MAC ALBIN

BIG DARBY CREEK, OHIO

The River

Big Darby Creek is unique in that it is a National Scenic River adjacent to a major metropolitan area. More than 2 million people live in the Columbus region. Consequently, the creek provides an important recreational and natural area for residents and visitors. Two metro-area parks offer 9,226 acres of forest, wetlands and prairie. The creek offers some of the best canoeing and smallmouth bass fishing in the state.

Big Darby Creek meanders through some of the richest farmland in Ohio, a former flatland prairie that once covered much of the region. Here, Big Darby enhances a rural way of life that most residents value and want to maintain.

Big Darby is most valued for its aquatic biodiversity, which includes over 100 fish and 44 freshwater mussel species. Fed by strong groundwater recharge through thick glacial till, Big Darby's highly alkaline waters are ideal for supporting rare species. One expert has stated that for its size, Big Darby is arguably the most diverse mussel stream in North America, and perhaps the world. The mussel fauna includes four federally-listed endangered species: clubshell mussel, northern riffleshell, rayed bean and snuffbox; and the federally-threatened rabbitsfoot mussel.

The Threat

In 2006, a historic agreement (the Darby Accord) was reached to sharply limit development in the eastern part of the watershed— i.e., in Franklin County, where development pressure was imminent from the Columbus metropolitan area. However, as the region continues to grow, developers are suddenly attempting to leapfrog this barrier and develop thousands of acres of farmland to the west that is unprotected by the provisions of the Accord. Most frustratingly, the bulk of that development has been proposed by Columbus itself, which is a key signatory to the Accord. They have petitioned the Ohio Environmental Protection Agency to extend their sewer plan to an area centered around the village of Plain City that would add

9

Big Darby Creek

CONTINUED

11,000 housing units and open a development zone the size of two of Columbus' largest suburbs combined. The zone would literally straddle Big Darby Creek and critically imperil the health of the river.

In addition, the downstream village of West Jefferson is planning to build another 1,000 residential units and is seeking to expand their industrial park over thousands of acres along Little Darby Creek, a critical Big Darby tributary that itself is a National Scenic River.

Research shows that streams start to show impacts from impervious surface (such as roads, buildings and parking lots) at around five percent impervious cover. The level of building proposed would put that region of the watershed well above that threshold. Moreover, the area is just upstream of both the Darby Accord region and two parks, generally considered the heart of the high-quality Darby ecosystem and the region, where tens of millions of dollars have been invested to preserve the stream.

In the past decade, Big Darby has seen some disturbing signs that increasing development may already be impacting the quality of the stream. In 2016, a sudden die-off of mussels hit a 50-mile stretch of the stream, perhaps killing a quarter of the creek's mussels. The cause of the event was never determined, but it was a wake-up call that the future of Big Darby is by no means assured.

What Must Be Done

The City of Columbus, Plain City, West Jefferson and Madison and Union Counties must commit to the kind of science-based environmental planning that was done in the Darby Accord area prior to any new development moving forward. Most critically, this planning must include credible environmental impact modeling to determine the carrying capacity of the area, and all parties must commit to limiting development to stay under this cap. In addition, the Ohio Environmental Protection Agency should require this planning as part of any issuance of a permit for Columbus to expand sewer and water service to the area.

For More Information

Katie Rousseau
American Rivers
(419) 215-7748
krousseau@americanrivers.org

John Tetzloff
Darby Creek Association
(614) 288-0313
jftetzloff@aol.com

Take Action:

[www.AmericanRivers.org/
BigDarbyCreek2019](http://www.AmericanRivers.org/BigDarbyCreek2019)

VARIEGATE DARTER (*ETHEOSTOMA VARIATUM*)



PHOTO: MAC ALBIN

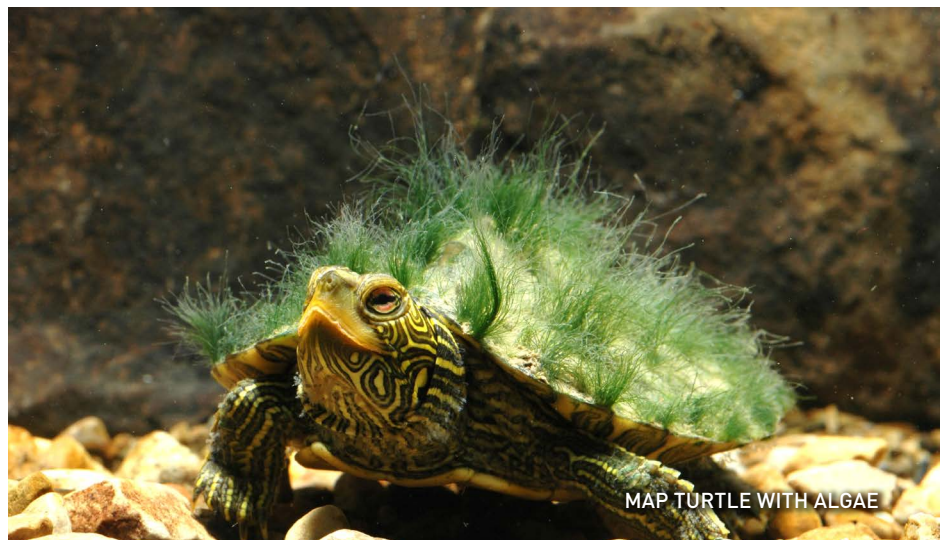


PHOTO: MAC ALBIN

MAP TURTLE WITH ALGAE



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

10

Stikine River

PHOTO: KENDALL ROCK



State: Alaska

Threat: Mining

At Risk: Indigenous way of life; healthy fisheries; clean water

Summary

The Stikine River's clean water, fish and wildlife are the lifeblood of local communities, including tribes who have called the area home for thousands of years. The river and its fisheries, water quality and people are threatened by toxic pollution from current and proposed mining projects. The International Joint Commission of the U.S. and Canada must protect the human rights of the tribes and others reliant upon a healthy river and stop these mines from polluting the Stikine with harmful mining waste.

The River

The Stikine River flows from an area known as the Sacred Headwaters in British Columbia into Southeast Alaska. The Tlingit, Haida and Tsimshian people have occupied this region for more than 10,000 years. The community of Wrangell is home to 2,400 year-round residents with the population rising to more than 3,000 during the seasonal fishing period. Indigenous people rely on foods gathered from the river and forests to survive. "Subsistence" food gathering is not just about eating; it is the major method of how culture is passed down to new generations. The Stikine supports five different species of salmon, as well as moose, geese, deer and multiple other game that are integral to the diet of the entire community. One of the river's claims to fame is that it is the fastest-flowing navigable river in North America.

The Threat

The Stikine is threatened by the pollution from an operational mine at the headwaters—the Red Chris Mine, with others proposed nearby. These mines are extracting minerals, including silver, gold, molybdenum and copper. The Red Chris Mine is owned by the same company, Imperial Metals, responsible for a massive dam failure in 2014 at its Mount Polley site (Cariboo region, British Columbia, Canada) that polluted lakes and rivers with 24 million cubic meters of toxic waste.

Mines have to keep their tailings (toxic ore waste potentially containing cyanide, arsenic, and/or mercury) immersed in water in perpetuity. The earthen dams holding the tailings at the Stikine mines are engineered in the same way as the failed dam at Mount Polley. Further cause for concern is that the area sits on the Queen Charlotte/Fairweather fault, which is similar to the San Andreas fault in California. Consequently, the risk of an earthquake leading to a dam failure in this region is a major concern. As one tribal member stated, "If that dam fails, our way of life will become a dead zone."



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

10

Stikine River

CONTINUED

What Must Be Done

By allowing contamination from mining to endanger the transboundary Stikine River, British Columbia is violating the 1909 Boundary Waters treaty that prohibits Canada and the U.S. from polluting each other's waters. The Southeast Alaska Indigenous Transboundary Commission (SEITC) has asked the U.S. State Department to convene the International Joint Commission (IJC) to address this concern. International scrutiny of mining operations, under the objective auspices of IJC, is the best way to ensure protection of water quality and native fisheries in the Stikine River system. Specifically, the U.S. State Department should direct the IJC to investigate and report on the current discharges from the mines and the current cumulative adverse impacts on water quality, fisheries, wildlife and the environment. In addition, the U.S. State Department should request an immediate moratorium on new mines or mine expansions based on a lack of analysis of the cumulative and downstream impacts to water quality and fish habitat.

STIKINE RIVER, ALASKA

PHOTO: KENDALL ROCK



On December 5, 2018, SEITC submitted a petition to the Inter-American Commission of Human Rights calling for an international review on the threat these mines pose to the tribal way-of-life. The Inter-American Commission must agree to hear this case and seriously consider the impacts these mines are having on generations-old subsistence practices that form a mainstay of the livelihood, culture and traditions of the tribes.

Lastly, in 2018, Alaska Governor Bill Walker signed a Memorandum of Agreement with British Columbia to review the mines and discuss financial resources in the event of a disaster. Current Governor Mike Dunleavy must continue to support this collaborative effort to ensure a healthy, sustainable future for the Stikine River Basin and the tribes and local communities that it supports.

For More Information

Jessie Thomas-Blate
American Rivers
(202) 347-7550
jthomas@americanrivers.org

Tis Peterman
Southeast Alaska Indigenous
Transboundary Commission (SEITC)
(907) 305-0120
tispeterman@seitc.org

Take Action:

[www.AmericanRivers.org/
Stikine2019](http://www.AmericanRivers.org/Stikine2019)



PHOTO: KENDALL ROCK

STIKINE RIVER, ALASKA

2019

River of the Year



FIRE ON THE CUYAHOGA RIVER

“Fifty years ago, the Cuyahoga River was so polluted it caught fire. In this anniversary year, we celebrate the progress that has been made in Cleveland, and we underscore the importance of clean, healthy rivers to cities nationwide.

May other cities draw inspiration from Cleveland’s story, and may we all work together to spark an urban river renaissance nationwide. Because everyone in our country deserves clean water and a healthy river.”

— Bob Irvin, President and CEO
American Rivers

PHOTO: SHARE THE RIVER



A National Success Story:

Ohio’s Cuyahoga River

Fifty years ago this June, sparks from a train ignited the surface of Cleveland’s Cuyahoga River. One hundred years of unregulated dumping of factory waste had smothered the river in oil and other pollution.

The river was one of the most polluted waterways in the country -- in fact, the Cuyahoga had burned at least 13 times since the 1860s. But it was the 1969 fire that grabbed the nation’s attention, thanks in part to a Time magazine story.

A river catching fire? Americans were outraged. This was a turning point.

Cleveland Mayor Carl Stokes called for action. He was the first Black mayor of a major U.S. city and a voice for the river and environmental responsibility. The day after the fire, he held a press conference and filed a complaint with the state, saying the city couldn’t clean up the river without the state’s help. When that help didn’t arrive, Mayor Stokes and his brother, Rep. Louis Stokes (D-OH), testified before Congress in support of federal legislation to clean up Lake Erie and the Cuyahoga River.

Their advocacy brought attention to the Cuyahoga and helped spark a transformation for rivers nationwide. Congress passed the landmark Clean Water Act, which curtailed “point source” pollution from industry and wastewater treatment plants on rivers including the Cuyahoga. In addition, the creation of a regional sewer district for the Cleveland metro area helped address the region’s wastewater treatment needs, as well as pollution from industrial sources.

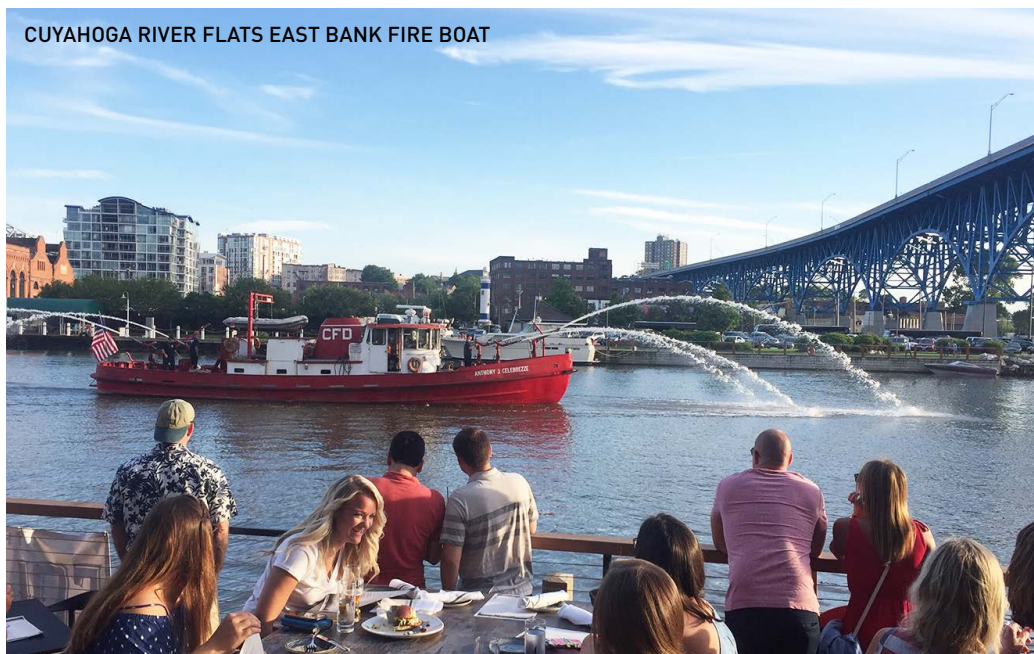
“The Clean Water Act is so important to this river’s story,” says Kyle Dreyfuss-Wells, CEO, Northeast Ohio Regional Sewer District. “The river’s recovery is not an accident. This didn’t just happen overnight. It took real environmental regulations combined with infrastructure improvements. You get what you pay for.”

2019

River of the Year

Cuyahoga River

PHOTO: CUYAHOGA RIVER RESTORATION



The Cuyahoga River Today

It took Congressional action, 20 years and \$3.5 billion in updated infrastructure for life to return to the Cuyahoga. In 1998, the U.S. Environmental Protection Agency named the river one of fourteen American Heritage Rivers, a designation that rewarded community-led efforts to protect and restore the river's cultural, environmental and economic values.

In 2017, the Northeast Ohio Regional Sewer District and the Ohio Environmental Protection Agency assessed water quality and other indicators of health in the Cuyahoga River. They found that, "the overall health of the fish and macroinvertebrate communities in the Cuyahoga River has improved substantially over the past several years."

Today, more than 60 fish species thrive in the Cuyahoga, and its water is cleaner than it has been in decades. Just last month, the U.S. EPA agreed with Ohio EPA's recommendation that restrictions on fish consumption in the Cuyahoga River can be eased – confirming research showing continued improvements to local water quality.

"If you safely can eat the fish, we know that's a great indication that water quality is improving," Ohio EPA Director Laurie A. Stevenson said in a press release announcing the decision.

"This is an example of the progress that can be achieved when you collaborate and dedicate resources to improving the quality of water in our state," Ohio Governor Mike DeWine said in the announcement. "We need to continue to invest in our water resources so that we can see additional improvements."

Other signs of the river's improvement are the connections Clevelanders have with their river today. Once dominated by heavy industry, now restaurants and parks line the banks of the Cuyahoga. Neighborhood groups are beautifying their communities by installing rain gardens and other green infrastructure to help keep pollution out of local streams and ultimately the Cuyahoga and Lake Erie.



American Rivers

AMERICA'S MOST ENDANGERED RIVERS®

2019

River of the Year

Cuyahoga River

People swimming, boating and fishing are a common sight. Jim Ridge, founder of Share the River, credits the industrial users of the river for being cooperative stakeholders, “fostering an environment where a federal navigation channel can coexist with growing interest by the public to use the river for recreation.” Ridge is organizing Blazing Paddles, a standup paddleboard, canoe and kayak race and celebration on June 22 to mark the anniversary of the 1969 fire.

“Fostering shared use and getting more people out to enjoy the river is creating new advocates who will help protect the river,” he says. “We can’t go back to the bad old days. We won’t let the river become polluted again because too many people are using the river and living by the river. They will not allow it to happen.”

“Cleveland is so close to having that live-work-play ‘secret sauce’ that all great river cities have. The rebirth of the Cuyahoga River is creating a rebirth of our city.”

What’s next for the Cuyahoga

The sewer district is investing in “green infrastructure” to reduce polluted runoff from streets, parking lots and rooftops. These projects add nature-based solutions that improve quality of life and promote clean water. In addition, efforts are underway to remove Gorge Dam and Brecksville Dam. Once the outdated structures are gone, 35 miles of the Cuyahoga will flow freely between Lake Rockwell and Lake Erie.

There will always be more work to do. Jennifer Grieser, Senior Natural Resource Manager - Urban Watersheds with Cleveland Metro parks stresses that the effort to clean and restore the Cuyahoga is not finished. “While we mark the anniversary of the fire, we need to make sure people stay engaged beyond this year,” she says.

“Rivers are the heartbeat of our cities,” says American Rivers President and CEO Bob Irvin. “May other communities draw inspiration from Cleveland’s story, and may we all work together to spark an urban river renaissance nationwide. Concerned citizens need to continue speaking up. Everyone deserves clean water and a healthy river.”



PHOTO: SHARE THE RIVER

CUYAHOGA RIVER, OHIO

For More Information

www.AmericanRivers.org/Cuyahoga50