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.

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.

**About American Rivers**

American Rivers protects wild rivers, restores damaged rivers, and conserves clean water for people and nature. Since 1973, American Rivers has protected and restored more than 150,000 miles of rivers through advocacy efforts, on-the-ground projects, and an annual *America’s Most Endangered Rivers* campaign. Headquartered in Washington, DC, American Rivers has offices across the country and more than 275,000 members, supporters, and volunteers.

Rivers connect us to each other, nature, and future generations. Find your connections at AmericanRivers.org, Facebook.com/AmericanRivers, and Twitter.com/AmericanRivers.

Cover photo: Sunset on the Big Sunflower River, Mississippi
Credit: Stephen Kirkpatrick
Near Vicksburg, Mississippi, the Big Sunflower River is home to a diverse abundance of wetlands, fish and wildlife. This special place is threatened by a U.S. Army Corps of Engineers project that would damage roughly 200,000 acres of nationally significant wetlands and cost taxpayers at least $300 million for construction, plus millions in annual maintenance costs. In 2008, President George W. Bush’s Environmental Protection Agency vetoed the project under the Clean Water Act. Today, there is a push in Congress for the Army Corps to immediately construct the project. This action poses a major threat to the Big Sunflower River and waters across the nation protected by the Clean Water Act veto. Public outcry is needed to ensure that Congress does not force the construction of this expensive, destructive and unnecessary project.

The River

The Big Sunflower River begins in Coahoma County, Mississippi, and flows for 250 miles until it reaches the Yazoo River, a tributary of the Mississippi River. According to the Environmental Protection Agency, the wetlands of the Big Sunflower are, “some of the richest wetland and aquatic resources in the nation,” and serve a vital function for fish, wildlife, anglers, paddlers and other water users. Thanks to the protection of vital wetland habitat around the Big Sunflower afforded by the Clean Water Act, the state-listed Louisiana black bear has thrived, allowing it to be removed from the federal endangered species list. The area is also home to the federally-endangered pondberry plant and sheepnose mussel, federally-threatened rabbitsfoot mussel, and the state-endangered mucket mussel.

While most of the land in the Big Sunflower River watershed is in agricultural production, nearly a quarter has been set aside, returned to native forest, protected as public land or enrolled in conservation easements. Despite farm conservation efforts, agricultural water withdrawals and pollution have had a major impact on the watershed since at least the 1970s.

The wetlands of the Big Sunflower serve a vital function for fish, wildlife, anglers, paddlers and artists. The Mississippi Delta has been a cultural muse, and, Clarksdale, near the headwaters of the Sunflower, has produced many famous musicians, including Sam Cooke, Ike Turner, Muddy Waters, John Lee Hooker, Son House and James “Super Chikan” Johnson.

The Threat

The Big Sunflower River is threatened by an effort to resurrect a U.S. Army Corps of Engineers project. The Yazoo Backwater Area Pumping Plant (or Yazoo Pumps) was initially authorized in 1941 to theoretically help reduce backwater flooding between the Mississippi and Yazoo Rivers just north of Vicksburg, Mississippi. In reality, this is an agricultural drainage project
that would benefit highly subsidized big agribusiness while increasing flood risk downstream and harming low income communities that depend on the area’s natural resources (i.e., subsistence fish and/or wildlife).

According to independent estimates, Yazoo Pumps would drain and damage up to 200,000 acres of ecologically-significant wetlands and a highly productive floodplain fishery. The project’s impact area includes more than 123,000 acres of one of the last bottomland hardwood forest ecosystems that once dominated the Lower Mississippi Alluvial Valley, four National Wildlife Refuges, the Delta National Forest and State Wildlife Management Areas. The project would also impact nearly 184,000 acres of privately-owned forest land and 50,000 acres of lands enrolled in the Wetlands Reserve and Conservation Reserve Programs. Taxpayers have spent hundreds of millions of dollars conserving wetlands in this region. Draining them now to promote more intensive cultivation is nonsensical.

In an era of climate change and more intense storms and flooding, instead of pushing more water downstream, we need to rely on the multiple benefits of healthy wetlands and floodplains to manage these events. This project is a major boondoggle propping up a handful of industrial farms at the cost of at least $300 million (plus an annual maintenance cost of around $2.1 million) in taxpayer dollars and irreplaceable wetlands and wildlife habitat.

The Yazoo Pumps are so damaging that the George W. Bush administration vetoed the project, using the Clean Water Act veto authority for only the 12th time in history. The veto was upheld in court. Unfortunately, Congress and the Trump administration’s aggressive anti-environment rhetoric threaten to revive this devastating project, throwing out the longstanding protections provided by the Clean Water Act and the National Environmental Policy Act. Language directing the Army Corps to immediately begin constructing the Yazoo Pumps—regardless of the veto and without any additional environmental review— was included in a draft FY 2018 Senate appropriations bill. Though that language was not in the final FY2018 bill, some members of Congress and supporters within the administration are continuing to push for including it in future funding bills or other must-pass legislation.

**What Must Be Done**

Historically, EPA Clean Water Act vetoes have permanently blocked exceptionally destructive projects. However, some members of Congress and the Trump administration are actively working to dismantle long-standing environmental protections and the environmental legacies of past presidents. Congress must not sneak an approval for this project into a funding or other bill, or otherwise direct that the Yazoo Pumps proceed.

It is critical that the public speak out to defend this ecologically-significant place from destruction. It is also vitally important that the public demand that Congress defend the integrity of the Clean Water Act, including the vitally important Clean Water Act veto authority.

**Take Action:** [www.AmericanRivers.org/BigSunflower](http://www.AmericanRivers.org/BigSunflower)
State: Alaska
Threat: Massive open-pit mine
At Risk: Alaska Native communities; world’s largest sockeye salmon run; fisheries

Summary

The Nushagak and Kvichak rivers of Bristol Bay, Alaska, support the world’s largest run of wild sockeye salmon, dozens of Alaska Native tribes who depend on clean water for hunting and fishing, and a sustainable multi-billion dollar commercial and sport-fishing industry. Unfortunately, the Pebble Mine once again threatens this priceless resource. The U.S. Army Corps of Engineers (USACE) recently launched a fast-tracked public scoping process to kick off the federal permitting process for an environmental review. Tribal communities in Bristol Bay have already rejected the fast-tracked plan because of its failure to give adequate time and opportunity for the public to weigh-in. The Army Corps should deny this permit or, if a permit is granted, the Environmental Protection Agency (EPA) should permanently protect these waters using its authority to veto permits under the Clean Water Act.

The River

The Nushagak and Kvichak rivers, including tributaries such as the Koktuli, Mulchatna and Talarik rivers, are home to one of the last great wild salmon runs in the world, and host world-class rainbow trout, char and other freshwater fish. Returning salmon have been the cornerstone of the region’s three distinct indigenous cultures for thousands of years, still providing physical and spiritual sustenance for the region’s over 7,000 residents spread out over a region the size of Ohio. The Bristol Bay rivers not only connect communities, but provide an intact pristine source of fresh drinking water to the people of Bristol Bay and the countless other wildlife and marine species that thrive in the region. The Bristol Bay commercial fishery supports 14,000 sustainable American jobs worth $1.5 billion annually.

The Bristol Bay watershed provides habitat for at least 29 fish species, 40 terrestrial mammal species and 190 bird species. The area attracts tens of thousands of tourists each summer. Sport fishing results in more than 29,000 angler trips per year, and salmon-dependent wildlife such as bears attract thousands more. Just downstream from the mine site lies Lake Iliamna—Alaska’s largest freshwater lake and home to one of two known freshwater seal populations in the world.

The Threat

Pebble Mine, located at the headwaters of the Nushagak and Kvichak rivers, could become one of North America’s largest open pit mines. While the current proposal describes mining through roughly a tenth of the existing deposit, it is clear that this permit would only represent the first phase of what would be one of the largest hardrock mines in North America. The full extent of the project could create 10 billion tons of waste, consume 35 billion gallons of freshwater per year, and include a four mile long dam taller than the Hoover Dam. Pebble Mine would create approximately 1,000 temporary mining jobs, while indefinitely threatening 14,000 fishery jobs. Because the Pebble project will require massive new infrastructure to operate in the Bristol
Bay region, many smaller mineral claims surrounding the Pebble deposit will be able to tap into and benefit from Pebble’s roads, pipelines and port facilities. This will pave the way for Bristol Bay to be transformed into a mining district.

In 2014, the EPA estimated that this first phase of operation would destroy at least 24 miles of streams and more than 1,200 acres of wetlands, lakes and ponds, many of which support salmon. They asserted that, “all of these losses would be irreversible.” Transporting the minerals would require the construction of an 83-mile road corridor and a 188-mile natural gas pipeline. Mine waste would include heavy metals and toxic chemicals, which cause health and developmental problems for both humans and fish. The toxic waste from the largest pit could fill roughly 3,900 professional football stadiums. Even if the waste pits do not spill, waste storage would threaten juvenile salmon that winter in headwater streams by altering groundwater hydrology, and would require water treatment and monitoring in perpetuity. Further, this region is seismically active and even minor earthquakes could result in disastrous spills of toxic waste into pristine waters.

Taking these impacts into account, in 2014, EPA Administrator Gina McCarthy announced that EPA would exercise its authority under Section 404(c) of the Clean Water Act to veto any permit that the Army Corps might ultimately issue for the mine. In 2017, hours after meeting with representatives of Pebble Limited Partnership, EPA Administrator Scott Pruitt announced he would withdraw his predecessor’s veto determination. As a result, the Pebble Mine was resuscitated and the company resubmitted its permit application. In 2018, Administrator Pruitt appeared to change course again when he announced that, because of the important natural resources at stake, he would not withdraw his predecessor’s proposed veto determination. However, Administrator Pruitt made clear that the Pebble Mine permit application with the Army Corps could continue to move forward. Moreover, Administrator Pruitt failed to mention that his authority to ultimately veto a permit for Pebble Mine would be nullified if the Trump administration’s proposed elimination of EPA’s Section 404(c) veto authority is passed into law.

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**What Must Be Done**

The Pebble Mine will harm wild salmon, local businesses and communities, and some of America’s greatest wild rivers. The U.S. Army Corps of Engineers launched a fast-tracked environmental impact analysis on March 30, 2018, allowing only 30 days of public comment on the scoping process. During the scoping period, we must demand that the Army Corps use the time necessary to undertake a rigorous review that analyzes all potential impacts of the proposed mine and that allows the public adequate time and opportunity to comment. Ultimately, based on existing studies on the known impacts of the project, the Army Corps should deny the permit and the EPA should permanently protect these waters using its Clean Water Act Section 404(c) authority.

**Take Action:** [www.AmericanRivers.org/BristolBay](http://www.AmericanRivers.org/BristolBay)
#3 Boundary Waters

**State:** Minnesota

**Threat:** Sulfide-ore copper mining

**At Risk:** Recreation economy; drinking water; wildlife habitat and wilderness

## Summary

Renowned for its natural beauty, the Boundary Waters Canoe Area Wilderness is the most visited area in the National Wilderness Preservation System. The Boundary Waters are under threat from proposed sulfide-ore copper mining on adjacent lands. This wild freshwater haven will be gravely threatened by acid mine drainage, if mining occurs on nearby lands. The Trump Administration and Congress should take action to ensure the Boundary Waters is permanently protected and resist efforts to weaken conservation law and water quality standards that would jeopardize this sensitive and well-loved area.

### The River

The Kawishiwi River (which divides into North and South branches) is an important canoe route through the heart of the Boundary Waters and the Superior National Forest. Its waters flow out of the Wilderness through Birch Lake, re-enter the Boundary Waters through Fall and Basswood Lakes, and then flow into Ontario’s Quetico Park. The South Kawishiwi River area has three popular entry points to the Boundary Waters for wilderness travelers.

The valuation of natural benefits (i.e., ecosystem services, such as cleaning air and water, moderating natural disturbances, and promoting human well-being) alone of the Boundary Waters is estimated to be $1.39 billion; this does not account for recreational value (more than 155,000 visitors annually), job creation (around 17,000 jobs), or the more than $913 million in sales annually that tourism brings to the region. The significance of this special place is underscored by the four research sites in the area. Further, the river and its lakes are protected for hunting, fishing, and gathering wild rice under the 1854 Treaty of La Pointe. This treaty, signed by member bands of the Ojibwe (also called Chippewa) Nation additionally aids the preservation of the lands and waters for other area tribes with a historical connection, such as the Huron, Cree, and Dakota Nations.

People, fish and wildlife, including walleye, northern pike, smallmouth bass, wolves, lynx, moose, bear, loons, bald eagles and osprey, all benefit from the clean water that the Boundary Waters provides for drinking, recreating and refuge.

### The Threat

The Boundary Waters and the Kawishiwi River are threatened by a massive sulfide-ore copper mine proposed by foreign-owned Twin Metals/Antofagasta on the banks of, and under, the South Kawishiwi and Birch Lake. Other
mining companies have an interest in the area as well. If this first project is allowed, others likely will follow, creating an ever-greater risk of water contamination.

More than 99 percent of the sulfide-bearing rock extracted from hardrock mining would be waste. When air and water contact such waste rock, acid mine drainage (sulfuric acid, heavy metals and sulfates) is released. Similar mines elsewhere generate hundreds of millions of tons of waste rock and acid mine drainage that requires active water treatment now and for hundreds, perhaps even thousands, of years. Acid mine drainage harms water, aquatic and terrestrial species, forests and soils, and poses a serious risk to human health. The Boundary Waters is uniquely vulnerable because of the extensively interconnected and abundant waters and a lack of buffering capacity (base compounds) to prevent a drop in pH levels.

The scientific evidence supporting the high likelihood of harm to the South Kawishiwi and the Boundary Waters from sulfide-ore copper mining in the watershed is abundant. Peer-reviewed hydrology has shown that acid mine drainage will flow into the Boundary Waters from copper mining in its headwaters. Once polluted, no mitigation could fix the significant and long-term damage to the Boundary Waters. Hardrock mining is the most toxic industry in America, according to the U.S. Environmental Protection Agency (EPA).

Scientific and economic studies show that sulfide-ore copper mining along lakes and streams that flow into the Boundary Waters would endanger not only premier fishing, hunting and other recreational activities, but also the stable, sustainable economy of Northeastern Minnesota. Economic analysis shows that sulfide-ore copper mining on Superior National Forest lands in the watershed of the Boundary Waters could lead to the loss of nearly 5,000 jobs in tourism, up to 22,000 jobs in the rest of the economy, a $1.6 billion loss in annual income, and a $509 million reduction in private property values.

**What Must Be Done**

Under the Obama Administration, the U.S. Forest Service advanced toward semi-permanent protection of the Boundary Waters from mining, including: (i) denial of renewal requests for federal mining leases, and (ii) initiating an environmental review process to consider a 20-year mining ban for 234,328 acres of Superior National Forest lands near the Boundary Waters.

However, the Trump Administration has now reversed its legal position on the denied mineral leases, opening the door to consider renewal of the previously denied federal mining leases in the headwaters of the Boundary Waters. Further, the Trump Administration has scaled back its evaluation of the impact of a future mining ban; the U.S. Forest Service is proceeding with an Environmental Assessment of the withdrawal proposal. To protect the Boundary Waters by preventing sulfide-ore copper mining in the watershed, the following actions must be taken:

► The U.S. Forest Service must prepare a rigorous and comprehensive environmental study that thoroughly analyzes the potentially devastating impacts of sulfide-ore copper mining on Superior National Forest lands in the Rainy River Drainage Basin. This analysis should take an unbiased approach to evaluating the scientific, economic and social basis for the protection of 234,328 acres of Superior National Forest lands. This evaluation should not be influenced by mining interests, and is essential to ensure the long-term health and sustainability of the Boundary Waters.

► Supported by a firm scientific basis that a rigorous study will supply, the U.S. Forest Service should submit a strong recommendation to Interior Secretary Ryan Zinke to instate a 20-year ban (the maximum currently allowed by law) on mining on 234,328 acres of Superior National Forest lands. This is the vital first step towards permanent protection of the Boundary Waters from mining.

► Based on a recommendation from the U.S. Forest Service, Interior Secretary Zinke should withdraw 234,328 acres of Superior National Forest lands in the headwaters of the Boundary Waters from the federal mining program.

**Take Action:** www.AmericanRivers.org/BoundaryWaters
State: Texas

Threat: Border wall

At Risk: River access; wildlife habitat; migratory corridors

Summary
The Rio Grande is a western icon and the lifeblood of the American southwest. This iconic river is already suffering death by a thousand cuts due to dams and unsustainable diversions. Now the Trump administration is pressing to build a border wall, adding to miles of levee-border walls and bollard border walls that already choke the river, increase flooding and erosion, disconnect the river from its floodplain, and block access for people and wildlife. The danger is nowhere more acute than in the Lower Rio Grande, where Congress has approved funds to build more than 30 additional miles of border walls and the Trump administration continues to push for hundreds of miles of additional wall. The Department of Homeland Security will waive environmental laws to build these border walls. Congress must block any further attempts to advance this invasive and harmful project, and restore the rule of environmental law to the borderlands.

The River
Starting in the snow-capped peaks of Colorado’s San Juan Mountains, the Rio Grande (or Rio Bravo, as it is known in Mexico) carves the third longest path of any U.S. river. The river bridges two nations and nourishes communities and cultures from its cold headwater streams in Colorado to its warm water delta on the Gulf of Mexico – with 270 miles in the Wild and Scenic Rivers system. It boasts three sets of canyons, each followed by some of the most productive agricultural land in North America and some of our nation’s fastest growing cities. This has led to the diversion and reduction of much of the river’s natural flow. The 1200-mile border section of the Rio Grande is a critical component of ecosystems protected by Big Bend National Park, the Lower Rio Grande Valley National Wildlife Refuge, Santa Ana National Wildlife Refuge and major state parks, as well as major conservation areas on the Mexican side of the river. All of this is precariously balanced on the flows and management of the river by the U.S. and Mexico, and threatened by mismanagement and border walls.

The Lower Rio Grande and its tributaries support a thriving agricultural economy, including the bulk of Texas’ grapefruit, oranges, tangerines and lemons. The other major economic driver in the region is ecotourism that is largely dependent on the unique river ecosystem that hosts a stunning variety of wildlife, including 500 species of birds, 300 species of butterflies, Texas tortoise, peregrine falcon, javelina, jaguarondi and the critically endangered ocelot. The Lower Rio Grande Valley and the Santa Ana National Wildlife Refuges protect the heart of this wildlife corridor along the banks of the Rio Grande. Collectively, the refuges attract 165,000 people and bring in $463 million each year and provide the last remaining five percent of intact habitat in the Lower Rio Grande valley.
The Threat

The Trump administration has proposed the construction of hundreds of miles of new border walls along the Rio Grande. The first 30 or more miles of this new phase of wall building in the Lower Rio Grande floodplain were recently funded by Congress. Much of this new construction will be “levee-border walls”—carving away the river-facing side of existing earthen levees and inserting a vertical concrete slab—that will cut the Rio Grande off from its floodplain and block access to this life-giving resource for people and wildlife. Property owners on both sides of the river could see the use of their lands disrupted. The walls would hamper the movement of terrestrial and aquatic species, fragmenting habitat critical to endangered ocelots and jaguarondi, and disrupting species distribution and seed dispersal. Bollard border walls, consisting of 18-foot tall steel posts spaced 4 inches apart, will also be erected in areas that do not have levees. These walls will repeatedly intrude into the Rio Grande floodplain, putting communities and habitats on both sides of the river at risk of flooding and violating the treaty that established the Rio Grande as an international boundary. New walls would make the river a place of division, as opposed to a place of opportunity and connection. Ironically, all of this might be set in motion in a year when we celebrate the 50th anniversary of the Wild and Scenic Rivers Act.

Unfortunately, current federal environmental laws provide little protection. Under federal legislation enacted in 2005, the Secretary of Homeland Security has the authority to waive all federal laws requiring environmental review and protection that might stand in the way of building the border wall, including the National Environmental Policy Act, Clean Water Act and Endangered Species Act. Three environmental waivers have already been issued for border wall construction in California and New Mexico. If plans go forward to build the walls on the Lower Rio Grande, another waiver is likely. Consequently, the federal government can permit the destruction of wetlands, sedimentation of waterways, and harm to imperiled species that would otherwise be protected.

What Must Be Done

In the coming years, President Trump will likely push Congress to fund additional border wall construction. Trump has called the current $1.57 billion appropriation a “down payment” on an eventual $25 billion over ten years.

Though the Santa Ana National Wildlife Refuge has been spared for now, construction of more than 30 miles of new levee-border walls and bollard border walls in some of the last remaining habitat along the Lower Rio Grande corridor will do inestimable damage. The Trump administration is already pushing for funding for hundreds of miles of additional border walls, and given the attractiveness of federal land for wall construction (no land acquisition is necessary), it is highly likely that if more funds are approved, additional border walls will go up in national wildlife refuges and other protected areas along the river. The approved walls are clearly only the first step in the Trump administration’s plans for a border wall along the 1200-mile border section of the Rio Grande, possibly including the iconic Big Bend region.

Congress must refuse to appropriate another penny for this damaging and wasteful project, thus preventing further harm to what little remains of Lower Rio Grande habitat. The American public must urge Congress to reject border walls along the Rio Grande that will harm critical habitat and impede access by people and wildlife that depend upon this great river.

Take Action: www.AmericanRivers.org/RioGrande

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The South Fork of the Salmon 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 multiple open pit gold and antimony mines in the river’s headwaters threatens to pollute this Idaho treasure and all of the downstream communities 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.

The River

The South Fork of the Salmon River’s headwaters are high in the Salmon River Mountains east of Cascade, Idaho, at almost 8,000 feet. The river travels for approximately 86 miles north to where it meets the Salmon River at Mackay Bar. The Shoshone, Nez Perce, Bannock and Paiute tribes have used the river for fishing and hunting for generations.

The South Fork of the Salmon River is designated as critical habitat for endangered chinook salmon and steelhead and threatened bull trout. It is also home to westslope cutthroat trout, another sensitive species. The South Fork Salmon watershed is one of the linchpins in the ongoing work to restore endangered salmon and steelhead to Idaho. The river has been found eligible and suitable by the U.S. Forest Service for federal Wild and Scenic protection.

Extensive logging and road building, as well as heavy metal contamination from mining have taken their toll on river health over the years, but the South Fork Salmon is on the mend, and still boasts clear, free-flowing waters. The river is a magnet for expert whitewater paddlers from around the world. Multiple hot springs offer opportunities for multi-season camping and gathering. The river feeds the Wild and Scenic Salmon River and supports a thriving recreation economy, attracting tens of thousands of people annually to the area for boating, fishing, hiking and other activities in the towns of Riggins and McCall.

The Threat

The demand for Idaho’s precious gems and heavy metals continues to threaten the state’s public lands and rivers. Pollution and scars from past mining remain across the landscape of Idaho’s public lands and rivers. At the headwaters of the South Fork Salmon River is an old open-pit mine site called Stibnite. For several decades, the mine sat dormant while state and federal
agencies worked to reclaim the site. However, Midas Gold wants to reopen two massive open pits in a former mining site and open a third new pit for mining gold and antimony.

Mining began at Stibnite in the late 1800s. Since that time, levels of arsenic, mercury and antimony in the surrounding creeks and rivers have been high. However, according to a recent meta-analysis, detected heavy metals are on the decline. In addition, $13 million has been spent in restoration and reclamation at Stibnite to cap legacy tailings and waste rock piles. Now, decades later, Midas Gold has submitted plans to the U.S. Forest Service to reopen and expand the mining operation.

Midas Gold has channeled considerable resources into a public relations campaign, stating its interest in fixing the Stibnite area’s legacy mining impacts. However, Midas Gold’s Plan of Restoration focuses on expanding the two extant pits and creating a third new pit. A tributary to the South Fork of the Salmon River already flows through one of the open pits and contributes to water contamination in the South Fork of the Salmon River. Expansion of the mine will exacerbate and accelerate the problem.

This project would unearth more arsenic, mercury and antimony that, through natural processes, such as acid mine drainage, and potential accidents and spills, would deposit directly or indirectly into the South Fork of the Salmon River, jeopardizing the protected Main Salmon River and endangered fish downstream. Regardless of intentions, mining operations are inherently toxic for river health, water quality and the environment, and the scale at which this project is proposed would have catastrophic repercussions for the South Fork of the Salmon River and the downstream communities that depend on a healthy Salmon River system. Toxic polluted water will directly affect the fisheries, recreation economy, cultural importance and healing process for South Fork waters.

**WHAT MUST BE DONE**

In July 2017, the Payette National Forest completed a public scoping comment period, as required by the National Environmental Policy Act (NEPA). The U.S. Forest Service received thousands of comments in opposition to the mine, from people who said they would be directly and negatively impacted by its operations, including business owners, campers, hunters, anglers, rafters, kayakers and others.

Since that time, a major coalition of local residents and South Fork enthusiasts has been coalescing to fight the mine. Due to the power of the Mining Law of 1872, stopping the development of this mine will take significant and focused efforts from concerned citizens.

In August 2018, 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.

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**Take Action:** [www.AmericanRivers.org/SalmonRiver](http://www.AmericanRivers.org/SalmonRiver)
THE RIVER

The Mississippi River Gorge runs approximately eight miles from Saint Anthony Falls in downtown Minneapolis to the Minnesota River confluence in Mendota, Minnesota. In the Gorge, steep bluffs extend to the waterline and are mostly undeveloped throughout the Mississippi National River and Recreation Area. Park land and walkways parallel the top of the bluffs, and some areas are crisscrossed with hiking trails. From the water, recreational boaters experience a feeling of remoteness even though they are paddling through a major metropolitan area. However, despite the river’s proximity to the city’s center and its National Park designation, it has the fewest number of recreational boaters on the Upper Mississippi River Navigation System in the St. Paul District.

The Gorge is impounded by two navigation dams that also produce hydropower: Lower Saint Anthony Falls Lock and Dam, and Lock and Dam 1. The dams are impacting a river corridor that supports many state and/or federal species of concern, including black buffalo fish, paddlefish, northern long-eared bat, eleven species of mussels, and Blanding’s turtle.

THE THREAT

We are at risk of missing an opportunity to restore part of an untamed Mississippi River and bring back fish and wildlife that were exiled a century ago. The U.S. Army Corps of Engineers is currently studying Lower Saint Anthony Falls Lock and Dam, and Lock and Dam 1, to determine if it is in the taxpayers’ best interest to continue paying for maintenance and operation of the structures. This study will also determine if other federal, state, local, non-profit and private entities are interested in future ownership of the properties. Upon completion of the study, the Army Corps will submit recommendations to Congress on the fate of the infrastructure. This study provides a rare opportunity to influence the future of the Mississippi River Gorge and residents’ connections with the river.
If the Army Corps decides to keep the dams in place, aquatic habitat in the Gorge could continue to decline for a generation or more. On the Upper Mississippi River, habitat is degrading faster than it can be restored through existing conservation programs, and the river’s dams are a primary cause of declining aquatic habitat. The stretch around Saint Anthony Falls was once one of four big river rapids on the Upper Mississippi. Today, a lone remnant of the St. Louis Chain of Rocks rapids is all that remains. While the Gorge’s bluffs have been mostly protected as public parkland, the dams remain, blocking access to unique habitat for fish and wildlife and stifling natural river processes.

Historically, the Gorge’s narrow, rocky channel would have been used by several aquatic species of concern that seek swifter water and rockier substrates for parts of their lifecycles. Some of these species include: American eel, paddlefish, lake sturgeon and Higgins’ eye pearlymussel. Removing the dams is the only sure way to revive the unique rapids ecosystem in the Mississippi River Gorge.

Artist renditions of a free-flowing river through the Gorge show kayaking opportunities and riverfront activities within the newly restored parkland open to the public. This would be one of the nation’s biggest urban dam removal and river restoration efforts— a chance to restore the river’s natural functions for current and future generations.

The dams in the Mississippi River Gorge were built to support an industry vision dating back to the 1800s. Although the dams currently produce hydropower, their capacity is tens of thousands of kilowatts below the 55,000 kW national average, and their actual production is lesser still. Keeping the dams in place would require millions of dollars annually to safely maintain the infrastructure, some of which is a century old, while the river’s ecosystem continues to degrade.

The time is ripe to take a bold step forward towards a new vision of the Gorge that removes the environmentally damaging features of a 150-year-old industrial plan, restores the natural flow and character of the river, rehabilitates habitat for fish and wildlife, and promotes compatible recreation and business opportunities.

**What Must Be Done**

The U.S. Army Corps of Engineers should recommend that Congress accept the fiscally-responsible solution of dam removal for the structures in the Mississippi River Gorge. Furthermore, state and federal agencies, including the National Parks Service, U.S. Fish and Wildlife Service and Minnesota Department of Natural Resources, need to participate in the Army Corps’ study process to develop a proposal that will realize the restoration of the Mississippi River Gorge.

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Summary
One of Montana’s most storied rivers, the Smith is a favorite destination of paddlers and anglers from across the state and around the country. However, a proposed copper mine in its headwaters threatens to pollute this treasured place with acid mine drainage and heavy metals contamination. The Montana Department of Environmental Quality must consider all of the potentially harmful impacts of this proposed mine on the river’s water quality, trout fishery and the multi-million dollar recreational economy it sustains, and deny a permit for the Black Butte Copper Project.

The River
The Smith River flows for 60 miles through a spectacular limestone canyon between the Little Belt and Big Belt Mountains, emptying into the Missouri River just south of Great Falls. It is nationally renowned among anglers for its thriving brown and rainbow trout fishery, and a few remnant populations of native westslope cutthroat trout persist in its most pristine tributaries. Among the other wildlife that frequent the Smith River corridor are bald and golden eagles, osprey, moose, elk, mule and whitetail deer, black bear, and the occasional grizzly bear.

Due to its lack of big whitewater and good road access at either end, the Smith is one of the few multi-day river trips in Montana that provides floaters of all abilities with opportunities for backcountry solitude, excellent trout fishing, and fantastic camping. Float trips on the Smith are in such high demand that it is Montana’s only permitted river. In 2017, more than 10,000 people applied for just 1,280 float permits on the Smith. Recreational fishing alone (not counting the roughly two-thirds of floaters who do not fish) generates an estimated $10 million annually in revenue for outfitters and surrounding communities.

The Threat
Australia-based Sandfire Resources America (formerly known as Tintina Resources, Inc.) is proposing to develop an underground copper mine underneath and directly adjacent to Sheep Creek, the most productive trout spawning stream in the Smith River drainage. The Black Butte Copper Project would be located approximately 20 miles north of the town of White Sulphur Springs. Locally, Sandfire is touting the project as a modest-sized underground mine with an 11 to 14-year operating life that will bring a few hundred jobs to the area. However, to its investors, Sandfire is promoting the potential for dramatically expanding the project and creating a “50-year mining district.”
Removing copper from the ground poses serious environmental risks. First, the copper lies in a massive sulfide-ore body, which, when exposed to air and water, produces acid mine drainage. There is also the likelihood that the mine will leach toxic heavy metals, such as mercury, lead and arsenic into nearby surface waters. Finally, groundwater would have to be pumped from the mine, which could partially dewater Sheep Creek and its tributaries, thus drying up trout habitat.

Mining has left a toxic legacy in many of Montana’s rivers for over a century. Among the rivers that have borne the brunt of historical mining impacts are the Big Blackfoot of A River Runs Through It fame and the Clark Fork, 120 miles of which is designated as the nation’s largest Superfund site due to contamination by toxic heavy metals. The cost to clean up the Clark Fork River alone is estimated at over $1 billion and is expected to last 20 years. Modern mines have also taken their toll on local streams, and their legacy is found in publically-funded multi-million dollar cleanups that are occurring, or must occur, at mines throughout Montana that have been shuttered in recent years including: Zortman-Landusky near Malta, Beal Mountain near Anaconda, Kendall near Lewistown, Basin Creek south of Helena, and possibly the Troy Mine near the Kootenai River.

**What Must Be Done**

Sandfire originally submitted its mine permit application to the Montana Department of Environmental Quality (DEQ) in December 2015. The agency rejected the application three times due to incomplete information, but it finally signed off on the completeness review in August 2017. That triggered the launch of a full environmental impact statement (EIS), which is expected to take at least one year to complete. The draft EIS likely will be released for public review sometime in 2018. This will be the public’s best opportunity to state their opposition to the environmentally harmful Black Butte Copper Project.

In the meantime, several conservation groups in Montana, including American Rivers, recently launched a campaign to put a responsible mining initiative on the state ballot in November 2018. If the initiative passes, it will allow the state of Montana to more easily deny any proposed mine that requires perpetual water treatment to deal with acid mine drainage and heavy metal contamination. Montanans’ support for this initiative could impact the fate of this project and future harmful mining proposals.

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Take Action: www.AmericanRivers.org/SmithRiver
The Colville River, or Kuukpik in the Iñupiaq language, is one of the United States’ great Arctic waterways. Located on the eastern side of the massive National Petroleum Reserve-Alaska, the Colville has extremely high conservation values and great cultural importance. The Trump administration’s aggressive energy policies and pursuit of rapid oil development threaten this wild, remote place that is unlike any other on the planet. Secretary of Interior Ryan Zinke is pushing for oil and gas exploration throughout the Reserve. The public must stand up for responsible management of the Reserve and oppose further oil and gas development that would have lasting impacts on the Colville River.

**The River**

The Colville River drains approximately one fourth of Alaska’s North Slope to the Beaufort Sea and is one of the wildest rivers in the United States. The headwaters are bounded by the Endicott Mountains in the east and the Delong foothills in the west. Much of the Colville River watershed is located within Alaska’s National Petroleum Reserve. Despite the Reserve’s official name, this landscape is one of the most ecologically intact unprotected areas on the planet. At 22.8 million acres, a size greater than 10 Yellowstone National Parks, the Reserve is the largest federal land unit in the country.

While its name may conjure up images of roads, pipelines and drilling platforms, the Reserve is a largely undisturbed place vital to polar bears, wolves, moose, caribou, grizzly bears and musk oxen. It is also an important watershed for numerous fishes, including Arctic grayling, salmon and whitefish. The river’s tall bluffs provide nesting habitat for a diverse variety of raptors, including peregrine falcons, rough-legged hawks and gyrfalcons. The Colville’s headwater habitat serves as calving grounds for hundreds of thousands of Western Arctic caribou and has extremely high densities of wolverines.

For residents of the region, the river is important for subsistence resources and practices. The river is a source of food and sustenance, and the waterway serves as an important transportation route to traditional use areas and culturally important sites. For visitors, the Colville’s upper sections offer outstanding opportunities for wilderness experiences and recreation. This includes paddling, fishing, hiking, wildlife viewing and photography, among other wildland pursuits.

The federal Bureau of Land Management is required to manage the Reserve for these conservation and subsistence values. The Colville River has been found eligible for inclusion in the National Wild and Scenic Rivers System.
The Threat

The National Petroleum Reserve has five Special Areas, including the Colville River Special Area, that were designated for their high conservation and subsistence values. In total, these tracts cover approximately 11 million acres of the Reserve and protect a variety of habitat types and species. These areas are unique within our nation’s network of public lands. Unfortunately, oil development and the Trump administration’s energy policies greatly threaten the places, wildlife and people that make this region so ecologically and culturally important.

No permanent protections are in place for the Colville River. In 2013, the first ever comprehensive land management plan for the Reserve was completed. This plan reaffirmed the Colville River Special Area as an area of ecological and cultural importance and established a series of best management practices to ensure its stewardship. In June 2017, however, Secretary of Interior Ryan Zinke issued an order calling for a revision of the existing land management plan to maximize oil development within the region.

Oil development is occurring rapidly within the Colville River delta and on the landscape surrounding the river’s mainstem. To date, a very significant portion of federal and state lands along the lower Colville River have been leased for oil development.

To facilitate development, the administration plans to deconstruct the Colville River Special Area and the associated management plan and best management practices developed to protect this waterway. These rollbacks have the potential to compromise this river’s conservation values while subjecting this vulnerable Arctic waterway to substantial degradation.

What Must Be Done

There is much work to be done to ensure that the Colville River watershed is protected from oil development and well managed in a rapidly warming Arctic. The Bureau of Land Management must maintain and enhance Administrative protections that were established in 2013 to safeguard this river’s conservation and subsistence values.

2018 is the 50th Anniversary of the Wild and Scenic Rivers Act, and the Colville exemplifies all the important work that has yet to be done in protecting waterways of national significance. Permanent protections should be sought for the Colville River Special Area and for the river’s sensitive riparian corridor. The public must express support for the preservation of our wild public lands, in order for special places such as the Colville River Special Area to be conserved for the benefit of fish, wildlife, local communities and future generations.

Take Action: www.AmericanRivers.org/Colville

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#9 Middle Fork of the Vermilion River

**State:** Illinois

**Threat:** Coal ash

**At Risk:** Clean water in state’s only Wild and Scenic River

## Summary

The beautiful and ecologically-vibrant Middle Fork of the Vermilion, Illinois’ only Wild and Scenic River, is the centerpiece of a major recreational area and home to numerous unique and endangered species. It is also home to over three million cubic yards of toxic coal ash from the Vermilion Power Station. The owner of the station, Dynegy, wants to permanently leave the coal ash in three unlined pits along the banks of the river. Coal ash contaminants are seeping into the Middle Fork and the natural forces of the meandering river are rapidly eroding the riverbank next to the ash pits. The Illinois Environmental Protection Agency must require Dynegy to clean up its site to avoid catastrophe and an expensive cleanup that would burden taxpayers for years.

## The River

The Middle Fork Vermilion’s waters are clear, fast-running, and punctuated with boulders and riffles that create habitat for gamefish and attract paddlers. The river is flanked by nearly 10,000 acres of public land and boasts tall bluffs, forested bottomlands, wildflowers and abundant wildlife. The bluebreast darter and silvery salamander are among the 24 state-threatened or endangered species that rely on the ecological health of the river and adjacent open space. The Collins Archaeological District, listed on the National Register of Historic Places, is located along the east bank of the river and includes 1000-year-old burial mounds.

The Middle Fork flows through the heart of Kickapoo State Park, which attracts more than one million visitors each year. Angling, photography and wildlife viewing are popular activities, and visitors often swim in or tube down the river on hot summer days. A local guide company sends more than 10,000 paddlers down the river in warm-weather months on a 13-mile river trail that brings them directly past the coal ash pits.

Downstream, the Middle Fork merges with the Salt Fork to form the Vermilion River, which flows through Danville, a city of 32,000. Danville is currently redeveloping its riverfront and intends to link this revitalized open space to the city’s adjacent downtown as a way of attracting tourists and boosting their local economy.

## The Threat

In 2011, Dynegy closed the Vermilion Power Station—a former coal-fired power plant on the only private inholding along 17 miles of Wild and Scenic river. The plant sits on the bluff above the Middle Fork of the Vermilion River, and the 3.3 million cubic yards of coal ash produced over its 55-year operating life were dumped into three massive pits in the floodplain below. Inside the unlined coal ash pits, the groundwater saturates the coal ash, then seeps continuously into the Middle Fork. Contaminants stain the riverbank and...
create stagnant orange pools when the river is at low flow. Coal ash contaminants can include arsenic, barium, boron, chromium, iron, lead, manganese, molybdenum, nickel and sulfate, which are known to cause birth defects, cancer and neurological damage in humans and can harm and kill wildlife, especially fish.

The coal ash pits were built irresponsibly close to the river. The erosion rate of the bank next to these pits suggests that the Middle Fork will compromise the impoundments in the next 8 to 18 years, but a record flood could cause a breach at any time. Previous attempts at bank reinforcement to stop erosion have not been sustainable and can be found in tatters on the bank.

The Illinois Environmental Protection Agency (EPA) issued a Notice of Groundwater Violation in 2012, but the violation has not been addressed. Dynegy is now seeking approval to install new bank stabilization measures, then cap and leave the coal ash pits. Simply capping an unlined ash pit will not stop the groundwater contamination, nor can the armor prevent the eventual failure from the erosive force of the river. In fact, as climate change brings higher and more frequent peak flood flows, the chance of failure is only increasing.

This year, 2018, marks the 50th anniversary of the Wild and Scenic Rivers Act and is a time to redouble our national commitment to protecting these natural treasures. Dynegy’s plan to cap the coal ash and leave it in place will not eliminate the long-term threat to the river. Future generations will inherit a toxic liability and taxpayers could be left with the bill for cleanup.

What Must Be Done

Dynegy hopes to complete its studies, prepare a final report, and have a final decision on its proposal from the Illinois EPA this fall. Illinois EPA must require Dynegy to permanently halt the ongoing pollution and ensure that the ash pits do not pose a continuing threat to the Middle Fork. Dynegy must either remove the coal ash from the floodplain and store it in a safe and properly-designed disposal facility away from the river, or demonstrate that different measures will be equally as protective.

Unfortunately, there are no formal statutes that require a hearing on Dynegy’s proposal, despite the fact that five county-level organizations have passed resolutions calling for the responsible closure of these ponds. Public participation will only occur if the Illinois EPA voluntarily holds a hearing—a request that has, to date, been ignored. That is why river advocates are planning to hold their own “People’s Hearing” with expert testimony, witnesses of coal ash spills in North Carolina and Tennessee, and opportunities for the public to ask questions and raise concerns. Public comments will be delivered to the Illinois EPA and Governor’s office to place pressure on officials to protect the crown jewel of Vermilion County by finding a permanent solution to protect this National Scenic River.

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Take Action: www.AmericanRivers.org/Vermilion
The Kinnickinnic River (the “Kinni”) is an Outstanding Resource Water and one of the best trout streams in the Midwest. Two dams disrupt a full mile of the Kinni in the heart of River Falls, Wisconsin, destroying habitat and warming the river by more than 4.5 degrees Fahrenheit. Removing these dams would revitalize and restore the Lower Kinni’s cold water habitat, resurrect an entire mile of this world class stream, and fully restore the historic Junction Falls waterfall in the heart of the city. The City of River Falls must remove these dams before the river deteriorates under another 20 or more years of hydropower operation.

**The River**

The Kinnickinnic River is the last major tributary to the Wild and Scenic St. Croix River before its confluence with the Mississippi River. The Lower Kinni drops over 70 feet through a deep gorge, giving visitors a unique wild experience in the Minneapolis-St Paul metro area. The Kinni is an extremely popular kayaking and trout fishing destination, drawing people from across Wisconsin and the Midwest to recreate on the free-flowing sections of the river.

This river anchors the local community’s identity as the City of River Falls. The Kinni’s entire watershed lies within the Twin Cities metro area, which has a population of over 3.5 million in the fastest growing county in Wisconsin. The river is also home to three endangered mussel species: Higgins eye pearlymussel, spectaclecase mussel and snuffbox mussel.

**The Threat**

Two dams disrupt a full mile of the Kinnickinnic in the heart of River Falls, which in the absence of the dams would feature a beautiful drop of cascades and waterfalls. The Upper Dam destroys the falls, diverting all of the water from the Kinni’s banks where the dry ledges of the waterfall sit today. The two dams on the Kinni support an outdated hydroelectric facility that causes fluctuations in flow, increases in water temperature, and directly impacts trout, macroinvertebrates, mussels and other wildlife. The hydroelectric facility currently produces less than 2 percent (0.375 MW) of the electricity for the City of River Falls with a population of 15,000. The power could easily be replaced with conservation and efficiency measures. These dams do not provide recreation opportunities, flood control, irrigation, water storage, water supply, drinking water, navigation, quality fish habitat or aesthetic appeal. Further, the dams compound the impacts of increasing development and agricultural ground water depletion throughout the watershed.

Dam operations cause significant flow fluctuations in the Lower Kinni that stress vital reproductive sites for macroinvertebrates and trout. There is also a well-documented annual warming trend of the Kinni recorded since 1992, and the Lower Kinni is 4.5 degrees Fahrenheit warmer downstream...
of the dams than above the dams—a result of thermal pollution from the impoundments. The combination of broader climate trends in warming and warming caused directly by the dams presents an alarming threat to the sustainable future of the river.

The future of the Kinni is uncertain because the City of River Falls is considering relicensing this hydroelectric facility with the Federal Energy Regulatory Commission (FERC) for continued operation of the Upper Dam through the year 2040. The City Council passed a non-binding resolution on February 27, 2018, establishing a policy framework that acknowledges the fact that both dams should be removed from the Kinni. However, their current plan is to remove the Lower Dam in 2023 and postpone the removal of the Upper Dam until a target date of 2040. This more than 20-year delay in the complete restoration of the Kinnickinnic River is unacceptable.

**What Must Be Done**

The Kinnickinnic River dams must be removed in order to achieve Wisconsin Department of Natural Resources’ (DNR) goal of providing optimal temperatures for cold water trout habitat in the Lower Kinni. In 1998, Wisconsin DNR’s Kinnickinnic River Priority Watershed Report concluded that, “In order to achieve this long-term goal it would likely be necessary to alter, modify or remove the Kinnickinnic River impoundments in River Falls.” If the dam relicensing moves forward, it will be more than 40 years until potential restoration from the time that this goal was issued.

The removal of these dams will restore a full mile of the Kinnickinnic’s most scenic terrain, and is key to the preservation of the cold-water resource that is the Lower Kinni. This project would restore urban trout stream habitat, provide whitewater and recreational kayaking opportunities, reveal the majestic Junction Falls Waterfall, and help pave the way for future river restoration projects.

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