

America's Most Endangered Rivers®

2021



American Rivers
RIVERS CONNECT US®



2021

AMERICA'S MOST ENDANGERED RIVERS®

“Rivers are among the most degraded ecosystems on the planet, and threats to rivers are threats to human health, safety and survival. A future of clean water and healthy rivers requires environmental justice.”

— Tom Kiernan, President
and CEO of American Rivers

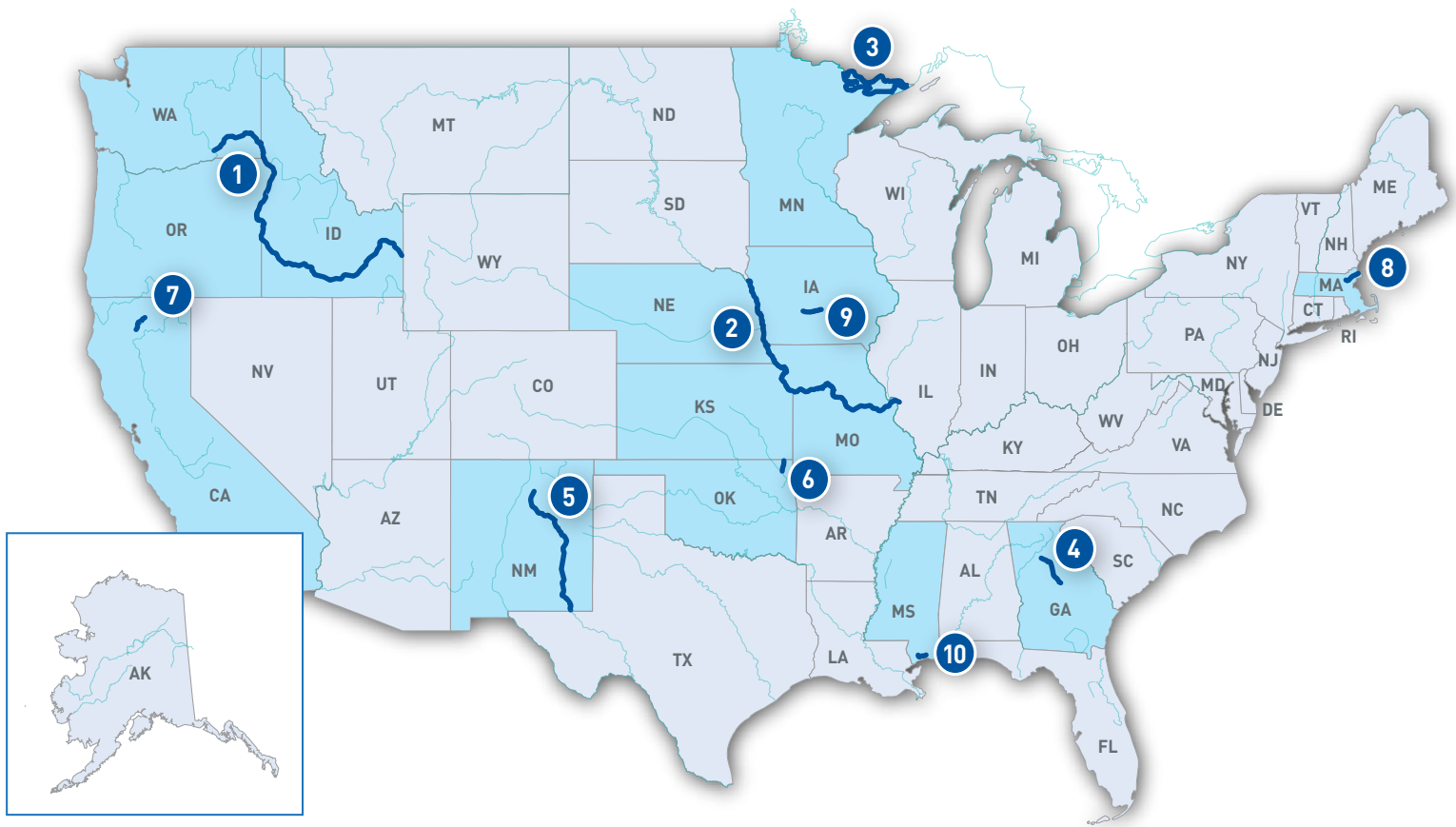
IPSWICH RIVER, MASSACHUSETTS
PHOTO: IPSWICH RIVER WATERSHED ASSOCIATION

Dams, flooding, pollution and development threaten so much more than beautiful places. These issues strike at the heart of people's health, livelihoods, families and identities. America's Most Endangered Rivers® of 2021 underscores the impacts of environmental injustice on rivers nationwide and amplifies frontline efforts to protect rivers and clean water.

Each of the ten rivers on the list is at a tipping point, facing an urgent decision in the coming months. Threats to these rivers are threats to human health, safety and cultural survival. This is particularly true for Indigenous, Black and Latinx people, who are disproportionately impacted by climate change and environmental degradation — but who are often left out of crucial decision-making spaces. These same communities are spearheading efforts to protect their rivers and shore up their rights. We honor their leadership.

We can achieve a future of clean water and healthy rivers everywhere, for everyone — if we stand together for environmental justice now.

**Harm to rivers perpetuates environmental
injustice. We must stand up **NOW**, together.**



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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.

ABOUT AMERICAN RIVERS

American Rivers believes a future of clean water and healthy rivers everywhere, for everyone is essential. Since 1973, we have protected wild rivers, restored damaged rivers and conserved clean water for people and nature. With headquarters in Washington, D.C. and 300,000 supporters, members and volunteers across the country, we are the most trusted and influential river conservation organization in the United States, delivering solutions for a better future.

FOR MORE INFORMATION: AmericanRivers.org/EndangeredRivers2021

#1

Snake River

THREAT: Four federal dams, climate change

STATES:

Idaho, Washington, Oregon

AT RISK:

Salmon runs, native rights and culture, prosperity for the Northwest

SUMMARY

Salmon are the spiritual and cultural icon of the Pacific Northwest and a critical component of the Northwest's economy. Unfortunately, these magnificent fish are teetering on the brink of extinction. The loss of salmon, a keystone species, has devastated ecosystems, native cultures, and fishing communities across the region.

Scientists say that the Snake River, the largest tributary and historically the most prolific producer of salmon in the Columbia River Basin, holds the largest potential for restoring salmon to healthy, harvestable numbers. To accomplish this, removing four dams on the lower Snake River in eastern Washington is essential along with increasing flow over downstream dams. A comprehensive salmon recovery plan is vital to honoring treaties and responsibilities to Northwest tribes. This comprehensive plan must also include job-creating investments in clean energy and agriculture, to secure a future of abundance and prosperity in the Pacific Northwest. The region's congressional delegation must ensure these urgently needed solutions are a key part of President Biden's national infrastructure legislation.

PHOTO: CARL ZOCH

THE RIVER

The Snake River is the largest tributary of the Columbia River, flowing more than 1,000 miles from its headwaters in Wyoming to the confluence with the Columbia at the Tri-Cities in Washington. The Snake Basin is home to 50 percent of the current cold water habitat for Pacific salmon in all of the lower 48, and once produced 40 percent of the prized Chinook salmon and over half steelhead in the Columbia River Basin. The Snake River and its tributaries including the Clearwater, Salmon, Grande Ronde, Imnaha and Tucannon rivers once produced 2-6 million salmon and steelhead every year. A keystone species, these fish support the entire food web, including at least 135 species from eagles to salamanders to Southern Resident killer whales.

Salmon are at the heart of the cultures of Northwest Native American tribes, integral to religion, identity and physical sustenance. Historically, the region's native tribes were wealthy people thanks in large part to a trade economy based on abundant salmon. Today, the annual salmon return and the First Salmon ceremonies continue to ensure the renewal of all life. Tribes have led regional salmon recovery efforts for decades.

Abundant returns of salmon are critical to local economies, driving lucrative recreation and tourism businesses, commercial fishing and restaurants. Recreational fishing in the Pacific Northwest generates more than \$5.3 billion annually in economic benefits and supports more than 36,000 jobs. But in recent years, businesses have been devastated by poor salmon returns. The State of Idaho closed the Clearwater River and parts of the Snake River to steelhead fishing in fall 2019 because of the low numbers of fish. It is estimated that salmon and steelhead fishing brings in about \$8.61 million a month to this part of Idaho, and these communities took a significant economic hit with the fishing closure.

THE THREAT

From 1955 to 1975, the U.S. Army Corps of Engineers built four dams on the lower Snake River in southeast Washington to enable barge transportation to Lewiston, Idaho and to produce hydropower. The dams -- Ice Harbor, Lower Monumental, Little Goose and Lower Granite -- have provided significant benefits to the region, but they have come at a staggering cost.



#1

Snake River

Continued

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Wild salmon returns plummeted by over 90 percent following construction of these four federal dams on lower the Snake River. In recent years, fewer than 10,000 wild Chinook salmon have returned to spawn. Today, 13 Columbia-Snake salmon and steelhead populations are protected under the Endangered Species Act. Scientists believe that all four salmon and steelhead populations in the Snake River Basin will go extinct without urgent action.

The four lower Snake dams turned 140 miles of cool, flowing river into a series of stagnant reservoirs. The dams disrupt and slow natural river flows, create lethally high reservoir temperatures which allow non-native predators to thrive, impede migration of salmon to and from the Pacific Ocean, and kill young salmon attempting to pass through the dams. The threat posed by the dams is exacerbated by climate change, which is warming up the Snake River and making conditions even more dire for salmon. In 2015, for example, 96 percent of the Snake River sockeye died trying to navigate through lethally warm waters to cooler tributaries and spawning grounds upstream. While the dams are heating up the major river thoroughfares for salmon, scientists estimate that the essential habitat above the dams will continue to provide clean, cold water. Scientists estimate that by 2080 the Snake River Basin will provide two-thirds of the coldest, most climate resilient stream habitats for salmon and steelhead on the West Coast.

The dams on the lower Snake River are an ongoing source of injustice and the loss of salmon is violating Native American rights ensured by treaty with the U.S. government. The dams and reservoirs submerged or impacted between 600 and 700 important tribal cultural sites along the lower Snake and its tributaries, thousands of acres of treaty-based hunting and gathering places, and countless graves of loved ones and sacred and ceremonial places. According to the report, "Tribal Circumstances and Impacts of the Lower Snake River Project on the Nez Perce, Yakama, Umatilla, Warm Springs and Shoshone Bannock Tribes," loss of salmon threatens culture, community connection and well-being and is a major factor in health and income disparities.

WHAT CAN BE DONE

The Pacific Northwest has a once-in-a-lifetime opportunity to honor treaties and commitments with Northwest Native American tribes and revitalize the region's economy through restoring abundant numbers of Snake River basin salmon and invigorating clean energy, agriculture and recreational opportunities.

In February 2021, Congressman Mike Simpson (R-ID) proposed a \$33.5 billion framework that includes critical river restoration measures regionwide, including but not limited to the restoration of the lower Snake River by removal of the four dams. It would be the biggest river and salmon restoration effort in history. His proposal also includes investments to replace the energy produced at the dams and increase the energy grid's reliability, and upgrade transportation and irrigation services that the lower Snake River dams currently provide, and support community needs.

The Pacific Northwest has a track record of crafting innovative, bipartisan solutions to challenging water and river issues. The Northwest congressional delegation must bring together the governors, tribes and stakeholders to build upon Congressman Simpson's framework, ensuring it is as strong as possible and meets the region's urgent needs. A well-crafted, collaboratively developed, comprehensive solution would benefit not only the Northwest, but also the nation as a whole by restoring salmon runs, bolstering clean energy and strengthening the economy of one of the most dynamic regions in the country. Congressional leaders from both major political parties should introduce legislation and ensure it advances as part of President Biden's national infrastructure legislation.



#2

Lower Missouri River

THREAT: Climate change, poor flood management

STATES:

Iowa, Kansas, Missouri, Nebraska

AT RISK:

Public safety, fish and wildlife

SUMMARY

The lower Missouri River is a critical artery of the Great Plains and plays a vital role in our nation's economy. Increasingly frequent and severe flooding, exacerbated by climate change, puts the river's communities and residents at risk. Floods have overtopped and breached levees in hundreds of locations in recent years. To protect public safety and taxpayers, states and local governments need to implement multi-benefit projects that reduce flood risk and restore lost habitat in coordination with impacted stakeholders.

PHOTO: BRANDON KNOBLAUCH

THE RIVER

The Missouri is America's longest river, flowing more than 2,300 miles, with a watershed encompassing one-sixth of the United States. The river is considered the "Center of Life" for the Great Plains and the "Gateway to the West." Historically, the lower Missouri was home to the Osage and Missouri tribes, remnants of which survive today in the Otoe-Missouria Tribe.

The Missouri is also one of the nation's most altered rivers. Once a wide, meandering, dynamic river that spread out over its ecologically rich floodplains, today's Missouri River has been constricted to meet conflicting water resource demands, including flood control, navigation, irrigation, hydropower, water supply, recreation and fish and wildlife habitat. Six massive dams in the upper basin and a navigation channel and extensive levee system in the lower basin dramatically impact the health of the river. The lower Missouri River from Sioux City to St. Louis is artificially confined by hundreds of miles of levees that have destroyed the dynamic features of the river, including side channels, chutes, shallow and slack water areas, sandbars and islands. This loss of diverse habitat resulted in the federal listings of multiple species, including piping plover and pallid sturgeon, and the ongoing federal endangered species review of sicklefin chub and sturgeon chub.

THE THREAT

The lower Missouri River needs much more room to safely accommodate floods and high flows. Historically, floods spread across wide floodplains (the land adjacent to the river). While dams and levees have been constructed to control flooding, even ardent supporters of this antiquated flood control system have come to realize that the Missouri River needs more room to safely accommodate flood waters. The federal legislation authorizing the levee system stipulated that the river should not be constricted narrower than 3,000 feet. Despite this legal requirement, in some areas the river has been pinched to a width of 600 feet. Consequently, major floods and high flows regularly overtop and breach the levee system, particularly at these "pinch points." During recent flood events, more than 850 miles of levees in Iowa, Kansas, Missouri and Nebraska were damaged. The U.S. Army Corps of Engineers (Corps) reports that repair costs exceeded \$2 billion. Flood repairs are not a



#2

Lower Missouri River

Continued

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PHOTO: RACHEL BARTELS

one-time expense. Levees overtop or breach in almost every flood and often in the same locations. As climate change intensifies, major flooding is becoming more frequent and severe in the Midwest. A 2012 Bureau of Reclamation report on climate change in the Missouri River Basin predicted a 10 percent increase in mean annual flow for the years 2040-2069 in the lower river basin.

Management of the Missouri River must change to allow enough room to safely convey this increasing amount of flood water. For decades, federal policy and state efforts have favored maintaining the status quo. Corps' policies continue to deter levee setbacks and state and community officials continue to rebuild existing levees to maintain and even intensify

additional floodplain development — putting more people and investment at risk. These strategies often disproportionately impact low-income and communities of color.

If changes are not made in how the Missouri River is managed, areas along the river will continue to experience flood damage and taxpayer dollars will be used to repeatedly rebuild the same levees. In 2019, the lower Missouri River states and the Corps began a Planning Assistance to States study intended to assess areas of recurring flood damage and determine options that improve protection. This process has the potential to identify projects that will give the river room to hold floodwaters. In 2020, Congress authorized the Corps to continue this lower Missouri River Flood Study, including the consideration of nature-based solutions like levee setbacks. These efforts should be integrated with the Missouri River Recovery Program, which restores the river's natural features and critical habitat for endangered species.

WHAT MUST BE DONE

In order to address the issues associated with outdated floodplain management in the lower Missouri River basin, states and local governments located in areas where catastrophic flooding has occurred must commit to non-structural and nature-based solutions, including setting back levees to give the river room, preventing development in the Missouri River floodplain that contributes to rising flood waters and increased flood risk, and funding relocation and flood mitigation projects for communities already located in flood-prone areas. Funding the Missouri River Recovery Program will help implement these necessary multi-benefit projects. States and the Corps should also fund and continue the lower Missouri Planning Assistance to States study to identify repeatedly damaged levees and frequently flooded areas and subsequently plan multi-benefit projects, including levee setbacks, that will make room to accommodate major floods, reduce flood risk and restore habitat to leverage available funding.

Flood risk planning along the lower Missouri River must be an integrated process that allows all stakeholders, including impacted communities and conservation groups, a seat at the table. A diverse stakeholder group will ensure development of a flood-risk management plan with multi-benefit projects that safely accommodate flood water and improve flood risk management for lower Missouri River communities. This process should include robust transparency and public engagement at every step of the process and allow public comments on any specific projects that result from the lower Missouri River PAS process.

#3

Boundary Waters

THREAT: Sulfide-ore copper mining

STATES:

Minnesota

AT RISK:

Clean water, recreation economy, wildlife habitat

SUMMARY

The Boundary Waters Canoe Area Wilderness encompasses 1,200 miles of rivers and streams and more than 1,000 lakes. As the most visited wilderness area in America, it is a major driver of the local economy. However, the Boundary Waters and its clean water are threatened by proposed sulfide-ore copper mining on public lands in the headwaters just outside of the wilderness area's boundary. Mining and associated acid mine drainage, loss of habitat, forest fragmentation, invasive species, and air, noise and light pollution would devastate this fragile ecosystem and the wilderness area's unique values. The Biden administration must act to protect the Boundary Waters from mining by issuing a federal mineral leasing ban, and Congress must pass legislation to forever protect this treasured place.



PHOTO: SAVE THE BOUNDARY WATERS

THE RIVER

Much of Minnesota's northeastern "Arrowhead" region, including the Boundary Waters, is within the 1854 Ceded Territory, where Anishinaabe people (including the Ojibwe or Chippewa) retain hunting, fishing and gathering rights. Basswood Lake, located in the Boundary Waters and Quetico Provincial Park along the border with Canada, is an ancestral homeland of the Lac La Croix First Nation Community and a sacred place for Anishinaabeg. The Kawishiwi (which in the Ojibwe language means, "river of many beavers' houses") River is an important canoe route through the heart of the Boundary Waters Canoe Area Wilderness 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 Provincial Park and Minnesota's Voyageurs National Park.

The Boundary Waters draws more than 155,000 overnight wilderness visitors annually, and helps power the recreation economy that supports 17,000 jobs in the region and generates more than \$913 million in sales annually. This area provides world-class recreational experiences for all residents and visitors. People, fish and wildlife — including walleye, northern pike, lake trout, smallmouth bass, wolves, lynx, moose, bear, loons, river otters, 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 on the banks of the South Kawishiwi River and Birch Lake, through which the river flows. There is strong scientific evidence showing that sulfide-ore copper mining in the watershed would harm the river and the Wilderness. Hydrologists say that pollution from mining in this area is inevitable. Hardrock mining is the most toxic industry in America, according to the Environmental Protection Agency. Sulfide-ore copper mine contamination harms water, aquatic and terrestrial species, forests and soils, and poses a serious risk to human health.



#3

Boundary Waters

Continued

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PHOTO: NATE PTACEK

Climate change, which is expected to bring more droughts, alternating with more extreme rains, would further exacerbate the negative impacts of a mining operation. Drought-induced low water flows would concentrate pollutants. Subsequent heavy rains could cause floods and the overflow of pollutants into groundwater and streams. Stress on aquatic ecosystems caused by climate change will add to the degradation caused by the impacts of mining. Conversely, an ecologically healthy Boundary Waters is part of the solution for the climate crisis. Its boreal forests provide for carbon sequestration and play a key role in adaption and resilience of species.

Studies show that sulfide-ore copper mining along lakes and streams that flow into the Boundary Waters would put at risk not only premier fishing, hunting and other recreation on Superior National Forest lands, but also the sustainable economy of northeastern Minnesota. An independent peer-reviewed economic study by Harvard Professor James Stock demonstrated that a ban on copper mining in the Boundary Waters watershed would result in more jobs and more income for the region.

A broad coalition of local and national conservation organizations, businesses, hunting and fishing groups, youth and other allies are working together to achieve permanent protection for this ecologically important, cherished landscape from the threat posed by sulfide-ore copper mining. Bands of the Minnesota Chippewa Tribe and one Canadian First Nation have also asked the U.S. government to ban sulfide-ore copper mining on federal public lands in the area, which is part of 1854 Ceded Territory.

WHAT MUST BE DONE

The Biden administration should reverse the indefensible decisions made during the Trump administration that weakened protection for the Boundary Waters and fast-tracked copper mining. The U.S. Department of Interior should initiate a 20-year federal ban on mining on federal public lands in the watershed, starting with a two-year pause and robust study on the risks of mining in this unique and treasured place.

Further, Congress must pass and President Biden must sign Representative Betty McCollum's bill to permanently ban hardrock copper mining on Superior National Forest lands in the Boundary Waters watershed. This bill was passed by the U.S. House Natural Resources Committee last September and is expected to be reintroduced in the 117th Congress.

#4

South River

THREAT: Sewage pollution

STATES:

Georgia

AT RISK:

Public health

SUMMARY

Originating from creeks and streams in Atlanta, the South River has been plagued by sewage pollution for decades. This pollution has choked the river and impacted the health and quality of life in nearby communities, perpetuating longstanding environmental injustice. DeKalb County missed the 2020 deadline set by the Environmental Protection Agency to fix the sewer system. Now, the Department of Justice and Environmental Protection Agency must examine the circumstances surrounding this failure and the years of lax regulatory enforcement. It is critical for the health of South River communities and the river that they take immediate action to ensure that the river and all impacted communities are afforded all clean water protections required by law.

PHOTO: MARGARET SPALDING

THE RIVER

Flowing through the ancestral lands of the Muscogee (Creek) Nation from just north of Hartsfield Jackson International Airport through Arabia Mountain National Heritage Area (AMNHA) into Jackson Lake, the South River has struggled for decades with extreme environmental impacts concentrated in the two most densely populated areas in metropolitan Atlanta— the City of Atlanta and DeKalb County. Neither has been particularly kind to the river that meanders through primarily moderate to low-income Black neighborhoods. Lax regulation and management have contributed mightily to the river's pollution problems from sanitary and combined sewage and stormwater runoff. Currently, both municipalities are under federal consent decrees for Clean Water Act (CWA) violations.

Outside of the city, the river's troubles are masked by the beauty of its surrounding landscape. Massive granite outcroppings, cascading waters and a white sand beach frame the Panola Shoals Trailhead — the recreational gateway to the South River in DeKalb County. Extending 40 miles to the Southeast along this navigable stretch, the river's ecosystem and wildlife habitat are beautiful and intact. Seven thousand acres of protected greenspace (the combined acreage of AMNHA, Panola Mountain State Park and Monastery of the Holy Spirit – a Trappist monks' sanctuary) make the river an idyllic place for viewing a wide variety of birds and an abundance of other wildlife.

Over the last decade, the South River has become an important source of water recreation where none previously existed. Only 20 minutes from downtown Atlanta, the river attracts canoeists and kayakers from throughout the metro area. A new 6.5-mile section of water trail will soon be officially designated just downstream in Rockdale County. Hosting hundreds of thousands of visitors each year, the AMNHA is a natural locale for expanding the organized paddle events offered by South River Watershed Alliance that take place throughout late spring and summer, leading the community to share in the state's \$11.3 billion paddling sports industry.

#4

South River

Continued

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PHOTO: MELANIE COURT

THE THREAT

DeKalb County owns and operates a sewer system designed to collect and transmit wastewater to treatment facilities before being discharged into the South River in compliance with National Pollutant Discharge Elimination System (NPDES) permit effluent limitations. The county's failure to maintain and upgrade its system has caused sewage to repeatedly overflow from pipes and spill into waterways before reaching treatment facilities.

In 2010, the Environmental Protection Agency, Georgia Environmental Protection Division and DeKalb County entered into a consent decree aimed at bringing the county into compliance with the Clean Water Act and eliminating sewage spills. The EPA is responsible for ensuring that the negotiated objectives of the consent decree are achieved. However, while EPA's consent decree imposed a deadline to repair the county's sewer system in "priority areas" (June 2020 — already missed), they did not impose a deadline to address issues in "non-priority areas" (a de-facto statement that compliance with the Clean Water Act is not necessary in these areas). These non-priority areas make up more than two-thirds of

the sewer system with over 1,800 miles of sewer pipes, including the entire navigable length of the South River in DeKalb County and the largest concentration of Black residents in the state. Not surprisingly, most of the sewage spilled from the sewer system is in non-priority areas.

The EPA has negotiated an extension of the consent decree deadline or modified consent decree (MCD) with DeKalb County, given that they have not even fully addressed the sewage problem in "priority areas". The MCD is now focusing on 103 priority work projects (i.e., repeat spill locations) — 48 in Priority Areas and 55 in Non-Priority Areas. Theoretically, all projects are to be completed within the next seven years, with most work completed by 2025. Even if all 55 work projects slated for non-priority areas are completed within the seven-year timeframe, which is very unlikely, the requirement to eliminate all spills by an agreed upon deadline as required by the Clean Water Act remains far beyond reach.

WHAT MUST BE DONE

It is the responsibility of the EPA to effectively negotiate and enforce consent actions that achieve the goals of the Clean Water Act for all, regardless of race, socio-economic status or geography. Compliance and enforcement are paramount. Neither the consent decree nor MCD include a deadline to repair the sewer system in "non-priority areas," thus there is no requirement for compliance with the Clean Water Act for these impacted communities.

DeKalb County must commit to making the necessary investments to address wastewater management issues fully and eliminate sanitary sewage spills for all impacted communities in a timely manner. The EPA and the Department of Justice (DOJ) must determine what went wrong with the negotiation and implementation of the consent decree and take all necessary actions to restore Clean Water Act protections to the South River and the entire impacted community. Further, the DOJ should retrospectively review the 2010 consent decree to determine the foundation and justification for the two-thirds exclusion and identify and implement actions to remedy this miscarriage of environmental justice — including revising the MCD to ensure compliance with the Clean Water Act.

Finally, the EPA should exercise its regulatory authority that prohibits intentional discrimination and unintended discriminatory effects, and actively explore opportunities through the National Environment Policy Act and the Civil Rights Act, to further bolster actions to achieve compliance with the Clean Water Act for South River impacted communities. It is the law, and equal protection is a right that must be upheld for both water and communities.

#5

Pecos River

THREAT: Hardrock mining

STATES:
New Mexico

AT RISK:

Clean water, cultural values, habitat degradation, wildlife, recreation economy

SUMMARY

The Pecos River and its waters are considered sacred to the Pecos, Jemez and Tesuque Pueblo peoples. With its vibrant, millennia-old ties to traditional Indigenous and historic Spanish communities, the river's remarkable cultural history is integrally linked to New Mexico's identity and future. A proposed hard rock mine could adversely impact over 5,000 acres of critical subalpine wildlife habitat and the river's life-giving clean water. Governor Michelle Lujan Grisham has publicly opposed the mine. The New Mexico Mining and Minerals Division must deny the exploratory mining application, the U.S. Forest Service must adequately assess the environmental impacts of the mining proposal, and Congress must pass legislation to permanently protect this special place for communities today and for generations to come.

PHOTO: AMIGOS BRAVOS / JIM O'DONNELL

THE RIVER

From its headwaters in northern New Mexico, the Pecos River flows for 926 miles to Texas's Rio Grande. The entire watershed is replete with sacred sites still visited by Pecos, Jemez and Tesuque Pueblo peoples. The name "Pecos" is a Spanish derivative of the Indigenous Towa term for the Pecos Pueblo, [*p'æyok'ona*]. The Pecos was also historically referred to as the Río Natagés by the Mescalero people of southern New Mexico. Pecos Pueblo was one of the largest trade centers in the West in the 16th and 17th centuries. A landmark of New Mexico culture and tradition, today the Pecos watershed is of tremendous value to surrounding towns, tribal groups, Spanish acequia, land grant communities, ranchers, farmers, anglers, hunters and other outdoor enthusiasts.

The Pecos River encompasses a remarkable mosaic of biodiversity. Its headwaters, which begin at an elevation of over 12,000 feet, are a stronghold for New Mexico's imperiled native Rio Grande cutthroat trout. The alpine portion of the upper watershed is home to the nation's southernmost populations of ptarmigan. The lower conifer forests are a habitat for both the critically endangered Mexican spotted owl and northern goshawk and home to elk, deer, black bear, mountain lion and turkey. One of the tributaries potentially impacted by the proposed exploration supports struggling patches of the critically endangered Holy Ghost ipomopsis — a lovely flowering plant that exists nowhere else in the world and is sacred to the Jemez and Pecos peoples who use it in special spiritual ceremonies. Recognizing the many outstanding values of the Pecos, Congress added more than 40 miles of the river to the National Wild and Scenic Rivers System in 1990.

The Village of Pecos and other small communities within the watershed are home to low-income Hispanic populations and other historically marginalized groups. These communities rely heavily on spending from the influx of tourists in the summer and fall coming to enjoy the Wild and Scenic Pecos River for fishing, camping, hunting and hiking. For centuries, the Pecos River has been the main source of irrigation water for traditional agricultural practices which continue to sustain many communities today.

#5

Pecos River

Continued

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PHOTO: CAVU

THE THREAT

Comexico LLC, a Colorado subsidiary of Australian mining company New World Resources Ltd., has acquired 20 federal mining claims for gold, copper and zinc in the Jones Hill area southwest of Tererro, New Mexico, and surrounding Santa Fe National Forest lands along the banks of the Pecos River. The company's proposed mining project could adversely impact over 5,000 acres and five of Pecos' tributaries, plus the Pecos River itself.

Since the 1800s, the Pecos River watershed has been exploited for valuable metals. From 1927 to 1939, the Tererro Mine and its mill near the Pecos River were among the most productive lead and zinc operations in the United States. A community of Pecos Pueblo people lived in the village of Pecos from the turn of the 20th century until 1938, when they decided to leave Pecos and move to Jemez because the river was too poisoned to support their

livelihoods. A nasty legacy — a massive waste pile — was left behind after the Tererro Mine closed. That waste contaminated the Pecos River, killed thousands of trout, buried Willow Creek and led federal environmental officials to recommend the area be declared a Superfund site. Fortunately, the worst of the contaminants from the Tererro Mine were contained. However, it took several environmental disasters — like heavy snowmelt in 1991 that washed pollutants into the river and caused fish kills 11 miles downstream — to make the cleanup happen. The state spent decades and millions of taxpayer dollars to clean up the Tererro Mine and the nearby El Molino Mill, where the mined rock was processed.

The river ecosystem and the cultures and communities that depend on it cannot afford this kind of risk again. Hydrologic evidence suggests that this area may also be connected to the Santa Fe River watershed and aquifer, the City of Santa Fe's primary drinking water source. The surrounding communities have fresh memories from the devastation wrought by past mining activities. This area is far more precious for its cultural, historical, economic, ecological and recreational values than for the potential short-term earnings that might be derived from destructive mineral mining.

WHAT MUST BE DONE

Comexico hopes to start prospecting for gold, copper and zinc in the Tererro area as soon as it acquires the necessary exploratory permits from the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) and receives approval from the U.S. Forest Service (USFS).

The Stop Tererro Mine Coalition, a formidable coalition of approximately thirty stakeholders, was formed by local citizens to coordinate a response to the proposed exploratory hard rock drilling. The coalition is calling on the New Mexico Mining and Minerals Division of EMNRD to deny the application for an exploratory permit under the New Mexico Mining Act. The U.S. Forest Service must also take a comprehensive and rigorous look at impacts of the mining proposal, consider a robust range of reasonable alternatives, and allow for inclusive and transparent public participation in the environmental impact evaluation.

Lastly, Senator Martin Heinrich (D-NM) recently introduced the Pecos Watershed Protection Act (S.4599), which proposes to protect the entire upper Pecos watershed from future mining. Congress must pass this critical legislation to ensure this special place's long-term protection from further degradation from mining.

#6

Tar Creek

THREAT: Toxic water contamination

STATES:

Oklahoma

AT RISK:

Clean water, public health

SUMMARY

Tar Creek flows through what was once some of the richest grasslands of the Southern Plains but is now one of the country's largest Superfund sites. Heavy metals from mining have contaminated the creek for decades, and cleanup efforts continue to fall short, threatening the health of Indigenous communities and other local residents. The Environmental Protection Agency, Federal Energy Regulatory Commission, State of Oklahoma and tribes must work together to develop a landscape-scale solution to clean up the pollution and safeguard public health.

PHOTO: IAN MAULE

THE RIVER

Tar Creek begins in Kansas and crosses into Oklahoma, flowing through the towns of Commerce and Miami before joining the Neosho River. The Neosho and Spring Rivers merge at Twin Bridges State Park, creating the Grand River. Tar Creek and the Grand River feed a major drinking water source for thousands of Oklahomans — the Grand Lake o' the Cherokees, created by Pensacola Dam. The watershed is a destination for anglers, hunters, conservationists, artists, recreationists and nature lovers.

Ottawa County is home to a blended community comprised of nine Indigenous tribes forcibly moved here during the 19th century and descendants of white settlers. Tribal members make up more than 20 percent of the population in the county, with many individuals having ancestry in multiple tribes. The watershed is further shared by the Cherokee Nation, which borders it on the West and South.

THE THREAT

After 80 years of working the world's largest lead and zinc mine, industry abandoned the site in the 1960s, leaving behind 75 million tons of lead-contaminated tailings piles. The Tar Creek Superfund Site, one of the largest and most complex in the nation, was established by the Environmental Protection Agency in 1984, becoming one of the first Superfund sites in the country. The Tar Creek Superfund Site's epicenter contains forty square miles of abandoned mines with more than 30 major tailings piles as high as 200 feet tall with lead-contaminated soils throughout much of the county. For forty years, one million gallons of contaminated water has discharged daily into Tar Creek, killing most of the Creek's aquatic life and turning the water orange due to oxidation. Heavy metal contamination poses a danger from two directions — upstream at the source from acid mine drainage and surface runoff, and downstream from the disturbance of contaminated sediments dispersed during floods. Farms, homes and neighborhoods are put in toxic danger any time a storm causes flooding.

Tar Creek is one of four sites within the Tri-State Mining District of abandoned lead and zinc mines (spanning Missouri, Kansas and Oklahoma). The mine tailings (essentially waste, often toxic) were used as gravel for roads, driveways and generally throughout local communities



#6

Tar Creek

Continued

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PHOTO: IAN MAULE

without evaluation of, or caution regarding, the high levels of toxic heavy metals (specifically lead, cadmium, arsenic and manganese) in the material or the resulting irreversible neurocognitive impairments on humans, especially children. Due to water contamination in Tar Creek, residents cannot safely use or consume fish or plants in and around Tar Creek. Further, important Indigenous subsistence lifestyles and cultural practices, as well as recreational activities for native and non-native people alike, are inhibited.

Since its Superfund designation, the EPA and State of Oklahoma have done piecemeal work at the site, spending more than \$300 million (including buying out towns) — yet Tar Creek still flows orange, tailings piles still loom on the horizon and too many children are still poisoned by lead.

As the EPA develops cleanup plans for Tar Creek, it relies on a flawed Conceptual Site Model that ignores groundwater and local riparian and floodplain areas. In doing so, EPA undercuts the effectiveness of the entire remediation process by consigning the residents of a poor county to a future in which polluted groundwater and contaminated soils are unavoidable. This neglect is part of the pattern of behavior at environmental justice sites across the country.

Concurrently, the Pensacola Dam is going through a hydropower relicensing process with the Federal Energy Regulatory Commission (FERC). This process is expected to be completed and ready for approval in 2024. Grand River Dam Authority (GRDA), a state agency that operates the dam and manages the lake, has historically ignored the metals pollution within the lake and watershed, in addition to flooding issues. GRDA is asking to raise the lake level an additional two feet in its new license request, thereby increasing the risk to upstream communities from toxic flood waters and climate change impacts.

WHAT MUST BE DONE

Tar Creek is poisoned with regional, watershed-wide pollution that requires a landscape-level solution. In conjunction with the relicensing of the Pensacola Dam, the EPA, FERC and State of Oklahoma must collaboratively address historic and ongoing contamination throughout the Grand Lake watershed. EPA, FERC, the State of Oklahoma, and tribes with land adjacent to Tar Creek must sign a Memorandum of Understanding (MOU) that requires all parties to commit to an integrated, landscape-level solution to address both the dam relicensing and EPA cleanup plans at Tar Creek. In addition, the lake level must not be raised as proposed because doing so will increase the watershed-wide redistribution of sediment-bound heavy metals during floods.

Furthermore, the new EPA Region 6 Administrator must order a new Remedial Investigation and Human Health Risk Assessment that is more protective of human health and the environment. The health of communities around Tar Creek can no longer be ignored and set aside as an accepted casualty of historic mining. Tar Creek must be addressed as a matter of environmental justice, a priority of the Biden Administration.

Lastly, Congress must reauthorize the Superfund Fee under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), which funds cleanup at Superfund sites across the country. Reauthorizing the Superfund 'polluter pays' provision will provide cleanup money so citizens do not have to pay for cleanup.

#7

McCloud River

THREAT: Raising Shasta Dam

STATES:

California

AT RISK:

Sacred cultural sites and river health

SUMMARY

The McCloud River, a river protected by the state Wild and Scenic Rivers Act, is one of California's natural treasures. It was home to the Winnemem Wintu Tribe, who still depend on the river for their culture, religion and identity. The river's health and the Tribe's cultural values are threatened by raising the height of Shasta Dam by two stories, which would drown vital habitat, riverside lands and sacred sites. The Biden administration must overturn the Trump administration's plan to raise the dam in order to protect the river and the Tribe's way of life.

PHOTO: CHRISTOPHER MCLEOD

THE RIVER

The McCloud River flows out of the Cascade Range, draining the rugged conifer forests skirting Mount Shasta. It flows 77 miles to the Pit River, a tributary of the Sacramento River, and currently ends in Shasta Reservoir. Recognizing its rich fish and wildlife habitat, scenic beauty and clean, pristine waters, California protected much of the remaining McCloud River under the state Wild and Scenic Rivers Act in 1972. Several rare and endangered wildlife and plant species are found along the McCloud, including the Shasta snow-wreath, Shasta salamanders and Pacific fisher.

Since time immemorial, the Winnemem Wintu Tribe has relied on and cared for the river. Fishing and practicing ceremony at sacred sites along the river are central activities to the Tribe's culture and way of life. The completion of Shasta Dam on the Sacramento River in 1945 devastated the health and well-being of the McCloud River and Winnemem Wintu Tribe. The reservoir — the largest in the state — backed up the waters of the Sacramento River, Pit River and 26 miles of the McCloud River for the joint purposes of long-term water storage, flood control, hydropower and protection against saltwater intrusion in the San Joaquin/Sacramento River Delta. The eighth-tallest dam in the U.S. at more than 600 feet tall, Shasta Dam was built without fish passage and had devastating impacts on salmon populations. It displaced tribal members and flooded ancestral lands, burial grounds and most of the Tribe's sacred cultural sites.

THE THREAT

For years, Westlands Water District, the largest irrigation district in the country, has advocated for raising Shasta Dam to provide more water for big agricultural interests in the Central Valley Project. There are other solutions to the water needs of agricultural interests, such as updated reservoir management, improved conservation in agriculture and groundwater banking — actions that can be implemented without sacrificing more of California's already greatly diminished wild rivers.

#7

McCloud River

Continued

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PHOTO: CHRISTOPHER MCLEOD

In November 2020, the Trump administration, under the direction of Secretary of the Interior David Bernhardt, a former lawyer and lobbyist for Westlands Water District, advanced plans to increase the height of Shasta Dam by 18.5 feet—expanding Shasta Lake by more than 200 billion gallons (or nearly 614,000 acre-feet).

Raising the dam would cause further harm and injustice to sacred sites of the Winnemem Wintu Tribe, permanently or seasonally flooding approximately 39 sacred sites along the McCloud River. The project would severely impact the Tribe's ability to practice their culture and religion. In addition, the project would cost taxpayers \$2 billion, not to mention decimating the extraordinary scenic, recreational, fish and wildlife values of the state-scenic McCloud River, flooding more than 5,000 acres of forest and riverside habitat, harming the river's wild trout fishery and the salmon that now have to spawn downstream of the dam. Raising the dam could also increase the risk of loss of life in the event of dam failure in a seismically active region.

Furthermore, increasing the height of Shasta Dam and expanding the size of Shasta Lake is illegal under California law. In 1989, the California Legislature amended the California Wild and Scenic Rivers Act to protect the McCloud River from a dam raise. Raising Shasta Dam would override California state law and set a dangerous legal precedent for other protected rivers.

WHAT MUST BE DONE

Newly appointed U.S. Department of Interior Secretary Deb Haaland has an opportunity to do the right thing and stop this harmful project. Under the direction of Secretary Haaland, Department of Interior staff must complete a swift review of the proposed Shasta Dam raise, fully consider and expose its injustice and illegality, and issue a public determination that the project is infeasible (in part because it is illegal in California under the California Wild and Scenic Rivers Act). The Secretary must then kill the project for good by publishing a Record of Decision that rejects the dam-raise alternatives.

#8

Ipswich River

THREAT: Excessive water withdrawals

STATES:

Massachusetts

AT RISK:

Community resiliency, drinking water, wildlife habitat, recreation

SUMMARY

The Ipswich River is the main drinking water source for Northeastern Massachusetts, but excessive water withdrawals are sucking the river dry, putting both the ecosystem and the region's water security at risk. Two severe droughts in the last five years and a global climate crisis have increased the urgency to drastically improve river management. The Massachusetts Department of Environmental Protection must fix how it implements existing laws and improve its regulations to support the river's health, regional water security and the many communities, businesses and residents who depend on the Ipswich River.

PHOTO: DEAN BAUMEISTER

THE RIVER

Winding 45 miles from Burlington, Massachusetts, to Plum Island Sound, the Ipswich River is the main source of drinking water for 350,000 people and businesses in 14 communities. Located just north of Boston, the basin supports a multi-million-dollar shellfish industry and habitat for several rare and threatened species. Aside from providing clean water and healthy habitat, the Ipswich River offers free, undisturbed nature and recreation for residents of Essex County, the third-most diverse in the state.

The Ipswich River feeds into the Great Marsh Area of Critical Environmental Concern, New England's largest salt marsh. The marsh includes a National Wildlife Refuge and is an internationally recognized Important Bird Area. Nearly half the basin is protected by state parks, Audubon's Ipswich River Wildlife Sanctuary, and private and town-owned conservation lands. The Ipswich offers hundreds of miles of trails and other chances to explore nature for five million people within an hour's drive.

The Ipswich River (called Agawam in the Algonquian language, meaning 'beyond the marsh') flows through ancestral lands of the Pawtucket Tribe, as well as the Massachusett, Penacook, Pentucket, Abenaki and Wabanaki Confederacy.

THE THREAT

The greatest threat to the Ipswich River is excessive water withdrawals. The 1986 Massachusetts Water Management Act (WMA) authorizes the Massachusetts Department of Environmental Protection (DEP) to set water withdrawal limits that factor in environmental impacts. However, DEP's implementation of this law follows a confusing system that exempts more users than it regulates. DEP classifies three categories of users. The first class, which includes several large water suppliers, were granted automatic water registrations and are exempt from conservation rules. The second class, any water users withdrawing less than 100,000 gallons per day averaged over the entire year, are also exempt. Since lawn watering and other outdoor nonessential uses peak when stream flows are lowest in the summer and early fall, annual averages do not address actual impacts. As droughts are increasing with

#8

Ipswich River

Continued

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PHOTO: IPSWICH RIVER WATERSHED ASSOCIATION

climate change, basing regulation on annual averages is ill-advised. In the summer, 15 million gallons per day are wasted in the Ipswich due to outdoor watering, even during drought. Only a third class of users, those above-threshold users without registrations, must obtain permits and comply with water use and conservation regulations. Communities in this third class grapple with an unfair system, creating conflict among residents subject to different rules while impacting the same river.

The Ipswich River is the poster child for the state's outdated water system. An astounding 80 percent of Ipswich water is exported out of the watershed. Worse, more than 90 percent of withdrawals are exempt from any water use conditions like conservation measures. Even in non-drought years, stretches of river are pumped dry. Dry riverbeds result in fish kills, ecological damage, loss of recreation and threats to the quality and security of the water supply. The climate crisis has made things worse. Municipalities and residents are increasingly worried about running out of water. While behavior and land use changes can lower some water use, we cannot solve this problem without a more balanced regulatory framework. This is a critical moment for state officials, water suppliers, communities and residents to work together to make Massachusetts a leader for smart water use in an era of climate change.

WHAT MUST BE DONE

2021 is a pivotal year for improving water security in Massachusetts. Both registrations and permits are up for renewal for the first time in two decades. Two severe droughts in the last five years have spurred leaders into action. A new Drought Bill was introduced in the state legislature to regulate all water use during drought. Massachusetts recently adopted a new Drought Plan and is now creating several new climate policies. An Ipswich River Task Force was also formed by local legislators to help facilitate improvements. This is a once-in-a-generation opportunity to get better rules on the books. New rules will reduce conflict and spur collaboration between towns. The battle lines are already being drawn — pitting concerned communities, businesses and residents against a faction of water users who benefit from the status quo. State legislators and agency officials need to hear from the public that they support effective and balanced water management that ensures enough clean water for communities and the river.

Specifically, DEP must overhaul how they regulate water withdrawals to protect rivers and account for climate change. After several decades of inaction, DEP has announced new regulations it will attempt to pass this year before renewing water registrations. Without significant stakeholder involvement and public input, there is considerable risk these desperately needed changes will not happen.

Limited water supplies, coupled with longer and more severe droughts across the country, have brought us to a key moment for reimagining water policy and improving the health of our communities. What we do for the Ipswich River over the coming years could serve as a litmus test for improving climate and river policy throughout the country.

#9

Raccoon River

THREAT: Factory farms and agricultural pollution

STATES:

Iowa

AT RISK:

Clean drinking water, recreation, wildlife habitat

SUMMARY

Iowa's Raccoon River, which provides drinking water to 500,000 people in Iowa's capital city, Des Moines, has become increasingly contaminated by upstream factory farms and industrial agriculture. In 2020, pollution-fueled outbreaks of toxic algae combined with climate change-driven drought conditions pushed the city's drinking water utility to the brink of a crisis for several weeks. Iowa's state agencies have refused to appropriately regulate pollution from factory farms. The U.S. Environmental Protection Agency must step in and investigate, monitor and enforce factory farm pollution violations in the absence of state action.

PHOTO: GARRETT HALL

THE RIVER

Nearly 31 miles long, the Raccoon River in west-central Iowa is part of the Mississippi River watershed. The watershed is largely rural, but includes portions of Iowa's capital city, Des Moines, and several smaller towns. The river serves as a drinking water supply for more than 500,000 people in Des Moines. The river is an important source of recreation for local communities, where activities including swimming, canoeing, birding and fishing are popular. Several beloved water trails have been developed along all three major tributaries of the Raccoon River, and there are plans to expand recreational use on the river within the city of Des Moines.

In some locations, bluffs along the river reach 30 to 40 feet high and expose glacial till deposited 12,000 years ago as the ice sheets retreated from Iowa. The North Raccoon is home to a population of Topeka shiner, a federally endangered species of minnow. The watershed contains several tracts of rare oak savanna ecosystem, often described as the transition zone between prairie and woodland environments. Oak savanna was once one of the most common ecosystems in the Midwest, but is now exceedingly rare, with less than 0.1% of the original ecosystem remaining. In the Raccoon River watershed, this increasingly imperiled habitat provides nesting grounds to nearly one-third of Iowa's 200 species of breeding birds.

The Raccoon River watershed was historically home to the Oceti Sakowin and Ioway peoples. The Meskwaki Tribe also inhabited land in the southeast portion of the watershed.

THE THREAT

The Raccoon River is polluted by more than 750 factory farms that confine thousands of animals and their waste. This waste is spread on fields, often at rates that exceed the soil's ability to absorb it. It then runs off into rivers and streams where it contributes to a water crisis of epic proportions.

#9

Raccoon River

Continued

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PHOTO: KATHRYN GAMBLE

Iowa relies on a voluntary strategy to reduce agricultural pollution of lakes and rivers. This strategy is fundamentally inadequate and has failed spectacularly. The corporate agribusiness industry with the help of Iowa's government has enabled factory farms to expand at an increasingly rapid rate — Iowa adds between 300 and 600 factory farms every year.

Meanwhile, downstream the Des Moines Water Works (DMWW) and other utilities use the Raccoon River as a source of drinking water. Nitrates, which are notoriously difficult to remove and are extremely toxic, especially to babies and pregnant women, are often found in the river at levels that far exceed the Environmental Protection Agency's legal limit. In 1991, the DMWW constructed one of the world's largest nitrate removal

facilities in order to provide safe drinking water to people in Des Moines. The cost of this facility — \$4.1 million — was ultimately borne by ratepayers rather than the factory farm and agribusiness interests responsible for the nitrate pollution. In 2017, DMWW ratepayers paid another \$15 million to double the size of the facility. Private wells that provide drinking water to families throughout the Raccoon River watershed are also frequently contaminated with levels of nitrates that exceed safe drinking water standards. There are often no alternative clean and safe drinking water supplies for the owners of these contaminated wells.

In 2020, climate change-fueled drought conditions led to historically low water levels in both the Des Moines and Raccoon Rivers. These low-flow conditions, along with record levels of agricultural pollution, resulted in potentially deadly toxic algae outbreaks in both rivers, and there was significant concern that DMWW would not be able to meet demand for water in Des Moines. While mandatory restrictions were ultimately avoided, DMWW had to utilize water from storage wells and an emergency reservoir as the primary drinking water supply for several weeks.

Toxic algal outbreaks and factory farm runoff also limit people's ability to safely recreate on the river. Farther downstream, this pollution contributes to a growing hypoxic zone in the Gulf of Mexico where the commercial fishing industry pays the price for Iowa's water pollution crisis.

WHAT MUST BE DONE

The EPA must conduct a study of factory farm runoff from fields in Iowa. The agency has previously acknowledged that such runoff is the biggest source of factory farm pollution by far, but it is not monitored at all by Iowa's Department of Natural Resources. EPA must also immediately ramp up its Concentrated Animal Feeding Operation (CAFO) inspections and enforcement actions in the Raccoon River watershed. Factory farms should be required to invest in state-of-the-art technology to treat animal waste, instead of relying on antiquated techniques that hide the problem (e.g., spreading waste on fields). These initiatives will advance efforts to spur new EPA rules as well as stronger state-level permitting.

With the election of President Biden and the appointment of a new EPA Region 7 Administrator, a timely opportunity exists to call on EPA to finally address the increasing levels of factory farm pollution in the Raccoon River watershed through research, improved regulations and consistent enforcement.

#10

Turkey Creek

THREAT: Two major developments

STATES:

Mississippi

AT RISK:

Historic preservation, public health and safety

SUMMARY

Coastal Mississippi's Turkey Creek has supported vibrant, culturally rich communities since the 1800s. However, rampant urban sprawl and toxic contamination have eliminated forests and wetlands, increased flooding and threatened homes. New proposed roadways and wetland fills could harm the Creek, undo recent restoration, and perpetuate further injustice to historic Black communities. Turkey Creek is a national posterchild for how injustice and inequity persist in development decisions. Mississippi state agencies must retract recent development permits and consider the full suite of cumulative impacts on local communities and the environment.

PHOTO: HARRIET FESTING

THE RIVER

Historically popular for fishing, swimming, boating and baptisms, Gulfport, Mississippi's 13-mile Turkey Creek is a freshwater stream and a brackish estuary that connects to Bayou Bernard just north of the Gulfport-Biloxi International Airport. In addition to supporting an important recreational and subsistence fishery for species such as bluegill, largemouth bass, gar, pickerel and crappie, the creek is an inland coastal nursery for Gulf of Mexico shellfish species, and an important stopover for migrating birds.

Turkey Creek flows through several historically important African-American "sister" communities including Turkey Creek, North Gulfport and Forest Heights. In 1866, recently emancipated former slaves purchased and settled the 320 acres or "eight forties" that came to be known as the Turkey Creek community. It remained essentially undisturbed until the mid-1980s when annexation and coastal sprawl reached the area. The Turkey Creek settlement's historic cemetery was largely destroyed in 2001, leading the Mississippi Heritage Trust to list that community as one of Mississippi's Ten Most Endangered Historical Places.

The Forest Heights community was one of the nation's first integrated home ownership developments for low-income families. Established in the 1960s, its development was led by the National Council of Negro Women, in partnership with the Department of Housing and Urban Development and supported by the Ford Foundation. The success of Forest Heights led to similar "Turn Key" programs for home ownership across the country. While it suffered damages in Hurricane Katrina, the community retains much of its original aesthetic and cultural character.

Since the late 1990s, residents, including North Gulfport's Rose Fairley Johnson, have had to fight efforts to develop wetlands surrounding their communities and the Creek. Released in 2014, the documentary 'Come Hell or High Water: The Battle for Turkey Creek' followed the painful but inspiring journey of Derrick Evans, a Boston teacher who returned home to work with Johnson and others when the graves of his ancestors were bulldozed. Current threats to Turkey Creek are part of an unfinished fight for cultural and environmental protection, self-determination and justice.

#10

Turkey Creek

Continued

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PHOTO: HARRIET FESTING

THE THREAT

In recent years, the Forest Heights, North Gulfport and Turkey Creek communities have become prone to frequent flooding. The worst damage was inflicted during Hurricane Katrina, when all but five of the 200 homes in Forest Heights flooded. Both storm surges and routine flooding have been exacerbated by airport, hotel and other commercial sprawl. These developments have destroyed forests and wetlands, increasing impervious surfaces, runoff and flooding. This poorly planned airport and surrounding development have impacted the water quality and health of Turkey Creek as well as the health, safety and economic integrity of the Black communities alongside it. Now, more new developments are proposed that could make the situation worse.

One of the proposals is for an area for military shipments built by the Port of Gulfport on the site of a former fertilizer factory. The development will cover 16 acres and drain 3.15 acres of wetlands on a site where lead and arsenic

contamination exceed regulatory limits. Experts believe that the development risks mobilizing contaminants toward and into the creek — ultimately endangering the health and safety of local residents during the inevitable floods. Another proposed development includes a road connector route between commercial establishments and the airport. The road will pass just a few hundred yards from the Forest Heights community.

As the planet's climate continues to change, the frequency and intensity of storms will increase, leading to even greater flooding risks and impacts to these culturally rich but marginalized communities. Turkey Creek and the surrounding wetlands play a key role in mitigating flood risk, but increased development will only reduce the ability of the river and land to absorb frequent and intense storms and flooding.

WHAT MUST BE DONE

Economic development must not come at the cost of human and ecological health, or environmental justice. Decision-makers must ensure that any economic development proposals in the Turkey Creek area are supported by the local community and protect the health of the community and environment. To this end, they must refer to the neighborhood's Community Plan and Watershed Plan.

The Mississippi Department of Transportation must halt distribution of the \$20 million in federal funding for the connector road. In addition, the Mississippi Department of Environmental Quality must re-evaluate and retract their permit for the Port Authority development. An evaluation of the full suite of cumulative impacts, including health, safety and economic impacts to the creek, and the Turkey Creek and Forest Heights communities, must be conducted to reveal the true costs of this development. The wetlands must be avoided and restored to ensure that they can continue to perform their important water absorbing ecological function.

Furthermore, the Biden Administration is establishing an interagency council on environmental justice with the secretaries of Transportation and Housing and Urban Development. The council is charged with addressing issues of environmental injustice within communities of color and low-income communities. That council should examine Turkey Creek and its associated communities as a case study on the systemic racism that continues to plague development decisions surrounding these historic communities.

*In memory of Rose Johnson (July 23, 1946-April 16, 2020),
Founder, North Gulfport Land Trust.*