

American Whitewater Climate Change Policy
February 2022

Introduction

Climate change is a defining environmental issue of our time. It disproportionately impacts fragile ecosystems and marginalized communities, is accelerating extinction rates, is impacting the lives of many people, and has already begun to destabilize communities and societies around the world. It also affects the health of our nation's rivers. Protecting river health is at the core of American Whitewater's mission, and therefore we believe our nation must act to mitigate human-caused climate change. We believe that individuals' choices alone will not solve climate change and that we need national policies that reduce and mitigate climate change. River runners have a front row seat to see the effects of a changing climate on our rivers and American Whitewater is well positioned to affect needed policy change. We therefore advocate for policies that protect and restore rivers while reducing our nation's carbon reliance. Specifically, we support legislative, regulatory, and project-level initiatives that have climate benefits, while increasing awareness of climate issues within our community. We strongly believe that new hydropower dams on rivers are not a viable solution to climate change in the United States.

Climate change is impacting, and will continue to impact, whitewater rivers

Human-induced climate change is affecting many weather and climate extremes.¹ These changes are in turn causing significant impacts to stream flows, which affect river enjoyment and ecological health.² Glaciers and snowpack are declining in regions like the Rocky Mountains, which, combined with warmer air temperatures and drier soils,³ reduces summer instream flows.⁴ Spring runoff has also shifted more than 10 days earlier in the year in snowy areas like the northeast, northwest, and the Sierra Nevada.⁵ Throughout the country significant changes have occurred in storm and flood severity that affect rivers and nearby communities.⁶ Wildfire is a climate-related impact that profoundly affects watershed and river health, fisheries, wildlife, human communities, and it often affects river recreation and access. Our climate is

¹ IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press., <https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report_smaller.pdf>.

² Meyer, J.L., M.J. Sale, P.J. Mulholland, N.L. Poff. 2007. Impacts of climate change on aquatic ecosystem functioning and health. Journal of the American Water Resources Association. 35:1373–1386, <<https://doi.org/10.1111/j.1752-1688.1999.tb04222.x>>.

³ Overpeck, Jonathan T., Udall, Bradley. 2020. Climate Change and the aridification of North America. Proceedings of the National Academy of Sciences. <https://doi.org/10.1073/pnas.2006323117>

⁴ <https://www.nps.gov/glac/learn/nature/melting-glaciers.htm>

⁵ <https://www.epa.gov/climate-indicators/climate-change-indicators-streamflow>

⁶ <https://www.epa.gov/climate-indicators/weather-climate>

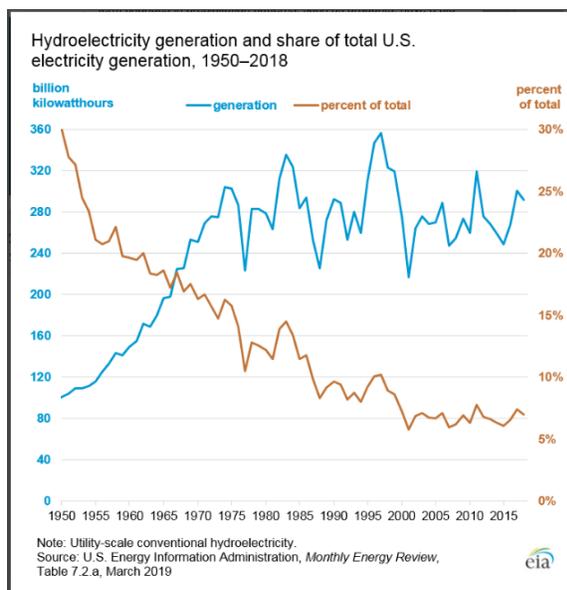
changing, and with it our rivers are changing, too. Water and land management choices can mitigate or exacerbate these changes. These changes often threaten our recreational opportunities, but also the diverse ecosystems that we cherish and the riverside communities that we live in and visit.

It is possible to stem climate change while protecting and restoring rivers

Wind and solar energy are increasingly outcompeting both fossil fuel and hydroelectric energy. As this occurs, some hydroelectric projects are becoming more valuable for their ability to integrate with other renewable energy sources, but many others that are not designed to respond quickly to changes in energy demand are becoming obsolete because of reduced profitability and the diminished need for the base load power they generate. It is clear that the shift to wind and solar, including when paired with battery storage, will increasingly lead to the decommissioning of many dams that no longer serve a purpose. American Whitewater firmly believes that all energy infrastructure on public lands or waters where ecosystem and social impacts exceed societal benefits should be removed, including dams. All energy projects should be carefully sited to minimize their impacts. In time, these practices should lead to a more efficient and renewable energy system and healthier free-flowing rivers.

New hydropower dams are not the solution to climate change

Hydroelectric dams already occupy the vast majority of available sites in the United States, and have been a significant part of our energy infrastructure for over a century. These dams have a vast environmental footprint, emit significant greenhouse gases from reservoirs,⁷ and continue to threaten the existence of many freshwater and riparian species. Their relative contribution to our nation's energy production has fallen steadily since the 1950s.⁸ We also recognize that climate change impacts have created uncertainty in the role of hydropower on the electric grid as historically low rainfall and snowmelt have created drought conditions in the Northeast and aridification of the West.



⁷ Harrison, J.A., Y.T. Prairie, Sara Mercier-Blais, C. Soued, 2021, Year-2020 Global Distribution and Pathways of Reservoir Methane and Carbon Dioxide Emissions According to the Greenhouse Gas From Reservoirs (G-res) Model, *Global Biogeochemical Cycles*, 35(6), <<https://doi.org/10.1029/2020GB006888>>.

⁸ Declining from 30% in 1950 to 7% in 2020, <<https://www.eia.gov/energyexplained/hydropower/>>.

The relatively small amount of energy that could be gained by building additional dams is simply not worth the impacts to plants, animals, human communities, and outdoor recreation. Hydropower's hundred-year-old technology is not the answer to our future challenges. American Whitewater opposes the construction in rivers of new dams, diversions, reservoirs, and the expansion of existing reservoirs, but often supports efforts to enhance or add generation capacity at existing dams through efficiency upgrades and other low-impact ways.

River conservation and restoration helps reduce the impacts of climate change on river environments

American Whitewater is among the leading advocates for restoring flows below hydroelectric dams, dam removal, and the protection of our nation's remaining free-flowing rivers. These actions help freshwater ecosystems adapt to and withstand current and future climate-related changes. Protected headwater streams provide vital cold water habitat for species as their ranges shift. Dam removals help species migrate and move to find the right habitats for the continuation of their species. River restoration creates healthier aquatic environments that are less susceptible to extreme heating and cooling events and have more habitat for more resilient aquatic species populations. In addition to the benefits to nature, as earth's climate changes these river conservation and restoration initiatives provide extensive benefits to people whether through improved recreation opportunities, sustainable economic benefits, or the restoration of resources essential to indigenous cultural uses and spiritual practices.

Land conservation, restoration, and improved land management represent natural climate solutions

Conservation, restoration, and improved land management represent natural climate solutions. American Whitewater supports a number of conservation tools including protective land designations and conservation easements that conserve intact forest ecosystems and prevent forest conversion. We work to protect unroaded backcountry landscapes in our nation's headwaters. We support policies and actions to restore healthy watersheds including the native vegetation that provides carbon sequestration services. To reduce wildfire impacts to rivers, we support the use of prescribed fire and cultural burning to restore the natural role of fire in fire-adapted ecosystems. We advocate for improved land management, particularly in riparian corridors adjacent to rivers. We recognize that indigenous people have stewarded rivers for millenia and that tribal management and traditional practices play an essential role in protecting rivers and mitigating climate change impacts.

Watersheds managed with the climate in mind filter and protect our nation's headwaters improving water quality, strengthening the capacity of river systems to withstand extreme weather, and reduce flooding, runoff, and erosion. Natural climate solutions are cost-effective, can be quickly implemented quickly, and provide benefits beyond reducing climate change: By improving water quality and supporting a more natural flow regime, the health of rivers and the quality of river experiences are enhanced.

Movement away from fossil fuel use is important for the future of rivers and the planet

American Whitewater supports shifting our nation's energy policies to phase out fossil fuel use while protecting and restoring rivers. This shift is well underway and will take a wide range of approaches over many years, and American Whitewater will support specific policies to this end on a case-by-case basis. American Whitewater will stay focused on hydropower policy and proper siting of energy projects, as we have the most to offer and gain in those zones of change. We will seek a seat at the table and a respectful role in the conversation on river-related climate issues, and show up with open minds. We will continue our efforts to limit the carbon footprint of our organization, and encourage our members to join us in pursuing those and other sustainable choices.