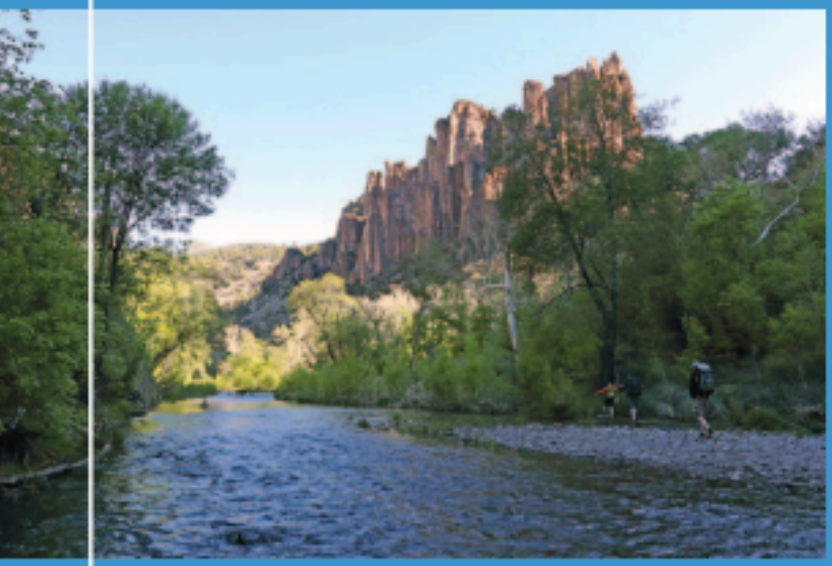
THE STATE OF CLIMATE ACTION IN NEW MEXICO: *A Call to Action*



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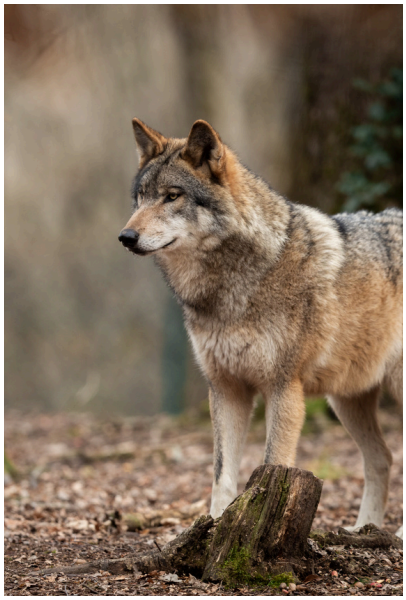
The Toll of Climate Change on Wildlife

The cumulative impact of decades of extractive industry and climate change effects in the southwest have placed our wildlife species and ecosystems at grave risk. **The planet is now experiencing a global extinction crisis. The 2022 Living Planet Report from the World Wildlife Fund found an average decline of 69% of mammals, birds, fish and reptiles since 1970, placing the future of our global ecosystem in jeopardy (World Wildlife Fund, 2022).** This crisis is being driven by a combination of unchecked human development, poor habitat and forest governing practices, extractive industry, habitat destruction and the impacts of climate change. In New Mexico alone, the Department of Game and Fish State Wildlife Action Plan has 274 species in greatest conservation need (NM Department of Game & Fish, n.d.).

Warming has already led to less regular flows in intermittent (seasonal) streams and permanent watersheds, resulting in diminished water for mollusks, crustaceans, amphibians, fish and the animals that feed on them. T**his also impacts species whose life cycle is partially dependent on a water-based stage. Declining flows are predicted to worsen over the next 50 years, with river water flow projected to decline an additional 16%–28% (Dunbar et al., 2022).** Heat waves and drought will also lead to elevated surface water temperatures, eliminating the cool water habitats necessary for the survival of some fish and other riverine species, especially the cold water species prized by anglers that draw tourists from around the world (Easterling, 2019; Prokup, 2023).

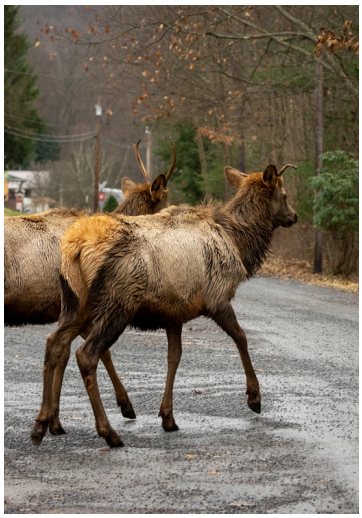
Warmer water temperatures will also increase the likelihood of disease spreading by water, directly impacting wildlife (Mora, C. et al, 2022). Additionally, warmer water and lower flows will lead to lower water quality standards as streams fail to meet their current criteria (Van Vilet et al., 2023). A decline in water quality standards can expose waterways to increased unregulated pollution, especially in the wake of the Supreme Court's Sackett decision, which removed federal protections for a vast majority of state waters. All of these impacts will further deteriorate waterways and impact the surrounding landscape.



For wildlife, changes in seasonal timing caused by a warming climate can disrupt patterns of emergence and mating that have been established over millennia. For example, pollinators may emerge after blossoms have disappeared, impacting the long-term survival of those plants and the food supply of birds dependent on those insects, thereby rippling up the food chain (U.S. Department of Energy, 2023). **Climate impacts on trees and plants, such as drought or earlier plant blooming, also impact the food supplies of herbivores and omnivores such as deer, bears, mice and rabbits.** Changing plant growth patterns directly impact food availability for the animals that rely on them for survival. This, in turn, impacts predator-prey dynamics and threatens food sources for larger animals such as wolves, cougars and coyotes.

Pollinators vital for ecosystem resilience and food production are also directly impacted by climate change. Extreme weather events, heat and drought all impact the ability for pollinators to thrive, affecting their reproduction cycle, food availability and pollination

windows (Brunet and Fragoso, 2024). The climate crisis, combined with increased pesticide use, has also dramatically lowered pollinator populations as much as 80%, even in forests undisturbed by humans (Beams, 2023). This decline, in turn, impacts every aspect of the ecosystem including the ability for plants to thrive.



Changing landscapes due to drought, pests, disease, food scarcity and wildfire have also forced wildlife, including game species and birds, to migrate northward. **Wildlife migration paths and habitats are often fragmented due to development, making it difficult for some species to adapt. Furthermore, many species cannot move or move fast enough to adapt.** Drought is especially devastating for wildlife species with small habitat ranges or compromised migration corridors, such as the Sacramento mountain salamander, which is considered an endemic species (Grover, 2021). Research has found that up to 90% of all endemic species could become endangered and experience adverse impacts under unchecked global warming scenarios (Manes et al., 2021). These changes directly impact the ability of wildlife to thrive and survive.

Heat extremes also stress wildlife. **Birds are particularly vulnerable to heatwaves, as they struggle to keep their bodies cool and find relief from the heat (Wilson, 2023).** In 2020, communities were shocked by the sudden deaths of thousands of birds that fell out of the sky across the Southwest. Scientists concluded that the bizarre occurrence was likely to be the result of climate change: There were many wildfires in the West, and it is likely that the fires and their drifting smoke forced birds to change their migration routes, making the routes longer and less optimal (Associated Press, 2023). **In addition, persistent drought across the West has diminished the supply of insects and other food these large flocks depend on to fuel their arduous migrations to warmer climates in the winter and prepare them for their spring breeding season (Weston, 2020).**

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