

Dear Senator,

We the undersigned signatories, leading researchers and practitioners from the various biological and earth science disciplines, are writing to urge the Senate to pass legislation that will reduce U.S. greenhouse gas emissions and begin to substantively address the impacts of climate change on our communities, wildlands and wildlife this year. The science is clear: we must both reduce greenhouse gas pollutants and safeguard wildlife and natural resources already impacted from climate change. The time to act is now.

The increase in human-caused emissions is responsible for driving climatic changes worldwide, and negatively impacting both human and natural systems. Climate change is already causing serious damage and disruptions to wildlife and natural ecosystems, threatening the collapse of natural systems that cross ecological or biological thresholds. This collapse will result in the loss of the environmental goods and services they provide to society, as well as the loss of the biological diversity that sustains their production. The warming of rivers, streams, lakes and wetland, the changes in natural disturbance regimes and increased incidence of pest and disease outbreaks, and changes in the seasonal timing of both plant and animal life history events such as reproduction, migration, and species ranges are disrupting ecological communities. Profound changes such as the melting polar ice caps and glaciers, acidification of the oceans, rise in sea levels, and an increasing incidence of intensified storms, drought and catastrophic fires will stress natural systems and have devastating implications for people, our treasured landscapes and wildlife. Wildlife, natural resource and water managers will be increasingly challenged by species assemblages and climate-related stressors that have never previously occurred.

It is encouraging to see that the American Power Act begins to not only address the causes of enhanced global warming, but also the resulting impacts associated with climate change due to increased greenhouse gas concentrations already in the atmosphere. But given the unprecedented changes already seen, and the fact that even if greenhouse gas emissions were substantially reduced now, global temperatures will continue to rise and force additional climatic change, which will further impact people and the ecosystems they rely upon. However, in order to give our communities, wildlands and wildlife the best possible chance of surviving in a warming world, significantly greater funding is needed than what is currently allocated in the American Power Act. In addition, this funding must be dedicated, and it must be made available far sooner than 2019, as the bill currently proposes.

Only through sufficient near-term funding will natural resource managers have the necessary tools to strategically and proactively reduce threats to ecosystems and assist natural systems to better adapt to the changing climatic conditions now, and in the foreseeable future. It will require a national effort to work with all the key stakeholders at federal, state, tribal and local levels in a coordinated manner to achieve a balance among the many societal goals and to maintain ecosystem-based services our economy and communities rely upon. This includes the following work:

- **Restore and maintain healthy, genetically diverse and viable populations that are geographically connected to allow species to shift in response to climate change.**
- **Identify and institute appropriate monitoring systems and infrastructure and initiate true adaptive management.**
- **Prevent and control non-native invasive species.**

- **Reduce other stressors such as land use and pollution that threaten the resiliency of ecosystems.**
- **Reduce the risk of catastrophic fires, drought, and flooding through land use planning and strategic resource allocation initiatives.**
- **Protect coastal estuaries and inland wetlands from sea level rise using ecosystem-based management approaches.**
- **Adjust yield and harvest limits in response to changes in productivity due to climate change.**
- **Identify new financial incentives, and collaborative opportunities to work more effectively and at greater landscape-level scale.**

Each of these essential actions comes with a significant price tag, and the cost of addressing climate impacts only increases with each year of inaction. Managers of the nation's wildlife, land and water resources will need billions of dollars annually to develop and implement science-based strategies for conserving wildlife and ecosystems threatened by increased global warming due to human activities. To make this conservation work feasible, any clean energy and climate bill must include substantial dedicated funding that begins immediately. This funding is essential to protecting the wildlife and the biological diversity that maintains the natural ecosystems on which our communities and economy rely.

We thank you for your consideration of this urgent matter.

Paul Bartelt, PhD  
Waldorf College

Jean Brennan, PhD  
Senior Climate Change Scientist  
Defenders of Wildlife

Thomas Lovejoy, Ph.D.  
The H. John Heinz III Center for Science  
Economics and the Environment

James Nations, PhD  
Vice President  
National Parks Conservation Association

Barry R. Noon, Ph.D.  
Colorado State University