



The Need and Opportunity

The Office of Public Health (OPH) works to protect, promote, and advance the health of the National Park Service's (NPS) visiting public and workforce. This work began over 100 years ago through an agreement between the NPS and the United States Public Health Service. Our work requires us to identify and address the health threats our visitors and workforce may encounter as well as identify ways in which public health issues impair or enhance the NPS's ability to carry out its mission.

As the NPS' public health professionals, we must consider the greatest threats to human health and how we will address those threats to ensure our work is relevant and effective. Health professionals across the nation and the globe agree: the climate crisis is the greatest threat to human health of this century. Climate change is changing the pattern and emergence of infectious diseases, causing conditions conducive to increased wildfires, severe weather, extreme heat, and sea level rise that threaten water quality, water availability, food production, air quality and national security.¹ At the same time, climate change places NPS's protected resources, both natural and cultural, at enormous risk.^{2,3,4}

Inequity is another major, and related, crisis that affects the health of all Americans.⁵ Inequity is worsened the impact of the COVID-19 pandemic and health outcomes for other leading causes of death, driving the epidemic of deaths of despair (drug overdose, suicide, and alcoholic liver disease), and leaves underserved communities more vulnerable to the detrimental health impacts of climate change.⁶⁻⁸ While public lands are commonly considered "America's back yard", they are in fact not equitably accessible to underserved communities, either as a resource to enjoy or places to work.^{9,10} Minorities make up 42% of the US population, but only 23% of NPS visitors and only 17% of the NPS workforce.

The NPS is one of the most well-positioned federal agencies to lead climate mitigation and advance equity education and action. As a protector of some of the nation's most treasured natural and cultural resources and a keeper of the nation's stories, the NPS has an opportunity to stimulate action on climate change and inequities, and to change the national narrative to center on hope, healing, and reconciliation. The NPS has a congressional mandate to engage the public with the natural world and our shared

heritage, and park rangers are uniquely effective educators and leaders. The American people recognize and utilize natural areas as public health resources, so both the public and the NPS workforce are primed for conversations about health impacts of climate change and inequity, as well as the critical role nature plays in promoting health, equity, and mitigating climate change.¹¹

There are two compelling reasons why connections between climate and health are crucial to stimulating climate action. First, education about climate change impacts to human health is more likely to stimulate action than education about climate impacts to natural resources alone, helping NPS to better accomplish its broader mission and better support underserved communities that already experience significant health inequities.¹² Second, climate mitigation strategies take time; they do not result in immediate local nor visible changes to climate despite requiring immediate costs or inputs, therefore public support for these strategies can be difficult to mobilize.

However, climate mitigation strategies have public health benefits, which result in immediate economic benefits and broad public support. For example, public lands and tree canopy not only absorb carbon from the atmosphere to mitigate climate change in the long term, they also immediately reduce air pollution, the health impacts of extreme heat, and increase community cohesiveness and property values. These immediate and visible benefits are even more significant for nature-based solutions than for technological climate mitigation strategies, and further strengthens the case for nature-based and other climate policies and action centered on public health to build a broader coalition of support and benefits.¹² **Public Health must therefore play a lead role in NPS climate adaptation, resilience, and equity actions in order to maximize public support and benefits.** Pandemics and climate change impacts are part of our collective future and public health should be incorporated into the NPS strategy and operations to both minimize harms and maximize our mission.

Climate and equity are inextricably linked. Climate change impacts fall disproportionately on underserved communities, and underserved communities have fewer resources to adapt and mitigate these impacts, including less access to nature and public lands.¹⁴ At the same time, communities of color and the underserved support climate action at greater levels than less impacted and wealthier communities.^{15,16} The same systemic, structural issues that have exacerbated inequity are also the structures that have caused the climate crisis and prevented climate action despite overwhelming public support. We cannot solve the climate crisis without also advancing equity, and advancing equity requires us to combat the climate crisis. Similarly, the NPS cannot accomplish its mission or even survive as an organization if our parks do not have broad and diverse public support. Likewise, NPS cannot protect and preserve our resources without addressing climate change, and the NPS is uniquely positioned to connect climate, equity, and health because people from all backgrounds understand the connection between nature and their personal wellbeing.

These imperatives are recognized at the highest levels of this nation's Administration. On the first days this Administration took office, three of the executive orders issued by President Biden included:

- Executive Order 14008 Tackling the Climate Crisis at Home and Abroad;
- Executive Order 13990 on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis; and
- Executive Order 13985 On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government.

These mandates along with the priorities of the [Biden-Harris Administration](#) are a call to action for every Federal agency to identify ways in which their respective programs and offices can decisively advance them.

Role of the NPS Office of Public Health

The climate crisis and racial inequities have far-reaching consequences at national and global scales. The National Park Service can play an important role in addressing the health impacts of both climate change and inequity, which will in turn allow NPS to better accomplish its mission. The NPS Office of Public Health (OPH) is a key player in helping the NPS maximize its contributions to addressing these critical health threats. In preparation for its role, OPH has articulated its principles and priorities for action in these two arenas over the next 5 years and below articulates the public health role it envisions:

The NPS Public Health Community leads Servicewide thinking, planning, and action to mitigate climate change and inequities' harmful impacts on human health while leveraging the power of parks to advance climate justice and conservation to promote and protect the health of this and future generations.

The NPS Office of Public Health has the expertise to address a wide range of public health challenges and will strategically utilize its capabilities to the best advantage of the National Park Service. These avenues include:

- Fostering appreciation for how climate hazards impact the health of employees, visitors, and local communities
- Educating NPS employees about how inequity threatens the health of all people.
- Advocating for the inclusion of health impacts on people, animals, and natural resources in NPS decision-making and action.
- Promoting nature-based and other climate solutions with public health co-benefits.
- Communicating the health benefits of national parks and advocating for increased access to underserved communities in the U.S.

- Developing internal and external partnerships to bring sufficient resources and advance the science needed to address these complex issues and serve as a model for land management agencies and educational institutions.
- Increasing communication and outreach to underserved communities or other resources to promote parks and other public spaces as resources for health.

The following principles will ensure the health impacts of climate change and racial inequity are considered in the daily operational activities of the public health community across the NPS. These principles will allow operational decisions and actions to leverage opportunities to both mitigate potentially harmful health impacts as well as prevent them from materializing in the future.

Guiding Principles

- We use the best available science to influence decisions that affect public health.
- We promote the power of parks for health to all by increasing understanding of inequity's harmful health impacts and promoting diversity in our workforce and visitors.
- We promote nature-based and other solutions to reversing climate change and its human health impacts, and work to advance climate justice and equity through these efforts.
- We use a holistic, One Health approach to protect and promote the health of humans, animals, and the environment that we share.
- We incorporate equity and climate change adaptation and mitigation into our daily work and tasks.

The Path to Action

Addressing the health impacts of climate change and racial inequities is a long-term process requiring sustained attention and effort. OPH has identified several focal points for its efforts in the short-term and will continue to cultivate our plan to address these issues long into the future. Current arenas for action include the following:

Awareness & Education

1. OPH will provide education for members of the NPS public health community to increase their understanding of these issues and build their capabilities to address them in daily operations.
 - a. OPH will seek and participate in training programs offered internally (e.g. NPS Climate Change Response Program-NRSS) and externally (e.g. [HHS](#), EPA, CDC, NIH, [Project ECHO](#) and others) to develop our climate and equity literacy. As part of the NPS-PHS [centennial celebration](#) provided training on climate and equity topics to all members of the NPS public health community and will continue this effort.

- b. OPH will help educate NPS staff on how climate hazards specifically impact health so NPS can understand the risks and make more informed operational decisions.
 - c. We will seek to implement opportunities for servicewide education and discussion on climate and equity.
 - d. OPH will utilize the [Twenty & Odd](#) learning material to engage conversations around diversity and inclusion.
 - e. We will build our knowledge and capacity through partnerships with other organizations already working in this space.
2. OPH will advocate for the inclusion of health in the NPS' interpretation of climate and social justice narratives to educate park visitors and the general public.
3. OPH will explore expansion opportunities for the *Your Park Your Health* Program to include the Servicewide implementation of "Hikes for Health and Healing" and [Twenty & Odd](#) as vehicles for catalyzing conversations on racial and economic inequality, climate equity and their connection to health.

Policy & Planning

4. OPH will advocate for the inclusion of health considerations in Departmental and NPS policy.
5. OPH will advocate for the inclusion of Servicewide actions to prevent and mitigate the harmful health impacts of climate change and racial inequities in Departmental and NPS planning.
 - a. OPH will provide input into the revision of the 2010 NPS Climate Change Response Strategy and the 2014 Climate Action Plan.
 - b. OPH will provide input into the Green Parks Plan
 - c. OPH will explore where it can contribute to America 250 initiatives and identify opportunities to align with the Safety, Health and Wellness Council.
 - d. OPH will investigate arenas in which to incorporate planning considerations based on the health impacts of climate change and racial inequities, such as the NPS Investment Review Board, the NPS response to the Great American Outdoors Act, and the Climate Friendly Parks Program.
 - e. OPH will include this guidance in NPS policy, DO83A and DO83B.

Public Health Operations

6. OPH will create a new collateral position within the Field Service Branch leadership for a team lead to serve as the Sustainability Engineer to provide expertise, training and leadership on sustainable engineering solutions for the work our Office does to support the entire Service.

7. OPH will quantify greenhouse gas emissions of public health operations and develop a plan to reduce them.
8. All members of the NPS public health community will seek solutions to public health issues that reduce climate change and inequity impacts on the NPS workforce, visitors, and the general public.
 - a. We will identify and recommend sustainable solutions into the work that we do that influences park operations.
 - b. We will become more literate in equity and climate impacts on health and engage and lead conversations around the Service.
 - c. We will identify opportunities in our programs to ensure they advance equity.
9. OPH will proactively seek to increase the diversity of its workforce.
10. OPH will seek training opportunities for staff to improve their awareness of and literacy in climate and equity, which may include implicit bias, carbon footprint assessments and sustainable operations trainings, land acknowledgment, and facilitated discussions including Power of Parks for Health roundtables and book clubs.
11. OPH will seek opportunities to enhance its capacity and expertise by bringing in fellows, details and others with expertise in the subject matter.

References

1. *BMJ* 2019;365:l2371.
2. *Climate Risk Management* 2020;28: 100211.
3. *Environmental Research Letters* 2018;13: 104001.
4. NPCA, *Polluted Parks: How America is Failing to Protect Our National Parks, People and Planet from Air Pollution*, 2019
5. *Lancet* 2017;389(10077):1453-1463.
6. *J Rural Studies* 2019;68:319-335.
7. National Academies of Sciences, Engineering, and Medicine. 2017. doi: 10.17226/24624.
8. United Nations Working Papers. 2017; ST/ESA/2017/DWP/152
9. *Nat. Resources J* 2002;42:723-763.
10. Center for American Progress:
<https://www.americanprogress.org/issues/green/reports/2020/07/21/487787/the-nature-gap/>.
11. *Health Promotion International* 2005;21:45-54.
12. *BMC* 2019;19:1079.
13. *Phil. Trans. R. Soc. B* 2020; 375:20190120.
14. *Health Affairs* 2020;39: <https://doi.org/10.1377/hlthaff.2020.01125>.
15. *Rural Sociol* 2007;72:185–214.
16. Yale Program on Climate Change Communication. 2020. Yale University and George Mason University. New Haven, CT.