The National Park Service has been around for a long time. In fact, 2016 is the agency’s 100th birthday. But a century is hardly any time at all when compared to the age of the Earth, which is 4.6 billion years old. Our parks preserve special parts of the natural world, billions of years in the making, for the enjoyment of people today and in future generations.

For parks and people, this moment in history is crucial, because the climate is changing at an accelerated rate due to air pollution from human activities. Flip this poster over to learn about how we know this, what is happening in parks, and what you can do to help.
Climate Change is In the Air

Weather describes day-to-day conditions of the atmosphere, such as temperature, precipitation, humidity, and winds. “Climate” is the average of these weather conditions over long periods of time. Climate change describes overall trends; it does not predict the exact rate at which temperatures will rise or mean that there will never be localized cold snaps. One cold winter does not by itself change the climate.

Climate scientists tell us that as part of climate change some areas can expect more severe storms along with more flooding, more drought, and extended heat waves. Both climate change and extreme weather events are concerns for national parks.

WHAT’S IN THE AIR UP THERE?

Human activities such as burning fossil fuels for power and transportation, as well as other industrial, commercial, and agricultural processes, create air pollutants. These pollutants can make it difficult for people to breathe, see distant views, and enjoy nature. In addition, some air pollutants, called greenhouse gases, are rapidly warming the planet.

When sunlight reaches Earth, some of the heat reflects commercial, and agricultural processes, create air gases, are rapidly warming the planet.

2

Nitrous oxide (N₂O) is commonly released from agricultural fields when fertilizer is added and from automobiles through fuel combustion. N₂O has 300 times the global warming impact of carbon dioxide because it stays in the atmosphere for over 100 years.

Methane (CH₄) is released primarily (60 percent) from natural gas and oil production, as well as livestock: burps and farts. Methane is 25 times more powerful than carbon dioxide for warming the planet.

Carbon dioxide (CO₂) is the most common greenhouse gas. Electricity and transportation are responsible for over two-thirds of all human-created carbon dioxide.

WHAT ARE NATIONAL PARKS DOING?

National parks are doing their part to reduce air pollution, including greenhouse gases, by investing in alternative energy and increasing efficiencies in transportation, electrical power, and recycling.

Because most pollution in national parks comes from outside park boundaries, the National Park Service partners with air regulators, developers, industry, agricultural producers, and other stakeholders to reduce air pollution. This can help both slow climate change and benefit clean air and clear views for parks and nearby communities.

WHAT CAN YOU DO?

Take actions that will have multiple benefits. For example, taking a bike ride instead of driving your car helps reduce greenhouse gases. Whenever you use gasoline in a car, or natural gas and electricity for heating, cooling, and light, you contribute to air pollution. Save energy, reduce waste, and save money.

• Drive less. Combine trips, carpool, ride your bike, or take the bus or park shuttles.
• Reduce power. Use CFL or LED light bulbs, and programmable thermostat to reduce energy used.
• Be “food smart” Support local agriculture, understand the environmental impacts of food choices, and waste less food.
• Reduce, reuse, recycle. It takes energy to make and sell the products we use.

WHAT IS HAPPENING?

Life can generally cope well with gradual change. However, in the past few decades scientists have observed changes in greenhouse gas levels and temperature that would normally occur over tens of thousands to millions of years. These “super-fast” changes challenge the ability of living things—plants, animals, and humans—to adapt and ultimately survive rapidly shifting environmental conditions.

So far, the most dramatic evidence of a changing climate has been seen in parks closest to the north and south poles, along beaches, and in the high mountains. Many fragile ecosystems and cultural resources in these places are in danger of disappearing forever.

For example:

• The alpine glaciers in Montana’s Glacier National Park are disappearing. In 1990, there were 150 glaciers in the park, but now only 26 are left. Scientists predict that these glaciers will be completely gone by 2030.

• Plants like Joshua trees, for which Joshua Tree National Park in California was named, can survive only in a narrow temperature zone. If current trends of changing temperatures continue, one day there may be no Joshua trees in Joshua Tree National Park.

• Along the coast of Everglades National Park, rising sea level and extreme weather events are quickly eroding archeological sites left behind by some of Florida’s earliest cultures.

• As grizzly bears in Yellowstone National Park fatten up for winter, they rely on nutrient-rich whitebark pine seeds. However, bark beetles which can survive warmer winters are killing whitebark pines across North America and reducing this critical food source. This lowers the grizzlies’ survival rates and can increase bear-human conflicts as bears search for alternate foods.

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