



Birds and Climate Change

Over the past forty years, nearly sixty percent of avian species that winter in North America have moved northward or inland – but can't always find suitable habitat.

State



Washington's IBAs

Our Important Bird Areas provide healthy habitat for most all of our birds – and are especially vital to our more than 100 species at greatest risk.



Birds on the Brink

We are losing our birds because they are losing their habitat – and Important Bird Areas can help save them.

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Our Vulnerable Birds

Now disappearing at a location near you: How climate change is increasing threats our birds face in Washington.



Why Birds Matter

Birds bring us many benefits – environmental, economic, and aesthetic. We would be far poorer without them.

Birds



What You Can Do

We can – and must – act now to help protect our birds and, ultimately, ourselves.

Climate Change Changes Our Birds

Like canaries in coal mines, birds across America are giving us early warning signs of what climate change portends for our landscapes and, ultimately, ourselves.

Over the past forty years, nearly sixty percent of avian species that winter in North America have moved northward or inland – sometimes by hundreds of miles – most likely in response to climate change.

Climate change models warn us that changes in precipitation and temperature will modify entire ecosystems. What was once important wildlife habitat may become too hot or too cold, too dry or too wet, inundated by seawater, or negatively altered by wildfire patterns – and no longer able to support flora and fauna necessary to support current resident or migratory bird populations. Wildlife that depends on this habitat will need to shift its range – or not survive.

As documented in Audubon Washington's first *State of the Birds* report in 2004, current threats to our feathered residents and visitors continue to be our state's growing human population, and fragmentation and alteration of our major habitats. This report focuses on new risks posed by climate change to avian populations in Washington's 74 *Important Bird Areas*, internationally recognized places important to birds during some part of their life cycles.

Projections for the Pacific Northwest suggest the region will lose 32 percent of our bird species, but will gain some new ones as they move into the rearranged climate and habitats of the region – resulting in a net loss of 16 percent of our total number of bird species.

The risk to birds is minimized where they can easily move into new satisfactory areas. But what happens when suitable habitat is not available – either because it has been substantially altered by humans or climate change? We humans, who also need healthy habitat conditions, would do well to pay attention to what the birds are showing us.



*American Goldfinch,
Washington's State Bird*

Washington's Important Bird Areas

Our Important Bird Areas (IBAs) provide healthy habitat for most of Washington's 346 annually recorded bird species, and are especially vital to our more than 100 species at greatest risk.

The worldwide IBA program identifies landscapes that support birds in some part of their life cycle: breeding, wintering, feeding, or migrating. The program also develops collaborative, grassroots action to safeguard these sites.

Many of Washington's 74 Important Bird Areas are vital stops along the Pacific Flyway, one of the Western Hemisphere's biannual migration routes. In 2006 Washington scientists joined the vanguard of a new effort to identify Pacific Marine IBAs, the complex and critical network of offshore sites for birds from Barrow, Alaska, to Baja, Mexico.



Washington's Important Bird Areas comprise our diverse natural habitats from shrub-steppe to mountains, forests to shores, and the open Pacific Ocean.

Birds on the Brink

Why are we losing our birds?

The growth of human population and loss of natural habitat have already put one in eight of the world's bird species at risk of extinction. Now climate change is adding to those twin threats.

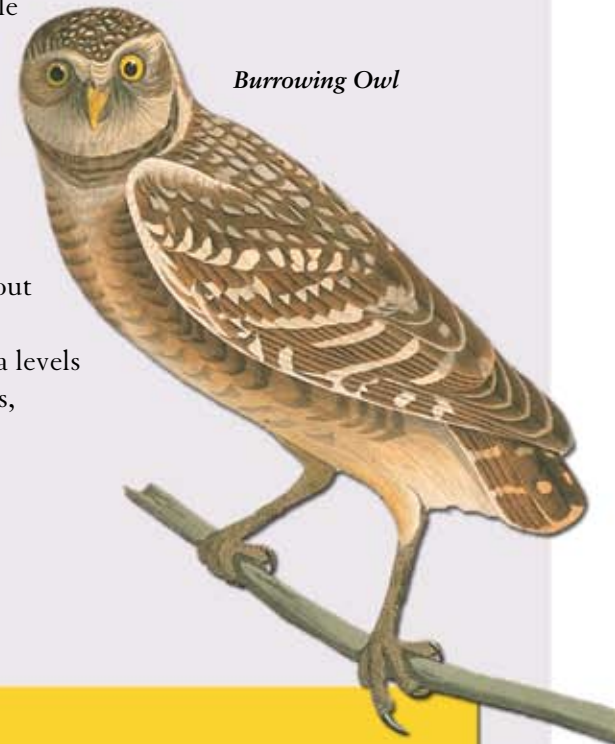
Birds and other wildlife increasingly depend on "islands" of suitable native habitat.

Not only are these islands of native habitat growing smaller and more isolated, but – because of climate change – they increasingly may not meet the needs of the flora and fauna that currently depend on them. So birds will have to shift their ranges to find the right food, shelter, temperature, and nesting conditions.

But trying to shift ranges can be difficult. If the habitat becomes unsuitable in protected or designated places, like Important Bird Areas, their boundaries aren't designed to shift or expand to encompass new, healthier habitat. As birds move into new areas, they run into bird species already living there, resulting in new interaction and competition. And sometimes, there's just no "new" habitat available.

Birds and wildlife most at risk are those species that depend on specific types of habitat. For example, birds that depend on alpine areas will run out of "up" as temperatures warm mountainsides, melt glaciers, and alter vegetation. Birds that depend on ocean beaches will find only waves as sea levels rise. Birds that depend on shrub-steppe will find burned landscape, weeds, erosion, and reduced water quality as wildfire patterns change.

And more of our birds come closer to the brink.



Burrowing Owl

What constitutes an Important Bird Area?

To be recognized as an IBA, a site must support species that are vulnerable due to one or more of the following conditions:

- They are classified as "species of conservation concern" because their populations are extremely small, isolated, and or declining rapidly on a local, regional or global basis.
- They are restricted to a specific region or biome.
- They regularly congregate in exceptionally large numbers for breeding, wintering, or migrating.

IBAs provide an effective and convenient method for setting conservation priorities, since these sites are often small enough to be preserved in their entirety, and often already part of a protected-area network.

Since BirdLife International began the program in Europe in 1981, more than 8,000 Important Bird Areas have been identified by local conservationists in 178 countries. In 1995,

Audubon started the IBA program in the United States. To date, 48 states have identified 2,100 IBAs covering 300 million acres. More than 330 of this country's IBAs – including six in Washington – are prioritized as globally significant.

Audubon's professional and citizen scientists work in partnership with members of other nongovernmental organizations, public agency staff, and private landowners to develop and implement conservation strategies for Important Bird Areas. Designed to minimize the effects of climate change and habitat loss on birds in particular and biodiversity overall, these conservation strategies depend on the efforts of local people who volunteer their time and effort to monitor and protect the birds' important areas.

Why Birds Matter

Birds tell us about the health of our communities. Ultimately, what happens to birds happens to us. Wild birds reflect the health of the land, air, and water upon which we humans also depend.

Birds are one of the best-documented animal groups in the world and one of the best available subjects for tracking the trends of the habitats that support life on earth.

Our planet is home to nearly 10,000 species of birds. About 1,400 species inhabit the North American landscape from southern Mexico to Alaska and Canada, with many species present in more than one country as residents or migrants. Washington lies squarely on the Pacific Flyway migration route connecting South America and the Arctic.

Birds protect crops and gardens. Humans rely on birds for such services as pest control and keeping natural systems in balance. By eating insects, weed seeds, and nuisance rodents, birds provide us with free ecological services.

Birds contribute to healthy, prosperous communities. Bird watching is the fastest growing form of outdoor recreation in the United States with more than 46 million Americans spending upwards of \$32 billion on the pastime annually.

Birds attract money to Washington. Our bird habitats range from deep marine waters off the continental shelf to high alpine meadows, from soggy coastal rainforests to arid interior deserts. Our climate, location, and landscapes offer a remarkable variety of environments for our birds – more than 60 percent of which are found on both sides of the Cascade Mountains.

A Washington Department of Fish and Wildlife study shows that wildlife watching annually provides more than 22,000 jobs and brings in hundreds of millions of dollars to the state. Audubon's popular Great Washington State Birding Trail draws birders and their dollars to rural communities, inspiring local habitat conservation.

Birds bring joy and wonder to our world. What would our landscapes be without bright feathers and melodic songs? Birds populate our waters, fields, and forests as well as our books, plays, and paintings. They awaken the poet, artist, and philosopher in each of us, and we celebrate their beauty and power of flight. They help our spirits soar, our visions broaden – and they renew our natural sense of joy.



Sharp-shinned Hawk

What You Can Do

The United Nation's *Intergovernmental Panel on Climate Change* says that industrialized countries must achieve an 80-to-95 percent reduction in greenhouse gas emissions by 2050 – if life on earth, as we know it today, is to continue. Yes, this is a dire warning. And yes, we CAN take heed and take action to make a difference.



Individually

- Explore and discover the out-of-doors. To truly value the natural world is to appreciate our place in it and understand our dependence on it.
- Know your carbon footprint – and take steps to reduce it. Go to *Safe Climate* or *Global Footprint Network* to determine your personal contribution to climate change.
- When shopping, always ask yourself, “Do I really need this? Does the earth really need this?” You’ll not only help reduce carbon emissions but will probably save money as well.

At Home

- Become a “locavore.” Eat foods produced locally to reduce transportation fuels.
- Energy-proof your home. Many changes are easy, quick, and inexpensive, and will save money. See Audubon’s action list. Plant trees. An average tree absorbs ten pounds of air-borne pollutants annually. Buy forest-certified lumber to support bird-friendly, sustainably managed forests.
- Recycle and reuse products used in everyday life.

In Your Community

- Become a citizen-scientist to help monitor the health of our plants, animals, and communities.
- Travel wisely: Carpool, use the bus and train, support better public transportation and more pedestrian- and bicycle-friendly neighborhoods. Make your next car a low-emission, high-mileage model.
- Green up your workplace, where 40% of greenhouse gas emissions arise. Turn off lights, electronics at end of work day.

Statewide

- Vacation closer to home! Visit sites along the *Great Washington State Birding Trail*.
- Carpool with friends to go birding.
- Buy clean/alternative/renewable energy from your power utility. The greater the consumer demand, the more utilities will invest more in non-fossil fuel sources. Power plants are the single largest source of heat-trapping gases in the United States.
- Urge our elected officials to act on climate change issues and support the *Priorities for a Healthy Washington*.

Nationally and Internationally

- Stay informed by Audubon and other organizations; give your time and resources to the national and global effort.
- Become an Audubon activist and urge elected officials to make global warming a top priority by signing the Audubon petition.
- Support the preservation and stewardship of natural areas around the world to help moderate the effects of climate change.



About this Report

To evaluate the potential impacts of climate change on Washington's avifauna, Audubon Washington science staff conducted an extensive evaluation of published literature on climate change. But we must add an important caveat: even the most current literature may already be out of date as it rolls off the press because human understanding of climate change and its implications is evolving rapidly.

Audubon Washington synthesized the most current global and national information to focus on our small but relevant corner of the world – Washington state. Why relevant? Because our boundaries include both interior and coastal landscapes, because of our location on the Pacific Flyway, and because these are our habitats and our birds!

This publication is an executive summary of the full report on our findings. The full report, along with a complete list of references, is available on our web site at wa.audubon.org.

Key sources for further reading include the following six publications:

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The mission of Audubon is to conserve and restore natural ecosystems – focusing on birds, other wildlife, and their habitat – for the benefit of humanity and the earth's biological diversity.

Audubon Washington, a state field office of the National Audubon Society, works closely with our 26 local Audubon societies to conserve and restore natural ecosystems – focusing on birds, other wildlife, and their habitats – for the benefit of humanity and the earth's biological diversity.

Get in touch with the Audubon chapter nearest you to discover, enjoy, and protect our indispensable birds.



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