executive summary

Humans are altering the earth's atmosphere, causing changes in global climate that will affect our environment and communities for centuries to come. There are many indications that these changes are already underway: temperatures are increasing, glaciers are retreating, snowpack is disappearing, spring is arriving earlier, the ranges of plants and animals are shifting, and seas are rising. Within a handful of decades, climate in many parts of the United States is expected to be significantly warmer than even the warmest years of the 20th century, increasing the risk of drought, flooding, forest fires, disease, and other impacts across many regions.

Public decision-makers have a critical opportunity – and a need – to start preparing today for the impacts of climate change, even as we collectively continue the important work of reducing current and future greenhouse gas emissions. If we wait until climate change impacts are clear to develop preparedness plans, we risk being poorly equipped to manage the economic and ecological consequences, and to take advantage of any potential benefits.

Preparing for climate change is not a "one size fits all" process. Just as the impacts of climate change will vary from place to place, the combination of institutions and legal and political tools available to public decision-makers are unique from region to region. Preparedness actions will need to be tailored to the circumstances of different communities. It is therefore necessary that local, regional, and state government decision-makers take an active role in preparing for climate change, because it is in their jurisdictions that climate change impacts are felt and understood most clearly.

The purpose of *Preparing for Climate Change: A Guidebook for Local, Regional, and State Governments* is to help you as a decision-maker in a local, regional, or state government prepare for climate change by recommending a detailed, easy-to-understand process for climate change preparedness based on familiar resources and tools. The content of this guidebook was developed

from reviews of scientific literature, the Climate Impacts Group's experience working with U.S. Pacific Northwest decision-makers on preparing for climate change, and King County, Washington's experience developing and implementing a climate change preparedness plan. ICLEI – Local Governments for Sustainability has also provided guidance based on its Climate Resilient Communities Program, its Five Milestones process for climate change adaptation, and its extensive experience with local and regional governments.

The guidebook begins with an introduction (Chapter 1) from King County Executive Ron Sims, which highlights both the urgent responsibility and opportunity for public decision-makers to prepare for climate change now and in the coming decades. Chapter 2 provides a short overview of the science of global climate change and its projected national and regional consequences. Chapter 3 offers reasons why local, regional, and state decision-makers should prepare proactively for the impacts of climate change to their communities.

This guidebook is for you if your primary area of concern includes the following:

- ensuring safe and reliable public services
- ensuring environmental quality or compliance
- economic development
- land use planning and zoning
- fiscal responsibility and risk management
- capital investments
- · emergency response
- water resources management
- public health
- coastal zone management
- port management
- ecosystem management
- transportation infrastructure
- simply making sure that your community is planning for climate change

Chapter 4 through 7 provide suggestions on the critical steps to take to initiate your climate resiliency effort. Specifically, these chapters recommend how to:

- scope the climate change impacts to your major *sectors* (Chapter 4)
- build and maintain support among your stakeholders to prepare for climate change (Chapter 5)
- build your climate change preparedness team (Chapter 6)
- identify your *planning areas* relevant to climate change impacts (Chapter 7).

Words in **bold italics** indicate the first use of key terms defined in the "Key Terms" section on pages 5–6.

At the completion of these chapters, you should have: an understanding of climate change impacts to your community, an established climate change preparedness team, and sufficient organizational and political support to conduct your climate resiliency study. You and your team should also have a list of planning areas relevant to climate change impacts on the major sectors in your community.

Chapter 8 and Chapter 9 next offer recommendations on how to identify your *priority planning areas* for action, including how to:

- conduct a *vulnerability assessment* based on climate change projections for your region, the sensitivity of your planning areas to climate change impacts, and the ability of your community to adapt to climate change impacts (Chapter 8);
- conduct a *risk assessment* based on the consequences, magnitude, and probability of climate change impacts, as well as on an evaluation of risk tolerance and community values (Chapter 9).

At the completion of these chapters, your team should have a list of its priority planning areas to focus on for the next stage of preparedness planning.

Chapter 10 guides development of your climate change plan for your identified priority planning areas, including how to:

- establish a vision and guiding principles for a *climate resilient community*
- set *preparedness goals* in each of your priority planning areas based on these guiding principles
- develop, select, and prioritize possible *preparedness actions*.

At the completion of these chapters, your team should be able to publish a cohesive climate change preparedness plan based on the series of preparedness goals and actions developed in your selected priority planning areas. Chapter 11 then guides you on implementing your climate change preparedness plan, including how to:

- identify a list of important *implementation tools*
- develop an understanding of how to manage risk and uncertainty in your planning effort.

Chapter 12 guides you on measuring your progress and updating your plans, including how to:

- develop *measures of resilience*, and use these to track the results of your actions over time
- review your assumptions and other essential information to ensure that your work remains relevant to your community's most salient climate change impacts
- update your plans regularly.

At the close of the chapter, you should have a list of measures of resilience for your team's work and an understanding of how and when to update your plan. Chapter 13 provides final thoughts on how to prepare for climate change effectively and establish a lasting positive influence.

Finally, the appendices provide valuable supporting information, including: summaries of observed changes in the United States; a science primer of climate change impacts; summaries from the U.S. National Assessment Synthesis Team's reports on climate change impacts in regions and native homelands of the United States; and a current list of additional resources on climate change science, impacts, and preparedness.

For governments intending to mark their progress in use of this guidebook, a checklist that captures the major milestones of the process can be found at the front of this guidebook. In general, the steps and milestones of this checklist are consistent with the guidebook's chapter headings, as well as the Five Milestones process of ICLEI - Local Governments for Sustainability's Climate Resilient Communities Program.

It is important to note that the guidebook's preparedness process can be tailored for implementation across communities, within a single community, or even within an individual agency or department in the United States or elsewhere. You may also choose to tailor the process based on your resource availability or other factors; strategies for working with limited resources are offered at various points in the guidebook. Finally, although the guidebook is written for local, regional, and state governments in the United States, the fundamental principles of the guidebook can also be applied in tribal governments, non-governmental organizations, and private sector businesses sensitive to climate variability and change.