



## Prepare for Impacts

### Objective:

Reduce climate pollution and prepare for the effects of climate change on the environment, human health, and the economy

### Strategy:

Identify and adapt to the impacts of climate change on natural systems, human health, public safety, county operations, infrastructure, and the economy

### Why is this strategy important?

According to the Intergovernmental Panel on Climate Change, the National Academies, the University of Washington's Climate Impacts Group and other scientific bodies, recent warming of the climate system is "unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global mean sea level."

There is broad scientific consensus that human activities are the most significant factor in the increase in concentrations of atmospheric greenhouse gases such as carbon dioxide and methane. These gases are having an acute impact on Earth's climate because they trap infrared radiation that would otherwise escape to space. On a global scale, impacts include rising temperatures and sea levels, melting ice caps, diminished coral reefs and fisheries, the spread of vector-borne diseases, and more severe and frequent droughts and floods.

King County faces its own set of challenges related to climate change. Locally, climate change affects snowpack in the Cascade Mountains, stream flows, water supplies and sea level--which in turn affect agriculture, stormwater, wastewater, wildfire risk, forest health, infrastructure and property, hydro-power production, human health, salmon and biodiversity, and possibly other sectors that we may not yet foresee. These changes are resulting in diverse and important impacts to the local environment, human health and the economy.

### How is our performance?

King County has identified key local environmental, human health, and economic impacts from climate change and is monitoring those areas. Additionally, in 2011, King County implemented an Environmental Behavior survey that included climate change impacts and behaviors for the first time. Data from this survey will become a baseline for measuring our performance in helping the community identify and adapt to the impacts of climate change.

### Environmental Impacts of Climate Change

Important climate change related shifts in King County's physical environment have been observed in

recent years. King County is tracking these changes in the local environment to help assess the severity of local climate-influenced impacts. Increasing air and water temperatures, acidifying marine waters, increasing fall flooding, rising sea levels, decreasing snow pack, and decreasing summertime river flows are examples of changes that have been observed in King County; these trends are consistent with expected and projected local climate change impacts, and many other impacts are also occurring.

## **Human Health and Economic Impacts of Climate Change**

Climate change will have long-term consequences for both public health and the economy in King County; some of these impacts are already occurring. King County is tracking human health and economic impact indicators that are showing improvements in air quality but also increasing natural disasters, decreasing salmon populations, and negative heat-related impacts to human health. These observed changes are consistent with the projected local impacts of climate change, and many other impacts are also likely.

## **Environmental Behavior Survey**

Several questions about climate change were included in King County's 2011 Environmental Behavior Survey. One question was "to what extent have concerns about climate change impacts such as increased flood risk, increased severe weather events, or summertime drought influenced you to take steps to protect your assets?" This included whether households had taken any actions to protect their trees, forest areas, yard, home or other assets. 48 percent of respondents indicated that they had done things or were considering steps while 44 percent said they had not done anything and were not considering taking steps. This survey also developed a "Climate Change Index" which indicates that for many people, concerns about climate change seem to influence their environmental behaviors (more concern = more proactive behavior).

## **What can you do?**

### **Individual Actions to Reduce Climate Change**

### **Business Actions to Reduce Climate Change**

### **Forest and Land Management Actions**

## **Moving forward**

As highlighted in the 2012 King County Strategic Climate Action Plan (SCAP), King County is committed to developing climate change impacts preparedness plans. In collaboration with the local scientific community, and as part of the work leading into the 2015 SCAP update, King County will develop standard local climate change impacts assumptions to be used by King County agencies in their planning efforts. Additionally, King County will develop an inventory of key King County owned facilities and natural resource assets and programs vulnerable to climate change related risks (such as flooding, drought, sea level rise) and plans for reducing likely impacts. To accomplish this work, King County will explore and pursue partnerships with the City of Seattle and other King County cities. King County will track and monitor the percent of facilities that have assessed and have addressed potential climate change impacts.

King County's Environmental Behavior Survey will be implemented in future years to track the proportion of residents taking steps to adapt to climate change impacts.

## Related Links

[2011 King County Environmental Behavior Survey](#)

[King County Environmental Impacts of Climate Change](#)

[King County Human Health and Economic Impacts of Climate Change](#)

[King County Climate Change Response](#)

## Technical Notes

Environmental Behavior Survey: Washington State University's Social and Economic Science Research Center (SESRC) collaborated with the King County Department of Natural Resources and Parks to design and conduct a telephone and web survey of households in King County, WA about their environmental behaviors. Interviewing for this survey began on January 19, 2011 and was concluded on March 7, 2011, with a telephone sample of 12,441 households in King County, Washington. A web version of the survey was also available. Letters were mailed to an address based sample of 9,341 households, inviting them to participate in the survey online. A total of 1,816 (1,209 phone, 607 web) interviews were completed from a combined starting sample of 21,782 King County households. The interview averaged twenty-three minutes in length. SESRC used a computer assisted telephone interview (CATI) system for the telephone survey. Respondents received an average of four call attempts. A web survey was used to provide greater coverage of King County households. Letters were sent to an address based sample inviting households to participate in the survey.

## Charts and Maps

**King County 2011 Environmental Behavior Survey  
Climate Change Index**

