strategic CLIMATE ACTION PLAN

November 2015

King County

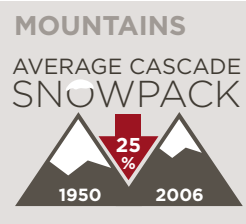
INTRODUCTION

CLIMATE CHANGE IN KING COUNTY

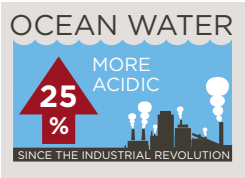
Across the globe, there is overwhelming evidence that increases in carbon dioxide and other GHGs in the atmosphere are causing the climate to change. The year 2014 was the warmest on record since 1880, and the ten warmest years on record have occurred since 2000. Climate change is causing more heat waves, more extreme weather events, sea levels to rise, glaciers to disappear, the ocean to acidify, species to go extinct or change their range, and rainfall and storm patterns to change in major ways. These changes translate into economic, public health and safety, national security and environmental impacts that affect people and communities in diverse ways.

Combatting climate change is the paramount challenge of this generation and has far-reaching and fundamental consequences for King County's economy, environment, and public health and safety.

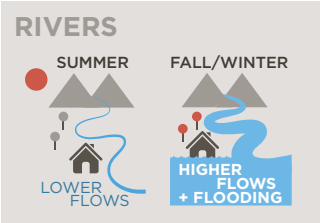
King County is already experiencing the impacts of climate change**:** warming temperatures, acidifying marine waters, rising seas, increasing flooding risk, decreasing mountain snowpack, and less water in the summer. For example:



- **Mountains:** In the Cascade Mountain Range snowpack has decreased 25 percent from the 1950s to the 2000s, with significant implications for water supplies and recreation.



- **Oceans:** Puget Sound has risen more than eight inches over the last century, and the rate of rise has increased in recent years. Across the globe and in the Puget Sound, marine waters are becoming more acidic, with potentially severe impacts to ocean ecosystems.



- **Rivers:** In 2012, more than 80 percent of surveyed streams and rivers in King County exceeded the state temperature standard for protection of salmon habitat. Over the last 40 years, all major rivers in King County have shown more flow and increased flooding risk during the fall and significantly less water in rivers during summer.

Climate change will have long-term consequences for the economy, the environment, and public health and safety in King County. Impacts of a changing climate will be experienced differently by King County residents, influenced by factors such as income, age, health, and where they live. Climate change will also affect resource-based economies like agriculture and forestry through changes in precipitation, water supplies, and pests, and will affect biodiversity of plants and animals as habitat conditions change.

The County is tracking human health and economic impact indicators that are showing increasing frequency of natural disasters, decreasing salmon populations, increasing incidence of forest fires, and more heat-related impacts to human health. These observed changes are consistent with the projected local impacts of climate change made by the University of Washington Climate Impacts Group and other leading scientists.

INTRODUCTION

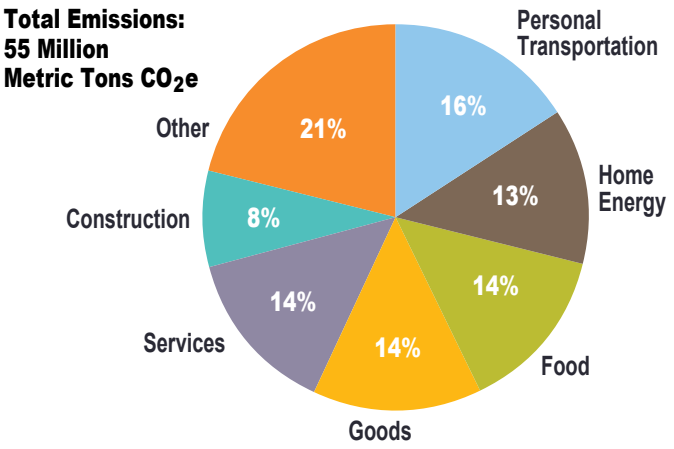
GREENHOUSE GAS EMISSIONS IN KING COUNTY

Community Sources

In 2012, King County published the findings from a comprehensive assessment of local sources of GHG emissions. The study, Greenhouse Gas Emissions in King County, was conducted in partnership with the Puget Sound Clean Air Agency, the City of Seattle, and the U.S. Department of Energy. It quantified all sources of GHG emissions within the county's geographic borders. It also estimated emissions associated with local consumption of food, goods, and services regardless of where these commodities were produced.

This Consumption-Based Inventory accounted for GHG emissions associated with local activities, such as driving or heating a home, as well as local consumption, such as the emissions associated with producing, transporting and consuming food grown outside the region but eaten locally. King County's Consumption-Based Inventory is the most complete assessment of communitywide GHG to date.

COMMUNITY CONSUMPTION BASED - GHG EMISSIONS

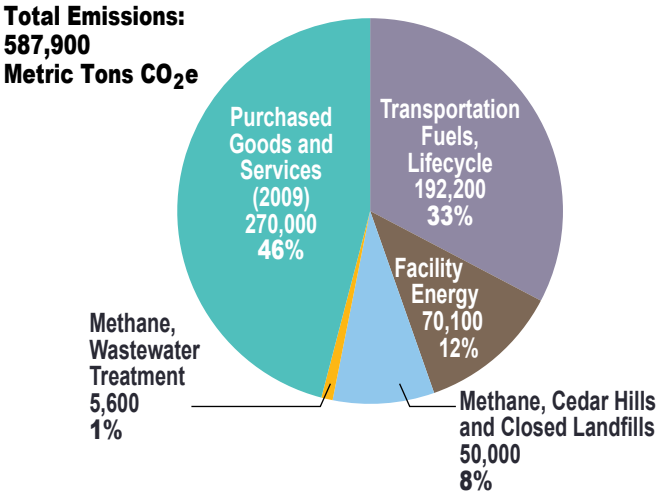


*From **Greenhouse Gas Emissions in King County, 2012.***

Government Operations Sources

Major sources of GHG emissions from King County government operations include those from the combustion of diesel and gasoline fuel by transit buses and fleet vehicles, methane from landfills, electricity used in buildings and for wastewater treatment, and the production, use, and disposal of government-purchased goods and services associated with capital and operational practices.

COUNTY OPERATIONS - GHG EMISSIONS
(2014 UNLESS NOTED)



*From **Greenhouse Gas Emissions in King County, 2012.***
GHG emissions from King County government operations are roughly one percent of the community consumption based emissions total.

INTRODUCTION

The major sources of GHG emissions at the communitywide scale and from government operations align with the 2015 Strategic Climate Action Plan (SCAP) goal areas as outlined below.

Goal Area 1: Transportation and Land Use

- Personal Transportation (Countywide)
- Fossil Fuels Used in Vehicles (County Operations)

Goal Area 2: Buildings and Facilities Energy

- Home Energy and Construction (Countywide)
- Fossil Fuels Used in Facilities and Infrastructure (County Operations)

Goal Area 3: Green Building

- Home Energy and Construction (Countywide)
- Fossil Fuels Used in Facilities and Infrastructure (County Operations)

Goal Area 4: Consumption and Materials Management

- Goods and Services (Countywide)
- Purchasing, Methane from Landfills and Wastewater Facilities (County Operations)

Goal Area 5: Forests and Agriculture

- Food (Countywide)
- Forest Carbon Storage (GHG offset) (Countywide, County Operations)

ABOUT THE PLAN

Authority and Policy Guidance

Climate action, both to reduce GHG emissions and prepare for the impacts of climate change, is a long-standing and central priority for King County, as reflected in the County's overall Strategic Plan, Comprehensive Plan, and 2010 Energy Plan. King County's 2012 Strategic Climate Action Plan (SCAP) was developed through close collaboration between the Executive and Council and was unanimously adopted by the Council in December 2012. A companion Ordinance 17270 called for the SCAP to be updated by June 29, 2015, to be integrated with the Energy Plan, and to build on additional community engagement.

In January 2013, recognizing that the region was not on track to achieve significant reductions in GHG emissions, the King County Executive outlined additional climate priorities building on and implementing the 2012 SCAP, with a focus on collaborating with cities to develop a shared climate target and action commitments.

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Audit of the 2012 SCAP

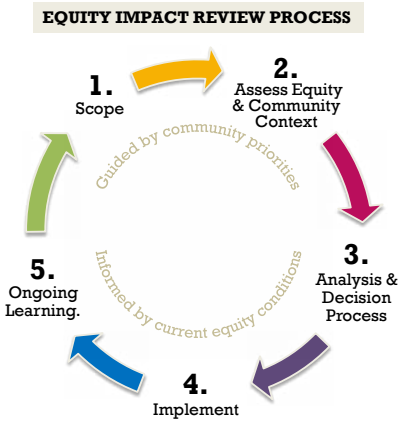
In 2014, the King County Auditor's Office (KCAO) completed a Performance Audit of the 2012 SCAP. The KCAO found that King County is a national leader in responding to climate change and made four key findings to further build on this leadership. These actions have been acted on through the 2015 SCAP. However, it will take continuing work beyond the 2015 SCAP to follow through on recommendations to better engage the King County community, quantify the GHG emissions reduction benefits of County climate commitments, and conduct and use cost-benefit and cost-effectiveness analyses to inform the County's climate work.

Key findings of the KCAO's 2014 audit included:

- The County Executive should ensure that the SCAP update and its subsequent implementation and monitoring are informed by input from a broad representation of community stakeholders in King County.
- The 2015 SCAP should establish explicit, and whenever possible, quantifiable connections between the overarching climate goals and specific strategies and actions.
- The County Executive should ensure that: (a) the 2015 SCAP incorporates verifiable economic analysis of the cost-effectiveness of current and potential actions to reach SCAP targets, and (b) subsequent SCAP annual reports provide explicit information about progress toward the overarching climate targets and goals.
- The County Executive should ensure there is an effective management structure in place to produce the 2015 SCAP and should ensure this project team has sufficient resources and support, to the extent possible, to complete the update.

Equity and Social Justice Ordinance

Climate change will have long-term consequences for the economy, the environment, and public health and safety in King County. It is anticipated that climate change will have disproportionate impacts on some communities, including low income populations and those with existing health issues. King County's Equity and Social Justice Ordinance requires the use of the Equity Impact Review process in the development of major program and project proposals. As County departments and divisions embed climate change impact considerations throughout their services and capital projects, their decision-making will be shaped by the equity frameworks outlined in the Equity Impact Review Tool, which include Process Equity, Distributional Equity, and Cross-generational Equity.



Approach for the 2015 SCAP

Consistent with Council direction and audit findings and building on King County's commitment to equity and social justice and accountability, the 2015 SCAP is:

- **Collaborative.** This update reflects a year-long collaborative effort with cities to develop a shared GHG reduction target and map out specific pathways and actions to meet that target given the sources of GHG emissions in King County. The plan also includes additional recommendations for working at the community scale to catalyze community efforts to improve energy efficiency and produce renewable energy.
- **Strategic.** It is informed by technical assessments of what is needed to achieve community-scale GHG reduction goals and reflects assessment of where the County can have the most impact in reducing

emissions, both through its own operations and at the community scale.

- **Integrated.** It brings together climate change actions from every area of King County government and is aligned with the King County Strategic Plan, which sets the long-term goals and priorities for King County, as well as with other key guiding plans and policies. Goals, Targets, Strategies, and Priority Actions were developed by cross-department teams for each goal area. The Climate Leadership Team, with representatives of multiple departments, the Executive Office, and Budget Office, reviewed recommendations and addressed policy issues. Appendix A provides an overview of how the 2015 SCAP goal areas align with other King County plans and policies.
- **Accountable**. The plan defines performance measures and targets and identifies accountable agencies and groups for each goal area.
- **Performance-based.** Progress has been monitored and published in the **Annual Report of King County's Climate Change, Energy, Green Building and Environmental Purchasing Programs**. Progress to date is presented in this plan and was used to inform this update. Additional work is recommended to further quantify the GHG emissions reduction benefits of County climate commitments and to conduct and use cost-benefit and cost-effectiveness analyses to inform the County's climate work.
- **Reflects County Priorities for Equity and Social Justice.** This update includes a focus on identifying disproportionate impacts of climate change, making recommendations for additional collaboration with diverse communities to identify local impacts and develop local solutions. The plan also highlights co-benefits of climate actions for health, safety, mobility, and economic outcomes. Implementation of the strategies, actions, and programs outlined in this plan will occur consistent with the King County Strategic Plan and the County's Fair and Just Ordinance. King County will seek opportunities to address equity and social justice issues when making investments in climate strategies. Additionally, when evaluating climate strategies King County will consider whether there are any potential inadvertent adverse impacts of those strategies on disadvantaged communities. In considering possible adverse impacts, King County will also consider whether doing nothing to mitigate or adapt to climate change will have greater adverse impacts on low income disadvantaged populations.

King County Council Motion 14349 – 2015 SCAP Suggestions

The King County Council provided further guidance on the 2015 SCAP through Motion 14349, which was adopted in May 2015 and requested the plan:

- Include a goal and proposed timeline for eliminating coal power from the County's operational energy portfolio.
- Consider and provide an explanation for how climate-related activities and policies suggested in the motion have been modified and reflected in the plan or why they have not been included.
- Identify the five largest sources of GHG emissions within King County and specify objectives, strategies, and priority actions to reduce emissions from these sources.

In response to Council Motion 14349, **Goal Area 2: Buildings and Facilities Energy** outlines a set of ambitious renewable energy targets, including a proposed timeline to transition to GHG neutral electricity for government operations by 2025. **Appendix B** outlines how activities and suggestions in Motion 14349 are addressed in the 2015 SCAP. The introductory section **GHG Emissions in King County** identifies the five largest sources of GHG emissions in King County and outlines how they are addressed through the five GHG emission reduction goal areas of the SCAP.

INTRODUCTION

HOW TO READ THIS PLAN

The 2015 King County Strategic Climate Action Plan (SCAP) synthesizes and focuses King County government's most critical goals, strategies and actions to reduce GHG emissions and prepare for the impacts of climate change. The 2015 SCAP builds on and updates the 2012 SCAP and provides one document for County decision-makers, employees, city and business partners, and county residents to learn about the county's climate change commitments. The Action Plan is organized into two major sections: **Section 1: Reducing Greenhouse Gas Emissions and Section 2: Preparing for Climate Change Impacts.**

The Action Plan

SECTION ONE: Reducing Greenhouse Gas Emissions

The Action Plan begins with an overview of the County's climate-related **Outreach and Engagement**, and how the public, stakeholders and partners informed the 2015 SCAP and how King County will continue to involve them in the development and implementation of its climate strategies.

Section One begins with an overview and update on progress towards King County's overarching **Greenhouse Gas Emissions Reduction Targets** at the countywide and government operations scales. This section includes a subsection, **Achieving GHG Emissions Targets,** which summarizes technical analysis done in support of the 2015 SCAP, about what it will take to achieve countywide and government operations targets. The section concludes by outlining GHG emissions Measurement and Reporting commitments.

Following information about the County's overarching GHG emissions reduction targets is the **Pilot Cost Effectiveness Assessment** section, which outlines the relative costs and GHG emissions reduction benefits of a selection of 2015 SCAP actions.

The plan then outlines details of the 2015 SCAP's five goal areas that reduce GHG emissions:

- **Goal Area 1:** Transportation and Land Use
- **Goal Area 2:** Buildings and Facilities Energy
- **Goal Area 3:** Green Building
- **Goal Area 4:** Consumption and Materials Management
- **Goal Area 5:** Forests and Agriculture

Within each of these five goal areas, actions are grouped according to:

- **County Services.** How King County will deliver services that support the reduction of countywide GHG emissions. Examples include public transportation, forest stewardship, and solid waste services.
- **County Operations.** How King County government will minimize the environmental footprint of its operations. Examples include increasing the efficiency of the County's fleets and facilities.

Each Goal Area follows a consistent format:

- **Key Takeaways:** A summary of the most important information for the goal area.
- **Introduction:** Background and context.
- **Current Actions and Programs:** Highlights of recent work.
- **Goals, Strategies, Measures, Targets:** Listed for County Services and County Operations in the following format:
  - ***King County-Cities Climate Collaboration Pathways (K4C)*** - Pathways that detail what it will take to get on track to countywide GHG emissions reduction targets.
  - ***Goal*** - a high-level statement of outcomes King County will strive to achieve in support of the K4C pathways.
  - ***Category*** – a grouping of strategies with shared characteristics.
  - ***Strategy*** - a method to help achieve the overall goal.
  - ***Measure*** - data that shows progress in support of SCAP goals.
  - ***Target*** - the desired level of performance for a measure.
  - ***Status*** – recent progress and current status of for each performance measure and target.
  - ***GHG Emissions Reduction*** – current or projected GHG emissions benefits of relevant targets.
- **Priority Actions:** Key climate actions that King County agencies will take through 2020.
- **Accountable Agencies:** King County agencies responsible for implementation.

Section Two: Preparing for Climate Change Impacts

Section Two is similarly organized, but includes more program-specific information. Section Two includes:

- **Key Takeaways:** A summary of the most important information.
- **Introduction:** Background and context, including an overview of the climate change impacts in King County.
- **Overview of Climate Change Impacts**
- **Goals and Strategies:** for County Services and County Operations.
- **Program-Specific Impacts, Ongoing Responses, Priority Actions and Long Term Direction** for 12 focus areas focused on the **Built Environment and Planning and Regional Services**
- **Summary of Priority Actions:** a compilation of the priority actions to be accomplished by 2020.

INTRODUCTION

Throughout the document, these icons are repeated and indicate the following:

County Services. How King County will deliver services that support the reduction of countywide GHG emissions.

County Operations. How King County government will minimize the environmental footprint of its operations.

Aligns with commitments made in collaboration with the King County-Cities Climate Collaboration (K4C).

Quantifies a greenhouse gas (GHG) emissions reduction. All quantities are expressed in metric tons of carbon dioxide equivalent (MTCO2e). Driving a passenger car 25,000 miles results in about 10 MTCO2e.

Responds to the King County Auditor's Office performance audit of the 2012 SCAP.

Advances with King County's commitment to equity and social justice.

Indicates partnership with local businesses.

Idenitifies commitments where there are pending or unmet resource implications.