
# 2012 Strategic Climate Action Plan

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**Alternative formats available**

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# Contents

# Introduction

In King County, decreasing mountain snowpack, increasing flooding, and rising sea levels are all evidence that the climate system is changing and causing significant impacts in our communities. The County faces significant environmental and economic challenges stemming from climate change; these challenges include stressed and rapidly changing ecosystems, costly impacts on public and private property, and new public health risks.

King County has many opportunities to reduce greenhouse gas (GHG) emissions—the primary cause of recent climate change—from its own operations and at the community level. The County is reducing operational sources of GHG emissions by implementing the *2010 Energy Plan* and the Green Building and Sustainable Development policy, among other efforts. At the community level, King County is helping reduce GHG emissions through its land-use policies and transportation planning and by providing services such as public transit, recycling, and support of sustainable forestry and agriculture. These efforts are yielding significant reductions in GHG emissions as well as environmental, economic, and health benefits. The County is also collaborating with others on solutions, pooling technical expertise and sharing practical strategies for reducing GHG emissions through venues like the King County-Cities Climate Collaboration.

King County is helping minimize the local impacts and risks of climate change as well. The County has programs and projects to reduce the risk of floods, help farm and forest owners address climate change impacts, and plan for the effects of climate change on stormwater, public health and emergency management.

King County has a long history of adopting policies promoting environmental and economic sustainability and responding to climate change. Climate motions adopted in 2006 and 2012 outlined specific near-term actions to reduce GHG emissions and prepare for the impacts of climate change. Executive Orders over the past decade have prompted investments in alternative fuels and more efficient use of energy. The integration of climate policies into King County's Comprehensive Plan in 2008 strengthened the integration of land use, transportation, and environmental policies with goals and actions to reduce GHG emissions. In King County's Strategic Plan, reducing GHG emissions and preparing for climate change are core objectives of the environmental sustainability goal. New Countywide Planning Policies recently approved by the Growth Management Planning Council call for development of a countywide GHG emissions reduction target over the next year.

On February 29, 2012, the Metropolitan King County Council unanimously passed Ordinance 17270, requiring the County Executive to develop and transmit the County's first Strategic Climate Action Plan (SCAP) to the County Council by June 29, 2012. This plan is intended to synthesize and focus King County's most critical goals, objectives, and strategies to reduce GHG emissions and prepare for the effects of climate change. The SCAP will provide "one-stop-shopping" for county decision-makers, employees, and the general public to learn about the County's most critical climate change actions.

The SCAP builds upon and reflects the *King County Comprehensive Plan*, *2007 Climate Plan*, 2006 and 2012 Climate Motions, *2010 Energy Plan*, *Strategic Plan for Public Transportation*

*2011-2021*, *Open Space Plan,* and *Solid Waste Comprehensive Plan*. The SCAP also integrates best practices from other leading climate action efforts, including plans from the cities of Eugene, Seattle, and Portland as well as Multnomah (Oregon) and Skagit counties.

As required by Ordinance 17270, the SCAP uses the same basic organizing structure as the *King County Strategic Plan.* This framework provides for accountability and transparency to the public, elected officials and staff.

Consistent with Ordinance 17270, performance measures and accomplishment of priority actions in the SCAP will be included in the *Annual Report of King County's Climate Change, Energy, Green Building and Environmental Purchasing Programs*, due to the County Council by June 30 of each year.

The County plans to update the SCAP by June 2015 to include additional community-level actions and formally integrate the SCAP with the *King County Energy Plan*. After 2015, updates to the SCAP will occur on a five-year cycle, unless more frequent updates are needed to respond to changing information about emissions sources, performance relative to targets, new technologies, or changes in regulations related to climate change.

# The Framework for King County Climate Action

## Climate Change Impacts

Human sources of GHG emissions, such as carbon dioxide and methane, are causing unprecedented and severe changes in global and local climate systems. This is the consensus view of the world's leading scientists, including the United Nations' Intergovernmental Panel on Climate Change (IPCC) and the U.S. National Academy of Sciences.

### Environmental Impacts

King County is tracking local environmental indicators and has observed changes related to climate change in recent years. For example, between 1962 and 2008, a strong downward trend in summertime water volumes in King County rivers was observed at 10 local river gauging stations. During this same period, there was also some evidence from these gauging stations and from eight King County weather stations that severe storms and floods were occurring more frequently during the fall and winter months. These trends are consistent with expectations for local climate change impacts. Increasing air and water temperatures, acidifying marine waters, increasing sea level and decreasing snow pack are other examples of climate change-related impacts already observed in King County.

### Human Health and Economic Impacts

Climate change will have long-term consequences for both public health and the economy in King County; some of these impacts are already being experienced. The County is tracking human health and economic impact indicators that are showing improvements in air quality but also increasing natural disasters, decreasing salmon populations, increasing forest fires, 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.

It is important to note that the human health and economic impact indicators being tracked by King County are affected by multiple factors in addition to climate change. For example, the frequency of natural disasters is also affected by where people live and work and how prepared they are for storms. Climate change has been shown to be an important influence on each of the indicators, however.

## Greenhouse Gas Emissions in King County

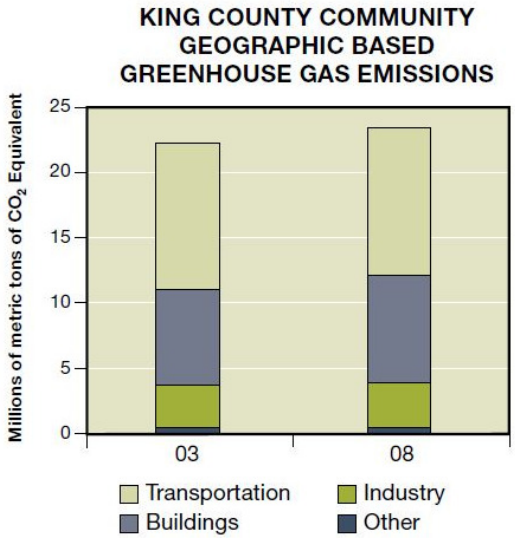
### Community Level Sources of GHG Emissions

In February 2012, King County, in partnership with the Puget Sound Clean Air Agency and the City of Seattle and with additional support from the U.S. Department of Energy, issued the report *GHG Emissions in King County*. This report quantifies emissions from the entire King County community including governments, residences and businesses. The report presented results from two different, but complementary, inventories of GHG emissions:

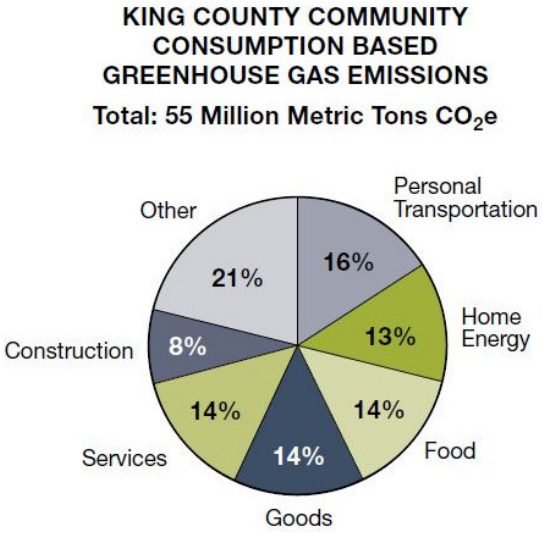
- The Geographic Plus Inventory estimated year-2008 GHG emissions released within King County's geographic boundary. ("Plus" indicates that the inventory includes some emissions outside the boundary, such as those associated with air travel and electricity.)

- The 2008 Consumption-Based Inventory used a new methodology to quantify the emissions associated with all consumption of goods and services by King County residents and governments. This inventory includes emissions associated with the production, transport, sale, use, and disposal of goods and services—no matter where they were produced.

The Geographic Plus Inventory found that within King County's geographic boundaries, GHG emissions are primarily caused by use of fossil fuel for transportation (gasoline and diesel) and, to a lesser but significant extent, for heating buildings (natural gas and heating oil). Between 2003 and 2008, local sources of emissions in King County increased 5.5 percent. While this reflects a stabilization of per-person GHG emissions, the region is not on track to meet its long-term community level GHG emissions-reduction target of an 80 percent reduction below 2007 levels by 2050.



The Consumption-Based Inventory showed that significant emissions are associated with consumption in King County, even though many of those emissions do not occur here. These emissions are created through the production, transport, sale, use, and disposal of imported goods and services, such as food and electronics. In 2008, emissions associated with local consumption were more than twice as high as emissions that occurred locally. GHG emissions associated with the production of goods and services, including materials and manufacturing, comprised more than 60 percent of emissions associated with consumption. Use of these goods and services, such as fueling a car or powering a refrigerator, represented more than 25 percent of consumption-based emissions. Transporting, selling and disposing of goods and services together represented less than 15 percent of consumption-based emissions.



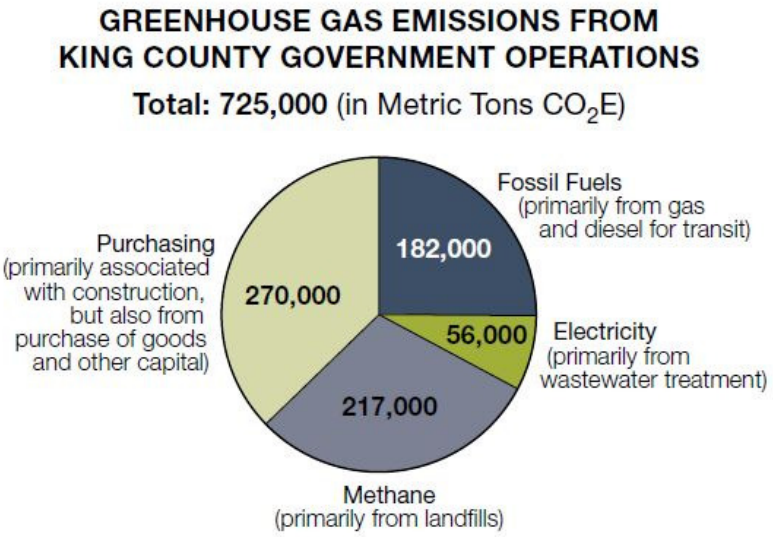

The inventories' findings of significant emissions from a wide range of sources have important implications for King County's approach to climate change. The findings make it clear that a sustained focus on a diverse range of climate solutions is necessary. They also show us that collaboration with businesses, community groups, and other governments is critical.

#### 2010 Update on Community-Level GHG Emissions

In addition to periodically conducting GHG inventories, in 2010 King County began annually tracking a core set of GHG emissions associated with buildings, vehicles and solid waste. These core emissions are approximately two-thirds of all emissions from local sources. Data for 2010 show that core emissions from local sources continued to slowly rise, up roughly 4 percent since 2003, primarily as a result of population growth. During this same period, per-person emissions decreased approximately 4 percent, due in large part to significant declines in per-person transportation-related emissions and to slight declines in energy use by buildings.

#### Government Operations Sources of GHG Emissions

King County government operations produce GHG emissions. Major government sources are 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.




Overall energy-related GHG emissions from government operations increased slightly (~1 percent) between 2007 and 2011. The rise in operational GHG emissions was largely due to increases in transit service. GHG emissions from diesel used by buses account for more than half of all energy-related GHG emissions, and have increased by approximately 5 percent since 2007. Energy-related GHG emissions from sources other than transit decreased 2.5 percent during this time, a sign of progress related to implementation of the *2010 Energy Plan* and the Green Building and Sustainable Development policy, among other efforts.

It should be noted, however, that transit has a net beneficial impact on reducing community-level GHG emissions. Transit reduces communitywide GHG emissions by replacing private vehicle trips, reducing traffic congestion, and supporting efficient land use and community design. Metro estimates that King County transit service reduced community emissions by more than twice the direct emissions footprint of the transit vehicle fleet.

## Climate Change Goals and Targets

King County Executive Dow Constantine and the County Council are leaders in responding to climate change. Environmental sustainability is one of eight goals in the King County Strategic Plan. One of the objectives for this goal is to "reduce climate pollution and prepare for the impacts of climate change on the environment, human health and the economy."

This priority is also reflected in the *King County Comprehensive Plan*, the 2012 Climate Motion 13644, and the *2010 Energy Plan*. Climate change considerations are also being integrated throughout County planning efforts. Examples are the *Strategic Plan for Public Transportation*, *Open Space Plan*, and *Solid Waste Comprehensive Plan*. The County has set a high bar for its response to climate change, and has supported and reaffirmed its commitment by setting the targets outlined in the following section.

### Community Level GHG Reduction Target

King County's GHG emissions-reduction goals are based on a growing scientific consensus that to avoid the most devastating impacts of climate change, global temperature increases should be limited to no more than ~2°C above pre-industrial levels. The best available science as outlined by the IPCC, among others, indicates that to achieve this goal, concentrations of atmospheric carbon dioxide must be stabilized at roughly 450-475 ppm. This would require a global reduction in emissions of roughly 80 percent. King County's long-term goal, as defined by 2008 King County Comprehensive Plan Policy E-216, is:

> *King County should collaborate with other local governments in the region with the aim of reducing greenhouse gas emissions throughout the region to 80 percent below 2007 levels by 2050.*

In addition to the King County target, Washington State and many King County cities have adopted related GHG reduction policies. Washington State's GHG emissions reduction requirements (RCW 47.01.440) are to limit statewide emissions to 1990 levels by 2020, to 25 percent below 1990 levels by 2035, and to 50 percent below 1990 levels by 2050. Although the baseline years for Washington's requirement and King County's target differ, King County's target is significantly more ambitious.

In addition to the state requirements, 17 of the 39 cities in the county have adopted the U.S. Mayors' Climate Protection 2012 GHG emissions-reduction target. Some of these cities, including Kirkland, Seattle, and Issaquah, have adopted additional targets that are as strong as or stronger than King County's target. For example, Seattle's goal is net carbon neutrality and Kirkland's goal is an 80 percent reduction below 2005 levels by 2050.

In 2011, after the County had adopted its long-term GHG reduction target, the King County Growth Management Planning Council approved new Countywide Planning Policies. Policy EN-17 calls for establishment of a countywide GHG reduction target that meets or exceeds the state's target. King County is currently collaborating with local cities and other partners to help establish shared near- and long-term targets that are consistent with this new Countywide Planning Policy and that exceed the statewide emissions reduction requirement.

### Government Operations GHG Reduction Targets

In addition to working towards community-level goals, King County is committed to reducing its own environmental footprint. Updated operational GHG-reduction targets are proposed in policy E-204a of the *Executive Recommended 2012 Comprehensive Plan*. These targets are consistent with the near-term energy targets adopted in the *2010 Energy Plan*. The establishment of near-term targets for reducing operational GHG emissions demonstrates King County's commitment to responding to climate change and ensures accountability by County agencies. By establishing stair-stepped "check-in" points on a timeframe that can inform future Comprehensive Plan and SCAP updates, these near-term targets strengthen the likelihood that the King County government will do its part in helping achieve the long-term community level GHG reduction target.

> *King County shall reduce total greenhouse gas emissions from government operations, compared to a 2007 baseline, by at least 15 percent by 2015, 25 percent by 2020, and 50 percent by 2030, consistent with the County's long-term goal of collaborating with other local governments and partners to reduce countywide emissions by at least 80 percent by 2050.*

#### Goals for Preparing for Climate Change Impacts

King County has multiple goals for preparing for the effects of climate change on the environment, human health and the economy. The overarching goal is highlighted in the *King County Strategic Plan*:

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

## King County's Role in Responding to Climate Change

King County plays diverse roles that support regional efforts to reduce GHG emissions. The County provides a number of services—public transit, regional trails, recycling and composting services, support of sustainable forestry and agriculture, green building, and production of renewable energy—that yield environmental, economic, and health benefits as well as significant reductions in community-scale GHG emissions.

In addition, King County is reducing the environmental and GHG emissions footprint of government operations. The County is implementing the *2010 Energy Plan*, Green Building and Sustainable Development policy, and Environmentally Preferable Purchasing Policy. Through these and other efforts, King County is reducing emissions related to its own operations and demonstrating leadership and commitment to addressing climate change.

King County is also helping minimize the local impacts and risks of climate change. It has programs, policies and projects that reduce the risks of floods, develop capacity and markets for reclaimed water, partner with farm and forest owners to address climate change impacts, and plan for effects of climate change on stormwater, public health and emergency management.

#### Challenges and Opportunities

King County and many other partners are making progress in reducing GHG emissions. At the community level, per-person emissions from buildings, transportation and solid waste declined 4 percent between 2003 and 2010. However, despite promising signs of progress, overall GHG emissions continue to increase. A critical challenge will be to scale up the level and urgency of local action. Without more vigorous efforts, the County may not achieve GHG emissions reductions in the next few years or the long-term goal of 80 percent below 2007 levels by 2050—the amount necessary at a global scale to avoid the most catastrophic impacts of climate change. Achieving this level of emission reductions will require significant changes to government operations and our fossil fuel-based economy.

On top of the challenge of achieving dramatic emission reductions, the region faces daunting climate change impacts. King County residents, businesses and local governments are facing the risks of rising sea levels, altered ecosystems and increased flooding. Recent scientific research has found that significant local environmental changes have already occurred and are affecting human health and the economy. Additional impacts are now guaranteed, even if global GHG emissions are immediately curtailed. Long-term planning for an uncertain future will continue to be a challenge, but the benefits of taking a proactive approach to reducing the impacts of climate change far outweigh the costs of inaction.

Despite these challenges, exciting opportunities and new solutions are emerging. The 2012 report *GHG Emissions in King County* highlighted potential climate solutions in such diverse areas as food choices, product stewardship, and environmentally preferable purchasing. King County is already taking initiatives in these areas. For example, in 2012, the Solid Waste Division will conduct a pilot project to reduce food waste that could serve as a model for future efforts.

As a government, King County recognizes that it must not only lead by example, it also must actively support broader climate solutions. King County's climate change efforts are evolving to include education, technical assistance, and incentives in key areas such as green building, recycling and composting, forest stewardship, electric vehicles, and alternative transportation. The County is also involved in developing and advocating for state and federal solutions, which will be critical to addressing this global challenge. As a regional government, King County can have a big impact by partnering with local cities, businesses, and community groups. It is doing just that with new efforts ranging from renewable energy projects to alternative transportation programs.

### Relationship between the King County Strategic Plan and the Strategic Climate Action Plan

In 2009, King County established a performance management and accountability system that led to the adoption of the first *King County Strategic Plan* (KCSP) in 2010. The KCSP has an organizational structure based on goals, objectives and strategies. The SCAP builds upon this framework and also includes key performance measures and targets and examples of relevant King County projects, programs and policies.

The overarching targets of the SCAP are outlined in the "Climate Change Goals and Targets" section of the introduction; these include GHG emissions-reduction targets at the community level, for government operations, and for preparing for the effects of climate change on the environment, human health, and the economy. The SCAP also defines sector-specific targets where they directly relate to achieving the overarching targets.

The SCAP follows the strategic plan's basic organizational structure. It has high-level goals expressing intended outcomes, and objectives and strategies that articulate a course of action. The SCAP also follows the strategic plan by tracking both community-level and King County government-level outcomes.

King County's performance and accountability system recognizes the need for an aligned planning hierarchy that requires (1) plans that connect the KCSP to operations and (2) business plans that define specific results and resources required through the budget process. The SCAP connects the strategic plan to operational priorities and will inform King County business plans.

King County tracks a variety of performance measures related to the projects, programs and policies referenced in the SCAP. The measures and targets included in the SCAP are key measures at the goal level and are directly related to achieving the SCAP's overarching targets. Additional measures being used by King County agencies to track progress and improve the efficacy of services are provided as a reference to the SCAP and for the sake of transparency through the "Additional Resources" section at the end of the plan.

The SCAP will be updated in 2015. The update will refine existing measures and targets, and will develop additional measures. Some measures will be refined so they more clearly indicate progress towards the objective or strategy, for example by measuring the percentage of forests permanently conserved compared to total acreage. Additional measures and targets that more directly measure GHG emissions reductions will also be developed.

The following table shows the alignment of the SCAP with KCSP objectives and strategies.

| **King County Strategic Plan Objective or Strategy** | **Strategic Climate Action Plan Goal** |
|---|---|
| Environmental Sustainability (ES) Objective 3: Reduce climate pollution and prepare for the effects of climate change on the environment, human health, and the economy | This is the overarching goal of the 2012 King County Strategic Climate Action Plan |
| Economic Growth and Built Environment (EGBE) 2: Meet the growing need for transportation services and facilities throughout the county | Community Goal 1 (C1): Reduce the need for driving and provide and encourage the use of sustainable transportation choices such as public transit, alternative technology vehicles, ridesharing, walking and bicycling |
| EGBE 2b: Coordinate and develop services for an integrated and seamless transportation system | |
| EGBE 2d: Enhance bicycle and pedestrian infrastructure as alternative transportation alternatives | |
| ES 3e: Advance policies and programs that simultaneously reduce climate pollution and improve health | |
| ES 4c: Invest in alternative fuel transit and fleet vehicles to reduce emissions, fuel use and fuel costs | Government Operations Goal 1 (G1): King County will increase the efficiency of its vehicle fleets and minimize their greenhouse gas emissions |
| ES 3a: Promote collaborative efforts among local and regional governments to assess and reduce community greenhouse gas emissions | C2: King County will help reduce energy use by its residents, businesses and other partners and support development of increasing amounts of local renewable energy |
| ES 4: Minimize King County's operational environmental footprint | G2: King County will reduce energy use by government operations and produce, procure and use an increasing percentage of renewable energy |
| ES 4b: Measure energy usage in county facilities and use this information to guide conservation investments | |
| EGBE 4b: Encourage stewardship of rural landscapes including agricultural and forest land | C3: King County will support healthy, productive farms and forests that maximize biological carbon storage and are resilient to changing climate conditions |
| ES 1a: Focus development within the Urban Growth Area | |
| ES 2: Encourage sustainable agriculture and forestry | |

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| ES 2a: Utilize landowner incentives to keep land in agricultural and forestry use | |
| ES 2b: Provide incentives, technical assistance, and streamlined permitting to support sustainable farm and forestry practices | |
| ES 3d: Identify and adapt to the impacts of climate change on natural systems, human health, public safety, county operations, infrastructure and the economy | |
| ES 1: Protect and restore water quality, biodiversity, open space, and ecosystems | G3: King County will acquire, steward and restore natural lands in ways that maximize biological carbon storage and are resilient to changing climate conditions |
| ES 1c: Support acquisition and stewardship of open space and natural areas | |
| ES 3d: Identify and adapt to the impacts of climate change on natural systems, human health, public safety, county operations, infrastructure and the economy | |
| ES 1b: Use a combination of incentives, technical assistance and regulations to promote desirable environmental practices by individuals and businesses | C4: King County will encourage and support behaviors, purchasing, and waste management strategies that account for and minimize the life cycle impacts of consumption and materials |
| ES4: Minimize King County's operational environmental footprint | G4, G6: Minimize King County's operational environmental footprint |
| ES 4a: Incorporate sustainable design practices into the design, construction, and operation of county facilities and county-funded projects | |
| ES 4d: Create resources from wastewater and solid waste disposal | |
| ES 4e: Encourage King County employees to reduce their environmental impact | |
| ES 3d: Identify and adapt to the impacts of climate change on natural systems, human health, public safety, county operations, infrastructure and the economy | C5, G5: Prepare for the effects of climate change on the environment, human health and the economy |
| ES 3a: Promote collaborative efforts among local and regional governments to assess and reduce community greenhouse gas emissions | C6: King County will engage and partner with citizens, businesses, governments and others to respond to climate change and will provide resources to help partners make sustainable choices |
| ES 3c: Advocate for and participate in the | |

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|---|---|
| development of federal, state and regional climate response strategies and resources that advance emission reduction goals | |
| ES 3b: Monitor county greenhouse gas emissions and use the information to guide future actions and investments to advance progress against emission reduction goals | C7: King County will inform regional climate solutions and investments by reporting on community level climate change-related performance data. |
| ES 3b: Monitor county greenhouse gas emissions and use the information to guide future actions and investments to advance progress against emission reduction goals | G7: King County will inform government-focused climate solutions and investments by reporting on operational climate change-related performance data. |

The plan that follows includes sections on:

1. Reducing GHG Emissions
    - Transportation and Land Use
    - Energy
    - Forests and Agriculture
    - Consumption and Materials Management
2. Preparing for Climate Change Impacts
3. Outreach, Education, Advocacy, Collaboration, Leadership
4. Assessment

These sections cover the key areas of King County's climate action. When all of these diverse areas are seen together, it becomes clear that the County's response to climate change requires an "all hands on deck" approach and a suite of solutions. GHG emissions come from a variety of sources, and climate change impacts will affect many different aspects of public health, the economy and the environment. Climate change is also an issue that requires collaboration and partnership at many levels—it is profoundly both a local and a global challenge.

Each section of the plan provides background information on the subject and its relationship to climate change and then summarizes related goals, objectives, strategies, performance measures, and targets. Each section also has examples of relevant King County projects, programs and policies.

# Reducing Greenhouse Gas Emissions

## Transportation and Land Use

**Community Level**

Transportation accounts for roughly 48 percent of GHG emissions created in King County. Travel in passenger vehicles, including cars, light trucks and buses, accounts for about half of all transportation emissions. Freight, marine and air travel make up the rest. Between 2003 and 2010, per-person transportation-related emissions in King County declined slightly due to a reduction in passenger travel and an increase in vehicle efficiency.

Public transit, ridesharing, walking and bicycling reduce GHG emissions by eliminating private vehicle trips, mitigating traffic congestion, and supporting efficient land use. Besides providing transit service through King County Metro Transit, the County also provides non-motorized travel choices through the Regional Trails System.

**►Community Goal C.1: King County will reduce the need for driving and provide and encourage the use of sustainable transportation choices such as public transit, alternative technology vehicles, ridesharing, walking and bicycling.**

**Measure 1:** Net GHG impact of transit service

**Measure 2**: Percentage of commuters using different transportation modes—transit, walking, biking and driving.

**Measure 3:** Percentage of annual countywide housing development located in the Urban Area

- **Objective C.1.1: Provide and increase transportation choices**

  King County Metro Transit offers a range of public transportation services. In 2011, Metro buses provided nearly 113 million passenger trips and the commuter vanpool program delivered more than 3 million passenger trips. The agency also offers ride-matching services. Metro is making major service revisions in 2012 to make the transit system more productive and effective and to attract more riders. The agency is launching the third and fourth of six planned RapidRide bus rapid transit lines in 2012; the final two lines will follow in 2013.

  **Strategy A:** Provide and expand public transit service

  **Strategy B:** Improve the reliability and efficiency of transit

- **Objective C.1.2: Increase the use of alternative transportation vehicles and technologies**

  Using low-carbon fuel sources and phasing in the use of more-efficient vehicles are key strategies to reduce GHG emissions from transportation. King County has a long history of supporting and demonstrating new transportation technologies. For example, Metro operates one of only five electric trolley systems in the U.S. It was the first transit agency in the nation to invest in articulated hybrid buses and, more recently, in all-electric zero-emission cars for its Metropool commuting program. Metro now operates one of the biggest hybrid bus fleets in the nation and, as a next step, is planning to test an all-electric battery-powered bus.

King County is also supporting regional adoption of new, cleaner transportation technologies. For example, it is helping coordinate the deployment of regional electric vehicle infrastructure and is installing electric vehicle charging stations at King County properties such as park-and-ride facilities.

**Strategy A:** Collaborate with private industry, community groups, utilities and other agencies to build markets and infrastructure related to alternative vehicles and technologies

**Strategy B:** Demonstrate leadership by partnering in pilot projects that help improve the viability of alternative vehicles and technologies

- **Objective C.1.3: Promote and invest in community design that reduces the need to drive and enables walking, bicycling and public transit use**

  As the main transit provider and as the land-use and zoning authority for unincorporated areas, King County has influence over the design and form of local communities. Communities where residents have access to quality transit and other sustainable transportation choices have been shown to have significantly lower GHG emissions per resident. King County is playing an active role in promoting and investing in healthy community designs. For example, the County is working with schools to implement "Safe Routes to School" programs and is partnering with private developers and others on transit-oriented development projects. The County is also implementing programs such as the Transfer of Development Rights program that preserves land and steers development growth away from rural and resource lands into King County's Urban Growth Area. The regional trails system supports more than 20 million bicycle and walking trips annually, including an estimated 5 million trips along the 175 miles of trails directly managed by King County Parks.

  **Strategy A:** Focus development within the Urban Growth Area and reduce development pressure on rural and resource lands

  **Strategy B:** Use incentives, land-use designations, and zoning authority that create development and community design matched to the needs and preferences of transit users, pedestrians, and bicyclists

  **Strategy C:** Maintain and expand the Regional Trails System

#### Government Operations

Gas and diesel used by County owned and operated vehicles accounts for approximately 65 percent of energy-related GHG emissions from King County government operations. Most of these emissions are associated with diesel used by buses. Significant emissions are also associated with the general-use fleet as well as solid waste and wastewater treatment hauling vehicles. King County is striving to continuously improve the efficiency of its vehicles.

### ►Government Operations Goal G.1: King County will increase the efficiency of its vehicle fleets and minimize their greenhouse gas emissions

**Measure**: Energy use by County vehicles

» **Target:** In its vehicle operations, King County shall reduce normalized net energy use, compared to a 2007 baseline, by at least 10 percent by 2015.

- **Objective G.1.1: Reduce operational emissions from the current vehicles and phase in cleaner fuels, vehicles and technologies**

  By pursuing strategies such as anti-idling, car sharing, and vehicle "right sizing," and by phasing in more-efficient, lower-emissions hybrid and electric vehicles, King County is reducing the direct operational GHG emissions of its fleets.

  **Strategy A:** Integrate alternative fuels, vehicles and technologies into King County vehicle fleets, where cost effective

  **Strategy B:** Implement operational strategies to reduce emissions from King County vehicles

# Energy

**Community Level**

Energy use in buildings accounts for 35 percent of GHG emissions generated in King County. These emissions are split equally between commercial and residential buildings. Between 2003 and 2008, emissions from buildings increased approximately 11 percent. Between 2008 and 2010, GHG emissions from buildings held constant, but declined slightly per person. Building emissions stabilized as a result of reduced energy consumption (in part due to energy efficiency efforts and in part due to warmer weather, which resulted in an approximate 10 percent reduction in heating needs). This improvement was offset by an increase in the GHG-intensity of electricity from Puget Sound Energy (PSE). PSE's electricity sales from burning fossil fuel-based natural gas increased from 4 percent in 2003 to 13 percent in 2008 and to 22 percent in 2010.

**►Community Goal C.2: King County will help reduce energy use by its residents, businesses and other partners and will support development of increasing amounts of local renewable energy.**

- **Objective C.2.1: Partner with residents, businesses, and energy utilities to support local energy efficiency and renewable energy projects and programs**

  King County is helping implement regional energy efficiency and renewable energy projects and programs that reduce energy-related GHG emissions. For example, the King County GreenTools program supports and provides resources to cities, the construction community and the public to help them design sustainable, energy-efficient buildings. The County is also engaging in regional energy efforts—as a founding partner of the Seattle 2030 high-performance building district, for example. The County is also leading important collaborative efforts such as its Community Solar Program, which partners with community groups to develop solar energy on County-owned properties.

  **Strategy A:** Encourage, support and promote the application of sustainable development practices, including energy efficiency and renewable energy, in all private sector development within the county

  **Strategy B:** Develop, participate in, and support appropriate regional energy efficiency and renewable energy efforts

#### Government Operations

Direct energy use in government operations—including energy used by buildings, to treat wastewater, and to fuel vehicles—represents one-third of the total GHG emissions related to King County government operations.

### ►Government Operations Goal G.2: King County will reduce energy used in government operations and will produce, procure and use an increasing percentage of renewable energy.

**Measure:** Energy use at county facilities

» **Target:** King County shall reduce normalized net energy use from government operations in its buildings and facilities, as compared to a 2007 baseline, by at least 10 percent by 2012, 15 percent by 2015, and 20 percent by 2020

**Measure:** Percentage of energy produced, used, or procured by the County that is renewable energy

» **Target:** Produce, use or procure renewable energy equal to at least 50 percent of total County net energy requirements on an ongoing basis.

- **Objective G.2.1: Reduce energy use in County operations through continuous improvements in facility and equipment efficiency, procurement and construction practices, and resource conservation**

  Following the 2010 Energy Plan, King County has been implementing projects and policies to reduce the energy used in its operations. The Facilities Management Division has implemented various energy efficiency projects for buildings, reducing their GHG emissions by almost half and saving roughly $1.7 million annually in energy costs from 2007 to 2011.

  King County is also reducing energy and resource use through implementation of its Green Building and Sustainable Development policy. In 2011, King County agencies worked on 10 Leadership in Energy and Environmental Design (LEED) projects, used the County's Sustainable Infrastructure Scorecard for 202 projects, and diverted from landfills an average of 80 percent of construction and demolition material generated by these projects.

  **Strategy A:** Conduct and/or update efficiency audits of all major County buildings and develop specific energy management plans for large, energy-intensive and/or special purpose County facilities

  **Strategy B:** Ensure that the design, construction, maintenance and operation of any capital project owned or financed by King County is consistent with the latest green building and sustainable development practices

  **Strategy C:** Improve on existing green operations and maintenance practices to further reduce energy and resource use

- **Objective G.2.2: Increase the production and procurement of renewable energy and the development of waste-to-energy applications**

  Renewable energy can replace fossil fuel energy, reducing GHG emissions from all energy-using sectors. The County has a decades-long history of implementing renewable energy projects. The West Point wastewater treatment plant began to recover and produce renewable energy from waste gas in 1984-85. King County continues to produce, use and procure an

increasing amount of renewable energy. Recent increases resulted from the start-up of a large biogas-to-energy project at the Cedar Hills Regional landfill, where BioEnergy Washington has begun selling cleaned landfill gas to Puget Sound Energy. The County expects to exceed its 50-percent renewable energy target once the Cedar Hills project and a new West Point project are fully operational in 2012.

**Strategy A:** Maximize opportunities at King County's wastewater treatment plants and landfills to reuse waste resources for energy and other purposes in ways that prioritize mitigation of GHG emissions

**Strategy B:** Research opportunities to apply renewable energy in the County's new construction, retrofit construction and stand-alone energy projects, and seek to develop or support private developments of renewable energy applications where benefits exceed costs

**Strategy C:** Transition to purchasing renewable energy as possible

## Forests and Agriculture

#### Community Level

*Forests*

Forests help reduce atmospheric concentrations of GHGs. As trees grow, they absorb carbon dioxide from the air and convert it into carbon, which is stored in tree trunks, roots and foliage. Soils also store significant amounts of biological carbon. Forests and soils in the Pacific Northwest store more carbon than almost anywhere in the world. There are more than 800,000 acres of forest land in King County. The report *2012 GHG Emissions in King County* estimates that over the past decade, a net of approximately 800,000 to 900,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) have been sequestered each year by local forest growth. This is equivalent to the annual local emissions associated with about 70,000 King County citizens. This total does not include all the rural residential and urban forests, which also contain significant carbon.

Loss of forest land to clearing results in carbon dioxide emissions. According to U.S. Forest Service data, an average of 4,400 acres of forestland in King County were converted to other uses each year since 1996. If these acres were completely cleared, it would result in emissions of approximately 440,000 $MTCO_2e$. However, often when forest land is converted, only a small area is cleared for a house site.

*Agriculture*

Approximately 50,000 acres in King County are in agriculture production, much of it in perennial pasture. Major sources of GHG emissions from agriculture include soil management, especially from excessive tillage and from use of nitrogen fertilizers; natural digestive processes in livestock, manure management, and use of fossil fuels in operations.

**►Community Goal C.3: King County will support healthy, productive farms and forests that maximize biological carbon storage, promote public health, and are resilient to changing climate conditions**

**Measure:** Privately owned rural acreage that has stewardship plans or is enrolled in incentive programs

» **Target:** 500 additional acres per year

**Measure:** King County forests and agricultural lands permanently conserved through easements that remove the development rights

» **Target:** 200,000 forest acres

- **Objective C.3.1: King County will encourage sustainable agriculture and forestry**

  *Forests*
  Managing forests for health and resilience can increase forest carbon and reduce the risk of catastrophic loss of carbon through wildfire, windfall, and mortality caused by insects or pathogens. King County is encouraging and supporting sustainable forests through a variety of efforts, including:
  - Conserving forest land through the designation and zoning of 824,000 acres in the Forest Production District, and the purchase of development rights on more than 90,000 acres of private forestland.
  - Promoting forest stewardship by offering forest stewardship planning courses and forestry workshops, and offering forest management assistance to landowners.
  - Reducing the risk of wildfire by working with communities and fires districts on community Firewise plans.
  - Providing Loop™ biosolids to public and private commercial forestland owners in eastern King County for use as a carbon storing soil amendment and fertilizer

  *Agriculture*
  Farming techniques that enhance soil health also add significant biological carbon to agricultural lands. In addition, new research shows that the production of some types of food, for example fruits and vegetables, results in fewer GHG emissions than the production of other foods does. Efforts to increase access to and availability of these locally produced low-impact foods can help reduce GHG emissions associated with food consumption.

  King County is encouraging and supporting sustainable agriculture through a variety of programs that also have GHG emissions-reduction benefits. Examples include:
  - Protecting productive farmland through the designation and protective zoning of 42,000 acres in the Agricultural Production Districts and ensuring long-term conservation of more than 13,000 acres in the Farmland Preservation Program.
  - Reducing GHG emissions from dairy waste by supporting the development of a dairy waste digester in the Enumclaw area.
  - Promoting local food through the Puget Sound Fresh marketing program.
  - Providing technical assistance and cost sharing to support sustainable farming practices
  - Supporting local production of, and access to, fruits and vegetables and helping King County residents meet U.S. Dietary Guidelines on fresh fruits and vegetables

  **Strategy A:** Conserve working forests and encourage private forestry through the acquisition of development rights in the Forest Production District

  **Strategy B**: Provide incentives, technical assistance, and streamlined permitting to keep land in agriculture and forestry use and to support sustainable farm and forestry practices including the growth of low-impact foods such as fruits and vegetables

  **Strategy C:** Protect agricultural land and encourage farming through the purchase or transfer of development rights

**Strategy D**: Work with others to support farmers markets and programs that help new farmers get started and market their products

#### Government Operations

**►Government Operations Goal G.3: King County will acquire, steward and restore natural lands in ways that maximize biological carbon storage and are resilient to changing climate conditions**

- **Objective G.3.1: Acquire and preserve forest lands**

  King County owns and manages approximately 20,000 acres of forest land that store large quantities of biological carbon. King County continues to acquire new lands; in 2011, 780 new acres of natural lands were obtained.

  **Strategy A:** Acquire, protect and conserve high-priority open space through a variety of means including fee-simple purchase, donations and purchase of conservation easements and covenants

- **Objective G.3.2: Protect and improve the health of King County-owned forest lands**

  King County's Parks and Recreation Division and Water and Land Resources Division provide stewardship and actively restore 26,000 acres of natural lands. The Parks Division has done a preliminary forest stand assessment on more than 15,000 acres of its forestland. The division has completed forest stewardship plans for seven sites, and has conducted four harvests for long-term forest health.

  These lands already store significant amounts of carbon, but hold the potential to store much more if restored and managed appropriately. King County is actively restoring and maintaining the health of its forest lands. In 2011, Parks volunteers gave more than 58,000 hours of service, planting more than 23,000 native trees and plants and removing invasive weeds. Water and Land Resources Division staff oversaw the planting of nearly 60,000 trees and plants.

  **Strategy A:** Assess, maintain, enhance and restore forests and soils on King County-owned lands, including developing and implementing Forest Stewardship Plans for forested sites

## Consumption and Materials Management

#### Community Level

The purchase, use, and disposal of goods and services by King County residents, businesses and governments are associated with significant GHG emissions. Emissions can occur at all stages of a product's life—from resource extraction, farming, manufacturing, processing, transportation, sale, use, and disposal. In 2008, consumption-related emissions in King County totaled more than 55 million $MTCO_2e$—more than double the emissions produced within the county's geographic boundaries.

### ►Community Goal C.4: King County will encourage and support behaviors, purchasing, and waste management strategies that account for and minimize the life-cycle impacts of consumption and materials

**Measure:** Recycling rates in King County service area

» **Target:** By 2020**:** 70 percent recycling; By 2030: zero waste (no landfilling) of resources that have economic value for reuse, resale or recycling

- **Objective C.4.1: Reduce waste and increase recycling and reuse of materials**

  King County performs many functions related to waste prevention and reuse, product stewardship, recycling and composting, and beneficial reuse. For example, in 2010, about 832,000 tons of recyclable materials were collected by private hauling companies and at King County transfer stations. Reuse of these materials resulted in the reduction of approximately 1.6 million $MTCO_2e$—equivalent to removing about 280,000 passenger cars from the road.

  The Solid Waste Division offers education, incentives, pilot programs and partnerships to reduce waste and increase recycling and composting. The campaign "Recycle More-- It's Easy to Do" promotes basic recycling, food scrap recycling, and yard waste sign-up. The campaign has formed partnerships with suburban cities that have residential recycling rates of less than 35 percent. It does targeted outreach to residents to help them increase curbside recycling. The division has also formed promotional partnerships with the private sector on TV and radio advertising, in-store promotions and distribution of recycling information. In 2011, one partnership garnered a value of $143,000 in support from partner businesses, helping increase the quantity of recycling tools sold by 11 percent and securing nearly 3.4 million media impressions.

  Another example is the LinkUp program that expands markets for recyclable and reusable materials by fostering an interactive community of businesses, public agencies, and other organizations. LinkUp strives to eliminate market barriers such as a lack of recycling infrastructure and poor end-markets. Recently LinkUp has focused on asphalt shingles, carpet, and mattresses, which King County has identified as priority recyclable materials.

  Another example is the $300 million modernization of the County's 1960s-era network of transfer stations that is currently underway. The transfer station improvements will meet the needs of residential self-haulers, businesses, and garbage collection companies. The modernization is expanding and upgrading recycling by providing for the collection of additional materials collection and by making collection more efficient.

  **Strategy A:** Conduct a campaign and provide incentives and support to increase communitywide recycling and composting

  **Strategy B:** Partner with haulers and recycling and composting businesses to increase productive reuse and recycling of materials

  **Strategy C:** Develop, expand and support markets for recycled and reused products

  **Strategy D:** Provide and increase recycling and composting collection at King County transfer stations

#### Government Operations

King County government purchases and uses large amounts of goods and services daily. These goods and services—especially construction related services—account for 270,000 $MTCO_2e$ of King County GHG emissions, or about 30 percent of the County's operations-related emissions.

### ►Government Operations Goal G.4: Minimize King County's operational environmental footprint.

**Measure**: Total amount of copy paper purchased

» **Target**: 20 percent reduction in copy paper usage by 2013 compared to 2010

- **Objective G.4.1 – Reduce waste and increase recycling and reuse of materials**

  King County strives to reduce the amount of resources used in its operations. This effort focuses on energy efficiency but extends to water, materials, and other resources. For example, King County's Environmentally Preferable Purchasing Policy (KCC 18.20) includes paper reduction policies, and between 2010 and 2011 County agencies reduced paper consumption by 9.5 percent.

  King County is also increasing the recycling and reuse of materials used for government operations. In addition to traditional recycling and composting, the County now recycles electronic waste only through e-Steward-certified vendors. In 2011, this practice ensured the sustainable recycling of more than 68,000 pounds of electronic equipment, almost 7,000 pounds of cathode ray tube monitors, and 6,300 pounds of batteries.

  Beyond waste reduction and recycling, King County is finding ways to reuse previously wasted resources. For example, since 1997, King County has created and reused an average of 330 million gallons of Class A reclaimed water annually at its wastewater treatment plants. At the South Treatment Plant in Renton, Class A reclaimed water is diverted to Tukwila where it is used by municipal street sweepers and landscape watering vehicles. Reclaimed water is also used to irrigate local sports fields and golf courses. King County has also recycled wastewater biosolids for more than 40 years. In 2011, through its land application biosolids program, more than 40,000 $MTCO_2e$ of carbon was added to forest and agricultural soils.

  **Strategy A:** Minimize the usage of resources such as water, office supplies and building materials

  **Strategy B:** Minimize fugitive greenhouse gas emissions from King County owned landfills

  **Strategy C:** Maximize the reuse and repurposing of byproducts of government operations

  **Strategy D:** Maximize recycling and composting of materials from County facilities

- **Objective G.4.2 - Identify, evaluate, purchase and promote economical and effective products and services that minimize life-cycle environmental impacts**

  King County's Environmental Purchasing Program reflects its long-term commitment to the purchase of environmentally preferable products. Such purchases can help reduce GHG emissions, especially if products are made with recycled materials or in efficient ways.

In 2011, King County purchased more than $60 million of environmentally preferable products, with cost and durability savings of more than $1.5 million compared to conventional products. Environmentally preferable purchases include recycled paper; remanufactured toner cartridges; re-refined antifreeze and motor-oil; ultra-low sulfur diesel; hybrid, electric and alternative fuel vehicles; bio-based oils; plastic lumber; compost; green cleaners; electronics; and tire-retreading services. King County supports both existing markets and the development of new ones such as carpet and asphalt.

**Strategy A:** Buy recycled and other environmentally preferable products and services whenever practicable

**Strategy B:** Require contractors and consultants to use recycled and other environmentally preferable products and services whenever practicable

**Strategy C:** Promote the use of recycled and other environmentally preferable products and services

**Strategy D:** Engage in the development of sustainable product and services certification and labeling efforts

## Preparing for Climate Change Impacts

**Community Level**

### ►Community Goal C.5: Prepare for the effects of climate change on the environment, human health and the economy

**Measure:** Number of King County homes at risk of flooding or river channel migration

- **Objective C.5.1: King County will identify and adapt to the impacts of climate change on natural systems, human health, public safety, infrastructure, and the economy.**

  King County is playing important roles in communitywide preparedness efforts to reduce local climate change impacts and risks. For example, the King County Flood Control District is improving floodplain management to minimize the impacts of flooding. In 2011, the district completed three flood protection infrastructure projects, helped raise the elevation of seven homes, facilitated relocation of five chronically flooded houses to higher ground, and demolished six chronically flooded houses on land that King County had purchased.

  The County is helping minimize other climate change impacts and risks through actions such as developing capacity and markets for reclaimed water, partnering with farm and forest owners to address climate change impacts, planning for effects of climate change on human health, providing information to citizens on Vashon Island about the impacts of rising sea level, and ensuring that the County can continue to provide services such as transit, wastewater treatment, debris management and flood protection.

  Most recently, the County has integrated the consideration of climate change impacts into a wide range of its ongoing projects and programs. These programs address issues ranging from salmon recovery to stormwater management to public health to emergency management.

**Strategy A:** Mitigate flood risks by implementing the Flood Control District Plan and consider climate change impacts when updating flood risk reduction policies and capital improvement plans and projects

**Strategy B:** Review and evaluate climate change impacts on natural resources that King County programs are designed to protect – forests, fisheries, productive farmland, water resources – to assess and improve the efficacy of existing strategies and commitments

**Strategy C:** Integrate observed and projected climate change-related changes in severe weather, flooding, drought, fire, landslides and related issues into emergency management planning and programs

**Strategy D:** Identify and plan for the impacts of climate change on human health including increasing temperatures, flooding, risk of vector-borne and infectious diseases, mental stress, and respiratory effects. Prioritize responses based on the needs of the most vulnerable populations including the very young and old, those in poor health, and those with limited resources.

#### Government Operations

**►Government Operations Goal G.5: King County will prepare for the effects of climate change on the environment, human health and the economy.**

- **Objective G.5.1: Identify and adapt to the impacts of climate change on county infrastructure and operations**

  King County, in partnership with scientists from the University of Washington Climate Impacts Group and other agencies, has begun to implement and learn from practical preparedness steps. For example the Wastewater Treatment Division has assessed the potential impacts of rising sea level on its infrastructure and is integrating this information into planning and operations.

  **Strategy A:** Collaborate with the scientific community to develop assumptions about countywide climate change impacts and integrate this science into capital project siting, planning, design and construction

  **Strategy B:** Inventory essential county facilities and infrastructure that are subject to climate change impacts such as flooding and inundation from sea level rise, and develop strategies for reducing risks and mitigating damages

  **Strategy C:** Manage King County-owned natural lands in ways that help reduce climate change risks to those lands and help minimize regional climate change impacts

## Outreach, Education, Advocacy, Collaboration, Leadership

#### Community Level

Climate change is both a local and a global challenge. To make a broader impact in reducing GHG emissions and preparing for climate change impacts, action must be taken not only by King County government but also by citizens, businesses, and other local governments. Beyond the county, action must happen across Washington, the nation and the world. King County is

implementing a range of strategies that engage and partner with others to promote broad solutions.

### ►Community Goal C.6: King County will engage and partner with citizens, businesses, governments and others to respond to climate change and will provide resources to help partners make sustainable choices.

**Measure**: Percentage drive-alone rate in King County by employers participating in King County's Commute Trip Reduction program

» Target: 10 percent reduction compared to 2011 baseline by 2015

**Measure**: Number of cities participating in the King County-Cities Climate Collaboration

- **Objective C.6.1: Develop, engage and partner on projects and programs that help businesses, schools, citizens and others reduce their own sources of greenhouse gas emissions**

  King County is partnering on a range of projects and programs that help others reduce GHG emissions. For example, King County partners with employers to support their employee Commute Trip Reduction (CTR) programs. Between 2007 and 2011, CTR worksites in King County experienced a 7.1 percent reduction in the "drive alone" rate, resulting in 2.2 million fewer solo vehicle trips annually and an annual GHG reduction of more than 32,000 $MTCO_2e$.

  Another example of partnership is the King County Green Schools program. This program provides tools and support to schools for initiating and expanding waste reduction and recycling practices and other conservation actions. The program involves the whole school community in environmental stewardship. In the 2010-11 academic year, the program assisted 120 schools with 74,028 students in 21 cities throughout King County. Ninety-three percent of these schools achieved recycling rates of at least 40 percent or increased recycling rates by at least 15 percent.

  A third example is the King County GreenTools program, which is designed to help all King County stakeholders green their built environment. GreenTools provides technical assistance, grants, and hands-on training to help users create green projects efficiently and effectively. In 2011 GreenTools delivered 12 Sustainable Cities Roundtables, five technical trainings, two tours and the GreenTools Government Confluence, which was attended by more than 250 local government staff members.

  **Strategy A:** Expand King County's partnerships with employers and businesses to support their efforts to reduce transportation related greenhouse gas emissions

  **Strategy B:** Provide tools and support to King County schools and school districts to improve resource conservation and efficiency and involve school communities in environmental stewardship

  **Strategy C:** Provide green building-related technical assistance, grants, hands-on training, and support for builders, residents, businesses and other King County local governments.

- **Objective C.6.2: Educate, promote and support sustainable choices in the King County community that help reduce greenhouse gas emissions**

  Through programs such as InMotion, Ecoconsumer, EnviroStars, and Best Workplaces for Waste Prevention and Recycling, King County is helping consumers, students and businesses reduce their GHG emissions and achieve other environmental and economic benefits.

  As an example, Metro Transit has offered various outreach, technology improvements and incentives to support use of alternative transportation options. In 2011, the InMotion program promoted alternatives by providing direct outreach, encouragement and resources to approximately 23,000 households. Another example is the Best Workplaces for Waste Prevention and Recycling program, which provides recognition to local businesses that demonstrate their commitment to waste prevention and recycling; in 2011, 89 local businesses were approved and received recognition and promotion by King County.

  King County is also helping develop markets and use of renewable resources such as energy, recycled materials, and reclaimed water. For example, the Wastewater Treatment Division (WTD) is using its new biosolids brand Loop™ to increase community support and understanding of the County's biosolids product. Loop™ outreach highlights the safety and environmental benefits of biosolids for both home gardens and commercial crops.

  **Strategy A:** Conduct education, promotion, social marketing and incentive programs on sustainable transportation, building, energy, consumption, and forestry as well as climate change impacts

  **Strategy B:** Increase community awareness and usage of the County's renewable resources and develop markets for them

- **Objective C.6.3: Participate in the development and advocacy for local, regional and national efforts to reduce GHG emissions and prepare for climate change impacts.**

  King County is actively supporting development of a broad range of local, state, federal, and global solutions.

  At the local level, King County is leading new partnerships with cities. In 2011, Executive Constantine kicked off the King County-Cities Climate Collaboration, a partnership between the County and cities to enhance climate change and sustainability efforts. County and city staff are partnering on outreach, coordination, solutions and funding. By June 2012, nine King County cities—Seattle, Shoreline, Mercer Island, Snoqualmie, Tukwila, Kirkland, Redmond, Renton, and Issaquah—have formally committed staff and funding to this partnership.

  King County is also supporting regional and national efforts. For example, in 2011 the County participated in the development of the Washington State Integrated Climate Change Response Strategy and played a leadership role in Growth Management Planning Council work to develop new climate change-focused Countywide Planning Policies. The County also partnered with national organizations, including Climate Communities, ICLEI-Local Governments for Sustainability, the Responsible Purchasing Network and the National

Association of Counties Green Purchasing Taskforce, to support projects such as the STAR Communities Index, a national sustainability rating system and framework.

**Strategy A:** Participate in and support partnerships with King County cities to increase the effectiveness of local sustainability and climate change efforts

**Strategy B:** Work with cities and other partners to formulate and implement climate change adaptation strategies that address the impacts of climate change to public health and safety, the economy, public and private infrastructure, water resources, and habitat

**Strategy C:** Participate in national and regional organizations of local governments that share strategies to reduce emissions and prepare for climate change

**Strategy D:** Support and advocate for the adoption of federal and state policies and standards designed for reducing greenhouse gas emissions

#### Government Operations

**►Government Operations Goal G.6: Minimize King County's operational environmental footprint.**

- **Objective G.6.1: Encourage King County employees to reduce their environmental footprint**

  King County employs more than 15,000 people. The practices of these employees, both in commuting to work and in occupying, operating and maintaining buildings and other facilities, has a significant effect on the county's operational sources of GHG emissions. By educating and motivating employees to use resources wisely, the County can reduce waste and generate savings. Changes in employee behavior have been shown to cut resource use by up to 10 percent for a typical building. King County is committed to supporting outreach, education and training about sustainability for employees. For example, from 2007 to 2011, King County ran a Commute Trip Reduction program at most King County worksites, supporting an 8 percent reduction in vehicle miles traveled and associated GHG emissions.

  **Strategy A:** Conduct a countywide campaign encouraging employees to use alternative transportation, drive efficiently, and minimize resource and energy usage at work

  **Strategy B:** Train and educate staff to develop skills and expertise for reducing GHG emissions and preparing for climate change impacts

  **Strategy C:** Train staff on green operations and maintenance practices to enhance existing division procedures to reduce GHG emissions.

## Assessment

#### Community Level

King County frequently assesses and reports GHG emissions associated with all resident, business, and local government activities in King County. These assessments help measure progress towards goals, identify sources of emissions that the community can influence, identify trends in those emissions, and inform a range of related efforts.

Accounting for countywide emissions can be challenging, as it requires diverse sources of data and information, and no widely accepted county-level accounting protocols exist today.

In 2011-2012, King County conducted one of the most comprehensive assessments of local sources of GHG emissions to date in partnership with the Puget Sound Clean Air Agency, the City of Seattle, and the U.S. Department of Energy. This inventory quantified all sources of GHGs within the county's geographic borders. For the first time, it estimated emissions associated with local consumption of food, goods, and services regardless of where these commodities were produced.

In addition to tracking GHG emissions, King County is also tracking local impacts of climate change on the local environment, human health, and economy. These assessments help educate the community about the severity of local climate change-influenced impacts and how well the King County community is doing to reduce climate change-related risks.

### ►Community Goal C.7: King County will inform regional climate solutions and investments by reporting on community level climate change-related performance data.

- **Objective C.7.1: Assess and report on community-level GHG emissions and climate change impacts**

  **Strategy A:** Assess and report countywide GHG emissions

  **Strategy B:** Assess and report the net energy and GHG emissions impacts of providing government services such as recycling and transit as practicable

  **Strategy C:** Assess and report local environmental, human health and economic impacts of climate change

#### Government Operations Level

King County has completed regular inventories and assessments of GHG emissions associated with government operations since 2000. The County joined the Chicago Climate Exchange in 2006 and tracked and reported emissions from government operations via this program through 2010. New protocols for monitoring and verifying emissions from local government operations have emerged, including through The Climate Registry. King County continues to assess operational GHG emissions annually. The County uses these assessments to inform efforts to reduce operational sources of emissions and to monitor progress toward targets.

### ►Government Operations Goal G.7: King County will inform government-focused climate solutions and investments by reporting on operational climate change-related performance data.

- **Objective G.7.1: Assess and report GHG emissions associated with government operations**

  **Strategy A:** Assess and report GHG emissions associated with government operations including emissions associated with energy use, wastewater and solid waste treatment, and the production, use and disposal of purchased goods and services

# Conclusion

Climate change is a daunting challenge that will require bold action by many players. King County and its partners are taking action in many areas—from green buildings to alternative transportation to minimizing flood risk—to reduce GHG emissions and prepare for the impacts of climate change. Through their work they are demonstrating that a sustainable environment goes hand in hand with healthy people, a prosperous economy, and vibrant communities.

King County's first SCAP synthesizes and focuses King County's efforts to respond to climate change. By focusing on priorities and by defining performance measures and targets, the plan provides clarity and accountability to elected officials, the public, and County agencies and employees. The plan will inform policy and budget decisions. It will also serve as the framework for annual reporting along with the County's energy, green building and environmental purchasing programs.

The SCAP will be formally updated by 2015 to include an analysis of additional community level actions the County might take and how to fund priority strategies. The 2015 update will include significant community and partner engagement and will formally combine and integrate the SCAP with the King County Energy Plan.

# Additional Resources

King County Climate Change Program
www.kingcounty.gov/climate

Additional King County Climate Change Related Performance Measures
www.kingcounty.gov/environment/climate/climate-change-resources/performance-measures.aspx

King County Strategic Plan
www.kingcounty.gov/strategicplan

King County Comprehensive Plan
www.kingcounty.gov/property/permits/codes/growth/CompPlan.aspx

Annual Reports of King County's Climate Change, Energy, Green Building and Environmental Purchasing Programs
www.kingcounty.gov/environment/climate/king-county/annual-reports.aspx

Greenhouse Gas Emissions in King County
www.kingcounty.gov/environment/climate/climate-change-resources/emissions-inventories.aspx

King County Energy Plan
www.kingcounty.gov/environment/climate/king-county/2010-energy-plan.aspx