

# King County Benchmarks

## 2007

# Environment

## Anticipating and Responding to Global Climate Change

Global climate change has become a defining issue of this century. The National Oceanic and Atmospheric Administration (NOAA) identified 2006 as the second warmest year on record in the United States. U.S. and global annual temperatures are now warmer than at the start of the 20th century. Over the past 30 years, temperatures have accelerated at a rate that is approximately three times faster than the rate of warming over the last century. In fact, the past nine years have been among the 25 warmest years on record for the contiguous U.S., an unprecedented warming trend in this country.<sup>1</sup> The degree to which these worldwide weather patterns are due to human activity and the means by which these effects can be mitigated is the subject of a large body of analysis occurring throughout the scientific community.

While greenhouse gases do occur naturally, a disproportionate amount are caused by human activity, most notably as carbon dioxide emissions from transportation. Total petroleum consumption in King County increased almost 20% over the last 10 years, driven by almost 50% growth in the consumption of diesel fuel. As a result, diesel fuel steadily contributes to a larger share of total petroleum consumption in King County. This is consistent with the increase in activity at the Port of Seattle, which has contributed to the increase in commercial traffic as shown in the 2006 Transportation Bulletin. Indeed, the number of commercial trucks on King County's major highways has increased almost 70% since 1994.

With an increase in commercial traffic, total vehicle miles traveled (VMT) has crept ahead slightly since 1995. Per capita VMT rose during the late 1990's but has actually been on a nominal downward trend since 1999, even though almost two-thirds of workers in King County continue to use their personal vehicle for work commutes. This per capita decrease may be attributed to the combined effect of two factors over the last seven years: a recession that resulted in resulting in job losses throughout the region through 2003, followed by an increase in public transit ridership as the county regained jobs in 2004. However, despite the growing number of King County residents using public transportation, the increased use of light- and heavy-duty trucks, as well as thriving port activity, have contributed to increased VMT and elevated greenhouse gas emissions.

### What's Inside

Over one-half of King County's **Land Cover** is forested (Indicator 9, page 3).

Since 2001, the number of good **Air Quality** days have decreased at the same time that greenhouse gas emissions have increased (Indicator 10, page 4).

Per capita **Energy Consumption** has increased less than 1% since 1996 (Indicator 11, page 6).

From 1993 to 2005, total **Vehicle Miles Traveled** in King County increased almost 20% (Indicator 12, page 7).

Changes in **Surface Water Quality** are evident in King County's lakes, streams and marine waters (Indicator 13, page 8).

Seattle Public Utilities estimates that total **Water Consumption** by retail customers decreased almost 30% from 1990 to 2006 (Indicator 14, page 12).

Providing drinking water for almost 30% of the county's population, **Groundwater Quality and Quantity** are protected by jurisdictional policies throughout King County (Indicator 15, page 13).

Due to the lack of new data regarding **Wetland Acreage and Function**, please refer to the 2005 Environmental Bulletin for the most recent analysis.

Almost one-half of King County's acreage consists of publicly protected lands, providing opportunities for the **Continuity of Terrestrial and Aquatic Habitat Networks** (Indicator 17, page 14).

Though significantly lower than historic returns, the annual **Number of (Chinook) Salmon** returns has risen nominally over the last 30 years (Indicator 18, page 15).

16% of households in King County identified neighborhood street **Noise** as bothersome in (Indicator 19, page 16).

From 2000 to 2005, both **Waste Disposed and Recycled per Capita** increased. The pounds of waste recycled nearly doubled (Indicator 20, page 18).

<sup>1</sup> NOAA National Climatic Data Center 2006 annual climate report, <http://www.ncdc.noaa.gov/oa/climate/research/2006/ann/ann06.html>.

## Metropolitan King County *Countywide Planning Policies* Benchmark Program

The consequences of rising temperatures associated with global climate change are complex and complicated. As temperatures have risen, spring snow pack in the Cascades, which supplies most of the County's water, has shrunk from an average of about 20 inches in the 1950s to an average in the range of less than 14 inches since 1995.<sup>2</sup> This decrease contributes to changes in the quantity and quality of the county's surface and ground water, making conservation efforts increasingly important.

In addition to threatening our region's supply of drinking water, climate change can hamper the ability of our natural areas to provide habitat for wildlife. A 2006 NOAA study indicated that habitat degradation "associated with climate change is likely to make salmon recovery in the Pacific Northwest much more difficult."<sup>3</sup> However, the study also suggested that habitat protection and restoration efforts may mitigate some of the harmful effects of future climate change. Indeed, some of these efforts are underway now. Although still drastically short of historical numbers and population targets, it is hoped that active habitat and harvest management strategies are contributing to growing chinook returns. Water utilities are employing a number of strategies to decrease water consumption, such as informing the public about water conservation techniques and by making key improvements to system operations.

And for the first time, King County residents are recycling more pounds of waste than they are disposing in landfills. As the indicators in this bulletin illustrate, the Puget Sound Region is making progress on some fronts. However, additional proactive efforts to decrease regional greenhouse gas emissions and improve air quality are necessary to protect public health, property and natural resources for our region's future generations.

<sup>2</sup> King County Department of Natural Resources, *Measuring for Results 2005*.

<sup>3</sup> NOAA news release, April 5, 2007, [http://www.nmfs.noaa.gov/mediacenter/docs/climate\\_and\\_salmon.pdf](http://www.nmfs.noaa.gov/mediacenter/docs/climate_and_salmon.pdf)

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### King County Benchmark Program

Established by the Growth Management Planning Council (GMPC) in 1995 as required by the WA State Growth Management Act, the King County Benchmark Program monitors 45 indicators that measure the progress of the King County Countywide Planning Policies. The indicators are intended to collectively articulate the impact of land use and development policies/ practices on our natural, built and social environment. Rather than focusing on the jurisdictional programs of the county's 40 jurisdictions, the Benchmarks provide a high level analytical view of change within the geographic boundaries of King County.

As one of the first and most durable efforts at monitoring outcomes in the public sector, the King County Benchmark Program demonstrates how measurement of broad quality-of-life outcomes can help determine if public policy and programs are making a difference. Public outcome monitoring is a strategy for change: it alerts us to what we are doing well and where we need to do better. It is closely connected to both the policy goals that it monitors, and to the strategic planning, programs, and services that are intended to implement those goals.

The Benchmark Program reports cover five policy areas: land use, economic development, transportation, affordable housing and the environment. All reports are available on the Internet at <http://www.metrokc.gov/budget/benchmrk>. For information, please contact Lisa Voight, Program Manager (206) 296-3464, King County Office of Management and Budget, 701 Fifth Ave, Suite 3200, Seattle, WA 98104, or e-mail: [lisa.voight@kingcounty.gov](mailto:lisa.voight@kingcounty.gov).

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