

## Notes and Data Sources

### Indicator 9: Percent of Land Developed

The Growth Management Act is codified in Chapter 36.70A Revised Code of Washington. For more information about critical areas requirements, see <http://www.gmhb.wa.gov/gma/index.html>. Figures 9.1 and 9.2 data provided by King County Department of Natural Resources and Parks, Water and Land Resources Division (DNRP/WLRD), at <http://www.kingcounty.gov/environment/wlr.aspx>.

### Indicator 10: Air Quality

Figure 10.1 and 10.2 data provided by *2005 Air Quality Summary*, prepared by Puget Sound Clean Air Agency (PSCAA), <http://www.pscleanair.org/news/library/reports/2007AQDSFinal.pdf>. In 1999, the EPA added PM2.5 to the Air Quality Index and divided the “unhealthy” category into “unhealthy” and “unhealthy for sensitive groups” making direct comparability to previous annual ratings inappropriate. Air toxics sources measured in Puget Sound Region in 2002. For information regarding Puget Sound EPA designation of air toxics, refer to the *National Air Toxic Assessment, 1996* from the U.S. EPA at <http://www.epa.gov/ttn/atw/nata/>. State emissions data provided by *Washington’s Greenhouse Gas Emissions: Sources and Trends, 2006*, prepared by the Washington State Department of Community, Trade and Economic Development (CTED), <http://www.cted.wa.gov/energy/archive/papers/wa-ghg99.htm>. Figure 10.3 data provided by King County DNRP, based on *2005 Air Emission Inventory*, [http://www.pscleanair.org/news/library/reports/Air\\_Emission\\_Inventory\\_2005.pdf](http://www.pscleanair.org/news/library/reports/Air_Emission_Inventory_2005.pdf).

### Indicator 11: Energy Consumption

This indicator measures trends in the usage of the four primary energy sources in King County: gasoline, diesel, electricity and natural gas. It does not include renewable energy sources, nuclear-powered sources or usage of other fossil fuels including aviation/ jet fuel or coal in energy production. Due to these exclusions, energy consumption at the county level is not strictly comparable to state and national totals where such measurement is made. Diesel consumption data was not collected until 1996. Improved data collection methodology may be partly responsible for the sharp rise in diesel usage from 1996-2000. Electricity consumption data provided by Puget Sound Energy (PSE) and Seattle City Light. Natural gas consumption data provided by PSE. Gasoline and diesel consumption data provided by Washington State Department of Transportation (DOT) and is based on annual Washington State Office of Financial Management (OFM) population estimates for King County.

### Indicator 12: Vehicle Miles Traveled

Data provided by Washington State Department of Transportation (DOT). Data on statewide trends taken from *Measures, Markers and Mileposts: Transportation Benchmarks 2006 Report* from the WA State DOT, available at [http://www.wsdot.wa.gov/NR/rdonlyres/BD67F128-35A6-4DA7-A27F-764F213C5A84/0/2006\\_Benchmarks.pdf](http://www.wsdot.wa.gov/NR/rdonlyres/BD67F128-35A6-4DA7-A27F-764F213C5A84/0/2006_Benchmarks.pdf). Additional information on the cost of gasoline provided by the Energy Information Administration (EIA), a statistical agency of the U.S. Department of Energy, at <http://www.eia.doe.gov/>.

### Indicator 13: Surface Water Quality

**Marine:** Marine water quality data provided by King County DNRP/WLRD, <http://www.kingcounty.gov/environment/waterandland/puget-sound-marine.aspx>. The 14 offshore sites monitored by King County DNRP for eutrophication and fecal coliform include both ambient (sites away from any known source of pollution) and outfall (those situated close to a know source of pollution) sites. The offshore site testing includes parameters for temperature, salinity, density, dissolved oxygen, nutrients, chlorophyll and fecal coliform bacteria. The State of Washington’s fecal coliform standard indicates that organism counts should not exceed a geometric mean value of 14 colony-forming units (CFU) per 100 ml.

**Lakes:** Lake water quality data provided by King County DNRP/WLRD. For more information about large lakes monitoring, see <http://green.kingcounty.gov/lakes/>. For more information about small lakes monitoring, see <http://www.kingcounty.gov/environment/waterandland/lakes/documents.aspx>. Figure 13.3 includes testing results for 23 lakes that are tested every year. Small lakes testing samples taken in summer months. While each major division (10, 20, 30 etc) of the Trophic State Index (TSI) represents a doubling or halving of algal biomass and is related to nutrients and water clarity, the TSI values are a continuum and some lakes may be in a borderline range, exhibiting some qualities of upper and lower classifications. Subsequently, small lakes with TSI values of 39.9 to 40.1 are included in the oligotrophic range and those with TSI values of 49.9-50.1 are included in the mesotrophic range. Eutrophication is not interpreted here as a statement of water quality but an indication of the conditions existing in lakes.

**Rivers and Streams:** Data about stream water quality was provided by King County DNRP/WLRD. For more detailed information about the results of this testing see <http://green.kingcounty.gov/WLR/Waterres/StreamsData/>. Instream flow data from the WA State Department of Ecology data was provided by King County DNRP. For more information about Instream flows, see Washington State Department of Ecology at <http://www.ecy.wa.gov/programs/wr/instream-flows/isfhtm.html>.

Maps prepared by King County GIS Center, <http://www.kingcounty.gov/operations/gis.aspx>.

### Indicator 14: Water Consumption

Figure 14.1 provided by King County DNRP/WLRD. For more information about water resources in King County, see <http://www.kingcounty.gov/environment/waterandland/drinking-water/sources.aspx>. Figure 14.2 data provided by Seattle Public Utilities (SPU) and analyzes only SPU-provided water consumption.

**Indicator 15: Groundwater Quality and Quantity**

All data provided by King County DNRP/WLRD. Figure 15.1 data taken from the 2001-2004 Ambient Groundwater Monitoring Results Report, available at <http://www.kingcounty.gov/environment/waterandland/groundwater/maps-reports/ambient-monitoring01-04.aspx>.

**Indicator 16: Change in Wetland Acreage and Function**

Indicator 16 is not reported in this bulletin as no new data exists. For the last reported data regarding the change in wetland acreage and function, see the 2005 Environmental Bulletin, available at [http://www.metrokc.gov/budget/benchmark/bench04/Environment/Environment\\_05.pdf#16](http://www.metrokc.gov/budget/benchmark/bench04/Environment/Environment_05.pdf#16).

**Indicator 17: Continuity of Terrestrial and Aquatic Habitat**

Open space corridors are required by the Growth Management Act under RCW 36.70A.160. Figure 17.1 data taken from the March 2005 *Greenprint for King County*, prepared by the Trust for Public Land Northwest for King County DNRP/WLRD available at <http://www.kingcounty.gov/environment/stewardship/sustainable-building/greenprint.aspx>.

**Indicator 18: Increase Salmon Stock**

Figure 18.1 data provided by King County DNRP/WLRD. For more information regarding salmon in King County waters, see <http://www.kingcounty.gov/environment/animalsandplants/salmon-and-trout.aspx>.

**Indicator 19: Change in Noise Levels.**

Figure 19.1 data provided by the *American Housing Survey for the Seattle-Everett Metropolitan Area in 2004* prepared by the American Housing Survey, <http://www.huduser.org/datasets/ahs/Ahs04metroreports/Seattle.pdf>, table 2-8. Figure 19.2. based on the *Sea-Tac Airport Community Impact Survey* conducted by the Puget Sound Regional Council, <http://www.psrc.org/projects/air/pubs/prelimsurveyresults.pdf>. Map prepared by King County GIS Center, <http://www.metrokc.gov/gis/>. Additional information provided by the Sea-Tac International Airport Noise Abatement website, <http://www.portseattle.org/community/environment/noise.shtml> and King County International Airport Noise Abatement website, <http://www.metrokc.gov/airport/noise/>. The FAA has sole authority over national airspace, and their air traffic controllers alone have authority to direct aircraft once airborne. The State of Washington, King County, and the City of Seattle exempt from regulation noise from the manufacture, operation, or testing of aircraft.

**Indicator 20: Waste Disposed and Recycled**

Recycling and diversion data provided by the Washington State Department of Ecology through the King County Department of Natural Resources, Solid Waste Division (DNRP/SWD). Information on construction and demolition debris comes from private facility operators, provided by King County DNRP/SWD. Disposal data for MSW provided by King County DNRP/SWD. For more information regarding solid waste, see <http://your.kingcounty.gov/solidwaste>. Construction and demolition recycling includes materials used for fuel production; MSW recycling does not include fuel uses. Materials excluded from recycling tonnage include landclearing debris, topsoil, and tires burned for energy, and auto bodies. Asphalt and concrete construction and demolition debris reported on the Department of Ecology survey is not included in either recycling or disposal tonnage, since it is unclear whether the material went to an end use that qualifies as beneficial use. Inclusion of concrete and asphalt in recycling figures would have greatly increased the appearance of recycling, and is instead reported separately. Figure 20.1 from *King County Monitoring Program, 2007 Solid Waste Characterization Study*, at <http://your.kingcounty.gov/solidwaste/about/documents/waste-characterization-study-2007.pdf>.