



Minneapolis
greenprint

2010 Environmental Report

Minneapolis



greenprint

In the fifth year of publishing the Greenprint report, the City of Minneapolis continues developing accurate, reliable sustainability indicators, data and policies that are helping us upgrade our business practices in ways that will systematically improve our ecological and social systems. Aligning decision making with principles of sustainability not only increases innovation and return on investment, it also protects the planet and human health. As part of our 2009 efforts, the City:

- Established new targets and added new indicators on local food and waste reduction/recycling.
- Met the target for no combined sewer overflows for the third year in a row.
- Continued to be the only city in the country to accept electronics from its residents at no additional charge. All electronics are recycled in the U.S., and 819 tons of electronics were recycled.
- Expanded a pilot residential organics composting collection program to a second neighborhood.
- Engaged more than 100 residents in the Homegrown Minneapolis initiative focused on expanding efforts to grow, sell, distribute and consume more fresh, sustainably produced and locally grown foods.

The City also saw the completion of several important green infrastructure investments:

- The Xcel Energy Riverside Plant was converted from coal to natural gas to reduce polluting emissions.
- The downtown Marquette and Second avenues transit project now provides side-by-side bus-only lanes for less idling of buses in downtown, decreased stormwater runoff, more efficient lighting and new trees with improved growing conditions for healthier and larger trees.
- The new Northstar Commuter Rail connects downtown Minneapolis and Big Lake, and a new Hiawatha light rail transit station opened in downtown.
- The Target Center green roof was completed. The largest in the state and the 10th largest in the world, it will capture 1 million gallons of stormwater each year.

A number of other important efforts are already under way for 2010, including the first map of the City's tree canopy using satellite imagery, residents investing more in solar power, a new hydropower plant at St. Anthony Falls, 600 kW of solar power on the Convention Center roof and a public bike sharing system.

Thank you to all those who contributed to the work behind this report including the City's Citizen Environmental Advisory Committee and Environmental Coordinating Team, City staff, Minneapolis Mayor R.T. Rybak, the Minneapolis City Council, the Minneapolis Park & Recreation Board, businesses, nonprofits, and residents working with us toward a sustainable city.

To learn more about the Minneapolis Greenprint and other sustainability efforts at the City, please visit www.ci.minneapolis.mn.us/sustainability.



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Published April 2010

Climate Change



Reduce Carbon Dioxide Emissions

The science is clear – climate change is real, we are responsible, and it is a threat. Carbon dioxide pollution, a greenhouse gas, causes climate change. Transportation and coal-burning power plants are the largest sources of carbon dioxide pollution in the U.S. Worldwide, 2009 was tied for the second warmest year since recording began in 1880. Our most recent decade was the warmest decade on record.

Target

- Reduce carbon dioxide emissions from municipal operations by 1.5 percent annually.
- Reduce citywide carbon dioxide emissions by 17 percent by 2020 using 2006 as a baseline.

Trend Analysis

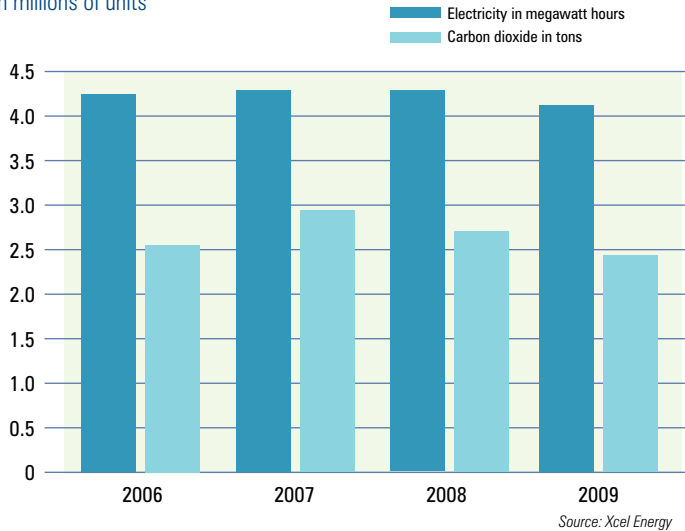
In 2009, 4.1 million megawatt hours of electricity were consumed citywide releasing almost 2.5 million tons of carbon dioxide.

The estimated number of vehicle miles traveled on Minneapolis roads was 2.4 billion, a 3.5-percent decrease from the prior year.¹ In Minneapolis, 63 percent of all households do not own a vehicle (29,400 households) or own only one vehicle (71,600 households).²

¹ 2008 Minnesota Department of Transportation www.dot.state.mn.us/roadway/data/reports/vmt.html
² 2008 Census Bureau's, American Community Survey factfinder.census.gov/servlet/ADPTable?_bm=y&-qr_name=ACS_2008_1YR_G00_DP4&-geo_id=16000US2743000&-ds_name=ACS_2008_1YR_G00_-&-lang=en&-redoLog=false

Citywide electricity consumed and carbon dioxide emissions released

in millions of units



Recent City and Community Activities

- The Xcel Energy Riverside Plant in northeast Minneapolis was converted from coal to natural gas, producing more electricity while emitting much less carbon dioxide and other pollutants.
- More than 8,200 Minneapolis residents and businesses have taken the Minnesota Energy Challenge and are discovering new ways to save energy and money. www.mnenergychallenge.org
- The City awarded a third year of climate change microgrants to engage people in innovative, immediate energy-saving and money-saving actions. www.ci.minneapolis.mn.us/sustainability/ClimateChangeGrants2009.asp
- The Energy Innovation Corridor was formed to create a sustainable energy and transportation showcase along the planned Central Corridor light-rail transit route between downtown Minneapolis and downtown Saint Paul. www.energyinnovationcorridor.com
- Completed a comprehensive overhaul of the City's parking requirements in the zoning code – the City now requires bicycle parking for many uses, eliminates parking minimums and introduces parking maximums in certain districts, and allows more generous shared parking arrangements.
- LEED-certified projects – projects with national third-party verification for high green building standards – now registered in Minneapolis include 13 certified nonresidential buildings, seven certified homes and an additional 40 projects that are slated for certification. www.usgbcmmn.org



Butler Properties, LLC

Butler Square, built in 1908 and renovated in 2009, is the oldest multi-tenant commercial building in the nation to achieve Leadership in Energy and Environmental Design (LEED) certification for existing buildings. It ranks among the top 15 percent of all commercial buildings nationwide for its efficient energy use.

Web Links and Resources

- Minnesota Center for Energy and Environment www.mncee.org
- U.S. Environmental Protection Agency (EPA) Energy Star Program www.energystar.gov
- Xcel Energy www.xcelenergy.com/mplsconserves

Renewable Energy



Increase the Use of Renewable Energy

In the face of climate change and harmful pollution levels created by our current energy consumption, it is critical to use more renewable energy including solar, wind, biomass and hydropower. Renewable energy contributes to energy security, stable energy pricing, climate change solutions and green jobs.

Target

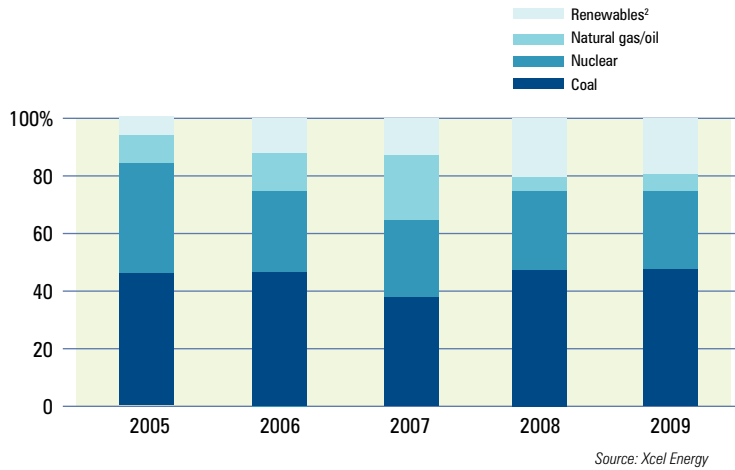
- In municipal operations increase renewable electricity to one megawatt by 2014.
- Citywide, increase renewable energy use to 10 percent above Xcel Energy’s renewable power mix by 2014.

Trend Analysis

Limited state solar rebate availability and the economy contributed to a decline in new solar installations in 2009. The City issued five solar permits in 2009 compared to 10 in 2008, 12 in 2007 and 18 in 2006. There are solar photovoltaic systems on three City buildings. Twelve permits related to geothermal systems were also issued by the City in 2009.

In 2009, Xcel Energy obtained 20 percent of its power from renewable energy compared to 19 percent in 2008. Minnesota regulations require Xcel to obtain 30 percent of its electricity from renewable resources by 2020 – most of it coming from Minnesota-generated wind power.

Xcel Energy electric power sources¹ in Minnesota



1 Includes sources owned by and purchased from other companies
 2 2009 renewables include 9 percent hydro, 8 percent wind, 3 percent biomass and 0.4 percent other renewables

Recent City and Community Activities

- Partnered with stakeholders to pass state legislation encouraging renewable resource development combined with energy efficiency and conservation.
- As part of a federal Solar America Cities grant, improved the permitting process for solar projects and conducted solar training for local governments to encourage more solar projects on government buildings.
- Launched a joint project with the University of Minnesota Law School to investigate local government financing options for leveraging private solar investment.
- Received a federal stimulus grant in partnership with Saint Paul to evaluate and potentially add solar energy at Saint Paul District Energy and NRG Thermal, the district heating provider for downtown Minneapolis.
- The self-guided, annual Minnesota Solar Tour showcased 10 Minneapolis homes, businesses, and institutions that set an example for incorporating renewable energy into the design and operation of their buildings. mnrenewables.org/2009-solar-tour-sites
- More than 7,100 Minneapolis customers participated in Xcel Energy’s Windsource program, buying enough wind-generated electricity for 5,700 homes a year. This results in more Minnesota-produced wind power, which helps our economy and environment. www.xcelenergy.com/Minnesota/Residential/RenewableEnergy/Windsource/_Pages/WindSource.aspx



Bruce Slick

The Wellstone Apartments uses solar energy to heat water for its residents. www.wellstoneapts.com

Web Links and Resources

- City of Minneapolis solar www.ci.minneapolis.mn.us/sustainability/solar.asp
- Minnesota Renewable Energy Society www.mnrenewables.org
- Minnesota Department of Commerce information on renewable energy www.state.mn.us/portal/mn/jsp/content.do?id=-536893809&agency=Energy

Air Quality



Improve Air Quality Levels

Air quality in Minneapolis is among the best of large metropolitan areas in the U.S. Still, the area has air quality issues that contribute to health problems such as asthma, lung disease and heart disease. Most air pollution comes from cars and trucks releasing fossil fuel exhaust.

Target

- Reduce air pollution in the Minneapolis area to health-based levels recommended by the Environmental Protection Agency’s Clean Air Scientific Advisory Committee (CASAC).
- Reduce all monitored air toxins to levels within state health guidelines by 2015.

Trend Analysis

The Minnesota Pollution Control Agency's 2009 air monitoring results revealed promising signs for air quality. The days exceeding the CASAC recommendations for ozone concentrations in the metro area were 66 percent fewer than the average over the last seven years. 2009 was the second lowest in the past seven years for number of days exceeding CASAC standards for fine particulate (PM 2.5) concentrations.

All air toxins monitored in Minneapolis have trended downward in concentrations over the last five years and are below state health guidelines.

Metro area ozone^{1,2} and Minneapolis particulate matter 2.5³

in number of days

	Met CASAC Ozone Levels	Exceeded CASAC Ozone Levels	Met CASAC PM 2.5 Levels	Exceeded CASAC PM 2.5 Levels
2005	136	47	353	8
2006	145	38	360	5
2007	150	33	355	8
2008	165	18	355	9
2009	172	11	358	7

Source: Minnesota Pollution Control Agency

- 1 Ozone is an air pollutant in the lower atmosphere that creates smog and has harmful effects on respiratory systems and plants.
- 2 Based on Minnesota’s annual 183-day ozone season from April 1 to September 30
- 3 PM 2.5 refers to fine particles that are 2.5 micrometers in diameter and smaller and can pass through the throat and nose and enter lungs, having serious health effects.

Recent City and Community Activities

- Reduced the City vehicle fleet’s fuel use and emissions by almost 14,000 gallons and increased the fleet’s number of hybrid vehicles by 9 percent.
- Updated the zoning code to allow neighborhood electric vehicle and motorized scooter sales to promote lower emitting vehicles.
- Took enforcement actions on 87 air quality violations and collected \$3,000 in fines.
- Increased educational outreach on the negative effects of idling to motorists through the Downtown Improvement District program.
www.ci.minneapolis.mn.us/airquality/Antildling_home.asp
www.minneapolisidid.com
- Increased street sweeping in the Phillips community to reduce particulates in these neighborhoods as part of the Community Air Improvement Project, a collaborative effort between the Phillips community, the City and the Minnesota Health Department.
- Purchased a new mobile air quality monitor, the Electronic-Beta Attenuation Monitor (E-BAM), to test particulate air pollution of activities such as sand blasting of lead-painted surfaces and rock crushing.
- The Emergency and Community Health Organization included air quality alerts as part of its multi-lingual outreach to residents with limited English proficiency. www.echominnesota.org/index.cfm/p/Home

Web Links and Resources

- Minnesota Pollution Control Agency air quality www.pca.state.mn.us/air/index.html
- City of Minneapolis air quality www.ci.minneapolis.mn.us/airquality
- Minnesota Department of Health air quality www.health.state.mn.us/divs/eh/air/index.htm
- Clean Air Scientific Advisory Committee yosemite.epa.gov/sab/sabpeople.nsf/WebCommittees/CASAC



This mobile air quality monitor is a new tool being tested by the City to measure fine particulate air pollution for specific activities.

Waste Reduction and Recycling



Prevent, Reduce, Reuse and Recycle

Economic activity and daily living produce materials that can be classified as waste. Limiting consumption of natural resources to levels that the planet can manage, processing waste by recycling and reducing garbage that goes to a landfill are priorities for the City. Most of the waste in Minneapolis is from the packaging of purchased goods.

Target

- Increase recycling and source separated organics (SSO) composting from 35 percent¹ of discarded waste tonnage to 50 percent by 2013, including a 10 percent SSO composting target.
- Reduce the number of households with more than one garbage cart from 22¹ percent to 11 percent by 2013.

- Increase the percentage of Minneapolis residents using the smaller garbage carts from 4 percent¹ to 25 percent by 2013.
- Expand the source-separated organics composting program by 2013.

Trend Analysis

The rate of recycling rose from 34.5 percent in 2008 to 34.9 percent in 2009. Composting – including source-separated organics and residential yard and street waste – increased from 15.3 percent in 2008 to 15.6 percent in 2009.

The percentage of residents using the small garbage carts rose to 4.7 percent. The number of large carts per household remained close to 2008 levels with an average of 1.06 carts per household.

¹ Baseline data from 2008

Residential recycling and composting²

2005	2006	2007	2008	2009
33.3%	33.2%	32.3%	34.5%	34.9%

Source: Minneapolis Public Works

² This does not include multifamily housing (six units and more).

Recent City and Community Activities

- Expanded the source-separated organics recycling program from the Linden Hills pilot neighborhood to the East Calhoun neighborhood. An average of three tons of food waste and non-recyclable paper is collected weekly from 40 percent of residents in Linden Hills. www.lhpowerandlight.org
- Supported the East Side Food Co-op's pilot recycling program for plastics currently not collected curbside.
- Collected 819 tons of electronics from residents, for recycling in the U.S. Minneapolis continues to be the only City in the country to accept electronics from its residents at no additional charge.
- The Mill City Farmers Market was the first farmers market in the state to convert to zero-waste practices. This conversion was supported by a Climate Change Grant awarded by the City. www.ci.minneapolis.mn.us/dhfs/zerowaste.pdf
- Installed the first public art drinking fountain to encourage use of municipal water and reduce the number of water bottles discarded. www.tapmpls.com
- Supplied 54 community gardens with more than 700 cubic yards of free and reduced-rate compost.



Linden Hills Power and Light

Home composting, the practice of turning kitchen and garden waste into nutrient-rich soil, is an important part of reducing waste that is burned and landfilled.

Web Links and Resources

- Minneapolis Solid Waste and Recycling www.ci.minneapolis.mn.us/solid-waste/index.asp
- Clean City Minneapolis www.ci.minneapolis.mn.us/solid-waste/clean-city.asp

Biking



Increase Biking and Bikeways

Bicycling requires less energy than any other form of transportation on wheels. It is good for our health, economy and environment, yet Minneapolitans still drive alone in their cars for 63 percent of their commutes to work. The City encourages bicycling for all ages to all destinations by providing new and improved bikeways and education.

Target

- Increase bikeways (on-street lanes and off-street trails) from 123 miles in 2008 to 178 miles by 2015.
- Increase residents' trips to work on bicycle to 6 percent by 2012 and 7 percent by 2014.¹
- Increase the number of cyclists in the bike count² 30 percent by 2011 and 60 percent by 2014.

Trend Analysis

In 2009, five miles of on-street bikeways were added, including lanes for bicyclists only and marked shared lanes. Since 2000, total miles of bikeways have increased by 32 miles, or 34 percent. The fastest growth has occurred on streets, with 17 additional miles (a 61-percent increase over 2000 levels).

Minneapolis has the second highest percentage of people biking to work of the 50 largest U.S. cities.³ Of all residents' trips to work in 2008, 4.3 percent were on bikes, up from 2 percent in 2000. An estimated 8,160 residents were biking to work, a 111-percent or 4,300-person increase since 2000.

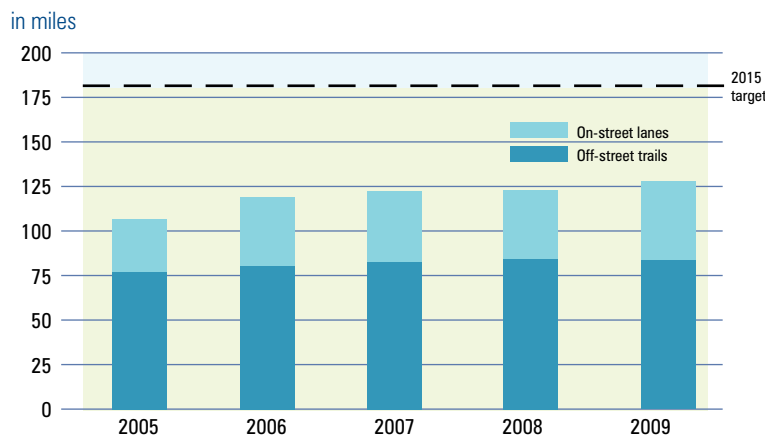
The count of bicycle traffic at 30 citywide locations was 28,810, a 5-percent decrease from 30,340 in 2008 and a 10-percent increase over the 2007 count of 26,310.

¹ This is also known as the "bicycle commute mode share."

² At the locations of previous bike counts

³ U.S. Census Bureau

Bikeways⁴ in Minneapolis



Source: Minneapolis Public Works

⁴ Bikeways are multi-use paths, bike lanes and marked shared lanes.

Recent City and Community Activities

- Improved bikeways in Minneapolis by adding bike lanes to Riverside Avenue, First Avenue North, and 18th Avenue Northeast and marking shared lanes on Hennepin Avenue in downtown. The Minneapolis Park and Recreation Board also reconstructed the West River Parkway bike path between Franklin Avenue and Godfrey Parkway. www.ci.minneapolis.mn.us/bicycles/new-projects.asp
- Painted Minneapolis' first bike boxes on the street on Hennepin and First avenues, making left turns safer and easier for bicyclists. www.ci.minneapolis.mn.us/hennepinfirst/Henn_1Bicyclists.asp
- The Bike Walk Ambassadors encourage biking and walking as part of everyday routines. In 2009, they reached more than 5,000 participants through Bike Walk Week and nearly 10,000 members of the public through more than 150 events. www.ci.minneapolis.mn.us/bicycles/ntp-bikewalk-ambassadors.asp www.bikewalktwincities.org/ambassadors
- Trained City employees on commuting basics and offered an on-road downtown short course teaching best practices for street riding, safety, routes into downtown and parking.
- Annual bicycle events include the Minneapolis Bike Tour, Great River Energy Bicycle Festival, and Bike Walk Week. www.bikewalkweek.org



Bikes Belong

The city's world-class bike trail system includes Grand Rounds, Midtown Greenway and the Stone Arch Bridge, making it easy to bike for work, errands or fun.

Web Links and Resources

- City of Minneapolis biking information www.ci.minneapolis.mn.us/bicycles
- Future bike sharing program www.niceridemn.com
- Bike Walk Twin Cities www.bikewalktwincities.org
- Metro Transit Biking Resources www.metrotransit.org/bike
- Online biking forum www.mplsikelove.com

Downtown Transportation Alternatives



Increase Use of Alternative Transportation into Downtown

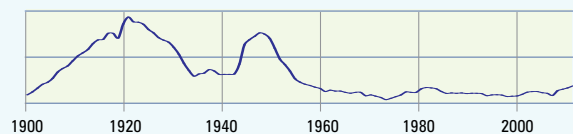
Using transportation other than driving is good for our hearts, lungs and budgets. Today in Minneapolis, alternative transportation includes busing, riding trains, carpooling, bicycling and walking. The City plays important roles in making transit affordable and convenient, promoting its use, and creating dynamic urban corridors that are safe and accessible for pedestrians and bicyclists.

Target

Increase the percentage of people who enter downtown via alternative transportation (busing, riding trains, carpooling, bicycling and walking) from 55 percent in 2003 to 67 percent by 2013.

Trend Analysis

The number of people entering downtown via alternative transportation was 55 percent when last measured in 2003. In 2009, transit ridership in the region including downtown fell after several years of growth. In 2009, light-rail transit (LRT) ridership fell 2.7 percent, and system-wide bus ridership fell 7.4 percent. Over the longer term, however, transit ridership has grown 16 percent from 2003 to 2009.

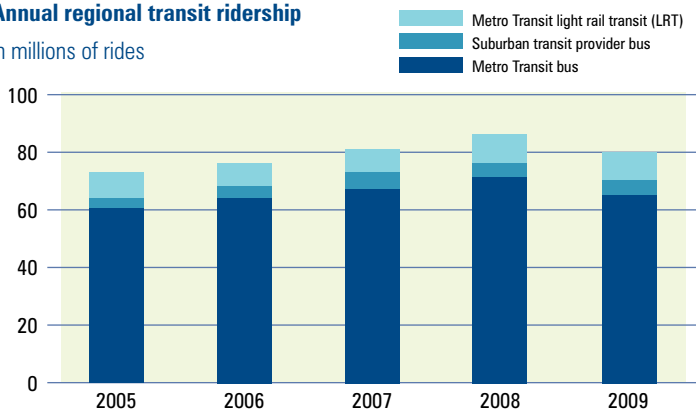


Historic regional transit service ridership (1900 to 2009)

Source: Metropolitan Council

Annual regional transit ridership

in millions of rides



Source: Metro Transit

Downtown jobs

2005	2006	2007	2008	2009
136,165	139,127	135,713	135,378	n/a

Source: Minnesota Department of Employment and Economic Development (DEED)



Walking along Nicollet Mall brings residents and downtown employees to the farmers market and shops.

Recent City and Community Activities

- Completed the Marquette and Second avenues South transit project providing side-by-side bus-only lanes improving bus speed in downtown, new bus shelters, wider sidewalks and trees.
www.ci.minneapolis.mn.us/public-works/marq2
www.metrotransit.org/marq2
- Opened the Northstar Commuter Rail connecting downtown Minneapolis and Big Lake.
www.metrotransit.org/northstar.aspx
- Opened the new Hiawatha LRT station in downtown and lengthened the platforms at 10 LRT stations to accommodate future use of longer trains.
- Increased the number of employers participating in the Metropass and Go-To College Pass discount transit programs by 17 over 2008. Total downtown Metropass users declined by 22 percent to 21,000 users, while City employee Metropass users increased by 7 percent to 517 users.
www.metrotransit.org/metropass.aspx
- Registered 1,473 carpools and vanpools for free or discounted parking in many downtown Minneapolis facilities, a 10-percent increase from 2008.
- Downtown commuters registered in carpool, vanpool or transit pass programs reduced their vehicle miles traveled by almost 19.75 million miles and carbon dioxide pollution by more than 5,400 tons.
- Opened high-occupancy toll (MnPASS) lanes from downtown to Highway 62, reducing travel times for express bus, carpool and vanpool users.
- Revised the zoning code to require active uses on the street-facing, ground floor of buildings. This increases perceived and real safety and creates a more pedestrian-friendly environment.

Web Links and Resources

Downtown Minneapolis Transportation Management Organization www.mplstmo.org

Airport Noise



Reduce Airport Noise and the Environmental Impacts of the Airport

The Minneapolis-St. Paul International Airport (MSP) is one of the 20 busiest airports in the U.S. and one of the 30 busiest airports in the world, measured by the number of passengers. Despite a declining number of landings and takeoffs, the airport provides global access for a significant number of business and leisure travelers. The airport also impacts the environment, producing noise and air pollution that affects the quality of life for nearby residents.

Target

Reduce the average noise levels from 2004 levels by at least three decibels at all nine monitored locations in Minneapolis by 2009. Three decibels is the minimum change that is perceptible to the average person's ear.

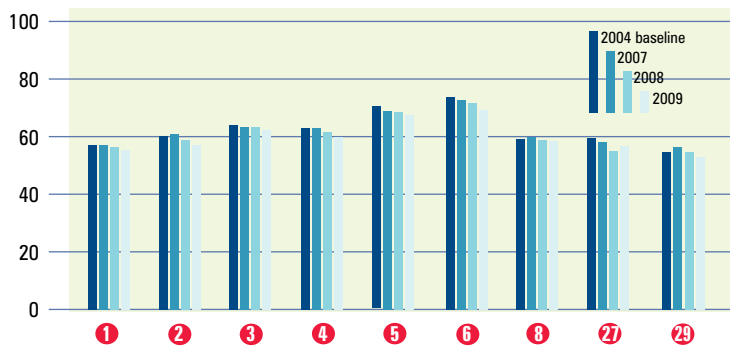
Trend Analysis

Airplane landings and takeoffs at MSP in 2009 totaled 432,395, a 3-percent decline. This was the fourth year of reductions following declines of 0.59 percent in 2008, 4.6 percent in 2007 and 10.6 percent in 2006. The number of nighttime landings and takeoffs decreased by an average of 24 percent from 2008, however, there were approximately five percent more nighttime operations in 2009 than in 2004.

Fewer flights and phasing out older planes have caused noise levels to decline at all nine monitors. Only four of the monitors, however, indicated a reduction of at least three DNL,¹ with an average reduction at all nine monitors of approximately 2.67 DNL. While the numbers clearly show improvement, many residents still perceive no significant change in noise levels.

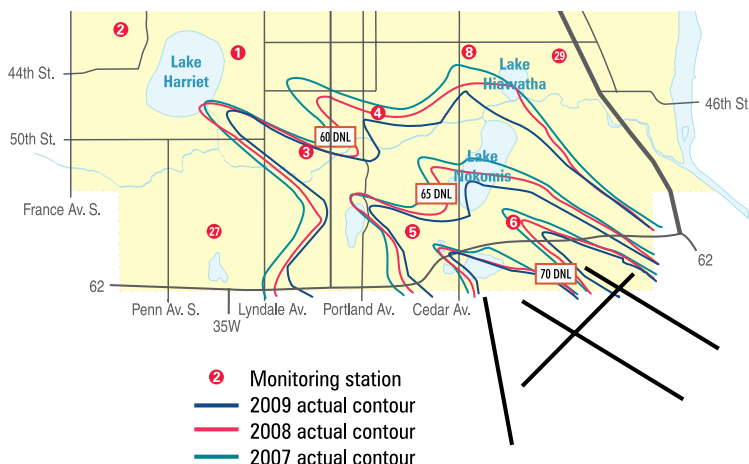
¹ DNL is a cumulative average annual noise exposure of a 24-hour period with a nighttime penalty of 10 decibels for operations between 10 p.m. and 7 a.m.

Average noise levels at Minneapolis monitoring stations in decibels



Source: Metropolitan Airports Commission

Airport noise monitoring stations in Minneapolis



Source: Metropolitan Airports Commission

Recent City and Community Activities

- Coordinated with the Metropolitan Airports Commission (MAC) to implement the sound insulation program resulting from the 2007 settlement agreement. In Minneapolis, 248 homes impacted by the highest noise levels of 63 to 64 decibels received five decibel noise reduction packages. Settlement maps and details can be found on the City's Web site. www.ci.minneapolis.mn.us/airportnoise
- Completed installation of central air and additional noise reduction upgrades at 389 homes in the 60, 61 and 62 DNL areas as part of the settlement agreement's second phase insulation program.
- Advocated with the MAC for abatement measures to manage noise at the airport including more balanced use of parallel runways for nighttime operations and more equitable distribution of noise on all runways.

Web Links and Resources

Metropolitan Airports Commission
www.msppairport.com/mac

To file a noise complaint, call (612) 726-9411 or visit www.macnoise.com/complaint

City of Minneapolis airport noise
www.ci.minneapolis.mn.us/airportnoise

Tree Canopy



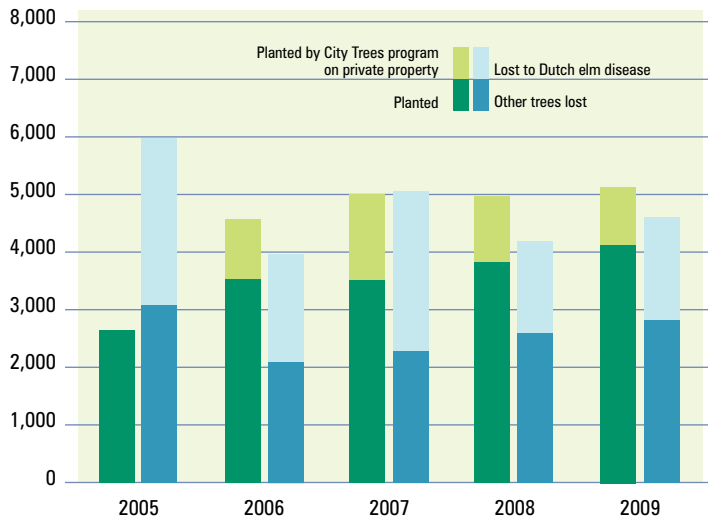
Expand the City's Tree Canopy

Trees contribute significantly to human health and environmental quality, but protecting the urban forest is a challenge given the impacts of construction, diseases and insects. A new threat is the emerald ash borer, an invasive beetle that kills ash trees, found in Minneapolis in February 2010. With no known remedy, it is poised to destroy 22 percent of the city's trees.

Target

- Maintain the tree canopy at 26 percent of the city through 2015 and increase it to 30 percent of the city by 2030.
- Plant at least 4,000 trees on public land in 2010 and gradually increase to 6,000 trees planted annually by 2015.

Trees lost¹ and trees planted on boulevards and in public parks²



Source: Minneapolis Park and Recreation Board

1 This includes trees in natural areas that were not planted or maintained by the MPRB, such as remote locations in Theodore Wirth Park or Minnehaha Park.
 2 The size of the average tree removed is 24 inches in diameter. The average replacement tree is 1.5 inches in diameter.



Ash trees make up one-fifth of Minneapolis' trees. Residents are encouraged to plant new trees now to lessen the impact of the loss of the city's ash trees due to the emerald ash borer.

Trend Analysis

The tree canopy, last measured in 2004, covers 26 percent of the city. Since then, more than 15,000 elm trees on public land have died from Dutch elm disease.

The Minneapolis Park and Recreation Board (MPRB) met the tree planting target for the fifth year in a row by planting 4,200 trees, but still saw a net loss of trees in 2009. Since 2003, the MPRB has planted an average of 3,600 trees per year and a total of almost 22,000 trees along streets and in parks. There has still been a net loss of 9,400 public trees in the city over the past six years. More than 4,500 trees have been planted by the City and its partners on private land over the past four years through the City Trees program.

Recent City and Community Activities

- Obtained a grant from the Minnesota Department of Natural Resources to map the City's tree canopy using satellite imagery.
- Provided 1,000 trees to city residents through a partnership with Tree Trust, a local nonprofit, and coordinated a response to replant trees after a summer tornado. www.treetrust.org
- Planted 179 new trees on Marquette and Second avenues to improve the streetscape and manage stormwater downtown. www.ci.minneapolis.mn.us/stormwater/green-initiatives/marq2-tree-install.asp
- Incorporated more than 2,000 tree gator bags into the MPRB's tree watering practices.
- Hosted the Minnesota Viking's "Planet Purple" tree planting event at Bohanon Park and Jenny Lind School. Students helped Vikings players plant more than 100 new trees.
- Began removing declining ash trees and replacing them with new trees of diverse species in preparation for the arrival of the emerald ash borer.
- Held the Minneapolis Arbor Day celebration at Waite Park and Waite Park School where students and staff helped plant more than 100 new trees. www.minneapolisparcs.org/default.asp?PageID=986

Web Links and Resources

- Minnesota Department of Agriculture emerald ash borer www.mda.state.mn.us/plants/pestmanagement/~/_link.aspx?_id=739576CEA8434EB09D7334B18106C5D2&_z=z
- MPRB's Forestry Division www.minneapolisparcs.org/default.asp?PageID=28
- Minneapolis Urban Forest www.ci.minneapolis.mn.us/sustainability/urbantreecanopy.asp
- USDA's 2004 UFORE tree canopy study of Minneapolis www.fs.fed.us/ne/syracuse/Data/State/downloads/CityReports/Minneapolisrb166.pdf

Stormwater



Reduce Stormwater Pollution Entering Lakes, Creeks and the Mississippi River

Reducing the pollutants that enter lakes and waterways from stormwater runoff is a responsibility of the City and all residents, property owners and visitors. Rain runs across surfaces such as roofs, streets, driveways and compacted lawns, picking up pollutants as it flows. Practices that keep pollutants out of our waterways include rain gardens, wetland areas, grassy swales, pervious pavers, underground treatment chambers and street sweeping.

Target

- Reduce pollutants in stormwater runoff, establish measurements of pollution reduction, and determine the extent of the City’s part in bringing impaired water bodies into compliance, by 2015.
- Increase the number of rain gardens to 3,000 by 2015.
- Eliminate combined sewer overflows by 2014.

Trend Analysis

The State of Minnesota determines whether lakes, rivers and creeks are suitable for swimming, consumption of fish, and habitat for fish and other aquatic life. Minneapolis discharges stormwater to 15 water bodies that are on the state’s impaired waters list – the Mississippi River, all three creeks, eight of 11 lakes in Minneapolis and three lakes outside of Minneapolis. Work is under way to establish measurements for stormwater pollution reduction.

There are currently 906 rain gardens in the city.

For the third year in a row, there were no combined sewer overflow events in which heavy rains can cause stormwater contaminated with raw sewage to be conveyed into the Mississippi River.¹

¹ This shows very good progress gained by City and Metropolitan Council projects. It is likely also due to the lack of heavy precipitation or a water table generally lower than normal.

Minneapolis rain gardens

by land use category

Quantity	Garden type
656	Residential: <i>single and multifamily</i>
87	Institutional: <i>schools, universities, libraries, churches, other</i>
81	Businesses: <i>commercial and industrial</i>
63	Public: <i>parks, plazas, right-of-way areas, public parking lots</i>
19	Mixed Use: <i>businesses on lower floors with residences above</i>
906	Total

Source: Minneapolis Public Works



This Minneapolis rain garden, installed under the City’s permit review process, is located at the site of a former hospital converted to housing at Glenwood and Penn avenues North.

Recent City and Community Activities

- Installed innovative stormwater management infrastructure on Marquette and Second avenues to create growing spaces that support mature trees.
- Adopted planning and zoning measures to reduce stormwater runoff, including new standards for plazas and revised off-street parking requirements for certain new developments.
- More than 2,000 volunteers removed 20,000 pounds of trash from their watersheds at 41 locations on Earth Day.
- Trained 676 residents to design and install rain gardens at workshops held by Metro Blooms. www.metroblooms.org
- Piloted a project using beet juice on the pavement of some City properties to pre-treat for snow and ice control, to decrease salt use. Salt can find its way to water bodies and harm aquatic life.
- Held a Canines For Clean Water summer movie series. At several events, dog owners took a Clean Water Pledge to dispose of dog waste responsibly.
- The new Target Center green roof, largest in the state and 10th largest in the world, will capture one million gallons of stormwater each year.

Web Links and Resources

Minneapolis storm and surface water management www.ci.minneapolis.mn.us/stormwater

Minnesota Pollution Control Agency Stormwater Manual www.pca.state.mn.us

Healthy Lakes



Improve the Water Quality of Minneapolis Lakes

Minneapolis is known as the City of Lakes because of its many lakes and waterways. City residents and visitors enjoy swimming, boating, fishing, biking and walking along the lakeshores and riverbanks. Keeping our lakes, streams and rivers clean is critical to a healthy urban environment, safe recreation and quality wildlife habitat. Practices that help protect lake water quality include frequent monitoring, lake restoration projects, managing stormwater to keep pollutants out of our lakes, and keeping residents informed of best practices for water management.

Target

- Every Minneapolis lake is rated and receives a ranking of eight, nine or 10 (with 10 being excellent) on the Lake Aesthetic and User Recreation Index (LAURI)¹ by 2014.
- No beaches are closed.

Trend Analysis

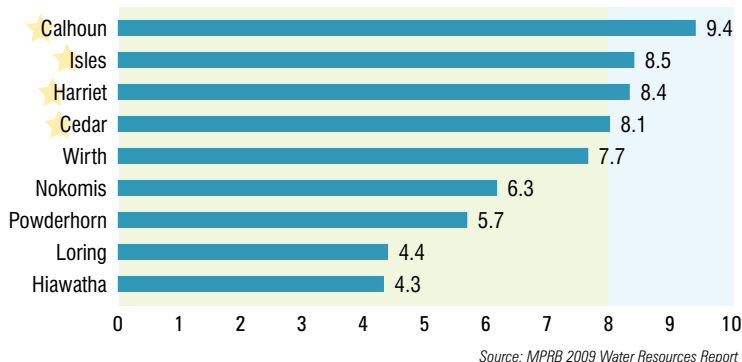
The baseline data for the City’s lakes using the LAURI¹ shows lakes Calhoun, Isles, Harriet and Cedar meeting the target. The LAURI provides a snapshot of the conditions at the lakes during the summer season, and future LAURI reporting will provide a means for analyzing trends and identifying problem areas affecting our lakes.

There were no beach closings in Minneapolis in 2009. Most Minneapolis lakes are showing measurable water quality improvements due to continuous improvements in treatment and mitigation of stormwater contamination by the Minneapolis Park and Recreation Board (MPRB) and the City.

¹ The LAURI measures: 1) public health status at swimming beaches, 2) water quality including clarity, 3) aesthetics such as color, odor and debris, 4) availability and ease of public access for recreational uses, and 5) habitat quality for plant and fish diversity. These five indices are scored on a scale of one to 10. The LAURI standards were revised in 2009.

Lake Aesthetic and User Recreation Index

average on a scale of one to 10



Recent City and Community Activities

- The MPRB and Friends of Diamond Lake completed the Diamond Lake Management Plan aimed at improving access and water quality. www.minneapolisparke.org/documents/caring/Diamond_Lake_Management_Plan.pdf
- Expanded comprehensive water monitoring to include five more stormwater sites and emerging contaminants such as pharmaceuticals and endocrine disrupters to the lake monitoring program.
- Reduced stormwater volume and contaminant outflow at North Mississippi Park by installing rain gardens, ponds and pervious surfaces. www.minneapolisparke.org/default.asp?pageid=4&parkid=419
- Permeable pavement replaced impervious paved areas at the Lake Harriet Band Shell.
- The MPRB removed 500 cubic yards – 90 truckloads – of invasive Eurasian milfoil from city lakes to improve recreational access.
- The MPRB environmental education program served 15,000 people with more than 1,410 program hours at 75 sites and raised awareness and understanding of water quality issues.



Minneapolis Park and Recreation Board

Minneapolis residents enjoy learning how to sail on the lakes as part of Lake Calhoun Sailing School.

Web Links and Resources

- MPRB Annual Water Resources Report www.minneapolisparke.org/default.asp?PageID=791
- Minnesota Department of Natural Resources Lake Finder www.dnr.state.mn.us/lakefind/index.html
- Minnesota Pollution Control Agency Water Resources www.pca.state.mn.us/water/index.html www.cleanwatermn.org

Green Jobs



Grow a Green Economy

Minneapolis is emerging as a leader in attracting and growing green businesses. Strategically investing in job opportunities in areas such as green construction, transportation, food production, energy efficiency, conservation and renewable energy will help solve current economic, energy and environmental challenges.

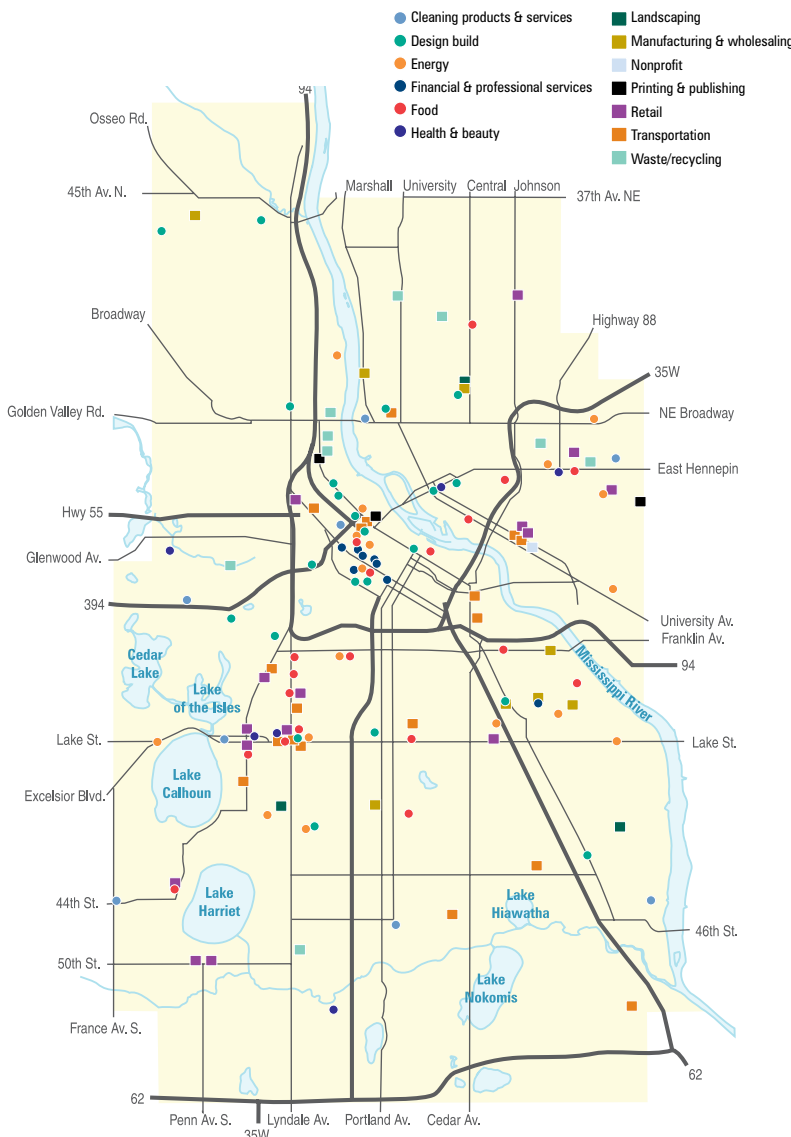
Target

A target has not yet been established. City staff have identified 148 green businesses in Minneapolis and are working to establish direct contact with them. Our goal is to retain existing and attract new green businesses.

Trend Analysis

Green businesses and green-collar jobs are tied to industries that reduce environmental impact and resource consumption. Examples include renewable energy (solar, wind, geothermal, hydropower and biofuels), green products (green building products, clean vehicle technologies, biodegradable and energy-efficient products), green services (recycling, composting, green retail, professional services supporting green industries), and environmental conservation (energy efficiency, water conservation and treatment, sustainable land use). Green collar jobs also provide good wages and career laddering opportunities for moving low-income workers into occupations that develop skills in growing industries.

Minneapolis green business locations



Recent City and Community Activities

- The City selected a developer to install a 600 kW solar photovoltaic system on the Convention Center. The project will train and employ local, union electrical workers, pay good wages and benefits, reduce building emissions, and expand the region's capacity to compete in the clean-energy economy.
- The City, in partnership with Ramsey County Workforce Solutions, received a \$4 million Green Jobs-Pathways Out of Poverty grant from the U.S. Department of Labor (DOL) to create a green career training opportunities for low-income residents in high poverty neighborhoods in St. Paul and Minneapolis. The Blue-Green Alliance received a \$5 million DOL grant for a statewide initiative, which includes the City and Minneapolis technical colleges as partners, to train workers in green manufacturing and clean-energy jobs.
- Minneapolis, Saint Paul, and the Blue-Green Alliance led the second phase of the Twin Cities Green Manufacturing Initiative, working to develop strategies, resources and partnership models to grow our regional green economy. www.bluegreenalliance.org/press_room/publications?id=0020
- The City partnered with the Minneapolis Regional Chamber of Commerce on the first Greening Your Business Expo. www.minneapolischamber.org/program_green_business_expo.php
- The City, in collaboration with several partners and using federal stimulus dollars, is launching new energy efficiency investment programs to reduce energy use in at least 50 percent of the City's building stock over the next 10 years. These programs are designed to create jobs in the growing energy efficiency sector and cross-train construction workers in these skills.

Web Links and Resources

Pathways Out of Poverty: Renewable Energy Network Empowering Workers (RENEW) Training and Employment Project www.renewmn.com
 The Blue-Green Alliance www.bluegreenalliance.org

Local Food



Increase the Amount of Local Food Grown, Sold and Consumed in Minneapolis

A sustainable food system provides healthy food to meet current needs while maintaining a healthy ecosystem. It requires infrastructure that supports local food production, processing, distribution and waste recovery. It makes nutritious food available, accessible, and affordable to all and increases food safety and security. It is also humane and fair, protecting farmers, workers, consumers and communities.

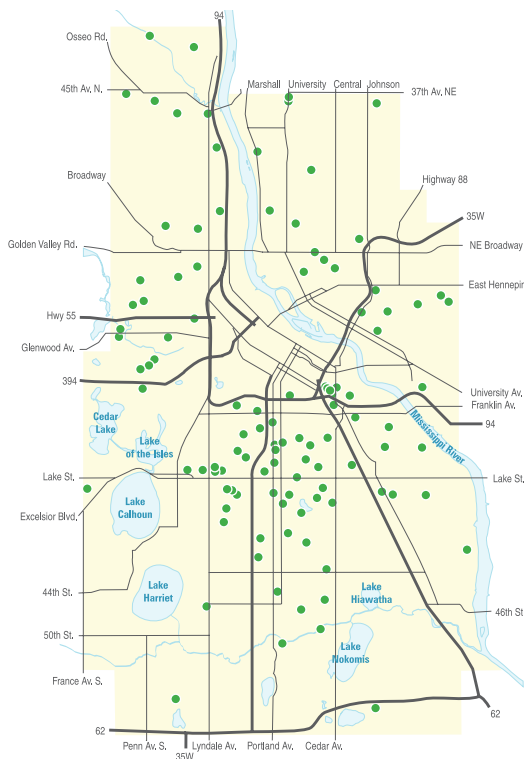
Target

A target has not yet been established.

Trend Analysis

The local food system in Minneapolis currently includes 21 farmers markets, including 12 mini farm stands, more than 120 community gardens, five health food co-ops, 106 community supported agriculture (CSA) drop-off sites and many restaurants serving local food. But gaps remain, including unequal access to healthy, affordable, local foods; a lack of small- and mid-size facilities for processing, aggregating and distributing food; a disconnect between rural food producers and urban consumers; underused home gardens; and not enough suitable land for community food production.

Minneapolis community garden locations



Community gardens integrated into Minneapolis neighborhoods provide residents with open, green spaces for gathering, sources of fresh produce, a way to stay active, and opportunities for kids to learn about the environment.

Recent City and Community Activities

- Convened more than 100 city and community partners in Homegrown Minneapolis, an initiative focused on improving growth, sales and consumption of healthy, local food. Established working groups to implement key recommendations.
- Partnered with the Minneapolis Employment and Training Program to start the Emerge Youth Community Garden in north Minneapolis – a community garden focused on teaching teens about local food production and sustainability.
- Installed raised gardening beds made of recycled materials at 11 of the City's fire stations and provided additional soil for gardens at five other stations. Firefighters use these beds to grow their own fresh produce.
- Funded development of the Yards to Garden Web site through the City's Climate Change Grant process to connect people who are looking for gardening space with people who have space. www.y2g.org
- Provided funding for five community members from the Little Earth of United Tribes to attend an urban agriculture training workshop at Growing Power in Milwaukee.
- Customers and vendors of the Minneapolis Farmers Market donated 108,000 pounds of fresh produce to Second Harvest Heartland in 2009 to help those in need in our community.

Web Links and Resources

Homegrown Minneapolis
www.ci.minneapolis.mn.us/dhfs/homegrown-home.asp

Gardening Matters
www.gardeningmatters.org

Institute for Agriculture and Trade Policy:
Local Foods Program
www.iatp.org/localFoods

Local Harvest
www.localharvest.org

Twin Cities Urban Ag Connection
www.tcurbanag.com

Minneapolis greenprint

Published April 2010

Printed on recycled paper
100% post-consumer fibers, FSC

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For more information: call **311**

or e-mail sustainability@ci.minneapolis.mn.us

or visit www.ci.minneapolis.mn.us/sustainability

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Hmong: Ceeb toom. Yog koj xav tau kev pab txhais cov xov no rau koj dawb, hu 612-673-2800.

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