Evanston Climate Action Plan

November 2008

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INTRODUCTION

In October 2006, the Evanston City Council voted unanimously to sign the U.S. Mayors Climate Protection Agreement, an initiative launched in 2005 that invites cities to 'meet or beat' the targets of the 2005 Kyoto Protocol. The goal: to reduce greenhouse gas (GHG) emissions to 7% below 1990 levels by 2012. The City then conducted a community-wide inventory of its GHG emissions and found that, in order to meet this goal, Evanston must reduce its emissions by 13%, or 140,104 metric tons of carbon dioxide equivalent ($MTCO_2E$).

Achieving a 13% reduction in emissions requires a plan. Rather than hire a consultant or have City staff author a plan for the community, the City embarked on a unique, collaborative partnership with the Network for Evanston's Future, a local sustainability coalition. Nine task forces were established; each with one City and two citizen co-chairs, and the planning process was launched at a community meeting in November 2007 that was attended by more than 130 community members. Participants were invited to join one of the nine task forces and help develop the recommendations of the Evanston Climate Action Plan (ECAP). In a remarkable display of citizen action, the task forces worked through the winter to research recommendations. A draft ECAP was presented to the community in May 2008 at an Earth Month event attended by more than 300 community members. The draft ECAP was then available online for citizen review and comment for one month.

The plan is organized into nine focus areas and outlines more than 200 strategies for reducing Evanston's GHG emissions. The nine focus areas are: Transportation & Land Use, Energy Efficiency & Buildings, Renewable Energy Resources, Waste Reduction & Recycling, Forestry, Prairie & Carbon Offsets, Food Production & Distribution, Policy & Research, Education & Engagement and Communications & Public Relations.

Strategies outlined in the ECAP identify action steps but do not detail methods for implementation in order to allow for flexibility moving forward. Task force members spent months researching options and determining which measures would be the most cost-effective to pursue based on the associated emissions reductions, costs, existing resources and community priorities. This plan is not a policy; there are recommendations in some sections to examine current policies and develop new ones, but any policy changes resulting from this plan will require a separate process of investigation and adoption. While the City has a key role to play as a strategic partner, catalyst and advocate for the implementation of this plan, the success of Evanston's efforts to take action on climate change depend largely on the involvement of Evanston institutions, businesses and residents.

Some of the strategies do not have measurable emissions reductions but nonetheless are key components of the success of the ECAP. When added together, the strategies that will have a measurable impact on GHG emissions have the potential to reduce Evanston's emissions by 245,380 $MTCO_2E$ – nearly twice the 13% reduction goal of 140,104 $MTCO_2E$. Clearly, the ECAP offers ample options for meeting the goal.

The timeline for implementation of the different strategies varies and it will not be possible to implement all of the strategies outlined in the plan. Strategies will be prioritized based on ease of implementation, availability of existing resources, funding and grant opportunities and emission reductions. Some strategies, such as the distribution of free CFLs and promotion of ComEd's energy efficiency rebate programs, can be started immediately and will require no additional resources. Other strategies, such as the development of renewable energy resources, are long-term initiatives but the groundwork for their implementation needs to be laid now. Additionally, some measures may not seem feasible now, but political or economic changes in the coming years may make them more viable in the future.

Actual costs to the City for any recommendation will vary widely depending on when it is implemented and what resources (City revenues, grant, other funding) are available at that time, subsequently, the plan does not include the costs associated with each strategy. Wherever possible, however, strategies leverage

existing programs, initiatives and resources. Moreover, it is important to recognize that, while there will be upfront costs to reducing Evanston's GHG emissions that can't be offset by immediate savings elsewhere, in the long term there will be substantial savings and economic growth for the City and community.

Several studies demonstrate that the implementation of climate change mitigation strategies, such as improving building energy efficiency and public transit, have a positive impact on local and regional economies. Increased energy efficiency standards for buildings and appliances have saved California businesses and residents an estimated $56 billion over the past 3 decades and the California Energy Commission projects an additional $23 billion will be saved by 2013 (California Green Innovation Index, 2008). Expanded public transit and nationally acclaimed land use policies have resulted in 20% fewer miles traveled a day in the Portland metro region, saving the region $2.6 billion a year (Portland's Green Dividend, 2007). Initial estimates on the effects of the City of Boulder's Climate Action Plan Tax, enacted in 2006 to fund climate initiatives city-wide, project energy savings equivalent to $63 million based on 2006 energy rates – a 1,000% return on investment (City of Boulder, 2006).

In addition to financial savings, economic analysis of the impacts of implementing the California and Chicago Climate Action Plans indicate significant job growth. Chicago estimates over 13,000 new jobs could be created annually as a result of the building retrofits recommended by their Climate Action Plan (Regional Economic Applications Laboratory, 2007), while a UC Berkley study estimates California's plans to fight climate change will produce an additional 403,000 jobs and increase household income by $48 billion over the next 12 years (Energy Efficiency, Innovation and Job Creation in California, 2008).

The recommendations contained in this report all focus on reducing our dependence on nonrenewable energy resources and the amount of waste produced by the community. If implemented now, these strategies will not only reduce Evanston's GHG emissions, but over time they will enhance its economic vitality, as well as its viability as a sustainable, livable city.

By signing the U.S. Mayors Climate Protection Agreement, conducting a GHG emissions inventory and developing a climate action plan, Evanston has taken the first important steps in addressing climate change. While a number of cities nationwide have released climate action plans, including Portland, OR (2001), Seattle, WA (2006), Boulder, CO (2006), Minneapolis, MN (2004) and Madison, WI (2002), as of September 2008, the City of Chicago is the only city of the more than two dozen Illinois cities that have signed the agreement to release a plan for reducing their emissions. Evanston's experience can serve as a model for other Midwestern cities, providing leadership to surrounding communities as well as cities of similar size and resources across the region.

ECAP Recommended Strategies – Summary

Transportation and Land Use

1. Continue to support and encourage mixed-use, green, high performing, transit-oriented development. (15,000 $MTCO_2E$-over 5 years)
2. Encourage Evanston businesses to adopt strong employee commuting and telecommuting programs, providing resources and incentives to reduce the number of single occupant auto commuters in and out of Evanston. (5,700 $MTCO_2E$)
3. Reduce car-ownership by encouraging residents and employers to participate in car-share programs. (984-2,436 $MTCO_2E$)
4. Reduce vehicle emissions. (2,076 $MTCO_2E$)
5. Investigate the feasibility of an "EcoPass" for every Evanstonian, valid for no fare when boarding within Evanston any Pace or CTA train or bus. (When boarding outside of Evanston, regular fares would apply.) (3,225-11,375 $MTCO_2E$)
6. Utilize the Evanston Multi-Modal Transportation Plan development process to recommend and support measures that reduce transportation-related greenhouse gas emissions.

7. Expand public transit as a viable option for commuting to work, home and entertainment. (1,972 $MTCO_2E$)
8. Increase affordable housing options and resources in Evanston as a mechanism to reducing vehicle travel. (1,500-2,580 $MTCO_2E$)
9. Collect and track data on Evanston travel trends, including vehicle miles traveled, transit boardings and the number of residents that commute via bike and foot.
10. Reduce City fleet vehicle emissions.

Energy Efficiency and Buildings

1. Reduce emissions related to electric and gas use in commercial, institutional and industrial buildings. (56,674-117,787 $MTCO_2E$)
2. Reduce emissions related to electric and gas use in residential buildings. (27,616–60,759 $MTCO_2E$)
3. Reduce emissions related to electric and gas use in City owned and operated buildings, parks, parking lots and garages and along City streets. (2,498 $MTCO_2E$)

Renewable Energy Resources

1. Reduce emissions related to motor fuel use in commercial and residential applications through the use of bio-fuels. (13,522-29,748 $MTCO_2E$)
2. Continue to reduce emissions related to motor fuel use by City fleet through the use of bio-fuels. (101 $MTCO_2E$)
3. Reduce emissions related to electric and gas use in buildings through the use of renewable energy. (91,789-128,993 $MTCO_2E$)
4. Reduce emissions related to electric and gas use in commercial and municipal buildings through the use of off-peak thermal storage. (1,588 $MTCO_2E$)
5. Reduce emissions related to electric and gas use in commercial and municipal buildings by converting waste to energy. (1,900 $MTCO_2E$)

Waste Reduction & Recycling

1. Increase residential waste reduction and recycling participation efforts. (23,602 $MTCO_2E$)
2. Increase commercial waste reduction and recycling participation efforts. (2,175 $MTCO_2E$)
3. Increase the reuse and recycling of construction and demolition waste.
4. Keep clothing and fabric out of the landfill. (135-318 $MTCO_2E$)
5. Increase waste reduction and recycling participation at City buildings, parks and events. (3,885 $MTCO_2E$)

Food Production & Distribution

1. Reduce emissions related to the production and transportation of food.

Forestry, Prairie & Carbon Offsets

1. Create a local carbon offset program to complement Climate Action Plan emissions reduction strategies.
2. Optimize tree planting and protect existing trees for maximum carbon storage/sequestration and energy savings. (54-114 MTCO2E)
3. Optimize the use of native plants throughout Evanston.
4. Reduce amount of water used by 15% below 2000 water consumption levels by 2015. (Goal of Greenest Region Compact, approved by City Council, 1/28/08) -- (1,384 $MTCO_2E$)
5. Implement policies and practices that treat rainwater as a precious resource and make use of it where it falls.

Policy & Research

1. Track and disseminate information on climate change trends, policies and best practices.
2. Ensure that policy decisions at all levels seek to reduce greenhouse gas emissions.

3. Secure and leverage funding for Evanston Climate Action Plan initiatives and strategies.
4. Support local, state and national efforts to mitigate climate change.

Education & Engagement

1. Empower the community to take action around climate change.
2. Gain support from the six largest Evanston institutions and businesses for the implementation of the Evanston Climate Action Plan.
3. Use festivals, markets and celebrations to promote and model "green practices."
4. Connect residents, businesses and City staff to workshops, training and lectures on green topics.

Communications & Public Relations

1. Disseminate information to the community around climate change and the Evanston Climate Action Plan and promote community and City efforts as pertinent.
2. Support development of a public information campaign that includes advertising, poster displays, signage, etc. and that motivates the community to take action to reach the goal of 13% reduction in GHG emissions by 2012.
3. Encourage residents, businesses, students and community groups to use the Zerofootprint Evanston online carbon footprint calculator.

GLOBAL WARMING, CLIMATE CHANGE AND IMPACTS IN THE MIDWEST

The overwhelming body of scientific evidence is clear: climate change is happening now, and the primary cause is human activity. Global average temperatures have risen by 1.4°F over the last century, and this warming trend is accelerating. The vast majority of scientists agree that the main culprit is the emission of heat-trapping greenhouse gases from the burning of fossil fuels such as coal and oil. The concentration of carbon dioxide in the atmosphere as of 2005 is 379ppm, higher than the natural range of 180 to 300ppm of the last 650,000 years. The increase in carbon dioxide observed has been escalading since the industrial revolution and can be explained only by human-caused emissions of greenhouse gases.

The impacts of climate change are increasingly apparent. Extreme weather events such as heat waves and heavy downpours have increased in recent decades. The combination of melting glaciers and thermal expansion of the warmer oceans is causing sea levels to rise. Droughts and floods are becoming more common, and eco-systems around the world are struggling to adapt to the changing climate. Many of the observed changes are occurring faster than was predicted even just a few years ago.

The evidence of global warming is unmistakable here in the Midwest as well. The 2000 National Assessment Report of the U.S. Global Change Research Program notes the following climate trends over the 20th century for this region:

- Generalized warming (+4°F in the northern portion, including the upper Great Lakes, and -1°F along the Ohio River Valley)
- Increased annual precipitation (by 10-20 %)
- Increased number of days with heavy to very heavy precipitation events

Looking to the future, climate models predict that these trends will increase even more rapidly in the 21st century if we do not sharply reduce GHG emissions.

- Temperatures in the northern portion of the Midwest are projected to increase by 5 to 10°F by the end of the century.
- Precipitation is projected to increase another 10 to 30 % over the region, with much of it coming from heavy and extreme precipitation events.
- Higher temperatures will lead to increased evaporation and lower water levels in the Great Lakes.
- Increased evaporation will also cause soil moisture deficits and more drought-like conditions in much of the region.

These changes will have a number of effects in this region; some will be positive, but many others will be devastating, especially for vulnerable groups such as the poor, the young and the elderly. Public health will be a major issue for an urban area like Evanston.

- The number of days of extreme heat per year is projected to rise significantly. Under a high-emissions (business-as-usual) scenario, we could experience a heat wave similar to the Chicago heat wave of 1995 (that resulted in over 700 deaths) three times/year by the end of the century.
- The urban heat island effect (when cities remain much warmer than surrounding areas) leads to elevated nighttime temperatures and thus little relief at night during heat waves. These conditions can be expected to lead to increases in heat-related illness and death.
- High summer temperatures also mean higher ozone levels.
- Insects such as ticks and mosquitoes will produce larger populations in the warmer weather, increasing the risk of diseases like West Nile virus.

Increases in heavy and sustained precipitation events are expected to lead to more frequent flooding. In Evanston (with a combined sewer system) stormwater overflows will be an issue. Intense rainfall also disrupts transportation and is likely to cause more property damage, increased clean-up and rebuilding costs, and a heavier burden on City emergency services.

Some continued global warming is inevitable over the next few decades, but the degree to which the future climate will change will be determined by the choices and decisions we make today. Taking aggressive action now to reduce GHG emissions will result in less future warming and less harm to our planet. Continued heavy reliance on carbon-intensive energy sources, on the other hand, will lead to greater warming and severe consequences for human health, ecosystems, and the economy. "Think globally, act locally" takes on new meaning as it relates to global climate change. The time to take action is now.

TAKING ACTION

National Trends

The number of cities taking action on climate change is growing. As of September 2008, 884 mayors from 50 states (including Puerto Rico and Washington, D.C.) have signed the U.S. Mayors Climate Protection Agreement, representing more than 80 million citizens. The agreement pledges to advance the goals of the 2005 Kyoto Protocol through local leadership and action.

Under the Agreement, participating cities commit to take the following three actions:

1. Strive to meet or beat the Kyoto Protocol targets in their own communities, through actions ranging from anti-sprawl land-use policies to urban forest restoration projects to public information campaigns;
2. Urge their state governments, and the federal government, to enact policies and programs to meet or beat the greenhouse gas emissions reduction target suggested for the United States in the Kyoto Protocol -- 7 % reduction from 1990 levels by 2012; and
3. Urge the U.S. Congress to pass bipartisan greenhouse gas reduction legislation that includes clear timetables and emissions limits and establishes a national emissions trading system.

Two recent surveys (both released June 2008), the Presidential Climate Action Plan (PCAP) Action Attitude Study (2,175 respondents) and the 132-City U.S. Mayors Climate Protection Center's survey, "The Impact of Gas Prices, Economic Conditions, and Resource Constraints on Climate Protection Strategies in U.S. Cities," indicate that U.S. citizens are ready for government to take action and that governments are, despite financial restraints, increasingly doing so. The PCAP study addresses voters' opinions about global warming and current presidential candidates, and the U.S. Mayors' survey examines the progress in implementing climate protection strategies in those cities that have signed the U.S. Mayors Climate Protection Agreement.

The PCAP survey found that 63 % of likely voters consider it important that the next U.S. president initiate strong action to address climate change soon after taking office (with those most likely to vote expressing

even greater urgency on this question), 67 % of those with household incomes of $49,999 or below indicate that strong action to address climate change is important and 41 % of Americans believe that, if strong action is not taken, our national security will be threatened by global instability.

The U.S. Mayors' survey results indicate that rising fuel and energy costs are providing additional motivation to take action on climate change issues. Eighty-nine % of mayors responding said that rising fuel prices are having a significant or very significant impact on their city budget and operations, with 76 % of mayors reporting that rising fuel costs prompted their city to give greater emphasis on the transportation sector of their climate protection strategy. Ninety-one % said that their city is placing more emphasis on providing alternatives to driving, and 76 % are considering additional changes in land use and development practices to support alternatives to solo driving.

Additionally, 41 % of the mayors surveyed reported that they are making city facilities and services more energy efficient. Eighty-four % say that energy price hikes have prompted their cities to consider raising future capital and other resource commitments to invest in building retrofits, more fuel-efficient fleets and other improvements that reduce energy use and costs.

Evanston

In October 2006, the City Council voted to sign the U.S. Mayors Climate Protection Agreement. The following year, as a precursor to the development of this action plan, the City completed a Greenhouse Gas Emissions Inventory. The inventory reflected total greenhouse gases by source (Table 1) and includes carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). While not the only greenhouse gases, these three were the only ones that could be reliably measured for the Evanston inventory. CO_2, CH_4 and N_2O are emitted from the burning of fossil fuels in generating electricity and using natural gas and motor fuel. Additionally, CH_4 and N_2O are also produced through agricultural processes and wastewater treatment, and CH_4 is released from landfills.

Using a baseline year of 2005, the total greenhouse gas emissions were standardized in metric tons of carbon dioxide equivalent ($MTCO_2E$) and backcasted to 1990 in order to comply with the U.S. Mayors Climate Protection Agreement requirements.

City of Evanston	
Source	**$MTCO_2E$**
Electricity	17,804
Natural gas	3,975
Gasoline	1,321
Diesel	1,398
Biodiesel	278
TOTAL	**24,776**
Evanston Community	
Source	**$MTCO_2E$**
Electricity – Residential	156,426
Electricity – Commercial	370,530
Electricity – Rail	19,016
Natural Gas – Residential	114,674

Natural Gas – Commercial	224,266
Gasoline	99,664
Diesel	25,869
Solid Waste Landfilled	9,709
Organic Waste Composted	(898)
Mixed Recyclables Recycled	(22,584)
TOTAL	**996,672**
City and Community Total	**1,021,448**

Table 1. Evanston Greenhouse Gas Emissions, 2005.

As noted in the introduction, an analysis of the inventory showed that Evanston's emissions must be reduced by 13% by 2012 in order to achieve the emissions reductions goal outlined in the U.S. Mayors Climate Protection Agreement (Chart 1). This translates into an emissions reduction goal of 140,104 metric tons of carbon dioxide equivalent ($MTCO_2E$).

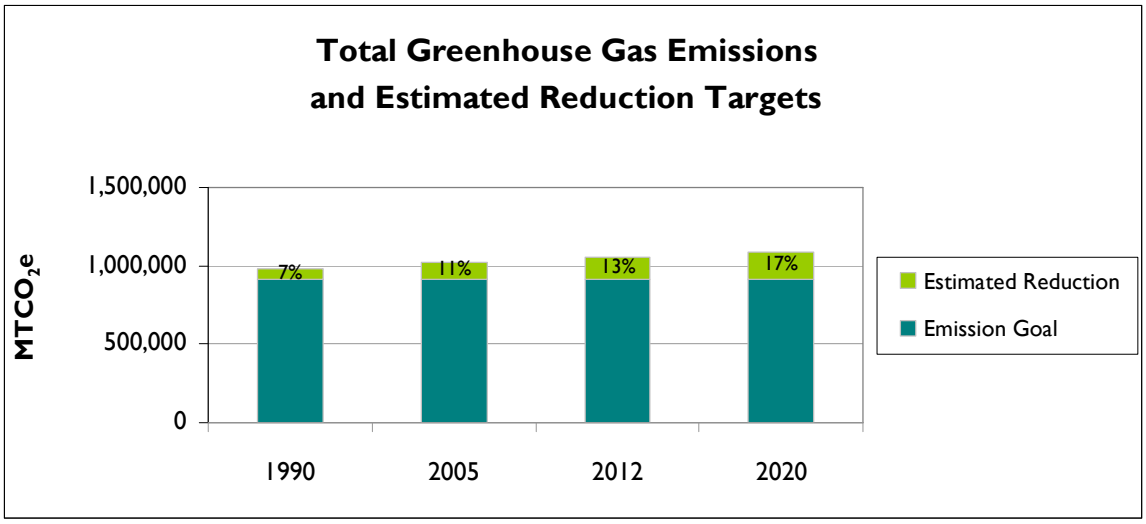

Chart 8.

EVANSTON CLIMATE ACTION PLAN - RECOMMENDED STRATEGIES

The Evanston Climate Action Plan includes more than 200 recommended strategies for reducing GHG emissions. Each strategy is presented with an estimate of the potential reduction in GHG emissions, and lists likely partners for implementation. In addition, special attention is called to strategies that are starred. The stars indicate initiatives that should be prioritized due to ease of implementation (requires no additional resources or resources, funding and/or grant opportunities are available) and potential emissions reductions, or both.

When added together, the strategies have the potential to reduce Evanston's emissions by 245,380 $MTCO_2E$, representing nearly twice the reduction goal of 140,104 $MTCO_2E$. With a 2012 emissions reduction goal of 140,104 $MTCO_2E$, the ECAP offers a wide variety of options for meeting the goal. (It should be noted, however, that a large portion of the potential emissions reductions — up to 80,379 $MTCO_2E$ — are attributable to a single strategy, a proposed offshore wind farm.)

The plan does not include the potential costs associated with each strategy as this will vary depending on the resources available (City revenues, grants, other outside funding) at the time of implementation. Wherever

possible, strategies that leverage existing resources were included. For example, the proposed distribution of more than 18,000 compact fluorescent lamps (CFLs) to Evanston residents, in the Energy Efficiency and Buildings section, was included because the City received these CFLs in early 2008 by partnering in a regional initiative. By utilizing existing programs and partnerships for distribution, this measure, which could reduce emissions by 737 $MTCO_2E$, will not cost the City additional resources to implement.

The ECAP task forces also looked at measures that may be expensive but whose costs could be absorbed outside the community. For example, the cost to the City to implement the recommendation under the Renewable Energy section to investigate the feasibility of harvesting wind power on Lake Michigan could be simply the price of the feasibility study, which has the opportunity for grant funding. If determined feasible, the actual costs associated with the installation of wind turbines could be absorbed by an interested utility company. Also, this is a revenue generating opportunity for the City.

While the plan is focused on City action, the strategies contained within the ECAP will require action from the entire community, residents, businesses and the City, and all will have to absorb some of the burden of the upfront implementation costs. Long term, however, reductions in energy usage will translate into significant savings for the City and the community.

Transportation and Land Use

The contribution of the transportation and land use sector is a sizeable portion of Evanston's total GHG emissions. Land use has a major influence on patterns of travel and so is incorporated in this sector.

Calculations of the estimate of Evanston's transportation and land use GHG emissions are based on gasoline and diesel sales within Evanston and on reported electric usage for rail. Due to the limited amount of information available in this category and the inability to track emissions more accurately, it is likely that actual emissions are substantially larger than indicated here (as much as 2 to 3 times the amount measured). While the reduction goal is not 100% accurate, it is an important step toward reducing Evanston's emissions. Evanston's 2005 Greenhouse Gas Emissions Inventory demonstrated that transportation and land-related uses contribute 147,546 $MTCO_2E$, or 14% of total emissions.

In order to reduce this sector's emissions by 13%, or 19,181 $MTCO_2E$, the following recommended strategies focus on: building development (affordable, mixed-use, green, transit-oriented); improving commuting options (car-share, telework, carpool, etc.); improving existing transportation systems; and leading by example (alternatives to single occupancy vehicle commuting for City of Evanston employees, improvement of City fleet vehicles [reduce fleet size, improve efficiency, use alternatives]).

	Recommended Strategy	Potential GHG Reduction	Partners for Implementation
★	**Continue to support and encourage mixed-use, green, high performing, transit-oriented development.**	**15,000 $MTCO_2E$ over 5 years**	
	a) Investigate reducing the number of parking spaces provided in developments near transit.		COE, Multimodal Transportation Plan

	b) Consider an incentive for or a requirement to provide spaces for bikes and car-share in new developments as well as sidewalks leading from the City sidewalk system to the front door of the development.		COE, Multimodal Transportation Plan
	c) Encourage developers to unbundle living units and parking spaces and eliminate the assignment of specific stalls to specific occupants, thus pooling the available spaces and reducing the total requirement.		COE Community Development, Plan Commission
	d) Investigate a payment option for developers in lieu of parking spaces.		COE Community Development, Plan Commission
★	**Encourage Evanston businesses to adopt strong employee commuting and telecommuting programs, providing resources and incentives to reduce the number of single occupant auto commuters in and out of Evanston.**	**5,700 $MTCO_2E$**	**COE, Evanston Businesses**
	Reduce car-ownership by encouraging residents and employers to participate in car-share programs.	**984 - 2,436 $MTCO_2E$**	
	a) Support car-share programs by expanding designated parking for car-share vehicles in city garages, high density neighborhoods, at new developments and along transit lines.		COE, RTA, Car Share Companies
★	b) Increase awareness of car-share program benefits among Evanston residents and businesses.		COE
	Reduce vehicle emissions.	**2,076 $MTCO_2E$**	
	a) Encourage taxi companies, local shuttle services and school buses to convert to hybrids or other fuel-efficient vehicles.		City Council, COE, Northwestern, Evanston Hospitals, Districts 65 & 202
	b) Investigate the feasibility of establishing a regular bus service to O'Hare Airport.		COE, Multimodal Transportation Plan
	c) Consider modifying Taxi Cab Ordinance 3-19 to include stricter vehicle maintenance standards.		City Council, COE
	d) Consider offering a subsidy (potentially through a federal grant) to taxi companies that purchase hybrid or highly fuel efficient vehicles.		City Council, COE

	e) Where feasible, implement traffic-calming and speed reduction strategies that reduce unnecessary stops and starts to reduce greenhouse gas emissions.		COE, Multimodal Transportation Plan
★	f) Enforce the citywide Anti-idling Ordinance and consider expanding it to apply to all vehicles.		COE
★	g) Connect residents and businesses to resources and information that increases awareness around the environmental effects and costs of idling.		COE, Clean Air Counts, IL EPA
	h) Encourage businesses and institutions to join Clean Air Counts.		COE, Clean Air Counts
★	**Investigate the feasibility of an "EcoPass" for every Evanstonian, valid for no fare when boarding within Evanston any Pace or CTA train or bus. When boarding outside of Evanston, regular fares would apply.**	**3,225 - 11,375 $MTCO_2E$**	**RTA, City Council, COE**
★	**Utilize the Evanston Multi-Modal Transportation Plan development process to recommend and support measures that reduce transportation-related greenhouse gas emissions.**		
	a) Support efforts to improve public transit connections.		COE, RTA
	b) Encourage walking and biking to school by designating routes.		COE, Multimodal Transportation Plan
	c) Facilitate sidewalk enhancements and maintenance.		COE, Multimodal Transportation Plan
	d) Facilitate the installation of sheltered, secure bike racks downtown and at transit stations.		COE, Multimodal Transportation Plan
	e) Facilitate the full implementation of the City Bicycle Plan, with promotion of viable bike routes, including designated lanes.		COE, Multimodal Transportation Plan
	f) Work with the Regional Transit Authority (RTA), Chicago Transit Authority (CTA), PACE, Northwestern University (NU) and NorthShore University HealthSystem (NUH) to better coordinate transit services, eliminate duplication, and expand services where feasible.		COE, Multimodal Transportation Plan, Northwestern, Evanston Hospitals
	g) Continue to evaluate the fee structure for public on-street and off-street parking in Evanston's commercial districts and support efforts to equitably account for and capture the true cost and market rate for parking.		COE, Multimodal Transportation Plan

	Expand public transit as a viable option for commuting to work, home and entertainment.	**1,972 MTCO2E**	
	a) Work with CTA, RTA, PACE and Metra to improve bus stops, concrete pads, benches, shelters and route and schedule information.		COE, Multimodal Transportation Plan, RTA
	b) Continue to support the development of an Evanston stop on the CTA Yellow Line (to Skokie).		COE, Multimodal Transportation Plan, RTA
	Increase affordable housing options and resources in Evanston as a mechanism to reducing vehicle travel.	**1,500 - 2,580 MTCO2E**	
	a) Consider adopting a housing policy goal for Evanston's housing stock (measured in terms of affordability) to mirror the incomes paid by Evanston-based employers to their workforces.		City Council, COE Community Development
	b) Consider strengthening Evanston's Inclusionary Housing Ordinance (IHO) to insure that affordable housing is made available when new developments are built.		City Council, COE Community Development
	c) Encourage landlords to accept Section 8 vouchers.		City Council, COE Community Development
	Collect and track data on Evanston travel trends, including vehicle miles traveled, transit boardings and the number of residents that commute via bike and foot.		
	a) Consider collecting odometer readings on vehicle registration applications.		COE
	b) Work with the City of Evanston Division of Transportation to obtain data collected through the Multi-Modal Transportation Plan development process.		COE, Multimodal Transportation Plan, RTA, CMAP
	Reduce City fleet vehicle emissions.		
	a) Continue to replace higher emitting vehicles with vehicles that meet or exceed the most current Environmental Protection Agency (EPA) emission standards.		COE
★	b) Ensure that the vehicle purchased "fits" the size of the job that is intended.		COE

★	c) Where feasible, pool City vehicles as opposed to assigning vehicles to various Departments and Divisions to improve efficiency and reduce the size of the fleet.		COE
	d) Investigate the feasibility of using car-share vehicles to reduce the size of the City's fleet.		COE
	e) Offer bicycling and walking as an option, where feasible, within Police and Parking Enforcement operations to reduce fleet size.		COE
★	f) Consider revising the citywide Anti-Idling Ordinance to include City vehicles.		City Council, COE
	g) Continue to retrofit all viable City vehicles with emission reduction technology.		COE Fleet
★	h) Continue to provide staff with resources and information to increase awareness around the environmental effects and costs of idling.		COE
	i) Achieve Platinum level membership in Clean Air Counts.		COE, Clean Air Counts
	j) Investigate the feasibility of implementing planned routes that minimize the number of left hand turns as a method to reduce idling for City service vehicles.		COE Streets and Sanitation
	Land-Use and Transportation - Total Potential Greenhouse Gas Emission Reductions	**18,457 - 29,139 MTCO2E**	

Energy Efficiency and Buildings

The estimate of GHG emissions associated with Evanston's buildings is based on energy usage (gas and electric) in both residential and commercial/industrial buildings. This sector contributes the largest amount of GHG emissions both in Evanston and nationwide. Based on the Evanston Greenhouse Gas Emission Inventory, Evanston produces 887,675 $MTCO_2E$ from electric and natural gas consumption (17,804 $MTCO_2E$-City Electric, 3,975 $MTCO_2E$-City Natural Gas, 156,426 $MTCO_2E$-Residential Electric, 370,530 $MTCO_2E$-Commercial Electric, 114,674 $MTCO_2E$ -Residential Natural Gas, and 224,266 $MTCO_2E$ - Commercial Natural Gas).

The total emissions reduction goal for this sector is 115,398 $MTCO_2E$. Representing 87% of Evanston's overall reduction goal, this sector offers the greatest potential for direct reductions in GHG emissions. The following strategies focus on: reducing emissions related to electric and natural gas use (improve energy efficiency in residential, commercial, institutional, and industrial buildings) and reducing emissions related to electric and natural gas use in public places (City-owned and operated buildings, parks, parking lots, garages, and streets).

	Recommended Strategy	Potential GHG Reduction	Partners for Implementation
★	**Reduce emissions related to electric and gas use in commercial, institutional and industrial buildings.**	**56,674-117,787 $MTCO_2E$**	
	Energy Efficiency through Utility Programs		
	a) Encourage businesses to participate in programs that allow users to manage their energy use and take advantage of real-time pricing, if feasible.	64-140 $MTCO_2E$	COE, Energy Commission, ComEd, Center for Neighborhood Technology (CNT), ICE Bear, Evanston Chamber of Commerce
	b) Encourage businesses to participate in ComEd's Load Response Program.	44-152 $MTCO_2E$ **or** 443-4431 $MTCO_2E$	COE, Energy Commission, ComEd, Evanston Chamber of Commerce
★	c) Work with ComEd to increase awareness of and encourage businesses to participate in ComEd's commercial energy efficiency incentive programs (starting 6/2008). Achieve program participation from 5-15% of the businesses; request ComEd's assistance in tracking participants and energy savings.	418-1,251 $MTCO_2E$	COE, Energy Commission, ComEd, Local Merchant Associations, Evanston Chamber of Commerce
	Business Community Outreach		
	d) Launch a community awareness campaign to promote the installation and use of programmable thermostats as an energy saving mechanism to small businesses, non-profit organizations and public agencies.	372-816 $MTCO_2E$	COE, Energy Commission, Local Merchant Associations, Evanston Chamber of Commerce
★	e) Reduce heating and cooling loads by promoting light-colored roofs and paving materials, planting trees and increasing vegetative cover (on roofs and walls).	48-105 $MTCO_2E$	COE Community Development, EPA, USGBC, City of Chicago, Chicago Center for Green Technology

★	f) Work with the 20 largest local businesses, industrial and institutional energy consumers to establish and meet energy-efficiency and greenhouse gas emission reduction targets; encourage businesses to benchmark emissions through membership in the Chicago Climate Exchange (CCX) (fee and binding) or the EPA Climate Leaders Program (free and voluntary).	15,579 $MTCO_2E$	COE, CCX, EPA Climate Leaders
	g) Encourage the use of energy-service performance based contracts, where appropriate, by businesses, government and non-profit agencies.		COE, IL DCEO, SEDAC
	h) Encourage developers and contractors to exceed the minimum requirements established by the International Energy Conservation Code (IECC) when building or renovating.	8,922-26,766 $MTCO_2E$	COE Community Development, IL DCEO
	i) Work with the state to increase awareness of and encourage schools and affordable housing providers to participate in the IL Department of Commerce and Economic Opportunity's (IL DCEO) energy efficiency incentive programs (starting 6/2008).		COE Office of Sustainability, IL DCEO, Districts 65 & 202
	j) Promote opportunities to improve operations and maintenance practices in local buildings, such as the Building Operator Certification (BOC) training.		COE Office of Sustainability, IL DCEO, MEEA
	k) Encourage local retailers to stock and promote Energy Star® products.	31,227-68,699 $MTCO_2E$	Energy Star®, MEEA, Evanston Chamber of Commerce, COE Office of Sustainability
	Energy Efficiency Resources		
★	l) Develop and maintain a community resource guide for energy efficiency, renewable energy and green building grants, tax incentives and technical resources.		COE Office of Sustainability, SEDAC, ComEd, IL DCEO, EPA, DSIRE, USDOE-EERE
★	m) Help small businesses, non-profit organizations and public agencies access energy conservation services through the Smart Energy Design Assistance Center (SEDAC) and the IL DCEO; track participants.		COE Office of Sustainability, IL DCEO, SEDAC, Local Merchant Associations, Evanston Chamber of Commerce

	Codes, Policies, and Legislation		
★	n) Support legislation or programs that require or provide incentives for existing commercial buildings that achieve Leadership in Energy and Environmental Design for Existing Buildings (LEED-EB) Certification or an Energy Star® qualified rating.		City Council, Environment Board, Energy Commission
★	o) Support legislation or programs that require or provide incentives for new construction that achieves, at a minimum, LEED Silver certification.		City Council, Environment Board, Energy Commission
	p) Investigate legislation to reduce outdoor light pollution.		City Council, Environment Board, Energy Commission
★	q) Update Evanston's building energy code as the IECC is updated (every 3 years) to keep pace with improvements in building technology.		City Council, Energy Commission, Environment Board
★	**Reduce emissions related to electric and gas use in residential buildings.**	**27,616 – 60,759 MTCO2E**	
	Community Engagement		
	a) Launch a community awareness targeting front porch lights to promote the use of compact fluorescent lamps (CFLs).	177-389 MTCO2E	COE Office of Sustainability, EFI's Online Store for ComEd
★	b) Promote shade trees and vegetative cover (walls and roofs) as an energy conservation technique.	54-114 MTCO2E	COE Community Development, Chicago Center for Green Technology, EPA
★	c) Work with ComEd and the community to increase awareness of and encourage residents, multifamily dwelling owners and condo associations to participate in ComEd's residential energy efficiency programs.	6,134-14,387 MTCO2E	ComEd, COE Office of Sustainability
★	d) Work with the Community and Economic Development Association of Cook County (CEDA) to increase awareness of and participation in CEDA's free weatherization program for income-qualified households.		CEDA, COE Community Development

	e) Work with local banks to develop loans and mortgages that support and encourage residential energy efficiency measures.		COE
	f) Connect residents to free or low-cost energy audit resources; support efforts to expand these services.		COE, Energy Star®, IL Home Energy Raters
★	g) Distribute 18,550 CFLs to residents through existing City programs, partners and events.	737 MTCO2E	COE
	h) Connect residents to local, state and federal programs and resources that provide information on and financing for energy efficiency improvements.		COE Office of Sustainability
	Education and Outreach		
	i) Increase awareness around the Energy Star® brand and products.	14,653-32,237 MTCO2E	Energy Star®, MEEA, COE Office of Sustainability
	j) Support the development of free workshops on reducing home energy use.		COE
	k) Focus education and outreach efforts around the four measures with the most cost-effective energy savings; weatherization, CFLs, thermostat management and low-flow shower heads.		COE, Energy Commission
	l) Encourage and support neighborhood-based outreach efforts to promote energy conservation.		COE
	Codes, Policies, and Legislation		
	m) Support efforts to legislate utility sponsored natural gas efficiency programs.		IL DCEO, Midwest Energy Efficiency Alliance
★	n) Consider requiring green building and energy-efficient measures, including Energy Star® or equivalent appliances, lighting and heating equipment in city-funded affordable housing development projects.		City Council, Environment Board, Energy Commission, COE Community Development

	o) Explore requiring weatherization of residential properties at time of sale.	5,861-12,895 MTCO2E	City Council, Energy Commission, Environment Board, COE Community Development
	Reduce emissions related to electric and gas use in City owned and operated buildings, parks, parking lots and garages and along City streets.	**2,498 MTCO2E**	
	Energy Efficiency Actions		
	a) Invest in all energy-efficient measures that have a simple payback of 10 years or less.		City Council, COE Facilities, IL DCEO
	b) Support efforts to exceed energy code on new construction and renovation projects.		City Council, COE Facilities
★	c) Where feasible, convert traffic signals to light-emitting diode (LED) technologies.	174 MTCO2E	COE Transportation, IL CECF, IL DCEO
	d) Benchmark building energy use through the Energy Star® online system and improve energy efficiency in City facilities by 10%.	2,324 MTCO2E	COE Facilities
	e) Convert street lights and traffic signals to more efficient technologies as they become available.		COE Transportation, IL CECF, IL DCEO
	f) Leverage federal, state and private funding to finance energy efficiency measures.		COE, IL DCEO, Federal Energy Block Grant Funding, IL Clean Energy Community Foundation, SEDAC
	Codes, Policies, and Legislation		
★	g) Support legislation to require, at a minimum, LEED Silver certification for all City and City-funded new construction and major renovation projects.		City Council, Environment Board, Energy Commission
★	h) Establish a City policy to purchase ENERGY STAR or equivalent products, when available, for any equipment that uses electricity, natural gas, or fuel oil.		City Council, COE Purchasing

	Energy Efficiency and Buildings - Total Potential Greenhouse Gas Emission Reductions	**86,788 – 181,044 MTCO2E**	

Renewable Energy Resources
Renewable energy is any form of energy that is naturally replenished. Examples include: wind, solar, geothermal, and hydroelectric. As opposed to fossil fuel-based energy, renewable resources are "clean" and do not produce GHG emissions. Renewable energy could help reduce not only our emissions but also our dependence on fossil fuels. A cornerstone of the ECAP, this set of recommendations could involve all levels of the community, from individual citizens to city government.

Recommended strategies focus on: use of biofuels (E85 ethanol, biodiesel, vegetable oil, methane from landfills, etc); use of wind and solar energy (offshore Lake Michigan wind turbines, solar photovoltaic [electricity producing], solar thermal [water heating device], and zoning changes to encourage use); off-peak thermal storage (esp. for large buildings, store energy for cooling at off-peak electric or gas hours); and converting waste to energy. While these are lofty goals, they are important to investigate for possible use because of their enormous potential for reducing Evanston's overall GHG emissions.

	Recommended Strategy	**Potential GHG Reduction**	**Partners for Implementation**
	Reduce emissions related to motor fuel use in commercial and residential applications through the use of bio-fuels.	**13,522-29,748 $MTCO_2E$**	
	a) Support efforts to make biodiesel commercially available to residents and businesses.		COE, IL DCEO
	b) Encourage residents to switch from regular gasoline and diesel fuels to bio-fuels if feasible.		COE, IL DCEO
	c) Investigate the feasibility of purchasing bio fuels for use in not only municipal vehicles, but also by Evanston residents and businesses as well.	13,522-29,748 $MTCO_2E$	COE, IL DCEO
★	**Continue to reduce emissions related to motor fuel use by City fleet through the use of bio-fuels.**	**101 $MTCO_2E$**	
	a) Investigate the feasibility of retrofitting fleet vehicle fuel tanks and heating systems to run on waste vegetable oil (WVO).	101 $MTCO_2E$	COE Fleet
★	**Reduce emissions related to electric and gas use in buildings through the use of renewable energy.**	**91,789-128,993 $MTCO_2E$**	
★	a) Investigate the feasibility of offshore wind power generation in Lake Michigan.	43,175-80,379 $MTCO_2E$ per 10 turbine	City Council, COE, IL DCEO, US DOE

		array	
★	b) Encourage residents to consider and install solar thermal panels for hot water heating at their homes.	6,048 $MTCO_2E$ (3-panel systems)	COE Community Development
	c) Investigate the feasibility of purchasing solar power through a solar energy service provider as a way to finance solar electricity generation at City facilities.	1,951 $MTCO_2E$	COE Facilities
	d) Encourage businesses and institutions to install solar PV systems as feasible.	40,604 $MTCO_2E$	COE Community Development
	e) Consider the installation of solar thermal panels at City facilities that use large quantities of hot water, such as fire stations.	11 $MTCO_2E$	COE Facilities, IL DCEO, IL CECF
★	f) Address zoning and permitting barriers to the installation of renewable energy applications in the residential and commercial building sectors.		City Council, COE Community Development
	Reduce emissions related to electric and gas use in commercial and municipal buildings through the use of off-peak thermal storage.	**1588 $MTCO_2E$**	
	a) Support efforts to utilize peak thermal storage systems, which provide a means for storing thermal energy acquired from electricity purchased at off-peak demand times and from other fuel sources such as waste heat and solar energy, at commercial, institutional and municipal buildings.	1588 $MTCO_2E$	COE Community Development
	Reduce emissions related to electric and gas use in commercial and municipal buildings by converting waste to energy.	**1,900 $MTCO_2E$**	
	a) Investigate the feasibility of utilizing a thermal-to-energy (plasma arc gasification) conversion system to provide electricity to multiple buildings in Evanston.	1,900 $MTCO_2E$	COE Public Works
	b) Investigate the feasibility of utilizing a non-thermal (anaerobic digestion) conversion system to provide electricity to multiple buildings in Evanston.		COE Public Works
	Renewable Energy Resources - Total Potential Greenhouse Gas Emission Reductions	**108,900-162,330 $MTCO_2E$**	

Waste Reduction and Recycling

Waste reduction and recycling is referenced in three steps: reduce, reuse, and recycle. Reduction is the most important step: buying and using less; selecting products that have less packaging; using durable rather than disposable items. Reuse is next: donating used goods to a charitable group; maintaining and repairing rather than replacing broken items. Last, recycle what cannot be reduced or reused. By implementing these three steps, Evanston's waste could be cut by more than half, which would help the city achieve its reduction goal of 3,633 $MTCO_2E$.

The recommended strategies for reducing waste focus on: waste reduction (commercial and residential) and increasing participation in recycling; recycling of construction/demolition waste; keeping clothing and fabric out of landfills; and waste reduction and increased recycling in public places.

	Recommended Strategy	Potential GHG Reduction	Partners for Implementation
★	**Increase residential waste reduction and recycling participation efforts.**	**23,602 $MTCO_2E$**	
★	a) Convert the current 18-gallon recycling containers to 65 and 95 gallon roll carts to increase collection capacity.	22,582 $MTCO_2E$	COE Streets and Sanitation
★	b) Expand and support efforts to increase community awareness around recycling.		COE, SWANCC, KEB
★	c) Continue to work with the Solid Waste Agency of Northern Cook County (SWANCC) to expand recyclable material collection programs for residents in Evanston, including electronic waste.	634 $MTCO_2E$	COE, SWANCC
★	d) Connect residents with resources for recycling materials not collected through Evanston's ongoing recycling programs.		COE, SWANCC, KEB
	e) Encourage residents to compost at home.	386 $MTCO_2E$	COE, Evanston Environmental Association/Ecology Center
	f) Continue to evaluate the residential charge for waste collection and support efforts that equitably account for and capture the true costs of waste disposal, retaining free recycling for residences.		City Council, COE Streets and Sanitation, SWANCC
★	**Increase commercial waste reduction and recycling participation efforts.**	**2,175 $MTCO_2E$**	
★	a) If a commercial franchise is adopted, ensure implementation includes a strong recycling component.	971 $MTCO_2E$	City Council, COE Streets and Sanitation, SWANCC

	b) Work with businesses to identify resources and strategies for reusing and reducing waste.		COE, SWANCC, Evanston Chamber of Commerce
★	c) Encourage businesses to begin or increase their recycling efforts.	1,204 $MTCO_2E$	COE, SWANCC, Evanston Chamber of Commerce
	d) Identify barriers to recycling in the commercial sector and support efforts to overcome the barriers identified.		COE, SWANCC, Evanston Chamber of Commerce
	e) Continue to support and encourage recycling efforts through District 65 and 202.		COE, SWANCC, KEB, Districts 65 and 202
	f) Encourage retailers to offer incentives to customers that bring their own shopping bags.		COE, Evmark, Evanston Chamber of Commerce
★	g) Investigate a tax or ban on single-use plastic bottles and plastic bags in order to discourage usage; support voluntary efforts to reduce use.		City Council, Environment Board, Evmark, Evanston Chamber of Commerce
★	h) Encourage the six largest institutions (NU, NUH, St Francis, Dist.65, Dist. 202, and the City of Evanston) to set specific goals for reducing, recycling, and reusing materials.		COE
	Increase the reuse and recycling of construction and demolition waste.		
	a) Consider establishing a city-wide recycling rate for all construction and demolition projects.		City Council, COE Community Development, COE Streets and Sanitation, SWANCC, Environment Board
★	b) Encourage businesses and residents to utilize "deconstruction" services when undertaking demolition and renovation projects. "Deconstruction", as opposed to demolition, is the selective dismantlement of building components, specifically for re-use and recycling.		COE Community Development, Delta Institute, Reuse America
	Keep clothing and fabric out of the landfill.	**135-318 $MTCO_2E$**	
	a) Promote and support the efforts of local companies who have created a market for resale of used clothing.		COE, Evanston Chamber of Commerce
	b) Encourage residents to "recycle" clothing and fabric through special events, clothing drop boxes, resale clothing shops and door-to-door charity clothing collection drives.	135-318 MTCO2E	COE, SWANCC, KEB

★	**Increase waste reduction and recycling participation at City buildings, parks and events.**	**3885 $MTCO_2E$**	
	a) Work with City departments to identify resources and strategies for reducing waste.	95 $MTCO_2E$	COE Office of Sustainability, COE Streets and Sanitation
★	b) Ensure all departments have the resources and information necessary to recycle.		COE Office of Sustainability, COE Streets and Sanitation
	c) Provide purchasing specifications and guidelines on green products in the City's purchasing policies.		COE Office of Sustainability, COE Purchasing
	d) Encourage City departments to purchase recycled-content and durable, long lasting products whenever feasible.		COE Office of Sustainability, COE Purchasing
★	e) Support efforts to increase recycling in public spaces and at events.	3790 $MTCO_2E$	COE
	f) Leverage state and federal funding to create programs that encourage Evanston to reduce, reuse and recycle.		COE, IL DCEO
	g) Increase community awareness around best practices and resources for waste reduction at events.		COE
★	h) Consider a recycling requirement as part of City permits for special use, festivals, picnics, block parties, etc.		City Council, COE, Environment Board
	Waste Reduction and Recycling - Total Potential Greenhouse Gas Emission Reductions	**29,797-29,980 $MTCO_2E$**	

Food Production and Transportation

Food can travel up to 5,000 miles before reaching the end user, generating GHG emissions from transportation in the process. In addition, food packaging represents up to 75% of a food item's embodied energy, with a hefty amount of associated emissions. Given the vast array of variables related to food production and transportation, it was not possible to include emissions related to this sector in the Evanston Greenhouse Gas Emissions Inventory. However, it is important to acknowledge the impact that food has on global GHG emissions, and it is therefore included in the ECAP.

This section is primarily aimed at encouraging citizens to lower emissions related to production and transportation of food. By eating locally grown foods consumers not only reduce the carbon footprint of that food but also support regional/local growers. Efforts to improve the connection between local growers and consumers include the creation of farmer's markets or food co-ops (commitment to consumer education, product quality, and member control, sale of produce grown locally [usually family farms]). While indirectly reducing emissions, it allows individuals to make a change through their day-to-day decisions.

	Recommended Strategy	Potential GHG Reduction	Partners for Implementation
	Reduce emissions related to the production and transportation of food.		
★	a) Support and encourage efforts to grow more food in Evanston.		COE, Talking Farm, community
★	b) Promote and continue to expand the Evanston farmers markets.		COE, Evanston Farmers Markets
	c) Work with the community to increase the amount of local and healthy food served in local institutions and food establishments.		COE, community
	d) Promote and support educational programs that address food-related health and environmental issues.		COE, Districts 65 and 202, community
	e) Complete a community food assessment, inventorying local food resources and community access.		COE
★	f) Regularly publish articles in the local papers on food related environmental and health issues.		COE, community
	g) Encourage the establishment of a food co-op in Evanston.		COE, Evanston Chamber of Commerce, community

Forestry, Prairie, and Carbon Offsets

All of the previous sections focus on reducing the creation of GHG emissions. This section instead focuses primarily on compensating for (offsetting) emissions, and on carbon sequestration. Also included here are strategies for water conservation, stormwater management, urban temperature control and water quality.

It is estimated that planting one tree will offset GHG emissions by about 730kg of CO_2 over the life of the tree. Additionally, numerous climate-appropriate landscaping alternatives offer the potential to sequester carbon and lower Evanston's GHG emissions. A fund to support local offset projects can also help Evanston achieve its GHG reduction goal. While the emissions reductions associated with this sector are difficult to measure and are not included in the Evanston Greenhouse Gas Emission Inventory, the inclusion of the following strategies is essential to a diverse, well-balanced plan.

	Recommended Strategy	Potential GHG Reduction	Partners for Implementation
★	**Create a local carbon offset program to complement Climate Action Plan emissions reduction strategies.**		

★	a) Establish Evanston Climate Action Fund to support local offset projects and help Evanston meets its Evanston Climate Action Plan emissions-reduction goals.		Evanston Community Foundation
★	**Optimize tree planting and protect existing trees for maximum carbon storage/sequestration and energy savings.**	**54-114 $MTCO_2E$**	
	a) Develop planting and management guidelines based on an Urban Forest Effects (UFORE) analysis of Evanston's urban forest.		COE, US Forest Service
	b) Support policies, ordinances, and codes that incorporate the urban forest guidelines. Examples include: a comprehensive city tree ordinance to prevent unnecessary tree removal, building codes and zoning ordinances that include strong landscaping, and green space standards for new construction and rehab of older buildings.		City Council, COE, Environment Board
	c) Encourage tree planting, native landscaping and green roofs by private landowners, consistent with the UFORE analysis.	54-114 $MTCO_2E$	COE Community Development, UFORE
	Optimize the use of native plants throughout Evanston.		
★	a) Support and encourage the use of native plants in all public park redevelopment projects.		COE
	b) Where feasible, develop and implement plans for the restoration and management of native plants on City properties.		COE
★	c) Promote education and outreach programs that increase awareness around the benefits of native plants.		Evanston Environmental Association/Ecology Center, Chicago Botanic Gardens, Notebaert Nature Museum, Garden Clubs, Chicago Wilderness
	d) Encourage use of native plants on private property.		COE Community Development, Evanston Environmental Association/Ecology Center, Chicago Botanic Gardens, Notebaert Nature Museum

	Reduce amount of water used by 15% below 2000 water consumption levels by 2015. (Goal of Greenest Region Compact, approved by City Council, 1/28/08).	**1,384 $MTCO_2E$**	
	a) Develop and implement a water conservation plan for City owned and operated buildings and property.		COE Facilities
★	b) Support policies, ordinances, and codes that promote water conservation.		City Council, COE, Environment Board
	c) Investigate revising the water service fee structure to promote water conservation.		City Council, COE Water Department
	d) Support regional efforts to conserve water.		COE Water Department, IL EPA and US EPA, Great Lakes Protection Fund
★	e) Promote education and outreach programs to engage the community in water conservation practices.		COE Water Department, Evanston Environmental Association/Ecology Center
	f) Assist residents in assessing ways in which they can save water.		COE Water Department, Evanston Environmental Association/Ecology Center
	g) Identify grants and funding mechanisms for water conservation initiatives.		COE Water Department, IL EPA and US EPA, Great Lakes Protection Fund
★	**Implement policies and practices that treat rainwater as a resource and make use of it where it falls.**		
	a) Support policies, ordinances, and codes that promote green solutions to stormwater management.		City Council, COE Community Development, COE Public Works, Environment Board
	b) Encourage the community wide implementation of Best Management Practices (BMPs) for stormwater management that uses the power of plants and soil to absorb and clean rainfall runoff.		City Council, COE Public Works, Environment Board, Evanston Environmental Association/Ecology Center, CNT

	c) Incorporate BMPs in capital improvement projects and ongoing infrastructure maintenance (e.g., green alleys, redesigned curbing; filter strips and bioswales; native vegetation; permeable materials for parking lots).		City Council, COE Public Works
	d) Identify grants and funding mechanisms for green stormwater management initiatives.		City Council, COE Public Works, IL EPA and US EPA, Great Lakes Protection Fund
	e) Promote education and outreach programs to engage community (residents, business owners, schools, institutions) in implementing BMPs for stormwater management.		COE Public Works, Evanston Environmental Association/Ecology Center, CNT
	f) Connect residents and businesses to tools and resources that encourage BMPs.		COE Public Works, CNT
	g) Support and recognize community projects that use BMPs.		City Council, COE
	Forestry, Prairie and Carbon Offsets - Total Potential Greenhouse Gas Emission Reductions	**1,438-1,498 MTCO$_2$E**	

Policy and Research

In order to understand climate change and the best practices that can be implemented in the City of Evanston, research needs to be done continually on how best to achieve these goals. Reduction strategies in this section focused on: keeping up-to-date on climate change efforts from other municipalities/communities; tracking reductions strategies and effectiveness; encouraging citizens to influence policy by being proactive; seeking out and leveraging funding for local efforts; and supporting regional and national efforts to help curb greenhouse gas emissions.

	Recommended Strategy	**Potential GHG Reduction**	**Partners for Implementation**
	Track and disseminate information on climate change trends, policies and best practices.	**n/a**	
★	a) Annually compile and update Evanston's greenhouse gas emissions inventory, tracking related waste, energy, economic and environmental data.		COE
★	b) Prepare a progress report on the Evanston Climate Action Plan every two years and propose and adopt modifications as needed.		COE

	c) Provide Evanston residents and businesses with the resources, information and tools necessary to assess their greenhouse gas emissions and emission reductions.		COE, Zerofootprint calculator
★	d) Track relevant regional, national and international best practices to ensure that the ECAP is being implemented as effectively and efficiently as possible.		COE
	e) Support and adopt a greenhouse gas reduction goal that extends beyond the timeline established by the U.S. Mayors Climate Protection Agreement.		City Council, COE, Environment Board
	Ensure that policy decisions at all levels seek to reduce greenhouse gas emissions.	**n/a**	
	a) Integrate the initiatives and strategies outlined in the Evanston Climate Action Plan into future policies as relevant.		City Council, COE, Environment Board
	b) Review major policies and programs in the early stages of development to identify ways to reduce related greenhouse gas emissions.		COE
	c) Develop and adopt procurement guidelines for City secured goods and services that contribute to a reduction of the community's greenhouse gas emissions.		COE Purchasing
	d) Review existing ordinances and policies to ensure support for the Evanston Climate Action Plan initiatives and strategies.		COE
	Secure and leverage funding for Evanston Climate Action Plan initiatives and strategies.	**n/a**	
	a) Identify local, state and federal grants and resources to support and fund initiatives and strategies outlined in the Evanston Climate Action Plan.		COE, EPA, IL DCEO
	b) Identify and evaluate innovative and creative funding sources for implementing the initiatives and strategies outlined in the Evanston Climate Action Plan.		City Council, COE
★	c) Encourage and support City and community partnerships that leverage existing funds and resources to implement the initiatives and strategies outlined in the Evanston Climate Action Plan.		City Council, COE
★	d) Acknowledge exemplary community efforts and initiatives that support the reduction of Evanston's greenhouse gas emissions.		City Council, COE

★	e) Assign and support a City liaison to coordinate the implementation of the Evanston Climate Action Plan.		City Council, COE
	Support local, state and national efforts to mitigate climate change.	**n/a**	
	a) Participate in local, state and national initiatives and programs that provide information, tools and resources for the implementation of the Evanston Climate Action Plan.		COE
	b) Encourage and support greenhouse gas reduction efforts at the regional, state and national level.		City Council, COE
	c) Support the expansion of civic, educational, religious and neighborhood institutions that specifically address climate change.		City Council, COE
	d) Share Evanston's successes and lessons learned with Chicago-area communities through regional meetings and conferences.		COE City Managers Office

Education and Engagement

In addition to providing leadership, the City of Evanston needs to foster and support an environment that is conducive to citizen-based efforts. Those working to mitigate the effects of climate change should be supported in their efforts in helping make the ECAP come to life in hands-on community efforts. This section focuses on public education around climate issues, and details methods to engage the public in addressing these issues. Recommended strategies focus on engaging big businesses, disseminating information through local events, community-based action, and training for City employees.

	Recommended Strategy	Potential GHG Reduction	Partners for Implementation
★	**Empower the community to take action around climate change.**	**n/a**	
★	a) Support the formation of a community-based Evanston Climate Action Plan Implementation Committee.		City Council, COE, Evanston Climate Action Plan Co-chairs
	b) Encourage residents, businesses, churches, non-profits, block-clubs, etc., to convene working groups with the goal of helping to implement the strategies outlined in the Evanston Climate Action Plan.		COE, Citizen volunteers, Evanston Chamber of Commerce, Evanston Community Foundation, community
★	**Gain support from the six largest Evanston institutions and businesses for the implementation of the Evanston Climate Action Plan.**	**n/a**	

★	a) Support efforts to convene a summit of the six largest Evanston institutions and businesses (including the City) to discuss and gain support for the Evanston Climate Action Plan.		City Council, state and federal elected officials, COE, Environment Board, NU, NUH, St. Francis Hospital, Districts #65 and #202
	b) Encourage summit participants to assign representatives to a working group that will be tasked with sharing resources, information and strategies for implementing the Evanston Climate Action Plan.		City Council, state and federal elected officials, COE, Environment Board, NU, NUH, St. Francis Hospital, Districts #65 and #202
★	**Use festivals, markets and celebrations to promote and model "green practices".**	**n/a**	
	a) Support community-based outreach efforts to disseminate information and resources around Evanston Climate Action Plan recommendations at community and City-sponsored events.		Community, COE
	b) Continue to support the annual Evanston Green Living Festival.		COE, Evanston Environmental Association/ Ecology Center
	Connect residents, businesses and City staff to workshops, training and lectures on green topics.	**n/a**	
★	a) Support the development of a "Speakers Bureau" and encourage community members and business to participate as speakers in their areas of expertise.		Community, Evanston Environmental Association/Ecology Center, COE
	b) Connect speakers in the Speakers Bureau with community audiences based on subject matter and interest.		Community, Evanston Environmental Association/Ecology Center, COE
	c) Encourage efforts to develop and implement a series of ongoing courses on carbon reduction strategies at public venues such as the libraries, Ecology Center and community centers.		Community, Evanston Environmental Association/Ecology Center, COE, Evanston Library
★	d) Develop and implement a "Green Training" initiative for City staff to ensure understanding of and support for the Evanston Climate Action Plan.		COE

Communications and Public Relations

Communication is essential to any campaign that seeks to inform, educate and motivate behavior change in a community. In devising the following recommendations, the Communications and Public Relations task force conducted informal focus group discussions among Evanston residents, and researched tools and strategies proven to be effective in changing behavior. Recommended strategies in this section include: promotion, marketing, and the development of messaging addressed to the general public that will help not only involve citizen but keep the public informed about the process of implementation and action of the City's effort to reduce GHG emissions.

	Recommended Strategy	Potential GHG Reduction	Partners for Implementation
★	**Disseminate information to the community around climate change and the Evanston Climate Action Plan and promote community and City efforts as pertinent.**	**n/a**	
★	a) Support the development of a campaign slogan, along with a theme, graphics, and key messages.		Community, COE
	b) Consider developing an Evanston Climate Action Plan advertising campaign that includes billboard advertising; posters on public rail platforms; a poster campaign in downtown Evanston; point-of-action messages (stickers, signage) on recycling bins, bike lane signs, etc.		Community, COE
★	c) Encourage residents, businesses, students and community groups to use the Zerofootprint Evanston online carbon footprint calculator.		Community, COE
	d) Support efforts to develop a campaign website that serves as an information resource; reflects the organizational structure of the campaign; and fosters connections and collaboration between local groups and individuals.		Community, COE
★	e) Publish articles, both locally and regionally on Evanston's efforts to reduce greenhouse gas emissions.		Community, COE
	f) Consider conducting a survey of Evanston residents to identify current knowledge, attitudes, and behavior related to climate change among Evanstonians.		Community, COE
★	g) Ensure information and resources related to the ECAP and climate change reaches all Evanston residents, regardless of socioeconomic status.		Community, COE

	TOTAL Potential ECAP Greenhouse Gas Emission Reductions	**245,380 – 403,991 $MTCO_2E$**	

Note: the potential GHG emission reductions involve many assumptions. These are intended to provide a sense of the magnitude of the impact, rather than specific expectations. Calculation assumptions are available upon request.

Conclusion

The Evanston Climate Action Plan includes more than 200 recommended strategies for reducing GHG emissions. When added together, the strategies have the potential to reduce Evanston's emissions by 245,380 – 403,991 $MTCO_2E$, offering a wide variety of options for meeting Evanston's 13% reduction goal of 140,104 $MTCO_2E$ by 2012. By reducing Evanston's reliance on nonrenewable energy sources and waste, the recommendations included in this plan not only offer ample opportunities to reduce Evanston's GHG emissions, but also enhance and support the three core values outlined in Evanston's Strategic Plan - economic viability, environmental sustainability and strengthening community.