



# **CITY OF NAPERVILLE ENVIRO-LINK**

## **ENVIRONMENTAL SUSTAINABILITY INVENTORY REPORT**

**OCTOBER 2007**

*PREPARED ON BEHALF OF THE COMMITTEE BY MICHAEL BEVIS*

*THIS REPORT IS PRODUCED ON  
100% POST-CONSUMER RECYCLED PAPER*

### Committee background and data collection methodology

The Enviro-Link Committee was formed by interested City of Naperville employees and community members in the Spring of 2006 to consider the proper role of environmental sustainability in the responsible conduct of the City of Naperville's business. Through discussion and a series of current events, the Committee has grown to its present membership which includes the following members:

#### City Staff

Don Carlsen, Administrative Services  
Doug Krieger, Finance  
Allan Poole, Public Utilities  
Dan DiSanto, City Manager's Office  
Mark Curren, Utilities – Electric  
Michael Bevis (Chair), Finance - Procurement Services  
Chris Smith, Finance – Budget  
Jim Holzappel, Utilities – Water/Wastewater  
Terry Miller, Legal  
Anastasia Urban, TED  
Mark Straughn, Utilities Water/Wastewater  
Beth Lang, Public Works  
Christine Schwatrzhoff, Public Works  
Debbie Grinnell, Naper Settlement\*  
Ginger Ryan, Community Relations  
Naomi Pollard, Finance - Procurement Services  
Allison Alonzo, Fire

#### Community Members

Dan Bulley, Mechanical Contractors Association  
Michelle Hicky-Fouts, Community Energy  
Rod Irey, Earth Tech

The City Council requested that staff prepare an inventory of current practices that are related to issues of environmental sustainability. This report, the first product from the Committee, is intended to respond to that request.

The committee asked each City Department, in coordination with a member of the committee, to conduct a survey of environmentally responsible activities and report the results to the committee. The Committee then reviewed the results and sought clarification where needed. This inventory and report is the result of this effort.

### The working definition of “Environmental Sustainability”

There is some ambiguity in the use of the term “environmental sustainability.” The popular literature and governmental activities on an international scale have taken an extremely broad view of the term, often including such issues as aboriginal peoples’ rights and social welfare in the evaluation. This report and the committee, expressly limit themselves to those programs and activities that directly impact, or seek to minimize our impact on, the physical environment. The report includes traditional programs focused on the three core practices of reduce, reuse and recycle (i.e. recycling programs, alternative energy and waste reduction programs) and also takes a broader view and includes those practices and programs intended to enhance the physical environment by facilitating community decision making and activities (i.e. programs centered on permitting, code enforcement and traffic patterns).

### The format and content of the report

This report is a listing of the City of Naperville’s current practices related to environmental sustainability. This report is divided into sections based on the City department that is responsible for the practice or procedure. Those listings that are Citywide are listed in the beginning of the inventory. Included in each listing are:

- a description of the activity, whether process or program,
- an identification of its intended environmental impact,
- an identification of whether it is a business practice followed in the conduct of City business or a program to support community decision making
- an identification of how environmental performance is measured, and
- an identification of whether the impact is local, regional or national.

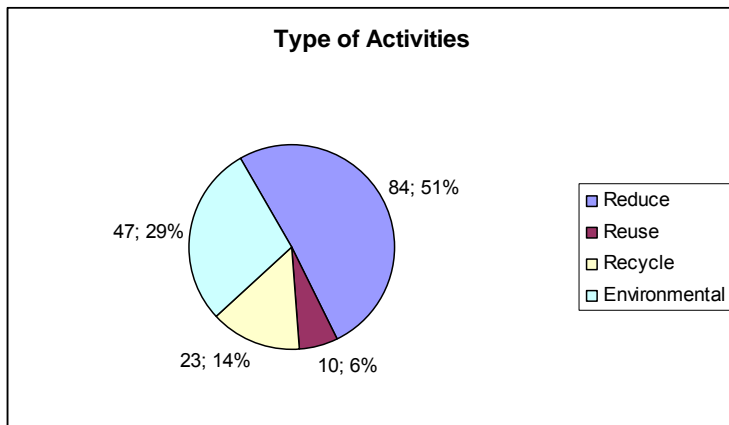
The activities reported in this inventory have, in the vast majority of cases, developed as a response to best business practices and regional market trends and they were not necessarily implemented because of their environmental impact. The simple fact is that good business and the reduction of our impact on the environment is good for business and good for the environment. For example the replacement of paper documents with electronic documents results in increased productivity by providing quicker access to needed information, cost savings through paper purchases and reduces deforestation and the use of fossil fuels in document delivery. In many areas the City staff and the Committee have been able to identify environmental impacts through cost savings, in others through reductions in our contribution to the waste stream and in many we are just beginning to develop and implement performance measures related to environmental impacts.

### Next Steps

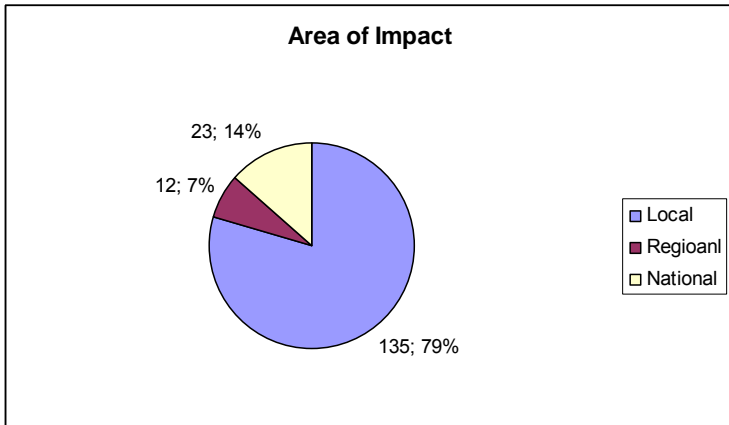
The Committee has developed a City Employee Program that will take place on either November 27 or 28 and will provide staff with information on resource conservation and recommendations to reduce their individual impact on the environment through responsible conduct. Additionally, pending City Council direction, the Committee has developed several potential program enhancements that could become part of a Strategic Plan Initiative. The following programs are currently under evaluation:

- A policy related to the procurement of goods and services that will consider possibilities for the reduction, reuse, and recycling of products and provide a process for the evaluation and, where appropriate, require procurement of goods that have a reduced negative impact on the environment and human health while being financially responsible.
- A program to minimize the environmental impact of residential, commercial and construction waste disposal and reduce waste generation and utilization of landfills.
- A resource guide for Citizens that provides information and access to various opportunities for community involvement and participation in environmentally responsible activities including reduction, reuse and recycling opportunities.

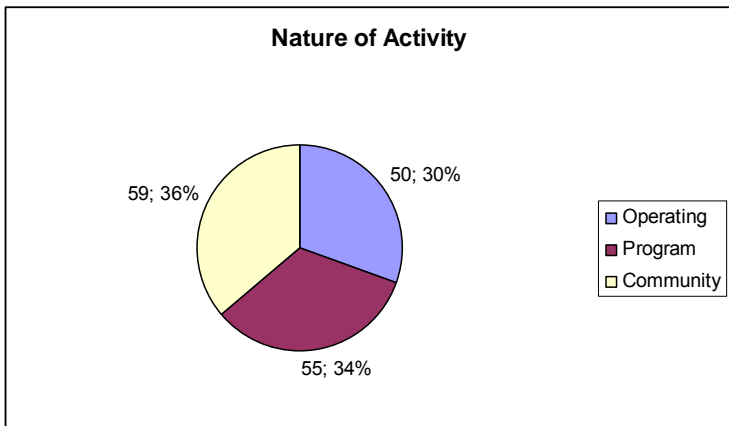
### Summary Data



When separated by the nature of the activity, for example whether the activities are focused on reducing consumption and therefore the City's impact on the environment, reusing materials already owned, recycling materials used or intended to have a direct positive on the environment, the results show a clear preponderance of reduction programs. The focus on reducing our consumption demonstrates both a desire to save financial resources and mitigate our impact on the environment.



All impacts are global, not many are, by either their nature of design intended to have a direct local, regional or national impact. When separated by the area of impact, for example whether the impact is local, regional or national, again a clear preponderance of the activities are focused on local impact. This is entirely consistent with the preference for reduction programs.



When separated by the nature of the activity, for example whether it is an operating preference within an ongoing program, a program for internal application or a program focused on the community there is a fairly balanced and even distribution of activity.

**Conclusion**

While there is much being done, there is also much more that can be done. We believe that this report demonstrates the commitment of the City to doing the right thing as it relates to the environment. The Committee has many ideas and initiatives that have been recommended by various members of the committee and by interested community members. The committee is committed to executing further direction from the City Council related to environmental sustainability.

# ENVIRO-LINK: Environmental Sustainability Inventory

Impact Areas:  
O=Operating, P=Program,  
C=Community Program  
Scope:  
L=Local, R=Regional, N=National  
Type:  
D=reDuce, U=reUse, C=reCycle,  
E=Environmental Enhancement

Department and Activity Name	Description	Measurement	Impact to Date	Impact Area: O-P-C	Scope: L-R-N	Type: D-U-C-E
<b>Citywide</b>						
Citywide: Comprehensive Services	Provision of multiple services and various locations, for example all services provided at the Municipal center and at Community Connections.	Reduction in trips and their related impacts through vehicle emissions and fuel consumption.	to be determined	O	L	D
Citywide: Click-to-Gov	Click-to-Gov functionality evaluation and pilot implementation I Finance and TED	Reduced paperwork and reduced need for citizens to come to Municipal Center for routine matters	Reduction in trips and their related impacts through vehicle emissions and fuel consumption. Impact to be determined.	O	L	D
Citywide: EDMS	Electronic Document Management System (OnBase)	Reduction in the amount of paper utilized and the amount of inter-office and USPS mail	to be determined	O		D
Citywide: e-agenmda project	Project to reduce the production of paper based agendas for Council, Boards and Commissions	Reduced paperwork and reduced vehicular travel associated with packet distribution.	to be determined	O	L	D
Citywide: Use of 2 sided printing and limited printing of emails	Effort to reduce the number of sheets of paper used through 2 sided copying and printing fewer emails	Cost savings through reduced paper consumption and related reduction in deforestation	to be determined	O	L-N	D
<b>City Clerk</b>						
Rod Irey, Earth Tech	The City Clerk's Office is an active participant in the paper recycling program. Reprographics produces from paper in the recycling stream (recycling bins) converting recycle to reuse.	Direct Impact: Reduces the amount of waste going into landfills.	to be determined	O	L	U-C
City Clerk's Office: Water Program	The City Clerk's Office offers it employees a voluntary water program. Employees can contribute money towards receiving bottled water for a water cooler from a water company. The bottles are recycled after use. Staff then uses reusable glasses/mugs instead of disposable container.	Direct Impact: Reduces the amount of disposable containers.	to be determined	O	L	D
City Clerk's Office: Voting Procedures	Longer voting window allows for combining trips to Municipal Center	Reduction in trips and their related impacts through vehicle emissions and fuel consumption.	to be determined	C	L	D
City Clerk's office: Use of electronic data sources i.e. recorder, etc . . .	Use of online resources to reduce trips to various data sources such as the County Clerk, Recorder of Deeds, etc. . .	Reduction in trips and their related impacts through vehicle emissions and fuel consumption.	to be determined	C		D

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<b>Community Relations</b>						
Recycled paper for printing	Newsletters and utility bill inserts along with most other flyers are printed on paper which is made of 30% PCW (post consumer waste).	Reduced deforestation.	to be determined	O	L-R-N	C
Electronic communication	City Link, Commuter Connection, City Notes and press releases are all sent electronically instead of being printed.	Reduced deforestation.	to be determined	O	L-R-N	D
<b>Finance</b>						
Finance/Financial Reporting Team	Several years ago the Financial Reporting Team reduced the amount of paper budget books and Comprehensive Financial Report offered by creating an on-line version accessible via the city's website.	Direct impact: eliminated over 20 books each 400 pages long	Annual savings, beginning 2002: \$3,000	O	L	D
Finance/Financial Reporting Team	Conversion of paper copy invoices to EDMS	In FY2005 the accounts payable section converted all their invoice storage from paper to electronic versions.	Annual savings is storage capacity as well as staff time in finding invoices	O	L	D
Finance: Billing and Collections	e-bill service reduces the number of paper bills and provides for electronic payments.	Reduction in reprinting, paper and mailing costs along with reduction in ratepayer use of paper checks and mailing costs	15.6% usage equating to eliminating ~9,300 bills not sent and the same number of electronic payments	P-C	L	D
Finance: Procurement Services Team	On-line distribution of solicitations.	reduction in reprinting, paper and mailing costs.	to be determined	P-C	L	D
Finance/PST: Office Supply Swap meet	The Procurement Services Team conducts an annual Office Supply Swap Meet to redistribute Office Supplies from areas where they are no longer needed to areas where they can be used.	Direct impact: Reduction in the demand for new office supplies and in the use of all resources associated with their production is measured by the dollar value of the office supplies redistributed.	Annual savings, beginning 2001: \$7,500.	O	L	U-C

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<b>IT</b>						
IT/Business Systems Team: Archiving ERP (Enterprise Resources Planning) applications period end reports into City's Electronic Document Management System	IT/Business Systems Team streamlines the process of archiving Payroll, Accounting, Work Order, Asset Management II period end reports, daily Utility Billing reports, Accounts Receivable update reports into City's EDMS instead of printing.	Direct impact: Reduction in the usage of paper, printer and save archiving space, save labor of distribution reports to employees. Employee will be able to access information on-line. Auditor will be able to review data in an efficient way.	Annual savings on paper usage, beginning 2003: \$20,000	O	L	D
IT/Business Systems Team: Distribute reports to users via e-mail.	IT/Business Systems Team based on the needs to setup rules to distribute reports to one user or a group of users via email, so user may view and archive reports electronically.	Direct impact: Reduction in the usage of paper, printer and save archiving space, save labor of distribution reports to employees. Staff will be able to access information on-line in an efficient way. This process also improves business work flow.	Annual savings on paper usage, beginning 2002: \$5000.	O	L	D
Disposal of surplus computers	The IT Department has disposed of excess computer equipment to companies that will scrub the data, inspect and resell any good equipment and dispose of non functioning equipment according to EPA guidelines.	No independent measurement, following EPA guidelines for disposing of used computer equipment.	to be determined	P	N	E
<b>HR</b>						
Human Resources	Every member of the Human Resources Department recycles paper, especially unsolicited (junk) mail as well as newspapers.	Direct impact: Reduction in the destruction of trees for paper.		P	N	
Human Resources	Human Resources purchases recycled products when feasible.	Direct Impact: Reduces the need to destroy additional trees and other resources.		P	N	
Human Resources	Human Resources scans all employee paperwork into the Electronic Document Management Systems (OnBase).	Direct Impact: Reduces need for storage and encourages online access to employee information.		O	L	
Human Resources	Human Resources shreds whatever paperwork cannot be recycled.	Direct impact: Lower density going into landfills and shredded paper decomposes more efficiently.		P	N	



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Human Resources & IT	The HR/IT dishwasher is run only once per week.	Direct Impact: Saves water, soap and electricity.		P	N	
<b>Police</b>						
Police/Power DMS	Power DMS is an electronic data management system that incorporates storing, managing and distributing revisions of the department's general orders and training bulletins. The Communications Section has utilized this system since 2004. The police department started utilizing this system in 2007.	The police department's training bulletins and 490-page general orders are now in an electronic format allowing minimal printing.	to be determined	O	L	D
Police/Fuel Conservation Program	In FY06-07, the police department achieved a 5.6% improvement in fuel economy. Is this police practices of city wide fuel conservation	Comparison of police fleet activity in FY06-07 as compared to the base year of FY04-05.	Saved \$17,883 in fuel costs and 7,200 gallons of gasoline	O	L	D
Police/EOC furnishings	The Communications Section purchased recycled and/or refurbished materials for the new back-up Emergency Operations Center (EOC) at the Electric Service Center.	Refurbished materials were purchased for \$20,000. If bought new, the price would have been approximately \$60,000 - \$70,000.	Saved \$40,000 - \$50,000.	O	L	C
<b>Public Works</b>						
DPW/Recycle Motor Oil	Fleet services contracts with a service to collect used motor oil.	Oil is disposed of in a socially responsible manner and in compliance with IEPA regulations.	to be determined	P	L	C
DPW/Recycle Anti-freeze	Fleet services contracts with a service to collect used anti-freeze.	Anti-freeze is disposed of in a socially responsible manner and in compliance with IEPA regulations.	to be determined	P	L	C
DPW/Recycle Tires	Fleet services contracts with a service to collect tires that have surpassed their useful life.	Recycling practice prevents material from being sent to a landfill.	to be determined	P	L	C
DPW/Recycle Batteries	Fleet services contracts with a service to collect used batteries.	Recycling practice prevents material from being sent to a landfill.	to be determined	P	L	C

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DPW/Recycle Aerosol Cans	Fleet services contracts with a service to collect used aerosol cans.	Recycling practice prevents material from being sent to a landfill.	to be determined	P	L	C
DPW/Recycle Scrap Metal	Fleet services and Traffic Operations contract with a service to collect scrap metal.	Recycling practice prevents material from being sent to a landfill.	to be determined	P	L	C
DPW/In-house refrigerant recycler	Fleet services owns an anti-freeze recycler.	This equipment extracts R12 and R134 from vehicles, filters the impurities and return the refrigerant back to the vehicle system.	to be determined	P	L	C
Fleet Downsize Program	The police department participated in the Fleet Services Downsize Program to evaluate the replacement vehicle function and need.	Since the implementation of the program, for example, the police department has downsized four vehicles leading to fuel and captial cost savings.	to be determined	O	L	D
DPW/Recycle Fluorescent lighting	Public Buildings and Strategic Services contract with a service to collect used fluorescent fixtures.	Recycling practice prevents material from being sent to a landfill.	to be determined	P	L	C
DPW/Recycling Program	Strategic Services administers a residential curbside recycling program.	Recycling program reduces the amount of solid waste sent to a landfill.	to be determined	P	L	C
DPW/Recycling Drop-Off Center	DPW maintains the operation of a recycling drop-off center. Residents and local businesses may bring recyclable materials to this center.	Recycling program reduce the amount of solid waste sent to a landfill.	to be determined	P	L	C
DPW/Household Hazardous Waste Facility	DPW maintains the operation of a household hazardous water drop-off center. Any residents of Illinois may bring qualifying materials to this center for safe disposal.	This program reduces the amount of solid waste sent to a landfill in addition to mitigating negative environmental impacts resulting from illegal dumping/contamination.	to be determined	P	R	E
DPW/Fuel Conservation Program	Fleet Services developed a program to reduce the amount of internal fuel use outlining the importance of tire pressure, turning off the ignition when stopped on a job and reducing the use of air conditioning.	Reduced fuel consumption and emissions.	to be determined	P	L	D

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DPW/Annual Tree Planting Program	The forestry department administers an annual tree planting program/contract.	Social and environmental benefits.	to be determined	P	L	E
DPW/Street Light Upgrade	Strategic Services administers a street light upgrade program/contract to replace antiquated infrastructure with energy efficient lighting.	Reduction in energy consumption.	to be determined	P	L	D
DPW/ PWSC	The construction of a multi-use public works service center.	Green building practices and technology.	to be determined	O	L	D-U-C-E
DPW/Recycling Drive	Strategic Services with external partner conduct an annual recycling drive. Residents may drop off books, shoes, bikes and electronics for reuse/recycling.	Reduce the amount of waste placed in landfills.	to be determined	C	L	C
DPW/ Tree Sale	The forestry department conducts an annual tree sale open to all residents.	Social and environmental benefits.	to be determined	C	L	E
DPW/Mulch Program	DPW mulches tree material collected from the trimming program, brush collection and storm events for use at public facilities and sale to landscape contractors.	Social and environmental benefits.	to be determined	P	L	E
DPW/ Street Sweeping	DPW operates a street sweeping program to mitigate the impact of pollution on the local environment.	Social and environmental benefits.	to be determined	O	L	E
DPW/ Storm Sewer Maintenance	DPW Storm Sewer programs ensure surface water is diverted and collected properly.	Health and environmental benefits. (Prevent water from mixing with possible contaminants and spreading.)	to be determined	P	L	E
DPW/Leaf Collection Program	DPW contracts a service to have leaves transferred to local farm for use as a natural fertilizing.	Agricultural and environmental benefits	to be determined	P	L	U
DPW/ Excavation Spoils	DPW trucks spoils to a quarry in North Plainfield. This quarry is no longer being mined and is being filled for stabilization purposes.	Environmental benefits	to be determined	O	L	U

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Department and Activity Name	Description	Measurement	Impact to Date	Impact Area: O-P-C	Scope: L-R-N	Type: D-U-C-E
<b>Naper Settlement</b>						
Naper Settlement	Ballast replacement: Fluorescent light ballasts replaced with more energy efficient ballasts. Approximately 75% of ballasts changed out at NS, primarily in Pre-Emption House, where largest concentration of fluorescent lights are used.	More efficient energy consumption as well as reduction in staff time spent changing fluorescent tubes as ballasts prolong their life. However, increased usage of the building, and lack of sub metering on electrical draw for lighting specifically, makes it difficult to provide a specific # or \$ value.	to be determined	O	L-R	D
Naper Settlement	Incandescent light bulbs: standard bulbs replaced with more energy efficient coils where visibility of the bulb/coil itself is not an intrusion on authentic building furnishing plans and exhibition needs. Further investigation into other energy efficient bulbs is underway.	Again, increased consumption by longer usage times of buildings offsets the energy savings. We do not have a calculated number or dollar figure at this time.	to be determined	O	L-R	D
Naper Settlement	Reduction in water consumption: water saver faucets have been installed in all restrooms to provide a predetermined, smaller amount of water for hand washing when activated by a user. ADA compliant, the devices assist in reducing water consumption by the 140,000 visitors we have a year, a majority of whom use a restroom while touring NS.	Because we do not have each building, or faucets, separately sub metered, we do not have a calculated figure of reduction in usage of water due to these devices being installed. Increased attendance and usage of buildings offsets reduction per user.	to be determined	O	L-R	D
Naper Settlement	Paper Recycling: similar to City of Naperville, NS has a contract with RCM for paper recycling. All offices and most desks at NS are provided with paper recycle bins. All staff and volunteer participate in recycling paper.	We have not been provided with weekly, monthly or yearly reports stating amount of paper picked up by RMS from our site for recycling and resale to other industries. 99% of disposed paper at NS is recycled through this program, however.	to be determined	O	L-R	C

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Naper Settlement	Salvaged Materials: The preservation services team monitors demolitions and other means for re-usable materials to salvage for preservation and restoration uses at NS. Materials salvaged from other sites in Naperville and the surrounding region typically date from the 1840s - 1920s and include: glass, wood/lumber, brick and limestone, hardware, tin ceiling tiles, fixtures, and architectural features. Materials are chosen based on projected need, condition, availability, our ability to store it, and if it can be obtained for no charge or an extremely nominal fee.	Salvaged materials are incorporated into preservation and restoration projects whenever possible for authenticity purposes and to reduce need for modern material purchases. Salvaged materials account for anywhere from 5-50% of needed materials required for preservation and restoration efforts. These efforts are central to the core mission's of the museum and the Naperville Heritage Society, and are incorporated into our preservation outreach and educational offerings at NS. We are often looked to as a model by other historic sites and museums in the region and nation. By the very essence of what we are, the fact is the historic buildings moved to NS are being reused.	to be determined	O-C	L-R-N	U
Naper Settlement	Artifact Collections: Naper Settlement's artifact collections might be considered a means of reusing objects that original owners no longer wish to keep or maintain. Through their donation to the museum, they are reused in exhibitions, educational programming and for study purposes. Often donor's express that if we don not the items, they will be discarded, thus adding to landfills.	The museum collections contain over 27,000 items. 2,000+ items are typically accepted each year.	to be determined	O-C	L-R-N	U
Naper Settlement	Integrated Pest Management Program: NS uses an integrated pest management program, which reduced the amount of chemicals being used over the 13-acre site to prevent pest infiltration of buildings and exhibits. A philosophy of reduced application has been used successfully to manage pest activity and yet be more human- and environmentally-friendly.	MSDS sheets provide the information on what is used and program information documents where what specific sprays are used and how often. Monthly service has been changed to quarterly service without sacrificing objectives - to keep buildings and collections pest free by means of lowest usage as possible without threat to humans or environments.	to be determined	O	L-R	D

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Naper Settlement	Garden Management: Along the same lines as the pest management, our staff and garden club volunteers use organic plant foods and more environmentally friendly insecticides only as needed to maintain the beauty and health of the plant materials throughout the 13 acres.	No quantifications exist, however it is felt this is the responsible thing to do as a preservation organization. For behind the scenes tours requested, information is shared on the gardens, their respective time periods and materials used, and maintenance practices. This helps people learn more about what they can do in their own yards.	to be determined	O-C	L-R	D
Naper Settlement	Borrowing/Collaboration: Whenever possible, Naper Settlement will work with other city departments or community organizations to borrow items if not needed on a daily/weekly basis. For example, we borrow portable bleacher seating from the Naperville Park District for certain events as opposed to buying them.	Resources are saved by not purchasing new products that aren't used often enough to merit their procurement.	to be determined	O	L-R	D
<b>TED</b>						
<b>Landscape Programs</b>						
TED: Comprehensive Arterial Tree Planting Program (2000-2007)	Planting of trees on arterial streets	Staff has identified this as a prominent practice, which is a specific countermeasure to address environmental concerns. This practice includes measures that reduce air, noise, water and light pollution, relieve barriers to mobility, improve visual impact, and conserve, preserve or create natural resources in the roadway environment.	to be determined	C	L	E
TED: Landscape Median Programs	248th Avenue - Landscape Median Installation (2005)	Staff has identified this as a prominent practice, which is a specific countermeasure to address environmental concerns. This practice includes measures that reduce air, noise, water and light pollution, relieve barriers to mobility, improve visual impact, and conserve, preserve or create natural resources in the roadway environment.	to be determined	C	L	E
	111th Street - Landscape Median Installation (2006)	Same	to be determined	C	L	E
	Naper Boulevard - Landscape Median Installation (2006)	Same	to be determined	C	L	E

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	West Diehl Road - Landscape Median Installation (2005)	Same	to be determined	C	L	E
	West 95th Street - Landscape Median Installation (2006)	Same	to be determined	C	L	E
	250th Avenue - Landscape Median Installation (2006)	Same	to be determined	C	L	E
	Plainfield/Naperville Road - Landscape Median Agreement (2006)	Same	to be determined	C	L	E
	Mid-Washington Street - Landscape Median Plans (2007)	Same	to be determined	C	L	E
	South -Washington Street - Landscape Median Plans (2007)	Same	to be determined	C	L	E
	VanBuren Streetscape Installation (2004)	Same	to be determined	C	L	E
	Nichols Library Deck Plaza - streetscape Planning (2007)	Same	to be determined	C	L	E
	75th Street & Washington Landscape Median Planning (2005)	Same	to be determined	C	L	E
Landscape Programs	East Highland Improvements - Tree Preservation Planning (2006)	Same	to be determined	C	L	E
	Riverwalk landscape planning (2006)	Same	to be determined	C	L	E
	Lake Osborne - Natural Plantings	Same	to be determined	C	L	E
	83rd Street & Book Road Improvement - Wetland and Natural Plantings Restoration (2006)	Same	to be determined	C	L	E
	DuPage River Trail Segment 3 - Natural Plantings and Landscape Preservation (2005)	Same	to be determined	C	L	E

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Department and Activity Name	Description	Measurement	Impact to Date	Impact Area: O-P-C	Scope: L-R-N	Type: D-U-C-E
<b>Transit Programs</b>						
PACE and METRA related programs	PACE Route 530	Increased use of mass transit	to be determined	C	R	D
	PACE Route 714 - COD	Increased use of mass transit	to be determined	C	R	D
	PACE Route 673 & 675 - park n-rides	Increased use of mass transit	to be determined	C	R	D
	95th Street park & ride Planning	Increased use of mass transit	to be determined	C	R	D
	Transit Feeder Service	Increased use of mass transit	to be determined	C	R	D
	PACE Reverse Feeder Route Improvements	Increased use of mass transit	to be determined	C	R	D
	Ride DuPage	Increased use of mass transit	to be determined	C	R	D
Other Transit Programs	Sidewalk and Shelter Improvements	Increased use of mass transit	to be determined	C	R	D
	Bicycle Parking Improvements at Train Stations	Increased use of mass transit	to be determined	C	R	D
	Special Event Shuttles	Increased use of mass transit	to be determined	C	R	D
<b>Traffic Signal Operation Systems</b>						
Signal Coordination	Naper Boulevard Traffic Signal Interconnect	Improved traffic flow and reduced fuel consumption and particulate pollution	to be determined	P	L	D
TED: LED lamp replacement program	Traffic Signal LED Energy Savings program	Reduced energy consumption and maintenance	to be determined	P	L	D
Pedestrian Signal	South Route 59 Pedestrian Signals Installation	Enhanced Pedestrian use of system	to be determined	P	L	D



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Signal Coordination	75th Street Traffic Signal Interconnect - w/ DuPage County	Improved traffic flow and reduced fuel consumption and particulate pollution	to be determined	P	L	D
<b>Highway Construction &amp; Maintenance Program</b>						
TED: Enhanced Construction Practices	MIP - Pavement Preservation Programs (on-going)	Reduction in use of new product and reuse of existing materials, also reduction in transport of new product to site.	to be determined	O	R	D-U
TED: Enhanced Construction Practices	Recycling Asphalt and Concrete in construction contracts (on-going)	Reduction in use of new product and reuse of existing materials, also reduction in transport of new product to site.	to be determined	O	R	D-U
TED: Enhanced Construction Practices	No-Dig Street Maintenance - Crackfill/ Microsurfacing (on-going)	Reduction in use of new product and reuse of existing materials, also reduction in transport of new product to site.	to be determined	O	L	E
Signal Coordination	Signal Timing Adjustments for construction - Main Street Bridge (2005)	Improved traffic flow and reduced fuel consumption and particulate pollution	to be determined	O	L	D
Traffic Coordination	Accelerated construction minimizing travel delays - Washington Street Bridge resurfacing (2004)	Improved traffic flow and reduced fuel consumption and particulate pollution	to be determined	O	L	D
TED: Enhanced Construction Practices	Multiple project coordination minimizing detours and travel delays - 83rd Street & Book Road (2006)	Improved traffic flow and reduced fuel consumption and particulate pollution	to be determined	O	L	D
TED: Enhanced Construction Practices	Night work - Micro-surfacing (on-going)	Improved traffic flow and reduced fuel consumption and particulate pollution	to be determined	O	L	D
TED: Enhanced Construction Practices	Project Coordination with development to minimize travel delays and improve efficiency through coordination - 248th Avenue, 95th Street (West) , 95th Street (Timber Creek)	Improved traffic flow and reduced fuel consumption and particulate pollution	to be determined	O	R	D
TED: Enhanced Construction Practices	Project Coordination with Public Utilities to minimize travel delays and improve efficiency through coordination - Benton Avenue Duct Bank, Jefferson Avenue Duct Bank	Improved traffic flow and reduced fuel consumption and particulate pollution	to be determined	O	L	D

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<b>Non-vehicular Transportation Programs</b>						
Pedestrian and Bicycle System Enhancement Projects	Neighborhood Sidewalk Construction - 8th Av., Benton Av., associated with teardowns	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	C	L	D
	Arterial Sidewalk Construction - Route 59, Book & 87th	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	C	L	D
	DuPage River Trail 3 Installation (2005)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	C	L	D
	Dupage River Trail 4 - planning (2007)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
	Downtown DuPage River Trail Installation (2006)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
	Springbrook Prairie Trail System (2003)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
	Book Road Bike Path (2006)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
	Southern DuPage Trail - 75th Street/ Hobson Road (2004)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
	Plainfield/Naperville Road Bikeway Agreement (2006)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
	Bicycle Parking Ordinance (2005)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
	Additional Bicycle Parking @ Train Stations (2004)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
	95th Street Sidewalks (2006)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D

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	Route 59 Pedestrian Bridge Plans (2007)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
	Washington Street Pedestrian Underpass Planning (2004)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
	West Street mid-Block Crossing (2005)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
	Eagle Street mid-Block Pedestrian signs (2005)	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
	Webster Street Pedestrian Flashing Crossing signs	Enhanced Pedestrian and Bicycle use of system and the incumbend reduction in automobile use.	to be determined	P	L	D
<b>Street Lighting Program</b>						
Lighting retrofits and improvements	High Pressure Sodium Energy Saving Upgrade (2002-06)	Energy and cost reduction.	to be determined	O	L	D
	Use of Cutoff Directional Lights - Naper Blvd Street lighting (2006)	Enhanced lighting conditions.	to be determined	O	L	D
	Direction Lighting Standards - Street Design Standards (on-going)	Enhanced lighting conditions.	to be determined	O	L	D
	Commercial Lighting Standards - Dealerships (2005)	Enhanced lighting conditions.	to be determined	O	L	D
	Energy Conservation - Lighting Timers @ Commuter Lots & Parking Decks (on-going)	Enhanced lighting conditions.	to be determined	O	L	D
	Light Direction Shield Installation (on-going)	Enhanced lighting conditions.	to be determined	O	L	E

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<b>Stormwater Collection &amp; Management</b>						
Stromwater Related Projects	Flood Reducing In-line Detention - Hobson Road, North Aurora Road , 75th & Washington, Plainfield/Naperville Road (on-going)	Improved water quality, preservation of soil conditions, enhanced wetlands conditions.	to be determined	P	L	E
	Coordination of detention design and installation with development allowing better flood protection and environmental BPM's (Best Management Practices) - 95th Street (Tall Grass), Diehl Road, 248th Avenue (on-going)	Improved water quality, preservation of soil conditions, enhanced wetlands conditions.	to be determined	P	L	E
	Wetland Preservation to improve water quality - DRT 3, Diehl Road, Book & 83rd	Improved water quality, preservation of soil conditions, enhanced wetlands conditions.	to be determined	P	L	E
	Erosion and Sedimentation control during and after construction - all projects (on-going)	Improved water quality, preservation of soil conditions, enhanced wetlands conditions.	to be determined	P	L	E
	Innovative sedimentation control - main Street Bridge Turbidity Curtain to trap sediment (2005)	Improved water quality, preservation of soil conditions, enhanced wetlands conditions.	to be determined	P	L	E
	Best management Practices to improve Water Quality - NPDES regulations, Naperville Stormwater Ordinances, TearDown Regulations (on-going)	Improved water quality, preservation of soil conditions, enhanced wetlands conditions.	to be determined	P	L	E
<b>Highway Operations</b>						
Street Sweeping Program to remove on pavement pollutants on a regular basis (on-going)	Street Sweeping Program	Remove on pavement pollutants on a regular basis (on-going)	to be determined	O	L	E
	Best Management Practices for the application of de-icers, limiting applications to a minimum and using environmentally neutral de-icers when appropriate.	Remove on pavement pollutants on a regular basis (on-going)	to be determined	O	L	D
	Consolidated Traffic Sign Practices	Improved traffic flow and reduced fuel consumption and particulate pollution	to be determined	O	L	E

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	Traffic Calming Program	Improved traffic flow and reduced fuel consumption and particulate pollution	to be determined	O	L	E
	Adopt-A-Street Program		to be determined	O	L	E
	Annual City-wide Clean Sweep		to be determined	O	L	E
	DuPage River Sweep		to be determined	O	L	E
<b>Land Use Practices</b>						
Landscape Practices	Landscape Buffers installed during development - Tall Grass, Carillon Club, Monarch Landing (on-going)	Improved physical environment	to be determined	C	L	E
Landscape Practices	Physical Barrier Systems like sound walls - Maplebrook Planning (2004)	Improved physical environment	to be determined	C	L	E
Landscape Practices	TOD (Transportation Oriented Destination) Planning Study - Downtown Train Station Area (2006)		to be determined	C	L	E
PUD Ordinance	The Planned Unit Development encourages a higher level of design and amenities.	Developments that provide a more efficient use of land and preserve natural features and provide open space.	Quality developments	C	L	E
Weatherization Program	Program to provide assistance with weatherization-related home improvements.	Reduced energy use and costs.	Weatherization reduces home energy consumption, and provides a tangible boost to the household budget.	C	L	D
Landscape Code	Landscape code adopted by ordinance.		Implemented with new developments.	P-C	L-R-N	E
Tree Preservation	Tree preservation ordinance.	Tree preservation plans for new development.	Mature trees preserved.	P	L-R-N	E
Citywide Design Guidelines (pending)	Proposed citywide design guidelines that include efforts that promote environmental sustainability.	(Subject to adoption)	(Subject to Adoption)	P	L-R-N	E
Performance Standards	Lighting and noise ordinance restrictions.	Specific measurable units, defined by ordinance.	Enforceable standards.	P-C	L-R	D

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Walkable sites	The TED Business Group requires new projects provide internal and external pedestrian connections.	Sidewalk connections with completed projects.	Sidewalk connections with completed projects.	P-C	L-R	D
Plan Commission packets on-line	Addition of plan commission packets on the City's website.	Reduced paper and energy costs.	Reduced paper and energy costs.	O	L	D
Park & Ride Locations	Use of existing parking lots to operate commuter Park & Ride Locations.	Number of locations/riders.	Reduction in SOV and paved areas.	O-P-C	L-R	D
Historic Preservation	Supports the preservation of existing buildings.	Defined historic district, prohibiting tear downs.	Efficient use of resources.	C	L	U
Park Donation Requirements	Code requires the dedication of land for parks, or fee-in-lieu-of	Code specifies formula based on development density.	Parks constructed & fees collected for Park District.	C	L	E
2006 International Energy Code	Energy Code Section adopted with the 2006 IBC Codes	Lower impact on resources and lower energy costs.	Vary - building specific	P	L-R-N	D
<b>Utilities - Electric</b>						
Electric: City of Naperville's Renewable Energy Program	The Department of Public Utilities - Electric, in contractual partnership with Community Energy, Inc., provides the option for utility-served electric customers to pay an additional fee for obtaining a portion or all of their electric energy from a source that is a renewable energy (local windfarms, for the most part).	3745 residential and 8 commercial sign-ups. Revenue-neutral to the City. Residential average block size purchase is 358 kWh/mo. See attached document for more details.	Direct environmental impact is calculated from energy received through alternative rather than conventional sources. See attached document for more details.	C	R-N	D
Support Services	The sale of scrap metal, plastic, wooden reels for their scrap value.	Direct impact: Less material to be added to the land fill and money paid for scrap.	Annual payment of approximately \$20,000	P	R	C
Support Services	Recycling of transformer oil	Direct impact: Transformer oil recycled, not disposed of, causing a decrease in the demand for oil.	Annual savings of \$2,000.	P	R	C
Support Services	The sale of damaged transformers for their scrap value.	Direct impact: Less material to be added to the land fill and money paid for scrap.	Annual payment of approximately \$125,000	P	R	C
Support Services	Recycling of dry batteries.	Direct impact: Less material to be added to the land fill.	~3,000 units per year	P	R	C

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Utilities - Water						
Sanitary Sewer Lining Program	Lining of existing sanitary sewer services and mains with a epoxy resin liner. The liner rehabilitates the sewer to a like new condition, sealing out leaks and extending the life of the sewer.	5% reduction in flow to the Springbrook Water Reclamation Plant, reduction in maintenance activities. Prolongs the useful life of the sewer saving energy to produce new pipe, and disruption to the environment and community to replace the pipe. Reduction of energy consumed in pumping and treating excess waste flows. Reduction in fuel to operate maintenance equipment.	to be determined	O	L	D
Leak Dection Program	Performing a leak dection survey of the water distribution system to find leaks in watermains.	Once leaks are found, the size and magnitude of the leak is estimated. Eliminating leaks in the watermain system preserves a vital natural resource (water) and reduces the amount of energy needed to treat and pump water to the customers.	to be determined	O	L	D
Water Conservation Ordinance	Restricts the time of days and the amount of days that a customer may irrigate lawns.	Conserves water. Reduces energy needed to treat and convey water throughout the water distribution system.	to be determined	O	L	D
Leveraging Technology	Use of technology to monitor the water distribution system and other critical assets.	Reduces the number of vehicle trips (saving fuel, and reducing emissions) to remote sites to determine status or condition of the system or equipment	to be determined	O	L	D