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ENVIRONMENTAL
SUSTAINABILITY
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Photograph by John Sather



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VISION FOR ENVIRONMENTAL SUSTAINABILITY

Overview

Environmental awareness has always been at the forefront for the City of Naperville. Over the years, the city has undertaken a number of initiatives and programs that have had a positive impact on both the community and the environment. The timeline on page 3 illustrates a few examples of the city’s long-term commitment to environmental sustainability. These efforts and numerous others have helped the Mayor and City Council to endorse a Strategic Plan Initiative to define the city’s vision for environmental sustainability, address areas in need of improvement, and establish measurements for determining progress. The results of this initiative are incorporated into the Environmental Sustainability Plan, which will help serve as a long-range planning tool for the city.

Purpose

The purpose of this Environmental Sustainability Plan is to establish a long-term vision for environmental sustainability in Naperville and to serve as a guide for the city’s actions related to environmental leadership and initiatives over the next ten years.

Plan Framework

Within each category, three policy priorities have been developed, for which goal options are identified. A work plan will be established for regular review and adoption by the City Council. The framework of the plan is organized into five main categories including Leadership & Education, Resources & Energy, Transportation and Mobility, Waste Management and Recycling and Sustainable Development and Infrastructure.

Factors for Development of ESP



PLAN DEVELOPMENT

Specific actions have contributed to the development of the Plan, including the following:

Environmental Inventory

As an initial step towards developing a Plan for Environmental Sustainability, the City Council requested that an inventory of existing policies and practices be created. This document was received by the City Council in October 2007.

- City of Naperville Environmental Inventory (Appendix)

Environmental Vision

As part of the city's Fiscal Year (FY) 2009 Strategic Plan Initiatives, the Naperville City Council included a goal to develop an overall vision for environmental sustainability in the City of Naperville. An open house was conducted in September 2008 to solicit public input on new programs and initiatives that could be incorporated into an environmental work plan for the future.

Greenhouse Gas Emissions Inventory

The Naperville City Council commissioned a greenhouse gas emissions inventory for Naperville, which is one of the first in the Midwest and one of the few in the nation. The initial inventory was prepared based on data for calendar year 2005. This report was presented to the City Council on June 2, 2009. The Council directed the staff to consider the recommendations for implementation and the creation of the Environmental Sustainability Strategic Plan Goal.

- Greenhouse Gas Inventory - 2005 Data (Appendix)

Energy Efficiency and Conservation Block Grant (EECBG)

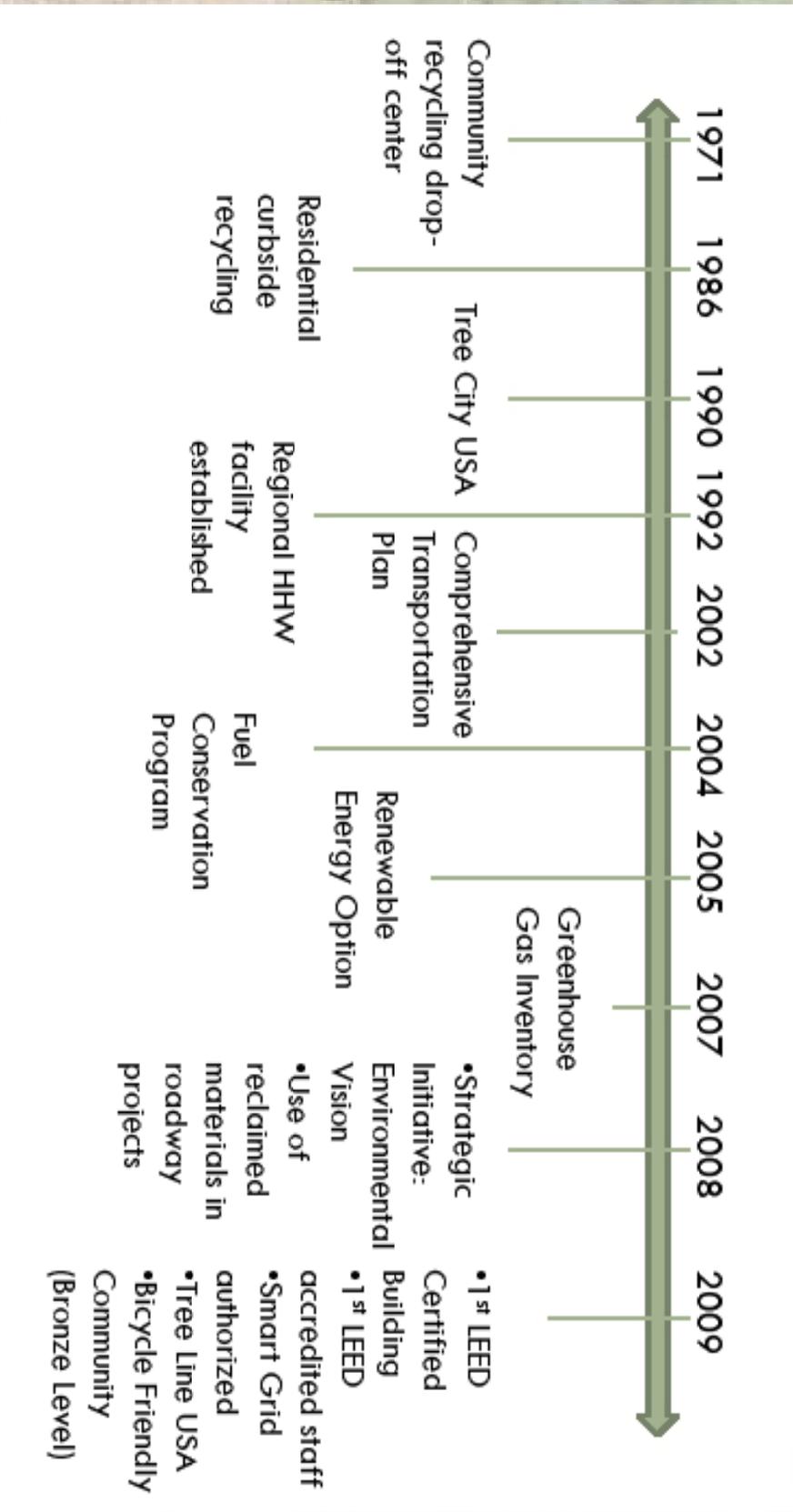
The American Recovery and Reinvestment Act (ARRA) was signed into law by President Barack Obama on February 17, 2009. Naperville received \$1,392,200 in the Energy Efficiency and Conservation Block Grant (EECBG) Program for projects that met the criteria, including reductions in fossil fuel emissions; total energy used and improved energy efficiencies in transportation or building. A number of projects were initiated within the City of Naperville as a result of this funding, including the Home Energy Savings Program and the Greener Business Program.

Environmental Sustainability Survey

An environmental sustainability survey was developed in fall 2009, which requested that participants evaluate and rank different environmental policies the city may incorporate into a plan for environmental sustainability. The information collected from the survey was used to identify priorities and specific actions, which have been incorporated into this plan document.

VISION FOR ENVIRONMENTAL SUSTAINABILITY

Timeline of Sustainability Efforts



VISION FOR ENVIRONMENTAL SUSTAINABILITY



1.0 LEADERSHIP & EDUCATION





1.1 OVERVIEW

The City of Naperville Strategic Plan includes Environmental Stewardship as a value reflected in the Naperville community. When it comes to the more efficient and effective use of our natural resources, the City of Naperville not only encourages residents and businesses to respect and protect the environment, but the city is an active participant in doing the same.

The Environmental Sustainability Plan evolved from existing green city practices and a response from resident demand for the City of Naperville to take a leadership role among government bodies. By embracing the role as a municipal leader in environmental sustainability, the City of Naperville becomes more marketable to businesses and residents. These efforts will advance the City of Naperville into the 21st Century economy and protect the environment for future citizens.

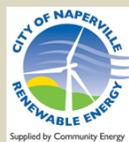
The City of Naperville is committed to being a municipal leader and an example for achieving a future of environmental sustainability through sound fiscal means. As a leader, the City of Naperville will educate and empower the public toward making a positive difference for the environment.

EXISTING PROGRAMS

A review of Naperville's current practices in 2010 revealed that the City already has many practices in place to support environmental sustainability.

- Educational program hosted in November 2007
- Environmental initiatives web site created (www.naperville.il.us/envirosustain.aspx)
- Renewable energy program for Naperville utility customers
- Public involvement in development of a Vision for Environmental Sustainability
- CDBG weatherization programs
- Greener Business Revolving Loan Fund and Grant Program
- Home Energy Savings Program

NAPERVILLE GREEN FACT



In 2010, the Naperville Renewable Energy Program was ranked fifth in the nation by the Department of Energy's National Renewable Energy Laboratory (NREL) in the category "Percentage of Customer Participation."



1.2 POLICY PRIORITIES

1. Leadership by Example

The City of Naperville understands the important role government plays in advancing innovation. The city believes that government should follow its own expectations of the private sector in order to achieve the best results. Therefore, the City of Naperville is committed to being a role model for our residents and businesses in environmental sustainability.

2. Community Education Initiatives

It can be difficult for the public to follow environmental best practices at home or in business without a thorough understanding of the benefits, costs, and proper way of doing so. The City of Naperville realizes that government can help educate the community through clear and targeted communication in how to improve their impact on the environment.

3. Incentives for Green Activities

When financially and logistically prudent, the City of Naperville supports encouraging the public to participate in green activities. Incentives can be financial, process related, or educational in nature.

WHAT CAN YOU DO?

- Become a greener consumer. Green options are everywhere, from pencils to vehicles. Choose environmentally sustainable products and support green business as an environmental leader.
- Sign up and contribute to the City of Naperville Renewable Energy Program.
- Tell a Friend! Share your environmental tips with your friends and family to help keep the “green” momentum going.



The EnviroLink Committee is comprised of city employees and community members who recognize the importance of making the right choices to protect and sustain the environment in every aspect of daily life, both at home and at work. The committee practices continuous quality improvement techniques to introduce new ways for employees and residents to reduce, reuse and recycle on a daily basis.

SPOTLIGHT on Leadership and Education

1. Home Energy Savings Program

Thanks to funding from the Department of Energy, through the American Recovery and Reinvestment Act (ARRA), the city of Naperville has created the Home Energy Savings Program (HESP). Through the program, the City is able to offer a minimum of 350 free home energy evaluations by a certified energy technician. The home energy evaluation identifies improvements to make the home more energy efficient. Additionally, the first 350 participants are eligible for a 50 percent reimbursement for energy improvements, up to a maximum of \$1,500.



A City of Naperville Certified Energy Technician conducts a home energy evaluation, each technician completed numerous hours of training prior to being certified to conduct evaluations.

2. Department of Public Works

The City of Naperville Multi-Purpose Public Works Service Center (pictured right) received Leadership in Energy and Environmental Design (LEED) certification in 2009. LEED certification was achieved through the implementation of green building techniques including low-flow water features to conserve water and the installation of numerous skylights to welcome natural light. The construction process incorporated the use of recycled materials from the site, and the building's landscaping also features native plants to help control storm water run-off.



Work progresses on the fleet maintenance area of the new Public Works Service Center.



Mayor George A. Pradel takes a picture in the Multi-Purpose Public Works Service Center, the first municipal LEED certified building in Naperville.



1.3 LEADERSHIP & EDUCATION GOALS

	Leadership & Education Goals	P1: Leadership by Example	P2: Community Education Initiatives	P3: Incentives for Green Activities	Plan Objectives
1	Formalize an ongoing environmental education strategy.				
2	Continue to seek opportunities for environmental programming with NCTV and other public entities.				
3	Continue to update the GHG inventory bi-annually.				
4	Continue to promote the Apogee Home Energy Suite Program for community use.				
5	Seek opportunities to effectively use federal, state and private funding for programs that benefit efficiency, sustainability and best management practices.				
6	Seek opportunities to partner with other agencies in support of environmental goals.				
7	Implement Smart Grid marketing and public relations strategy.				
8	Formalize an organizational structure for implementation of the Environmental Sustainability Plan.				
9	Prepare Green Procurement guidelines which will establish procedures for economically effective and environmentally responsible expenditures.				
10	Pursue opportunities to incentivize green activities in city-funded efforts and grants.				
11	Establish a program for recognition of business and residential community members who implement and employ "green" practices.				
12	Evaluate the current Home Energy Savings Program.				
13	Investigate the need to hire an Environmental Sustainability Coordinator.				

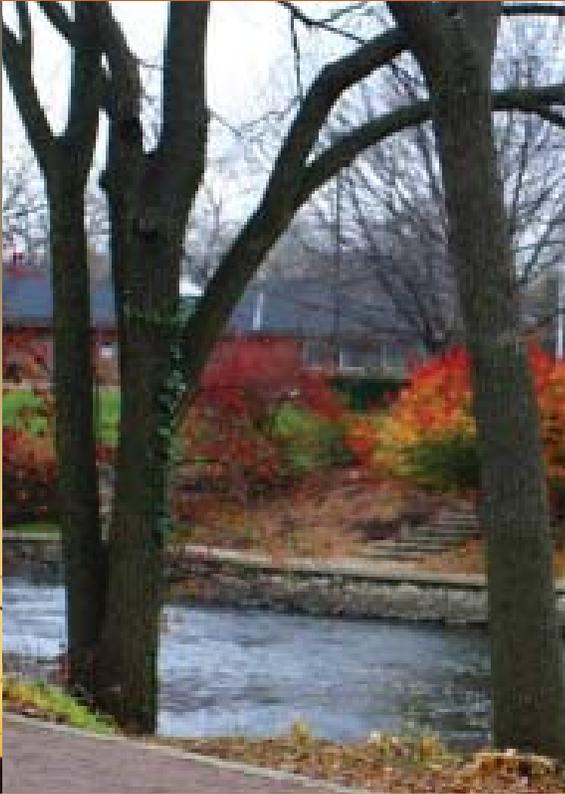
On-Going
 Short
 Medium
 Long

1.0 LEADERSHIP & EDUCATION





2.0 RESOURCES & ENERGY





2.1 OVERVIEW

Resources and energy represent a critical intersection between the City of Naperville as consumer and the City of Naperville as provider of resources and energy.

Like all businesses, the city consumes natural resources and energy. As a consumer the city strives to be a good citizen and a positive role model by seeking new ways to conserve resources in a fiscally responsible manner. Those resources include not only energy in its various forms (electricity and natural gas to mention a few) but also the consumption of fuel, oil, water and forestry products as well as all direct and indirect impacts through consumption. Most of these activities result in the triple benefit of (1) reducing our impact on the natural environment, (2) reducing costs to the taxpayer/ratepayer communities and (3) providing useful demonstrations of the possible.

As a provider of energy the city recognizes its enhanced responsibility as a market leader and its continuing obligation to facilitate informed decision making by consumers. As a provider of water, the city recognizes the finite availability of water and the need to support fiscally responsible conservation efforts.

EXISTING PROGRAMS

A review of Naperville's current practices in 2010 revealed that the city already has many practices in place to support environmental sustainability.

- Renewable Energy Program
- Greenhouse Gas Inventory
- Department fuel reduction goals
- Purchase of refurbished materials and recycled products, when feasible
- Replacement of aged pumping facilities with more efficient technologies
- Fleet Services vehicle downsize program
- Street light upgrade and replacement program
- Traffic signal LED energy savings program
- MIP roadway programs - reduction in use of new product and reuse of existing programs
- Construction project coordination
- Lighting standards review and upgrades
- Consolidated traffic control practices
- International Energy Conservation Code
- Water conservation ordinance
- Water distribution monitoring systems



2.2 POLICY PRIORITIES

1. Energy Conservation

Energy conservation efforts are primarily focused on reducing reliance on fossil fuels in the generation of electricity and providing for the least impactful use of these fuels.

2. Water Conservation and Quality

Water conservation efforts are primarily focused on the effective and efficient use and conservation of water resources. Water quality efforts are primarily focused on the environmental impact of the community's use of water through waste water treatment efforts and stormwater best management practices.

3. Resource Conservation

Resource conservation efforts encompass other impacts on the environment through consumption; these include reducing our impact on forests through responsible use of fossil fuel, paper, lumber, furniture and other forestry products and our efforts are primarily focused on our behavior as a consumer and community leader.

WHAT CAN YOU DO?

- Conduct a home energy evaluation. There are many on-line tools to help you identify areas for energy improvements in your home. The city's Home Energy Suite can help you identify areas for improvement (www.naperville.il.us/hec.aspx).
- Turn off equipment and computers when not in use.
- Check out the DuPage Water Commission's web site and explore opportunities to reduce water consumption (www.dpwc.org).
- Visit the Conservation Foundation's web site and discover ways to reduce the impact of water consumption (www.theconservationfoundation.org).
- Use programmable thermostats. Adjust the temperature up in the summer and down in the winter during hours when no one is home.

NAPERVILLE GREEN FACTS

LED Traffic Signals

In 2005 the City of Naperville initiated a program to replace existing traffic signal lamps with energy efficient LED lamps. There were 5,032 total lamps replaced. This replacement program helped to reduce the traffic signal energy demand from 648kW to 61 kW.

SPOTLIGHT on Resources & Energy

1. Energy Star

As a means to increase awareness regarding energy conservation, internally and externally, the City of Naperville has partnered with the U.S. Environmental Protection Agency's (EPA) Energy Star program, since April 2009. Naperville's partnership with Energy Star allows the city, and its electric utility to be on the forefront of new technologies, methods, and regulations relating to all aspects of energy conservation.



2. Fire Station #10

Fire Station #10 (pictured below) has opened with LED lighting and geothermal heating and air conditioning. This facility is a model of efficiency because it significantly reduces the city's need for electricity for lighting and needs for natural gas to provide heating. Fire Station #10 is a model of effectiveness because it accomplishes reduced environmental impact with a three year pay back for additional costs associated with construction and ongoing cost savings for the life of the building.



City of Naperville Fire Station #10: The city received two grants to fund the environmentally friendly features of the station.



Mayor A. George Pradel and the Naperville City Council hosted a ribbon cutting ceremony to celebrate the opening of the city's 10th fire station.



2.3 RESOURCES & ENERGY GOALS

	Resources & Energy Goals	P1: Energy Conservation	P2: Water Conservation & Quality	P3: Resource Conservation	Plan Objectives
14	Implement Smart Grid Initiative.				
15	Be a leader in the use of alternative fuel technology in our vehicle fleet.				
16	Continue water leak detection programs.				
17	Continue participation in the DuPage River Salt Creek Workgroup to address water quality.				
18	Investigate alternative energy technology in support of economic development (e.g. Green Fuels Depot).				
19	Evaluate Renewable Energy contract.				
20	Evaluate anti-idling policies.				
21	Investigate methods to more efficiently use natural resources in operating city facilities.				

On-Going
 Short
 Medium
 Long





3.0 TRANSPORTATION & MOBILITY





3.1 OVERVIEW

A sustainable transportation system is accessible, affordable, operates efficiently, and offers a variety of easily navigable transportation modes which supports a vibrant and successful community. A sustainable transportation system also provides a basic access need to individuals and communities.

Whether traveling by vehicle, mass transit, bike or on foot, an effective transportation system has the potential to reduce greenhouse gas emissions, minimize consumption of non-renewable resources and result in a more efficient use of the land. The City of Naperville recognizes the benefits of a multi-modal approach to its resident's health and the environment, and makes significant investments to its transportation system each year.

A sustainable transportation system not only has local benefits, but also affects the region and access to regional destinations. Overall, contributing to, creating, enhancing and maintaining an interconnected system enhances livability for Naperville residents and supports the economic viability that makes Naperville a major employment center and a destination for shopping, dining and entertainment.

EXISTING PROGRAMS

REGIONAL

- Access to Amtrak, Metra & PACE
- Free Rides for Seniors
- PACE Rideshare Service/Vanpool
- Park-n-Ride Facilities
- Ride DuPage Paratransit Service
- Transit Feeder Bus Services

LOCAL

- Commuter Connection E-Newsletter
- Comprehensive Transportation Plan
- Downtown Parking Guide
- Expansion of bicycle and pedestrian connectivity and mobility with development
- Fuel Conservation Program
- Hybrid Vehicle Fleet
- Installation of Landscape Medians
- Sidewalk Gap Installations
- Special Event Shuttles
- Traffic Signal Interconnect Programs

BICYCLE & PEDESTRIAN

- Pilot Accessible Pedestrian Signal
- Bicycle Friendly Community
- Bicycle Implementation Plan
- Bicycle Parking at Metra Stations, Downtown and in Community Parks
- Bicycle Parking Ordinance
- Bicycle and Pedestrian Safety Education (biking map & guide)
- Celebration of Bike Month
- Promotion of Bike to Metra
- Commuter Bicycle Lockers
- Safe Routes to School
- Route 59 Pedestrian Bridge



3.2 POLICY PRIORITIES

1. Regional Multi-Modal Transportation Network

Regional transportation includes the interconnectivity of local and regional systems for the purposes of providing maximum accessibility. A regional transportation system can encompass public transportation, local roadways, state highways and pedestrian and bike systems which all work together to provide accessibility to local and regional destinations. Coordination between government agencies and public education are essential components to providing Naperville residents with access to regional transportation and communicating the benefits that a regional transportation system provides.

2. Local Multi-Modal Transportation Network

Efficient transportation plays an important role in creating a desirable community and can have positive impacts on the environment. Over the years, Naperville has experienced tremendous population growth resulting in a mature community that will continue to evaluate opportunities for improving existing local transportation networks and raising public awareness on local transportation options available based on the implementation plan. To maintain and improve transportation mobility in the future, Naperville has approved a Comprehensive Transportation Plan that includes an implementation plan for the purposes of ensuring a comprehensive look at the city's existing and future transportation network.

3. Enhance Bicycle and Pedestrian Mobility

Over the years, Naperville has recognized the importance of providing its residents accessibility and mobility through bicycle and by walking. Alternative modes of travel, such as biking and walking, create an attractive atmosphere for Naperville residents and promotes the city as a destination for people around the region. Continued coordination of efforts to maintain and improve the city's bicycle and pedestrian network contributes to fewer vehicle trips, reduces greenhouse gas emissions and provides a healthy recreational alternative for travel.

WHAT CAN YOU DO?

- Combine trips and carpool to reduce air pollution.
- When feasible, replace vehicle trips with walking or biking,
- Try transit! Plan a trip using the bus and/or train (<http://www.naperville.il.us/transit.aspx>).

SPOTLIGHT ON: Transportation and Mobility

1. Parking Guidance Systems

In the spring of 2010, the City of Naperville will install two Parking Guidance Systems in downtown monitoring the number of vehicles entering and exiting parking structures. Information about the number of available parking spaces will be posted at the entrance of each deck, as well as on the city's web site to help visitors identify parking availability in advance of their trip to Downtown Naperville. The Parking Guidance Systems will also help to increase utilization of the parking decks and reduce unnecessary circulation and vehicle emissions within the downtown.

2. Park-n-Ride Facilities

The purpose of a park-n-ride is to increase and maximize access to local Metra stations by providing public transit services between the park-n-ride and the Metra stations. Furthermore, park-n-ride facilities have allowed commuters to take advantage of other means of transportation including walking, biking and carpooling which reduce the length of individual trips to commuter stations each day. Parking at all park-n-ride locations is free and the bus service, provided by PACE, to the station is direct, without stops during peak morning and evening commuter hours. Combined, all three park-n-ride facilities allow 231 individuals on average to take advantage of transit from Naperville to Chicago each day.



3. Naperville Named Bicycle Friendly Community

In 2009, the City of Naperville was awarded a bronze-level Bicycle Friendly Community designation by the League of American Bicyclists.

The Bicycle Friendly Community (BFC) Program rewards communities that actively encourage people to ride their bikes for transportation and recreation. In addition to having bicycle routes, BFCs also actively support bicycling through safety programs, education, law enforcement and community events. The BFC designation not only recognizes achievements by the City of Naperville but also provides important feedback for future bicycle projects.

BIKING IN NAPERVILLE

- 2 miles of on-street bicycle lanes
- 28 miles of bicycle routes
- 222 bicycle parking spaces at Naperville Metra stations
- 9 miles, which is the length of the completed DuPage River Trail



3.3 TRANSPORTATION & MOBILITY GOALS

Transportation & Mobility Goals		P1: Regional Multi-modal Transportation Network	P2: Local Multi-modal Transportation Network	P3: Enhance Bicycle & Pedestrian Mobility	Plan Objectives
22	Continue to coordinate with regional transportation agencies to maximize bicycle, pedestrian, vehicular, transit and rail connectivity and mobility.				
23	Promote alternate modes of transportation (i.e., transit, bicycle and pedestrian).				
24	Continue to expand park-n-ride facilities.				
25	Continue multi-modal transportation (i.e., vehicular, transit, bicycle and pedestrian activity) and "complete streets" when designing and improving the transportation network.				
26	Continue to identify roadway enhancements and opportunities to provide transportation demand management (TDM) options for key local destinations (trip reduction measures, carpooling).				
27	Support an update to the city's Bicycle Implementation Plan.				
28	Investigate technology and innovative programs to maximize use of the existing transportation network (e.g. Zipcar, bus trackers).				
29	Investigate funding for a local transit system with the recommendations from the Naperville Circulator Study.				

On-Going
 Short
 Medium
 Long





4.0 WASTE MANAGEMENT & RECYCLING





4.1 OVERVIEW

Waste management and recycling programs provide consumers a variety of options to dispose of their waste, while benefiting the environment in a number of ways.

Naperville began its curb side recycling program in 1986, making it the first community in Illinois to offer this service to its residents. The program has grown and improved from a biweekly service that required a large amount of sorting to a weekly service that requires virtually no preparation work at all.

While waste collection services have become streamlined, additional efforts can be made towards educating consumers about making better decisions to result in waste reduction and maximize recycling options. Similarly, there is room for improvement in the commercial sector in the area of recycling.

The City of Naperville also participates in recycling initiatives from office paper to waste oil from vehicle maintenance in Fleet Services.

EXISTING PROGRAMS

- Residential curb side recycling program
- Local recycling drop-off center
- Regional household hazardous waste (HHW) drop-off center
- Paper reduction through electronic communication and document management
- Annual office supply swap meet
- Recycle surplus computers
- Service contracts – collection of products used by internal operations
- In-house anti-freeze recycler
- Sale of damaged transformers for scrap value
- Promote recycling drives hosted by other agencies
- Promote alternative recycling services (electronics, paint, Christmas tree lights, etc.)
- Reuse and Recycling Extravaganza (electronics, books, bikes, scrap metal, etc.)
- Leaf collection program/agricultural fertilizer
- Naper Settlement reuse & preservation of original materials
- Recycling asphalt and concrete in construction projects

NAPERVILLE GREEN FACTS



Bridges Newsletter

The city's newsletter Bridges will be produced quarterly, instead of bimonthly. This change is possible with a multitude of electronic media opportunities such as the city's web site, social media networks and e-news subscriptions. By adjusting the city's newsletter from a bimonthly to a quarterly production, the city will save 4,410 pounds (2 and a quarter tons) of paper or 126,000 sheets of paper per year.



4.2 POLICY PRIORITIES

1. Focus on Waste Reduction

As the first “R” in Reduce, Reuse, Recycle; efforts towards waste reduction can make a substantial impact on the environment by conserving resources. Reducing overall waste results in less consumption up front, and also reduces the need to process refuse or recycle.

2. Improve Residential Recycling

With a residential household recycling service in place, educational efforts can be increased to maximize the efficiency and effectiveness of the recycling program and increase awareness for other recycling opportunities not currently available with the program (e.g. packing peanuts, grocery bags, electronics, etc.).

3. Improve Options for Commercial Consolidated Waste & Recycling

Commercial consolidated waste contracts can help businesses by potentially lowering contract rates. These programs also benefit the environment by reducing the number of vehicle trips required by waste haulers.

While some companies may be interested in participating in a recycling program, there currently are not many cost feasible options available in the marketplace. With increased market demand and forged partnerships, commercial recycling programs may become more of a reality.

WHAT CAN YOU DO?

- Go “Paperless”. Many companies are offering an electronic option for bills and newsletters. Change your preferences to receive only electronic communications to reduce paper.
- Reuse, Reuse, Reuse! From chic reusable shopping bags to old-fashioned coffee mugs, choose to reuse to conserve resources and minimize waste generated.
- Have a family recycling challenge. Review the types of materials that can be placed in your curb side recycling bin (http://naperville.il.us/dynamic_content.aspx?id=97) and challenge your family to become better recyclers. Recycling will become more fun and you’ll be surprised how much you weren’t recycling before.

RECYCLE!

Municipal Battery Collection

The City of Naperville has been collecting alkaline, lithium, ni-cad, sealed lead acid and nickel metal hydrate batteries used for city business. Since August 2009, over 95 pounds of batteries have been brought to the Household Hazardous Waste Facility for recycling.

SPOTLIGHT ON: Waste Management & Recycling

Recycling and waste management is a core service the city takes very seriously. The city has been a leader in recycling initiatives and is host to the regional household hazardous waste drop-off center.

1. Regional Household Hazardous Waste Drop-off Center

The City of Naperville is host to a regional household hazardous waste (HHW) facility (www.naperville.il.us/hhw.aspx), in partnership with the Illinois Environmental Protection Agency (IEPA), the City of Aurora, Kane County and Will County. This strategic facility allows residents to safely dispose of their household hazardous wastes such as automotive fluids, fertilizers and prescription medications. Proper disposal prevents pollution that could endanger human health and the environment. The Illinois EPA estimates that the average home can accumulate as much as 100 pounds of household hazardous waste in their homes and garages. Naperville is proud to be host of this important collection facility, which provides area residents a responsible disposal choice for these harmful products.

2. Local Recycling Drop-Off Center

In 1971, the city established a recycling drop-off center for residents and businesses, well before curb side residential recycling programs were developed in the 1980's. This service is free and provides an important service to those without curb side recycling, including area businesses. The drop-off center also accepts scrap metal for residents and businesses interested in recycling metals that are not accepted in their regular services (www.naperville.il.us/recyclecenter.aspx).

3. Reuse and Recycling Extravaganza

The city partners in hosting the Reuse and Recycling Extravaganza, which is a one-day recycling event to help divert items from the waste stream. In 2009, the following items were collected:

- 103,069 pounds of electronics to be converted to metals, plastic and glass for re-use.
- Over 10,130 pounds of books were collected during the event. 5,135 pounds of books were taken by participants of the event, leaving 4,995 pounds of material recycled. In addition, over 125 pounds of cardboard was recycled at the event.
- More than eight tons of scrap metal was collected.
- SCARCE collected more than 86 ink jet cartridges.
- Alcatel-Lucent collected more than 100 cell phones
- The Naperville VFW collected 100 flags during the event.
- The Naperville Noon Lions Club collected 300 pairs of glasses, 10 pounds of keys, and 15 pairs of hearing aids.
- More than 97 bikes were collected by Blackstone Bicycle Works.



4.3 WASTE MANAGEMENT & RECYCLING GOALS

Waste Management & Recycling Goals		P1: Focus on Waste Reduction	P2: Improve Residential Recycling	P3: Improve Options for Commercial Consolidated Waste & Recycling	Plan Objectives
30	Continue to use electronic media resources to reduce the amount of paper used by the City of Naperville.				
31	Identify opportunities to increase residential recycling participation.				
32	Continue to promote household hazardous waste program.				
33	Educate consumers on how to make better purchases in order to reduce waste.				
34	Support commercial consolidated waste partnerships, where feasible.				
35	Work with other agencies to develop cost effective options for waste hauling and recycling.				
36	Develop a policy for recycling at special events.				
37	Investigate the feasibility of developing a composting program.				
38	Determine the feasibility of developing a commercial recycling program.				
39	Develop a construction waste program or guidelines.				

On-Going	
Short	
Medium	
Long	





5.0 SUSTAINABLE DEVELOPMENT & INFRASTRUCTURE





5.1 OVERVIEW

Sustainable development encourages economic growth and development while conserving resources in the long-term interest of the individual, community and ecosystem. The notion of sustainable development, and by extension the natural and built infrastructure that supports that development, is rooted in harmony among the environment and its resources; society; and the economy. Key elements of sustainable development include:

- Concentrate development and mix land uses;
- Protect land and ecosystems;
- Use natural resources wisely;

Given the interrelated nature of environmental, economic and social interests, sustainability must be woven through all levels of the government and economy. The City of Naperville possesses the opportunity to implement policies and practices that further the interests of future generations by encouraging wise use of resources while maintaining the economic vitality of the community.

Sustainable development practices provide a means to foster environmental awareness, reduce the environmental impact of city and resident activities, and exhibit leadership. Many of the most sustainable choices are also fiscally responsible. This helps to explain why Naperville is already “ahead of the curve” in many of its current practices and policies, especially those related to public infrastructure.

EXISTING PROGRAMS

A review of Naperville’s current practices in 2010 revealed that the city already has many practices in place to support environmental sustainability.

SUSTAINABLE SITES:

- New LEED-certified Public Works and Fire Station 10 buildings
- Erosion and sedimentation control required for construction projects
- Required stormwater best management practices
- Shared use of under utilized parking facilities for commuter park-n-rides
- Tree preservation requirements and landscaping standards established through the Landscaping Ordinance
- Guidelines for sustainability in Building Design Guidelines and Historic Building Resource Manual
- Naperville Park Land Dedication Ordinance
- Outdoor common area requirements and incentives for best practices in Planned Unit Developments
- Vehicular cross-access and connectivity for commercial sites

SUSTAINABLE INFRASTRUCTURE:

- Sanitary sewer lining program
- Storm sewer maintenance program
- Flood and stormwater improvements
- Annual parkway tree planting
- Annual residential tree sale program
- Arterial landscape median installation



5.2 POLICY PRIORITIES

1. Reduce Barriers to Sustainable Development

Sustainable development includes new construction of “green” buildings; implementation of best management practices to reduce stormwater runoff; improve water quality or conserve energy; and reuse or adaptation of existing facilities to serve future needs. The city can reduce barriers to sustainable development by providing education and technical support where appropriate and identifying obstacles to implementing sustainable practices that are embedded in its policies or regulations.

2. Encourage Sustainable Sites

The sustainability of sites is inclusive of the physical arrangement of buildings and structures, conservation of natural features such as open space and trees; conveyance of stormwater and other runoff; energy efficiency, and relationship to surrounding uses and facilities. Natural landscape choices that require less water and

maintenance can result in resource and monetary savings. Sustainable sites should provide economic and environmental efficiencies for the developer, user and community, as measured through reduced consumption of resources. The city can encourage sustainable sites through property owner education, and appropriate regulatory actions.

3. Sustainable Infrastructure

Sustainable infrastructure practices focus on long-term durability and resource conservation by encouraging advance planning and modeling; long-term economic analysis (e.g., life-cycle analysis); material selection for quality and energy conservation; and maintenance. Efficient connectivity of people and sites to infrastructure is another key component of sustainable infrastructure.

WHAT CAN YOU DO?

- Plant a tree! Trees help shade your home to reduce air conditioning costs, remove carbon dioxide from the air and produce oxygen.
- Use native landscaping to provide habitat and reduce water runoff.



Natural landscaping on the Lucent Technologies property in Naperville. Photo Credit: NIPC, Natural Landscaping for Public Officials: a Source Book, 1997

SPOTLIGHT ON: Integrating Sustainable Development Principles through Planning

1. Park Land Dedication Ordinance

The park land dedication ordinance (Section 7-3-5 of the Municipal Code) was adopted in 1972 to dedicate land for park and recreation purposes as a condition of subdivision plat approval to serve the immediate and future needs of residents. Since its inception, the ordinance has resulted in the dedication of 1,048 acres for public open space, which includes active recreational fields and passive natural areas. Open spaces provide places for community gatherings and wildlife habitat. The Naperville Park District has utilized land and donations through the Park Land Dedication Ordinance to maintain a park space to maintain a ratio of 17 acres per 1,000 residents.

2. Landscaping Standards

The City of Naperville has established standards for parkway tree, site perimeter and parking lot landscaping, as well as foundation plantings. Site landscaping not only helps to beautify the community and define its character, but it also provides environmental benefits such as filtration of air pollutants, alleviation of the “urban heat island effect” through increased shade canopy, and reduced stormwater runoff. Appropriate placement of shade trees can provide sun and wind shelter to improve seasonal energy efficiency. Tree preservation standards are incorporated into the Landscape Ordinance (Section 5-10 of the Municipal Code) to encourage conservation of existing, quality tree specimens on commercial sites and in the community’s right-of-way.

3. Bicycle Parking

The Comprehensive Transportation Plan, approved in 2002, recommended development of bicycle parking requirements as a means to support the Bicycle Plan and facilitate bicycling as a viable transportation alternative. The Bicycle Parking Ordinance, passed in 2004, sets a minimum threshold of bicycle parking for commercial and institutional sites and provides guidance for placement, design and installation of bicycle facilities. In 2009, the city completed installation of new bicycle shelters at the Naperville and Route 59 Metra Stations to provide additional capacity for commuters.

4. Shared Use of Off-Street Parking

Parking is one of the largest uses of land in suburban areas, and often one of the most under utilized. In light of increasing demand for land resources, shared parking presents an opportunity to facilitate efficient use of parking facilities to accommodate multiple tenants. Benefits of shared parking include reduced development and maintenance costs, improved pedestrian access between sites, and reduced impervious surface for each land use. Naperville’s Municipal Code allows shared parking facilities for non-residential uses on abutting and nearby properties. Further, shared parking is encouraged through site development and redevelopment plans, and facilitated by cross-access and continuous pedestrian facilities to connect adjacent non-residential sites.



5.3 SUSTAINABLE DEVELOPMENT & INFRASTRUCTURE

Sustainable Development & Infrastructure Goals	P1:	P2:	P3:	Plan Objectives
	Reduce Barriers to Sustainable Development	Encourage Sustainable Sites	Sustainable Infrastructure	
40 Explore opportunities to encourage site and subdivision design that retains or restores key natural features.				
41 Support residential tree planting, maintenance and preservation strategies.				
42 Identify existing Code impediments to implementation of best practices for building, energy or site improvements.				
43 Offer technical support to residents and developers related to best management practices, sustainable building and sites, and energy efficiency in new construction and retrofits.				
44 Provide neighborhood and property owner education about detention pond maintenance and best management practices.				
45 Provide community education about the benefits and maintenance of native and natural landscaping.				
46 Evaluate alternate paving materials (e.g., concrete, permeable pavers) to reduce water runoff, improve runoff quality, and reduce the "urban heat island" effect.				
47 Evaluate current technology and performance standards to reduce light pollution				
48 Investigate ways to incentivize green development and retrofit projects.				
49 Evaluate opportunities to incorporate sustainable materials and practices into city engineering and infrastructure projects.				

On-Going
 Short
 Medium
 Long



6.0 WORK PLAN



6.1 ENVIRONMENTAL SUSTAINABILITY WORK PLAN

The attached draft work plan document has been developed in conjunction with the Environmental Sustainability Plan.

COLUMN HEADER LEGEND

- ¹ **RANGE** On-Going: Practices or Programs requiring on-going participation
 Short: 0-1 year - Council directive for FY 11
 Medium: 1-5 years - Requires further evaluation prior to implementation
 Long: 5+ years - Concept is supported, no action at this time
- ² **LINKED TO EXTERNAL FUNDING** Project, or components associated with an external funding source
- ³ **SUPPORTING CATEGORIES** Cross-references related Environmental Sustainability Plan categories
 1- Leadership & Education
 2- Resources & Energy
 3- Transportation & Mobility
 4- Waste Management & Recycling
 5- Sustainable Development & Infrastructure
- ⁴ **SUPPORTS GHGI REC's** Cross-references recommendations from Green House Gas Emissions Inventory, presented to the City Council on June, 2, 2009

	PLAN CATEGORY	WORK PLAN RECOMMENDATION	STATUS	RANGE ¹	CITY FUNDING SOURCE	LINKED TO EXTERNAL FUNDING ²	SUPPORTING CATEGORIES ³	SUPPORTS GHGI REC'S ⁴
1	Leadership & Education	Formalize an ongoing environmental education strategy.	Existing	On-Going	Staff		ALL	2B, 6B
2	Leadership & Education	Continue to seek opportunities for environmental programming with NCTV and other public entities.	Existing	On-Going	Staff	X	ALL	2B, 6B
3	Leadership & Education	Continue to update the GHG inventory bi-annually.	Previously Approved	On-Going	Operating Budget		ALL	YES
4	Leadership & Education	Continue to promote the Apogee Home Energy Suite Program for community use.	Previously Approved	On-Going	Operating Budget		2	1B
5	Leadership & Education	Seek opportunities to effectively use federal, state and private funding for programs that benefit efficiency, sustainability and best management practices.	New	On-Going	Staff		ALL	5B
6	Leadership & Education	Seek opportunities to partner with other agencies in support of environmental goals.	New	On-Going	Staff		ALL	
7	Leadership & Education	Implement Smart Grid marketing and public relations strategy.	Previously Approved	Short	CIP	X	2, 5	
8	Leadership & Education	Formalize an organizational structure for implementation of the Environmental Sustainability Plan.	New	Short	Staff		ALL	
9	Leadership & Education	Prepare Green Procurement guidelines which will establish procedures for economically effective and environmentally responsible expenditures.	New	Short	Staff		ALL	7A
10	Leadership & Education	Pursue opportunities to incentivize green activities in city-funded efforts and grants.	New	Medium	Staff		ALL	5B
11	Leadership & Education	Establish a program for recognition of business and residential community members who implement and employ "green" practices.	New	Medium	Staff		ALL	
12	Leadership & Education	Evaluate the current Home Energy Savings Program.	New	Medium	Operating Budget	X	2	1B
13	Leadership & Education	Investigate the need to hire an Environmental Sustainability Coordinator.	New	Long	Operating Budget		ALL	4A
14	Resources & Energy	Implement Smart Grid Initiative.	Previously Approved	On-Going	CIP	X	1, 5	8A
15	Resources & Energy	Be a leader in the use of alternative fuel technology in our vehicle fleet.	Previously Approved	On-Going	Operating Budget		1, 3	
16	Resources & Energy	Continue water leak detection programs.	Previously Approved	On-Going	Operating Budget		1, 5	

	PLAN CATEGORY	WORK PLAN RECOMMENDATION	STATUS	RANGE ¹	CITY FUNDING SOURCE	LINKED TO EXTERNAL FUNDING ²	SUPPORTING CATEGORIES ³	SUPPORTS GHGI REC's ⁴
17	Resources & Energy	Continue participation in the DuPage River Salt Creek Workgroup to address water quality.	Previously Approved	On-Going	Operating Budget		1, 5	
18	Resources & Energy	Investigate alternative energy technology in support of economic development (e.g. Green Fuels Depot).	New	On-Going	Staff	X	1, 5	
19	Resources & Energy	Evaluate Renewable Energy contract.	Existing	Short	Staff		1, 5	
20	Resources & Energy	Evaluate anti-idling policies.	New	Short	Staff		1, 3	
21	Resources & Energy	Investigate methods to more efficiently use natural resources in operating city facilities.	New	Medium	Staff		1, 5	1A, 5A, 6A, 9A
22	Transportation & Mobility	Continue to coordinate with regional transportation agencies to maximize bicycle, pedestrian, vehicular, transit and rail connectivity and mobility.	Existing	On-Going	Staff		1, 2, 5	9B
23	Transportation & Mobility	Promote alternate modes of transportation (i.e., transit, bicycle and pedestrian).	Existing	On-Going	Staff		1, 2, 5	9B
24	Transportation & Mobility	Continue to expand park-n-ride facilities.	Existing	On-Going	Operating Budget	X	1	9B
25	Transportation & Mobility	Continue multi-modal transportation (i.e., vehicular, transit, bicycle and pedestrian activity) and "complete streets" when designing and improving the transportation network.	Existing	On-Going	CIP		1, 2, 5	9B
26	Transportation & Mobility	Continue to identify roadway enhancements and opportunities to provide transportation demand management (TDM) options for key local destinations (trip reduction measures, carpooling).	Previously Approved	On-Going	Staff, Op. Budget or CIP		1, 2, 5	9B
27	Transportation & Mobility	Support an update to the city's Bicycle Implementation Plan.	Existing	Medium	Staff		1, 2, 5	9B
28	Transportation & Mobility	Investigate technology and innovative programs to maximize use of the existing transportation network (e.g. Zipcar, bus trackers).	New	Medium	Operating Budget		1	9B
29	Transportation & Mobility	Investigate funding for a local transit system with the recommendations from the Naperville Circulator Study.	Previously Approved	Long	Operating Budget		1, 2, 5	9B
30	Waste Management & Recycling	Continue to use electronic media resources to reduce the amount of paper used by the City of Naperville.	Existing	On-Going	Staff		2	

PLAN CATEGORY	WORK PLAN RECOMMENDATION	STATUS	RANGE ¹	CITY FUNDING SOURCE	LINKED TO EXTERNAL FUNDING ²	SUPPORTING CATEGORIES ³	SUPPORTS GHGI REC'S ⁴
31	Waste Management & Recycling Identify opportunities to increase residential recycling participation.	Existing	On-Going	Staff		1	
32	Waste Management & Recycling Continue to promote household hazardous waste program.	Existing	On-Going	Staff	X	1, 5	
33	Waste Management & Recycling Educate consumers on how to make better purchases in order to reduce waste.	New	Medium	Staff		1, 2	
34	Waste Management & Recycling Support commercial consolidated waste partnerships, where feasible.	New	Medium	Staff		1, 2	8B
35	Waste Management & Recycling Work with other agencies to develop cost effective options for waste hauling and recycling.	New	Medium	Staff		1	10A, 3B, 8B
36	Waste Management & Recycling Develop a policy for recycling at special events.	New	Medium	Staff		1	3B
37	Waste Management & Recycling Investigate the feasibility of developing a composting program.	New	Long	Staff		1	
38	Waste Management & Recycling Determine the feasibility of developing a commercial recycling program.	New	Long	Staff		1	3B
39	Waste Management & Recycling Develop a construction waste program or guidelines.	New	Long	Staff		1	10A
40	Sustainable Development & Infrastructure Explore opportunities to encourage site and subdivision design that retains or restores key natural features.	Existing	On-Going	Staff		1, 2	
41	Sustainable Development & Infrastructure Support residential tree planting, maintenance and preservation strategies.	Existing	On-Going	Staff		1, 2	
42	Sustainable Development & Infrastructure Identify existing Code impediments to implementation of best practices for building, energy or site improvements.	New	Medium	Staff		1, 2	7B

	PLAN CATEGORY	WORK PLAN RECOMMENDATION	STATUS	RANGE ¹	CITY FUNDING SOURCE	LINKED TO EXTERNAL FUNDING ²	SUPPORTING CATEGORIES ³	SUPPORTS GHGI REC'S ⁴
43	Sustainable Development & Infrastructure	Offer technical support to residents and developers related to best management practices, sustainable building and sites, and energy efficiency in new construction and retrofits.	New	Medium	Staff		ALL	7B
44	Sustainable Development & Infrastructure	Provide neighborhood and property owner education about detention pond maintenance and best management practices.	New	Medium	Staff		1, 2	
45	Sustainable Development & Infrastructure	Provide community education about the benefits and maintenance of native and natural landscaping.	New	Medium	Staff		1, 2	
46	Sustainable Development & Infrastructure	Evaluate alternate paving materials (e.g., concrete, permeable pavers) to reduce water runoff, improve runoff quality, and reduce the "urban heat island" effect.	New	Medium	Staff		1, 2	
47	Sustainable Development & Infrastructure	Evaluate current technology and performance standards to reduce light pollution.	New	Long	Staff		1, 2	2A, 2B, 6A, 7B
48	Sustainable Development & Infrastructure	Investigate ways to incentivize green development and retrofit projects.	New	Long	Staff or Op. Budget		1, 2	5B, 7B
49	Sustainable Development & Infrastructure	Evaluate opportunities to incorporate sustainable materials and practices into city engineering and infrastructure projects.	New	Long	Staff		1, 2,4	