ITEM_____

VILLAGE OF DOWNERS GROVE
REPORT FOR THE VILLAGE COUNCIL WORKSHOP
AUGUST 25, 2009 AGENDA

SUBJECT:	TYPE:	SUBMITTED BY:
Sustainability Best Practices Annual Report for 2009	Resolution Ordinance Motion ✓ Discussion Only	David Fieldman Village Manager

SYNOPSIS
Staff has prepared the Sustainability Best Practices Annual Report for 2009 for the Village Council's review and discussion.

STRATEGIC PLAN ALIGNMENT
The Five Year Plan and Goals for 2008 – 2013 identified *Exceptional Municipal Organization.* An associated objective is *Be "Green" Mindful in Village Operations.* The Policy Agenda for 2008 – 2009 identifies the *Research, Study and Evaluation of a "Green" Energy Policy and Plan* as a High Priority.

FISCAL IMPACT
N/A.

RECOMMENDATION
Discussion only during the August 25, 2009 Manager's and Director's Report.

BACKGROUND
During the 2008 Strategic Planning sessions, the Village Council directed staff to research, study and evaluate the Village's current best practices pertaining to "green" operations and environmental sustainability. In an effort to accomplish this Strategic Plan objective, staff, with input from the Environmental Concerns Commission (ECC), has drafted the Sustainability Best Practices Report for 2009. This report assesses the Village's current "green" practices and provides a potential roadmap for taking steps toward achieving environmental sustainability in Village operations in future years. In developing the Sustainability Best Practices Annual Report, staff sought to accomplish the following goals:

- Complete an inventory of current Village operational practices
- Identify Village sustainability best practices
- Make recommendations for implementation of sustainability best practices
- Implement selected sustainability measures for daily operations

Throughout the course of the evaluative process, staff identified seven functional areas as primary sustainability categories which would be addressed in the report. Each functional area represents a chapter of the Sustainability Best Practices Annual Report. The list of topics which were individually addressed within the report is listed below:

- Transportation
- Energy
- Waste and Recycling
- Urban Forest
- Land Use and Development
- Water
- Community Outreach

Staff researched each of the functional areas to be addressed in the Sustainability Best Practices Annual Report. During the research process, staff sought to answer the following questions for each of the sustainability topics listed above:

- What is it?
- Why is it important?
- How do we measure our progress?
- What are the current Village Best Practices?
- What are the Village's recent achievements?
- How can residents reduce their environmental impact related to this item?
- What are the Village's goals and timeframes to relative to this topic?

Staff presented each of the Sustainability Best Practices Report chapters, in addition to the document format and category list, to the ECC for review and comment. The ECC review schedule for the Sustainability Best Practices Report has been summarized in the table below:

Sustainability Best Practices Annual Report - 2009: ECC Presentation Schedule	
Meeting Date	**Agenda Item**
1/29/2009	Review of Environmental Inventory
2/12/2009	Review of Village Environmental Sustainability Program
3/12/2009	Review of Sustainability Report Format; and Review of Sustainability Report Topic List
4/16/2009	Review of Sustainability Report Topic - Transportation; and Review of Sustainability Report Topic - Energy
5/21/2009	Review of Sustainability Report Topic - Waste and Recycling; and Review of Sustainability Report Topic - Urban Forest
6/11/2009	Review of Sustainability Report Topic - Planning and Land Use; and Review of Sustainability Report Topic - Water; and Review of Sustainability Report Topic - Community Outreach

During the ECC review process, the Commission provided staff with a list of recommendations for the Sustainability Best Practices Report. Staff sought to incorporate as many of the ECC's recommendations into the proposed report as was feasible during the development process. The major ECC recommendations which were included in the Sustainability Best Practices Annual Report for 2009 were as follows:

- The inclusion of a "Goals and Timelines" section for each of the sustainability topics
- Making the Sustainability Best Practices Report for 2009 available to the public via the Village website
- Including "Transportation" as a separate chapter in the Sustainability Best Practices Report
- Including "Green House Gas Emissions" and "Urban Heat Island" as transportation-related sustainability issues
- Indicate that buildings are the largest contributors to green house gas emissions
- Incorporate any Village fleet sustainability issues into the Transportation chapter
- Quantify the environmental impact of a single tree in the Sustainability Report
- Include the Emerald Ash Borer as a predatory insect population threatening the Village's urban forest in addition to the Gypsy Moth
- Include a statement indicating that residents can voluntarily purchase and plant trees in the parkway upon inspection and approval by Village staff
- Discuss history of the Village's Forestry Program and how it has impacted the number of parkway trees planted in the Village since its inception

- Clarify sustainability items that were implemented by staff in Village operations and those that were implemented in the community
- Include a chart tracking the tonnage of solid waste being disposed in landfills for previous years
- Include a statement that the Village will consider installing low-flow / dual flush toilets during construction of Village facilities in the future
- Include a statement that the Village will consider issuing citizen surveys to identify resident water usage practices (kitchen use, bathroom use, landscaping, etc.)
- Include a statement that staff will research feasibility and cost/benefit assessment for rainwater collection and rain barrel usage, along with gray water usage at Village facilities.
- Include the purchasing of front-loader washing machines as a water-reducing suggestion for residents in the water report

Staff sought to present the final report to the ECC for an official recommendation during the Commission's August meeting. However, due to lack of a quorum, the ECC could not meet in August to formally recommend forwarding the report to the Village Council for consideration. Staff believes that the final report captures the input provided by the ECC and is forwarding the item to the Village Council for review in order to adhere to the schedule outlined in the 2008-2009 Strategic Plan Action Agenda.

ATTACHMENTS

Sustainability Best Practices Annual Report for 2009

Annual Report 2009

Village of Downers Grove

Sustainability Best Practices

Village of DOWNERS GROVE FOUNDED IN 1832 ®

www.downers.us

Cover pictures: Grounds of Sara Lee

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Highland Avenue & Barneswood Drive

Introduction

The Village's Strategic Plan establishes *Being "Green" Mindful in Village Operations* as a high priority within the Five Year Plan and Goals for 2008 – 2013. In response to this Strategic Plan objective, Village Staff, with input from the Environmental Concerns Commission, has developed the Sustainability Best Practices Report for 2009.

Belmont Prairie

The Sustainability Best Practices Report for 2009 (Sustainability Report) assesses the Village's current "green" practices and provides a roadmap for achieving environmental sustainability throughout the Village in future years.

Environmentally sustainable best practices were identified in the following operational categories with each represented as a chapter within the Sustainability Report:

- Transportation
- Energy
- Waste Diversion
- Urban Forest
- Land Use and Development
- Water
- Community Outreach

A number of sustainability measures have been put into practice with an eye towards being environmentally responsible in the daily operations of the Village of Downers Grove. The Recycling Extravaganza, the Water Conservation Ordinance and the Anti-idling Policy for Police Department vehicles are only a small sample of the "green" activities and initiatives which the Village has already implemented. These and other sustainability items will be discussed in greater detail within this report.

The Sustainability Report is also brimming with statistical data regarding Village-wide solid waste collection, the Urban Forestry Program and the increasing use of alternative fuel vehicles within the Village Fleet. Visit the Village of Downers Grove website at www.downers.us to find out more about these as well as other environmentally related issues.

Main Street Train Station

Transportation

Transportation

WHAT IS IT?

Transportation is defined as the movement of people and goods from one location to another. Transport may be accomplished through various means including ground, air and water. Transport is a major use of energy and burns most of the world's petroleum. As a result, the transportation sector has become increasingly linked to a variety of environmental issues such as:

- Air Quality
- Fossil Fuel Demands
- Traffic Congestion
- Greenhouse Gas Emissions
- Urban Heat Island

WHY IS IT IMPORTANT?

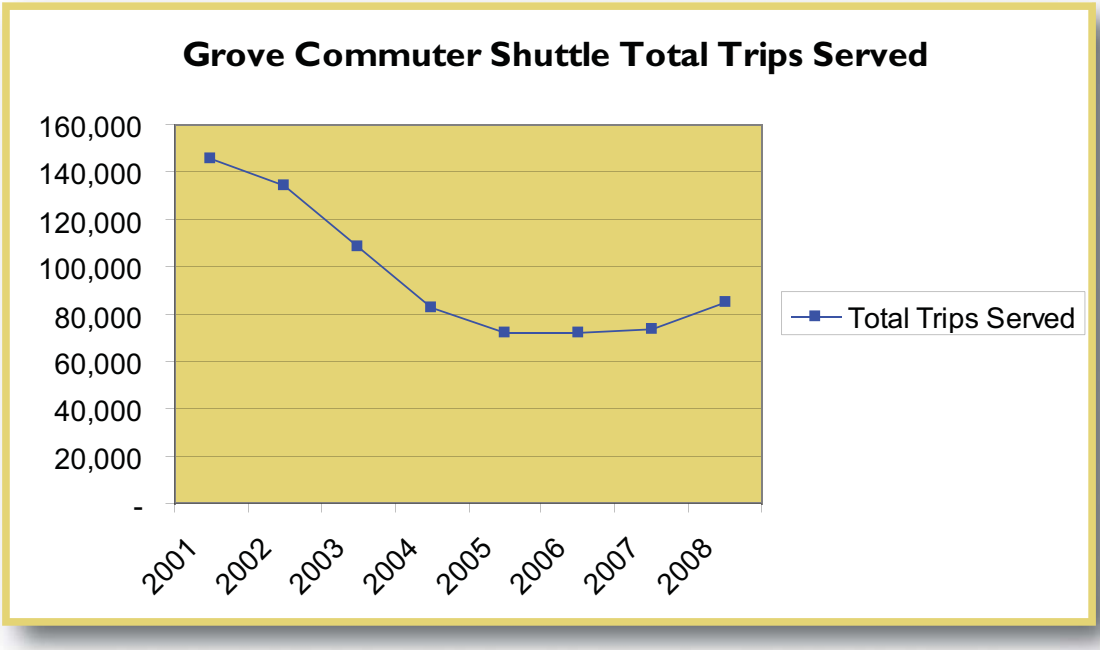
The Village of Downers Grove currently offers a variety of transportation options. Many of these transportation-related items in the Village may have a direct or indirect impact on the environment. Some of the topics to be addressed include the following:

- The Grove Commuter Shuttle System
- The Village Bikeway Plan
- Metra Rail
- The Safe Routes to School Travel Plan
- Village Fleet

HOW DO WE MEASURE OUR PROGRESS?

There are a number of ways which the Village can measure its progress in terms of transportation including the following:

- Tracking the number of trips and riders utilizing the Grove Commuter Shuttle system. The shuttle provided a total of 84,864 trips in 2008 (see chart below).
- The number of commuter parking spaces utilized by Metra riders on a daily basis in the Village. During the first quarter of 2009, the Village sold 571 monthly commuter permits for downtown parking lots which is equivalent to 96% of total capacity for these lots. Additionally, the Village sold 1,286 monthly commuter permits for outlying parking lots which is equivalent to 113% of capacity for these lots.
- The percentage of Village vehicles and equipment utilizing alternative fuels. Of the Village's current vehicle and equipment inventory, approximately 62% utilize alternative fuels.



CURRENT VILLAGE BEST PRACTICES:

Some best practices established by the Village with regard to transportation include the following:

- Staff currently operates a public transportation system comprised of four Grove Commuter Shuttle routes
- Acceleration of engineering design work associated with the Bikeway Connections and Eastern Corridor Bikeway Program in an effort to utilize grant funding in 2009.
- Staff has begun filling vehicle tires with nitrogen to improve fuel efficiency
- When possible, the Village purchases alternative fuel or hybrid vehicles
- In September 2008, the Fire Department began operating a Jump Company with three Firefighters. Under this system, three Firefighters jump into the Ladder Truck or the Squad depending upon the type of emergency service needed. Prior Fire Department operations required two Firefighters to be assigned to both the Ladder Truck and the Squad when responding to emergencies. Utilizing this operational change for certain calls will result in one less vehicle in use, resulting in fuel savings without causing a reduction in service.
- The Village fleet includes multiple alternative fuel vehicles and equipment including: 2 Ford Escape Hybrids; 80 vehicles and pieces of equipment fueled with B20 Bio Diesel; 17 compressed natural gas vehicles relying on 100% alternative-fuel use; 7 pieces of equipment utilizing solar power and 22 vehicles relying on 100% E-85 fuel use.

2007 *Honda Civic GX Compressed Natural Gas*

- Bicycle parking is available at each of the three Metra train stations. Presently, there are 85 spaces available at the Main Street Station, 34 spaces available at Fairview and 24 spaces available at Belmont.

RECENT ACHIEVEMENTS

Recent achievements which the Village has accomplished pertaining to transportation include:

- Staff placed three new bike racks in the down town area in 2008. The new bike racks are located at the northeast corner of Main and Warren; the southeast corner of Main and Warren; and the east edge of Parking Lot B, north of Burlington and east of Main. Additionally, bicycle parking loops have been installed in the downtown parking deck.
- The Police Department has implemented an anti-idling policy for police vehicles in an effort to conserve fuel and reduce the amount of carbon dioxide emitted into the atmosphere.
- The 2000 Bikeway Plan calls for construction of 29.7 miles of on-street bike paths and 11.1 miles of off-street bike paths. In 2008, the Village began construction of the Central Corridor Bikeway which includes 14.3 miles of on-street bikeways.
- The FY09 budget calls for the reduction of the Village fleet by a total of eleven vehicles (from 209 to 198 vehicles). At present, Village staff has reduced the fleet by six vehicles through operational efficiencies. Public Works, Community Development and Police Department have all seen a reduction in their vehicle count. Fewer vehicles in the Village fleet will lead to a reduction in carbon emissions and fossil fuel usage.
- The Village currently owns and operates an alternative fueling station which is located at the Public Works facility.
- The Village purchased six Compressed Natural Gas (CNG) vehicles in 2008, which according to the USEPA are the cleanest burning internal combustion vehicles in the world.
- Purchasing of the deicing agent, Magic Minus Zero. Magic Minus Zero is made of organic, agriculture-based ingredients and then used to pre-treat rock salt and applied to snow and ice covered roadways. This patented deicing product is considered environmentally gentle because it is biodegradable and contributes to a 30%-50% reduction in salt use as well as a 70% reduction in corrosion to roadway surfaces, equipment and vehicles.
- A designated bicycle parking area was utilized for the 2009 Heritage Festival.

"You can make a difference"

Here are some common transportation practices which residents can engage in that may lessen their impact on the environment:

- Avoid driving when possible – walk, bike, car pool or use public transportation instead
- At work, try teleconferencing or telecommuting to avoid unnecessary travel
- Consider purchasing hybrid or alternative fuel vehicles
- Consider fuel efficiency in vehicle purchases
- Consider purchasing bio-diesel fuel for diesel powered vehicles

GOALS AND TIMELINE:

Below are the next steps which the Village plans on undertaking with regard to transportation:

- Continue to encourage transit oriented development around train stations. (Short-Term, On-Going)
- Continue to publicize and encourage ridership regarding the Grove Commuter Shuttle. (Short-Term, On-Going)
- Obtain a maximum of $250,000 in federal grant funding for infrastructure improvements through the Safe Routes to School Travel Plan. (Short-Term)
- Continue with design and construction in accordance with the 2000 Bikeway Plan. Associated projects include design and construction of the Eastern Corridor Bikeway Program which comprises 3.3 miles of on-street bikeways, 0.4 miles of off-street bikeways and two traffic signals and the Bikeway Connections project which includes 4.2 miles of on-street bikeways and 0.5 miles of off-street bikeways. (Short-Term)
- Formalize the Village vehicle anti-idling policy. (Short-Term)
- Install idling units on diesel vehicles pending Green Fleet Clean Diesel Program IL EPA grant approval. (Medium-Term)
- Evaluate usage of Village bikeways. (Long-Term)

Energy

WHAT IS IT?

This category is comprised of two components: Energy Conservation and Renewable Energy. Energy conservation is defined as using less energy in the operation of facilities. Renewable energy comes from resources that are regenerative or cannot be depleted.

WHY IS IT IMPORTANT?

- Energy conservation reduces electric and gas consumption, reducing both costs and carbon footprint
- Using renewable energy reduces the use of non-renewable fossil fuels that contribute to pollution including greenhouse gases
- Buildings are responsible for almost half (48%) of all greenhouse gas emissions annually and have the largest combined carbon footprint

HOW DO WE MEASURE OUR PROGRESS?

- Reducing peak hour energy usage in Village facilities. Baseline and peak energy usage will be evaluated during the ComEd energy audit.

CURRENT VILLAGE BEST PRACTICES:

- All Village controlled traffic signals operate on LED lighting. Of the 67 traffic signals located within Village boundaries, 19 are Village maintained and operated.
- Certain Village facilities (Public Works, Fire Station 2, parts of Police Department) have T-8 lighting, rather than T-12 lighting. T-12 and T-8 refer to diameters of lamp tubes. Thus a T-12 lamp has a diameter of twelve eighths of an inch, or 1-1/2 inches. Typically, a narrower lamp is more energy-efficient. Since the T-8 is eight eighths of an inch, or one inch in diameter, it is a more energy-efficient lighting mechanism than the T-12.
- Implemented policy of turning off lights and powering down computers during non-business hours
- Staff is currently working with ComEd to develop an energy audit for Village Hall. This audit will establish the Village's baseline energy usage and identify areas of potential energy savings.

RECENT ACHIEVEMENTS:

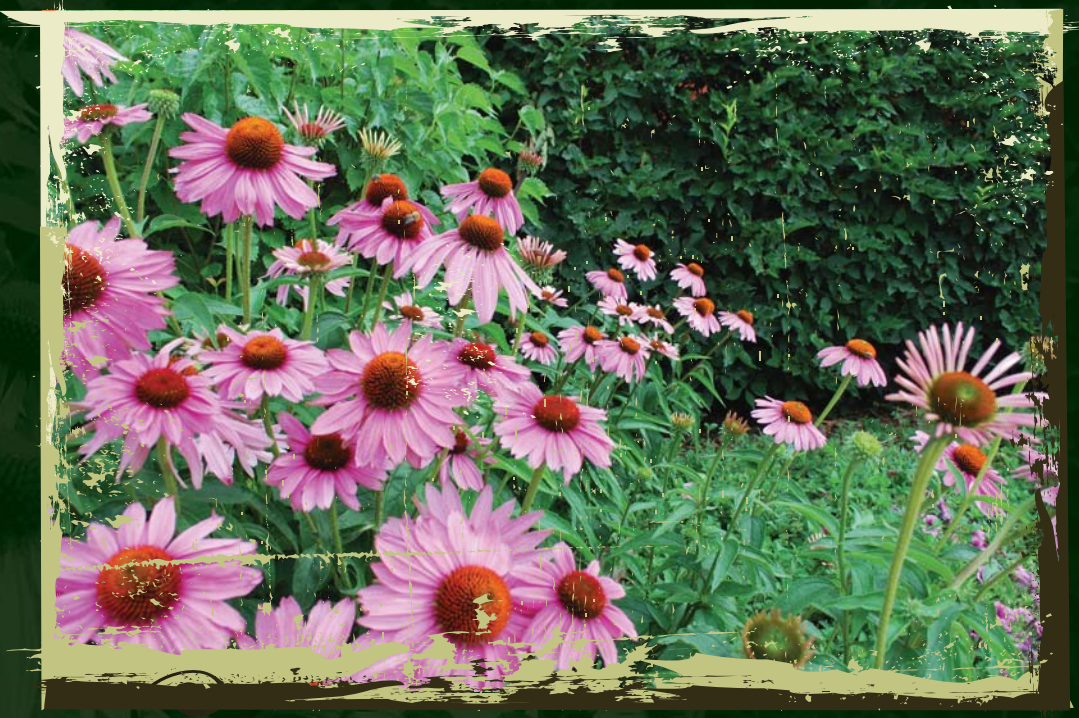
- Staff has started on an energy audit of Village Hall.
- Staff replaced lighting at the Fairview Avenue train station with induction lighting to reduce energy consumption.
- Staff replaced street lights in Parking Lot D at Gilbert Avenue, adjacent to Emmanuel Lutheran with LED fixtures.
- New computers are more energy efficient than those replaced

"You can make a difference"

- Use compact fluorescent light bulbs instead of incandescent bulbs.
- Turn off equipment and computers when not in use.
- Use programmable thermostats.
- Learn about EnergyStar labeled devices at www.energystar.gov
- Consider using solar to power various house hold items such as fans or lights.
- Use power strips in an effort to reduce "phantom loads," which are electronic appliances that continue to consume electricity when switched off or in a standby mode.

GOALS AND TIMELINE:

- Obtain grant funding for insulating well houses, and using solar heaters (Short-Term)
- Review and analyze ComEd energy audit results to identify areas in need of improvement. Consider implementing ComEd energy initiatives. (Short-Term)
- Replace metal halide lighting in the parking deck with induction lighting. (Short-Term)
- Investigate feasibility of purchasing a florescent bulb crusher. (Short-Term)
- Research an alternative energy source for street lights. (Medium-Term)
- Install solar-powered street lights at Prentiss Creek utilizing funds from Community Development Block Grant. (Medium-Term)
- Obtain Funds to replace T-12 lighting fixtures at Village Hall with T-8. (Medium-Term)
- Research geothermal energy for heating and cooling Village facilities. (Long-Term)
- Research wind power. (Long-Term)
- Conduct a lighting study for the Village. (Long-Term)



Waste Diversion

Waste Diversion

WHAT IS IT?

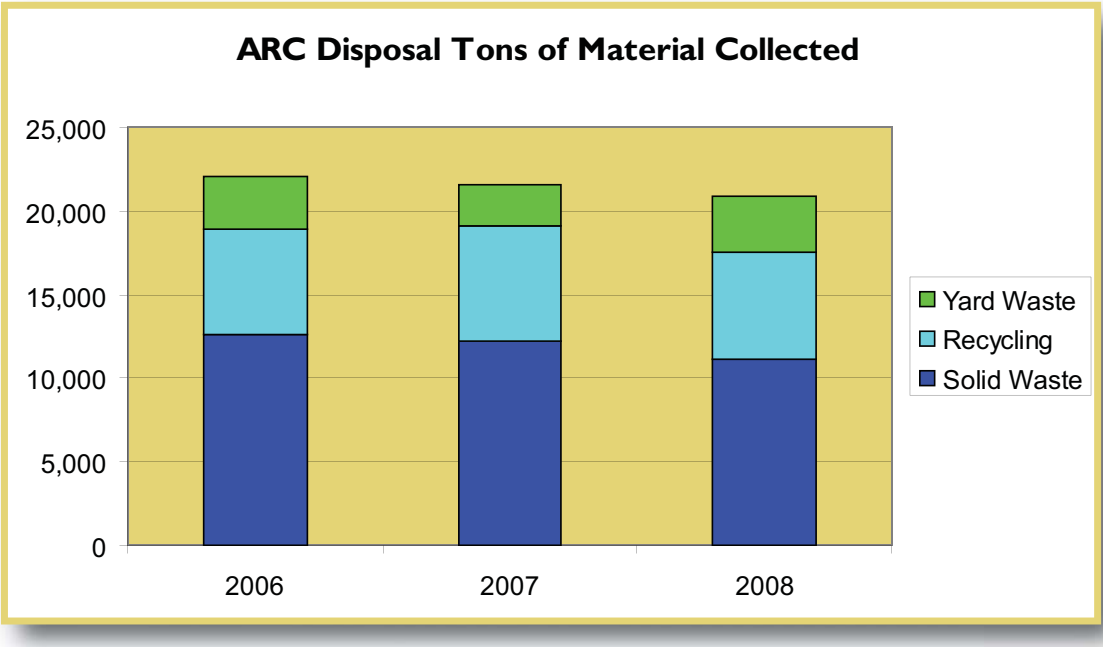
- Waste diversion refers to the combined efforts of waste prevention, reuse and recycling practices.
- Waste prevention refers to actions or choices that prevent the generation of waste. Preventing waste is different from recycling because it avoids or seeks to reduce the use of materials altogether.
- Reuse refers to using a material again but differs from recycling because it does not alter the physical form of an object.
- Recycling refers to using waste to manufacture a new product.

WHY IS IT IMPORTANT?

- Waste diversion efforts can be successful in reducing pollution by preventing resources from reaching a landfill and saving energy.
- Reuse and Recycling prevents resources from being wasted and reduces the consumption of raw materials and nonrenewable energy sources used to produce materials.

HOW DO WE MEASURE OUR PROGRESS?

- Per the 2008 DuPage County Solid Waste and Recycling Annual Report, the Village's recycling rate of 47% of all waste generated is among the highest in DuPage County.
- The Village currently works with ARC Disposal, Inc. to measure the amount of solid waste, yard waste and recyclable material generated in the Village (see chart below).
- Staff monitors the amount of recyclable material generated during the Village's recycling events. The 2008 Recycling Extravaganza facilitated the recycling of the following items:
  - Seven 53-foot trailers of electronics totaling 146,098 pounds
  - 197 American flags
  - 874 ink jet cartridges
  - 878 cell phones
  - 20 cribs
  - 10 dressers
  - 631 eyeglasses
  - 19 hearing aids
  - Nearly 11 18-gallon bins of batteries



CURRENT VILLAGE BEST PRACTICES:

- The Village encourages e-mail correspondence, electronic employee newsletters and electronic record-keeping whenever possible instead of using paper-based communication.
- ARC disposal collects recycling from Village facilities weekly.
- The Village seeks to conduct the Recycling Extravaganza on an annual basis.

RECENT ACHIEVEMENTS:

- The Village stopped purchasing Styrofoam cups and all Village facilities recently converted to re-usable mugs for employees to prevent the waste of daily beverage cups.
- In 2009, the Village will be mailing four Hometown Times newsletters to residents, rather than six. This operational change will save approximately 200,000 sheets of paper annually.
- The Village's TCD3 community outreach utilized e-mail, online message boards and questionnaires to communicate with residents.
- Double-sided printing was defaulted in Village printers to reduce paper consumption.
- Staff expanded the recycling program at Village Hall to include non-paper items such as plastic bottles, aluminum cans, etc.
- Staff has engaged in the purchasing of recycled office supplies when possible.
- The Village has converted to paperless Village Council packets which will save approximately 114,000 sheets of paper annually.

"You can make a difference"

- Avoid buying products with excess packaging
- Maintain and repair durable products
- Participate in your local recycling program on a regular basis
- Reuse bags, containers and other items.
- Consider reusable grocery bags.
- Sell or donate goods when possible.
- Participate in Recycling Events like the Village of Downers Grove Recycling Extravaganza.
- Purchase products made from recycled material.

NEXT STEPS:

- Conduct 2009 Recycling Extravaganza. (Short-Term)
- Analyze and improve recycling procedures throughout Village facilities in addition to Village Hall. (Short-Term)
- Work with solid waste vendor to place recycling receptacles in the downtown in the future. (Short-Term)
- Continue purchasing recycled products when feasible. (Short-Term, on-going)
- Explore hand dryers and the removal of paper products from Village bathroom facilities. (Medium-Term)
- Increase communication with residents regarding recycling. (Long-Term)

Lyman Woods

Urban Forest

WHAT IS IT?

Throughout Downers Grove and other Chicagoland communities, the urban forest is comprised of the parkway trees, residential trees, park trees and greenbelt vegetation.

WHY IS IT IMPORTANT?

Over the past 20 years, several research studies have quantified the value of the urban forest to the health of urban dwellers and to the economy of a community. Beyond aesthetics and creating habitats for wildlife, trees perform important functions that protect and enhance an urban dweller's health and property.

- Trees reduce global warming by shading homes and office buildings. This reduces air conditioning needs by up to 30%, thereby reducing the amount of fossil fuels burned to produce electricity. This combination of CO2 removal from the atmosphere, carbon storage in wood, and the cooling effect makes trees a very efficient tool in fighting the greenhouse effect.
- Approximately 800 million tons of carbon stored in U.S. urban forests with a $22 billion equivalent in control costs.
- Planting trees remains one of the cheapest, most effective means of drawing excess CO2 from the atmosphere. A single mature tree can absorb carbon dioxide at a rate of 48 lbs/year and release enough oxygen back into the atmosphere to support 2 human beings.
- Each person in the U.S. generates approximately 2.3 tons of CO2 each year. A healthy tree stores about 13 pounds of carbon annually -- or 2.6 tons per acre each year.
- An acre of trees absorbs enough CO2 over one year to equal the amount produced by driving a car 26,000 miles.
- The U.S. Forest Service estimates that all the forests in the United States combined sequestered a net of approximately 309 million tons of carbon per year from 1952 to 1992, offsetting approximately 25% of U.S. human-caused emissions of carbon during that period.
- Over a 50-year lifetime, a tree generates $31,250 worth of oxygen, provides $62,000 worth of air pollution control, recycles $37,500 worth of water, and controls $31,250 worth of soil erosion.

HOW DO WE MEASURE OUR PROGRESS?

The Village of Downers Grove has maintained an active Forestry Program since 1967. Since the program's inception, the number of parkway trees located within the Village has increased by approximately 50%. Staff measures its progress by tracking the amount of parkway trees planted by staff on an annual basis. Village staff planted 256 parkway trees in FY09, equating to about 1.04% of total inventory. Parkway trees are planted to replace a tree that was removed, to fill in parkways of new subdivisions or in response to a resident's request for a new tree planting where there is no tree. A wide variety of high quality species specifically grown for parkways are planted. Resident requests for specific tree species are honored when possible

CURRENT VILLAGE BEST PRACTICES:

Some best practices established by the Village with regard to maintenance of the urban forest include the following:

- The forestry program manages the more than 23,000 trees located in the public parkways along streets and includes planting, pruning, removals, watering, mulching, and problem diagnosis.
- The Village has enacted the parkway tree preservation ordinance which prohibits dam age or removal of trees in the public right-of-way.
- Every day of the year, the Village has free woodchips available at a fenced pickup site. The fenced pickup site is located on the north side of Curtiss St. at the intersection of Katrine St. and is open daily from dawn to dusk. Residents are welcome to take the amount they need using their own transport.
- Treegators are available free of charge from the Village for each newly planted parkway tree. A Treegator is a 20 gallon device which fits around the trunk of the tree, and can be easily filled twice a week and slowly releases water to the tree.

RECENT ACHIEVEMENTS:

- In 2009 the Village of Downers Grove was recognized for the 25th consecutive year as a Tree City, USA.
- The Downers Grove Forestry Division was recently accredited by the Society of Municipal Arborists.

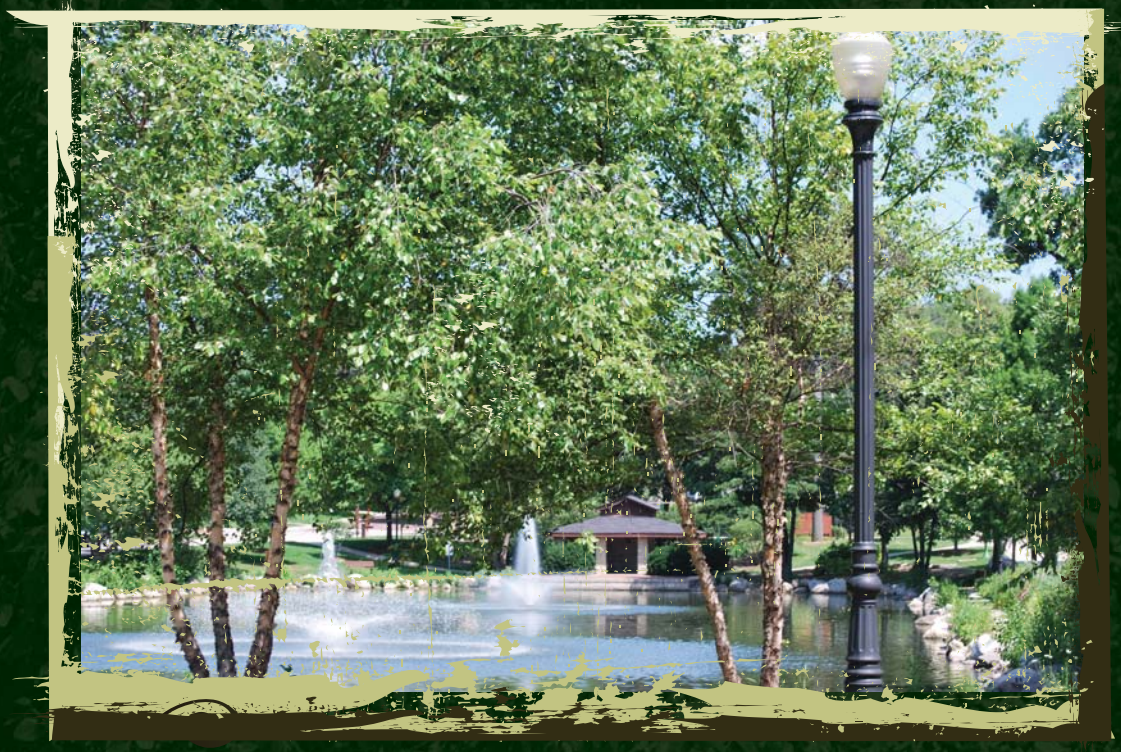
"You can make a difference"

- Residents can help expand the urban forest by planting trees on their property
- During periods of little or no precipitation, residents are asked to water newly planted parkway trees on a weekly basis
- Mulch such as woodchips can be applied any time of year. The size of the area to be mulched should be as large as practical with the mulch not more than 4 inches deep and not up against the tree trunk

GOALS AND TIMELINES:

- Complete the pruning of parkway trees as listed on the Village's 2009 Parkway Pruning Areas Map. (Short-Term)
- When possible, engage in measures which protect the Village's urban forest from various predatory insect populations such as the Gypsy Moth and Emerald Ash Borer. (Short-Term, On-going)
- Continue enforcement of the Village demolition / construction ordinance which requires contractors to erect protective fences around parkway trees during construction. (Long-Term, On-going)
- Consider replacing parkway trees on a one-to-one basis as economic and budgetary conditions allow. (Long-Term, On-going)

Prince Pond



Land Use and Development

Land Use and Development

WHAT IS IT?

This section deals primarily with the physical arrangement of land uses and development intensities, along with building materials and procedures influencing energy consumption, water usage and other environmental factors. Additional elements include preservation/enhancement of green space around buildings, and maintenance of natural areas.

WHY IS IT IMPORTANT?

First, energy and water conservation reduces consumption, costs and carbon footprint. Second, flexibility in the materials used for construction may reduce waste and increase energy conservation. Third, proximity to mass transit options can reduce the need for auto use, achieving reductions in pollution and oil. Finally, protection or expansion of green space requirements may reduce the size of impervious surfaces that contribute to stormwater runoff and flooding.

HOW DO WE MEASURE OUR PROGRESS?

The Village measures its progress through the adoption of updated building codes which take into account energy and water conservation goals, and allow for the recycling and reuse of construction materials. Additionally, progress is measured through increased densities and mixed use developments within ¼-mile of the Village's three transit centers. This transit oriented development allows for decreased emissions and traffic congestion.

CURRENT VILLAGE BEST PRACTICES:

- Building code update is underway
- Comprehensive Plan updates will begin in 2009.

RECENT ACHIEVEMENTS:

- Increased the number of mixed use developments in the downtown
- Increased development densities in the downtown.
- Adopted the Comprehensive Plan

"You can make a difference"

- Seek out opportunities to re-use and recycle building materials
- Shop locally to reduce carbon emissions

GOALS AND TIMELIMES:

- Complete building code amendments, including specific energy conservation code and historic preservation code (which includes re-use/recycling provisions). (Short-Term)
- Promote transit oriented development within the Comprehensive Plan, followed by adoption of the required implementation ordinances including a zoning ordinance update. (Short-Term)
- Complete tri-annual update of building codes. (Medium-Term)
- Make 5 year minor updates of Comprehensive Plan as necessary. (Medium-Term, on-going)
- Consider implementing policies related to open space development. Open space development, also called "cluster development," is an alternative site planning technique that concentrates dwelling units in a compact area to reserve undeveloped space elsewhere on the site. (Long-Term)
- Consider obtaining LEED Certification during construction of future Village facilities. The Leadership in Energy and Environmental Design (LEED) Green Building Rating System provides a suite of standards for environmentally sustainable construction of buildings. (Long-Term)

Water

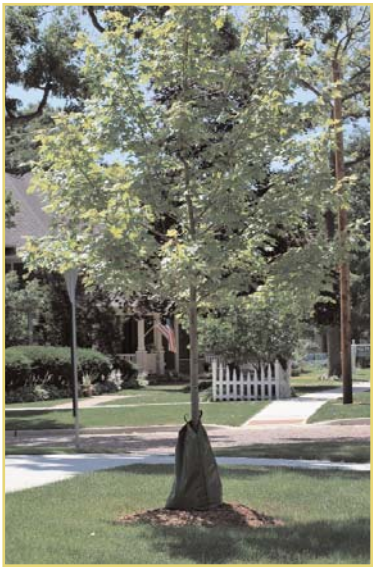
WHAT IS IT?

Water is basic to sustaining life. Its availability and management have major impacts on ecosystems, economies, governments, public health and the quality of life for communities. As a basic resource, all elements of water management represent an increasing concern for local, state and federal governments throughout the country. In Downers Grove, these elements of water management are listed below with their corresponding units of local government:

- Pre-consumer "potable" water treatment and distribution (Village of Downers Grove, Water Fund / DuPage Water Commission)
- Post consumer water treatment (Sanitary District)
- Stormwater Management (Village of Downers Grove)
- Area ponds and wetlands (Downers Grove Park District / Village of Downers Grove)

WHY IS IT IMPORTANT?

Responsible water management is critical to sustaining residential and commercial interests within the Village. Consumers pay for the treatment and delivery of potable water as well as the treatment of waste water. Costs are associated with the construction and maintenance of facilities and the extensive infrastructure necessary for the transportation, processing and distribution of water (stormwater and pre & post-consumer potable water usage). Excessive water use places unnecessary demands on the water processing, distribution and pumping systems throughout the region.



Residential Street

HOW DO WE MEASURE OUR PROGRESS?

- Over the past few years the Village has seen a decline in water purchases:
  - 2005 - 5.966 million gallons a day, costing $3,208,718
  - 2006 - 5.882 million gallons a day, costing $2,910,241
  - 2007 - 5.582 million gallons a day, costing $2,669,292
- During the winter months, the Village's average usage is 4 to 4.5 million gallons a day. Summer water usage is typically 6 to 8 million gallons a day and can reach as high as 11 million gallons a day.
- The Village is currently using the Automated Meter Reading (AMR) system and other means to measure and estimate how water is accounted for within the Village's usage, including: main breaks, hydrant metering and flushing, street cleaning, sewer cleaning, fire pump testing, new water main installations and other miscellaneous uses.

CURRENT VILLAGE BEST PRACTICES:

- Water Conservation Ordinance - Each year from May 15 to September 15, residents are permitted to use water outdoors based on an even / odd system, with additional regulations as applicable.
- Mulching and limited biosolid use is made available to the public free of charge and is used in landscaping to control evaporation and increase irrigation efficiency.
- High efficiency drip irrigation is utilized in the downtown landscaping.
- Free tree soakers or "Tree Gators" are available through Public Works to residents for use on parkway trees.
- The Downtown Parking Deck has a 1.63 million gallon capacity for on-site stormwater retention.
- Fire Station 2 has a 1.5 million gallon capacity for on-site stormwater retention.
- All Fire Stations incorporate the low flow, low volume plumbing fixtures.
- Staff restrooms at Fire Station 2 include optical sensors for lavatory fixtures and low flow shower heads and commodes. Automatic shut off is utilized on public rest room faucets.

RECENT ACHIEVEMENTS:

- Automated Meter Reading (AMR) reports have been used to identify water leaks throughout the system and to minimize further damage and costs associated with leaks. The projected cost saving elements associated with AMR include:
  - Increased meter accuracy;
  - Decreased meter reading costs;
  - Maintenance and warranty savings; and
  - Battery life and costs.
- The water department conducts manual checks to ensure proper functioning on meters affected by debris following hydrant flushes, main taps and fire response services.
- The Village contracts with vendors for checking metering accuracy, with large consumers being tested twice yearly, to identify any water leakage and avoid potential losses of revenues.
- 2007 Completion of Watershed Improvement Plan, a detailed planning document to guide future Village-wide stormwater infrastructure improvements.
- 2008 Completion of 5-year National Pollutant Discharge Elimination System (NPDES) permit development period.

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- Do not let the water run while shaving or brushing teeth.
- Never use your toilet as a waste basket.
- Install low-flow faucet aerators and showerheads.
- Consider purchasing front-loading washing machines which can save over 50% in laundry water and energy use.
- Use a rain barrel to collect and store rain water runoff from the roof of your home and use the collected water for landscaping needs.

GOALS AND TIMELINES:

- Align Village building codes with state plumbing codes. By reducing the incoming pipe diameter size, water consumption is reduced while still maintaining adequate water pressure. (Short-Term)
- Continued location of potential sources of water loss throughout the Village and implement remediation. (Short-Term, On-going)
- Research feasibility and cost/benefit assessment for rainwater collection and rain barrel usage, along with gray water usage at Village facilities. (Short-Term)
- Identify operational efficiencies with developing compatibility between the Automated Meter Reading (AMR) system and Eden financial software. (Short-Term, On-going)
- Consider citizen surveys to identify resident water usage practices (kitchen use, bathroom use, landscaping, etc.). (Medium-Term)
- Establish guidelines for Village facilities to use progressive water conservation such as plumbing fixtures, water-wise landscaping and other related infrastructure enhancements. (Long-Term)
- Consider installing low-flow / dual flush toilets during construction of Village facilities in the future. (Long-Term)
- Research and consider adoption of International Plumbing Code 2006. (Long-Term)

Community Outreach

WHAT IS IT?

Community outreach involves the steps taken to raise awareness and support for environmentally sustainable practices. This report highlights these and other newsworthy environmental best practices employed by the Village to improve operations and to promote environmental stewardship throughout the community. The report also serves to summarize the community outreach aspects of the sustainability topics discussed previously within the report.

WHY IS IT IMPORTANT?

Community outreach regarding environmentally sustainable best practices ensures accountability on the part of the Village organization, establishes certain environmental issues as priorities in the community and encourages participation so that individuals can make a difference.

HOW DO WE MEASURE OUR PROGRESS?

As outreach programs regarding the Village's environmental sustainability are developed, performance metrics will be developed. At present, the following data will be used as community outreach performance indicators:

- Total number of press releases and top stories posted to the Village web site
- Total number of stories appearing across all media including print, television, radio and electronic media i.e., blogs, media websites, etc.
- Reducing the number of citations issued regarding outdoor water usage violations
- Participation in environmental related special events like the Recycling Extravaganza, refuse Amnesty Day, Adopt a Highway, etc.
- Amount of material recycled via the solid waste disposal program.

CURRENT VILLAGE BEST PRACTICES:

The Village utilizes all of the following communications tools for outreach campaigns:

- Press release distribution to local print media outlets
- Posting top stories on the Village website
- Programming on local DGTV Channel 6
- Announcements at Village Council Meetings
- Posting on the community message boards
- E-news letter distribution
- Hometown Times print newsletter
- Triblocal newspaper

DGTV6

RECENT ACHIEVEMENTS:

- Publicizing of the 2008 Recycling Extravaganza which resulted in the participation of 1,600 people on event day.
- Mayor Sandack Earth Hour Proclamation in March, 2009.
- Downers Grove Reporter features story on conversion to Nitrogen for tires on Village vehicles.
- Yard Waste Collection Begins featured on website and in local papers.
- Outdoor water restriction published in Village Corner advertisement, E-News and DGTV
- Installation of three new bike racks in 2008 to increase capacity for commuters and visitors in downtown Downers Grove.
- In November 2008, the Village Council adopted a resolution to participate in the Illinois Safe Routes to School Program.
- Posting of the Downers Grove 2000 Bikeway Plan on the Village website.
- Continued promotion of the Grove Commuter Shuttle via rider incentives, outreach to those on the parking waiting list and in neighboring communities.
- Establishment and enforcement of anti-idling policy for Police Department vehicles.

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- Continually monitor the Village's various media outlets for useful information on how to participate in environmentally-friendly events or activities.

GOALS AND TIMELINES:

- Establish environmental issues section on the Village website. (Short-Term)
- Publicize the Sustainability Plan through the Village's various media sources. (Short-Term)
- Create column in the Home Town Times newsletter on environmental issues. (Short-Term)
- Create environmental issues section for E-News letter. (Short-Term)
- Utilize Twitter account to communicate Village information including environmental news. (Short-Term)
- Continually formulate and implement sustainability-related programs and activities for public participation. (Short-Term)
- Investigate two-way internet communication outlets which allow residents to respond to various environmental topics. (Medium-Term)
- Consider other public notification outlets such as high school radio stations for distributing environmental information to a wider audience. (Medium-Term)