

City of Warrenville Climate Action Initiatives

Over more than a decade, the City has completed many “green” projects, which fall under the goals of the City’s 2016 Climate Action Plan. They include:

A. Building Inspection Vehicle Retrofit

Description/Accomplishment: In 2014, the Community Development Department retrofitted a staff vehicle from unleaded gasoline to compressed natural gas (CNG). CNG produces 20 to 30% less greenhouse gases than gasoline or diesel vehicles.

B. Diesel Particulate Filter Installations

Description/Accomplishment: In 2018, the City received grant funding from the American Lung Associate to reimburse costs to have diesel particulate filters (DPFs), an emission control technology, installed on trucks in the Public Works Fleet. In September of 2020, three installations were completed. Filters will remove between 80 to 90% of diesel emissions on these vehicles.

C. LED Street Light Upgrades

Description/Accomplishment: The City began upgrading street lighting to LED in 2007. In the past, the City received grant funding to help offset the cost of the upgrades. In 2019, the City retrofitted 89 street lights to energy efficient LED fixtures and received a reimbursement incentive from ComEd. In addition, 240 LED street light installations were completed with ComEd incentives applied at point of sale. According to the City’s Geographic Information Systems (GIS) inventory of city-owned street lights, over 900 street lights are equipped with LED lights, over three-quarters of the total amount. Current practice, is when a City street light becomes inoperable, it is upgraded to an LED fixture. Also, new street lights, installed by the City, are equipped with LED fixtures. As future grant funding becomes available, the City will determine if additional street light can be upgraded to LED fixtures.

The new LED lights require less power to run, which overtime results in a savings to the City. For instance, the cost to buy and install the new light fixtures in Cantera Village was paid off in about two years. The new light bulbs cost about \$7 each in comparison to the old lights that were \$150 when purchased. Along with cost and energy savings, the new efficient light bulbs are more durable, and should last longer.

D. Energy Audits of City Buildings

Description/Accomplishment: Energy audits were conducted for the City Hall, Police Station, and Public Works Building by the Smart Energy Design Assistance Center (SEDAC) in conjunction with City staff. The audits measure current energy usage in each building, identify possible energy reduction measures and provide rough cost estimates to implement the reduction measures. According to the audit results, all three of the City’s buildings were more energy efficient than other municipal buildings of comparable design. The majority of the audit recommendations, for all three buildings, involved continued lighting upgrades.

E. Energy Efficient Appliances and Equipment

Description/Accomplishment: As a policy, the City prioritizes purchase of items bearing the *Energy Star* Certification, which indicates that equipment reduces greenhouse gas emissions through efficient energy usage (<https://www.energystar.gov/products/how-product-earns-energy-star-label>). Recent purchases have included energy efficient copiers and technology. The City has

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also moved away from purchasing equipment powered by two-stroke, gasoline engines, including snow throwers and weed trimmers. According to the Environmental Protection Agency (EPA), “A typical string-trimmer is powered by a two-stroke gasoline engine that has a hydrocarbon (HC) emission rate approximately six times that of the typical four-stroke mower engine.” (<https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=P100GDP7.TXT>).

Description/Accomplishment: The Public Works Department installed solar-powered lighting for specific signage, when applicable. Some examples include the City entrance signs (north and south Illinois Route 59), the Batavia Road and Williams Road pedestrian crossing signs, and the various school speed limit signs around the community. The Warrenville Police Department purchased solar-powered speed trailers, equipped with solar panels to supplement its energy usage.

F. Water Reduction

Description/Accomplishment: The City has continued to reduce water usage across the entire organization. Public Works staff have installed low-flow plumbing fixtures and faucet sensors in restrooms in Public Works, City Hall, and the Police Station. The City has also installed a water bottle filling station, at the Public Works Building, to help reduce water usage and waste from discarded plastic bottles.

G. Municipal Electrical Aggregation Program

Description/Accomplishment: In August 2012, the City implemented an electrical aggregation program. The program allowed the City to buy electricity from suppliers other than ComEd on behalf residents and small businesses by soliciting competitive bids from suppliers on behalf of the entire community. The City receives 100% renewable energy, from a supplier, for the entire community. All Warrenville residents and small business are automatically enrolled, unless they opt-out.

At the July 6, 2020, City Council meeting, Council approved a one-year agreement with Eligo for electric aggregation while staff evaluate an alternative energy program. The alternative program includes a rate match with ComEd, the option to elect 100% green energy, and an option to receive an annual civic contribution during the term of the agreement. Although this program would not offer savings on the rate to the consumer, it would remove the risk of paying more than the ComEd rate for supply.

H. Utilization of Natural Plantings

Description/Accomplishment: The City has promoted the use of natural plantings (plant species), along with rain gardens and bioswales, to help improve water quality, reduce runoff, beautify the community, and help local wildlife. The City’s Climate Action Plan promotes the planting of native trees, prairie plants, and grasses to promote biodiversity.

I. Green Infrastructure

Description/Accomplishment: In 2007, the City installed permeable pavers along a one mile section of Warrenville Road, between Butterfield and Batavia Roads in order to direct rainfall away from storm sewer systems and back into the natural ecosystem. Unfortunately, the Warrenville Road permeable paver system has not functioned as originally presented due to the compaction of the underlying supporting layers beneath the pavers along Warrenville Road,

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causing drainage and ponding issues, and was resurfaced in 2019. The project also included permeable paver parking along Warrenville Road. Utilizing permeable pavers for parking, has been an effective utilization of the permeable paver system for the City.

In summer 2018, the City completed the conversion of parking along Warren Avenue, in proximity of the Police Station, from asphalt to permeable paver parking.

J. Building Code Updates

Description/Accomplishment: In 2017, the City of Warrenville adopted the 2015 International Building Codes published by the International Code Council (ICC), which includes updated provisions for renewable energy, including solar photo voltaic (SPV) and solar thermal systems (STS). The adopted codes streamline and encourage the adoption of alternative energy usage. SPV and STS systems reduce overall energy consumption. The 2015 codes also includes the Energy Conservation Code with Illinois amendments.

K. Tree Planting

Description/Accomplishment: The City maintains a Parkway Tree Program, which gives residents the opportunity to purchase a parkway tree as part of its commitment to reforestation in Warrenville. Also, ash trees in the City's right of way, which are damaged by the Emerald Ash Borer, are replaced, free of charge, for residents.

L. City Advisory Commissions and Certifications

Description/Accomplishment: in 2006, the City Council established two advisory commissions to address issues related to climate change; the Environmental Advisory Commission (EAC) and the Bicycle and Pedestrian Advisory Commission (BPAC). The EAC promotes programs and initiatives geared towards enhancing environmental awareness within the city, among other things. The BPAC encourages bicycle commuting and walking in lieu of motorized transportation, among other things. Both organizations hold various events throughout the year that reflect the City's commitment to green initiatives.

EAC holds an Arbor Day event in late April, at which free tree saplings are given away to encourage tree planting around the community. BPAC promotes a bike and walk to school event, at local schools, in April and October. BPAC organizes an annual Bike Rodeo in May to provide education on bicycle safety and encourage bicycling for commuting as well as recreation. About a dozen bicycles are given away through a drawing for all attendants.

The City of Warrenville is designated as a Tree City USA by the Arbor Day Foundation and has held that designation for the past 30 years. The certification provides recognition of the City's efforts in promoting a healthy, sustainable urban forestry program.

The City is designated a Bicycle Friendly Community (BFC) by the League of American Bicyclists. The BFC certification provides a roadmap to promote and improve bicycling issues in the community.

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M. Interior and Exterior LED Lighting in City Buildings

Description/Accomplishment: The City has prioritized retrofitting high-wattage lighting to energy efficient LED lighting. Interior lighting projects completed to date include the upgrades of the vehicle storage and salt shed areas at the Public Works Building, the records office and the sergeant/detective areas at the Police Station, Warrentville City Museum, and the Gallery Conference Room at City Hall. Additional exterior lighting projects to reduce energy usage include upgrades at Cerny Park, Veterans Memorial, Bob Walters Commons, City Gazebo, Warrentville City Museum, Public Works Building, and City Hall.

Description/Accomplishment: The City received grant funding in 2010 to retrofit approximately 144 florescent lights to T-8 lights at the Public Works Building and Community Development Department at City Hall. T-8 lights use approximately 35% less energy than standard fluorescent lights. The same grant funding also paid for the upgrading of 39 high-bay light fixtures in the Public Works garage area to more efficient fluorescent fixtures.

N. Salt Reduction Measures

Description/Accomplishment: The Public Works Department works to reduce the amount of salt used during inclement weather events. Currently, only minimal salting occurs on roads during inclement weather events; with city crews primarily responding after the conclusion of the weather event. Also, the Public Works Department utilizes a mix of beet juice and salt brine, to pre-wet the road salt, which helps reduce the volume of salt required during a weather event. Staff regularly attend an annual deicing workshop that is hosted by the DuPage County. The annual workshop covers approaches and methods for deicing and snow removal on public roads, with the intent to reduce the amount of salt that makes it into area streams and rivers, to improve water quality.

O. High Efficiency HVAC and Building Equipment

Description/Accomplishment: In the spring of 2021, a high efficiency HVAC system was installed at the Police Station, replacing a 20 year old system. Programmable thermostats were installed in the City Hall, Police Station, and Public Works Buildings. The thermostats allow the City to reduce energy usage during non-work hours. Some purchases have included high-efficiency water heaters at Cerny Park, City Hall, the Public Works Building, and Police Station.

Building material upgrades include the installation of energy-efficient insulation at Cerny Park and the Police Station, and a cool (white membrane) roof at the Police Station. According to the US Department of Energy, “A cool roof is one that has been designed to reflect more sunlight and absorb less heat than a standard roof.” (<https://www.energy.gov/energysaver/energy-efficient-home-design/cool-roofs>).

P. Occupancy Sensors

Description/Accomplishment: Occupancy sensors have been installed in City Hall, Police Station, and Public Works building. The sensors save electricity by turning off lighting in unoccupied areas of the building. In 2010, grant funding was received for the installation of the sensors in the Public Works Building and Community Development Department (City Hall).

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Q. Waste Reduction

Description/Accomplishment: The City attempts to reduce waste and recycle as much as possible. Comprehensive residential solid waste, recycling, and yard waste pickup is provided by Waste Management under the City's franchise agreement.

R. Prescription Drug Recycling Drop Box

Description/Accomplishment: In 2017, the Police Station installed a prescription drug recycling box in the lobby. The box was provided by a grant from the DuPage Foundation and residents may place unwanted medications in the drop box during regular lobby hours.

S. Public Recycling Events

Description/Accomplishment: The Police Department holds a yearly shredding event every May. In 2018, electronics recycling was added as an additional service. The event gives residents the opportunity to recycle items such as computers, modems, routers and office equipment, among other things.

T. Private Solar Permit and Development Prioritization

Description/Accomplishment: In 2018, the City Council endorsed the prioritized review and processing of development applications that include solar installations. The policy statement is as follows, "In support of the goals of its 2015 Strategic Plan and 2016 Climate Action Plan, the City Council hereby directs the Community Development Department staff to allocate their time and direct their efforts in a manner whereby they prioritize the review and processing of those building permits and development applications that are most likely to result in the construction of solar installations in the City of Warrenville."

U. Mosquito Larvicide Program

Description/Accomplishment: The City ceased a mosquito abatement program in 2000, following an advisory referendum on raising property taxes to pay for the spraying. City also was responding to some residential concerns about the potential health risks posed by the chemicals that are used during the spraying process. Further, the effectiveness of spraying pesticides is very limited since Warrenville is surrounded by very large open spaces, including several forest preserves and Fermilab. In 2018 the City began a city-wide larviciding program in the summer of 2018. The program involved larviciding catch basins in the public right of way.

V. Herbicide Application Reduction

Description/Accomplishment: In 2003, the City decided to stop using herbicide (weed killers) on City-owned properties. An exception is made when specific applications are needed to kill invasive weeds prior to the installation of new natural plants, rain gardens, or other natural features. The reduction in herbicide usage creates cleaner air, reduces water pollution and benefits wildlife. It also creates child safe parks and public grounds for the community to enjoy.

W. Battery Recycling

Description/Accomplishment: In 2011, the City's Environmental Advisory Commission began a battery recycling program. The program allows the public to recycle dry-cell type batteries at drop-off boxes located at City Hall. The batteries are disposed of in an environmentally friendly

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manner. The purpose of the program is to prevent harmful chemicals contained in batteries from polluting the areas around garbage and landfill sites. As of November 5th 2020, the program has collected and recycled 6,935 pounds of batteries. Over the course of 9-years, this is an average of 770 pounds of batteries recycled per year.

X. SolSmart Designation

Description/Accomplishment: Warrenville received the Gold level designation. In 2019, Community Development staff participated in a SolSmart permitting and inspection webinar designed to help local municipalities make solar energy production more affordable and accessible. Participation in the webinar earned the City 10 credits toward a Gold, Silver, or Bronze designation in the SolSmart Certification. Staff also participated in a SolSmart planning and zoning training session, that also earned the City 10 credits towards a designation in the SolSmart Certification.

Y. Electronic Plan Review Software

Description/Accomplishment: During fiscal year 2019, the Community Development Department purchased an Electronic Plan Review (EPR) software package. The purchase of the software package greatly reduced the amount of paper utilized by part of the Community Development Department.

Current and Future Projects:

A. Enterprise Resource Planning (ERP) Program

Description/Accomplishment: In 2019, the City began the implementation of an Enterprise Resource Planning (ERP) program. Many processes will become entirely electronic, greatly decreasing the amount of printing, paper, and storage space required by City staff. Processes to be released in the first rounds on implementation include permits and licenses, utility billing, and payroll.

B. Public Works Exterior Building and Parking LED Lighting

Description/Accomplishment: Beginning in fiscal year 2019, and as the fixtures become deficient, the conversion of additional exterior and parking lot lighting will be converted to LED.

C. Solar Energy Project (Maecliff water tower and well site)

Description/Accomplishment: Anticipated to begin in fiscal year 2022, staff will evaluate smaller scale solar projects at Well No. 9, as a step toward exploring paths to using solar energy in City infrastructure.