

# MCHENRY COUNTY GOVERNMENT CONSERVATION ACCOMPLISHMENTS

The following four categories are examples of how McHenry County Buildings have become energy efficient and improved the environment.

## HVAC

- Installed DDC (Direct Digital Control) Control System – Night setback and weekend setback – 2003
- Installed CO2 monitoring devices – for HVAC units – 2003
- Installed daylight windows in new courtroom hall, Circuit Clerk area, Administration Building – 2003
- Installed reflective roof on County buildings – Annex A – 2006, Treasurer's Office – 2009
- Purchased alternate refrigerant for air conditioning – 2007
- Replaced 1972 original boilers with high efficiency boilers – 2007
- Designed economizers to the A/C system on new County buildings – 2004
- Install ceiling fans in DOT conference room – 2010
- Develop energy policy for McHenry County buildings – 2011
- Upgrade large motors with energy efficient frequency drives – 2010
- DDC Controls 2<sup>nd</sup> floor courtrooms - 2007
- High efficiency HVAC equipment at Animal Control - 2008
- Completed retro-commissioning air handlers at MCGC – 2011

## HVAC

- Installed 96% energy efficient HVAC unit at Evidence Barn. Received grant in the amount of \$3600 from DCEO - 2012
- Installed a complete DDC system at DOT for staff to monitor energy. Received grant from DCEO in the amount of \$12,160 to cover some of the project costs - 2013
- Tune up all large boilers with the assistance of a DCEO grant in the amount of \$4,396 – 2013
- Installed DDC controls at Animal Control Facility with the assistance of a DCEO grant in the amount of \$9,240 – 2013
- Government Center central building was selected by Alpha Controls Company to be a BETA site for a new products, Building Analytics, to manage and retro-commission on a continuous bases. Reviewing quarterly reports – 2013
- Upgraded existing HVAC equipment that serves the Government Center with new DDC controls in the B-Mod section. Received a DCEO grant from DCEO in the amount of \$17,586 – 2013
- Convert pneumatic controls to DDC at Government Center, improving temperatures and setbacks for energy savings (project cost was \$712,000, obtained rebate of \$85,000 with annual energy savings of \$95,000 – 2014
- Replace 15 paddle fans in DOT garages with ZOO de-stratification fans. Cost of project was \$13,000, eligible for rebate of \$10,900 - 2013

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# LIGHTING

- Purchased GE Ecolux fluorescent lamps contain  $\leq 85\%$  mercury – 2008
- Installed lighting occupancy sensors – SAO, Court Services, public restrooms – 2007
- Retrofit T/12 light fixtures with T-8 light fixtures – 2007
- Installed LED exit lighting – 2005
- Installed low E windows in new County facilities – 2003
- Install lighting occupancy sensors in Government Center, Annex A, Administration Building and DOT – 2005
- Replaced mercury vapor lamps in DOT garage with T/18 fluorescent fixtures – 2010
- Replaced sodium vapor parking lot lights in Government Center and Administration Building with LED high efficiency lighting – 2010
- Install LED parking lot lighting in Treasurer's Office Building – 2009
- Install skylights in DOT garage to allow for natural lighting – 2010
- Daylighting controls for public corridor lighting in Government Center, Annex A and Administration Building – 2010
- Replaced Jail cell wall fixtures with LED high efficiency lighting – 2010

## LIGHTING

- Replaced sodium vapor exterior wall sconce fixtures at Government Center with LED high efficiency fixtures – 2010
- Replaced incandescent light bulbs with CFL (compact fluorescent lighting) – 2005
- New occupancy sensors for Public Defender, States Attorney, Sherriff patrol- 2005
- Replaced 3 metal halide light fixtures for illumination of flag pole at DOT with LED fixtures – 2011
- Group re-lamped the Administration Building light fixtures from a T/8 32 watt bulb. Completed in-house with the replacement of over 8,000 light bulbs. Applied for and received energy grants to cover the cost of material and labor – 2012
- Replaced Halogen lighting with LED in Courtrooms – 2012
- Replaced existing high output can lighting in Radio Dispatch Room with LED lighting – 2013
- Replaced high pressure sodium wall pack lighting with LED fixtures at Valley Hi - 2013



## PROGRAMS/EDUCATION

- Joined Green Government Initiative Program – 8/2007
- SWAT (Solid Waste Action Team) – County Recycling Committee – 2002
- New Green Team – 2008
- Joined Energy Star Partner 2003 – (only Illinois County Partner)
- Completed waste audits of County facilities for recycling – 2004
- Techno Trash containers in public corridors for “Tech” equipment – 2006
- Assist in NIKE Reuse – A-Shoe Program – County wide – 2003
- Cell phone and battery collection site in Purchasing Department – 2003
- Adopt-A-Book Program in Purchasing Department – 2003
- Green Team part of the Adopt-A-Highway Program. Committee sponsors 1 ½ miles on Nelson Road – 2006
- McHenry County buildings are “certified” Green Clean Facilities – 2009
- Facilities Management adopted policy for non-coal tar sealant for parking lots – 2010
- Installed moisture sensor devices for underground sprinkler systems – 2009
- Implemented a CMMS (computerized maintenance management system) for all County buildings and equipment – 2004

## PROGRAMS/EDUCATION

- Materials reused recycled Animal Control – 2008
- Low VOC paints used for flooring and painting projects –2009
- Administration Building “Green Touch Screen” installed in the Administration Building lobby for staff and visitors to view energy efficiency and the operation of the solar panels on the roof of the building - 2010
- Treasurer’s Office Building continues to be an Energy Star Building two years in a row – 2011 & 2012
- Hired “Green Intern” for summer of 2012 and developed an updated energy program for the County as well as a “Sustainability Challenge” to have staff and department participate in the green initiatives – 2012
- Installed water bottle filling station on the 2<sup>nd</sup> floor of the Government Center for staff to refill their water bottles – 2013
- Annual Green Day Event for the County employees was held on April 22 - 2013

## OTHER

- Installed hand dryers in restrooms – LEED approved – 2006
- Reused cubical furniture in County departments – Courts, Animal Control, Health Department, Disaster Recovery – 2008
- Copiers using double-side copy to reduce paper usage – 2006
- Purchased park benches made of recycled material – 2006
- Purchased recycled copy paper – 2002
- Installed automatic urinal flush valves – 2003
- Installed large toilet paper dispenser units using large rolled paper – 2003
- Upgrade windows in 1972 Court House Building – 2010
- Install PV solar panels on roof of Administration Building – 2010
- Replanted grass seed at Archives storage facility to a “no mow” grass seed. The previous grass was mowed 26 times per year. The new grass seed will only need to be mowed 3 times per year – 2013
- Replaced 7 kitchen water sprayers with high water efficiency “green” sprayers provided by DCEO. The cost of the units was provided by DCEO. Sprayers were replaced at Animal Control, Jail and Valley Hi – 2013

## Other

- McHenry County part of an initiative with ComEd energy for curtailment programs in the summer for brown and black outs – 2000
- All utilities (electricity, natural gas, water and sewer) is being tracked using Utility TRAK software under Facility Dude and the Energy Star Program – 2008
- Department approved a policy for non-coal tar based sealant for asphalt repairs and installation – 2009
- All plastic liners for desk side garbage containers now use a recycled plastic bag that is safe for the environment in the landfill and is bio-degradable – 2010
- County uses a low sodium melting product for salting sidewalks at the County buildings – 2010
- Design/Build a 10,000 square foot Records Archive storage facility using LED fixtures, T/8 fixtures, high efficient HVAC units and high R-value on insulation – 2011
- Installed interior “storm” windows for energy efficiency and customer comfort in the Recorder’s Office, Auditor’s Office and the Department of Transportation – 2011, 2012, 2013
- Reused existing emergency generator from one County building. Relocated and put into service for another building under construction – 2011
- Planted native trees and plants at the Archive Storage Facility and the Administration Building – 2012



## Other

- Purchased and installed new recycled outdoor furniture in the Secured Courtyard for staff and visitors – 2012
- Installed hand dryers in the Sheriff's locker room restrooms. (Replaced hand cloth towel system ) – 2013
- Installed moisture sensors on the underground sprinkler systems at Valley Hi Nursing Home and Administration Building – 2013
- Installation of no-mow grass seed at Archives Storage Facility – 2013
- Installed bottle water filling station at Government Center (part of the Sustainability Challenge idea from one of the County employees - 2014

# GOALS

- Inspect DOT diesel trucks for retro-fit kits for alternative fuel
- Develop Education Program for County employees in Green Initiatives
- Reduce County paper usage by 3% 1<sup>st</sup> year, 3% 2<sup>nd</sup> year, 3% 3<sup>rd</sup> year, based on 2008 paper usage
- Compile list of recyclable items and benchmark content for reducing
- Reduce County water usage by 3% 1<sup>st</sup> year, 5% 2<sup>nd</sup> year, and 5% 3<sup>rd</sup> year, based on 2008 water usage per building
- Reduce electrical and gas usage by 3% 1<sup>st</sup> year, 3% 2<sup>nd</sup> year, and 3% 3<sup>rd</sup> year, based on 2008 utility usage per building
- Attain Green Building Cleaning Certification for all County buildings
- Improve recycling performance of County buildings by 10% 1<sup>st</sup> year, 10% 2<sup>nd</sup> year, 5% 3<sup>rd</sup> year, based on 2008 recycling numbers
- Reduce fuel consumption of County vehicles by 5% 1<sup>st</sup> year, 5% 2<sup>nd</sup> year, and 5% 3<sup>rd</sup> year, based on 2008 fuel gallons consumed
- Develop construction standards using Energy Star Products and practices approved by County Board
- Develop and promote program to purchase and utilize 50% post consumer recycled content paper and paper products.