

R E S O L U T I O N

PW-0001-10

Resolution Supporting the Water Conservation and Protection
Program Established by the DuPage Water Commission

WHEREAS, on August 12, 2008, the DuPage County Board adopted the Environmental Responsibility and Conservation Policy ("Policy"); and

WHEREAS, the Policy was adopted to reduce the impact the County has on the environment by recycling waste materials, utilizing resources in an environmentally responsible manner, reducing energy consumption and investigating opportunities to cutback resource use.

WHEREAS, the DuPage Water Commission provides an average day supply of approximately 88 million gallons of Lake Michigan water to approximately 750,000 residents and businesses in DuPage County; and

WHEREAS, the diversion from Lake Michigan into the Mississippi River basin through the Illinois Waterway at the Chicago River allows for water to be withdrawn from Lake Michigan and diverted to the Mississippi River rather than being returned to the Lake; and

WHEREAS, due to projected population growth, Illinois could require 20 to 50 percent more water in coming decades and the earth has a finite source of fresh water suitable for human use; and

WHEREAS, it is understood that sustaining adequate water supplies is essential to the people and economies of DuPage County, northeastern Illinois and cities of the region; and

WHEREAS, the DuPage Water Commission has developed the Water Conservation and Protection Program (WCAPP) for its current and future customers which focuses on customer public outreach and education and reducing water usage among their customers in term of per person water use by 10% in 10 years; and

WHEREAS, DuPage Water Commission has requested DuPage County to voluntarily participate in the WCAPP and formalize their intent to enhance the stewardship of water resources within their jurisdictions; and

WHEREAS, DuPage County provides Lake Michigan water to approximately 18,000 residents, pumping over 630 million gallons of water a year through approximately 75 miles of pipe and can be a very effective participant in this water conservation effort.

NOW, THEREORE, BE IT RESOLVED, that the DuPage County Public Works Department be directed to work toward achieving a 10% reduction in water use expressed in gallons per person per day between 2010 and 2020 and be an active partner in DuPage Water Commission's Water Conservation and Protection Program (WCAPP).

BE IT FURTHER RESOLVED that the County Clerk is hereby directed to transmit a certified copy of this Resolution to DuPage Water Commission, 600 E. Butterfield Road, Elmhurst, Illinois 60126.

Enacted and approved this 23rd day of February, 2010 at Wheaton, Illinois.

BY: _____
Robert J. Schillerstrom, Chairman
DuPage County Board

Attest: BY: _____
Gary A King
County Clerk

Ayes: 17
Absent: 1



UTILITY PLEDGE

DuPage water Commission Water Conservation and Protection Program

Utility Contact Information

Utility: DuPage County Public Works

Address: 9 South 271 Nantucket

Darien, IL 60559

Conservation Contact: James Joers

Title: Principal Operator

Phone Number: 630.964.7062

E-mail: jim.joers@dupageco.org

A. Water Loss Reduction

The following section should be used to indicate the Best Management Practices (BMPs) that your utility pledges to implement as part of its program to control water loss. A full list of BMP's is provided in Attachment A. Please check the BMP's that your utility currently has in place and any additional BMP's that will be incorporated as part of this pledge. BMP's not listed in Attachment A can be listed below.

Additional BMP's:



B. Water Conservation Education Programs

The following education programs have been developed as part of the WCAPP. Conservation kits and resources will be provided to member utilities for each program. Please indicate which actions you can commit to in support of the DWC education programs.

- Distribute *Toilet Leak Detection and Repair* kits and promote program.
- Distribute *Rain Gauge and Landscape Irrigation* kits and promote program.
- Distribute *Residential Water Pledge* and promote program.
- Coordinate placement of *Rain Barrels* in community buildings and promote availability of rain barrel purchase program.
- Coordinate a community wide rain barrel purchase program

Please describe how you plan to distribute the conservation kits and how the program will be promoted.

DuPage County plans to distribute approximately 4,000 leak detection tablets by mailings to customers and distribution at various locations. The County will also distribute brochures and other educational material at locations. All materials will be made available on the website and residents will be able to complete the pledge online as well. The County will work with SCARCE to provide education in customer areas. The County's Stormwater Division has taken the lead on providing education on rain barrels and is planning on hosting a bulk sale in the May 2010.

C. DWC recognizes that many utilities are already implementing water conservation practices into their current utility management efforts. Please list any additional water conservation activities or programs that are already being practiced in your community.

DuPage County has worked with SCARCE to educate the community on multiple green efforts including water conservation for almost two decades. The program has been directed to schools, teachers, communities and businesses. As indicated below, the County has pursued many opportunities to reduce its water consumption.



ATTACHMENT A – BMPs

BMP's to Reduce Water Loss

Methods for controlling real losses

Active Leakage Control

- Conduct Leakage surveys - regular inspection and sounding of water main fittings and connections
- Meter of individual pressure zones
- Meter with District Metered Areas (DMA's) – measuring total inflow per day, week or month
- Perform continuous or intermittent night-flow measurements
- Perform short-period measurements at any time of day
- Place temporary or permanent leak noise detectors and loggers
- Apply innovative leakage modeling methods – the bursts and background estimates (BABE) model (Lambert & Morrison, 1996)

Pressure Management

- Control pressure close to but greater than the minimum standard of service
- Operate discrete pressure zones configured based on topography
- Limit maximum pressure levels or surges in pressure
- Reduce nighttime pressure where feasible to minimize losses from small background leaks
- Perform pressure modeling using internationally applicable concepts such as the fixed and variable area discharge (FAVAD) paths model (Lambert, 2001b; May, 1994)

Distribution Materials Management

- Perform appropriate selection, installation, maintenance, rehabilitation, and replacement of distribution mains
- Repair leaks in distribution main
- Tighten valves



- Repair leaks at pump station facilities

Utility Management Practices

- Limit water waste during tank cleaning and repair
- Limit water waste in the water quality laboratory
- Capture/reuse water from hydrant flushing
- Control water loss through prompt repair of main breaks

Methods for controlling apparent losses

Policy and Enforcement

- Police unauthorized usage and impose penalties

Customer Meter Management

- Provide reliable selection, installation, testing, and rotation of customer meters
- Establish procedures for annual testing and calibration of meters for large users

Water Accounting Controls

- Work with customer service and financial/billing department to verify accuracy of billing system and accounting
- Ensure that all users are monitored and billed
- Add per capita calculator on water bills and track past and average usage
- Set system billing to look for spikes or non-typical usage
- Meet with top users a few times per year to evaluate/identify areas for improvement in conservation



WATER LOSS ASSESSMENT

Complete the following calculation to determine utility water loss. Water loss is the difference between Net Annual Pumpage and Authorized Consumption¹. Water loss under this calculation does not provide any allowance for unavoidable leakage and is previously referred to as unaccounted for flow. (Note: numbering below is a continuation of the Annual Water Use Audit Form (LMO-2)).

37. Total Actual Accounted for flow (add lines 19 and 27).....	0.5852	MGD
38. Percentage of Total Actual Accounted for Flow to Net Annual Pumpage (divide line 37 by line 14 and multiple by 100).....	81.6%	%
39. Total Water Loss (subtract line 37 from line 14).....	0.1318	MGD
40. Percentage of Water Loss to Net Annual Pumpage (divide line 39 by line 14 and multiply by 100)	18.4%	%
41. Annual Water Loss (multiply 39 by 365) ...	48.107	MG
42. Average sale price for water	\$1.48	\$/1000 gallons
43. Value of lost water (multiply line 41 by 42 and multiply by 1,000)	\$71,198.36	\$

¹ The volume of metered and/or unmetered water taken by registered customers, the water supplier and others who are implicitly or explicitly authorized to do so by the water supplier, for residential, commercial and industrial purposes. This does NOT include water sold to neighboring utilities (water exported). Authorized consumption may include items such as fire fighting and training, flushing of mains and sewers, street cleaning, watering of municipal gardens, public fountains, frost protection, building water, etc. These may be billed or unbilled, metered or unmetered. AWWA WLCL Water Audit Software, Copyright ©2006, American Water Works Association WASv3.0.

