

WATER EFFICIENCY AND CONSERVATION PROGRAMS

“HOW TO GO ABOUT IT”

MICHIGAN SECTION AWWA
WATER EFFICIENCY AND
CONSERVATION COMMITTEE

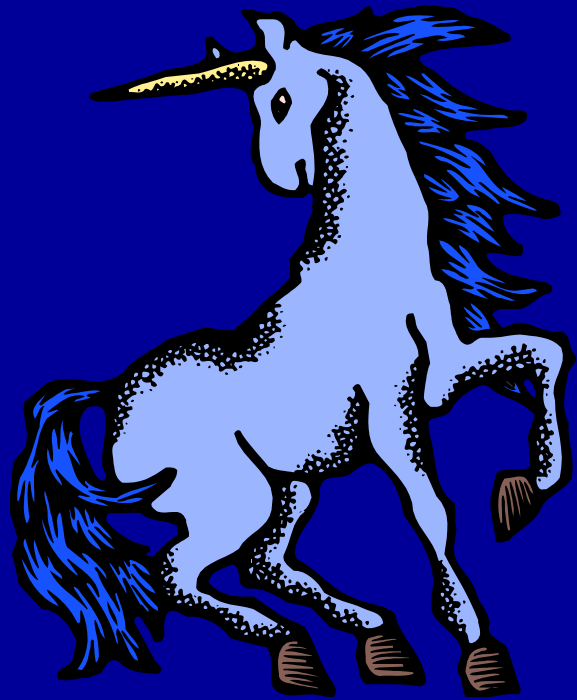
SEPTEMBER 16, 2009

“CALLS FOR CONSERVATION” - A WAKE UP CALL FOR US



- LEGISLATIVE
- REGULATORY
- MEDIA, PUBLICATIONS
- SUSTAINABILITY INTERESTS
- ENVIRONMENTAL
- POLITICAL
- PUBLIC PERCEPTION
- SUPPLY CONCERNS
- COST BENEFITS

WATER EFFICIENCY AND CONSERVATION PROGRAMS - MYTHS, MISCONCEPTIONS, REALITY



SHOULD NOT BE

- IDEALISTIC OR GUESSWORK
- UNSUPPORTED BY AN ORGANIZED PLAN
- MERELY FOR THE SAKE OF A PROGRAM
- NOT ARBITRARY, INEQUITABLE, PUNITIVE, DISCRIMINATORY, OR ILLEGAL

SHOULD INCLUDE

- PLANNING
- EVALUATION
- INVESTIGATION
- COST/BENEFIT ANALYSIS
- MEASUREMENT OF RESULTS

SYSTEMATIC APPROACH TO AN EFFECTIVE PROGRAM

- REVIEW DEMAND FORECAST
- REVIEW SYSTEM PROFILE
- EVALUATE EXISTING MEASURES
- DEFINE EFFICIENCY AND CONSERVATION POTENTIAL
- IDENTIFY EFFICIENCY AND CONSERVATION MEASURES
- DETERMINE FEASIBLE MEASURES
- PERFORM COST/BENEFIT ANALYSIS
- IMPLEMENT MEASURES
- EVALUATE SAVINGS
- MEASURE PERFORMANCE



WATER SYSTEM PROFILE

- SYSTEM OVERVIEW
- DETERMINE LOSS POINTS

WATER PLANT >

PLANT METERS >

TRANSMISSION MAINS >

MASTER METERING TO DISTRICTS, ZONES, AND

WHOLESALE CUSTOMERS >

SUBMETERING IN DISTRIBUTION >

STORAGE >

CUSTOMER METERS >

'METER READING AND BILLING'

WATER AUDIT AND WATER BALANCE

SYSTEM INPUT	AUTHORIZED CONSUMP.	BILLED AUTHORIZED CONSUMP.	BILLED METERED CONSUM. BILLED UNMETERED CONSUMP.	REVENUE WATER
		UNBILLED AUTHORIZED CONSUMP.	UN BILLED METERED CONSUMP. UNBILLED UNMETERED CONSUMP.	NONREV. WATER
WATER LOSSES		APPARENT LOSSES	UNAUTHORIZED CONSUMP. METERING INACCUR. DATE/BILLING ERRORS	
		REAL LOSSES	LEAKAGE - TRANS. & DIST. - STORAGE OVERFLOW - CUSTOMER SERVICES	

EFFICIENCY & CONSERVATION PROGRAM GOALS



“WHAT DO YOU WANT TO
ACCOMPLISH ?”

- COST SAVINGS
- ENVIRONMENTAL BENEFITS
- WATER SUPPLY LIMITATIONS
- ENERGY SAVINGS
- CUSTOMER BENEFITS
- REGULATORY COMPLIANCE
- PUBLIC PERCEPTION
- SUSTAINABILITY
- COMPETING USES
- RESULTANT WASTEWATER BENEFITS

EVALUATE PROGRAM GUIDELINES

“GUIDELINES FOR
GENERALLY
ACCEPTED WATER
MANAGEMENT
PRACTICES FOR
THE PUBLIC
WATER SUPPLY
SECTOR”

- EVALUATE “GUIDELINES” PER OVERVIEW AND GOALS
- DETERMINE PRACTICAL AND ECONOMIC FEASIBILITY OF PROGRAM MEASURES
 - COST EFFECTIVENESS
 - SUSTAINABLE APPROACH
 - FLEXIBILITY OF CHOICE
 - COMPLIANCE WITH CODES
 - AESTHETICS
 - FUNCTIONALITY
 - PERFORMANCE
 - SAFETY
 - SECURITY

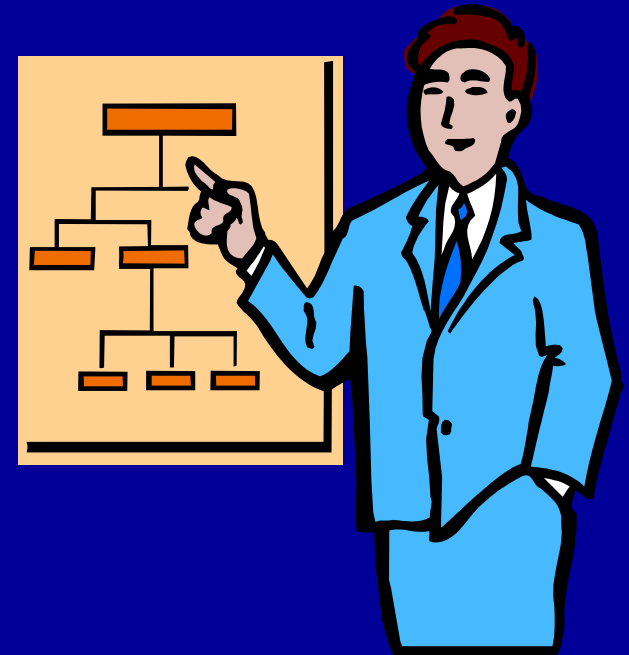
DEVELOP WORK PLAN & IMPLEMENTATION OF PROGRAM MEASURES

START UP

- ESTABLISH COMMUNICATIONS
- BUDGET PROGRAM
- ASSEMBLE THE PROGRAM TEAM
- ADVERTISE THE PROGRAM
- INVOLVE PUBLIC OFFICIALS
- INVOLVE THE PUBLIC
- PUBLIC EDUCATION EFFORT

ONGOING ACTION

- EVALUATE COST EFFECTIVENESS
- HIGHLIGHT SUCCESSES
- MARKETING & PRESENTATIONS
- OFFER ASSISTANCE TO LARGE USERS
- OVERSEE LOSS CONTROL
- REVISE CODES FOR MEASURES
- DEVELOP INCENTIVES



MEASURE PERFORMANCE & PROGRAM ADJUSTMENT



- WHAT ARE THE RESULTS?
- ARE GOALS MET?
- WHAT DOES THE COST/BENEFIT ANALYSIS SHOW?
- IS THERE ANY EFFECT ON RATES?
- WHAT IS THE EFFECT ON DEMAND FORECAST?
- ARE THERE ENERGY SAVINGS?
- WHAT LEVEL OF PARTICIPATION IS APPARENT?
- IS WASTEWATER FLOW AFFECTED?
- ARE PROGRAM MEASURES EFFECTIVE?
- ARE THERE UNINTENDED CONSEQUENCES?
- “EVALUATE AND ADJUST”

WATER EFFICIENCY AND CONSERVATION COMMITTEE



- INTERESTED?
- WANT TO BE INVOLVED WITH A VERY CURRENT ISSUE?
- WANT TO INFLUENCE HOW THIS ISSUE MAY IMPACT THE PUBLIC WATER SECTOR?
- WANT TO HELP FORMULATE A RATIONAL APPROACH TO EFFICIENCY/CONSERVATION?

CONTACT

KEN ZARZECKI, COMMITTEE CHAIR OR
ERIC WAY