



Kentucky Rural Water Association

Helping water and wastewater utilities help themselves

October 31, 2019

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PUBLIC SERVICE
COMMISSION

Ms. Gwen R. Pinson, Executive Director
Public Service Commission
P. O. Box 615
Frankfort, KY 40602-0615

Dear Ms. Pinson:

Kentucky Rural Water Association (KRWA) is applying for approval of a proposed water district management training program pursuant to KRS 74.020 and 807 KAR 5:070. The proposed session, entitled "Continuing Education Training for McCreary Co. Water District," will be conducted December 3, 2019, at the McCreary Co. Water District office in Whitley City, Kentucky. A copy of the proposed agenda is attached as **Exhibit 1**.

As reflected in Exhibit 1, the proposed training program will include presentations on the success of Kentucky's water utilities; a review of various methodologies to assess water loss and appropriate water loss control measures; an overview of roles and obligations for those who manage and operate utilities; and the importance of proper monitoring and evaluation of a utilities assets. These presentations will enhance the attendees' understanding of relevant issues involved in the management, operation, and maintenance of their utility.

The proposed training offers six hours of instruction and should be accredited and approved as water management training satisfying the requirements set forth in KRS 74.020(7) to establish a water district commissioner's eligibility for a maximum annual salary of \$6,000. **KRWA is not requesting that the proposed training program be accredited as a program of instruction for newly appointed commissioners.**

A biographical statement containing the name and relevant qualifications and credentials for the presenters is attached as **Exhibit 2**.

The written materials that each attendee will be provided are attached as **Exhibit 3** (PowerPoint presentations). Should the presenters revise or amend their presentations prior to the proposed session (or provide additional written materials to the attendees), KRWA will include a copy of the revised presentation with their sworn statement and report regarding the instruction.

Ms. Gwen R. Pinson
Page 2
October 31, 2019

KRWA is submitting this proposed training to the Kentucky Board of Certification of Drinking Water Treatment and Distribution System Operators and the Kentucky Board of Certification of Wastewater System Operators to request approval of continuing education credit for operators. A copy of the application is included as **Exhibit 4**. KRWA does not intend to submit this proposed training to additional agencies for accreditation.

Along with a list of the commissioners, their water district, and the number of hours they attend the session, KRWA will provide a sworn statement attesting the accredited instruction was performed and note any changings in the presenters or proposed program curriculum which may occur after certification.

With this letter and enclosed exhibits, the Kentucky Rural Water Association requests that the Commission approve and accredit the proposed training program entitled "Continuing Education Training for McCreary Co. Water District" for six hours of annual water district management continuing education credit.

Respectfully submitted,

A handwritten signature in blue ink that reads "Janet Cole". The signature is written in a cursive style with a large initial "J".

Janet Cole
Education Coordinator
j.cole@krwa.org

Enclosures
(Original and 10 packets)

EXHIBIT 1

Continuing Education Training for McCreary Co. Water District

Presented by

Kentucky Rural Water Association

December 3, 2019

McCreary Co. Water District Office

**456 North Hwy. 27
Whitley City, Kentucky**

8:30 a.m. – 9:30 a.m.

Session 1: What's so Great About Kentucky?

Presenter: Andy Lange, Kentucky Rural Water Association

In many ways, Kentucky's water and wastewater utilities lead the nation. This presentation will explore many factors that have gone into making this possible, from adequate financing allowing utilities to manage their capacity development to regulations stemming from the USEPA, KY Division of Water, and the Public Service Commission. These factors and other influences have allowed Kentucky's water utilities to operate more efficiently and serve greater areas than utilities in other states.

9:30 a.m. – 9:40 a.m. **BREAK**

9:40 a.m. – 10:40 a.m.

Session 2: Water Loss Evaluation: Percentage vs. Cost

Presenter: Gary Larimore, Kentucky Rural Water Association

With continuing aging infrastructure, water loss has become an increasingly important metric in the operation of water utilities. This presentation compares different methods of evaluating water loss with three different utilities utilizing cost parameters against traditional volumetric measures.

10:40 a.m. – 10:50 a.m. **BREAK**

10:50 a.m. – 11:50 a.m.

Session 3: Ethics and Responsibilities for Board Members and Operators

Presenter: Gary Larimore, Kentucky Rural Water Association

The board of a water utility sets the standard and tone by which the utility operates. As such, ethical board practices are crucial to the effective operation of a utility and set the standard for those who manage and operate the system. This session will define roles and responsibilities required of those serving the public.

11:50 a.m. – 12:30 p.m. **LUNCH (provided on-site)**

12:30 p.m. – 1:30 p.m.

Session 3: Ethics and Responsibilities for Board Members and Operators (cont.)

1:30 p.m. – 1:40 p.m. **BREAK**

1:40 p.m. – 3:40 p.m.

Session 4: Introduction to Asset Management

Presenter: Joe Burns, Kentucky Rural Water Association

Utilities possess many valuable assets with an expected life span before they need to be refurbished or replaced. Managing these assets is critical to ensuring near-term and long-term financial viability as well as regulatory compliance. This session will cover core components of asset management and the challenges and benefits for planning for the future

EXHIBIT 2

Speaker Bios

Andy Lange is the Assistant Director for the Kentucky Rural Water Association (KRWA) and has been employed there since 1989. Prior to joining KRWA, Mr. Lange worked for the Barren River Area Development District for five (5) years, providing administrative and financial assistance to local governments in the ten-county BRADD region. Mr. Lange has earned a Bachelor of Science in Geography and a Master of Public Administration from Western Kentucky University in Bowling Green, Kentucky. Mr. Lange's duties include involvement with all management and administrative activities of the Association. Other responsibilities include: coordinating and monitoring internal membership activities, producing and editing KRWA printed publications, and assisting in the administration of KRWA finance programs. He has been involved in the production of operation and maintenance manuals for water systems, the final report for the KY River Authority Water Counts project, and Operation Review studies for utilities.

Gary Larimore has been Executive Director of the Kentucky Rural Water Association since its formation in March, 1979. He received both Bachelor of Science and Master of Public Service Degrees from Western Kentucky University in Bowling Green, Kentucky. Mr. Larimore is responsible for the administration and day-to-day operation of the Association's office. His duties include budgeting and financial management, personnel management, and acting as the primary representative with the membership, the board of directors, and other outside organizations. Other primary duties include representing the Association's legislative and regulatory interests as a full-time lobbyist and working with water-related groups and organizations.

Joe Burns has been with Kentucky Rural Water Association since April, 1994. His experiences at KRWA have included implementing the NRWA source water protection program and oversight of the NRWA wellhead program and the Division of Water wellhead protection assistance grant. Prior to joining the KRWA staff, Mr. Burns was a Senior Groundwater Hydrologist for the Kentucky Division of Water beginning in July, 1991, where he was responsible for formulating Kentucky's Wellhead Protection Strategy. He also has experience in drilling and environmental monitoring. Joe holds Bachelor of Science and Master of Science degrees in Geology from Eastern Kentucky University. He currently works with the Assistance for Small Water Systems Initiative in partnership with the Kentucky Division of Water to provide Managerial, Financial, and Technical Assistance to small drinking water systems.

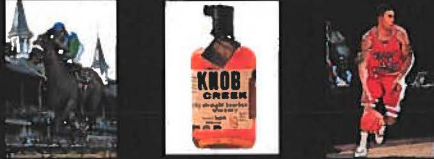
EXHIBIT 3

EXHIBIT 3

List of PowerPoint Presentations

- Session 1: What's So Great About Kentucky?**
- Session 2: Water Loss Evaluation: Percentage vs. Cost**
- Session 3: Ethics and Responsibilities for Board Members and Operators**
- Session 4: Introduction to Asset Management**

What's So Great About Kentucky...



...Water and Wastewater Utilities?

1

7 Contributing Factors

for

Kentucky's Water & Wastewater Utilities

to rank

Among the Best in America!

2

7 Contributing Factors

1

Climate/Geography

- Kentucky averages nearly 50 inches of rain each year
- Kentucky has the second most stream miles in U.S!
(Alaska - 1st)
- Kentucky relies more on surface water than groundwater
The only state in the U.S.

3

2

Federal Laws

- The Safe Drinking Water Act (1974)
- The Clean Water Act (1972)
- State Primacy (SDWA -1977, CWA - 1983)

4

3

State Laws & Regs

- DOW has been "out front" of most federal regulations
- KRS Chapter 74 established a framework for success!
- PSC jurisdiction has contributed to mostly-solvent utilities

5

4

Federal Funding

- USDA Rural Development in Kentucky is GREAT!!!
- Our U. S. Congressional delegation is very supportive
- Kentucky typically receives more from Washington than we pay in taxes

6

5

State Funding/Planning

- Kentucky's 20/20 Plan has led to \$900 million in funding
- SB 409 led to Planning and Project Profiles
- Kentucky Infrastructure Authority reorganized

7

6

KRWA

- Interim Loans - \$87.1 Million for 147 projects
- Flexible Term Loans - \$410 Million
- Trained - 80,000
- Assisted - 78,000
- 136 Utility Management Professionals

8

- Climate/Geography
- Federal Laws
- State Laws & Regs
- Federal Funding
- State Funding/Planning
- KRWA
- Natural Consolidation

9

7

Natural Consolidation

- Surface water treatment is more technically challenging
- Water districts and associations have expanded dramatically
- We're smarter than we look!



10

Public Water Systems

A system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves at least twenty-five individuals.

CWS - Community Water System (serves year-round)

Examples: Municipalities, Water Districts, Water Associations, Privately owned

TNCWS - Transient Non-Community Water System

Examples: Resorts, Restaurants, Motels, Campgrounds, State Parks

NTNCWS - Non-Transient Non-Community Water System

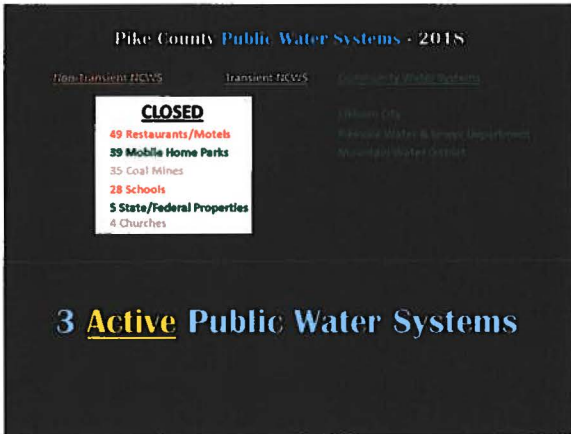
Examples: Schools, RV Parks, Industries, Senior Citizen Centers

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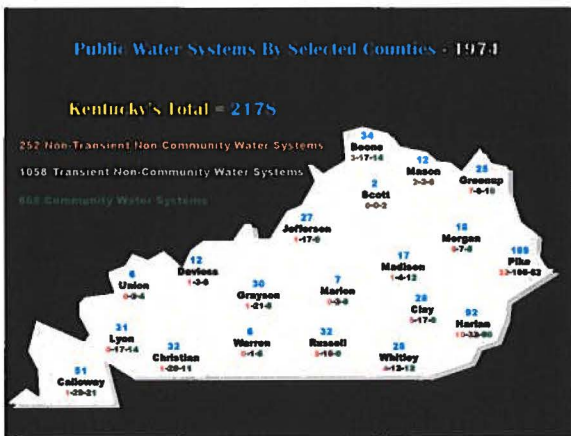
Natural Consolidation *Kentucky*

YEAR	TNCWS	NTNCWS	CWS	PWS	CHANGE
1974	1066	254	866	2186	
1979	805	252	755	1812	-17 %
1989	400	215	639	1254	-31 %
1999	199	85	497	781	-38 %
2009	49	26	408	484	-38 %
2019	25	15	352	392	-19 %

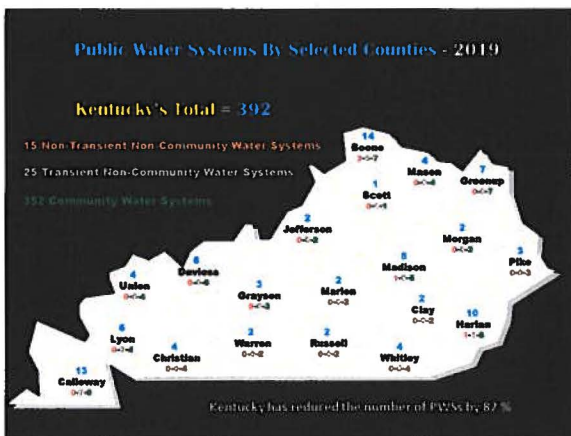
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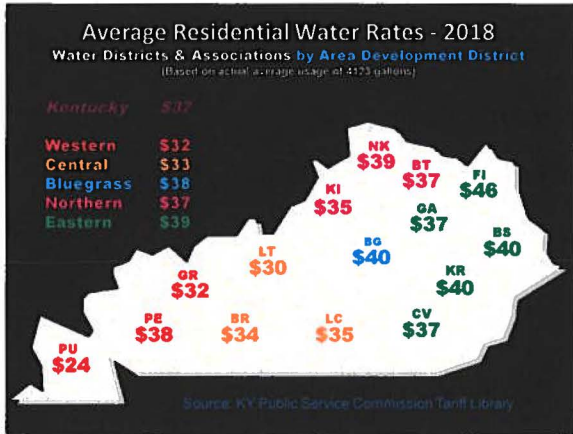
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22

Water Rate Comparisons - 2018

4,000 gallons

	Average	Median	Outside
All Cities (200)	\$29	\$28	\$36
Small Cities (97) (under 1,321)	\$32	\$32	\$39
Medium Cities (54) (1,321 - 4,000)	\$27	\$27	\$35
Large Cities (49) (over 4,000)	\$23	\$22	\$31
Water Districts/Associations (133)	\$37	\$37	-
All Utilities (333)	\$31	\$31	-

Sources: PSC, KIA, KRWA, Cannon & Cannon

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Sewer Rate Comparisons - 2018



4,000 gallons

	Average	Median	Outside
All Cities (201)	\$31	\$30	\$36
Small Cities (133) (under 1,321)	\$33	\$32	\$40
Medium Cities (75) (1,321 - 4,000)	\$29	\$28	\$41
Large Cities (24) (over 4,000)	\$36	\$35	\$37
Water Districts (74)	\$30	\$30	-
Sanitation Districts (21)	\$42	\$41	-
All Utilities (246)	\$32	\$31	-

Source: KIA, KRWA

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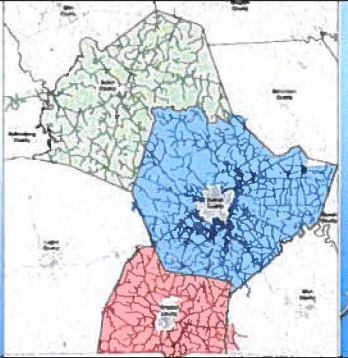
**WATER LOSS EVALUATION
PERCENTAGE vs COST**
Warren County Water District
Simpson County Water District
Butler County Water System, Inc.

1

MILES OF DISTRIBUTION MAIN:

Warren	1,156
Simpson	397
Butler	518



2

DISTRIBUTION MAIN BY SIZE

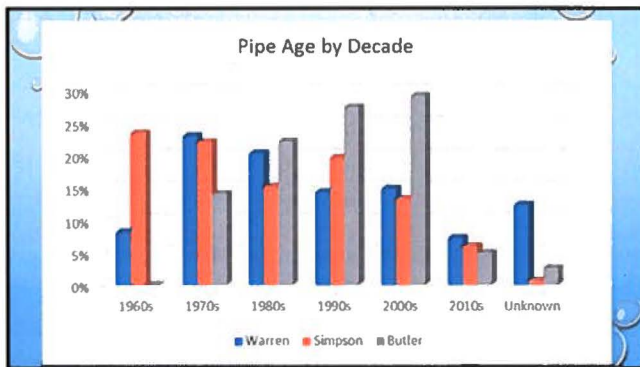
Pipe Size (in)	Miles		
	WARREN	SIMPSON	BUTLER
4" or Less	575	276	322
6"	351	61	159
8"	133	42	33
10"	34	10	1
12"	30	6	4
14"	5	0	0
16"	9	2	0
20" or Larger	19	0	0
Total	1,156	397	518

3

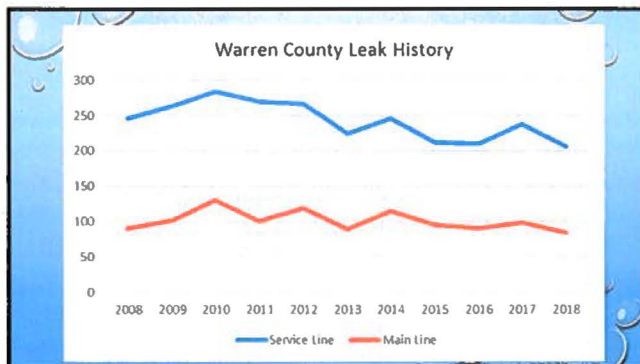
PIPE MATERIAL

	<u>Warren</u>	<u>Simpson</u>	<u>Butler</u>
Asbestos Cement	1.2%	11.1%	1.7%
Cast Iron	6.2%	0.1%	0.0%
Ductile Iron	3.5%	1.1%	0.7%
PVC	89.0%	87.7%	97.6%

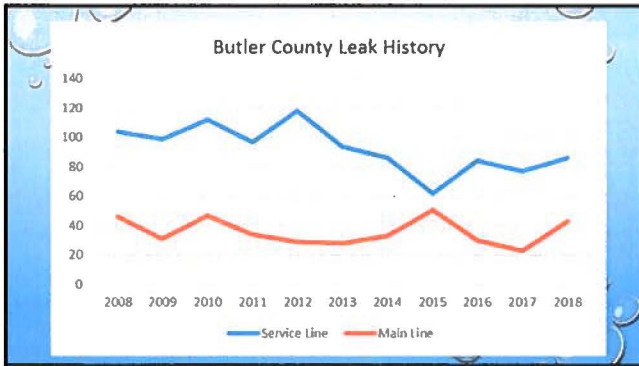
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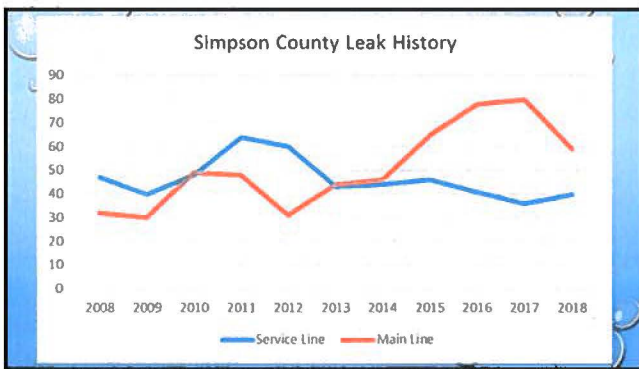
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YEAR 2018 STATISTICS			
	Warren County Water District	Simpson County Water District	Butler County Water System, Inc.
Description	Urban, Industrial, Agricultural	Agricultural, Some Industry	Rural
No. of Customers:	29,471	3,415	4,908
Residential	27,243	3,046	4,594
Commercial	2,107	336	301
Industrial	121	33	13
Largest Customer	Industrial	Feed Mill	Chicken House
Annually	181.7 MG	20.1 MG	3.1 MG
Daily	497,800 Gals	54,800 Gals	8,490 Gals

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YEAR 2018 STATISTICS (CON'T)

	<u>WARREN</u>	<u>SIMPSON</u>	<u>BUTLER</u>
Miles of Distribution Main	1,156	397	518
Customers Per Mile of Main	25.5	8.6	9.5
Miles of Service Line	179	23	31
Gallons Sold:	2,745,187,000	340,563,000	256,515,000
% Residential	53%	52%	87%
% Commercial \ Industrial	47%	48%	13%
New Meter Applications	801	42	50

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SOURCE OF SUPPLY

	<u>WARREN</u>	<u>SIMPSON</u>	<u>BUTLER</u>
Purchased (Gals)	3,145,932,000	423,024,000	
Produced (Gals)			329,354,000
Supplier	Bowling Green Municipal Utilities	White House Water District	N/A
Cost per 1,000 Gals	\$1.3570	\$2.6590	\$1.6138

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**2018 PSC ANNUAL REPORT
WATER STATISTICS (Ref Page 30)**

<u>Ln</u>	<u>WARREN</u>	<u>SIMPSON</u>	<u>BUTLER</u>
4 Purchased	3,145,932,000	423,024,000	-
Produced	-	-	329,354,000
13 Sold	<u>2,745,187,000</u>	<u>340,563,000</u>	<u>256,515,000</u>
Total Lost	400,745,000	82,461,000	72,839,000
17 Wastewater Plant	-	-	-
18 System Flushing	10,800,000	2,571,000	2,343,000
19 Fire Department	172,000	39,000	81,000
20 Other	<u>1,765,000</u>	<u>468,000</u>	<u>232,000</u>
21 Total Other Water Used	<u>12,737,000</u>	<u>3,078,000</u>	<u>2,656,000</u>

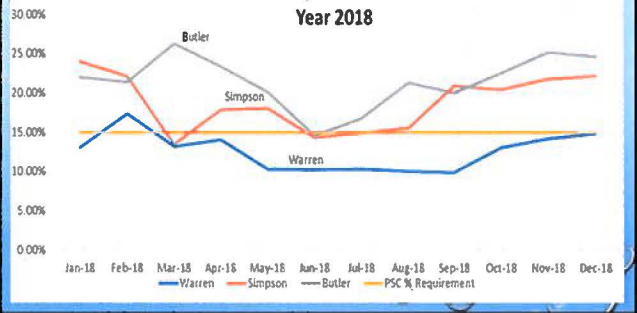
12

2018 PSC ANNUAL REPORT
 WATER STATISTICS (REF PAGE 30)
 (CONT)

Ln	WARREN	SIMPSON	BUTLER
24 Tank Overflows	121,000	-	266,000
25 Line Breaks	2,830,000	2,057,000	888,000
26 Line Leaks	382,446,000	76,350,000	66,249,000
27 Other	2,611,000	976,000	2,780,000
28 Total Line Loss	388,008,000	79,383,000	70,183,000
33 Line 28 divided by Line 4	12.3%	18.8%	21.3%

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PSC Monthly Volumetric Loss %
 Year 2018

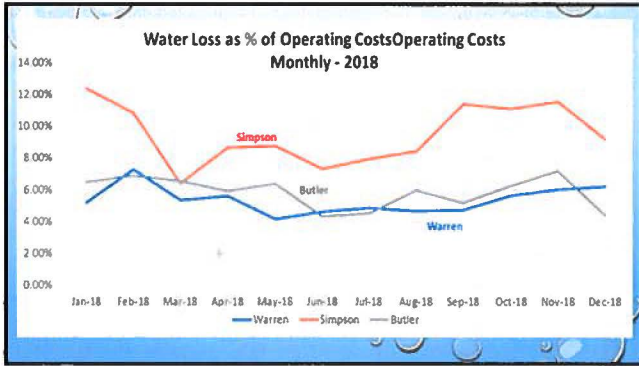


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FINANCIAL IMPACT
 YEAR 2018

	WARREN	SIMPSON	BUTLER
PSC Line Loss	388,008,000	79,383,000	70,183,000
Purchased \ Produced Cost per 1000 Gal	\$1.3570	\$2.6590	\$1.6138
Power Costs	\$0.1323	\$0.0622	\$0.1123
Total Pumping Costs	\$1.4893	\$2.7212	\$1.7261
Line Loss \$	\$577,863	\$216,019	\$121,143
Operating Costs	\$10,856,765	\$2,276,445	\$2,099,856
Line Loss as % of Operating Costs	5.3%	9.5%	5.8%

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<u>System Attributes:</u>	<u>WARREN</u>	<u>SIMPSON</u>	<u>BUTLER</u>	
Apparent Losses	20.211	2.590	1.967	MG/Yr
+ Real Losses	<u>360.640</u>	<u>76.041</u>	<u>63.413</u>	MG/Yr
= Water Losses	380.852	78.631	65.380	MG/Yr
Unavoidable Annual Real Losses (UARL)	321.11	77.31	120.65	MG/Yr
Annual Cost of Apparent Losses	\$80,845	\$16,599	\$15,529	
Annual Cost of Real Losses	\$537,715	\$203,104	\$40,543	Variable Cost

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<u>Performance Indicators:</u>		<u>WARREN</u>	<u>SIMPSON</u>	<u>BUTLER</u>
<u>Financial:</u>				
Non-revenue water as % by volume of Water Supplied		12.5%	19.3%	21.0%
Non-revenue water as % by cost of operating system*		5.9%	10.0%	2.8%
*Real Losses Valued at Variable Production Cost				

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**AWWA WATER AUDIT
YEAR 2018 (CON'T)**

Performance Indicators:

Operational Efficiency:	WARREN	SIMPSON	BUTLER	
Apparent Losses per service connection per day:	1.75	1.76	0.93	gals/conn/day
Real Losses per length of main per day:	854.72	524.76	335.07	gals/mile/day
Real Losses = Current Annual Real Losses (CARL):	360.64	76.04	63.41	MG/Yr
Infrastructure Leakage Index (ILI) [CARL/UARL]	1.12	0.98	0.53	
Data Validity Score	81	81	81	

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SUMMARY

	WARREN	SIMPSON	BUTLER
Volumetric:			
PSC Water Loss %	12.3%	18.8%	21.3%
AWWA Non Revenue Water %	12.5%	19.3%	21.0%
Financial:			
PSC Water Loss as % of Operating Costs	5.3%	9.5%	5.8%
AWWA Non-Revenue % of Operating Costs	5.9%	10.0%	2.8%
Line Loss \$ (Purch/Prod + Pumping)	\$577,863	\$216,019	\$121,143
AWWA Annual Cost of Real Losses	\$537,715	\$203,104	\$40,543

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**WATER LOSS EVALUATION
% vs \$**


WARREN COUNTY WATER DISTRICT
SIMPSON COUNTY WATER DISTRICT
BUTLER COUNTY WATER SYSTEM, INC.

QUESTIONS ?

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Kentucky Rural Water Association

ETHICS AND RESPONSIBILITIES FOR BOARD MEMBERS AND OPERATORS



Kentucky Rural Water Association

December 3, 2019

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1

Kentucky Rural Water Association

Introduction

- This presentation is designed to help you better understand your roles and responsibilities in delivering safe potable drinking water, and protecting the health and welfare of the public through proper operation and maintenance of the wastewater system.

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Utility Mission

- Protect the public health and safety
- Protect the environment
- Comply with federal and state regulations
- Serve large and small customers
- Tool to shape, facilitate, or encourage growth
- Maintain infrastructure in good operating condition

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3


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Board Member Basic Legal and Financial Responsibilities

- Fiduciary Responsibility
- Ethical Responsibilities
- Customer Relations
- Safe Drinking Water and Responsible Wastewater Management
- Laws, Rules and Regulations
- Strategic Planning, Operational Policies, and Procedures
- Board Conducts Business as a Quorum
- Records, Minutes and Notices

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Fiduciary Responsibility

- To exercise rights and powers for and on behalf of others with diligence and care
- To ensure that your water/wastewater system receives, records and spends funds in accordance with modern accounting, purchasing and record-keeping standards
- To assure that system revenue covers operations plus debt service plus reserves

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Ethical Responsibilities

- A public office is a public trust. The public has the right to secure and sustain trust against abuse, the board and each board member are expected to use the highest level of integrity in all matters dealing with the decision-making process
- Board members shall not gain financially or otherwise from their service on the board

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Customer and Customer Relations

- Your system exists to serve the public, and there are three major groups of players to do this and each with very different roles
 - Board or governing Body
 - Manager and Executive
 - Utility Staff/Employees

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Safe Drinking Water and Responsible Wastewater Management

- All board decisions must ensure that the water system will supply adequate and safe drinking water along with handling wastewater services

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Laws, Rules and Regulations

- The Board ensures compliance with all applicable federal, state and local laws and ordinances

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Strategic Planning, Operational Policies and Procedures

- The Board conducts strategic planning, sets policy, and sees that the system follows the operational policies and procedures

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Board Conducts Business as a Quorum

- A quorum is the minimal number of officers and members of a Board, usually a majority, who must be present for valid transactions of business

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Records, Minutes and Notices

- The Board is responsible to see that all decision making is conducted in open meetings and complies with Kentucky Statutes

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System Operation

- Keep all system components (i.e. source, treatment, storage, distribution and collection) functioning efficiently and effectively.

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General Responsibilities

- Monitor chemical feed and other system components.
- Monitor effectiveness of treatment.
- Prepare and maintain records of meter readings, tests, equipment, chemical use, correspondence, and customer complaint log.
- Develop a maintenance plan for the treatment plants, distribution system and wastewater collection system.

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General Responsibilities cont.

- Regularly read meters and gauges, making adjustments as needed.
- Periodically flush distribution system using hydrants and blow-off valves.
- Conduct SSES on wastewater collection system.
- Conduct preventative and routine maintenance on facilities and equipment.

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General Responsibilities

- Periodically assess efficiency of system components.
- Conduct frequent system and security inspections.
- Update system maps when a significant change to the distribution system or wastewater collection system has been made.

Training Manual for Wastewater Collection System Operators

16


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General Responsibilities

- Make all process control/system integrity decisions necessary to maintain the quality and quantity of water delivered to your customers.
- Attend training to meet state primacy agency's continuing education requirements.
- Create and follow Standard Operating Procedures (SOPs).

Training Manual for Wastewater Collection System Operators

17


 Kentucky Rural Water Association

Regulatory Compliance

- Comply with all relevant regulations, water and wastewater, to protect your customer's health.

Training Manual for Wastewater Collection System Operators

18


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General Responsibilities

- Develop and maintain a sampling plan, designed to protect the system, that covers all monitoring requirements.
- Collect or oversee collection of samples.
- Conduct routine inspections of water sources and watersheds to identify potential sources of contamination.

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General Responsibilities cont.

- Address any problems quickly and ensure that all required follow-up steps are taken (e.g. additional sampling, public notification, sanitary survey or other compliance inspection).
- File all required reports and maintain records.
- Resolve any compliance problems, in consultation with regulators, and gather information on upcoming regulations.
- Increase awareness of tools, reference materials, and other state and federal resources.

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Communication

- Maintain a positive relationship with customers, and the system decision makers and keep them informed of your efforts to provide high quality service of water and wastewater.

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General Responsibilities

- Report analytical results to regulators as required.
- Participate in the development and delivery of Consumer Confidence Reports (CCRs).
- Maintain, respond to, resolve, and keep a record of customer complaints.
- Communicate with the owner, manager, or board about technical and financial needs of your system (this includes training for recertification).

Making Water & Wastewater Utilities More Sustainable

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General Responsibilities cont.

- Records should be kept of any communication with decision makers.
- Inform the state of the results of technical improvements and their impact on the system.
- Inform the owner, manager, or board of any key findings from routine inspections and scheduled maintenance.

Making Water & Wastewater Utilities More Sustainable

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General Responsibilities cont.

- Provide input for planning and preparing for equipment replacement.
- Develop and maintain a plan for monitoring system process controls and meet all related goals, in consultation with the system owner, manager, or board.

Making Water & Wastewater Utilities More Sustainable

24


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Security

- Protect your system against natural disasters and vandalism.

Public Water & Wastewater Utilities Bill, Kentucky

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 Kentucky Rural Water Association

General Responsibilities

- Develop a plan to protect your facilities in case of an emergency, including updating your policies and procedures manual with security related information.
- Inspect critical facilities and components, including door locks and fencing as part of your daily inspections.
- Store chemicals in locked areas with proper safety equipment.

Public Water & Wastewater Utilities Bill, Kentucky

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General Responsibilities

- Maintain a list of written contacts for use in an emergency and make sure you know whom to contact in the event of an emergency.
- Exercise valves on a routine basis and make sure there are enough valves, in appropriate locations, to isolate parts of the system in the event of contamination
- Attend security related training when available.
- Educate other staff on emergency procedures and keep contact information up to date.
- Emergency Response Plans.

Public Water & Wastewater Utilities Bill, Kentucky

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Role of the Supervisor

- Encourage and Correct
 - Acknowledge the good choices
 - Should be the norm
 - Address the bad choices

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Role of the Supervisor

- Provide Training/Resources
 - Ensure that employees know the standards
 - Ensure that employees understand the application of the standards

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Responsibility of a Supervisor

- Promote Ethical Environments
- How?

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THE ETHICAL PUBLIC WORKS Supervisor

- Honesty - Competence
- Responsibility - Dedication
- Loyalty - Courage
- Trustworthiness - Professionalism
- Compassion - Respect

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401 KAR 11:020

- Standards of Professional Conduct for Certified Operators

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401 KAR 11:020

- A certified operator shall, during the performance of operational duties, protect the safety, health, and welfare of the public and the environment.
- A certified operator shall use reasonable care and judgment in the performance of operational duties.

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401 KAR 11:020
cont.

- If a certified operator's judgment is overruled by an employer under circumstances in which the safety, health, and welfare of the public or the environment are endangered, the certified operator shall inform the employer of the possible consequences.
- A certified operator shall be objective, truthful, and complete in applications, reports, statements, or testimony provided to the cabinet

http://www.kwrwa.org/Member-Resources

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401 KAR 11:020
cont.

- A certified operator shall ensure the integrity of the samples that the operator collects, prepares, or analyzes so that results will be a true representation of water quality.
- Proof of certification. While on duty, a certified operator shall carry the cabinet issued wallet card showing the operator's current certification status.

http://www.kwrwa.org/Member-Resources

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401 KAR 11:020
cont.


- **Maintenance of Records.** If information related to the operator's employment or mailing address changes from that provided in the application for certification, the certified operator shall provide written notification to the cabinet within 30 days.

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• SO, WHAT IS YOUR ROLE AND RESPONSIBILITY TO YOUR UTILITY



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**WORK ETHICS
(Learning Goals)**

- The importance of developing a strong work ethic and how the work ethic you develop will impact your future as an employee.

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What is Work Ethics

- Definition: A standard of conduct and values for job performance.

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Expectations for Employees

- What does an employer want?
- What are the traits of a winning employee?

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Top 10 Work Ethics

- Attendance
- Character
- Teamwork
- Appearance
- Attitude
- Productivity
- Organizational Skills
- Communication
- Cooperation
- Respect

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Work Ethics - Attendance

- Be on time...Don't be absent
- Limit Absences – Be at work every day possible; Plan your absences; Don't abuse leave time
- Come to work on time – Be punctual every day

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Work Ethics - Character

- Be Honest – Honesty is the single most important factor having a direct bearing on the final success of an individual or utility
- Be Dependable – Complete assigned tasks correctly and promptly
- Be Loyal – Speak positively about the company, supervisors and fellow employees
- Be Willing to Learn – Look to improve your skills

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Work Ethics- Teamwork

- Working toward a goal requires cooperation and respect
- Be a Team Player – The ability to get along with others – including those you don't necessarily like
- Leadership Abilities – The ability to be led and/or to become a leader

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Teamwork cont.

- Be a Contributing Member – The ability to carry your own weight and help others who are struggling
- Accept Compromise – Recognize when to speak up with an idea and when to compromise by blending ideas together

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Work Ethics - Appearance

- Dress Appropriately – Dress for success, Set your best foot forward
- Personal Hygiene - _____
- Good Manners – Hand shake, Demeanor, Eye Contact
- Remember that the first impression of who you are can last a lifetime

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Work Ethics - Attitude

- Have a Good Attitude – Listen to suggestions, Be Positive
- Accept Responsibility for One’s Work – If you make a mistake, admit it

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Work Ethics - Productivity

- Do the work correctly
- Quality and timeliness are prized
- Get along with co-workers – cooperation is the key to productivity
- Help out whenever asked, Do “extras” without being asked
- Take pride in your work, Do things the best you know how

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Work Ethics – Organizational Skills

- Written Communications – Being able to correctly write reports and memos
- Verbal Communications – Being able to communicate one on one or to a group

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Work Ethics – Cooperation

- Follow company rules and policies, learn and follow expectations
- Get along with co-workers, cooperation is the key to productivity
- Appreciate privileges and don't abuse them, privileges are favors and benefits

Helping Rural Water Providers Succeed Through Technology

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Work Ethics - Respect

- Work Hard –Work to the best of your ability
- Carry Out Orders – Do what's asked the first time
- Show Respect – Accept and acknowledge an individual's talents and knowledge
- Be Sensitive to Racial and Cultural Difference

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Why People Lose Their Jobs

- They Get Laid Off – Job loss not their fault
- They Get Fired – Job lost because of their actions

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Common Reasons Why Employees are Fired - Attendance

- Being late or absent from work – shows lack of responsibility, can hinder productivity

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Reasons Employees are Fired - Character

- Being Dishonest – Trust, once lost, is hard to regain
- Being Unreliable – Dependability is an employee asset
- Abusing Drugs or Alcohol – Can create health and/or safety issues

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Reasons Employees are Fired – Teamwork

- Bossing others around – giving orders is the boss's job
- Not Carrying Your Weight – Not doing your part, relying on others to do your job for you

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Reasons Employees are Fired – Appearance

- Dress Code –This can be a safety issue as well as a disregard for rules
- Remember that you are a representative of your utility, how you dress and act can reflect either positive or negative on the utility

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Reasons Employees are Fired – Attitude

- Being Troublemakers – Stirring up dissent among others, Causing arguments and problems
- Being rude and using abusive language
- Inappropriate behavior is inexcusable

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Reasons Employees are Fired – Productivity

- Failing to do the task/job properly (costly errors hurt business as well as your image)
- Being Lazy – It is a form of theft
- Being Careless – Can lead to accidents/profit loss

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Reasons Employees are Fired – Organizational Skills

- Loosing tools and materials, unable to locate items
- Lacking of time management, not meeting deadlines
- Unprepared – Not ready for meetings or presentations and even everyday tasks

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Reasons Employees are Fired – Communication

- Failure to Communicate (written and/or verbal) – Unable to properly express one's thoughts and ideas
- Unable to interpret instructions and directions

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**Reasons Employees are Fired –
Cooperation**

- Not getting along with others
- Failing to follow rules and policies
- Not following instructions “Doing your own thing”

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**Reasons Employees are Fired –
Respect**

- Being Disrespectful – Argumentative and confrontational
- Making fun of, harassing, or discriminating against others (could bring on legal issues)

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**Reasons Employees are Fired –
Other**

- Being dissatisfied all the time
- Theft
- Incompetence – Lack of ability to perform assigned tasks

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Positive Actions to Take if You're Fired

- Correct your faults, move forward
- Don't repeat your mistakes, learn from them
- Think positively about your next job

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ETHICS

- The discipline dealing with what is good and bad and with moral duty and obligation.
- A set of moral principles and/or values.

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MORALS

- Of or relating to principles of right and wrong in behavior.
- Expressing or teaching a conception of right behavior.

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BELIEFS

- Society's opinion of:
 - Right and wrong
 - Moral and immoral
 - Good and bad
 - Happy and Unhappy

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Unconscious Bias

- Psychological Studies
 - Our desires powerfully influence the way we interpret information.
 - Even if we try to be objective and impartial.
 - Most of us think;
 - We are better than the average driver.
 - Our kids are smarter than the average.
 - We are not too drunk to drive.

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VALUES

- Honesty (truthfulness, openness)
- Integrity (convictions, courage)
- Objectivity (independence, fairness, equality)
- Promise Keeping (fulfilling commitments)
- Fidelity (loyalty, confidentiality)
- Caring (compassion, kindness)
- Respect (dignity)
- Accountability (responsibility)
- Excellence (quality of work)
- Citizenship (respect of law, social consciousness)
- Character

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ETHICS

- Our individual feelings of moral duty and moral obligation that guide how we actually behave and act
- Our own guidelines and rules to help us make decisions of right and wrong while we strive for what the ancient Greeks called “eudaimonia” or happiness and flourishing in our life and our work.

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ACTIONS

- Our response or decision made when faced with an ethical dilemma
- Our actions can be
 - Intellectual
 - Emotional
 - Physical

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Our Own Ethics Orientation

Whatever our level of moral development, we have all developed our own individual ethical orientation or tendencies we follow when faced with making decisions that involve ethical dilemmas.

What is your ethical orientation?

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Your Ethical Orientation

1. Which is worse?


- a. Hurting someone's feelings by telling the truth

or

- b. Telling a lie and protecting their feelings

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Your Ethical Orientation

2. Which is the worse mistake?


- a. To make exceptions too freely

or

- b. To apply rules too rigidly

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Your Ethical Orientation

3. Which is it worse to be?


- a. Unmerciful

or

- b. Unfair

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Your Ethical Orientation

4. Which is worse?


- a. Stealing something valuable from someone for no good reason

or

- b. Breaking a promise to a friend for no good reason

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Your Ethical Orientation

5. Which is better to be?


- a. Just and fair

or

- b. Sympathetic and feeling

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Your Ethical Orientation

6. Which is worse?


- a. Not helping someone in trouble

or

- b. Being unfair to someone by playing favorites

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Your Ethical Orientation

7. In making a decision, on which do you rely more?


a. Hard facts

or

b. Personal feelings and intuition

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Your Ethical Orientation

8. Your boss or superior orders you to do something that is hurtful to someone. If you carry out the order, have you actually done anything wrong?


a. Yes

or

b. No

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Your Ethical Orientation

9. Which is more important in determining whether an action is right or wrong?


a. Whether anyone actually gets hurt

or

b. Whether a rule, law, commandment moral principle is broken

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Ethical Orientation- What's is Yours?

- **Ethics of Justice (J orientation)**
 - Based on equal application of moral principles and laws or policies with little flexibility or exceptions
 - Generally more common of men than women
- **Ethics of Care (C orientation)**
 - Based on sense of responsibility to reduce harm and suffering with considerable flexibility for individual cases
 - Generally more common of women than men

(Based on Ethical Orientation Questionnaire developed by the Center for Ethics and Business at Loyola Marymount University)

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Ethics – What's in it for me?

- A more accurate understanding of the world around you
- Greater control over your behavior
- A stronger personality
- A greater likelihood of a happy and healthy life

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Points Learned

- Conscience be your guide
- Honesty
- Feelings and Beliefs
- Think through situation first
- Concerns for results to society
- Education
- Expectations
- Work when you're alone like you would as if you are being watched

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THE ETHICAL PUBLIC WORKS Supervisor

- Honesty - Competence
- Responsibility - Dedication
- Loyalty - Courage
- Trustworthiness - Professionalism
- Compassion - Respect

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"It takes a lifetime to build a good reputation, but you can lose it in a minute"

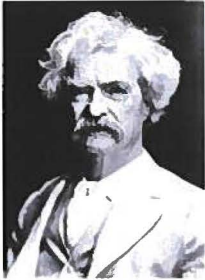
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"When in doubt, tell the truth."

Mark Twain



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Serving the Public Interest

- *Civil servants and public officials are expected to maintain and strengthen the public's trust and confidence in government, by demonstrating the highest standards of professional competence, efficiency and effectiveness, upholding the Constitution and the laws, and seeking to advance the public good at all times.*

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AS A PUBLIC OFFICIAL YOU SHOULD BEHAVE ETHICALLY BECAUSE:

- The public trusts that you will act in the public interest, not your personal one.
 - Is there a lot of trust (mistrust) today?
- You have a virtual monopoly over the infrastructure that supports the public's well being
- Why else are you in the public sector if not to do the right thing? It's certainly not for the money.

Helping Water & Wastewater Users Meet Their Needs

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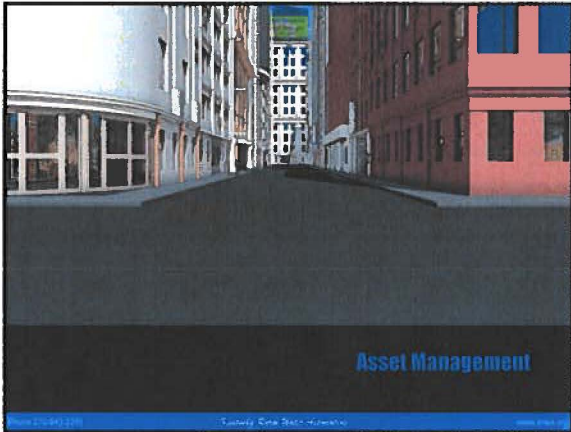
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Closing Thought

No regrets, live your life so the preacher won't have to lie at your funeral.

Helping Water & Wastewater Users Meet Their Needs

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1



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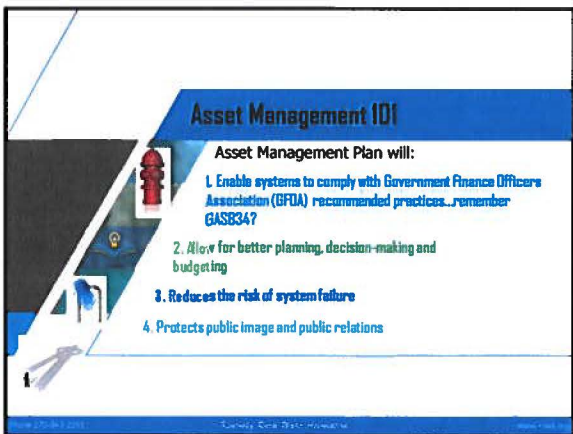
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5



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5 Core Components of Asset Management

1. Assets
2. Service Level
3. Criticality
4. Life cycle
5. Funding

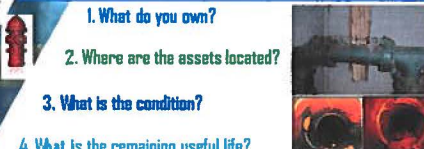


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Assets

1. What do you own?
2. Where are the assets located?
3. What is the condition?
4. What is the remaining useful life?
5. What is the value?




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How Do I Inventory My Assets

1. Record information about assets such as location, age, condition & value.
2. Used spreadsheets, GIS or custom software to track assets.
3. The inventory is a time intensive job.
4. Get the best information you can, but don't get bogged down. Use estimates where needed.



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Service Level - Customer expectations


1. What do your customers want?
2. What do the regulations require?
3. What are the utility's performance goals?
4. What is the physical capability of your assets?
5. How will you measure performance?
6. What are your customers willing to pay?



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Service Level - Considerations


1. Service history of the asset
2. Future performance of the asset
3. Record keeping responsibilities
4. Don't forget customer service



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Criticality - Consequence (cost) vs Probability of Failure

1. What is the probability of failure?
2. What is the consequence of failure?
3. What is the cost of repair or do you have backup equipment?
4. What are the other costs associated with failure?
5. Can you increase energy efficiency?



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Life Cycle - Replacement costs

1. What is the life expectancy of your assets?
2. What are the operation and maintenance costs?
3. What will it cost to replace them?
4. How do you know when to repair / rehabilitate and when to replace?

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Life Cycle - Strategies for O&M and CIP

1. Reactive or Run to Failure
2. Proactive or Preventative Maintenance
3. Predictive Maintenance
4. Capital Improvement Planning
 - > Repair
 - > Refurbish / rehab
 - > Replace
 - > Decommission

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Funding

1. Where will you get the money for operation and maintenance?
2. Where will you get the money for asset replacement?
3. What are the full economic costs associated with the utility?

Example: Rate Studies – State and federal programs

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Plan For The Future

1. Create reserve accounts: Reserve all or some depreciation to fund CIP & emergencies.
2. Cost based rates: Make sure you know your cost to provide service and develop the rate structure accordingly.
3. Form partnerships: Working with other water systems may allow you to lower costs, simplify management and maintain service.
4. Apply for funding: Loans are necessary & grants are rare. Maintain a good relationship with funding agencies. Always have a project ready to go.

Example: Strategic Planning

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Challenges of Asset Management

Challenges

- Determining the best (or optimal) time to rehabilitate, repair or replace aging assets
- Increasing demand for services
- Overcoming resistance to rate increases
- Diminishing resources
- Rising service expectations of customers
- Increasingly stringent regulatory requirements
- Responding to emergencies as a result of asset failures
- Protecting assets

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Benefits of Asset Management

Benefits

- Prolonging asset life and aiding in rehabilitate/ repair/replacement decisions through efficient and focused operation and maintenance
- Meeting consumer demands with a focus on system sustainability
- Setting rates based on sound operational and financial planning
- Budgeting focused on activities critical to sustained performance
- Meeting service expectations and regulatory requirements
- Improving response to emergencies
- Improving security and safety of assets

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Final Words

- Some of the youngest water utilities in Kentucky are celebrating 50 years.
- Maintenance will only take you so far; at some point replacement is the only answer.
- Planned replacement is always better than emergency response.
- Plan wisely; customer rates pay for the future.

"If you don't have time to do it right, you must have time to do it over." - John Wooden

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Questions and Comments

Thank You!

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EXHIBIT 4

<p>Mail to:</p> <p>Division of Compliance Assistance Certification and Licensing Branch Operator Certification Program 300 Sower Blvd. Frankfort, KY 40601</p>	<p>Commonwealth of Kentucky Department for Environmental Protection</p> <p>Application for Approval of Courses for Continuing Education Credit</p> <p><i>Drinking Water Treatment, Drinking Water Distribution, Bottled Water, Wastewater Treatment and Collection System</i></p> <p>Telephone: 1-800-926-8111 www.dca.ky.gov/certification</p>	<p><i>For Official Use Only Do not write in this space</i></p> <p>COPY</p>
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I. **Course Sponsor Information:** Agency Interest Number: 108571

A. Sponsoring Organization (school, business, association, etc.):

Kentucky Rural Water Association

Key Contact Person:

Name and Title: Janet Cole, Education Coordinator

Address: 1151 Old Porter Pike

City, State and Zip: Bowling Green, KY 42103

Phone and Fax: Ph: 270.843.2291 Fx: 270.796.8623

E-mail: J.cole@krwa.org

Web Page: www.krwa.org

One-Time Approval Requested

Two-Year Approval Requested

B. If individual requesting approval is different than the key contact person for the sponsor, please complete the following information:

Name and Title: _____

Address: _____

City, State and Zip: _____

Phone and Fax: _____

E-mail: _____

II. **General Course Information:**

A. Title: Continuing Education Training for McCreary Co. Water District

B. Location and Date/s: McCreary Co. Water District Office, Whitley City, KY / December 3, 2019

C. Cost per Student or Group: \$ _____

D. Delivery Format or Media (check those that apply):

Classroom

Web/Online

Laboratory

Exhibition

Field

CD-ROM

Video/Audio

Correspondence

Other
(Explain)



E. Continuing Education Credits (hours) Requested for Target Audience:

Drinking Water Treatment, Distribution and/or Bottled Water: 6 hours

Wastewater Treatment and/or Collection: 5 hours

(Attach a detailed description explaining how this training relates to the wastewater treatment process.)

III. Required Items (must be attached to submittal, check off as completed):

- A. Course Learning Objectives
- B. Criteria for Successful Completion by Operators
- C. Agenda (timed with instructors identified and brief description of topics)
- D. Credentials for All Instructors

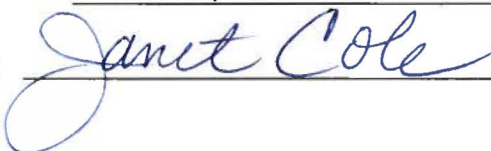
IV. Additional Attachments (required for distance learning courses, optional for other training):

- A. Instructional Design (developed by whom/their credentials)
- B. Curriculum Content (subject matter experts/their credentials)
- C. Required Assignments and/or Examinations (type, passing score, etc.)
- D. Mandatory Time Constraints (deadlines, granting of extensions, etc.)

V. Signature of Sponsor's Contact Person

I confirm that all information provided with this application is accurate to the best of my knowledge. A complete list of attendees and credits to be awarded to them will be forwarded on a "Continuing Education Activity Report" to the Kentucky Division of Compliance Assistance (within 30 days of completing the course when possible).

Printed Name and Title: Janet Cole, Education Coordinator

Signature and Date: 

October 31, 2019