

**Lindell E. Ormsbee**

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August 24, 2017

RECEIVED

AUG 25 2017

PUBLIC SERVICE
COMMISSION

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

Re: Application for approval of Workshop-in-a-Box Training of water district commissioners

Dear Ms. Matthews:

The Kentucky Water Resources Research Institute and collaborators from the National Environmental Services Center at West Virginia University have scheduled a workshop at the KRADD Conference Center in Hazard, Kentucky on September 14, 2017. The "Sustainable Management of Rural and Small Systems Workshop" was developed by the US EPA and the USDA and focuses on ten key management areas for small drinking water and wastewater utilities. The workshop is being offered at no cost to the participants through financial support provided by USDA.

We have enclosed the following materials in support of this application:

- 1) The name and address of the application (included in this transmittal letter).
- 2) The name and sponsor of the program and the subject matter covered by the program (included in this transmittal letter).
- 3) A summary of the content of the program (training summary/timed agenda is attached)
- 4) The number of credit hours requested by the program: 6
- 5) The name and relevant qualifications and credentials of each instructor presenting the program: Dr. Lindell Ormsbee (PhD) and Katherine Garvey (JD), bio-sketches attached.
- 6) A copy of written materials given to water commissioners attending the program (class Powerpoint slides are attached)
- 7) A copy of certification of the program for 6 hours by the KY Division of Compliance Assistance, Certification and Licensing Branch for water and wastewater operators (a copy of the certification is attached)

We respectfully request that the training also be approved for 6 hours of continuing education credits as management training for commissioners of water districts, combined water, gas or sewer districts, or water commissioners as referenced in 807 KAR 5:070. This workshop was previously approved by the PSC for our June workshop at Carter Caves.

Thank you for your consideration in this matter. If you have any questions, please do not hesitate to contact me.

Sincerely

A handwritten signature in black ink, appearing to read "L. Ormsbee", with a long horizontal flourish extending to the right.

Lindell E. Ormsbee, P.E., P.H., Ph.D, D.WRE, F.ASCE, F.EWRI
Director of the Kentucky Water Resources Research Institute
Director of the Kentucky Center of Excellence for Watershed Management
Associate Director of the UK NIEHS Superfund Research Program
Raymond-Blythe Professor of Civil Engineering
(859)-257-6329

SUSTAINABLE MANAGEMENT OF RURAL AND SMALL SYSTEMS WORKSHOP AGENDA

September 14, 2017

KRADD Conference Center, Hazard, Kentucky

8:30 am – 4:30 pm

FACILITATOR(S): Lindell Ormsbee, Professor, University of Kentucky, Department of Civil Engineering

SPEAKER: Katherine Garvey, Director, WVU Land Use and Sustainable Development Law Clinic

Time	Session
8:30	Sign-in/Registration (30 minutes)
9:00	Introductions and Workshop Objectives (15 minutes) Lindell Ormsbee, Director KWRRRI
9:15	Session 1: Overview of Key Management Areas – Presentation (30 minutes) [Katherine] <ul style="list-style-type: none">• Presentation of Key Management Areas• Group Discussion: Other Important Management Areas for Sustainability
9:45	Session 2: Utility ‘Self Assessment’ Exercise (55 minutes) [Lindell] <ul style="list-style-type: none">• Explain “Sustainable Management Self Assessment” (5 minutes)• Participants Conduct Self Assessment (20 minutes)<ul style="list-style-type: none">○ Rate utility achievements and rank management priorities○ Where is your utility strong? Why?○ Where is there the most room for improvement? Why?• Explain Plotting of Results: achievements vs. priorities (5 minutes)<ul style="list-style-type: none">○ Plot Results (20 minutes)○ What are your areas of focus (high priority and low performance)?<ul style="list-style-type: none">▪ Why are they a priority?▪ Why is performance low?<ul style="list-style-type: none">• Technical capacity?• Financial capacity?• Managerial capacity?• What are the commonalities and differences among table participants’ achievements, priorities, and challenges? (5 minutes)

- 10:40 Break (15 minutes)**
- 10:55 Session 3: Plenary Discussion – Self Assessment Results (1 hour)**
- Tables Report Out (30 minutes) [Katherine]
 - Chris Wells – Overview of RCAP (20 minutes)
 - Synthesize Results by Plotting Entire Group (10 minutes) [Lindell]
- 11:55 Working Lunch (1 hour) Discussion of Group Plotting
(plus Paulette Akers, KYDOCA; Greg Copley, CAER)**
- 12:55 Session 4: Improving Outcomes (50 minutes)**
- Tips from previous Improving Outcomes Exercises [Katherine]
 - Each participant completes an improvement worksheet for one low achievement/high priority management area (30 minutes) [Lindell]
 - Discussion Questions:
 - What will constitute “high achievement” in this management area?
 - What changes will the utility need to make to improve performance?
 - How could you track your performance progress?
 - What will be the biggest challenges to performance improvement?
 - Participants share improvement worksheet results at their tables (10 minutes)
- 1:45 Session 5: Plenary Discussion – Practices, Tools, and Measures: Results (30 minutes)**
- Tables Report Out [Katherine]
 - General Discussion of Findings [Katherine]
- 2:15 Break (15 minutes)**
- 2:30 Session 6: Tools, Guides and Other Resources (40 minutes) [Katherine]**
- Presentation of Additional Tools, Guides and Other Resources
 - Jocelyn Gross – Overview of KIA
- 3:10 Session 7: Creating an Action Plan (40 minutes) [Lindell]**
- Discuss Utility Management Improvement Plan
 - Complete a Sustainable Management Action Plan Worksheet
- 3:50 Session 8: Sharing Success Stories (20 minutes) [Katherine]**
- 4:10 Session 9: Next Steps (10 minutes) [Lindell]**
- 4:20 Session 10: Feedback Session (10 minutes) [Jeanne]**
- Participants Complete Workshop Evaluation Form
- 4:30 Adjourn**

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Director, Kentucky Water Resources Research Institute
Director, Research Translation Core, University of Kentucky Superfund Research Center
Director, Kentucky Center of Excellence for Watershed Management
Associate Director, University of Kentucky Superfund Research Center
Raymond-Blythe Professor of Civil Engineering Raymond-Blythe Professor of Civil Engineering

Education

Ph.D. Purdue University, 1983
M.S. Virginia Polytechnic Institute and State University, 1979
B.S.C.E. University of Kentucky, 1978

Professional Registration

Professional Engineer, State of Kentucky
Professional Hydrologist, American Institute of Hydrology
Diplomate, American Academy of Water Resource Engineers

Professional Employment

2010 - Present: Director, Kentucky Center of Excellence for Watershed Management
2009 - Present: Associate Director, University of Kentucky Superfund Research Center
2005 - Present: Director, Research Translation Core, UK Superfund Research Center
2004 - Present: Director, Kentucky Water 2004 - Present Resources Research Institute
2003 - Present: Raymond Blythe Professor of Civil Engineering
2003 - 2009: Director. Kentucky Research Consortium for Energy and the Environment
2000 - 2006: Director, Eastern Kentucky PRIDE Water Quality Assessment Program
2000 - 2003: Associate Director, Kentucky Water Resources Research Institute
2000 - 2002: Interim Director, Tracy Farmer Center for the Environment
1999 - Present: Kentucky River Basin Coordinator
1998 - 1999: Acting Director, Kentucky Water Resources Research Institute
1997: Visiting Researcher - Kentucky Environmental Protection Agency
1995 - 1998: Associate Director, Kentucky Water Resources Research Institute
1996 - 2003: Professor of Civil Engineering, University of Kentucky
1989 - 1996: Associate Professor of Civil Engineering, University of Kentucky
1983 - 1989: Assistant Professor of Civil Engineering, University of Kentucky
1979 - 1981: Project Engineer, Howard K. Bell Consulting Engineers, Lexington, KY

Research Interest and Expertise

Dr. Ormsbee is the Raymond-Blythe Professor of civil engineering at the University of Kentucky. Since joining the faculty of the University of Kentucky in 1983, Dr. Ormsbee has been actively engaged in research, teaching, and consulting in water resources and environmental engineering and has published more than 250 technical papers and reports on various topics in this field. In addition to serving on numerous international, national, and state committees, Dr. Ormsbee has spoken to hundreds of audiences at various technical conferences and other meetings across the United States as well as overseas.

Dr. Ormsbee currently serves as the director of the Kentucky Water Research Institute, the Kentucky Center of Excellence for Watershed Management as well as the associate director of the UK Superfund Research Center. In the past he has served in several other research administrative capacities including, Director of the Kentucky Research Consortium for Energy and Environment (03-09), Director of the Tracy Farmer Center for the Environment (02-03), Director of the UK-PRIDE Water Quality Assessment Program (00-06), the Chair of the Kentucky Environmental Quality Commission (04-06), and the Chair of the Scientific Advisory Board of the Kentucky Watershed Watch Program (04-09). From 1985 to 1998 he served in various capacities in the Kentucky Section of the American Society of Civil Engineering, culminating as president in 1998. In 2003 he served as Chair of the EWRI-ASCE Council on Emerging and Innovative Technologies and in 2004 he was elected Vice-President of the American Institute of Hydrology. In 2008, Dr. Ormsbee served on a BOSC technical review committee for the EPA Homeland Security Program.

Dr. Ormsbee's current research efforts are directed toward the application of systems analysis methods to complex problems in water resources and environmental systems. Over the last 30 years, Dr. Ormsbee has directly managed (as either a PI or Co-PI) over 21 million dollars in external contracts from such agencies as the National Science Foundation, the U.S. Geological Survey, the U.S. Army Corp of Engineers, the U.S. Department of Energy, the National Institutes of Environmental Health Sciences, the U.S. Environmental Protection Agency, and the US Department of Homeland Security. He has also served on several multidisciplinary research teams that have brought in an additional 29 million dollars in external research funding.

Professional Service Activities

1998 - Present: Director, Watershed Management Program, Kentucky River Authority
1998 - Present: Scientific Advisor, Kentucky River Watershed Watch
2003 - 2007: Chair, Kentucky Environmental Quality Commission
2004 - 2006: Chair, Scientific Advisory Board, Inter-basin Coordinating Committee, Kentucky Watershed Watch
2004 - 2005: Member, Governor's Task Force on Blackwater Issues
2004: Vice President for Academic Affairs, American Institute of Hydrology
2003 - 2004: Chair, EWRI Emerging and Innovative Technologies Council
2002: Chair, Nuclear Subcommittee, Governor's Energy Policy Board
1997-1998: President, Kentucky Section of ASCE
1995: Chair, AWWA International Computer Conference.
1991 - 1992: President, Bluegrass Chapter of Kentucky Section of ASCE

Katherine Garvey, J.D., LL.M.

Contact Information: WVU College of Law, P.O. Box 6130, Morgantown WV 26506-6130; (304) 293-8288;
katherine.garvey@mail.wvu.edu

Education / Academic Credentials

Vermont Law School, LL.M. 2010, *cum laude*, Environmental Law
University of Missouri-Kansas City School of Law, J.D. 2004
Webster University, B.S. 2000, Business Management
La Universidad de los Andes, Bogotá, Colombia, 01/98-12/98, Spanish and Economics

Professional / Academic Experience

- Courses Taught: Land Use and Sustainable Development Law Clinic, Environmental Law, Environmental Advocacy & Writing, Introduction to Environmental Law
- Research Interests: Environmental regulation at the local level, source water protection
- Grants: Legal Education to Address Neglected Properties (2014), Hardy County Source Water Protection (2014)

International Experience

- 17th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, Representative for Vermont Law School.
- World Summit on Sustainable Development 2002, Johannesburg, South Africa, Representative for the National Association of Environmental Law Schools.
- EnviroLaw Solutions Conference 2002, Durban, South Africa.
- Internship at FUNDEA, Caracas Venezuela, worked on conservation contracts, Summer 2003.
- Proficient in Spanish, lived 2.5 years in Latin America. Passed el Examen de Admisión de Estudios Posgraduados (Spanish version of the GRE) with above average score.

Professional Affiliations – Associations – Service & Outreach

- Board Member, Northern Brownfields Assistance Center
- Member, American Bar Association
- Member of the Bar, West Virginia, Vermont and Missouri
- Liaison, New River Clean Water Alliance

Awards and Honors

- Solid Waste Management Award, American Public Works Association (2006) for development of a solid waste management plan and funding for a hazardous waste management and recycling facility

Selected Publications

- *Investing in Green Infrastructure for Source Water Protection*, Chapter 1, World Resources Institute (2014).
- *Legal Consequences of Adopting New Floodplain Maps in New Hampshire*, 43 *Envtl. L. Rptr.* 10564 (2013).

- *Local Protection of Natural Resources after Jam Golf: Standards and Standard of Review*, 11 Vt. J. Env'tl. L. 145 (2009).

Selected Presentations

- *Game Changers: Land Banks and On-Site Citations*, Continuing Legal Education, Charleston WV (May 2015).
- *Client-centered Lawyering in a Rural Communities*, 14th Annual Transactional Clinical Conference, Kansas City, MO. (April 2015).
- *Utilizing Resilient Land Use Planning Concepts to Protect Local Source Water*, 2015 Water Resources Conference of the Virginias, Roanoke, WV, October 6, 2015
- *Policy, Law & Biofuels*, Bioproducts Master Teacher Training Workshop, July 11, 2013
- *Fayette County Dilapidated Buildings Strategy Session*, April 29th, 2015
- *An Introduction to Legal Issues Affecting Neglected Properties*, Community Leadership Academy, Morgantown, WV, October 27, 2015
- *Morgantown Utility Board's Source Water Protection Plan*, Initial Meeting, January 21, 2015
- *Navigating the Ordinance and Enforcement Maze*, Property Rescue Initiative Information Workshop, Montgomery, WV, October 9, 2015
- *The View from 10,000 Feet Up- Voluntary Initiatives and Government Regulations*, Spring 2013 Mountain State Land Use Academy, Pipestem WV May 5, 2013
- *Mapping and Legal Implications of Future Flooding in the Lamprey River Watershed of New Hampshire Due to Changes in Land Use and Climate*, The Coastal Society Conference, Miami FL, Jun 2012).

Courses Taught

Environmental Law, Introduction to Environmental Law, Environmental Communication, Introduction to Business Law, Land Use Clinic, Land Use and Sustainable Development Law Clinic, Torts, Legal Writing I

Grants

- Property Rescue Initiative, Technical Assistance to Address Legal Issues related to Dilapidated Properties December 2015
- Benedum Foundation, West Virginia Legal Education to Address Abandoned and Neglected Properties, July 2014
- Hardy County and the Potomac Valley Conservation District, Hardy County Source Water Protection and Ordinance Review, April 2015.

Sustainable Management of Rural and Small Systems Workshop

Kentucky Water Resources Research Institute

KRAADD Conference Center
Hazard, KY – September 14, 2017

UK
UNIVERSITY OF KENTUCKY

Welcome and Introductions

Moderator: Lindell Ormsbee

- Welcome
- WVU – University of Kentucky vision for assisting small communities
- Introduction of Team Members
- Participant Introductions – Name, Community, Role
- Workshop Materials
- Meeting Logistics

USDA Workshop-in-a-Box Objectives

- Learn about key utility management areas
- Complete a self-assessment to understand your respective community systems, needs, wants, requirements, and options
- Discuss tools, tips, and measures for performance improvement
- Exchange information and experiences with participants from other local utilities
- Initiate developing an action plan for your respective communities
- Identify possible resources for technical support

Schedule of Activities

- Key Management Areas
- Self Assessment Exercise
- Lunch, Invited Presentations, Networking
- Improving Outcomes
- Practices, Tools, and Measures
- Creating an Action Plan
- Next Steps
- Feedback Session

Overview of the Ten Key Management Areas

Outcomes that well-managed utilities strive for

Common Challenges for Utility Managers

- Aging infrastructure
- Rate issues
 - Prioritize demands for utility expenditures
 - Long-term rate adequacy strategy
- Customer satisfaction and confidence with services and rates

Common Challenges for Utility Managers

- Operational issues
 - Labor and material costs
 - Regulatory compliance and new requirements
- Workforce complexities
 - Attracting and keeping reliable and competent staff
 - Succession planning
- Knowledgeable and engaged board members

The Well-Managed Utility

- Ten Management Areas framed as outcomes
- Building blocks for utility performance improvement: where to focus and what to strive for
- Most water and wastewater utilities pay attention to these areas and likely perform well in at least some of them
- Fit into, draw on, and support asset management, long-term business planning, continual improvement management systems

The Ten Key Management Areas

• Product Quality	• Employee and Leadership Development
• Customer Satisfaction	• Operational Optimization – Energy and Water Efficiency
• Infrastructure Stability	• Operational Resiliency
• Community Sustainability & Economic Development	• Water Resource Adequacy
• Stakeholder Understanding and Support	• Financial Viability

Product Quality

- Clean and safe water
- Produce potable water, treated effluent, and process residuals/recovered resources:
 - Full compliance with regulatory and reliability requirements
 - Consistent with customer, public health, and ecological needs
 - Consistent with local economic development and business needs and opportunities

Customer Satisfaction

- Know what your customers expect in service, water quality, and rates
- Set goals to meet these expectations
- Help your customers understand the value of water
- Develop a way to gather feedback from your customers, review the feedback, and then act on it

Employee & Leadership Development

- Enable a workforce that is competent, motivated, adaptive, and safe working
- Ensure employee institutional knowledge is retained and improved on over time
- Create opportunities for professional and leadership development

Operational Optimization

- Ensure ongoing, timely, cost-effective, and reliable performance improvements in all facets of operations (i.e., continual improvement culture)
- Minimize resource use, loss, and impacts from day-to-day operations (e.g., energy and chemical use, water loss)
- Maintain awareness of information and operational technology developments to anticipate and support timely adoption of improvements

Financial Viability

- Ensure revenues adequate to recover costs, fund timely maintenance, repair, and replacement of assets, and provide for reserves
- Establish predictable rates, consistent with community expectations and acceptability – discuss rate requirements with customers, board members, and other key stakeholders

Infrastructure Stability

- Understand **costs** and **condition** for each system component
- Understand operational performance factors (e.g., pressure)
- Plan for system component repair and replacement over the long-term at the lowest possible cost
- Coordinate asset repair, rehabilitation, and replacement within the community to minimize disruptions and other negative consequences

Operational Resiliency

- Identify threats to the system (legal, financial, non-compliance, environmental, safety, security, and natural disaster) – conduct all hazards vulnerability assessment
- Establish acceptable **risk levels that support** system reliability goals
- Identify how you will manage risks and plan response actions – prepare all-hazards emergency response plan

Community Sustainability & Economic Development

- Be active in your community
 - Be aware of, or participate in, discussions of community and economic development
 - Get to know local business needs and be aware of opportunities for new residential or business customers
- Align Utility Goals: to be attentive to the impacts utility decisions will have on current and future community and watershed health
- Align Utility Goals: to promote community economic vitality and overall improvement

Water Resource Adequacy

- Ensure water availability consistent with current and future customer needs:
 - Long-term resource supply and demand analysis
 - Conservation
 - Public education
- Understand the system role in water availability
- Manage operations to provide for long-term aquifer and surface water sustainability and replenishment

Stakeholder Understanding & Support

- Create understanding and support from oversight bodies, community and watershed interests, and regulatory bodies:
 - Service levels
 - Rate structures
 - Operating budgets
 - Capital improvement programs
 - Risk management decisions
- Actively engage with the community and customers:
 - Understand needs and interests
 - Promote the value of clean and safe water

The Self-Assessment Exercise

Time to go to work!

Getting Started (Tab 4)

- Step 1: RATE your system's level of achievement (practice and performance) for each management area
- Step 2: RANK the importance of each area
- Step 3: PLOT the results
- Step 4: Improve by exploring

Steps 1&2: Tab 4 – Page 3

Steps 3&4: Tab 4 – Page 5

STEPS 1 & 2: Rating and Ranking Areas

Self-Assessment Demonstration

- Use the table on Page 3 of Tab 4 to rate your utility's **achievement (first blank column)** rate in the 10 key management areas: L –low, M – medium, H-high.
- Use the table on Page 3 of Tab 4 to rate the **priority (second blank column)** of each the 10 key management areas for your utility: L –low, M – medium, H-high.

STEP 1: Rating Areas

Scale from LOW to HIGH achievement

- Select **Low** if your system has no workable practices in place for addressing this area – very low capacity and performance.
- Select **Medium** if your system has some workable practices in place with moderate achievement, but could improve – some capacity in place.
- Select **High** if your system has effective, standardized, and accepted practices in place. It either usually or consistently achieves goals – capacity is high and in need of very little or no further development.

STEP 2: Ranking Areas

Scale from LOW to HIGH priority

- Current or expected challenges
- Customer or stakeholder impact: reliability; quality; timeliness
- Consequences of not improving: compliance; cost; credibility; health; safety
- Urgency – near or long term need
- Community priorities

STEPS 1 & 2: Rating and Ranking Areas Self-Assessment Demonstration

Key Management Area	Key Objectives/Activities	Step 1: Rating (Achievement)	Step 2: Rank (Priority)
		Low-High	Low-High
1. Rate Resource Adequacy	<ul style="list-style-type: none"> By utility's assets, the utility can maintain needed, customer and the service level. By utility's operations, the utility can maintain needed, customer and the service level. By utility's financial, the utility can maintain needed, customer and the service level. 	Low	High
2. Rate Product Quality	<ul style="list-style-type: none"> By utility's operations, the utility can maintain needed, customer and the service level. By utility's financial, the utility can maintain needed, customer and the service level. By utility's assets, the utility can maintain needed, customer and the service level. 	Medium	High
3. Rate Customer Satisfaction	<ul style="list-style-type: none"> By utility's operations, the utility can maintain needed, customer and the service level. By utility's financial, the utility can maintain needed, customer and the service level. By utility's assets, the utility can maintain needed, customer and the service level. 	High	Medium
4. Rate Community Sustainability & Economic Development	<ul style="list-style-type: none"> By utility's operations, the utility can maintain needed, customer and the service level. By utility's financial, the utility can maintain needed, customer and the service level. By utility's assets, the utility can maintain needed, customer and the service level. 	Low	Low
5. Rate Employee & Leadership Development	<ul style="list-style-type: none"> By utility's operations, the utility can maintain needed, customer and the service level. By utility's financial, the utility can maintain needed, customer and the service level. By utility's assets, the utility can maintain needed, customer and the service level. 	High	Medium
6. Rate Financial Viability	<ul style="list-style-type: none"> By utility's operations, the utility can maintain needed, customer and the service level. By utility's financial, the utility can maintain needed, customer and the service level. By utility's assets, the utility can maintain needed, customer and the service level. 	Low	High

STEPS 1 & 2: Rating and Ranking Areas Self-Assessment Demonstration

- Use the table on Page 3 of Tab 4 to rate your utility's achievement (first blank column) rate in the 10 key management areas: L – low, M – medium, H – high.
- Use the table on Page 3 of Tab 4 to rate the priority (second blank column) of each of the 10 key management areas for your utility: L – low, M – medium, H – high.
- Take a few minutes to discuss your results at your table.
 - What management areas are most important?
 - Where do you have high achievement?

Complete by 10:10

STEP 3: Plotting Results Self-Assessment Demonstration

WA: Water Resource Adequacy
 PQ: Product Quality
 CS: Customer Satisfaction
 CE: Community Sustainability & Economic Development
 ED: Employee & Leadership Development
 FV: Financial Viability
 CO: Operations Optimization
 IS: Infrastructure Stability
 OR: Operations Resiliency
 SS: Stakeholder Understanding & Support

Utility (Achievement)	Low	Medium	High
High			CS, ED
Medium	CO		PQ
Low	CE		WA, FV
	Low	Medium	High
	Ranking (Priority)		

STEPS 3 & 4: Plotting Results and Focusing Attention Self-Assessment Demonstration

- Use the table on Page 5 of Tab 4 to write the two letters corresponding to each management area in the appropriate box that corresponds to intersection of the two ratings (i.e. the achievement rating and the priority rating).
- Example: Customer Satisfaction (CS):
 - High – H – Achievement
 - Medium – M – Priority

STEPS 3: Plotting Results Self-Assessment Demonstration

WA: Water Resource Adequacy
 PQ: Product Quality
 CS: Customer Satisfaction
 CE: Community Sustainability & Economic Development
 ED: Employee & Leadership Development
 FV: Financial Viability
 CO: Operations Optimization
 IS: Infrastructure Stability
 OR: Operations Resiliency
 SS: Stakeholder Understanding & Support

Utility (Achievement)	Low	Medium	High
High			CS, ED
Medium	CO		PQ
Low	CE		WA, FV
	Low	Medium	High
	Ranking (Priority)		

Step 4: Self-Assessment Discussion Questions

- Where is your utility strong? Why?
- Where is there the most room for improvement? Why?
- What are your areas of focus?
 - Why are they a priority?
 - Why is performance low?
 - Technical capacity?
 - Financial capacity?
 - Managerial capacity?
- What are the commonalities and differences among table participants?

Break 10:40; Tables Report Out 10:55 – 11:25

Plotting Results On the Wall

- Using the provided stickers for your utility, place a sticker on each of the 10 Key Management Boards located around the room in each of the same boxes that you recorded on your own plot.

Your Utility Plot

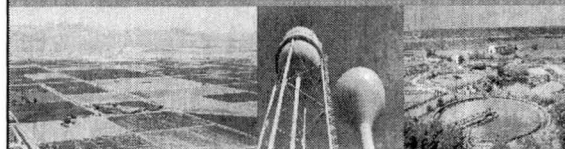
High	CC	PG
Medium	CC	PG
Low	CC	PG
Yes	No	High
Rating		
Priority		

One of 10 boards located around the room
(e.g. Consumer Service)

High	Utility Name
Medium	
Low	
Low	Medium
Rating	
Priority	

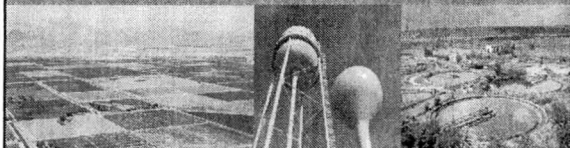
Lunch

Guest Speakers



Improving Outcomes

Creating a Plan, Taking Action, Measuring Results



Tips from Previous Improving Outcomes Exercises

- Key management areas selected and discussed at previous workshops:
 - Stakeholder Understanding and Support
 - Infrastructure Stability
 - Financial Viability
 - Employee and Leadership Development
 - Operational Resiliency

Stakeholder Understanding and Support

- Examples of High Achievement:
 - Capital improvement plan or other document that summarizes utility priorities and can be shared with utility board
 - Establish standard operating procedures for utility staff that address communication
- Possible Changes Needed:
 - Educate stakeholders about utility needs
 - Create ongoing opportunities for stakeholders and utility to interact (e.g., tours of facility)

Infrastructure Stability

- Examples of High Achievement:
 - Capital improvement plan
 - Inventory of system components, location, installation date, and condition
 - Understanding of system operating parameters (e.g., pressure)
- Possible Changes Needed:
 - Making time to support an incremental approach (e.g., maintenance and repair driven)
 - Ability to do smaller projects and upgrades annually

Financial Viability

- Examples of High Achievement:
 - Funds set aside for reserves
 - Asset management plans, short and long term plans, and quarterly budget reviews
 - Utility board is knowledgeable about financial issues and system maintenance and repairs
- Possible Changes Needed:
 - Good practices in place for rates and shut-offs
 - Better communication between elected officials, utility staff and consumer
 - Independent rate study
 - Document priorities for system improvements

Employee and Leadership Development

- Examples of High Achievement:
 - Written job descriptions
 - Clear performance expectations
 - Staff are cross-trained
- Possible Changes Needed:
 - Develop neighboring system relationships for staff to learn from each other
 - Create merit-based initiatives to reward high performance (e.g., additional leave days, recognition, monetary awards)

Operational Resiliency

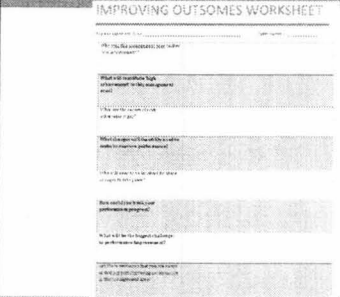
- Examples of High Achievement:
 - Emergency response plans, operations plans, shut-off checklists for equipment
 - Drill emergency response plan
 - Certify staff and board members
- Possible Changes Needed:
 - Ensure staff and board know where all emergency documentation is kept
 - Have contractor support lined up in case of emergency

Table Activity

- Using the Improving Outcomes Worksheet provided at your table (also a copy in Tab 6) each table should complete an improvement worksheet for one of the low achievement/high priority management areas identified by one of your table members. The worksheet has eight questions to answer.
- After picking a management area, share perspectives on:
 - What will constitute "high achievement" in this management area?
 - What changes will the utility need to make to improve performance?
 - How could you track your performance progress?
 - What will be the biggest challenges to performance improvement?

Table Activity

Using IMPROVING OUTCOMES WORKSHEET

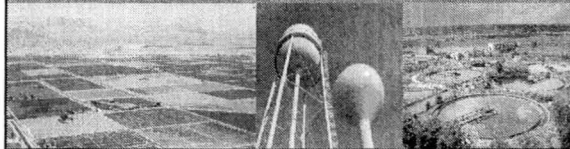


Tab 6 in your notebook

Tables Report Out 1:45 To 2:15; Break 2:15-2:30

Tools, Guides, and Other Resources

Resources Available for Your Use



Improving Outcomes: Additional Resources

- Extensive Compilation of Tools and Resources
 - Excel Print Out in Your Packet (Tab 8 – Appendix III)
 - Electronically Available on EPA and USDA's websites
- Organized by Key Management Areas
- Covers Resources from NRWA, USDA, EPA, RCAP, AWWA, WEF and others
- Supplemental to Locally Available Technical Assistance and Resources
- UK and WVU Resources (Tab 9)

Tools and Resources Demonstration

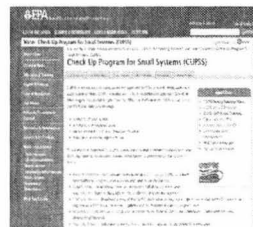
Tool Name	Description	Availability
Asset Management System	Software for tracking and managing infrastructure assets.	Available
Energy Use Tool	Tool for analyzing energy consumption in water and wastewater systems.	Available
Financial Viability Analysis	Tool for assessing the financial health of utility systems.	Available
Operational Optimization	Tools for improving the efficiency of water and energy use.	Available

Resource Highlights

- Three (Typically High Priority) Management Areas
 - Operational Optimization – Water/Energy Efficiency
 - Financial Viability
 - Stakeholder Understanding and Support
- Areas Typically of High Interest to Utility Managers and The Backbone of A Sustainably Managed System

Operational Optimization *Water/Energy Efficiency*

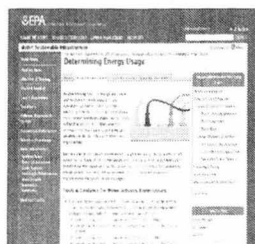
- EPA: Check Up Program for Small System (CUPSS)
- Free Asset Management Tool for Small Drinking Water and Wastewater Utilities
- Tips on How to Develop a Record of Your Assets, an Understanding of Your Financial Situation, and a Tailored Asset Management Plan



Operational Optimization *Water/Energy Efficiency*

EPA: Energy Use Tool for Water and Wastewater Systems

- Interactive, Excel-based tool
- Detailed Analysis of All Energy Types
- Provides Summary Report: Statement of Energy Performance



Operational Optimization *Water/Energy Efficiency*

RCAP: Sustainable Infrastructure for Small System Public Services: A Planning and Resource Guide

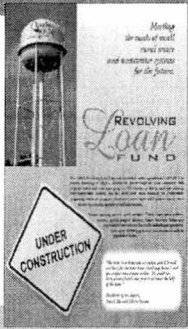
- Water Conservation
- Energy Efficiency
- Renewable Energy



Financial Viability

NRWA: Revolving Loan Fund

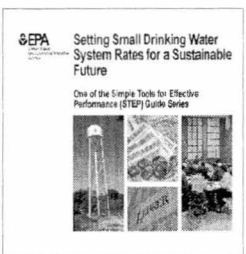
- Established Under Grant from USDA/RUS
- Financing for Pre-Development Costs
- Also Available for Equipment Replacement and Service Extension



Financial Viability

EPA: Setting Small Drinking Water System Rates for a Sustainable Future

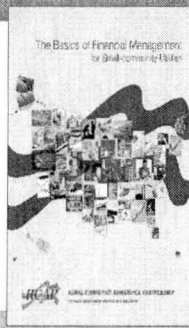
- Determining Revenue Needs
- Setting Rate Design
- Approaching Rate Implementation



Financial Viability

RCAP: The Basics of Financial Management for Small-community Utilities

- Understanding Financial Statements
- Using Financial Ratios



Financial Viability: Environmental Finance Center Network

Website: <http://efcnetwork.org/>

Free Webinars:




Smart Management for Small Water Systems Project

Website: <http://efcnetwork.org/small-systems-project>

Topics:


- Asset Management
- Energy Management
- Fiscal Planning & Rate Setting
- Funding Coordination
- Managerial & Financial Leadership
- Water Loss Reduction
- Water System Collaboration
- Climate Resiliency



Stakeholder Understanding and Support

NRWA: Quality on Tap!

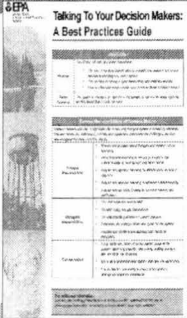
- Nationwide, Grassroots Campaign for Public Awareness
- Hands On Guide to Engagement and Communication for Better Community Support



Stakeholder Understanding and Support

EPA: Talking to Your Decision Makers – A Best Practices Guide

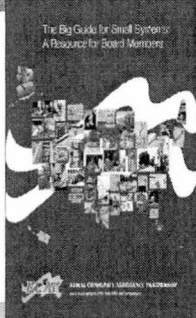
- Role of Community Decision Makers in Small Systems
- Tips on How to Communicate Needs to Decision Makers



Stakeholder Understanding and Support

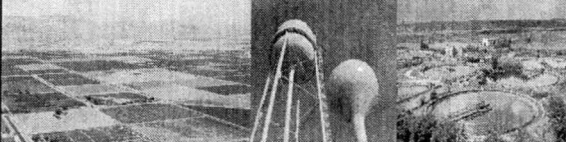
RCAP: The Big Guide for Small Systems: A Resource for Board Members

- Water and Wastewater Treatment Basics
- Regulatory Responsibilities
- Board Business
- Financial Duties and Responsibilities

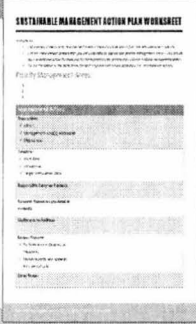


Creating an Action Plan

Where do we go from here?

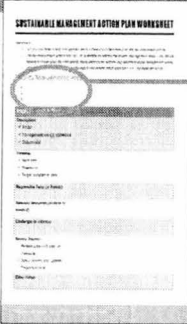


Action Plan Worksheet



Tab 5 in your notebook

Action Plan Worksheet



Step 1: Have each person fill out their top three priority management areas from the Self Assessment exercise and then pick one to work on.

For Example...

Priority Management Areas:

1. Water Resource Adequacy
2. Product Quality
3. Financial Viability ← Select One

Action Plan Worksheet

Step 2: Choose an action that you could take to make improvements in your selected Priority Management Area.

For Example...

Priority Management Areas:

1. Water Resource Adequacy
2. Product Quality
3. Financial Viability

Improvement Action: Improve practices for reducing the number of outstanding bills

Action Plan Worksheet

Step 3: Complete the fields below to describe what is needed to complete your "Improvement Action"

For Example...

Description:	<ul style="list-style-type: none"> ✓ Limit the carry-forward balances to a fixed amount and increase service deposits to discourage customers who don't frequently or avoid paying their bills. ✓ Financial Viability ✓ Reduce the amount of money lost to unpaid bills
Timeline:	<ul style="list-style-type: none"> ✓ June 2016: Start - draft new carry-forward balance ✓ Allowance and new service deposit requirements for new customers ✓ July 2016: Propose and approve new balance and deposit requirements at board meeting ✓ August 2016: Notify customers of new requirements ✓ September 2016: Completion - implement new balance and deposit requirements
Action	
Management Area(s) addressed	
Objective(s)	
Start date	
Milestones	
Target completion date	

For Example...

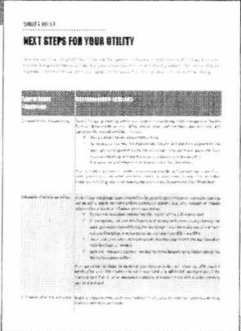
Responsible Party (or Parties):	<ul style="list-style-type: none"> ✓ Bill Smith ✓ Jane Anderson
Relevant Resources (on-hand or needed):	<ul style="list-style-type: none"> ✓ Example ordinance text created by other utilities to support the desired policy change
Challenges to Address:	<ul style="list-style-type: none"> ✓ Public pressure on board members to reject rate increases
Review Process:	<ul style="list-style-type: none"> ✓ Milestone dates met ✓ Weekly progress checks with utility director relative to identified milestones
Performance indicators or measures	
Status reports and updates frequency/cycle	
Other Notes:	<ul style="list-style-type: none"> ✓ Conduct calls with each board member to explain the need for the policy change and answer their questions.

Share Success Stories 3:50- to 4:10

Next Steps

Where do we go from here?

Next Steps for Your Utility



Tab 7 in your notebook

Next Steps for Your Utility

- 1-4 weeks
 - Review and update self assessment
 - Complete preliminary action plan
- 4-8 weeks
 - Reach out to board and community leaders
 - Review and update action plan
 - Gain final approval for action plan
- 8-12 weeks
 - Reach out to key organizations for assistance
 - Begin implementing the action plan
- 12-15 weeks
 - Hold follow up meeting to assess progress and adjust as needed

Next Steps for Your Utility

- Ongoing
 - Hold regular meetings to assess Action Plan activities
 - Periodically, revisit the Self-Assessment activity to identify emerging Priority Management Areas
 - Complete new Action Plan Worksheets as additional Priority Management Areas are identified
 - Share success stories and challenges with technical assistance providers

Key Organizations in Kentucky

- KY Water Resources Research Institute (KWRII)
- KY Division of Water
- KY Division of Compliance Assurances
- Kentucky Rural Water Association (KRWA)
- KY Rural Community Assistance Partnership (RCAP)
- KY Infrastructure Authority (KIA)
- KY Public Service Commission (PSC)
- KY Water and Wastewater Operators Association (KWWOA)
- KY/TN AWWA/WEF
- KY Area Development Districts (ADDs)
- KY Cooperative Extension Service
- KY Center of Applied Energy Research (CAER)

Feedback Session

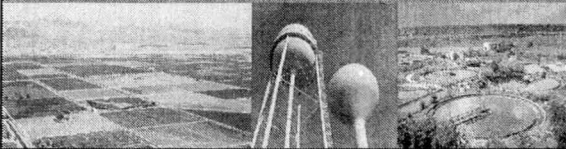
Please complete your evaluation forms.

Thank you!



Closing Comments

Thanks for coming!





MATTHEW G. BEVIN
GOVERNOR

CHARLES G. SNAVELY
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

AARON B. KEATLEY
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

June 23, 2017

Kentucky Water Resources Research Institute - UK
Attn: Lindell Ormsbee
233 Mining and Mineral Resources Bldg
Lexington, Kentucky 40506

Agency Interest Number: 133858

RE: Operator Certification Training Approval for Continuing Education Hours

To Whom It May Concern:

Your training request has been received by the Division of Compliance Assistance, Certification and Licensing Branch. Course approvals are reviewed and approved based on core content outlined by the cabinet and the Kentucky Board of Certification of Wastewater System Operators and the Kentucky Board of Certification of Drinking Water Treatment and Distribution System Operators. The core content lists can be located on our website, dca.ky.gov/certification.

Your request was reviewed by the Kentucky Board of Certification of Wastewater System Operators and/or the Kentucky Board of Certification of Water Treatment and Distribution System Operators at their most recent board business meeting. This letter serves as notification of the board and/or cabinet determination for continuing education credit.

Course Title	Date	Hours & Type Approved	DCA Event ID#	Comments
Sustainable Management of Rural and Small Systems	06/16/2017	WW - 6.0 Hours approved DW - 6.0 Hours approved	16937	One time Approval

Upon completion of the approved training, the provider shall submit to the cabinet a completed Continuing Education Activity Report form. This form can be located on the program's website at dca.ky.gov/certification. The program will no longer accept rosters that are not submitted on the cabinet's Continuing Education Activity Report form or electronically through the cabinet's website. If a continuing education activity report was attached to the training approval request, please be aware that the operators will only receive credit for the number of hours approved by the board(s).

If you have any questions or need additional information, please contact the Division of Compliance Assistance, Certification and Licensing Branch at (502) 564-0323.

Sincerely,

Veronica Roland
Certification and Licensing Branch

