

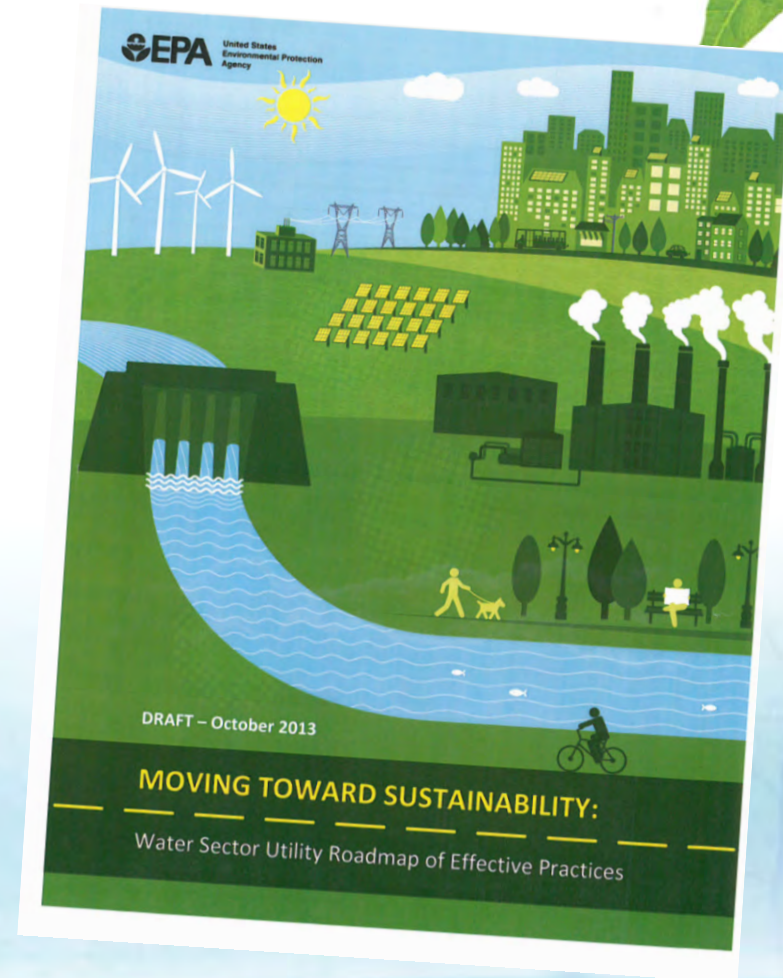
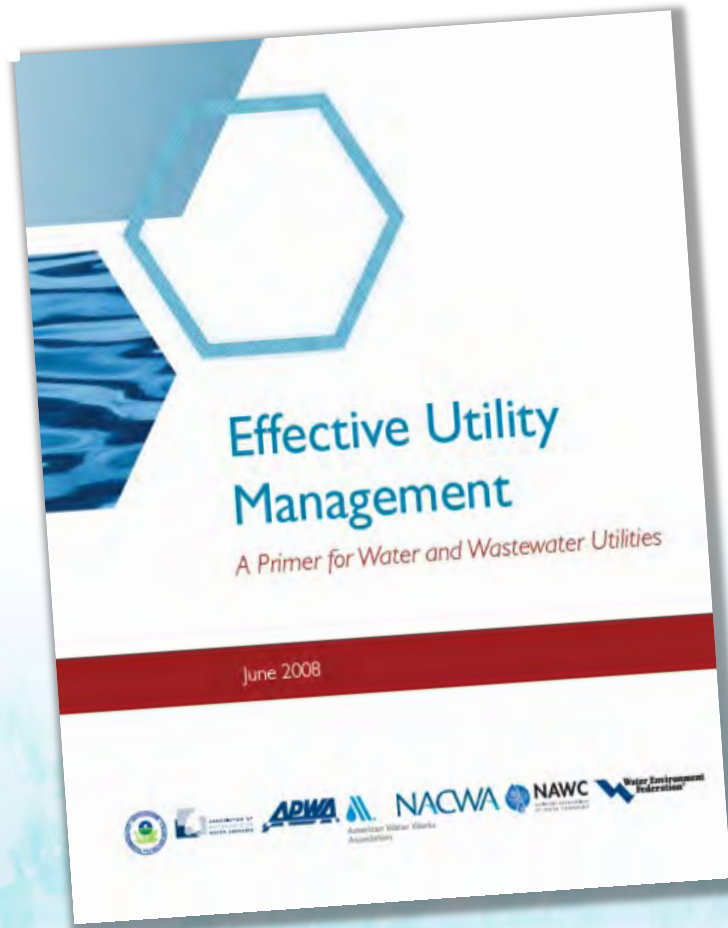


Roadmap of Effective Practices: The Next Step for Effective Utility Management (EUM)

AMWA 2013 Annual Meeting
“Leading to the Future”
October 27-30, 2013
St Petersburg, Florida

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EUM Provides a Framework



Effective Utility Management: The Key to Sustainability¹

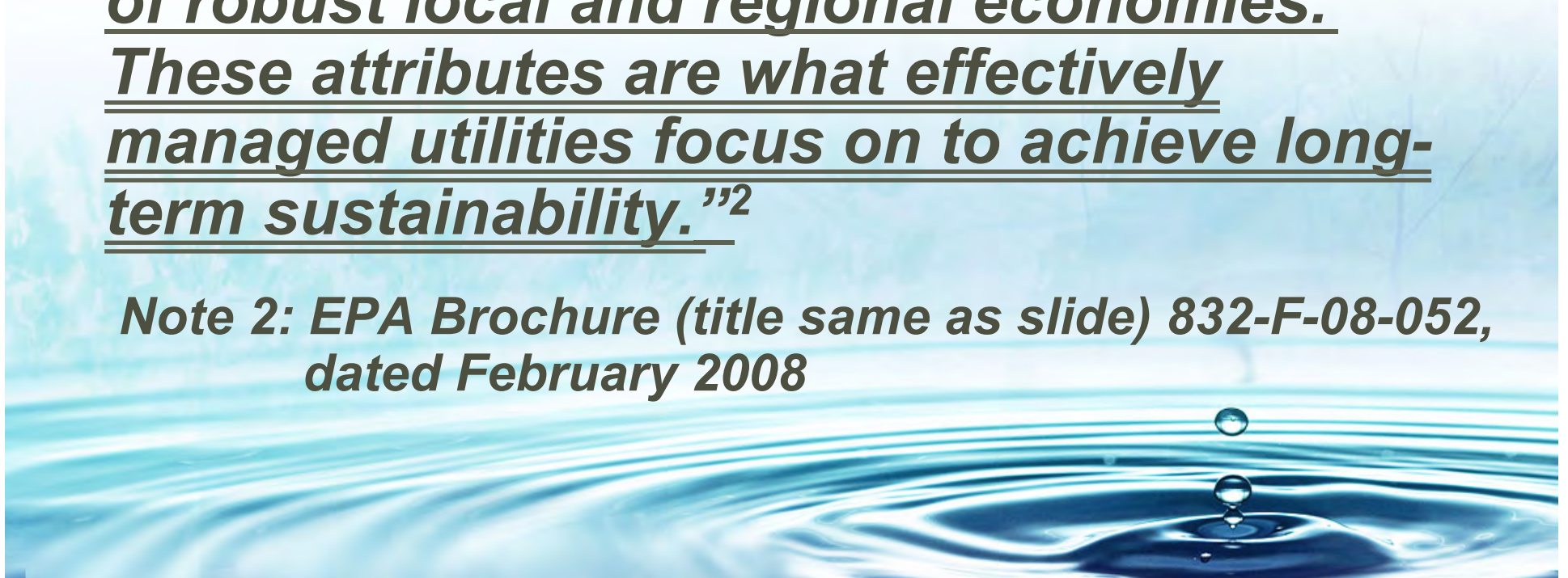
Note 1: EPA Brochure 832-F-08-052, dated February 2008, (title same as above)

“Effective Utility Management: The Key to Sustainability”¹



- *“Sound local wastewater and drinking water infrastructure is not only essential to the protection of public health, it is a foundation of robust local and regional economies. These attributes are what effectively managed utilities focus on to achieve long-term sustainability.”²*

Note 2: EPA Brochure (title same as slide) 832-F-08-052, dated February 2008



EUM is Foundational to Robust Local and Regional Economies

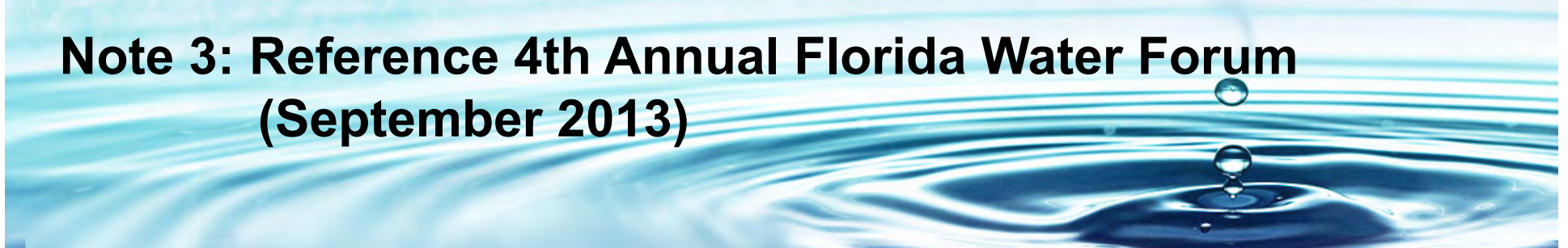


Florida is a good example with three engines to its economy:³

**Agriculture
Tourism
Construction**

“All three engines are significantly impacted by water and water is the most critical long term issue to be addressed for economic growth in Florida.”³

**Note 3: Reference 4th Annual Florida Water Forum
(September 2013)**



Why a Roadmap for Effective Practices?



- To promote sustainable water and wastewater services and be a foundation for robust local and regional economies –
- To assist utility leaders implement proven and effective practices moving toward sustainability –
- To help utilities of any size improve performance and better serve their communities –
- To provide “Lead by Example” opportunities for water professionals to be recognized by elected representatives (lawmakers) as leaders concerning utility and community sustainability issues -
- To provide practical, progressive practices bolstering EUM – the *Keys to Management Success* and the *Attributes of Effectively Managed Utilities* supported by EPA and major water sector Associations -



Core Management Areas

Utility Business Planning

Product Quality and
Operational Optimization

Customer Satisfaction and
Stakeholder Understanding & Support

Employee Leadership & Development

Financial Viability

Infrastructure Stability

Operational Resiliency

Community Sustainability

Water Resource Adequacy

Performance Measurement and
Continual Improvement

The Sustainable Utilities Roadmap



TEN KEY MANAGEMENT AREAS:

- *Utility Business Planning*
- *Product Quality and Operational Optimization*
- *Customer Satisfaction and Stakeholder Understanding & Support*
- *Employee & Leadership Development*
- *Financial Viability*
- *Infrastructure Stability*
- *Operational Resiliency*
- *Water Resource Adequacy*
- *Community Sustainability*
- *Performance Measurement and Continual Improvement*



Each Management Area Has Three Business Levels



- Level 1 – Providing Adequate, Fundamental Services
- Level 2 – Optimizing Operations and Services
- Level 3 – Transforming Operations and Services for the Future

Note: Levels do not imply any judgment about a utility's current performance –



<p>1</p>	<h2>Utility Business Planning</h2> <p>2 Scope: <i>The utility business planning Management Area addresses various forms of planning including capital, long-range, and strategic, incorporates building organizational and community needs and objectives into these processes, and includes collaborative relationships established with other water utilities, local government entities, private enterprises, and non-governmental organizations to enhance the utility's performance, capacity, and capabilities.</i></p>
<p>3</p> <p>Level 1: Providing Adequate, Fundamental Services</p>	<p>4</p> <p>Practice Statement – Planning: Capital project needs identified and incorporated into annual budgets. 5</p> <p>Example Practices:</p> <ul style="list-style-type: none"> • Multi-year capital plan that prioritizes capital project needs and identifies high-6 priority and short-term needs and investments on a life-cycle cost basis. • Reserve fund accounts or ability to acquire debt sufficient to provide for capital needs over the mid- to long-term.

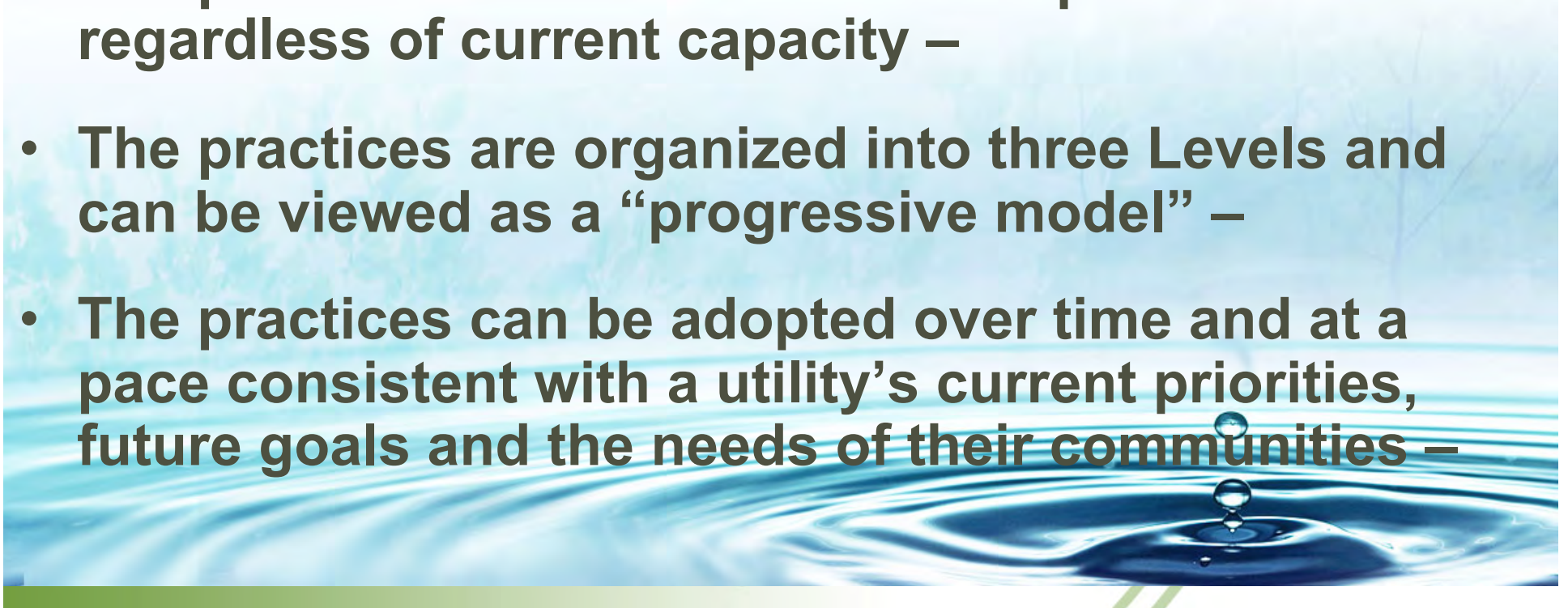
1. Management Area Title
2. Management Area Scope
3. Practice Level

4. Practice Category
5. Practice Statement
6. Example Practice

What is New?

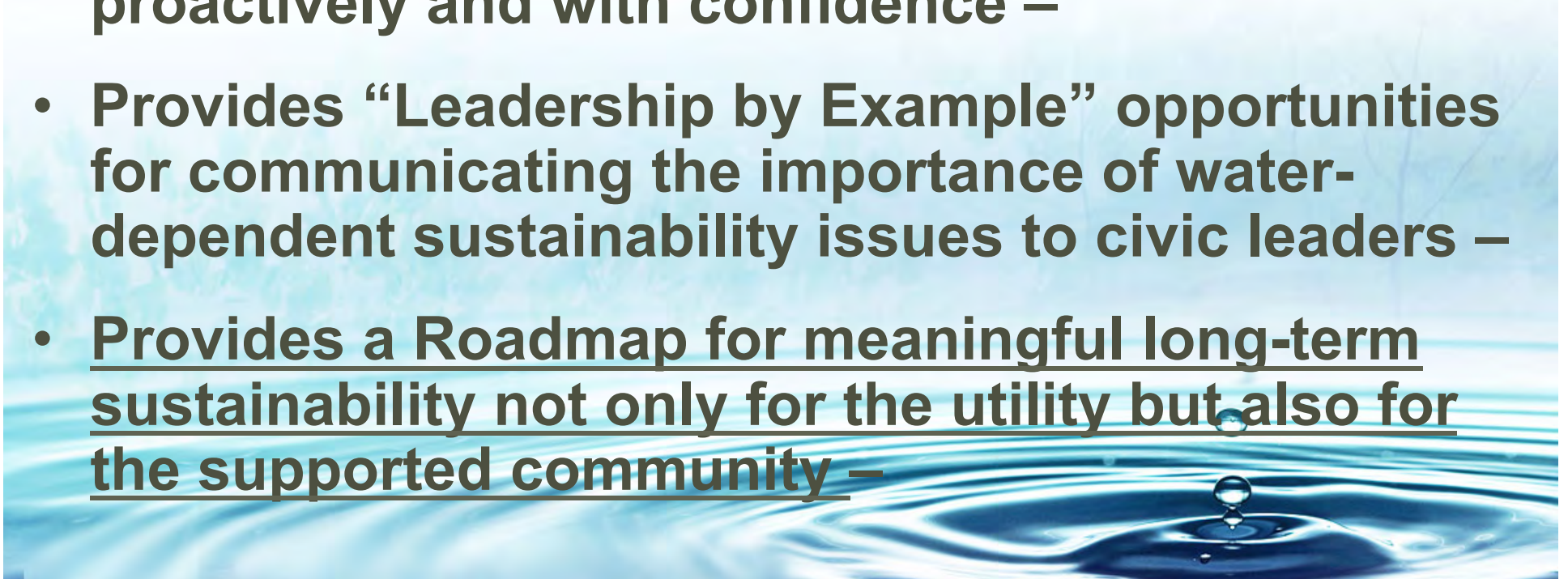


- The practices are not comprehensive but progressive with a purpose to illustrate practical opportunities for improving sustainability of utilities and their served communities –
- The practices can be scaled and implemented regardless of current capacity –
- The practices are organized into three Levels and can be viewed as a “progressive model” –
- The practices can be adopted over time and at a pace consistent with a utility’s current priorities, future goals and the needs of their communities –



What's in it for my large utility?

- Helps identify practical, scalable, and user friendly practices to improve day-to-day operations –
- Provides practices and a structure that can help address community leadership challenges proactively and with confidence –
- Provides “Leadership by Example” opportunities for communicating the importance of water-dependent sustainability issues to civic leaders –
- Provides a Roadmap for meaningful long-term sustainability not only for the utility but also for the supported community –





Classic Definition for “Sustainability”

- ... **“meeting the needs of the present without compromising the ability of future generations to meet their own needs.”** ⁴

(Note 4: United Nations, “Report of the World Commission on Environment and Development” known as the Brundtland Report (1987). The UN report’s definition encompasses a large number of ideas, which are categorized into three interlinked elements, forming the “Sustainability Triple Bottom Line” (TBL).

- According to the International City/County Management Association (ICMA), sustainable decisions are those that integrate Environment, Economy and Social Equity—the three elements of the “Sustainability Triple Bottom Line”.
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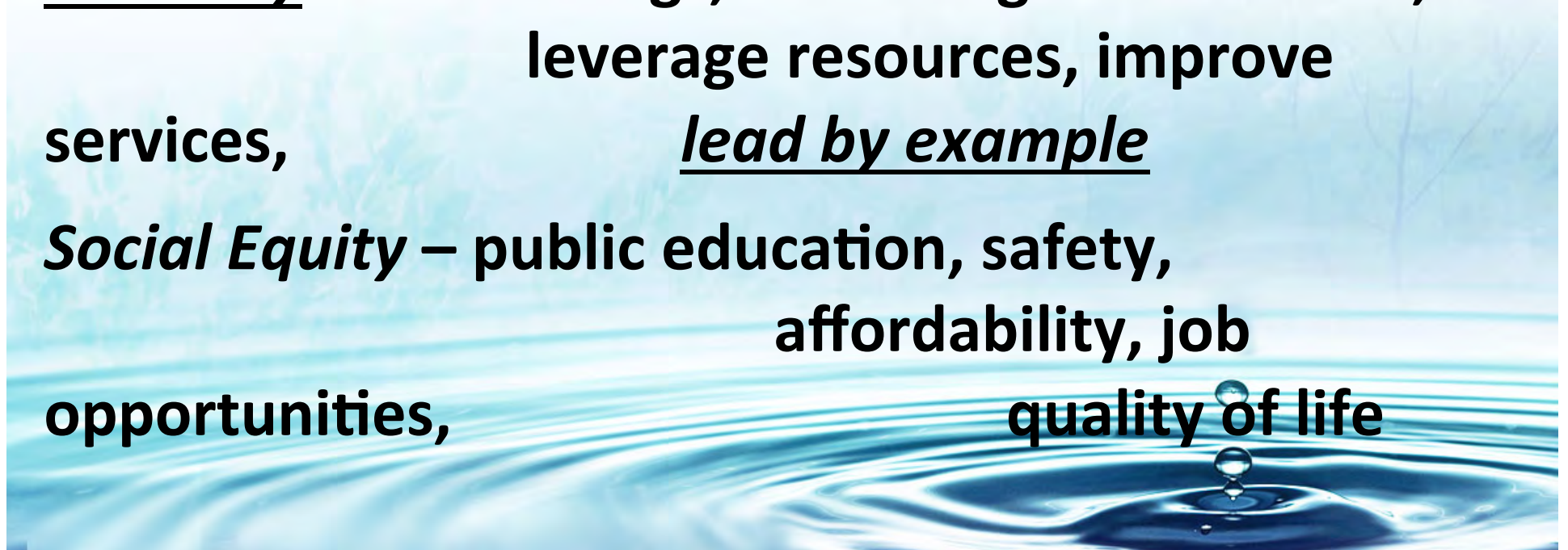
“TBL” Sub-Elements



Environment – energy reduction, cleaner air, land preservation, water conservation, waste reduction

Economy – cost savings, increase green demand, leverage resources, improve services, ***lead by example***

Social Equity – public education, safety, affordability, job opportunities, **quality of life**



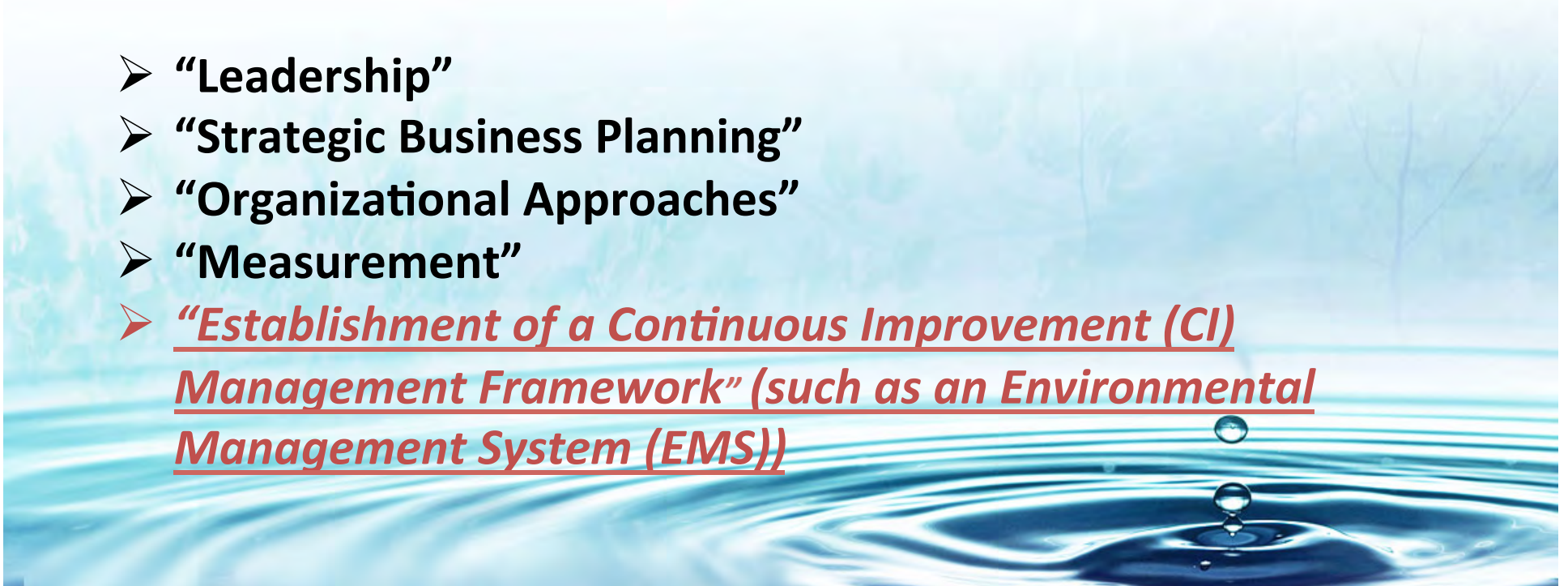
What are the Keys to Effective Utility Management?



Five Keys are identified in the EPA publication:
Effective Utility Management: A Primer for Water and Wastewater Utilities (EPA, June 2008)

<http://www.watereum.org>

- “Leadership”
- “Strategic Business Planning”
- “Organizational Approaches”
- “Measurement”
- “Establishment of a Continuous Improvement (CI) Management Framework” (such as an Environmental Management System (EMS))



Change Management and Continual Improvement Management Frameworks:



- Quality Management System (QMS)
(ISO 9001:2008)
- Environmental Management System (EMS)
(ISO 14001:2004)
- Energy Management System
(ISO 50001:2011)
- Utility Management System (UMS)
(2009 Operational Guide to AWWA Standard G400)
- Occupational Health and Safety Management System
(ANSI/AIHA/ASSE Z10-2012)
- Baldrige Performance Excellence Program
(BPEP)



Why a CI Management Framework (EMS) for My Large (Any) Utility?

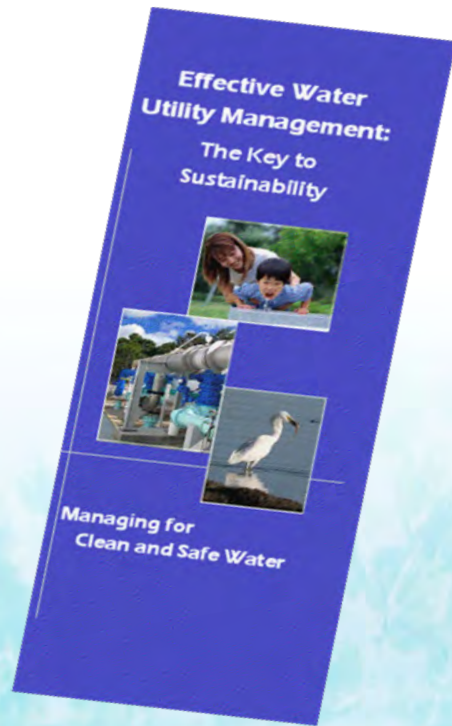
Six key organizational responses emerge from studies of world-class companies responding to exponential change:⁵

- Customer-Driven Continuous Improvement
- Closer Relationships with Customers and Suppliers
- Culture and Supporting Systems that Encourage Innovation and Creativity
- Global, External Orientation
- Clear Vision of Core Competencies
- Emphasis on Developing and Harnessing the Intellect of Human Assets

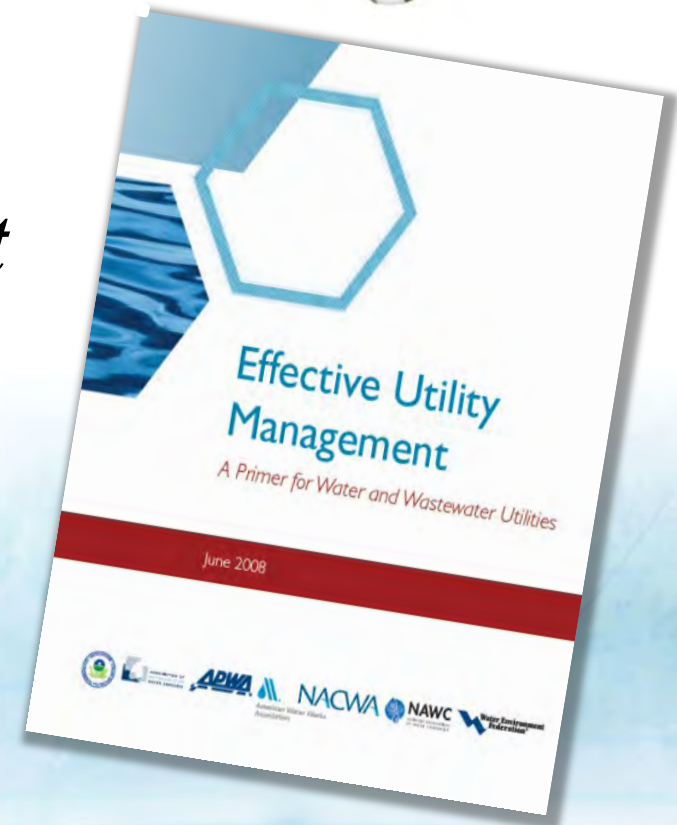
Each above key is promoted, supported and institutionalized by the ISO EMS Standard.

Note 5: Distillation of responses listed in the book titled “Customer Centered SIX SIGMA Linking Customers, Process Improvement, and Financial Results”, Earl Naumann, and Steven H. Hoisington, Published by ASQ Quality Press, Milwaukee, WI, (page 6).

An Environmental Management System (EMS):
a change management system which is key to EUM -
which is the key to sustainability and foundational to
robust local and regional economies.



*5th Key is the Most
Objective of Five
Keys*



EMS Implementations are Promoted by EPA



Example Management Area: “Performance Measurement and Continual Improvement”

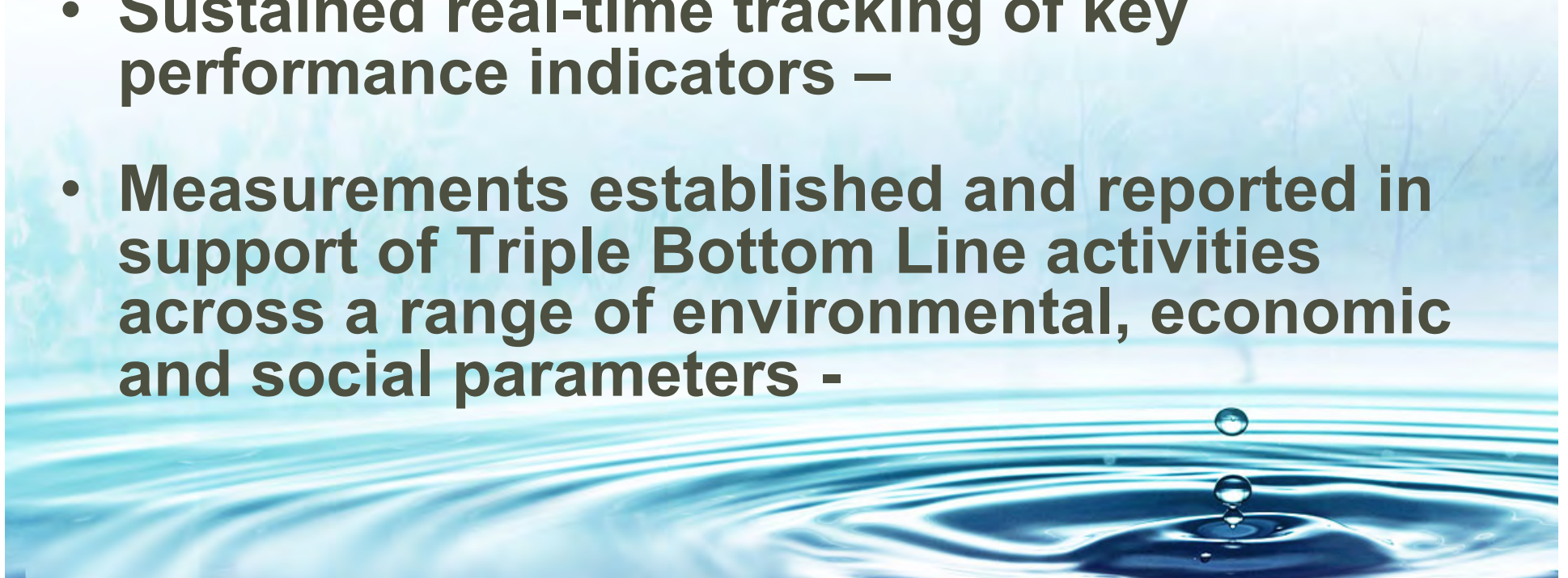
Level 1, 2, and 3

- **Practice Statement – Performance Measurement**
 - ✓ **Example Practices:**
 - **Practice Statement – Change Management and
Continual Improvement**
 - ✓ **Example Practices:**
- 

Practice Statements for Performance Measurement:



- **Integrated, automated system of metrics measurement and tracking –**
- **Sustained real-time tracking of key performance indicators –**
- **Measurements established and reported in support of Triple Bottom Line activities across a range of environmental, economic and social parameters -**



Performance Measurement:



Example Practices:

- **Mobile applications to record and upload field data –**
- **Performance measurement integration with control charts to improve performance –**
- **Metrics for utility-led, community sustainability performance –**
- **Technology-enabled improvement, i.e., automated interpretation of electronically gathered data for control or process capability improvements -**
- **Automated Power Management at Treatment Plants -**



Practice Statements for Change Management and Continual Improvement:



- **Build upon continual improvement management systems and a culture of innovation -**
- **Utilize complementary and integrated continuous improvement management systems across all aspects of operation –**
- **Cultivate and encourage community thought leaders, and develop and harness the intellect of human assets –**

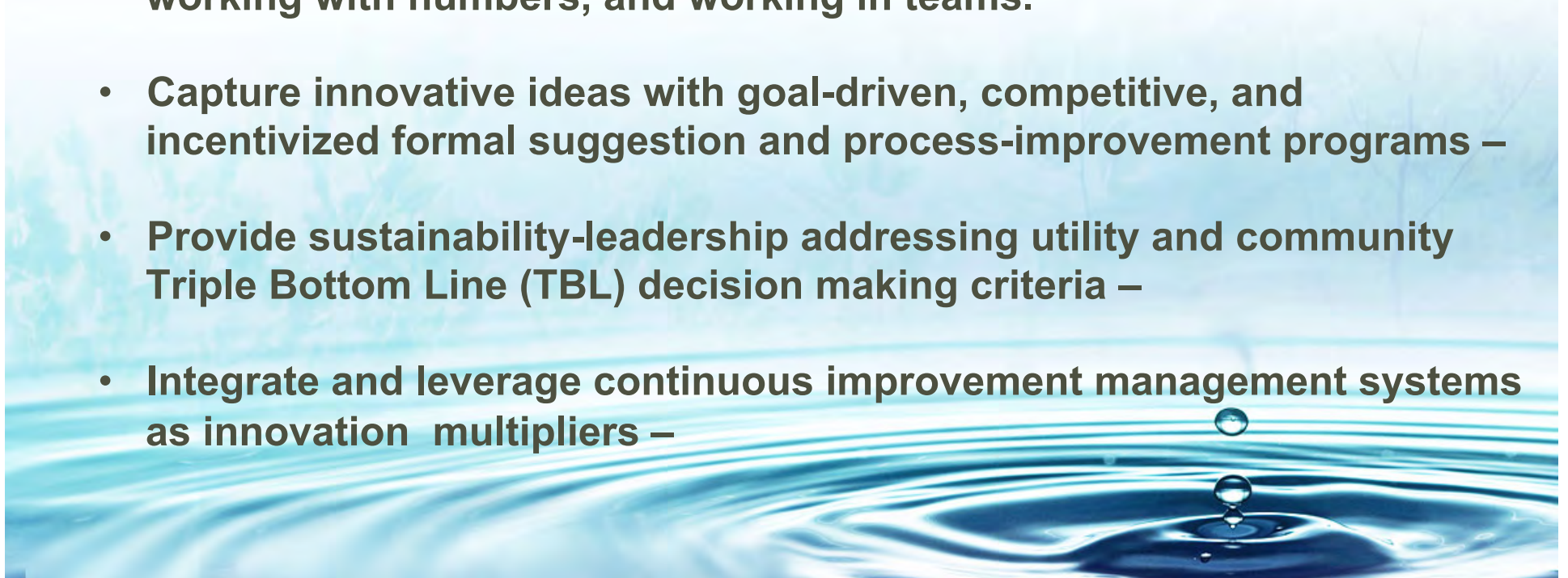


Change Management and Continual Improvement:



Example Practices:

- **Implement and integrate Lean and Six Sigma optimization methodologies into CI management frameworks –**
- **Provide continuous improvement tool training addressing typical improvement situations, i.e., provide tools for working with ideas, working with numbers, and working in teams.**
- **Capture innovative ideas with goal-driven, competitive, and incentivized formal suggestion and process-improvement programs –**
- **Provide sustainability-leadership addressing utility and community Triple Bottom Line (TBL) decision making criteria –**
- **Integrate and leverage continuous improvement management systems as innovation multipliers –**



“A Take-Away”

The Water Sector Utility Roadmap of Effective Practices provides an EUM structure of opportunities and example practices that can assist utility leaders “Lead for the Future” addressing exponential change proactively, effectively, and confidently.

Water is Life



Dan Roberts

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