The Utility of the Future Today

JOINT RECOGNITION PROGRAM

WATER RESOURCES UTILITY OF THE FUTURE TODAY

2017 APPLICATION FOR RECOGNITION

EPA United States Environmental Protection Agency

NACWA

Water Environment Federation the water quality people

WE&RF WATER ENVIRONMENT + REUSE FOUNDATION

WATEREUSE

The "Water Resources Utility of the Future" was first articulated in a 2013

publication jointly prepared by the National Association of Clean Water Agencies (NACWA), the Water Environment Federation (WEF), and the Water Environment Research Foundation (WERF). *The Water Resources Utility of the Future: A Blueprint for Action* sought to capture in one place current, emergent, and possible wastewater utility opportunities that, packaged together, presented a revolutionary future for the sector. That revolution would transform the traditional wastewater treatment system to a community-based resource recovery center and leader in the overall sustainability and resilience of the communities they serve. This Recognition Program has been specifically designed to further promote and enable the emergence of this new business model for the sector, provide recognition for those achieving these outcomes, and encourage peer-to-peer learning among utility members of the Recognition Program and with other utilities.

The sponsoring organizations for this recognition program understand that substantial excellence in the operations of wastewater treatment systems exists today. Many utilities optimize and continually improve their operations, consistently meet or exceed their regulatory requirements, plan and invest effectively for the maintenance, repair and replacement of their infrastructure, and engage their employees and communities in meaningful and productive ways.

While a variety of initiatives exist to promote and acknowledge excellent performance and sustainable management of utilities focused on our sector's historic priorities – providing reliable, affordable, and responsible wastewater collection and treatment service, the most prominent of these is *Effective Utility Management* (EUM) (www.WaterEUM.org). EUM is supported by eleven Collaborating Organizations, including all five partners of this Recognition Program. The Ten Attributes of Effectively Managed Utilities and Five Keys to Management Success form the basis for Effective Utility Management. When taken together, these Ten Attributes and Five Keys represent the basis for excellence in utility management. While EUM is not a requirement for recognition under this program, utilities are encouraged to use the EUM framework as they seek to become a Utility of the Future.

This *Utility of the Future Today Recognition Program* seeks to promote actions that build on this foundation of excellent management and help small, medium, and large utilities transform their operations over time. The Utility of the Future Activity Areas identified in this application package focus on the key building blocks to this transformation: recovery and new uses of a full range of resources; and engagement as a leader in the full water cycle and broader social, economic, and environmental sustainability of the community. In addition, transformation of the internal utility culture in support of these innovations, and engagement in the community and formation of partnerships are necessary for success when operating outside of the traditional span of control of the utility.

Program Statement of Purpose

The *Utility of the Future Today* Recognition Program seeks to reach deeply into the water sector to form and motivate a community of like-minded water utilities engaged in advancing resource efficiency and recovery, developing proactive relationships with stakeholders, and establishing resilient, sustainable, and livable communities. The Recognition Program, through the aggregation and sharing of utility advancements and experiences, will enable participants across a broad continuum of capacities and capabilities to learn from each other and continually grow and sustain their efforts to be, and continually advance the concept of, the Utility of the Future.

The Recognition Program seeks to encourage utilities to embed the principles of the Utility of the Future within their organization, beginning with Organizational Culture. Organizational Culture is the foundation by which all other Utility of the Future Activity Areas are sustainably supported.

Utilities receiving recognition through this program are expected to share their practices and experiences to create a community of practice around the Utility of the Future Today, and to enable other utilities to continually learn from each other and evolve as a sector.

Eligible Applicants

- Public and private wastewater collection and/or treatment systems (water resource recovery facilities) of all sizes are encouraged to apply. *Wastewater treatment plants that treat stormwater are eligible to apply, but would not be assessed only on the basis of their stormwater operations.*
- Applicants must have no major permit violations in the past year prior to the submission date of their application.

Application Requirements

To be considered for recognition, applicants must submit the following written materials. Each are described further in this information:

- **Application Part 1:** Background Information
- **Application Part 2:** *Utility of the Future Today* Organizational Culture Narrative
- **Application Part 3:** *Utility of the Future Today* Activity Area Description
- **Application Part 4:** Signed certification statement

Applicants should fill out the form in Microsoft Word and submit either as a Word or PDF document to **UtilityRecognition@wef.org** by **5:00pm Eastern Time, June 9, 2017**. Attachments, graphics, charts, photos or additional materials will not be accepted as part of an application package.

Basis for Recognition

Successful applicants will need to demonstrate that they are engaged in developing and growing an Organizational Culture that supports Utility of the Future implementation, as well as their selected Activity Area in a meaningful and robust manner, consistent with the principles of the Utility of the Future. Reviewers will take into consideration an applicant's current engagement and performance, as well as projected future results.

Notification and Presentation of Recognition

Applicants will be informed whether or not they were selected for recognition by or before July 28, 2017 by email or phone. A ceremony will be held at WEFTEC in Chicago, Illinois on October 3, 2017 to celebrate recognition recipients. Applicants are not required to attend WEFTEC to receive recognition. Selected utilities will receive a Utility of the Future Today flag to proudly hang/fly as well as a certificate.

Recognition Renewal Process

Utility of the Future Today recognition is granted for a three-year period – this applies to both the Organizational Culture narrative and recognition, as well as the additional Activity Area.

After three years, program members must renew their recognition. The applicant will need to: 1) show advancements in Organizational Culture, and 2) either show advancement in a previously recognized Activity Area, or apply in a new Activity Area.

Beginning in 2018, program members will be invited (but not required) to submit up to one additional Activity Area annually to receive further recognition.

Sponsoring organizations reserve the right to withdraw recognition from any previously selected applicant at any time.

Application Contents

Application Part 1: Background Information

Utility Description (combine all plants if a multi-site system)	
Utility Name:	
Type (e.g., single plant, regional system, multiple plants, collection system only, stormwater, etc.):	
Service Area (square miles):	Average Annual Daily Flow (MGD):
Population Served:	
Location	
Street Address:	
City: State:	Country:
Zip Code/Country Code:	
Contact Information	
Name:	Phone:	Email:

Application Part 2: *Utility of the Future Today* Organizational Culture Narrative

Organizational culture relates to the establishment of organizational excellence that inspires and embraces positive change and empowers the workforce to imagine, create, test, and implement innovative approaches from every day work to extreme challenges. It enables a culture of managing and recovering valuable resources, rather than one of the disposal of "waste." It promotes leadership that establishes a long-term vision for the organization, embodies a commitment to cultivating the organization's culture, and embodies communication that creates employee understanding, makes knowledge more productive, and harnesses the power of employee engagement.

Organizational Culture is the backbone of a Utility of the Future. Each applicant must submit a narrative that provides an overview of its programs and practices relative to their utility's Organizational Culture, in support of the Utility of the Future model.

Example practices and measures relative to Organizational Culture can be found in **Appendices 1 and 2**.

The narrative must be a minimum of 500 words, but no more than 1500 words.

Application Part 3: Utility of the Future Today Activity Area Description

Each applicant is required to submit a description for the <u>one Activity Area</u> of their choosing – **the seven *Utility of the Future Today* Activity Areas are listed and defined on the following page**. The purpose of the description is to demonstrate robust engagement in that Activity Area.

Your description should be no more than 2000 words.

The description includes three main components:

1. **Overview Paragraph:** Describe the practices/activities/programs that your utility has engaged in relative to the chosen Activity Area. For reference, a list of example practices related to each Activity Area are included in **Appendix 1**. This list is not meant to be comprehensive, but instead demonstrates the types of activities that could be included in the scope of each area. <u>Please include no more than 1-2 sentences per activity that you describe in this section.</u>

2. **Question & Answer:** Respond to the questions listed below in as much detail as possible to provide a guide to other utilities seeking to learn from your experiences and implement similar activities/practices at their system.
   a. How did you go about implementing the practices/activities/programs that you described in your Overview Paragraph?
   b. What type and amount of resources were needed to support implementation? (e.g., financial, staff, other)
   c. Did you partner with other stakeholders or organizations as a part of your implementation process?
   d. What was the most critical obstacle that your utility had to overcome to be successful in this Activity Area, and how did you do that?
   e. Has "smart" information technology supported your implementation/optimization in this area? If yes, please describe.
   f. Where could other utilities go to find additional information on this Activity Area or the activities/practices/programs that you implemented?

3. **Performance Measures & Results:** Using the table below, please describe the measures that you use to gauge performance in this Activity Area, including the targets that you set for each measure and your actual outcomes to date. For your reference, a list of example measures for each Activity Area is included in **Appendix 2**.

Measure *What are you measuring?*	Targets *What was your goal/intended outcome?*	Outcomes *What were your actual outcomes?*

Utility of the Future Today Activity Areas

ACTIVITY AREA 1: BENEFICIAL BIOSOLIDS USE

Wastewater-produced biosolids can be beneficially used to support: agriculture, silviculture, horticulture, fire restoration, and general landscape maintenance through land application; production of marketable products such as compost, amended topsoil, or construction products (e.g., bricks, road bed); and land reclamation as a substitute for other fill materials. This Activity Area does not include use of biosolids to produce energy or recovery of resources from biosolids.

ACTIVITY AREA 2: COMMUNITY PARTNERING & ENGAGEMENT

Community Partnering is collaboration with local organizations and other stakeholders to enable the utility to meet its own Utility of the Future goals while also enhancing the overall environmental, economic, and social wellbeing of the community or communities it serves. Community Engagement is the interaction with customers and other local stakeholders to provide ongoing opportunities for dialog along with communication and education related to utility operations and the value of water and utility services. Under Community Partnering & Engagement, the utility proactively engages with stakeholders and community decision makers to promote the utility as a valued, competent, and trustworthy community asset.

ACTIVITY AREA 3: ENERGY EFFICIENCY

Energy Efficiency is the reduction of overall energy use by the utility. A utility is more energy efficient if it delivers more services for the same amount of energy or the same services for less energy.

ACTIVITY AREA 4: ENERGY GENERATION & RECOVERY

Energy Generation & Recovery captures efforts to minimize the use of non-renewable energy; generate renewable (green) energy to the maximum extent practicable; and recover thermal, chemical, and hydraulic energy to the maximum extent possible. In doing so, the clean water Utility of the Future will not only seek to optimize its water quality performance, but also look to minimize its carbon footprint, reduce its vulnerability to climate change, and better manage energy costs and requirements.

ACTIVITY AREA 5: NUTRIENT & MATERIALS RECOVERY

Nutrient & Materials Recovery is the extraction of ammonium (NH_4), phosphorus compounds, nitrogen compounds, metals, and other marketable commodities during the wastewater treatment process, or lower tech activities such as recycling paper, pallets, containers, and segregated scrapped hardware.

ACTIVITY AREA 6: WATER REUSE

Water Reuse covers opportunities to use treated waters fit for beneficial purposes such as irrigation, buffering saltwater intrusion, industrial processes, toilet flushing, fire protection, surface/groundwater augmentation, and ultimately human consumption.

ACTIVITY AREA 7: WATERSHED STEWARDSHIP

Watersheds are the geographic areas that channel drainage into a river or stream system. They are defined by topographic boundaries and—depending on where they are located—might encompass complex natural ecosystems, highly urbanized landscapes, or elements of both. Watershed Stewardship refers to utility investments and actions to improve water flow (reduced flooding/increased local capture) and quality conditions outside of the traditional utility span of infrastructure operations and control. It also draws on integrated growth planning to integrate wastewater infrastructure expansion, repair, and replacement with community development planning (i.e., area plans), stormwater management planning (i.e., TMDL implementation plans), climate resiliency planning, and economic development planning to maximize the benefits and fully assess cost implications (i.e., triple bottom line feasibility analyses). Activities can include urban Green Stormwater Infrastructure investments,

conservation easements to preserve the ecosystem functions of undeveloped lands, and stream channel restoration.

Application Part 4: Certification Statement

I, _____ [PRINT NAME]*, an approved representative of my organization,*

_____ [ORGANIZATION NAME]*, certify that all data and information*

provided in this application package is accurate to the best of my organization's knowledge and has not been

falsified. I certify that my organization is in good standing and has had no major permit violations in the 12 months

prior to the date of submission of this application package.

_____ [SIGNATURE]

_____ [DATE]

Appendix 1: Example Activities by Area

ORGANIZATIONAL CULTURE

- Leadership proactively engaged in both internal organizational and broader external community priorities
- Participatory, collaborative culture established, dedicated to continual learning, improvement, and innovation
- Workforce and leadership development program (that includes leadership and management skills training in support of formal and informal leadership opportunities) in place to assure recruitment, retention, and competency of utility staff relative to a Utility of the Future business model
- Employee "in-reach" program established to share work experiences and ensure internal understanding and greater support for the utility's key strategy relative to the Utility of the Future business model
- Innovation initiatives adopted that encourage risk-taking, and that are adequately funded and staffed
- Establishes an integrated and well-coordinated senior leadership team
- Employees engaged and consulted on new processes, innovations, and designs before building
- Opportunities provided for employees to find and fix inefficiencies, and share ideas for solutions to problems
- Awareness and commitment to workplace safety established as a key organizational expectation
- Attention paid to employee morale, including opportunities to celebrate victories for the utility
- Process established for periodic tracking of progress toward meeting goals and milestones
- Mentoring program or other informal engagement with other utilities to promote Utility of the Future practices established as an organizational practice
- Effective Utility Management-based continuous improvement program in place

ACTIVITY AREA 1: BENEFICIAL BIOSOLIDS REUSE

- Board/executive management policy established to advocate for beneficial biosolids use
- Business case evaluation conducted for beneficial biosolids use program
- Marketing plan for biosolids products created
- Participation in or certification in National Biosolids Partnership or International Standards Organization (ISO) programs
- Public engagement and education activities conducted, related to acceptance and support of beneficial biosolids use
- Alternative uses for biosolids explored and evaluated regularly
- Risk management strategies established to address threats to sustainability of beneficial biosolids use practice
- Adequate staffing secured (internally or by contract) to support biosolids programs
- Procedures established to reduce generation of biosolids in treatment systems

ACTIVITY AREA 2: COMMUNITY PARTNERING & ENGAGEMENT

- Partnerships in place with one or more community organizations with the partnership clearly branded and working toward specifically meeting articulated objectives (e.g., a formalized partnership among community transportation, parks, and land use organizations for the incorporation of green infrastructure to reduce flooding and overflows)
- Utility is engaged in peer learning partnerships, utility "twinning" arrangements, or other informal partnerships within the utility community
- Neighborhood group/community project participation to create recreational opportunities and enhance community assets (e.g., parks, public spaces)
- Triple Bottom Line approach and stakeholder engagement processes used in support of decision making
- Regular meetings hosted with community stakeholders
- Environmental education opportunities offered to community (e.g., river walks)
- Web presence established with social media engagement

- Outreach conducted to target stakeholders and other community groups (e.g., regulators, local officials, watershed groups)
- Community workforce development programs in place
- The value of water and wastewater and stormwater collection and treatment's role in the social, economic, public, and environmental health of the community are actively promoted by the utility and its partners within the community
- Utility positioned as a "good neighbor" and an "anchor institution" – a critical asset to its community

ACTIVITY AREA 3: ENERGY EFFICIENCY

- Internal policies established indicating the commitment of utility management to energy efficiency (e.g., energy efficiency standard operating procedures; board/executive management energy efficiency policy, including quantitative goals developed and shared with stakeholders)
- Energy audit/benchmarking conducted to identify priorities for energy efficiency improvements
- Individuals empowered within the utility to champion energy efficiency activities (e.g., an "energy advocate" or "energy champion")
- Energy management-related training provided to plant staff
- Energy conserving operational methods utilized (e.g., optimization of primary sedimentation to reduce utilization of pure oxygen)
- Employee performance plans include energy program-related activities to support the utility's energy vision and goals
- Energy efficiency master plan and communications strategy included as part of utility's overall strategic plan
- Energy efficiency team established and empowered to implement master plan and communicate results to management and staff
- Internal incentives in place for achieving energy efficiency goals
- Energy efficiency evaluated for all equipment purchases and capital projects
- Energy performance contracts or other similar mechanisms evaluated and in place, where appropriate
- Internal energy efficiency research conducted, or participation in external research initiatives
- Sub-metering conducted for critical process units
- Participation in voluntary energy efficiency programs (e.g., EnergyStar)
- Energy conserving equipment utilized wherever possible (e.g., peak shaving equipment to reduce usage)

ACTIVITY AREA 4: ENERGY GENERATION & RECOVERY

- Internal policy/policies established indicating the commitment of utility management to energy generation and recovery (e.g., standard operating procedures; board/executive management renewable energy conversion policy, including quantitative goals developed and shared with stakeholders)
- Internal energy sources evaluated (e.g., biogas, hydropower, heat in wastewater), and/or renewable energy sources evaluated on an ongoing basis (e.g., solar, wind, co-digestion)
- Digester gas recovered in a combined heat and power (CHP) system, and boilers in place (for process and building heating)
- Digester biogas converted to electricity and heat, and/or transportation fuel
- Solar panels, wind turbines, heat recovery, in-conduit hydro, and/or hydroelectric power generation systems installed
- Co-generation systems utilized
- Fats, oils, grease (FOG) receiving stations created

ACTIVITY AREA 5: NUTRIENT & MATERIALS RECOVERY

- Materials recovery strategy established and communicated with utility employees
- Adequate staffing secured to support materials recovery program (contractual or in-house)
- Market assessment conducted for recovered materials
- Contracts or agreements in place for materials provision

- Materials recovery opportunities explored and evaluated on a regular basis
- Alkalinity recovered during nitrogen removal processes
- Phosphorus recovered for beneficial reuse
- Chemical use reduced through improved biological uptake
- Engaged with external partner(s) on new technology and support to nutrient recovery/sale
- Third party investments pursued and secured for capital costs and operating/maintenance of nutrient recovery equipment
- Revenue generated from sales of nutrients and/or other recoverable materials
- Closed loop systems created to enhance nutrient and energy recovery
- Sales enhanced through advertising for nutrients recovered
- Ability to store recovered nutrients and materials in anticipation of improved market value
- Goals for nutrient recovery established based on total nutrients available, costs, and value

ACTIVITY AREA 6: WATER REUSE

- Board/executive management reuse strategy established
- Communications and outreach plan developed and implemented
- Market assessments of reused water to public/private and public/public entities conducted on an ongoing basis
- Investments made in reuse infrastructure
- Building code changes made to enable reuse (e.g., reuse water code)
- Water reused for on-site irrigation or process water (e.g., vacuum pumps, seal waters, cooling towers, etc.)
- Water reused for off-site industry purposes (e.g., power generation/cooling and golf course irrigation)
- Programs developed to reduce risk of reuse and improve guaranteed reuse water quality
- Reuse water injected for salt water/groundwater control
- Indirect potable reuse (IPR) implemented for downstream water supplies
- Communication plan created to explain IPR and/or direct potable reuse (DPR) to stakeholders
- Internal plant methods established to ensure treated water quality is fit-for-purpose reuse

ACTIVITY AREA 7: WATERSHED STEWARDSHIP

- Unified vision statement established that integrates water supply, water conservation, water recycling, runoff management, wastewater facilities planning, and infrastructure planning using a regional watershed approach
- Green infrastructure deployed to enhance infiltration, evapotranspiration, treatment, or capture and reuse of stormwater
- Watershed permitting strategy created for multiple facilities (e.g., active nutrient water quality trading under a watershed-based permit)
- Ecosystem enhancements for improved hydraulics or water quality, including:
  - Riparian reforestation to enhance pollution mitigation functions
  - Stream channel restoration for increased hydrologic stability
  - Critical land acquisitions (e.g., conservation easements, buffer-zone purchases)
- Climate impact resilience principles incorporated into planning for new, repair, and replacement of infrastructure
- Holistic, integrated protection approach implemented to manage significant potential sources of contaminants in the watershed that improves surface water quality and avoids transferring pollutants from one resource to another
- Integrated program created to address wet weather issues, including such sources as regulated stormwater, unregulated runoff (nonpoint sources), CSOs, SSOs, peak flow at POTWs, and source water protection
- Building codes modified to allow green infrastructure
- Workforce capable of evaluating and maintaining effective green infrastructure

- Evaluation of water quality trading options
- Integration of wastewater services with urban planning entities
- Feasibility study conducted to assess the benefits and costs of green infrastructure
- Participation in voluntary programs such as the Alliance for Water Stewardship

Appendix 2: Additional Example Performance Measures & Results by Area

ORGANIZATIONAL CULTURE

- Number of sessions, number of people, and type of workforce development activities conducted (e.g., trainings)
- Level of employee engagement in the goals and vision of the Utility of the Future business model
- Number of open positions that internal candidates can qualify for, as a result of employee training and enrichment programs
- Resource efficiency improvements related to staff utilization
- Employee job satisfaction (percent based on a comprehensive employee survey)

ACTIVITY AREA 1: BENEFICIAL BIOSOLIDS USE

- Percent of biosolids beneficially used vs. total volume produced on an annual basis
- Quantification of natural resources conserved through substitution (e.g., pounds of phosphorus or other fertilizers substituted for by biosolids)
- Demonstrated performance against projected performance in business case (e.g., actual versus projected biosolids volume acquired for soil amendment by agricultural producers)
- Tons of carbon sequestered in the soil via land application of Class A and/or Class B biosolids
- Impact on customer rates
- Increase in agricultural land application
- Increase in silviculture land application
- Increase in agricultural or silviculture growth yields
- Increase in improved soil characteristics resulting from biosolids amended soils
- Amount of biosolids use for landscaping for green infrastructure projects
- Amount of biosolids use for recreational fields, golf courses, and domestic use

ACTIVITY AREA 2: COMMUNITY PARTNERING & ENGAGEMENT

- Number and type of specific projects completed (e.g., rain gardens installed, innovative technologies, or other innovative practices adopted) associated with a partnership
- Number and type of formal recognitions of partnerships by outside groups (e.g., state or national award) and any associated results for the community (e.g., acres of green space added in the community)
- Performance improvements resulting from a partnership (e.g., reduced volume of flooding or reduced greenhouse gas emissions)
- Number of ongoing communications network actions/activities (e.g., website hits, newsletters, social media activity)
- Type and number of working agreements and collaborative initiatives for growth planning between and across different levels of government
- Type and number of changes in operating practices of other partners (e.g., nonpoint source controls by agricultural producers, food producers, consumers)
- Level of community support for the benefits and costs of becoming a Utility of the Future (e.g., annual survey results regarding community support for utility priorities)
- Support from and amount of contracting with local businesses
- Level of stakeholder involvement in decisions that affect them
- Number of outreach events conducted to publicize and build support for water and water services
- Type and number of collaborations on data collection and assessment
- Amount and effectiveness of public outreach as an integral part of project planning

ACTIVITY AREA 3: ENERGY EFFICIENCY

- KWh reductions in site energy use/intensity – to date or anticipated in the future (e.g., change in energy required per million gallons treated, or change in energy required per hour of pump operation)
- Translation of energy use/intensity reductions to greenhouse gas emission reductions – to date and anticipated in the future

- Current and anticipated investment (in USD) in energy efficiency projects or activities, and anticipated savings (in USD)
- USD value of other re-investments made as a result of the savings from reduced energy costs
- Percent of annual budget allocated to implementing priority energy efficiency improvements identified in energy audit

ACTIVITY AREA 4: ENERGY GENERATION & RECOVERY

- Reduced non-renewable energy use and carbon footprint (e.g., percent of non-renewable energy use reduction, percent of greenhouse gas emissions reduction)
- Reduced reliance on the power grid (e.g., percent reduction of energy utilization coming from the grid), and corresponding reduced vulnerability to climate change and energy price fluctuations
- Cost savings (e.g., return on investment proceeds and/or avoided energy costs)
- Percent increase in renewable energy production (e.g., solar generation) or utilization (e.g., purchase of renewable energy through the grid)
- Amount of carbon sequestered
- Amount of transmission losses eliminated when providing outside power to the facilities
- Increase in use of renewable energy sources, including Renewable Energy Credit generation, and/or percent of energy use that is renewable
- Percent of total plant power demand that is generated on-site from renewable sources

ACTIVITY AREA 5: NUTRIENT & MATERIALS RECOVERY

- Type and percent of materials recovered vs. materials available
- Revenue generated and/or costs avoided from materials recovery and marketing activities
- Demonstrated performance as projected in market assessment
- Number of external and/or public-private partnerships for recovered material sales

ACTIVITY AREA 6: WATER REUSE

- Water beneficially reused
    - Percent change of static water levels or reservoir due to new actions (augmentation)
    - Ratio of reuse quantity vs. wastewater volume processed (normalized change)
- Environmental benefits
    - Amount of movement or reduction of saltwater front (in feet)
    - Amount of decreased diversion of freshwater from sensitive ecosystems
    - Area irrigated solely by recycle water
- Local supply
    - Reduced dependence on purchased water and energy used to treat purchased water
    - Climate-independent water supply of reuse water
- Costs for, or sales of, treated water fit-for-purpose reuse
- Level of public acceptance of reuse commitments for non-potable opportunities
- Use of advanced treatment (ultrafilters (UF), reverse osmosis (RO), granular activated carbon (GAC)
- Type and use of enhanced disinfection of reuse water besides chlorine residual, such as UV light

ACTIVITY AREA 7: WATERSHED STEWARDSHIP

- Reduction in wet weather impacts (e.g., flooding, CSOs, SSOs, gallons of infiltrated water not reaching collection systems)
- Reduced unit costs for water quality improvements (e.g., financial benefits of a water quality trade)
- Enhanced pollution mitigation (e.g., sediment capture through green stormwater infrastructure)
- Increased hydrologic stability (e.g., reduction in flood-prone land area)
- Reductions (e.g., VSAT Risk Reduction Units change) in vulnerability to climate change
- Created or enhanced wetlands and riparian habitats (e.g., number of projects, or acres covered)
- Rate payer savings resulting from planning and projects between transportation and other public utilities

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