Water Environment Federation
Water Reuse Blue Ribbon Panel
Water Reuse Position Statement Final Report and Recommendations
August 20, 2017

The Government Affairs Committee of the Water Environment Federation is charged with the development and preparation of Policy Statements and Position Papers for important areas of concern for the Federation. Over the past several years the GAC has submitted many different Policy Statements and Position Papers for consideration and adoption by the Federation Board of Trustees. Periodically the BOT determines that these Federation policy documents should be reviewed and evaluated for continuing appropriateness and continuing relevance to the industry. To accomplish these reviews, the GAC established a Policy Subcommittee to evaluate all Policies and Position Statements older than 5 years and to either leave as approved, modify based upon changes in the industry or elimination as no longer necessary. This document is the Water Reuse Blue Ribbon Panel Final Report and Recommendations related to the Water Reuse Position Statement. It contains the Final Report and Recommendations, the White Paper (Attachment A) developed in support of the recommendations and the Water Reuse Position Statement, and the Charter of the Blue Ribbon Panel (Attachment B).

Background and Charge

One policy was the Water Reuse Policy first drafted in 1997 by the Federation's Water Reuse Committee, and finally formally adopted by the Board of Trustees in 2013. The BOT had previously expressed concern with the then current Policy and indicated their desire that that a revised policy was a high priority for the Federation and required substantial consideration due to the significant changes in the water reuse industry, climate change impacts, severe droughts across the United States and expansion of the need for sustainable water supplies. The Policy Subcommittee considered the current Water Reuse Policy in January 2017. The Subcommittee was also aware that the WEF Reuse Committee had, over the past year drafted a new Policy Statement that was submitted to the Subcommittee to inform of the many differences since the original draft in 1997. The Blue Ribbon Panel prepared a White Paper (Attachment A),

The Subcommittee assigned the activity related to the Water Reuse Policy to the WEF staff and member Paul Causey to develop a charter and schedule for the timely consideration and development of recommendations on Water Reuse for possible BOT adoption. This effort was a determined to be a very high priority for review and completion. It was also recommended to the Policy Subcommittee that a Blue Ribbon Panel of highly experienced water reuse professionals from across the United States be convened to assist with the review and recommendation. This Panel was convened in February and March of 2017. The Charter for the work of the Panel is contained in the Blue Ribbon Charter attached at the end of this Final Report and recommendations. The Blue Ribbon Panel consisted of the following water reuse professionals:

- Paul H. Causey, Causey Consulting, Blue Ribbon Chair
- Christopher Stacklin, Orange County Sanitation District, Water Reuse Committee Past Chair
- Allison Deines, Water Environment & Research Foundation

- Gary Darling, Western States Recycled Water Coalition
- Randy Raines, San Francisco Bay Area Recycled Water Coalition
- James Crook, California Potable Water Reuse Expert Panel
- Don Vandertulip, Texas, former Water Reuse Committee Chair, Vandertulip WateReusEngineers, AWWA Water Reuse and Reclaimed Water Standards Committees
- Karen Lowe, CDM Smith, Florida Water Environment Utility Council Reuse Working Group
- Brian Wheeler, Executive Director, TOHO Water Authority
- Shellie Chard, Oklahoma Department of Environmental Quality
- Tom Kunetz, Metropolitan Water Reclamation District of Greater Chicago, WEF Board of Trustees
- Bob Angelotti, Upper Occoquan Service Authority

WEF Staff Support:
- Claudio Ternieden, WEF Liaison
- Amy Kathman, WEF Government Affairs Specialist

Recommendations

The Panel conducted all considerations by email and conference calls beginning in March through to June 2, 2017, six (6) separate calls each of an hour and a half. The Panel's considerations were directed by the draft Reuse Policy from the WEF Reuse Committee and the Charter and included five direct responsibilities and recommendations as follows:

1. Development of a recommendation of the proper use of the terms reuse, reclaimed or recycled water in the draft Policy and in WEF advocacy to assure both the public and the profession of the broadest understanding of the issues facing the expansion of water reuse across the United States.
2. Revisions and comments to the draft Policy that will enhance WEFs advocacy for the appropriate applications of reuse in both the short and long term with elected officials, regulators, environmentalists and the public.
3. A recommendation for additional research to assure public understanding and acceptance of the water quality of reuse supplies.
4. A statement on the current state of the industry in protecting public health, the environment and safety when using recycled water.
5. A summary statement of findings and issues for the identification of applications and sources where water reuse should be considered that could provide alternative sustainable water supplies which may include storm water, oil and gas, mining, well drilling, etc. This could be by expansion of the current policy or identification of separate policies for other areas of reuse.

After initial considerations by the Panel, it was determined that the Reuse Committee draft required expansion and reformatting to reflect the current state of global water reuse/reclamation. The result was recognition that the current language used in the industry was not consistent and could be confusing and lead to a lack of proper understanding by the public and the regulating communities and that this concern should be included in the final Position Statement. In addition, substantial changes were required to assure the most current thinking on the reuse and

reclamation of wastewater and the use of fit for purpose water supplies across the world. The Blue Ribbon Panel has therefore drafted a separate Water Reuse Position Statement to reflect many of the diverse issues, regulations and water supply needs across the world and the water sector. This is in place of the draft Reuse Policy submitted to the Panel by the WEF Reuse Committee Item 2 above.

The Panel believes that this revised draft Reuse Position Statement is strongly forward looking, provides guidance for the continued expansion of reclaimed water use across the globe, provides the proper language to assure broad public acceptance of reclaimed water in all of its fit for use forms and should service WEF and the water industry as a guide to the complete success and acceptance of this valuable resource.

As to the last three recommendations the following are the Panel's recommendations and responses:

Recommendation 3. Additional Research

WEF supports the concept of "fit-for-purpose" as a major theme[1] in the conversation of water reuse. Fit-for-purpose means matching water of a specific quality to a use appropriate for that quality. For example, a water with quality suitable for irrigation might not be suitable for industrial use as boiler feedwater. Because water can be treated to varying qualities depending on the need, water resource recovery facilities (WRRFs) should be aware of the end use of the product water they treat. This focus on treating to the appropriate use (fit-for-purpose) ensures both sufficient treatment for public health, environmental, or product needs while also minimizing the cost of over-treating water to a quality level much different than is actually required by the end use. A recommendation for additional research to assure public understanding and acceptance of the water quality of reuse supplies.

Recommendation 4. Current State of the Industry

Many states have developed regulations, mainly based on public health protection, for various non-potable applications of reclaimed water and some states have developed regulations or guidelines for potable use of reclaimed water. Such regulations have, where necessary, been updated over the years due advances in treatment technology, water quality monitoring, risk assessment methodology, and operation and management controls to assure that the use of reclaimed water does not present undue risks to public health. To date, there have not been any documented occurrences of adverse health outcomes associated with the use of reclaimed water that meets all regulatory requirements, including use-area controls. Validation of the safety of

[1] WEF also recognizes, "Water on Purpose: The Right Water for the Right Use", the establishment of policies and development funding options that support as many water recycling solutions as possible; that a range of customized "mix and match" options offer each community or region the most potential for success in offsetting limited drinking water sources, including imported water [WateReuse Association]. Complementing "Water on Purpose" is the "One Water" approach highlighting successful strategies and powerful real-world examples of One Water management in practice [U.S. Water Alliance].

using reclaimed water will continue to be evaluated by the industry as new uses and/or health-related issues are identified, including those that pertain to potable reuse.

Recommendation 5. Summary Statement of Findings and Issues

The work of this Blue Ribbon Panel has identified integrated water reuse as a key mechanism to expand efficient application of reclaimed waters. As the available resource quantity varies by region, so do the potential applications of the resource. Water utility planners must now consider previously defined non-traditional water sources as a component of their region's water supply. Planners must match the quantity and quality of resource required with the available raw sources and define an appropriate level of treatment to provide a product water "fit for purpose". With increasing water demands and cost of treatment and distribution, it no longer is acceptable to use potable water for any and all purposes.

The Panel has identified three key fit-for-purpose applications that can advance an integrated water reuse approach: potable reuse, supply augmentation, and non-potable source substitution. The highest level of treatment for integration is providing advanced treatment technology and integrated water quality monitoring to convert a community wastewater to an immediately useable high-quality drinking water source to extend community systems stressed by excess demands. Water supply augmentation applies many of the advanced treatment and monitoring technologies applied to potable reuse, combined with environmental buffers to extend water supplies through aquifer augmentation, aquifer recovery and surface water augmentation. This process could potentially have integrated components such as rehydration of a natural wetlands that provides increased surface water storage, percolation to receiving aquifers, restored wildlife habitat and recreational opportunities. Non-potable source substitution allows utility planners to identify non-traditional raw water sources and a treatment technology appropriate to convert the raw water to a quantity and quality that can meet a regional non-potable water demand. This could provide multiple point-of-use applications or multiple non-potable supplies contributing to a common non-potable water supply.

The 2012 National Research Council of the National Academy of Sciences report identified the potential to expand the United States' useable reclaimed water by 12 BGD, or 6 percent of the national water supply by intercepting and redistributing treated effluents currently discarded to saline coastal waters. Depending on local demands and density of development, this water source can be used to expand the potable supply, augment natural supplies, or supplement the regional water supply by using a non-potable supply as an acceptable alternate water supply. Since most of the saline coastal discharges are not geographically located near potential agricultural uses, the most readily available applications without advanced treatment technology would likely include industrial applications and other urban uses. For coastal communities, significant quantities of stormwater may also be discharged prior to beneficial reuse. Joint use of treatment, pumping and piping to local users may provide another layer of integration to effectively collect and distribute these two supplies. For inland communities, integration of stormwater collection systems with irrigation and augmentation efforts can help extend local water supplies.

Expansion of industrial supplies can include reuse within an industrial complex or import of other supplies to augment the industrial water demands. In remote areas, the high demand for water in oil and gas operations can force the operations to consider sources of water which

traditionally were not fit for purpose, such as highly saline produce waters, or highly saline naturally occurring waters. As these water sources, while unfit, may be available in large quantities, the operators are faced with the technical challenge of selecting affordable treatment technologies to convert the non-usable saline water to a water reusable by the applicable industry or useable for irrigation or aquifer augmentation, banking the water for a future use.

WEF can assist member utilities and state regulatory agencies by providing proof-of-science in matching technologies to required water qualities, assisting in the efficient application of technology at an affordable cost to meet a regions water demands.

ATTACHMENT A

Water Reuse White Paper
Prepared by The Water Reuse Blue Ribbon Panel
August 20, 2017

1. Executive Summary

Water is a finite resource and there is no new previously unused water. Of the 3.7×10^8 trillion gallons of water circulating through the hydrological cycle, nearly all is ocean water and most of the rest is frozen or underground. Only seven-tenths of 1 percent[2] of the world's water is readily available for human use. Prolonged and severe droughts and other factors have made water supplies increasingly scarce in many regions of the United States, and elsewhere around the globe. Based on these conditions, there is a clear need to more effectively use our water resources to provide reliable high-quality and affordable potable supplies to our communities. Where limited water supplies are becoming increasingly inadequate or prohibitively costly for satisfying existing and future demands, use of fit-for-purpose reclaimed water is essential.

Two of the Water Environment Federation's (WEF) critical objectives are to "generate an increased public awareness of the value of water leading to increased funding to protect water quality through appropriate levels of infrastructure, management approaches, and services" and to "establish the conditions that promote accelerated development and implementation of innovative technologies and approaches in the water sector."

As such, WEF uses an adaptive approach to water reuse by using common terms, defining the vital role that reclaimed water plays in water management, and supporting a community's decision to explore reuse as a water management option using regional, state, and national guidelines and objectives. WEF advocates research to expand the science of water reuse, continually ensuring that the water produced is safe, reliable, and affordable for the community it serves. WEF recognizes the need for effective education and training of stakeholders, and the need to continually engage the public to affirm the legitimacy of the any reuse project to expand the sector.

2. Terms

As a national and international organization that represents the water sector, it is important for WEF to work with regional, state and local entities to develop a framework for the use of reclaimed water. Central to the effort is identifying and standardizing terms. Without developing a common language, there is confusion and difficulty in communication between water resource recovery systems, purchasers and users of the reclaimed water, and the regulators. When all parties are speaking the same language, there is a greater opportunity for success.

[2] Nace, USGS, 1967 and The Hydrologic Cycle (Pamphlet), USGS, 1984

A diverse group of terms have been used to describe water reclamation and reuse within the water reuse sector. The variability in word choice arose as a result of differing local, regional, state, national and international entities adopting terminology within their stakeholder groups, regulations and guidelines. The most common terms used to describe water produced through treatment of wastewater for purposes other than disposal are reclaimed water and recycled water. For the purposes of this position statement, the definitions of these and other selected terms are provided below.

The following are selected terms with their definitions, as WEF will use them.

"Environmental Buffer" means a surface water body (e.g., lake, reservoir, or river) or groundwater recharge system (e.g., direct injection of reclaimed into an aquifer or surface application followed by percolation to an aquifer via a vadose zone) that physically separates reclaimed water and drinking water treatment. An environmental buffer provides retention time and can provide treatment and dilution of the reclaimed water.

"Fit-For-Purpose reuse" means a reuse technique wherein treatment is specifically designed to generate water with a quality that fits the intended water reuse purpose. This focus on appropriately treating to the intended purpose ensures both sufficient treatment for public health, environmental, or product water needs while also minimizing the cost of over treating water to a higher quality than is required for the end use.

"Non-Potable Reuse" means the use of reclaimed water for beneficial purposes other than potable reuse.

"Non-Potable Surface Water Augmentation" means a fit-for-purpose water reuse application where reclaimed water is used to augment the flow in a water body (e.g., river or wetland area) that is not used as a source of drinking water.

"Potable Reuse" means the planned augmentation of a drinking water supply or potable water distribution system with reclaimed water in one of the following ways (adapted from California Legislature, 2017):

- "Groundwater Augmentation" means the planned placement of reclaimed water for replenishment of a groundwater basin or an aquifer that has been designated as the source of water supply for a public water system.

- "Surface Water Augmentation" means the planned placement of reclaimed water into a water body used as a source of domestic drinking water supply for a public water system.

- "Raw Water Augmentation" means the planned placement of reclaimed water into a system of pipelines or aqueducts that deliver raw water to a drinking water plant that provides water to a public water system.

- "Treated Drinking Water Augmentation" means the planned placement of reclaimed water into the water distribution system of a public water system.

"Reclaimed Water" means water that, as a result of treatment of wastewater, is suitable and intended for beneficial use.

"Recycled Water" is another term for Reclaimed Water.

3. Role of Reclaimed Water in Water Resource Management

Traditional water supplies in many parts of the United States are inadequate to sustainably meet the needs of communities in the face of population growth, extended droughts, climate change, and integrated water planning. In some areas there is an increasing need for maintenance of wetlands, lake levels, springs and stream flows to meet environmental protection requirements. In other areas groundwater has been over drafted and there is either inadequate water quantity or only poor water quality groundwater available. Many regions have implemented water conservation measures to offset existing or projected water shortages, and many regions have also implemented water reclamation projects to reuse treated wastewater for a multitude of uses, including augmentation of potable supplies and non-potable uses such as landscape irrigation, industrial cooling, agricultural irrigation, oil and gas exploration and production and environmental enhancement of streams or wetlands. Many communities engage in de facto use of reclaimed water through the withdrawal of water from a river that contains treated wastewater from upstream communities.

The importance of reliable, sustainable water supplies is highlighted by review of the water-energy-food nexus. Water is critical to extraction of oil and other energy sources and energy production from hydropower or thermoelectric power. The transmission, treatment and distribution of potable water and the collection and treatment of wastewater utilize about four percent of power generation in the United States.[1] Agricultural irrigation represents the largest consumptive use of water in the United States and the production and transport of food require significant sources of energy. The water-energy-food nexus accounts for more than 94 percent of off-stream water use in the U.S, and the availability of water in one area of the country can have significant impacts on the economy nationwide.[2]

Increasing the use of reclaimed water has the potential to significantly increase total available water resources in the United States. For example, reusing all municipal wastewater effluent that currently discharges to coastal saline waters could produce a significant water supply, equivalent to 27 percent of the public supply in the United States. Nationwide about 12 billion gallons out of the 32 billion gallons of municipal wastewater treated each day is discharged to an ocean or estuary, effectively discarded to the sea rather than viewed as a valued and recoverable water resource. Advanced treatment technologies now make it possible to effectively and reliably remove contaminants to extremely low concentration levels at which there are no known health concerns. Reclaimed water is a reliable source of supply which typically exists in close

proximity to urban demands, and is potentially a less costly and energy intensive source than other potential water supplies such as desalination.

Reclaimed water may be used for potable or non-potable purposes. Wastewater that is reclaimed for non-potable applications is typically treated to "fit-for-purpose" levels beyond secondary treatment. Examples of non-potable uses of reclaimed water and typical levels of treatment are as follows:

- Agricultural Irrigation. Agricultural irrigation has a long history in the United States. For some types of crops secondary treatment provides adequate levels of water quality. Irrigation of food crops with reclaimed water that are eaten raw is prohibited in some states; in other states tertiary treatment with filtration and disinfection are required to reduce health risks associated with exposure to microbial pathogens.
- Landscape Irrigation. This is the most widely used application of reclaimed water in urban settings and typically includes spray irrigation of golf courses, parks, school playgrounds, cemeteries and residential irrigation. Because public contact is possible with these applications, appropriate treatment including filtration and high-level disinfection are typically required. Where reclaimed water is high in total dissolved solids (TDS) other measures may be required to meet user water quality requirements including treatment with reverse osmosis or blending with other supplies.
- Other Urban Uses. Other uses in the urban setting include toilet flushing, building cooling systems, fire protection, commercial laundries, vehicle washing, street cleaning, and decorative fountains
- Industrial Uses. Types of industrial uses of reclaimed water include cooling, boiler feed, stack scrubbing and process water. The treatment levels required are dependent on specific requirements of the industry and use, but typically involve some form of advanced treatment.
- Recreational Uses. These uses include use of reclaimed water to supply water impoundments. If full body contract is allowed, tertiary treatment and a high level of disinfection is typically required. Nutrient and ammonia removal may be required as well as other treatment technologies to meet certain water quality objectives.
- Environmental Uses. Reclaimed water is also used in certain cases to augment flows to springs, streams or wetlands. Treatment requirements may require advanced treatment in some cases to remove nutrients, trace metals or contaminants of emerging concern (CECs).
- Groundwater Augmentation. Reclaimed water may also be used for non-potable purposes through introduction of reclaimed water into an aquifer to reduce the potential for ground subsidence or as a seawater intrusion barrier.

Potable reuse involves employing advanced treatment processes to remove pathogens, trace organics and other contaminants from wastewater to meet drinking water standards. Potable reuse systems where high quality reclaimed water is discharged to an environmental buffer, such as an aquifer or surface water body, have been in place in the United States for more than 50 years.[4] This type of potable reuse can be designated as either groundwater augmentation or surface water augmentation. Treatment technologies utilized in potable reuse projects have evolved from physical processes, such as lime clarification and activated carbon adsorption, to membrane filtration and advanced oxidation. "In 2010, approximately 355 MGD of reclaimed water was used for planned potable reuse projects in the United States."[5]

Some states (e.g., Texas, Florida and California) have begun assessing the use of advanced treated reclaimed water for potable purposes without employing an environmental buffer. In California, the State Water Resources Control Board Division of Drinking Water (DDW) received a report from an Expert Panel in 2016 that determined that it is feasible to develop and implement regulations for potable reuse, through either raw or treated drinking water augmentation, that would provide a level of public health protection that is as good or better than what is currently provided for conventional drinking water supplies and potable reuse projects that include an environmental buffer (Oliveri, et.al 2016). The Expert Panel identified total reliability as the overarching goal for potable reuse projects. A reliable system can be defined as one that is redundant, robust, and resilient, as defined below:

- Redundant – providing multiple barriers for the same contaminant
- Robust - combination of treatment technologies capable of performing without failure under a wide range of conditions to address broad variety of contaminant type and concentration
- Resilient - combination of protocols and strategies to address failures and bring systems back on-line (e.g., real-time or near real-time monitoring)

4. Regulatory and Public Acceptance

As more states and nations develop regulations for the use of reclaimed water, it is necessary that the regulations be protective of public health and the environment, be based on sound science, provide for resiliency, and are attainable. Nevertheless, of critical importance is recognition that "one size does not fit all". Variations in weather and geography, and the volume and characteristics of the reclaimed water in conjunction with the intended use of the reclaimed water play a role in determining what is or is not acceptable in a particular area of the country. Approaches that work in one area of the country may not be acceptable and/or applicable in another. When setting standards, it is important that regulators have the flexibility to recognize and regulate to the differences in naturally occurring water quality from one aquifer or surface water body to the next

As more communities look to reclaimed water as a way to become more resilient, water resource and supply management must be addressed more holistically and practically. A key challenge to expanding the use of reclaimed water is understanding and accepting the associated risks. Risks to public health and the environment are different based on the source and use of the reclaimed water.

The challenges to protecting public health and the environment must be addressed through establishing a regulatory framework that provides for the appropriate treatment for the intended use of the reclaimed water. All reclaimed water does not have to be treated to potable standards for all uses. However, uses of reclaimed water must ensure that the reclaimed water is "fit-for-purpose."

If the use of reclaimed water is to be widely accepted by the public then there must be proper communication and recognition that sufficient research and sound science has demonstrated that

the use of reclaimed water poses no significant risks to public health, and the environment. WEF is uniquely positioned to work with partner water sector organizations to ensure reliable information is made available to member associations, partner organizations, individual members, state and federal regulatory agencies, and the general public.

The challenges associated with using reclaimed water must be recognized and addressed by communities in order to ensure sustainable water supply availability for economic development, food production, and potable needs in the years to come.

5. Research

As areas of the world experience water shortages and water scarcity, the use of reclaimed water is expanding for irrigation, industry, augmenting drinking water sources, and other beneficial uses.

Due to the strong interest in advancing potable reuse by many communities in the U.S., research has been methodically conducted and peer-reviewed and treatment technologies have been proven over decades, not only in the lab, but also in the field. Potable reuse projects have been implemented across the U.S. and overseas, including in Georgia, Texas, Virginia, California and Namibia (Africa), South Africa, Singapore, Australia, Belgium, India and Mexico. As previously noted, the State Water Resources Control Board Division of Drinking Water (DDW) of California convened an expert panel that reviewed the body of potable reuse research and concluded that the State of California can develop water recycling criteria for potable reuse projects that would produce reclaimed waters as protective of human health as potable finished waters derived from conventional surface water and groundwater supplies (Oliveri, et.al 2016).

Continued research would allow the industry to develop a greater variety of reliable treatment technologies, operate these systems more efficiently and effectively, and proactively monitor for emerging contaminants and pathogens that may affect human health. Specific research topics include:

- Refinement of new analytical tools, such as bioassays to assess unregulated chemicals, quantitative microbial risk assessment to assess risk, and next generation sequencing methods for assessing microbiologicals, will allow the industry to better understand the array of compounds and microbes present in reclaimed water and to optimize performance of the treatment systems to ensure protection of public health and the environment;
- Evaluation of real-time monitoring systems and sensors and development of data analytics to allow for better system control and optimization;
- Validation of new and novel treatment technologies to support innovation in the sector;
- Exploration of the impediments and incentives for potable and non potable water reuse across multiple industries; and,
- Development of additional communication tools to engage in a public dialogue on the benefits and questions associated with reclaimed water.

This additional research portfolio will require a continuing significant investment of public and private resources. Research must be undertaken by credible organizations, be subject to extensive

peer-review, and be in partnership with utilities and regulators to ensure that results are scientifically-sound and meet the needs of stakeholders.

6. Education and Public Engagement

The proliferation of reclaimed water projects requires a new way of thinking about how the industry engages the public in water projects as well as how we educate and train the next generations of water quality professionals.

Because of the public's relative unfamiliarity with reclaimed water and the 'yuck factor' that is many people's response when they first hear of reclaimed water, early and consistent public engagement is an important aspect of any reclaimed water project's success. Public opinion research has shown that acceptance can be achieved through a coordinated, consistent and transparent communications plan (Millan et. al. 2015). Goals of successful communications plans include:

- Develop trust by building community relationships early in the process; being transparent with the costs, water quality, safety and environmental benefits; and, conducting tours;
- Proactively address tough questions and misinformation with consistency in messaging, terminology and timing across the entire water sector; and,
- Increase familiarity with the project and confidence in the quality of water by talking explicitly about the treatment process.

There is also a need for general education on the benefits of reclaimed water that is fit-for-purpose. Agencies should consider starting education programs at the elementary school level, perhaps focusing on the grade level when students are beginning to learn about water. Age-appropriate lessons and activities can be developed and shared that talk about the water cycle, their local water treatment system in a fun and engaging way. Often, educating young people has a multiplier effect as they go home and share what they learned with their parents.

In addition, outreach tools should be developed that include frequently asked questions, science-based handouts, powerpoints and other items, that are widely available and can be used by any agency. Public Information Officers should be engaged in the development and dissemination of these tools because they are the best conduits to the general public.

Current certification programs for wastewater and drinking water do not cover the full array of issues reclaimed water system operators will encounter in operation of these systems. There is a need for a new training regime that would require a collaboration between wastewater and drinking water training programs. This training program should allow operators to manage their water and wastewater training and accrue years of experience in an integrated manner and allow for lateral moves between drinking water, wastewater and water reclamation facilities. This initiative could dovetail nicely with WEF's Operator Initiative.

References

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ATTACHMENT B

Water Environment Federation
Draft Water Reuse Policy Review
Blue Ribbon Panel Charter
Final
April 21, 2017

The Water Environment Federation is a nationwide professional organization representing the interests of water sector agencies in the wastewater and storm water profession and has long promoted the use of water reuse (reclaimed/recycled) to expand the use of recycled wastewater to augment water supplies for potable water supplies. As early as 1998, WEF developed a Water Reuse Policy with the stated purpose of development of sustainable water supplies and the appropriate use of varying qualities of recycled water. The original policy was directed predominately at the indirect use of recycled water for uses that did not demand the high water quality of potable uses. Since that time, the state of the industry has moved forward to now include direct potable reuse of recycled water. As a result WEF has determined that revisions and reevaluation of the WEF Water Reuse Policy is currently warranted.

The WEF Board of Trustees Strategic Planning Subcommittee has directed that the revisions to the Reuse Police is of the highest priority for WEF. The WEF Government Affairs Committee (GAF) has been charged with the coordination, development, management and updating of all WEF policies. The GAF Policy Review Subcommittee has received a proposed draft of revisions of this Policy from the WEF Water Reuse Committee that has been developed in the past year. The Policy Review Subcommittee has recommended this issue is of such importance that it is imperative that a Blue Ribbon Panel of recycled water experts from across the country be asked to review and provide recommendations on the proposed revisions to the Water Reuse Policy.

This charter charges the Blue Ribbon Panel with reviewing the Policy with a view toward the future of recycled water and the sustainability of water supplies across the United States. The Panel is charged with reviewing the draft Reuse Policy from a national perspective, providing input on the issues and policies for WEF in advocating for the expansion of the reuse of wastewater as part of a sustainable philosophy for the efficient and economic use of these frequently underutilized and available water supplies when appropriate and cost effective.

The Panel is asked to review and evaluate the Policy and provide information and Policy recommendations in the following areas:

5. Development of a recommendation of the proper use of the terms reuse, reclaimed or recycled water in the draft Policy and in WEF advocacy to assure both the public and the profession of the broadest understanding of the issues facing the expansion of water reuse across the United States.

6. Revisions and comments to the draft Policy that will enhance WEFs advocacy for the appropriate applications of reuse in both the short and long term with elected officials, regulators, environmentalists and the public.
7. A recommendation for additional research to assure public understanding and acceptance of the water quality of reuse supplies.
8. A statement on the current state of the industry in protecting public health, the environment and safety when using recycled water.
9. A summary statement of findings and issues for the identification of applications and sources where water reuse should be considered that could provide alternative sustainable water supplies which may include storm water, oil and gas, mining, well drilling, etc. This could be by expansion of the current policy or identification of separate policies for other areas of reuse.

Then Panel is to be compose of those individuals who have a broad national understanding of the issues facing the reuse of wastewater and the varying rules and regulations that impact public acceptance or rejection of these sustainable water supplies.

Blue Ribbon Panel Operation

It is intended that the Panel will conduct its evaluation by email and conference call. It is not anticipated that any face to face meetings will be required or scheduled nor will WEF be responsible for any travel costs associated with participation on the Blue Ribbon Panel.

Blue Ribbon Panel Schedule

The Policy Review Subcommittee has established a schedule that calls for the Panel to complete their discussions and recommendations no later than May 31, 2017. This schedule will allow for the draft Reuse Policy to be initially reviewed at the WEF Board of Trustees July 2017 Board meeting and thereafter adopted at WEFTEC ’17 in October 2017.

Blue Ribbon Panel Invited Participants

- Paul H. Causey, Causey Consulting, Blue Ribbon Chair
- Christopher Stacklin, Orange County Sanitation District, Water Reuse Committee Past Chair
- Allison Deines, Water Environment & Research Foundation
- Gary Darling, Western States Recycled Water Coalition
- Randy Raines, San Francisco Bay Area Recycled Water Coalition
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- Brian Wheeler, Executive Director, TOHO Water Authority
- Shellie Chard, Oklahoma Department of Environmental Quality
- Tom Kunetz, Metropolitan Water Reclamation District of Greater Chicago, WEF Board of Trustees
- Bob Angelotti, Upper Occoquan Service Authority