Honoring Tradition & Adapting to the Future

The Joint Force Award for Water Excellence Program

■ *By Sgt. Maj. Eduardo I. Carranza*

As we delve into the dynamic field of liquid logistics, it is crucial to recognize the rich history of the Sgt. Maj. John C. Marigliano Award of Excellence competition, better known as the U.S. Army Forces Command's (FORSCOM's) Reverse Osmosis Water Purification Unit (ROWPU) Rodeo. This is a tradition that symbolizes the unwavering commitment to excellence in water support operations. The threat of conflict and instability remains ever-present, requiring us to be prepared to operate in austere and challenging conditions. Extreme events like the global pandemic disrupted supply chains, causing shortages of critical supplies and equipment. Moreover, many scientists believe climate change may be leading to more frequent and severe natural disasters, which may devastate water infrastructure and disrupt the supply of clean, safe water.

As the Army continues to prioritize readiness in water support operations, it is important to note the transformation of quartermaster petroleum, oils, and lubricants (POL) groups into theater petroleum and water groups (TPWGs), which will take place in the near future. This shift recognizes the critical importance of water in support of large-scale combat operations (LSCO) in a multidomain environment, and the need for a dedicated focus on water production, storage, and distribution. TPWGs will be responsible for ensuring troops have access to clean, safe, and reliable water in support of operation plans and concept plans. The transformation of POL groups into TPWGs is a testament to the growing recognition of the importance of water in military operations. It also underscores the need for continued investment in training, equipment, and technology to ensure we are ready to meet the challenges of the future.

This article celebrates the ROWPU Rodeo's past while emphasizing the need for innovation and preparedness in a continuously evolving landscape. The objective of the ROWPU Rodeo is to train and educate water production teams and foster confidence and esprit de corps within the professional water community.

The Legacy of the ROWPU Rodeo

The ROWPU Rodeo, an event that goes back to 1997, is steeped in military tradition. It has long served as a testament to the dedication and expertise of water experts within the armed forces. Originally conceived to showcase the skills of military water production units, this event has evolved over the years to become a forum for knowledge sharing, innovation, and camaraderie. Today, the ROWPU Rodeo stands as a symbol of the enduring commitment to delivering clean and safe water to troops in the most challenging environments, whether in times of conflict, humanitarian missions, or disaster response.

Transforming the battlefield challenges of liquid logistics remains rooted in the ever-evolving nature of modern warfare and the critical role of water supply and distribution in military operations. These challenges have undergone significant changes over the years and continue to present new complexities. The water community continues to make progress in transforming liquid logistics across the key areas discussed below.

Changing Operational Environments

Modern military operations encompass a wide range of environments. Bulk water sustainment in the Arctic has been the Achilles' heel of the Army and is considered extremely challenging. Equipment readiness is a key determinant for overall mission success in LSCO. Although -60 Fahrenheit (F) is at the lower end of temperatures, the Army's new strategy touches on operations below -60 F and more specifically on having the right mobility assets able to operate under these extreme conditions. A common theme in historical literature dealing with military operations in extreme cold weather conditions is the lack of infrastructure and its impact on operations. Access to road networks, airfields, seaports, and shelters for personnel, power grids, communications assets, fiber optic networks, water, and all classes of supply is typically constrained well beyond all normal planning guidelines.

Bulk water production: Water-based systems are typically rated for -25 F with the ability to store empty at colder temperatures. Water

Soldiers from 127th Quartermaster Company, 3rd Expeditionary Sustainment Command, Fort Liberty, North Carolina, recover the raw water intake/dolphin strainer at the 2023 Reverse Osmosis Water Purification Unit Rodeo at Fort Story, Virginia, May 2023. (Photo by Master Sgt. Benari Poulten)

equipment specifications normally stay in the range of -25 F. For example, the HIPPO 2,000-gallon water tank rack contains an integrated freeze protection system rated to -25 F. Additionally, the CAMEL II 800-gallon water pod system contains an integrated freeze protection system also rated to -25 F. Each environment presents unique challenges for sourcing, purifying, and distributing water. Adapting liquid logistics to these diverse conditions is essential.

Therefore, observations from previous Arctic Warrior exercises led to the development of the arctic fuel glove technology from the Quartermaster Corps' board of directors, which defined Arctic as -60 F, not -25 F. Adapting to these transforming battlefield challenges requires a combination of comprehensive training, technological integration, strategic planning, and a deep understanding of the operational environment. Liquid logistics experts within the military must continuously evolve their approaches to ensure clean and safe water remains readily available in the complex and dynamic landscape of modern warfare.

Transition to the Joint Force Award for Water Excellence Program

In response to Headquarters, Department of the Army, G44S Troop Support's proposal for establishing a comprehensive joint water sustainment training and competition, FORSCOM has concurred and decided to rebrand the ROWPU Rodeo as the Joint Force Award for Water Excellence (JFAWE) Program. This strategic shift allows for broader joint force participation in sustainment training, promoting the use of interoperable water purification equipment. The eventual incorporation of the JFAWE into Army Regulation 700-136, Tactical Land-Based Water Resource Management, will solidify its place within the military framework. Embracing a total joint program approach, the JFAWE

extends its reach to encompass the Army (Regular Army, Army National Guard, and Army Reserve), Marine Corps, Navy, and Air Force.

The primary objective of the JFAWE program is to elevate water readiness and effectiveness by acknowledging and honoring outstanding performance in water purification operations across all branches. This initiative serves as a positive motivator, recognizing superior contributions made by military components to water operations within the DoD. Additionally, the program aims to heighten awareness of and adherence to water operations guidelines, fostering a sense of camaraderie and dedication within the joint force water community.

Training and Readiness: Back to the Basics

While the JFAWE provides a platform to demonstrate technical skills, true expertise as a water treatment specialist encompasses a broader spectrum of proficiencies. Participating in the JFAWE competition is undoubtedly a valuable component of showcasing competency and expertise as a water treatment specialist, yet it is just one facet of the comprehensive skill set necessary for success in this field.

Success in water treatment operations demands a commitment to ongoing learning and professional development. While the JFAWE highlights current competencies, true expertise requires staying updated on emerging technologies, regulations, and best practices through continuous education and training. The history of the water treatment specialist role, much like the NCO Corps, boasts a legacy of diligence, adaptability, and technical expertise. Amid the modern complexities and advancements in water treatment technology lies a crucial aspect that is often overlooked: a deep understanding of the foundational history and principles shaping this essential profession.

Presently, many water treatment specialists might possess surface-level knowledge acquired during advanced individual training or through routine military education. However, this gap raises concerns about potentially repeating past mistakes or failing to optimize systems due to a lack of historical context and understanding. Fostering a deeper appreciation for the historical evolution of water treatment could pave the way for enhanced proficiency, innovation, and problem-solving within the field. Much like the camaraderie and unit cohesion built on understanding NCO history, water treatment specialists can benefit from a shared heritage, enabling them to face contemporary challenges more effectively.

Leveraging Advanced Technology for Water Purification and Storage

While technology offers solutions, it also introduces complexities. Advancements in water purification and storage technology provide more efficient methods but require well-trained personnel to operate and maintain these systems effectively. Integrating these technologies into military operations is crucial.

Innovations in technology offer unprecedented opportunities to enhance military liquid logistics capabilities. Advancements in water purification technologies, encompassing new methods for treating contaminated groundwater, seawater, and even wastewater, present more efficient and effective solutions. By encouraging personnel to think creatively and work together, we can develop new solutions to complex challenges and improve overall readiness. This requires strong leadership and a willingness to embrace new ideas and approaches. Moreover, the development of robust and resilient water storage and distribution systems is pivotal in ensuring a consistent water supply, even in the face of operational disruptions. Investment in research and development can greatly enhance our preparedness to face future challenges.

One key area where we can improve readiness is in the development of new technologies and techniques for water purification, distribution, and storage. By investing in research and development, we can find more efficient and effective ways to purify water from a variety of sources, including contaminated groundwater and seawater. Additionally, we are exploring atmospheric water extraction, or water from air, to be able to have water available at the

point of need and reduce the need for water distribution, which will be challenging in multidomain operations. We are also developing new approaches to water storage and distribution that are more resilient to disruptions and better able to respond to changing conditions. Systems like the Marine Corps' Lightweight Water Purification System and the Army's 3,000-gallons-per-hour ROWPU are systems that work and that operators can fix without requiring more advanced training or more specialized tools.

Training and Education

Another critical area of focus is training and education. We must ensure personnel have the skills and knowledge they need to operate and maintain complex liquid logistics systems. This means providing regular training and refresher courses and developing specialized training programs for specific scenarios and environments. We now have reach-back sustainment training tools that can go after individual and team proficiency.

The experience of recent global events has further highlighted the imperative of well-prepared, resilient logistics systems. Training is not a one-off endeavor but an ongoing commitment. Water purification teams must constantly refine their skills, staying updated on the latest technologies and methodologies. No technological advancement can replace the value of a well-trained military workforce. Ensuring personnel possess the skills and knowledge required to operate and maintain complex liquid logistics systems is an absolute necessity. Water teams must have access to regular training and refresher courses tailored to address the scenarios and environments they may encounter.

Nurturing a Culture of Innovation and Collaboration

In the realm of military liquid logistics, innovation and collaboration are paramount. By cultivating a culture that fosters creative thinking and teamwork, we develop adaptive solutions to complex problems. Water experts should be encouraged to think outside the box, embrace new ideas, and work collectively to attain shared objectives. Collaboration across military units and allied forces is essential, tapping into the wealth of collective knowledge and expertise. Integrating Army Virtual Learning Environment modules into training programs or offering online courses on the evolution of water treatment could serve as the cornerstone for a more robust, well-rounded training regimen. Leveraging FORSCOM's water purification sustainment training courses, which are already a part of contemporary military education, offers a viable and cost-effective means to disseminate historical knowledge across the community.

Conclusion

In essence, the resurgence of historical education within water treatment training not only enriches the understanding of its evolution but fortifies the profession's legacy. By arming today's water treatment specialists with a comprehensive understanding of the historical context, we equip them to be more adaptable, innovative, and efficient in safeguarding the world's most vital resource: water.

Our responsibility to deliver clean and safe water underpins operational success and troop well-being. The challenges we face today require enhanced readiness, technological innovation, and collaborative efforts. The JFAWE and its rich tradition serve as a reminder of the enduring commitment to excellence in liquid logistics. Investment in training and preparedness, the use of the latest technologies, and the cultivation of a culture of innovation are vital for ensuring military readiness in an ever-changing world. Together, we can confront the fluid challenges of today and those that await us in the future, carrying forward the legacy of the ROWPU Rodeo. Our joint force continues to move forward in Force Design 2030 to design the right capability needed in LSCO. Our armed forces stand ready to meet these future demands.

Sgt. Maj. Eduardo I. Carranza serves at the 953rd Theater Petroleum Center, Fort Liberty, North Carolina. He previously served as the Petroleum & Water Department sergeant major at the U.S. Army Quartermaster School, Fort Gregg-Adams, Virginia. He has a master's degree in defense and strategic studies from the University of Texas at El Paso.

Featured Photo
Soldiers from the 10th Mountain Division Sustainment Brigade, 10th Mountain Division, Fort Drum, New York, prepare to conduct a turbidity test at the 2023 Reverse Osmosis Water Purification Unit Rodeo at Fort Story, Virginia, May 2023. (Photo by Master Sgt. Benari Poulten)