



AWWU Briefing

*A presentation to
Assembly Enterprise and Utility Oversight Committee
January 18, 2024*

Mark A. Corsentino, P.E., General Manager

Presentation Topics

- Time sensitive procurement of specialty environmental legal services
- Proposed RCA tariff changes for Eklutna Water Treatment Plant for safety, security and liability
- Cybersecurity threats, defenses and staffing



Specialty Environmental Regulatory Legal Services

- Time sensitive and urgent as several EPA and ADEC environmental regulatory actions are active
- AWWU has similar specialized legal contracts for Water Rights and RCA Regulatory services and has had past environmental legal service contracts
- Asplund EPA 301(h) permit has an independent special legal contract that was competitively bid in 2021 with only 2 bidders
- Reeves Amodio has the former ADEC Commissioner in their firm whom was ADEC commissioner when Alaska assumed primacy from EPA for NPDES permits
- Girdwood WWTF 18-year administrative extension on ADEC permit with risk for no regulatory solution
 - Nov/Dec 2023 ADEC comments: DEC imagines prolonged discussions with AWWU about technical and regulatory options available for further consideration – as well as those that may not be warranted. At some point a regulatory pathway may not be available for further consideration.
- Girdwood Well COBC for GWUISW determination challenge
- Legal input for CWA change
 - HHC and State Water Quality Standards
 - PFAS hazardous substance and forthcoming new rules (ubiquitous substances in the environment)
- Legal input for SDWA changes
 - PFAS settlements for proposed new regulations; Legal review of all correspondence (CCR's)
 - Eklutna raw/unfinished water sales
- Landfill leachate and disposal alternatives regulatory pathways
- AWWU requested the Mayor waive Title 7 procurement rules under 7.20.090.A.2 to enter into this contract, time is of the essence, we have a meeting with ADEC meeting this afternoon with a need for specialized environmental regulatory legal representation



Human Health Criteria and State Water Quality Standards

AML Dec 2023

Alaska Department of Environmental Conservation
Terri Lomax



Upcoming Revisions to Human Health Water Quality Criteria for Toxics in Alaska: Critical Policy Choices and Cost Implications for APDES Permittees

Mark A. Corsentino, Anchorage Water & Wastewater Utility

Tom Dupuis, Jim Wodrich, Dave Clark, HDR Engineering, Inc.

December 6, 2023





AWU Proposed Tariff Revision to Remove Rule 15.6, Bulk Water Sales for Bottling and Resale

Unanimously approved by AWWU Advisory Board

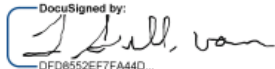


ANCHORAGE WATER AND WASTEWATER UTILITY
BOARD RESOLUTION
No. 2024-1

Meeting Date: January 10, 2024

1 **Subject: Recommendation for the Removal of Anchorage Water Utility (AWU)**
2 **Tariff Rule 15.6 Bulk Sales of Water for Bottling and Resale**
3
4 WHEREAS, the Mission of the Anchorage Water and Wastewater Utility is to
5 provide safe and reliable water and wastewater services today and into the future; and,
6
7 WHEREAS, in support of that mission, the Anchorage Water Utility is further
8 clarifying and limiting its mission to prioritize providing safe and reliable finished and
9 disinfected drinking water in accordance with the Safe Drinking Water Act to its
10 community and ratepayers; and,
11
12 WHEREAS, AWU Tariff Rule 15.6 allows for bulk water sales for unfinished water
13 (without disinfection) at the Eklutna Water Treatment Facility (EWTF) for bottling and
14 resale; and,
15
16 WHEREAS, the Eklutna Water Treatment Facility (EWTF) includes the lake intake
17 tunnel tied to the hydropower tunnel, the raw water main and the Eklutna transmission
18 main and associated appurtenances; and,
19
20 WHEREAS, AWU is proposing to remove AWU Tariff Rule 15.6 in its entirety for
21 safety, security, compliance, and operational needs; and,
22
23 WHEREAS, Safety is a key component to the atmosphere at Eklutna Water
24 Treatment Facility (EWTF) for customers receiving water services and the operational
25 staff performing the treatment process at EWTF, therefore, the goal with this proposal is
26 to reduce unnecessary access and interruptions to the treatment process; and,
27
28 WHEREAS, Security of EWTF is vital as the facility is critical and the primary
29 potable water production facility for AWWU, therefore, the goal with this proposal is to
30 limit access to only those individuals with a real need to be on site for operational,
31 maintenance, or construction purposes; and,
32
33 WHEREAS, Compliance requirements with all Alaska Department of
34 Environmental Conservation and Environmental Protection Agency Safe Drinking Water
35 Act Regulations are necessary to ensure AWWU continues to provide safe, compliant,
36 disinfected water ready for potable use, therefore, the goal with this proposal is to
37 eliminate any potential for discrimination or liability claims; and,

AWWU Board Resolution 2024-1
Removal of AWU Tariff 15.6, Bulk Sales of Water for Bottling and Resale
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1 WHEREAS, Operations of EWTF are a priority for the EWTF staff which is
2 burdened due to the limited number of available operators to load tankers for bulk
3 water customers and the fact that the pumping equipment used for loading the tankers
4 is a critical part of the EWTF Filter Backwash Process, therefore, the goal with this
5 proposal is to remove hardships on staff and treatment process; and,
6
7 WHEREAS, EWTF has seven (7) meters at the filling station, and all are assigned
8 to customers, of the seven customers, only one obtains water on a regular basis, three
9 customers obtain water on an intermittent basis, with the last being in 2015; and,
10
11 WHEREAS, AWU will offer an alternative service under AWU Tariff Rule 15.5.B,
12 Conditions of Temporary Construction Service from Fire Hydrants (Hydrant Meters),
13 which will have proposed tariff revisions filed concurrently; and,
14
15 WHEREAS, AWWU has engaged with its peers of similar larger public water
16 utilities in the United States and the consensus is that if they provide bulk water sales
17 for bottling and resale, they provide fully treated and disinfected water at locations in
18 their distribution system, not at the water treatment plants.
19
20 NOW, THEREFORE, THE ANCHORAGE WATER AND WASTEWATER UTILITY BOARD OF
21 DIRECTORS RESOLVES:
22
23 **to approve the submission of the proposed tariff revision to remove AWU Tariff Rule**
24 **15.6, Bulk Sales of Water for Bottling and Resale, to the Regulatory Commission of**
25 **Alaska.**
26
27 Approved by unanimous vote of the Anchorage Water and Wastewater Utility Board of
28 Directors.
29
30 
31 _____ \ 01/10/2024
32 Timothy M. Sullivan, Sr. Date
33 Chair, AWWU Board of Directors

Drivers for Proposed Revisions

- AWWU Mission
 - Limit to prioritize providing safe and reliable finished and disinfected drinking water
- Safety
 - Unknown individuals on site
 - Reduce unnecessary access and interruptions to treatment process
 - Intake tunnel, raw water main, Eklutna transmission main
- Security
 - Truck drivers for bulk water customers change often
 - Need proper advance vetting
- Compliance
 - ADEC and EPA Safe Drinking Water Act Regulations
 - Bulk water customers use own chosen means of disinfection
- Operational Needs
 - Limited to number of operators to provide access/service to load tankers
 - Pumping equipment used for loading the tankers is critical part of EWTF Filter Backwash Process



AWU Tariff No. 3 Proposed Revision Support

- Proposed Revision
 - Remove Rule 15.6 to discontinue the bulk “unfinished” water sales for bottling and resale
 - Revise Rule 15.5.B to allow for use of Fire Hydrants for bulk water sales
- Safety and security risks
- Hardship on employees and treatment process
- Risk of discrimination claims for requests to obtain raw water
- Eliminate potential for liability claims from bottled water products (not disinfected)
- Peers of similar larger public water utilities provide fully treated and disinfected water from distribution system not treatment plants
- Alternative service offered under Rule 15.5.B, Conditions of Temporary Construction Service from Fire Hydrants (Hydrant Meters)
- 7 customers, 1 consistent use, 3 intermittent use with last used in 2015 and 2022 (last 10 years)
- Communication with customers prior to filing proposed tariff revision



Timeline and Public Comment

- RCA has 45 days to make a decision
 - 30 days are for public comment
 - Customers will be notified
 - Commission Staff questions
- 3 choices for decision
 - Approve as filed
 - Reject/Deny
 - Suspend into a docket for further investigation





Cybersecurity

States and Congress wrestle with cybersecurity after Iran attacks municipal water utilities

By Marc Levy, Associated Press
Updated: January 2, 2024
Published: January 2, 2024



This is a portion of the Municipal Water Authority of Aliquippa, Pa., shown on Dec. 11, 2023 in Aliquippa, Pa. The Aliquippa water authority was just one of multiple organizations breached in the United States by Iran-affiliated hackers who targeted a specific industrial control device because it is Israeli-made, U.S. and Israeli authorities say. (AP Photo/Gene J Puskar)

HARRISBURG, Pa. — The tiny Aliquippa water authority in western Pennsylvania was perhaps the least-suspecting victim of an international cyberattack.

It had never had outside help in protecting its systems from a cyberattack, either at its existing plant that dates to the 1930s or the new \$18.5 million one it is building.

Then it — along with several other water utilities — was struck by what federal authorities say are Iranian-backed hackers targeting a piece of equipment specifically because it was Israeli-made.

Multi-layered approach



Co-Authored by:



TLP:CLEAR

Product ID: AA23-335A

December 1, 2023

IRGC-Affiliated Cyber Actors Exploit PLCs in Multiple Sectors, Including U.S. Water and Wastewater Systems Facilities

SUMMARY

The Federal Bureau of Investigation (FBI), Cybersecurity and Infrastructure Security Agency (CISA), National Security Agency (NSA), Environmental Protection Agency (EPA), and the Israel National Cyber Directorate (INCD)—hereafter referred to as “the authoring agencies”—are disseminating this joint Cybersecurity Advisory (CSA) to highlight continued malicious cyber activity against operational technology devices by Iranian Government Islamic Revolutionary Guard Corps (IRGC)-affiliated Advanced Persistent Threat (APT) cyber actors.

Actions to take today to mitigate malicious activity:

- Implement multifactor authentication.
- Use strong, unique passwords.
- Check PLCs for default passwords.

The IRGC is an Iranian military organization that the United States designated as a foreign terrorist organization in 2019. IRGC-affiliated cyber actors using the persona “CyberAv3ngers” are actively targeting and compromising Israeli-made Unitronics Vision Series programmable logic controllers (PLCs). These PLCs are commonly used in the [Water and Wastewater Systems \(WWS\) Sector](#) and are additionally used in other industries including, but not limited to, energy, food and beverage manufacturing, and healthcare. The PLCs may be rebranded and appear as different manufacturers and companies. In addition to the recent [CISA Alert](#), the authoring agencies are releasing this joint CSA to share indicators of compromise (IOCs) and tactics, techniques, and procedures (TTPs) associated with IRGC cyber operations.

Since at least November 22, 2023, these IRGC-affiliated cyber actors have continued to compromise default credentials in Unitronics devices. The IRGC-affiliated cyber actors left a defacement image stating, “You have been hacked, down with Israel. Every equipment ‘made in Israel’ is CyberAv3ngers legal target.” The victims span multiple U.S. states. The authoring agencies urge all organizations,

To report suspicious or criminal activity related to information found in this Joint Cybersecurity Advisory, contact [your local FBI field office](#) or CISA’s 24/7 Operations Center at [Report@cisa.gov](#) or (888) 282-0870. When available, please include the following information regarding the incident: date, time, and location of the incident; type of activity; number of people affected; type of equipment used for the activity; the name of the submitting company or organization; and a designated point of contact. For NSA client requirements or general cybersecurity inquiries, contact [Cybersecurity_Requests@nsa.gov](#).

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AWWU Follows Industry Standards

- AWWU adheres to the National Institute of Standards and Technology Cybersecurity Framework (NIST CSF)
- AWWU performs periodic assessments against **AWWA's Guidance and Assessment Tool**, a sector-specific approach to using the NIST CSF.
- These assessments are used to comply with the cybersecurity requirements of America's Water Infrastructure Act (2018 AWIA) Risk and Resiliency Assessments, among other regulatory requirements.



AWWU Partners with Industry Cybersecurity Agencies

- Water-ISAC
 - Water Information Sharing and Analysis Center
- MS-ISAC
 - Multi-State Information Sharing and Analysis Center
- CISA
 - Cybersecurity & Infrastructure Security Agency
- AWWU monitors bulletins and alerts from partner agencies, implementing recommendations and mitigation measures as necessary.



AWWU Implements Industry Best Practices

- AWWU implements a Defense-In-Depth, layered approach
 - Perimeter Security – Next Generation Firewall
 - Network Security – Network Segmentation, Access Control, Zero Trust, Log Monitoring.
 - Endpoint Security – Application Whitelisting, Patch Management, Antivirus.
 - Identity and Access Management – Strong password policy. Principle of least privilege.
 - Physical Security – Physical access is limited to authorized staff.
 - Data Encryption – Data is encrypted in transit and at rest.
 - Backup & Recovery – Backups occur regularly, are tested, and protected.
- <https://www.cisecurity.org/insights/spotlight/cybersecurity-spotlight-defense-in-depth-did>



Enterprise Firewall

- Inbound and outbound traffic is blocked by country of origin.
- IP addresses associated with nefarious activity are blocked automatically through dynamically updated lists.
- **There is no internet access to or from the SCADA network.**
- Personnel receive security and threat alerts when suspicious network activity is detected.



SCADA System

- Standardized SCADA Hardware and Software

- AWWU has standards dictating allowable vendors and equipment used in the SCADA network.
- AWWU uses a well-established vendor for hardware and software, recognized as an industry leader.
- SCADA software and hardware delivered by contractors is reviewed by staff for adherence to AWWU programming and security standards.
- SCADA software system updates are applied regularly.
- SCADA staffing issues (0 SCADA programmers) are warranting proposed organizational changes to be in alignment with AWWU SCADA Master Plan (Tetra Tech) recommendations and Gartner with respect to convergence of OT and IT skill sets; Labor changes will be required and potentially a code modification request; 3.70.060.C.11.b...add, “except for the ICS electrical shop”

2.2.1 Recommendation

Develop an OT group by consolidating SCADA/IT functions. This will enable AWWU to appropriately address future issues related to changes in technology.

Table 2-2. Recommendation—SCADA Organizational Support Structure

| Priority | Recommendation | Eng (\$k) | CAPEX (\$k) | OPEX (\$k/5 years) | Duration (months) |
|----------|---|-----------|-------------|--------------------|-------------------|
| 1 | Develop an OT group (consolidating SCADA and IT) to appropriately address future issues related to changes in technology. | 0 | 0 | 0 | 12 |

| | | | |
|--|--|---|------------------------|
| 9709 Job Views | 10 Applications | 10 Active Applications | 376 Days Advertised |
| Title ICS SCADA PROGRAMMER - Range 23 / PLU (2 Vacancies) | Number 2022-08281 | Location 325 E 94th Court Anchorage, AK 99515-2111 | |
| Advertise From 12/29/2022 | Closing Date/Time Continuous | Assigned To Luisa Kelekollo | |
| Class Spec ICS SCADA Programmer - Level 1 of 1 - Range PLU / 23 | Department Anchorage Water & Wastewater Utility | Division AWWU Industrial Control Systems | |
| Job Listing Default | Job Type Regular / Full Time | Exam Type Open & Promotional | |
| Reapply Period N/A | ApplicationTemplate Default | Bilingual Language =None | |
| Category Environmental Services, Utilities | Government Jobs Location N/A | Salary \$40.62 - \$42.66 Hourly \$3,249.60 - \$3,412.80 BiWeekly \$7,040.80 - \$7,394.40 Monthly | |

Questions?

