CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

25-109

MR# _____
Assigned by Purchasing Div.

MODIFICATION (WAIVER) REQUEST

Requesting Department & Division	Contact Name		Telephone #
PW&E/Utility Division	Abner Miller		907-586-0800 x4225
Department Head Signature	**Date**	**Original RQ #**	**Estimated Cost**
Dennis Kelly	7/8/2024	11025	$ 169,380.00
Is this Procurement State or Federally funded?	○ YES	◉ NO	

Reason for Modification Request:

Please complete this form and attach all supporting documents.
Give complete, accurate, detailed explanation of your request. Please be specific.

CBJ requests authority to purchase water reservoir water four (4) PAX water tank mixers per the attached quote and justification from CBJ Project Manager, Abner Miller. The water utility currently uses two (2) of the requested mixers that have been deemed superior to other technologies. The utility seeks uniformity in parts, operational training and maintenance of water distribution equipment. This equipment provides the above described efficiencies.

◉ **Sole Source:** The purchase of a commodity or service from the only known single source. *Attach verification.*
Code Provision: 53.50.090 (c)

○ **Class 2 Emergency:** A circumstance that poses a threat to the health, welfare or safety of the public.
Code Provision: 53.50.090 (L)

○ **Rider to Another Contract:** A vendor may extend another government agency's bid or contract pricing to CBJ. The proposed purchase must meet CBJ purchasing requirements and must have been competitively bid.
Code Provision: 53.50.090 (f) **Agency:** _____ **Contract #:** _____

○ **No Substitute:** A request for a specific brand name and model number of a particular item to be purchased. The item must be available from more than one supplier.

○ **Other:** Clear explanation is required. **Code Provision**: (if applicable) _____
Explanation:

Approved By:

Renée Loree — 08/14/2024
Purchasing Officer — **Date**

[signature] — 08/14/2024
City Manager — **Date**

FY	RQ	$ Amount	PO #	Purchasing Approval

Purchasing Officer Comments:

Expiration Date: _____

PAX WATER TECHNOLOGIES

A cleanwater1 Company

FIRM PROPOSAL

PAX PWM500 MIXERS
FOR
JUNEAU AK - (4) 2.0MG AUKE, CROW HILL, EAST VALLEY, WEST JUNEAU TANKS



PAX PWM500 SERIES MIXER

PAX Water Technologies File No.: P24-23059-Rev 1.1

Prepared on: June 24, 2024

SALES REPRESENTATIVE:
Cleanwater1, Inc.
Ethan Brooke
550 Sycamore Dr.
Milpitas, CA 95035
T: (917) 501-7358
Email: ebrooke@cleanwater1.com

PAX WATER TECHNOLOGIES

A cleanwater1 Company

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Cover Letter

Section 1 : Scope of Supply

Section 2 : Proposal Acceptance

Section 3 : Terms and Conditions

Section 4 : Technical Information

Section 5 : Case Study

Section 6 : Brochure

IMPORTANT NOTICE:

PAX Water Technologies is a Division of UGSI Chemical Feed, Inc., a Cleanwater1 company.

All the information in this Proposal or supplied in connection with this Proposal (including drawings, designs and specifications) (collectively, the "Information") is confidential and has been prepared for Buyer's use solely in considering the purchase of the goods and services described. Transmission of all or any part of this Proposal to others or use by Buyer for other purposes is unauthorized without Seller's advance written consent.

PAX WATER TECHNOLOGIES

A cleanwater1 Company

June 24, 2024

Abner Miller
Juneau
5433 Shaun Drive
Juneau, AK 99801,

Re: PAX PWM500 Mixer for Juneau, AK
PAX Water Technologies File No.: P24-23059-Rev 1.1

Dear Abner,

Thank you for your interest in PAX Water Technologies Division of UGSI Chemical Feed, Inc., a cleanwater1 company (PAX). We are pleased to provide a proposal for four (4) PAX PWM500 mixers for the 2MG Auke, Crow Hill, East Valley, and West Juneau Tanks. Our proposal is based on the following design criteria:

For Each Tank (four total tanks):

Gallons of Stored Water, in Millions	2
Average Asset Turnover, MGD	2 (assumed)
Tank Diameter, in feet	74
Tank Height, in feet	32
Recommended PAX Mixer per Tank	PWM500

The PAX PWM500 mixer is a submersible active mixing system for potable water storage tanks and reservoirs. When operated correctly, the PAX PWM500 mixer can rapidly eliminate thermal stratification, decrease ice formation, rapidly blend and distribute doses of residual disinfectant, and maintain uniform chemical and temperature conditions. Under some conditions, the mixing action can also reduce the rate of residual disinfectant loss and lower volatile disinfection byproduct levels inside the tank when used as part of an in-tank aeration system.

Installation of the PAX PWM500 mixer is very simple. The utility or contractor can perform the “wet-side” mixer installation while the tank is full by lowering the mixer into the tank access hatch using a stainless steel chain.

Equipment start-up may be provided by PAX or the local PAX representative. PAX will provide installation a start-up checklist form.

A detailed scope of work and firm price for the complete system is listed in Section 1 of this proposal. Section 3 includes our standard Terms and Conditions. All pricing is based on the scope of work described in Section 1 and the Terms and Conditions in Section 3.

The PAX line of water mixers offers many advantages, including:

- Eliminates thermal stratification, short-circuiting and “dead zones”
- Eliminates chemical stratification and residual loss
- Lowers surface water temperature and combats biofilm growth
- Reduces variability in water taste and odor
- Reduces nitrification risk in chloraminated water systems
- Lowers rate of disinfection by-product (DBP) formation
- Delivered and installed quickly, with minimal construction and installation cost
- Proven track record supported by years of successful operational experience

We look forward to working with you on this project. If we can be of any further assistance, please do not hesitate to contact me at (917) 501-7358.

Thank you.

Sincerely,

Ethan Brooke
Regional Sales Manager

cc: Wendy Trinh, PSI Water Technologies, Inc.
Wyatt Engdahl, PSI Water Technologies, Inc.

SECTION 1

SCOPE OF SUPPLY
PAX PWM500 MIXER

A. Scope of Work by PAX
B. Scope of Work by Others
C. Clarifications
D. Terms of Payment/Price Validity
E. Delivery
F. Warranty

PAX WATER TECHNOLOGIES

A cleanwater1 Company

A. SCOPE OF WORK BY PAX

The following equipment and services comprise our scope of work:

No	Item Description	Qty.
1.	**PWM500 Mixer Wet Assembly,** including: ▪ Stainless steel 316 impeller ▪ Passivated to minimize corrosion ▪ The ability to function continuously regardless of tank cycles ▪ 230V three phase 1 horsepower water-cooled motor powered by the PAX Control Center ▪ See below for on-site power requirement(s)	4
2.	**Control Center Dry Assembly with SCADA Compatibility**, including: **NEMA 4X Enclosure:** ▪ Lockable and weather resistant ▪ Overall weight of control center 55 lbs. ▪ Operating temperature range -4 ºF to 129 ºF (-20 ºC to 55 ºC) ▪ Green and Red LED Indicator lights to display motor status ▪ White LED Indicator light to display power ▪ Cooling fan **Motor Controller/VFD:** ▪ Allen Bradley ▪ **On-site power requirement: 115VAC single phase** ▪ VFD Rating: 1 HP ▪ HOA Switch ▪ Thermal shut-off protection built-in ▪ Current overload protection built-in ▪ Sine filter ▪ Branch-circuit protection **SCADA outputs included**: ▪ Digital Output signal indicating motor running ▪ Digital Output signal indicating fault ▪ Digital Input/Output signal for remote motor on/off ▪ RS-485 or Dry Contact connections ▪ 4-20mA signal	4
3.	**Cable 130 ft.**, including: ▪ Flat-jacketed 4-conductor	4
4.	**Tripod Assembly, PWM500,** including: ▪ Stainless steel 316 legs ▪ Stainless steel knobs for tool-less installation ▪ Chlorine/chloramine resistant rubber foot pad to avoid scratching tank floor	4
5.	**Long Bail Handle & Chain** ▪ Stainless steel 316 handle to deploy mixer in full tanks	4
6.	**Tank Penetration Accessories** ▪ Stainless steel strain relief for 4 wire flat-jacketed cable	4
7.	**Manufacturer's Field Services (1 Day at the Jobsite),** including: ▪ Installation Inspection ▪ System Start-Up ▪ Operator Training	Included

No	Item Description	Qty.
8.	**FOB Factory, Vineland, NJ with Full Freight Allowed to Jobsite, Juneau, AK**	Included
	FIRM PRICE [ITEMS 1 – 9]	**[US] $188,200**
	10% DISCOUNT	**[US] -$18,820**
	TOTAL FIRM PRICE (WITH 10% DISCOUNT [ITEMS 1-9]	**[US] $169,380**

B. SCOPE OF WORK BY OTHERS

1. Equipment unloading and installation.
2. Any submittal documentation.
3. **Any 5'x5' flat surface area for the PWM500 stand.**
4. All civil works and concrete pad for equipment.
5. Any underground or structural work.
6. Anchor bolts, seismic restraints and any associated seismic calculations.
7. Heat tracing and insulation of all interconnecting equipment.
8. Room ventilation, air conditioning or lighting.
9. Any video recording.
10. Electrical power to control panel.
11. Any electrical conduit runs.
12. Any tank recoating services, labor, or parts.
13. Any tank hatch penetrations.
14. All electrical conduit, wiring, electrical material, etc. between control panel, SCADA, etc.
15. All taxes, fees, lien waivers, bonds and licenses.
16. Any permitting or regulatory approvals.
17. Any items not explicitly listed under Scope of Work by PAX above.

C. CLARIFICATIONS

1. **PAX will provide the PAX Mixer in the Scope of Supply by PAX above in accordance to PAX's standard specification. PAX takes exception to any deviations outside PAX's standard specification**
2. **On-site power requirement to the Control Center of the PAX Mixer is 115VAC single phase. Step Down Transformer may be required if other power sources are available.**
3. **Reservoir Low Water Level must be above 7 feet for the PWM500 to function properly.**
4. If transaction is tax-exempt, please submit Tax Exemption Certificate to PAX.
5. PAX requires a minimum of two (2) weeks notification prior to performing onsite installation inspection, system start-up and training. PAX will work with you to attempt to accommodate your scheduling needs. Contact the Service Department at (866) 729-6493 to schedule the onsite visit.
6. Once the on-site service has been scheduled, PAX requires a minimum of one (1) week notification in the event of a delay. Notice of delay received less than one (1) week prior to a scheduled site visit may result in a change fee.

D. TERMS OF PAYMENT/PRICE VALIDITY

- Payment terms are 100% net 30 days after shipment of equipment.
- Price valid for 30 days. PAX may reprice this Proposal thereafter or if delivery occurs more than 365 days after PAX receives a mutually agreed order.

E. DELIVERY

- Equipment Shipment: 6-7 weeks after receipt of mutually agreed order

F. WARRANTY

- PAX will warrant the equipment for 5 years as set forth in its standard warranty included in the Terms and Conditions at Section 3 of this proposal.

PAX WATER TECHNOLOGIES

A cleanwater1 Company

SECTION 2

PROPOSAL ACCEPTANCE

PAX Water Technologies File No.: P24-23059-Rev 1.1

1) This Proposal by PAX Water Technologies ("Seller") is contingent upon the undersigned buyer ("Buyer") executing this Proposal, including without limitation agreeing to the terms and conditions contained in this Proposal.

2) Please return a signed copy of this Proposal to:

PAX Water Technologies
550 Sycamore Drive
Milpitas, CA 95035
Attn: Orders
Phone: (510) 550-7100
E-mail: orders@cleanwater1.com

Thank you for your interest in PAX. We are committed to meeting your expectations.

Proposal Acceptance
An authorized signature indicates Buyer's acceptance of this Proposal, including without limitation the Terms and Conditions in Section 3 below.

_____ **Company Name**

_____ **Buyer's Name (printed)**

_____ **Date**

_____ **Buyer's Authorized Signature**

_____ **Requested Arrival Date**

Bill To Name: _____	**Ship To Name:** _____
Bill To Email: _____	**Ship To Email:** _____
Bill To Phone: _____	**Ship To Phone:** _____
Bill to Address: _____	**Ship to Address:** _____
_____ **City State Zip**	_____ **City State Zip**

SECTION 3

TERMS AND CONDITIONS

1. Applicable Terms. These terms govern Seller's sale, and Buyer's purchase, of the products and/or services referred to in Seller's proposal or quotation (collectively, the "Products"). The front page of Buyer's purchase order (disregarding any reference to terms and conditions and any provisions that conflict herewith), if any, together with the description of the Products in Seller's proposal or quotation and these terms and conditions comprise the complete and exclusive agreement between the parties (the "Agreement") related to the purchase and sale of the Products. All prior communications, documents, negotiations and representations, if any, are merged herein. Whether these terms are included in an offer or an acceptance by Seller, such offer or acceptance is conditioned on Buyer's assent to these terms. Any additional, different or conflicting terms contained in Buyer's request for proposal, specifications, purchase order or any other written or oral communication from Buyer shall not be binding in any way on Seller, whether or not they would materially alter this document, and Seller hereby objects thereto. All orders are subject to prior credit approval by Seller.

2. Pricing. The prices shall be: (a) as stated in Seller's proposal or order acknowledgment, or (b) if none are stated, Seller's standard prices in effect at the time of release for shipment.

3. Payment. Unless otherwise stated, all payments shall be net 30 days from invoice date payable in United States Dollars. If Buyer fails to make any payment to Seller when due, Buyer's entire account(s) with Seller will become immediately due and payable without notice or demand. Buyer will pay 1½% interest per month, compounded monthly, on all amounts not received by the due date. Buyer hereby grants Seller a purchase money security interest in the Products until such time as Seller is fully paid. Buyer will assist Seller in taking action to perfect and protect Seller's security interest. Seller may make partial shipments, in which case, Buyer shall pay for each shipment in accordance with the terms hereof.

4. Taxes, Shipping, Packing. Except to the extent expressly stated otherwise in these terms or in Seller's proposal or quotation, prices do not include any freight, storage, insurance, taxes, excises, fees, duties or other government charges, and Buyer shall pay such amounts or reimburse Seller for any such amounts Seller pays. If Buyer claims a tax or other exemption or direct payment permit, it shall provide Seller with a valid exemption certificate or permit and indemnify, defend and hold Seller harmless from any taxes, costs, and penalties arising out of same. Prices include the costs of Seller's standard domestic packing only. Any deviation from standard packing (domestic or export) shall result in extra charges. Any and all increases, changes, adjustments, or surcharges (including fuel surcharges) which may arise in connection with the freight charges, rates or classification included as part of this Agreement, shall be for the Buyer's account.

5. Delivery. Products shall be delivered F.O.B. Seller's point of shipment or Ex Works Seller's point of shipment if being delivered outside the United States. All delivery dates are estimated and are dependent in part upon prompt receipt of all necessary information from Buyer, including submittal approvals, if applicable, and all required commercial documentation. Seller will make a good faith effort to complete delivery of the Products on the date and to the location specified in writing by Buyer, but Seller assumes no liability for loss or damage due to delay or inability to deliver, whether or not such loss or damage was made known to Seller. If Buyer causes or requests a shipment delay, or if Seller ships or delivers the Products erroneously as a result of inaccurate, incomplete or misleading information supplied by Buyer or its agents or representatives, storage and all other additional costs and risks will be borne solely by Buyer. Any claims for Products damaged or lost in transit ("Transit Losses") must be made by Buyer to the carrier and reported to Seller within one business day following delivery to Buyer.

6. Inspection and Acceptance. Buyer will have seven days from the date Buyer receives any Products to inspect such Products for defects and nonconformance which are not due to Transit Losses, and to notify Seller, in writing, of any defects, nonconformance or rejection of such Products. After such seven-day period, Buyer will be deemed to have irrevocably accepted the Products, if not previously accepted.

After such acceptance, Buyer will have no right to reject or revoke acceptance of the Products for any reason.

7. Returns and Cancellation. Buyer may not return custom engineered Products. Buyer may return other Products only with Seller's prior written approval, which may be withheld in Seller's sole discretion. Any authorized return will be subject to payment of a restocking charge and will be allowed only if the subject Product: (i) is in new condition, suitable for resale, and (ii) has not been used, installed, modified, altered or damaged. The restocking charge for authorized returns will be no less than (x) 25% of the purchase price, net of any freight charges included in the purchase price, plus (y) 100% of freight costs incurred by Seller. Buyer is responsible for the payment or reimbursement of return freight charges. Returns will be shipped F.O.B. Seller's location. Seller may, but will not be obligated to, treat any cancellation of an accepted order as an authorized return.

8. Force Majeure. Seller will have no liability for any breach caused by extreme weather or other act of God, strike or other labor shortage or disturbance, fire, accident, war or civil disturbance, delay of carriers, failure of normal sources of supply, act of government, epidemic or other public health crisis, or any other cause beyond Seller's reasonable control.

9. Warranty. Seller warrants to Buyer and the initial end-user of the Product (collectively, the "Owner") for the Warranty Period (as defined below) that each Product is free from defects in material and workmanship and conforms to Seller's specifications applicable to the Product. Seller's warranty is conditioned on (i) Seller's verification of the alleged breach; (ii) the Product being stored, handled, installed, started-up, operated and maintained in accordance with Seller's instructions, (iii) no repairs, modifications or alterations being made to the Product other than by Seller or its authorized representatives, (iv) Owner providing prompt written notice of any warranty claims within the Warranty Period, and (v) at Seller's discretion, Owner either removing and shipping the Product or non-conforming part thereof to Seller, such freight cost to be paid by Seller, or Owner granting Seller access to the Products at all reasonable times and locations to assess the warranty claims. Seller's warranty does not cover damage due to (x) acts of nature or third parties, or (y) ordinary wear and tear.

The sole remedy for any breach of Seller's warranty is limited to Seller's choice of repair or replacement of the Product, or non-conforming parts thereof, F.O.B. jobsite, or refund of the purchase price for the subject Product or part. Seller reserves the right to provide new or reconditioned replacement Products or parts (collectively, "Replacement Items"). The warranty on Replacement Items is limited to the remainder of the original Warranty Period and otherwise subject to the terms of this warranty. This warranty includes labor to install Replacement Items, subject to the following conditions: (a) Seller will reimburse Owner's reasonable, documented labor costs to install the Replacement Items up to an aggregate maximum of $2,500 over the full Warranty Period; and (b) Seller may elect, but is not obligated, to install the Replacement Items itself, in which case (i) Seller will bear all of its costs of installation; and (ii) Seller's obligations to pay for or provide additional labor under this warranty will be discharged in full. In any event, labor costs of divers and labor costs required to drain the storage tank or reservoir are excluded from this warranty. If Seller determines that any alleged defect or damage is not covered by this warranty, Seller will charge, and Owner will pay, Seller's normal rates for any inspection or repair performed by Seller, and for any materials provided or used in connection therewith.

The "Warranty Period" applicable to each Product begins on the date of installation or three (3) months after shipment, whichever comes first, and continues for 60 months thereafter.

THE WARRANTY SET FORTH IN THIS SECTION IS INTENDED TO BE SELLER'S SOLE AND EXCLUSIVE WARRANTY AND SELLER'S WARRANTY IS SUBJECT TO SECTION 10 BELOW. SELLER MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WARRANTIES REGARDING SERVICES RENDERED, IF ANY, OR ANY WARRANTIES THAT MIGHT ARISE FROM COURSE OF DEALING OR USAGE OF TRADE. IF IT IS ALLEGED OR DETERMINED THAT SELLER HAS MADE ANY OTHER WARRANTIES, SUCH OTHER WARRANTIES SHALL BE SUBJECT TO ALL THE CONDITIONS, LIMITATIONS, AND PROCEDURES SET FORTH IN THIS SECTION 9 AND SECTION 10 BELOW.

10. LIMITATION OF LIABILITY. NOTWITHSTANDING ANYTHING ELSE TO THE CONTRARY, SELLER WILL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE OR OTHER INDIRECT DAMAGES, AND SELLER'S TOTAL LIABILITY ARISING AT ANY TIME FROM THE SALE OR USE OF THE PRODUCTS WILL NOT EXCEED THE PURCHASE PRICE PAID FOR THE PRODUCTS. THESE LIMITATIONS APPLY WHETHER THE LIABILITY IS BASED ON CONTRACT, TORT, STRICT LIABILITY OR ANY OTHER THEORY. THE REMEDIES SET FORTH IN THIS AGREEMENT ARE INTENDED TO CONSTITUTE A COMPLETE ALLOCATION OF THE RISKS BETWEEN THE PARTIES, AND BUYER ACKNOWLEDGES THAT IT IS KNOWINGLY LIMITING THE REMEDIES THAT MIGHT OTHERWISE BE AVAILABLE TO BUYER. BECAUSE THIS AGREEMENT AND THE PRICE PAID REFLECT SUCH ALLOCATION, THE REMEDIES PROVIDED TO BUYER HEREUNDER WILL NOT HAVE FAILED OF THEIR ESSENTIAL PURPOSE EVEN IF THEY OPERATE TO BAR RECOVERY FOR CERTAIN DAMAGES THAT BUYER MAY INCUR.

11. Remedies of Seller. Any of the following will constitute an event of default which will enable Seller, at its option and without liability to Buyer, to cancel any unexecuted portion of the order that is the subject of this Agreement and to exercise any other right or remedy expressed herein or otherwise available at law or in equity: (i) the failure of Buyer to make any payment required hereunder when due ("Payment Default") or to perform any other term or condition contained herein; (ii) the insolvency of Buyer or its failure to pay its debts as they mature, an assignment by Buyer for the benefit of its creditors, the appointment of a receiver for Buyer or for the materials covered by this Agreement, or the filing of any petition to adjudicate Buyer bankrupt; (iii) a failure by Buyer to provide adequate assurance of performance within ten days after a justified demand by Seller; or (iv) if Seller, in good faith, believes that Buyer's prospect of performance under this Agreement is impaired. Seller's obligations under Section 9 hereof will be suspended during the pendency of any Payment Default. No such suspension will extend Seller's obligations under Section 9 beyond the Warranty Period provided therein. Seller's election of any remedy in the event of a default by Buyer will not preclude Seller from exercising any other remedy available to Seller hereunder or at law or in equity for the same or any other default. In the event it becomes necessary to incur any expense for collection of any overdue account, Seller's collection charges, including attorneys' fees and expenses, will be added to the balance due and Buyer will pay all such charges together with interest thereon from the date incurred in accordance with Section 3.

12. Equal Employment Opportunity. Seller is an equal opportunity employer. The parties shall, as applicable, abide by the requirements of 41 CFR 60-1.4(a), 41 CFR 60-300.5(a), 41 CFR 60-741.5(a) and Executive Order 13496 (29 CFR Part 471, Appendix A to Subpart A) (relating to the notice of employee rights under federal labor laws), and these laws and regulations are incorporated herein by reference.

13. Export Compliance. Buyer acknowledges that Seller is required to comply with applicable export laws and regulations relating to the sale, export, transfer, assignment, disposal, and use of the Products provided under this Agreement, including any export license requirements. Buyer agrees that such Products shall not at any time directly or indirectly be used, exported, sold, transferred, assigned, or otherwise disposed of in a manner which will result in non-compliance with such export laws and regulations. It shall be a condition of the continuing performance by Seller of its obligations hereunder that compliance with such export laws and regulations be maintained at all times. BUYER WILL INDEMNIFY, DEFEND AND HOLD SELLER HARMLESS FROM ANY AND ALL COSTS, LIABILITIES, PENALTIES, SANCTIONS AND FINES RELATED TO NON-COMPLIANCE WITH APPLICABLE EXPORT LAWS AND REGULATIONS.

14. Miscellaneous. No part of this Agreement may be changed or cancelled except by a written document signed by Seller and Buyer. As used in this Agreement, "including" and its variants mean "including without limitation" and its variants. No course of dealing or performance, usage of trade, or failure to enforce any term will be used to modify the Agreement. Buyer acknowledges that it has not relied upon any letters of intent, agreements, promises, negotiations, statements or representations other than those expressly set forth in this Agreement and that no such extraneous document or other communication shall be of any force or effect. Buyer agrees and warrants that in entering into this

Agreement, Buyer is relying solely upon the information contained in this Agreement and not in reliance upon any other information. If any of these terms is unenforceable, such term will be limited only to the extent necessary to make it enforceable, and all other terms will remain in full force and effect. Buyer may not assign this Agreement without Seller's prior written consent. This Agreement will be governed by the laws of the State of California without regard to its conflict of laws provisions. The application of the United Nations Convention on Contracts for the International Sale of Goods is excluded. Any bond issued by Seller in connection with the sale of the Products shall remain in effect for a maximum of two (2) years after acceptance of the Products, and the only warranty, guaranty or Product performance obligations covered thereby shall be those at Section 9 above. Buyer covenants to return any such bond to Seller upon the earlier to occur of (x) the expiration of the Warranty Period, and (y) the expiration of the aforesaid two-year period. All Product performance obligations of Seller are contingent on the conditions of and within the tank in which the Products are installed being as specified by Seller and will be considered satisfied and discharged upon successful completion of the initial Product performance testing. EACH OF THE PARTIES IRREVOCABLY AND UNCONDITIONALLY WAIVES ITS RIGHT TO TRIAL BY JURY IN RESPECT OF ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY ARISING IN CONNECTION WITH THE TRANSACTION CONTEMPLATED HEREBY.

Rev Date 03.25.22

SECTION 4

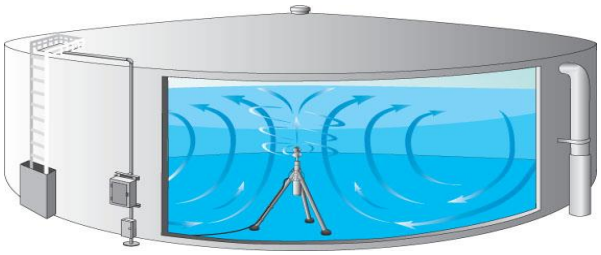
TECHNICAL INFORMATION

PWM500 MIXER
Powerful Active Mixer for Water Storage Tanks

The PAX Water Mixer (PWM500) is a powerful active mixer that improves water quality in water storage tanks. The mixer's patented Lily impeller creates a powerful vortex flow pattern to thoroughly circulate the entire tank volume while using very little energy. PAX Water Mixers are easy to install and maintain— no heavy cranes, lifting equipment or tank alterations are required and the mixer can be easily lowered through the tank hatch or installed by a diver.

Benefits

- Adjustable base for horizontal mixing
- Eliminates stratification and dead zones
- Improves disinfectant residual levels
- Reduces variability in water taste and odor



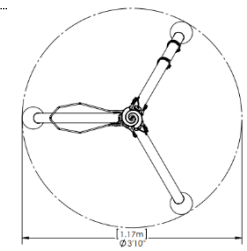
The PAX Water Mixer creates a powerful vortex flow pattern to thoroughly mix the entire tank volume.



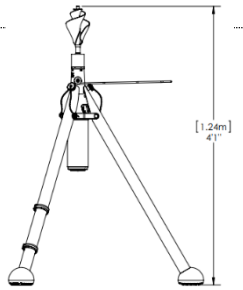
PWM500 MIXER

MIXER SPECIFICATIONS	
Power Supply Requirement	120/240 VAC, 50/60 Hz, Non GFCI Protected 20-amp circuit
Motor Type	230 VAC, 1 HP, water-filled, water-lubricated
RPM	1600
Nominal Power Draw	1.035 kVA (1035 watts)
Impeller Specifications	316 stainless steel, 8” (21 cm) tall x 5” (11 cm) diameter
Footprint Diameter	3’ 10” (117 cm)
Height	4’ 1” (124 cm)
Weight: Mixer Assembly	59 lbs. (27 kg)
Control Center Dimensions	55 lbs. (25 kg) (20” x 21” x 8”/ 50 cm x 53 cm x 20 cm)
Material: Control Center	Powder-coated carbon steel, Type 4 enclosure
Material: Stand	316 stainless steel
Material: Motor Seals	Chlorine/chloramine-resistant NBR rubber
Material: Feet	Chlorine/chloramine-resistant EPDM rubber
Wiring	NSF 61 & UL-listed submersible pump cable 14 AWG (2.1 mm^2) XLPE (.78 in x .28 in / 20 mm x 7 mm)

TOP VIEW



SIDE VIEW



CONTROL CENTER



UL CERTIFIED
HEALTH EFFECTS
US·CA
MH66053

cleanwater1
550 Sycamore Drive | Milpitas, CA 95035
Tel: 858.218.3745
Email: info@cleanwater1.com

cleanwater1.com

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The information provided in this literature contains merely general descriptions or characteristics of performance which in actual case of use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of a written contract.

SECTION 5

CASE STUDY

Powerful Submersible Mixers Help Prevent Ice Formation in Anchorage Tanks

Managing water distribution networks in cold northern climates comes with increased risks and operational challenges, such as main breaks and equipment outages. In Alaska, the Anchorage Water and Wastewater Utility (AWWU) is responsible for water and sewer services to over 297,000 residents in the greater Anchorage area. The 280-employee utility is owned by the Municipality of Anchorage and operates three wastewater treatment plants and two surface water treatment plants. The distribution system includes 65 million gallons of water in storage reservoirs throughout the city and 1,600 miles of underground pipes.



In 2010, AWWU began looking for equipment to prevent damage to its steel water storage tanks caused by ice forming inside the tanks. Operators observed that ice floating on the surface of the water scraped the coatings on the interior tank walls as water levels inside the tanks fluctuated. In addition, ice formation and movement caused extensive damage to roof support columns and tanks' interior ladders. Each spring, operators were faced with a list of storage tank repairs costing tens of thousands of dollars and requiring hundreds of hours of staff time.

As part of their search for equipment to prevent ice formation, AWWU officials discovered PAX Water Technologies at a national water industry tradeshow. They compared the PAX PWM400 Mixer to other available options, including installing exterior insulation on the tanks. As part of their due diligence, they checked with numerous customer references to determine how well PAX mixers perform in cold climates. Located roughly 500 miles from the Arctic Circle, Anchorage's winter temperatures average 5°F with a maximum of 6 hours of daylight per day in December. Calls to numerous references confirmed that the PAX mixer's performed in the harshest of climates.

To install the submersible PAX mixer, ice under the hatch had to be broken apart by AWWU staff so the unit could be lowered into the tank via a long bail handle. Once the mixer was powered up, operators observed the ice receding from the hole at a rate of approximately 15 feet per day, until the tanks were ice-free within about three days.

In August of 2010, a PWM400 Mixer was installed in the Girdwood tank. Installation of the mixer was relatively simple, only requiring the 115VAC electrical power available at the tank. AWWU staff installed the mixer while the tank was offline for repairs. Once the tank was refilled, the benefits were

immediately clear. As winter approached and temperatures dropped, operators observed no visible ice inside the tank. Despite extremely cold temperatures during the 2010-2011 winter, the tank remained ice-free. As time went on, operators noticed additional, unexpected benefits from tank mixing. During the warmer summer months the tank with the mixer no longer experienced thermal stratification. The mixer kept the water thermally homogenous and eliminated stagnant areas with high water age.

AWWU officials were extremely pleased with the performance of the initial mixer installed at the Girdwood tank. Eliminating ice damage at the tank resulted in immediate savings in staff time and repair costs. They began planning ahead to obtain additional mixers through a Capital Improvement Project budget plan. After five years, AWWU identified funding for an additional 18 submersible mixers to allow for one in each of its 18 storage tanks. In order to ensure that any new mixers would meet the performance standard established by the PAX PWM400 Mixer, AWWU engineers and staff included rigorous performance requirements in their specification. Their emphasis was on best performance, not on lowest cost. The specification called for water inside the tank (four million gallons or less) to turn over no less than six times within a 24-hour period and for water temperatures to converge to within 0.9°F degrees within that period. This level of turnover and chemical convergence was specified in order to keep a sufficient amount of water in motion to eliminate dead zones, force the warmer water at the bottom of the tank (in winter) to rise to the surface, and keep the surface from freezing.

By focusing performance rather than specific equipment, AWWU established the performance standard for the equipment, which is the key to achieving process control. AWWU staff and engineers held fast to the technical performance specifications throughout the procurement process. In the fall of 2015, 18 new PAX mixers were procured by AWWU.

Standardizing on specific mechanical equipment at a municipal treatment plant or factory makes operational sense. Common equipment simplifies employee training and streamlines maintenance and service. Equipment manufacturers must demonstrate a high level of performance, as well as a commitment to service, to merit consideration as a supplier of standard equipment. In the years since AWWU installed the PAX submersible mixers in its 18 storage tanks, deep cycling, the practice of "forcing turnover" by raising and lowering water levels, has been eliminated. The combination of performance, customer service and support enabled AWWU to confidently standardize its tank mixing equipment using PAX mixers.

"Icing was always a big problem for us until we added the PAX mixers."

Jay Jokela, Operations Manager, Anchorage Water & Wastewater Utility

SECTION 6

BROCHURE

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PAXMIXERS
TANK MIXING SYSTEMS

WATER QUALITY MANAGEMENT



PAX Impeller Mixer

SOLUTIONS THAT WORK

Quality Starts with Powerful Mixing

Your First Step Toward Improved Water Quality

cleanwater1 is the leading manufacturer of technologies used to improve water quality in storage tanks and distribution systems.

The PAX Mixer design is based on rigorous scientific analysis of fluid mechanical principles to achieve rapid disinfectant blend time. The mixers are designed for energy efficiency and engineered for ease of installation.

With an installed base of several thousand mixers around the world and average fleet age of seven years, the PAX family of mixers are the most frequently specified, lowest maintenance mixing systems in the world.



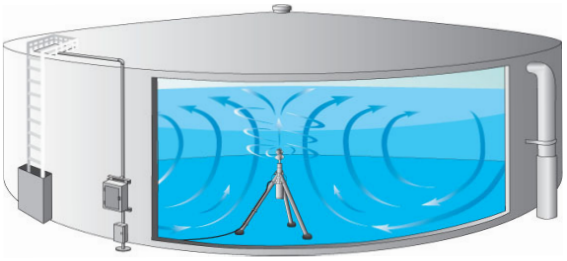
PWM100 Jet Mixer

Five Reasons Why Every Tank Needs a PAX Mixer

- **Improves Disinfectant Residual Control**
  Mixers capable of rapid blend times are essential to accurately controlling residual when dosing disinfectant.
- **Reduces Tank Corrosion**
  Active mixing can lower head space temperatures inside tanks, decreasing corrosion in tank interiors.
- **Reduces Biofilm and THM Precursors**
  Active mixing combined with powerful aeration and ventilation can drive down THM levels in tanks.
- **Reduces or Prevents Ice Formation**
  Powerful active mixing can reduce or prevent ice formation in tanks to protect valuable tank assets.
- **No Hassle Installation and Integration**
  Integrating mixing equipment into your water distribution system is easy. Our team of engineers and water quality experts works closely with municipal operators and engineers to ensure that installation is smooth and water quality goals are achieved.

Benefits of Powerful Active Mixing

- Eliminate thermal and chemical stratification
- Reduce disinfection byproducts (DBPs)
- Reduce water age
- Asset protection: Reduce ice formation and headspace corrosion



A PAX Impeller Mixer at work.

cleanwater1

Any Tank. Any Size.

We Have the Right Mixer for Your Process Goal

For Small-to-Mid Size Tanks

PAX Jet Mixers create a powerful vortex flow pattern inside small-to-mid-size water storage tanks.

For Mid-to-Large Tanks

PAX Impeller Mixers are powerful and energy-efficient active mixers for mid-to-large tanks.

For Large, Underground or Shallow Tanks

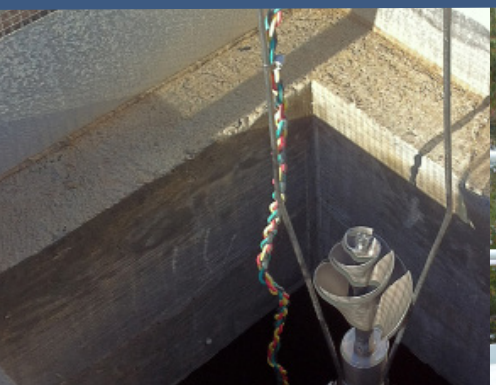
PAX Horizontal Mixers are ideal for large tanks, underground water storage tanks and shallow tanks.

Features of PAX Mixers

- Small footprint for easy installation
- 5 Year Warranty
- NSF61 certified
- Integrates with Monoclor® RCS and PAX TRS™ THM Removal Systems



PWM400 Horizontal Mixer



Simple Hatch Self-Installation



Jet, Impeller, Eductor Mixers



Wet or Dry Installation Options

"Since the PAX Mixer has been installed, we've seen better residual at the top and bottom layers and have had great water quality; furthermore, nitrification levels dropped significantly."

Randall Wilhelm, O&M Distribution Supervisor
South Coast Water District, California

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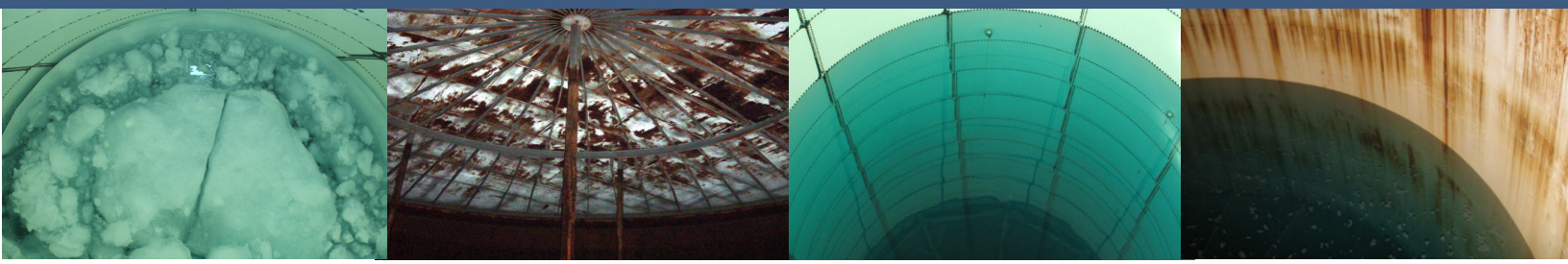
Any Challenge.

Thermal and residual stratifcation can be a huge challenge, in addition to ice and aged water. The Tank Shark® Mixing System provides for a homogeneous mixture within the reservoir, eliminating thermal and residual stratification with no moving parts or electrical equipment within the reservoir. The upward rotational force of the Tank Shark® Mixing System achieves a homogeneous mixture and eliminates thermal stratification, aged water, ice, and prevents structural damage.

A Tank Shark® Mixing System can create a homogeneous mix in a *one million gallon tank in 4 hours!*



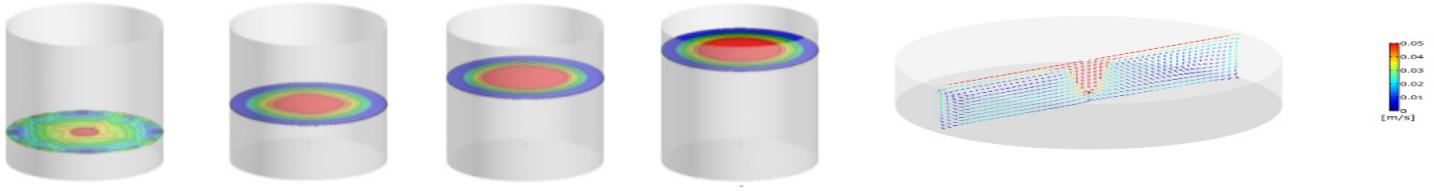
Tank Shark® Mixing System



"The PAX Mixer works, plain and simple. I'm never going to worry about ice again."

Frank Kearney Sr., Superintendent
Old Town Water District, Maine

We use rigorous modeling and testing to predict and validate disinfectant blend time performance.



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California Contractor's License No. 877235

From: Abner Miller
To: Greg Smith
Cc: Cristian Crabtree
Subject: MR for Pax Mixers
Date: Monday, June 10, 2024 10:56:18 AM

Greg – Here are some words for Modification Request purposes of sole sourcing mixers for our water tanks.

We currently have seven water storage tanks, each approximately 2 million gallons in capacity. In 2022 we contracted Taku Engineering to clean and inspect of six of the seven tanks.
During this exercise it was determined that installation of water tank mixers would benefit the life of the tank's internal coatings by preventing ice formation in the winter. An ice sheet on top of the water column results in internal coating scouring/damage as water levels rise and fall.
Additionally the water quality could be improved by mixing due to disruption other phenomenon such as biofilm growth and stratification.
Currently two tanks have mixers installed, one tank is not a candidate for a mixer as it has internal baffles, but the remaining four would benefit from mixers as described above.

The two mixers which we already have are PAX mixers from PAX Water Technologies. These mixers are available in an appropriate size the requires only one mixer per tank. They are free-standing/self-supporting units which do not require modification to our tanks. Additionally the mixers are easy to raise and lower which allows operator staff to conduct some troubleshooting and maintenance without the need to hire a contractor. The mixers come with proprietary controls housed in a NEMA 4X rated enclosure, suitable for outside mounting near the tanks perimeter. We have become acquainted with the tech support folks at PAX Water Technologies and their approach to troubleshooting our mixers.
In an effort to standardize on equipment, operation, and maintenance, we would like to purchase the four additional mixers from PAX Water technologies as well.

Let me know if I should provide more/other information.
Thanks,

Abner Miller
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