PROSPECTUS SUPPLEMENT (To the Prospectus Dated October 19, 2022)



205,213 Shares of Common Stock 928,581 Pre-Funded Warrants to Purchase Shares of Common Stock 928,581 Shares of Common Stock Underlying Pre-Funded Warrants

We are offering 205,213 shares of our common stock, par value \$0.001 per share, at a public offering price of \$11.34 per share. We are also offering to each purchaser whose purchase of shares of our common stock in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the holder, 9.99%) of our outstanding shares of common stock immediately following consummation of this offering, the opportunity to purchase, if the purchaser so chooses, 928,581 pre-funded warrants to purchase shares of common stock, or the pre-funded warrants, in lieu of shares of common stock. Each pre-funded warrant will be exercisable for one share of our common stock. The purchase price of each pre-funded warrant will equal the price per share of common stock being sold to the public in this offering, minus \$0.001, and the exercise price of each pre-funded warrant will be \$0.001 per share. The pre-funded warrants will not be listed on the Nasdaq Capital Market and are not expected to trade in any market; however, we anticipate that the shares of our common stock to be issued upon exercise of the pre-funded warrants will trade on the Nasdaq Capital Market. We are also registering the shares of common stock issuable upon exercise of the pre-funded warrants pursuant to this prospectus supplement.

In a concurrent private placement, we are also selling to the purchasers of our shares of common stock warrants, or private placement warrants, to purchase 1,133,794 shares of our common stock at an exercise price of \$11.34 per share. The private placement warrants are being sold at an offering price of \$0.125 per warrant. The private placement warrants and the shares of common stock issuable upon the exercise of such warrants are not being registered under the Securities Act of 1933, as amended, or the Securities Act, are not being offered pursuant to this prospectus supplement and the accompanying base prospectus and are being offered pursuant to the exemption provided in Section 4(a)(2) of the Securities Act and Rule 506(b) promulgated thereunder. The private placement warrants are immediately exercisable, and will expire five (5) years from the issuance date.

Our common stock is listed on the Nasdaq Capital Market under the symbol "AQMS." The last reported sale price of our common stock on the Nasdaq Capital Market on October 14, 2025 was \$29.62 per share.

As of October 14, 2025, the aggregate market value of our outstanding common stock held by non-affiliates, or public float, was \$12,857,219, based on 1,848,968 shares of our common stock, of which approximately 56,500 shares were held by affiliates, and a price of \$29.62 per share, which was the price at which our common stock was last sold on The Nasdaq Stock Market on October 14, 2025. We have sold \$4,840,415 of shares of our common stock pursuant to General Instruction I.B.6 of Form S-3 during the prior 12-calendar-month period that ends on and includes the date of this prospectus supplement. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities registered on this registration statement in a public primary offering with a value exceeding more than one-third of our public float in any 12-month period so long as our public float remains below \$75 million.

Investing in our securities involves a high degree of risk. Before making an investment decision, you should carefully review and consider all of the information set forth in this prospectus supplement, the accompanying base prospectus and the documents incorporated by reference herein and therein, including the risks and uncertainties described under "Risk Factors" beginning on page S-4 of this prospectus supplement and the risk factors incorporated by reference into this prospectus supplement and the accompanying base prospectus.

We have engaged The Benchmark Company, LLC, or the placement agent, to act as our exclusive placement agent in connection with this offering. The placement agent has agreed to use its reasonable best efforts to arrange for the sale of the securities offered by this prospectus supplement. The placement agent is not purchasing or selling any of the securities we are offering and the placement agent is not required to arrange the purchase or sale of any specific number or dollar amount of securities. We have agreed to pay to the placement agent the placement agent fees set forth in the table below, which assumes that we sell all of the securities offered by this prospectus supplement. There is no arrangement for funds to be received in escrow, trust or similar arrangement. There is no minimum offering requirement as a condition of closing of this offering. We will bear all costs associated with the offering. See "Plan of Distribution" on page S-11 of this prospectus supplement for more information regarding these arrangements.

	Per Share of	Per Pre-Funded	
	Common Stock	Warrant	Total
Public offering price	\$ 11.34	\$ 11.339	\$ 12,856,295
Placement Agent Fees(1)	\$ 0.7938	\$ 0.7937	\$ 899,941
Proceeds to us, before expenses	\$ 10.5462	\$ 10.5453	\$ 11,956,354

Represents a cash fee equal to 7% of the aggregate purchase price paid by investors in this offering. We have also agreed to reimburse the placement agent for certain of its offering-related expenses. See "Plan of Distribution" beginning on page S-11 of this prospectus supplement for a description of the compensation to be received by the placement agent.

Neither the U.S. Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying base prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The delivery to purchasers of the shares of common stock in this offering is expected to be made on or about October 16, 2025, subject to satisfaction of certain customary closing conditions.

The Benchmark Company

The date of this prospectus supplement is October 15, 2025.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying base prospectus are part of a registration statement that we filed with the Securities and Exchange Commission, or the SEC, utilizing a "shelf" registration process. From time to time, we may conduct an offering to sell securities under the accompanying base prospectus and a related prospectus supplement that will contain specific information about the terms of that offering, including the price, the amount of securities being offered and the plan of distribution. This prospectus supplement describes the specific details regarding this offering and may add, update or change information contained in the accompanying base prospectus. The base prospectus, dated October 19, 2022, including the documents incorporated by reference therein, provides general information about us and our securities, some of which may not apply to this offering. This prospectus supplement and the accompanying base prospectus are an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. We are not making offers to sell or solicitations to buy our securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation.

If information in this prospectus supplement is inconsistent with the accompanying base prospectus or the information incorporated by reference with an earlier date, you should rely on this prospectus supplement. This prospectus supplement, together with the accompanying base prospectus, the documents incorporated by reference into this prospectus supplement and the accompanying base prospectus and any free writing prospectus we have provided for use in connection with this offering, include all material information relating to this offering. We have not authorized anyone to provide you with different or additional information, and you must not rely on any unauthorized information or representations. You should assume that the information appearing in this prospectus supplement, the accompanying base prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying base prospectus and any free writing prospectus we have provided for use in connection with this offering is accurate only as of the respective dates of those documents. Our business, financial condition, results of operations and prospectus we have changed since those dates. You should carefully read this prospectus supplement, the accompanying base prospectus and the information and documents incorporated herein by reference herein and therein, as well as any free writing prospectus we have provided for use in connection with this offering, before making an investment decision. See "Incorporation of Certain Documents by Reference" and "Where You Can Find More Information" in this prospectus supplement and in the accompanying base prospectus.

This prospectus supplement and the accompanying base prospectus contain summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the full text of the actual documents, some of which have been filed or will be filed and incorporated by reference herein. See "Where You Can Find More Information" in this prospectus supplement. We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference into this prospectus supplement or the accompanying base prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

This prospectus supplement and the accompanying base prospectus contain and incorporate by reference certain market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, estimates as they relate to projections involve numerous assumptions, are subject to risks and uncertainties, and are subject to change based on various factors, including those discussed under "Risk Factors" in this prospectus supplement and the accompanying base prospectus and under similar headings in the documents incorporated by reference herein and therein. Accordingly, investors should not place undue reliance on this information.

PROSPECTUS SUPPLEMENT SUMMARY

This prospectus summary highlights information contained elsewhere in this prospectus supplement, the accompanying base prospectus and the documents incorporated by reference herein and therein. This summary does not contain all of the information that you should consider before deciding to invest in our securities. You should read this entire prospectus supplement and the accompanying base prospectus carefully, including the section entitled "Risk Factors" in this prospectus supplement and our consolidated financial statements and the related notes and the other information incorporated by reference into this prospectus supplement and the accompanying base prospectus, before making an investment decision.

All share and share price amounts included in this prospectus supplement give effect to a one-for-ten reverse split of our issued and outstanding common stock effected on August 4, 2025.

Our Company

Aqua Metals is seeking to reinvent metal recycling with its patented and patent-pending AquaRefiningTM technologies. Aqua Metals is focused on developing cleaner and safer metals recycling through innovation. We believe Aqua Metals can expand the development of breakthrough technologies for sustainable metal recycling and deliver high-value critical minerals back into the manufacturing supply chain while reducing emissions and toxic byproducts and creating much safer work environments.

Aqua Metals has invested in breakthrough metals recycling methodologies that we believe are environmentally responsible, economically competitive, and will help retain critical strategic metals within the U.S. while enabling domestically produced, sustainably produced, recycled metals to enter the supply chain and lower sole reliance on unsafe and toxic mining operations. Since 2015, Aqua Metals has developed breakthrough metal recycling technologies that utilize a clean, closed-loop process that can produce ultra-high purity metals. AquaRefining is designed to deliver raw materials back into the manufacturing supply chain, and replaces the need for polluting furnaces and hazardous chemicals with electricity-powered electroplating to recover valuable metals and materials from spent batteries with higher purity, lower emissions, and minimal waste.

We believe Aqua Metals' regenerative electro-hydrometallurgical recycling method potentially offers a substantial improvement over traditional pyrometallurgical and hydrometallurgical recycling techniques, which produce much higher emissions, lower recovery rates, and significant landfill waste. We believe the AquaRefining process has the potential to vastly reduce the environmental impact of recycling lithium batteries as compared to other processes while providing a higher yield of high-purity metals essential for the burgeoning US battery manufacturing industry.

We are in the process of demonstrating that Li AquaRefining can create the highest quality and highest yields of recovered minerals from lithium-ion batteries, with lower waste streams and lower costs than alternatives. With the proven ability to recover valuable metals from lithium-ion batteries at our pilot facility in the TRIC, our goal is to demonstrate our ability to process commercial quantities of high-purity lithium hydroxide and/or carbonate, nickel, cobalt, manganese dioxide, and copper in pure forms that can be sold to the general metals and superalloy markets, and can be made into battery precursor compound materials with proven processes that are already used in the battery industry.

The Company is also exploring additional innovative applications of AquaRefining across metals recycling industries at our Innovation Center, including recycling emerging battery chemistries and opportunities to develop additional products for sale to customer specifications.

Corporate Information

Our principal executive offices are located at 5370 Kietzke Lane, Suite 201, Reno, Nevada 89511, and our telephone number is (775) 446-4418. Our website is www.aquametals.com. Information contained in, or accessible through, our website does not constitute part of this prospectus supplement and is not incorporated by reference in this prospectus supplement.

Additional Information

For additional information related to our business and operations, please refer to the reports incorporated herein by reference, including our Annual Report on Form 10-K for the year ended December 31, 2024 as filed with the SEC on March 31, 2025, as described in the section entitled "*Incorporation of Certain Documents by Reference*" in this prospectus supplement.

The Offering

The following is a brief summary of some of the terms of the offering and is qualified in its entirety by reference to the more detailed information appearing elsewhere in this prospectus supplement and the accompanying base prospectus.

Common stock offered by us

205,213 shares of our common stock.

Pre-funded warrants offered by us

We are also offering to those purchasers, if any, whose purchase of the common stock in this offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or at the election of the purchaser, 9.99%) of our outstanding common stock immediately following consummation of this offering, the opportunity to purchase, if they so choose, 928,581 pre-funded warrants in lieu of the common stock that would otherwise result in ownership in excess of 4.99% (or 9.99%, as applicable) of our outstanding common stock.

The purchase price of each pre-funded warrant will equal the price per share of common stock being sold to the public in this offering, minus \$0.001, and the exercise price of each pre-funded warrant will be \$0.001 per

Each pre-funded warrant will be immediately exercisable and may be exercised at any time until exercised in full. There is no expiration date for the pre-funded warrants. To better understand the terms of the pre-funded warrants, you should carefully read the "Description of Securities We Are Offering" section of this prospectus supplement.

Offering price per share of common stock

\$11.34 per share.

Common stock outstanding immediately before this offering

1,477,966 shares of common stock.

Common stock outstanding immediately

after this offering

1,683,179 shares of common stock (assuming no exercise of the pre-funded warrants or the private placement warrants)

Use of proceeds

We estimate that the net proceeds of this offering, after deducting placement agent fees and estimated offering expenses, will be approximately \$11.8 million. We intend to use all of the net proceeds we receive from this offering for working capital and general corporate purposes. See "Use of Proceeds" for additional information.

Risk factors

Investing in our securities involves a high degree of risk. You should carefully consider the information under "Risk Factors" in this prospectus supplement and the other risks identified in the documents included or incorporated by reference in this prospectus supplement and the accompanying base prospectus before deciding to invest in our securities.

Concurrent private placement

In a concurrent private placement, we are selling to the purchasers of securities in this offering warrants to purchase up to 1,133,794 shares of our common stock at an exercise price of \$11.34 per share. The private placement warrants are being sold at an offering price of \$0.125 per warrant. We will receive proceeds from such warrants solely to the extent they are exercised for cash. The private placement warrants and the shares of our common stock issuable upon the exercise of the warrants are not being offered pursuant to this prospectus supplement and the accompanying base prospectus. The private placement warrants are immediately exercisable and will expire five (5) years from the issuance date. See "Private Placement Transaction."

Nasdaq Stock Market symbol

"AQMS"

The number of shares of common stock to be outstanding is based on 1,477,966 shares of common stock outstanding as of August 31, 2025, and excludes the following:

- 199,824 shares of our common stock issuable upon vesting of outstanding restricted stock units as of August 31, 2025;
- 182,386 shares of our common stock issuable upon exercise of outstanding warrants as of August 31, 2025, which have a weighted average exercise price of \$57.20 per share;
- 105,268 shares of common stock reserved for issuance and available for future grant under our 2019 Stock Incentive Plan as of August 31, 2025;
- 23,738 shares of common stock reserved for issuance under our Officer and Director Share Purchase Plan as of August 31, 2025; and
- 73,122 shares of common stock reserved for issuance under our 2022 Employee Stock Purchase Plan as August 31, 2025.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before investing in our securities, you should carefully consider the risks, uncertainties and assumptions contained in this prospectus supplement and also contained under the heading "Risk Factors" included in our Annual Report on Form 10-K for the year ended December 31, 2024 filed with the SEC on March 31, 2025, as revised or supplemented by subsequent filings, which are on file with the SEC and are incorporated herein by reference, and which may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. Our business, financial condition, results of operations and future growth prospects could be materially and adversely affected by any of these risks. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment.

Risks Related to this Offering and Our Common Stock

As an investor, you may lose all of your investment.

Investing in our securities involves a high degree of risk. As an investor, you may never recoup all, or even part, of your investment and you may never realize any return on your investment. You must be prepared to lose all of your investment.

Because we will have broad discretion and flexibility in how the net proceeds from this offering are used, we may use the net proceeds in ways in which you disagree.

We intend to use the net proceeds from this offering for working capital and general corporate purposes. See "Use of Proceeds" for additional information. Accordingly, our management will have significant discretion and flexibility in applying the net proceeds of this offering. You will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the net proceeds are being used appropriately. It is possible that the net proceeds will be invested in a way that does not yield a favorable, or any, return for us. The failure of our management to use such funds effectively could have a material adverse effect on our business, financial condition, operating results and cash flow.

The market price of our shares may be subject to fluctuation and volatility.

You could lose all or part of your investment. The market price of our common stock is subject to wide fluctuations in response to various factors, some of which are beyond our control. The market price for our common stock varied between a high of \$39.36 and a low of \$3.46 in the twelve-month period ended October 14, 2025. The market price of our shares on the Nasdaq Capital Market may fluctuate as a result of a number of factors, some of which are beyond our control, including, but not limited to:

- actual or anticipated variations in our and our competitors' results of operations and financial condition;
- general economic and market conditions and other factors, including factors unrelated to our operating performance, such adverse impact of tariffs and any trade war;
- market acceptance of our product candidates;
- changes in earnings estimates or recommendations by securities analysts, if our shares are covered by analysts;
- the lack of market acceptance and sales growth for our drug candidates, if any, that receive marketing approval;
- development of technological innovations or new competitive products by others;
- announcements of technological innovations or new products by us;
- developments concerning intellectual property rights, including our involvement in litigation brought by or against us;
- regulatory developments and the decisions of regulatory authorities as to the approval or rejection of new or modified products;
- changes in the amounts that we spend to develop, acquire or license new products, technologies or businesses;

- changes in our expenditures to promote our product candidates;
- our sale or proposed sale, or the sale by our significant stockholders, of our shares or other securities in the future;
- · changes in key personnel; and
- the trading volume of our shares.

There is no public market for the pre-funded warrants being offered by us in this offering.

There is no established public trading market for the pre-funded warrants, and we do not expect a market to develop. In addition, we do not intend to apply to list the pre-funded warrants on any national securities exchange or other nationally recognized trading system. Without an active market, the liquidity of the pre-funded warrants will be limited.

The pre-funded warrants in this offering are speculative in nature.

The pre-funded warrants offered hereby do not confer any rights of share of common stock ownership on their holders, such as voting rights, but rather merely represent the right to acquire shares of common stock at a fixed price. Specifically, commencing on the date of issuance, holders of the pre-funded warrants may acquire the shares of common stock issuable upon exercise of such warrants at an exercise price of \$0.001 per share of common stock. Moreover, following this offering, the market value of the pre-funded warrants is uncertain and there can be no assurance that the market value of the pre-funded warrants will equal or exceed their respective public offering prices. There can be no assurance that the market price of the shares of common stock will ever equal or exceed the exercise price of the pre-funded warrants, and consequently, whether it will ever be profitable for holders of the pre-funded warrants to exercise the pre-funded warrants.

Holders of the pre-funded warrants offered hereby will have no rights as common stockholders with respect to the shares of our common stock underlying the warrants until such holders exercise their warrants and acquire our common stock, except as otherwise provided in the pre-funded warrants.

Until holders of the pre-funded warrants acquire shares of our common stock upon exercise thereof, except as set forth in the pre-funded warrants, such holders will have no rights with respect to the shares of our common stock underlying such warrants. Upon exercise of the pre-funded warrants, the holders will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

This is a best efforts offering, with no minimum amount of securities required to be sold, and we may not raise the amount of capital we believe is required for our business plans, including our near-term business plans.

The placement agent has agreed to use its reasonable best efforts to solicit offers to purchase the securities in this offering. The placement agent has no obligation to buy any of the securities from us or to arrange for the purchase or sale of any specific number or dollar amount of the securities. There is no required minimum number of securities that must be sold as a condition to completion of this offering. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, placement agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth above. We may sell fewer than all of the securities offered hereby, which may significantly reduce the amount of proceeds received by us, and investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to support our continued operations, including our near-term continued operations. Thus, we may not raise the amount of capital we believe is required for our operations in the short-term and may need to raise additional funds, which may not be available or available on terms acceptable to us.

Future sales and issuances of our common stock could result in additional dilution of the percentage ownership of our stockholders and could cause our share price to fall.

We expect that significant additional capital will be needed in the future to continue our planned operations. To the extent we raise additional capital by issuing equity securities, our stockholders may experience substantial dilution. We may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities in more than one transaction, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights superior to our existing stockholders.

We have not paid dividends in the past and have no immediate plans to pay dividends.

We plan to reinvest all of our earnings, to the extent we have earnings, to cover operating costs and otherwise become and remain competitive. We do not plan to pay any cash dividends with respect to our securities in the foreseeable future. We cannot assure you that we would, at any time, generate sufficient surplus cash that would be available for distribution to the holders of our common stock as a dividend. Therefore, you should not expect to receive cash dividends on our common stock.

FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying base prospectus and the reports incorporated by reference herein and therein contain forward-looking statements. Certain statements in this prospectus supplement may constitute "forward-looking statements" for purposes of the federal securities laws. Our forward-looking statements include, but are not limited to, statements regarding expectations, hopes, beliefs, intentions or strategies regarding the future. In addition, any statements that refer to projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intends," "may," "might," "plan," "possible," "potential," "predict," "project," "should," "will," "would" and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. Forward-looking statements in this prospectus supplement may include, for example, statements about:

- · our ability to have our Aqua Refining solutions gain market acceptance;
- our ability to acquire addition working capital on reasonable terms, as needed and on a timely basis.
- our intentions, expectations and beliefs regarding anticipated growth, market penetration and trends in our business;
- the timing and success of our plan of commercialization;
- our ability to demonstrate the operation of our AquaRefining process on a commercial scale;
- · our ability to successfully apply our AquaRefining technology to the recycling of lithium-ion batteries;
- the effects of market conditions on our stock price and operating results;
- our ability to maintain our competitive technological advantages against competitors in our industry;
- our ability to maintain, protect and enhance our intellectual property;
- the effects of increased competition in our market and our ability to compete effectively;
- costs associated with defending intellectual property infringement and other claims;
- · our expectations concerning our relationships with suppliers, partners and other third parties; and
- our ability to comply with evolving legal standards and regulations, particularly concerning requirements for being a public company and environmental regulations.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described under the heading "Risk Factors" and elsewhere in this prospectus supplement, the accompanying base prospectus and the reports incorporated by reference herein and therein. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for us to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus supplement, the accompanying base prospectus and the reports incorporated by reference herein and therein may not occur and actual results could differ materially and adversely from those anticipated or implied in our forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus supplement to conform these statements to actual results or to changes in our expectations, except as required by law.

You should read this prospectus supplement, the accompanying base prospectus and the reports incorporated by reference herein and therein with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

USE OF PROCEEDS

We estimate that the net combined proceeds from this offering and the concurrent private placement will be approximately \$11.8 million, after deducting fees payable to the placement agent and other estimated offering expenses payable by us. This estimate excludes the proceeds, if any, from the exercise of the private placement warrants sold in the concurrent private placement were exercised for cash, we would receive additional net proceeds of approximately \$12.6 million. We cannot predict when or if these private placement warrants will be exercised. It is possible that these private placement warrants may never be exercised.

We expect to use the net proceeds from this offering for working capital and general corporate purposes. This represents our best estimate of the manner in which we will use the net proceeds we receive from this offering based upon the current status of our business, but we have not reserved or allocated amounts for specific purposes and we cannot specify with certainty how or when we will use any of the net proceeds. The amounts and timing of our actual use of the net proceeds from this offering will vary depending on numerous factors, including the factors described under "Risk Factors" located elsewhere in this prospectus supplement, the accompanying base prospectus or in the information incorporated by reference herein or therein. As a result, our management will have broad discretion in the application of the net proceeds, and investors will be relying on our judgment regarding the application of the net proceeds from this offering.

DILUTION

If you invest in our common stock, you will experience immediate dilution to the extent of the difference between the price per share you pay in this offering and the net tangible book value per share of our common stock after this offering.

Our net tangible book value as of June 30, 2025 was approximately \$5.12 million, or approximately \$4.98 per share. Net tangible book value is determined by subtracting our total liabilities from our total tangible assets, and net tangible book value per share is determined by dividing our net tangible book value by the number of outstanding shares of our common stock. After giving further effect to the sale and issuance of 205,213 shares of common stock in this offering, at a public offering price of \$11.34 per share and 928,581 pre-funded warrants at a public offering price of \$11.339 per pre-funded warrant, and deducting placement agent fees and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of June 30, 2025, would have been approximately \$16,925,218, or \$7.82 per share of our common stock (assuming the exercise for cash of all pre-funded warrants issued in this offering). This represents an immediate increase in net tangible book value of approximately \$2.84 per share to our existing stockholders and an immediate dilution in net tangible book value of approximately \$3.52 per share to investors participating in this offering.

Public offering price per share of common stock	\$	11.34
Net tangible book value per share as of June 30, 2025	\$ 4.98	
Increase per share attributable to investors participating in this offering		2.84
Adjusted net tangible book value per share after giving effect to this offering		7.82
Dilution per share to investors participating in this offering	\$	3.52

The number of shares of common stock to be outstanding is based on 1,030,349 shares of common stock outstanding as of June 30, 2025, and excludes the following:

- 135,208 shares of our common stock issuable upon vesting of outstanding restricted stock units as of June 30, 2025;
- 182,386 shares of our common stock issuable upon exercise of outstanding warrants as of June 30, 2025, which have a weighted average exercise price of \$57.20 per share;
- 23,738 shares of common stock reserved for issuance under our Officer and Director Share Purchase Plan as of June 30, 2025; and
- 73,122 shares of common stock reserved for issuance under our 2022 Employee Stock Purchase Plan as June 30, 2025.

DESCRIPTION OF SECURITIES WE ARE OFFERING

We are offering 205,213 shares of our common stock to investors pursuant to this prospectus supplement and the accompanying base prospectus. We are also offering up to 928,581 pre-funded warrants to those purchasers whose purchase of shares of common stock in this offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding shares of common stock following the consummation of this offering in lieu of the shares of common stock that would result in such excess ownership. Each pre-funded warrant will be exercisable for one share of common stock. We are also registering the shares of common stock issuable from time to time upon exercise of the pre-funded warrants offered hereby.

Common Stock

The material terms and provisions of our common stock are described under the caption "The Securities We May Offer—Common Stock" in the accompanying base prospectus.

Pre-funded Warrants

The following summary of certain terms and provisions of the pre-funded warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the pre-funded warrant, the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of pre-funded warrant for a complete description of the terms and conditions of the pre-funded warrants.

Duration and Exercise Price

Each pre-funded warrant offered hereby will have an initial exercise price per share of common stock equal to \$0.001. The pre-funded warrants will be immediately exercisable and will expire when exercised in full. The exercise price and number of shares of common stock issuable upon exercise is subject to appropriate adjustment in the event of share dividends, share splits, reorganizations or similar events affecting our shares of common stock.

Exercisability

The pre-funded warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the pre-funded warrant to the extent that the holder would own more than 4.99% (or, at the election of the holder, 9.99%) of the outstanding shares of common stock immediately after exercise. However, upon notice from the holder to us, the holder may decrease or increase the holder's beneficial ownership limitation, which may not exceed 9.99% of the number of outstanding shares of common stock immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the pre-funded warrants, provided that any increase in the beneficial ownership limitation will not take effect until 61 days following notice to us.

Cashless Exercise

In lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the number of shares of common stock determined according to a formula set forth in the pre-funded warrants.

Fractional Shares

No fractional shares of common stock will be issued upon the exercise of the pre-funded warrants. Rather, at our election, the number of shares of common stock to be issued will be rounded up to the nearest whole number or we will pay a cash adjustment in an amount equal to such fraction multiplied by the exercise price.

Transferability

Subject to applicable laws, a pre-funded warrant may be transferred at the option of the holder upon surrender of the pre-funded warrants to us together with the appropriate instruments of transfer.

Trading Market

There is no established trading market for the pre-funded warrants, and we do not expect an active trading market to develop. We do not intend to list the pre-funded warrants on any securities exchange or other trading market. Without a trading market, the liquidity of the pre-funded warrants will be extremely limited. The shares of common stock issuable upon exercise of the pre-funded warrants are currently traded on Nasdaq.

Right as a Stockholder

Except as otherwise provided in the pre-funded warrants or by virtue of such holder's ownership of shares of common stock, the holders of the pre-funded warrants do not have the rights or privileges of holders of our shares of common stock, including any voting rights, until such holder exercise their pre-funded warrants. The pre-funded warrants provide that holders have the right to participate in distributions or dividends paid on our shares of common stock.

PRIVATE PLACEMENT TRANSACTION

Concurrently with the sale of shares of common stock in this offering, we will issue and sell to the investors in this offering the private placement warrants to purchase up to an aggregate of 1,133,794 shares of common stock at an exercise price equal to \$11.34 per share. The private placement warrants are being sold at an offering price of \$0.125 per warrant.

The private placement warrants and the shares of common stock issuable upon the exercise of such warrants are not being registered under the Securities Act, are not being offered pursuant to this prospectus supplement and the accompanying base prospectus and are being offered pursuant to the exemption provided in Section 4(a) (2) under the Securities Act and/or Rule 506(b) promulgated thereunder. Accordingly, purchasers may only sell shares of common stock issued upon exercise of the private placement warrants pursuant to an effective registration statement under the Securities Act covering the resale of those shares, an exemption under Rule 144 under the Securities Act or another applicable exemption under the Securities Act.

The following sets forth the material terms of the private placement warrants.

Exercisability

The private placement warrants will be immediately exercisable and will expire five (5) years from the issuance date. Each of the private placement warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice, accompanied by payment in full in immediately available funds for the number of shares of common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). If a registration statement registering the issuance of the shares of common stock underlying the private placement warrants under the Securities Act is not effective or available, the holder may, in its sole discretion, beginning 30 days from the issuance date, elect to exercise the private placement warrants through a cashless exercise, in which case the holder would receive upon such exercise the net number of shares of common stock determined according to the formula set forth in the warrant.

No fractional shares of common stock will be issued in connection with the exercise of a private placement warrant. In lieu of fractional shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price or round down to the next whole share.

Exercise Limitation

A holder will not have the right to exercise any portion of the private placement warrants if the holder (together with its affiliates) would beneficially own in excess of 4.99% (or, upon election of the holder, 9.99%) of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the private placement warrants. However, any holder may increase or decrease such percentage, provided that any increase will not be effective until the 61st day after such election.

Exercise Price Adjustment

The exercise price of the private placement warrants is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock and also upon any distributions of assets, including cash, stock or other property to our stockholders.

Exchange Listing

There is no established trading market for the private placement warrants and we do not expect a market to develop. In addition, we do not intend to apply for the listing of the private placement warrants on any national securities exchange or other trading market.

Fundamental Transactions

If a fundamental transaction occurs, then the successor entity will succeed to, and be substituted for us, and may exercise every right and power that we may exercise and will assume all of our obligations under the private placement warrants with the same effect as if such successor entity had been named in the warrant itself. If holders of our common stock are given a choice as to the securities, cash or property to be received in a fundamental transaction, then the holder shall be given the same choice as to the consideration it receives upon any exercise of the private placement warrants following such fundamental transaction.

Rights as a Stockholder

Except as otherwise provided in the private placement warrants or by virtue of such holder's ownership of shares of our common stock, the holder of private placement warrants will not have the rights or privileges of a holder of our common stock, including any voting rights, until the holder exercises the warrant.

Resale/Registration Rights

We are required by October 25, 2025 to file a registration statement on Form S-1 or another appropriate form providing for the resale of the shares of common stock issued and issuable upon the exercise of the private placement warrants. We are required to use commercially reasonable efforts to file such registration statement within 10 days following the close of this offering and cause such registration to become effective within 30 days of the closing of this offering (60 days in the event the SEC elects to review such registration statement), and to keep such registration statement effective at all times until no investor owns any warrants or shares issuable upon exercise thereof.

PLAN OF DISTRIBUTION

We have engaged The Benchmark Company, LLC, to act as our exclusive placement agent, on a reasonable best-efforts basis, in connection with this offering pursuant to this prospectus supplement and accompanying prospectus. The terms of this offering are subject to market conditions and negotiations between us, the placement agent, and prospective investors. The engagement agreement does not give rise to any commitment by placement agent to purchase any of the securities, and the placement agent will have no authority to bind us by virtue of the engagement agreement. The placement agent has no commitment to buy any of the securities offered pursuant to this prospectus supplement and accompanying prospectus. The placement agent is not purchasing the securities offered by us in this offering and is not required to sell any specific number or dollar amount of securities, but will assist us in this offering on a reasonable best-efforts basis. Further, the placement agent does not guarantee that it will be able to raise new capital in any prospective offering. The placement agent may engage sub-agents or selected dealers to assist with the offering. We have entered into a securities purchase agreement directly with the investors in connection with this offering, and we will only sell to investors who have entered into the securities purchase agreement. We may not sell the entire amount of securities offered pursuant to this prospectus supplement.

We expect to deliver the securities being offered pursuant to this prospectus supplement on or about October 16, 2025, subject to satisfaction of customary closing conditions

Fees and Expenses

The following table shows, on a per share and total basis, the offering price, placement agent fees and proceeds, before expenses to us.

		Per Share of]	Per Pre-Funded	
	(Common Stock		Warrant	Total
Public offering price	\$	11.34	\$	11.339	\$ 12,856,295
Placement Agent Fees(1)	\$	0.7938	\$	0.7937	\$ 899,941
Proceeds to us, before expenses	\$	10.5462	\$	10.5453	\$ 11,956,354

(1) We have agreed to pay the placement agent in connection with this offering a cash fee equal to 7.0% of the aggregate purchase price paid by investors in this offering. We have also agreed to reimburse the placement agent for certain of its offering-related expenses.

Right of First Refusal

In addition, we have granted a right of first refusal to the placement agent, subject to certain exceptions, pursuant to which it has the right to act as the joint bookrunning manager or joint placement agent, as applicable, if we or our subsidiaries raise capital through certain public or private offerings of equity or debt securities at any time prior to the 12-month anniversary of the consummation of this offering.

Subsequent Equity Sales

We have agreed to be subject to a lock-up for a period of ninety (90) days following the date of closing of the offering pursuant to this prospectus supplement and accompanying prospectus. This means that, during the applicable lock-up period, we may not issue, enter into any agreement to issue or announce the issuance or proposed issuance of any of our Common Stock or any securities convertible or exercisable or exchangeable for, Common Stock, subject to certain exceptions.

We have also agreed, subject to certain exceptions, until the twelve (12) month anniversary following the date of closing of the offering, not to (i) issue or sell any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive, additional shares of Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon, and/or varies with, the trading prices of or quotations for the shares of Common Stock at any time after the initial issuance of such debt or equity securities, or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to our business or the market for our Common Stock, or (ii) enter into, or effect a transaction under, any agreement, including, but not limited to, an equity line of credit facility, subject to certain exceptions.

Regulation M

The placement agent may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by it and any profit realized on the resale of the shares sold by it while acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. As an underwriter, the placement agent would be required to comply with the requirements of the Securities Act and the Exchange Act, including, without limitation, Rule 415(a) (4) under the Securities Act and Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of shares by the placement agent acting as principal. Under these rules and regulations, the placement agent:

- may not engage in any stabilization activity in connection with our securities; and
- may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until they have completed their participation in the distribution.

Indemnification

We have agreed to indemnify the placement agent against certain liabilities, including certain liabilities arising under the Securities Act and to contribute to payments that the placement agent may be required to make for these liabilities.

Nasdaq Listing

Our Common Stock is listed on the Nasdaq Capital Market under the symbol "AQMS." On October 14, 2025, the last reported sale price of our Common Stock on The Nasdaq Capital Market was \$29.62 per share.

Other Relationships

From time to time, the placement agent may provide in the future, various advisory, investment and commercial banking and other services to us in the ordinary course of business, for which it may receive customary fees and commissions. Except as disclosed in this prospectus supplement, we have no present arrangements with the placement agent for any services.

LEGAL MATTERS

The validity of the securities offered by this prospectus supplement will be passed upon for us by Greenberg Traurig, LLP, Irvine, California. Lucosky Brookman LLP, Woodbridge, New Jersey, is acting as counsel for the placement agent in connection with this offering.

EXPERTS

The consolidated financial statements of Aqua Metals, Inc. as of December 31, 2024 and 2023 and for the fiscal years then ended, have been audited by Forvis Mazars, LLP, independent registered public accounting firm, as set forth in their report thereon, included in Aqua Metals, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2024, and incorporated herein by reference. Such consolidated financial statements have been incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing. The report of Forvis Mazars, LLP contains an explanatory paragraph regarding substantial doubt about the Company's ability to continue as a going concern.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC permits us to "incorporate by reference" the information and reports we file with it. This means that we can disclose important information to you by referring to another document. The information that we incorporate by reference is considered to be part of this prospectus supplement, and later information that we file with the SEC automatically updates and supersedes this information. We incorporate by reference the documents listed below, except to the extent information in those documents is different from the information contained in this prospectus supplement, and all future documents filed with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act (other than the portions thereof deemed to be furnished to the SEC pursuant to Item 9 or Item 12) until we terminate the offering of these securities:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, filed with the SEC on March 31, 2025;
- our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2025, filed with the SEC on May 8, 2025;
- our Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2025, filed with the SEC on August 13, 2025;
- our Current Reports on Form 8-K, filed with the SEC on May 1, 2025, May 13, 2025, May 16, 2025, May 16, 2025, May 29, 2025, June 13, 2025, July 3, 2025, July 24, 2025 and September 8, 2025; and
- the description of our common stock in our Form 8-A12B, which was filed with the SEC on July 24, 2015, and any amendments or reports filed for the purpose of updating this description.

To the extent that any statement in this prospectus supplement is inconsistent with any statement that is incorporated by reference and that was made on or before the date of this prospectus supplement, the statement in this prospectus supplement shall supersede such incorporated statement. The incorporated statement shall not be deemed, except as modified or superseded, to constitute a part of this prospectus supplement or the registration statement. Statements contained in this prospectus supplement as to the contents of any contract or other document are not necessarily complete and, in each instance, we refer you to the copy of each contract or document filed as an exhibit to our various filings made with the SEC.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Aqua Metals, Inc. Attn: Investor Relations 5370 Kietzke Lane, Suite 201 Reno, Nevada 89511 (775) 446-4418

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement under the Securities Act (SEC File No. 333-267780) that registers the securities offered hereby. The registration statement, including the exhibits and schedules attached thereto and the information incorporated by reference therein, contains additional relevant information about the securities and our Company, which we are allowed to omit from this prospectus supplement pursuant to the rules and regulations of the SEC. In addition, we file annual, quarterly and current reports and proxy statements and other information with the SEC. Our SEC filings are available on the SEC's website at www.sec.gov. Copies of certain information filed by us with the SEC are also available free of charge on our website at www.aquametals.com. We have not incorporated by reference into this prospectus supplement the information on our website and it is not a part of this document.

PROSPECTUS

\$100,000,000



Common Stock **Debt Securities** Warrants **Subscription Rights** Units

We may issue securities from time to time in one or more offerings of up to \$100,000,000 in aggregate offering price. This prospectus describes the general terms of these securities and the general manner in which these securities will be offered. We will provide the specific terms of these securities in supplements to this prospectus. The prospectus supplements will also describe the specific manner in which these securities will be offered and may also supplement, update or amend information contained in this document. You should read this prospectus and any applicable prospectus supplement before you invest.

We may offer these securities in amounts, at prices and on terms determined at the time of offering. The securities may be sold directly to you, through agents, or through underwriters and dealers. If agents, underwriters or dealers are used to sell the securities, we will name them and describe their compensation in a prospectus supplement.

Our common stock is listed on The NASDAQ Capital Market under the symbol "AQMS". On October 4, 2022, the last reported sale price of our common stock on The NASDAQ Capital Market was \$0.82 per share.

Investing in these securities involves significant risks. See "Risk Factors" included in any accompanying prospectus supplement and in the documents incorporated by reference in this prospectus for a discussion of the factors you should carefully consider before deciding to purchase these securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is October 19, 2022

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, which we refer to as the "SEC," utilizing a "shelf" registration process. Under this shelf registration process, we may from time to time sell any combination of the securities described in this prospectus in one or more offerings for an aggregate initial offering price of up to \$100,000,000.

This prospectus provides you with a general description of the securities we may offer. From time to time, we may provide one or more prospectus supplements that will contain specific information about the terms of the offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any accompanying prospectus supplement together with the additional information described under the heading "Where You Can Find More Information" beginning on page 17 of this prospectus.

We have not authorized anyone to provide you with information different from that contained in or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. We do not take any responsibility for, and cannot provide any assurance as to the reliability of, any information other than the information contained or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. Neither this prospectus nor any accompanying prospectus supplement constitutes an offer to sell or the solicitation of an offer to buy any securities other than the securities described in the accompanying prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus, any prospectus supplement, the documents incorporated by reference and any related free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Unless the context otherwise indicates, references in this prospectus to "we," "our" and "us" refer, collectively, to Aqua Metals, Inc., a Delaware corporation, and its subsidiaries.

ABOUT AQUA METALS, INC.

We are engaged in the business of equipment supply, technology licensing and related services to recyclers across the globe. Our recycling process is a patented hydrometallurgical technology that is a novel, proprietary and patented process we developed and named AquaRefining. AquaRefining is a room temperature, water and organic acid-based process that greatly reduces environmental emissions. The modular Aqualyzers cleanly generate ultra-pure metal one atom at a time, closing the sustainability loop for the rapidly growing energy storage economy. Our process was originally designed for lead recycling. Lead is a globally traded commodity with a worldwide market value in excess of \$20 billion. We believe our suite of patented and patent pending AquaRefining technologies will allow the lead-acid battery industry to simultaneously improve the environmental impact of lead recycling and scale recycling production to meet demand. Furthermore, our AquaRefining technologies result in high purity lead. We are also applying our commercialized clean, water-based recycling technology principles with the goal of developing the cleanest and most cost-efficient recycling solution for lithium-ion batteries. We believe our process has the potential to produce higher quality products at a lower operating cost without the damaging effects of furnaces and greenhouse emissions. We estimate our total addressable market for lithium-ion battery recycling will be approximately \$9 billion by 2025.

In August 2021, we announced that we had established an Innovation Center focused on applying our proven technology to lithium-ion battery recycling research and development and prototype system activities. During the first half of 2022, we announced our ability to recover copper, lithium hydroxide, nickel, and cobalt from lithium-ion battery black mass our Innovation Center. Our strategic decision to apply our proven clean, closed-loop hydrometallurgical and electro-chemical recycling experience to lithium-ion battery recycling is designed to meet the growing demand for critical metals driven by the global transition to electric vehicles, growth in Internet data centers, and alternative energy applications including solar, wind, and grid-scale storage.

Our business strategy is based on the pursuit of licensing opportunities within the lead acid battery recycling marketplace without maintaining and operating a capital-intensive lead recycling facility. Our lead recycling business strategy is designed to optimize shareholder value by focusing on equipment supply and licensing opportunities, which have always been a core part of our business plans. On July 29, 2021, we signed a Definitive Agreement with ACME Metal Enterprise Co., Ltd. to deploy AquaRefining equipment at its facility in Keelung, Taiwan.

We are in the process of demonstrating that lithium-ion AquaRefining, which is fundamentally non-polluting, can create the highest quality and highest yields of recovered minerals from lithium-ion batteries with the lowest waste streams and lower costs than existing alternatives. We have already demonstrated our ability to recover key valuable minerals in lithium-ion batteries, such as lithium hydroxide, copper, nickel, cobalt, and other compounds in 2022. We plan to build our first full system for the recovery of these minerals in our pilot plant later this year. Our goal is to process results with nickel, cobalt, and copper in pure metal form, that can be sold to the general metals and superalloy markets and can be made into battery precursor compound materials with known processes already used in the mining industry.

Our focus is providing equipment and licensing our lead acid battery recycling technologies in an enabler model which allows us to work with anyone in the industry globally and address the entire marketplace. We are also exploring joint ventures and potentially operating a recycling facility again in the future, particularly as our lithium-ion AquaRefining matures through 2022 and into 2023. This flexibility in our business model allows us to preserve cash in the shorter term and maximize profit potential in the longer term. We believe that Aqua Metals is in a position to become one of the few critical minerals recovery players for which our environmental and economic value proposition should generate both great commercial wins and potentially government grants to accelerate our credibility and progress.

Our principal executive offices are located at 5370 Kietzke Lane, Suite 201, Reno, Nevada 89511, and our telephone number is (775) 446-4418.

RISK FACTORS

Investing in our securities involves significant risks. You should carefully consider the risks and uncertainties described in this prospectus and any accompanying prospectus supplement, including the risk factors in our most recent Annual Report on Form 10-K, any subsequently filed Quarterly Report on Form 10-Q or Current Report on Form 8-K, together with all of the other information appearing in or incorporated by reference into this prospectus and any applicable prospectus supplement, before making an investment decision pursuant to this prospectus and any accompanying prospectus supplement relating to a specific offering.

Our business, financial condition and results of operations could be materially and adversely affected by any or all of these risks or by additional risks and uncertainties not presently known to us or that we currently deem immaterial that may adversely affect us in the future.

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains, and any accompanying prospectus supplement will contain, forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1993. Also, documents that we incorporate by reference into this prospectus, including documents that we subsequently file with the SEC, will contain forward-looking statements. Forward-looking statements are those that predict or describe future events or trends and that do not relate solely to historical matters. You can generally identify forward-looking statements containing the words "may," "will," "could," "should," "expect," "anticipate," "intend," "estimate," "believe," "project," "plan," "assume" or other similar expressions, or negatives of those expressions, although not all forward-looking statements contain these identifying words. All statements contained or incorporated by reference in this prospectus and any prospectus supplement regarding our business strategy, future operations, projected financial position, potential sources of additional capital, future prospects, future economic conditions, the future of our industry and results that might be obtained by pursuing management's current plans and objectives are forward-looking statements.

You should not place undue reliance on our forward-looking statements because the matters they describe are subject to certain risks, uncertainties and assumptions that are difficult to predict. Our forward-looking statements are based on the information currently available to us and speak only as of the date on the cover of this prospectus, the date of any prospectus supplement, or, in the case of forward-looking statements incorporated by reference, the date of the filing that includes the statement. Over time, our actual results, performance or achievements may differ from those expressed or implied by our forward-looking statements, and such difference might be significant and materially adverse to our security holders. Except as required by law, we undertake no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

We have identified some of the important factors that could cause future events to differ from our current expectations and they are described in this prospectus and supplements to this prospectus under the caption "Risk Factors," as well as in our most recent Annual Report on Form 10-K, including under the captions "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," and in other documents that we may file with the SEC, all of which you should review carefully. Please consider our forward-looking statements in light of those risks as you read this prospectus and any prospectus supplement.

THE SECURITIES WE MAY OFFER

We may offer and sell, from time to time in one or more offerings, any combination of common stock, warrants, subscription rights, debt securities and units having an aggregate initial offering price not exceeding \$100,000,000. In this prospectus, we refer to the common stock, warrants, subscription rights, debt securities and units that we may offer collectively as "securities."

Common Stock

We are authorized to issue 200,000,000 shares of \$0.001 par value common stock. Holders of shares of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders generally. Stockholders are entitled to receive such dividends as may be declared from time to time by the board of directors out of funds legally available therefor, and in the event of liquidation, dissolution or winding up of the company to share ratably in all assets remaining after payment of liabilities. The holders of shares of common stock have no preemptive, conversion, subscription or cumulative voting rights.

This prospectus provides a general description of the securities we may offer other than our common stock. Each time we sell any of our securities under this prospectus, we will, to the extent required by law, provide a prospectus supplement that will contain specific information about the terms of the offering. The prospectus supplement may also add, update or change information in this prospectus. For more information, see "About this Prospectus."

Description of Debt Securities

We may offer debt securities which may be senior or subordinated. We refer to the senior debt securities and the subordinated debt securities collectively as debt securities. The following description summarizes the general terms and provisions of the debt securities. We will describe the specific terms of the debt securities and the extent, if any, to which the general provisions summarized below apply to any series of debt securities in the prospectus supplement relating to the series and any applicable free writing prospectus that we authorize to be delivered.

We may issue senior debt securities from time to time, in one or more series, which may be issued under a senior indenture to be entered into between us and a senior trustee to be named in a prospectus supplement, which we refer to as the senior trustee. We may issue subordinated debt securities from time to time, in one or more series, which may be issued under a subordinated indenture to be entered into between us and a subordinated trustee to be named in a prospectus supplement, which we refer to as the subordinated trustee. While it is highly likely that any debt securities we issue will be issued under an indenture, we reserve the right to issue debt securities other than under an indenture pursuant to an exemption from the indenture requirement under the Trust Indenture Act of 1939. Any debt securities issued by us other than pursuant to an indenture will subject the purchasers of such debt securities to certain unique risks arising from the lack of a trustee charged with the responsibility of monitoring the debt securities and enforcing the rights of the holders of such debt securities, which will be set forth in a prospectus supplement filed with regard to such unindentured debt securities.

The forms of senior indenture and subordinated indenture are filed as exhibits to the registration statement of which this prospectus forms a part. Together, the senior indenture and the subordinated indenture are referred to as the indentures and, together, the senior trustee and the subordinated trustee are referred to as the trustees. This prospectus briefly outlines some of the provisions of the indentures. The following summary of the material provisions of the indentures is qualified in its entirety by the provisions of the indentures, including definitions of certain terms used in the indentures. Wherever we refer to particular sections or defined terms of the indentures, those sections or defined terms are incorporated by reference in this prospectus or the applicable prospectus supplement. You should review any indentures that are filed as exhibits to the registration statement of which this prospectus forms a part for additional information.

If we issue debt securities other than under an indenture, we will likely be limited to issuing a maximum of \$50 million of such debt securities and it is also likely that such debt securities will be unsecured and subordinated. Any indenture regarding debt securities issued by us will not limit the amount of debt securities that we may issue. The debt securities or applicable indenture, if any, will provide that debt securities may be issued up to an aggregate principal amount authorized from time to time by us and may be payable in any currency or currency unit designated by us or in amounts determined by reference to an index.

Genera

The following is a summary of the general terms of the debt securities we may issue under an indenture or otherwise, except as otherwise described in a prospectus supplement.

The senior debt securities will constitute our unsubordinated general obligations and will rank pari passu with our other unsubordinated obligations. The subordinated debt securities will constitute our subordinated general obligations and will be junior in right of payment to our senior indebtedness (including senior debt securities).

The debt securities will be our unsecured obligations unless otherwise specified in the applicable prospectus supplement. Any secured debt or other secured obligations will be effectively senior to the debt securities to the extent of the value of the assets securing such debt or other obligations.

The applicable prospectus supplement and any free writing prospectus will include any additional or different terms of the debt securities or any series being offered, including the following terms:

- the title and type of the debt securities;
- whether the debt securities will be issued under an indenture;
- whether the debt securities will be senior or subordinated debt securities, and, with respect to subordinated debt securities, the terms on which they are subordinated;
- the aggregate principal amount of the debt securities;
- the price or prices at which we will sell the debt securities;
- the maturity date or dates of the debt securities and the right, if any, to extend such date or dates;
- the rate or rates, if any, per year, at which the debt securities will bear interest, or the method of determining such rate or rates;
- the date or dates from which such interest will accrue, the interest payment dates on which such interest will be payable or the manner of determination of such interest payment dates and the related record dates;
- the right, if any, to extend the interest payment periods and the duration of that extension;
- the manner of paying principal and interest and the place or places where principal and interest will be payable;
- provisions for a sinking fund, purchase fund or other analogous fund, if any;
- any redemption dates, prices, obligations and restrictions on the debt securities;
- the currency, currencies or currency units in which the debt securities will be denominated and the currency, currencies or currency units in which principal and interest, if any, on the debt securities may be payable;
- any conversion or exchange features of the debt securities;

- whether and upon what terms the debt securities may be defeased;
- any events of default or covenants in addition to or in lieu of those set forth in any indenture;
- whether the debt securities will be issued in definitive or global form or in definitive form only upon satisfaction of certain conditions;
- whether the debt securities will be guaranteed as to payment or performance;
- if the debt securities of the series will be secured by any collateral and, if so, a general description of the collateral and the terms and provisions of such collateral security, pledge or other agreements; and
- any other material terms of the debt securities.

The applicable prospectus supplement will also describe any applicable material U.S. federal income tax consequences. When we refer to "principal" in this section with reference to the debt securities, we are also referring to "premium, if any."

We may from time to time, without notice to or the consent of the holders of any series of debt securities, create and issue further debt securities of any such series ranking equally with the debt securities of such series in all respects (or in all respects other than (1) the payment of interest accruing prior to the issue date of such further debt securities or (2) the first payment of interest following the issue date of such further debt securities). Such further debt securities may be consolidated and form a single series with the debt securities of such series and have the same terms as to status, redemption or otherwise as the debt securities of such series.

You may present debt securities for exchange and you may present debt securities for transfer in the manner, at the places and subject to the restrictions set forth in the debt securities and the applicable prospectus supplement. We will provide you those services without charge, although you may have to pay any tax or other governmental charge payable in connection with any exchange or transfer, as set forth in the debt securities or any indenture.

Debt securities may bear interest at a fixed rate or a floating rate. Debt securities bearing no interest or interest at a rate that at the time of issuance is below the prevailing market rate (original issue discount securities) may be sold at a discount below their stated principal amount.

We may issue debt securities with the principal amount payable on any principal payment date, or the amount of interest payable on any interest payment date, to be determined by reference to one or more currency exchange rates, securities or baskets of securities, commodity prices or indices. You may receive a payment of principal on any principal payment date, or a payment of interest on any interest payment date, that is greater than or less than the amount of principal or interest otherwise payable on such dates, depending on the value on such dates of the applicable currency, security or basket of securities, commodity or index. Information as to the methods for determining the amount of principal or interest payable on any date, the currencies, securities or baskets of securities, commodities or indices to which the amount payable on such date is linked.

Certain Terms of the Senior Debt Securities

The following is a summary of the general terms of the senior debt securities we may issue under a senior indenture, except as otherwise described in a prospectus supplement.

Covenants. Unless we indicate otherwise in a prospectus supplement, the senior debt securities will not contain any financial or restrictive covenants, including covenants restricting either us or any of our subsidiaries from incurring, issuing, assuming or guaranteeing any indebtedness secured by a lien on any of our or our subsidiaries' property or capital stock, or restricting either us or any of our subsidiaries from entering into sale and leaseback transactions.

Consolidation, Merger and Sale of Assets. Unless we indicate otherwise in a prospectus supplement, we may not consolidate with or merge into any other person, in a transaction in which we are not the surviving corporation, or convey, transfer or lease our properties and assets substantially as an entirety to any person, in either case, unless:

- the successor entity, if any, is a U.S. corporation, limited liability company, partnership or trust (subject to certain exceptions provided for in the senior indenture);
- the successor entity assumes our obligations on the senior debt securities and under the senior indenture;
- immediately after giving effect to the transaction, no default or event of default shall have occurred and be continuing; and
- · certain other conditions are met.

No Protection in the Event of a Change in Control. Unless we indicate otherwise in a prospectus supplement with respect to a particular series of senior debt securities, the senior debt securities will not contain any provisions that may afford holders of the senior debt securities protection in the event we have a change in control or in the event of a highly leveraged transaction (whether or not such transaction results in a change in control).

Events of Default. Unless we indicate otherwise in a prospectus supplement with respect to a particular series of senior debt securities, the following are events of default under the senior indenture for any series of senior debt securities:

- failure to pay interest on any senior debt securities of such series when due and payable, if that default continues for a period of 90 days (or such other period as may be specified for such series);
- failure to pay principal on the senior debt securities of such series when due and payable whether at maturity, upon redemption, by declaration or otherwise (and, if specified for such series, the continuance of such failure for a specified period);
- default in the performance of or breach of any of our covenants or agreements in the senior indenture applicable to senior debt securities of such series, other
 than a covenant breach which is specifically dealt with elsewhere in the senior indenture, and that default or breach continues for a period of 90 days after we
 receive written notice from the trustee or from the holders of 25% or more in aggregate principal amount of the senior debt securities of such series;
- certain events of bankruptcy or insolvency, whether or not voluntary; and
- any other event of default provided for in such series of senior debt securities as may be specified in the applicable prospectus supplement.

Unless we indicate otherwise in a prospectus supplement, the default by us under any other debt, including any other series of debt securities, is not a default under the senior indenture.

If an event of default other than an event of default specified in the fourth bullet point above occurs with respect to a series of senior debt securities and is continuing under the senior indenture, then, and in each such case, either the trustee or the holders of not less than 25% in aggregate principal amount of such series then outstanding under the senior indenture (each such series voting as a separate class) by written notice to us and to the trustee, if such notice is given by the holders, may, and the trustee at the request of such holders shall, declare the principal amount of and accrued interest on such series of senior debt securities to be immediately due and payable, and upon this declaration, the same shall become immediately due and payable.

If an event of default specified in the fourth bullet point above occurs with respect to us and is continuing, the entire principal amount of and accrued interest, if any, on each series of senior debt securities then outstanding shall become immediately due and payable.

Unless otherwise specified in the prospectus supplement relating to a series of senior debt securities originally issued at a discount, the amount due upon acceleration shall include only the original issue price of the senior debt securities, the amount of original issue discount accrued to the date of acceleration and accrued interest, if any.

Upon certain conditions, declarations of acceleration may be rescinded and annulled and past defaults may be waived by the holders of a majority in aggregate principal amount of all the senior debt securities of such series affected by the default, each series voting as a separate class. Furthermore, prior to a declaration of acceleration and subject to various provisions in the senior indenture, the holders of a majority in aggregate principal amount of a series of senior debt securities, by notice to the trustee, may waive an existing default or event of default with respect to such senior debt securities and its consequences, except a default in the payment of principal of or interest on such senior debt securities or in respect of a covenant or provision of the senior indenture which cannot be modified or amended without the consent of the holders of each such senior debt security. Upon any such waiver, such default shall cease to exist, and any event of default with respect to such senior debt securities shall be deemed to have been cured, for every purpose of the senior indenture; but no such waiver shall extend to any subsequent or other default or event of default or impair any right consequent thereto. For information as to the waiver of defaults, see "—Modification and Waiver."

The holders of a majority in aggregate principal amount of a series of senior debt securities may direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to such senior debt securities. However, the trustee may refuse to follow any direction that conflicts with law or the senior indenture, that may involve the trustee in personal liability or that the trustee determines in good faith may be unduly prejudicial to the rights of holders of such series of senior debt securities not joining in the giving of such direction and may take any other action it deems proper that is not inconsistent with any such direction received from holders of such series of senior debt securities. A holder may not pursue any remedy with respect to the senior indenture or any series of senior debt securities unless:

- the holder gives the trustee written notice of a continuing event of default;
- the holders of at least 25% in aggregate principal amount of such series of senior debt securities make a written request to the trustee to pursue the remedy in respect of such event of default;
- the requesting holder or holders offer the trustee indemnity satisfactory to the trustee against any costs, liability or expense;
- the trustee does not comply with the request within 60 days after receipt of the request and the offer of indemnity; and
- during such 60-day period, the holders of a majority in aggregate principal amount of such series of senior debt securities do not give the trustee a direction
 that is inconsistent with the request.

These limitations, however, do not apply to the right of any holder of a senior debt security to receive payment of the principal of and interest, if any, on such senior debt security in accordance with the terms of such debt security, or to bring suit for the enforcement of any such payment in accordance with the terms of such debt security, on or after the due date for the senior debt securities, which right shall not be impaired or affected without the consent of the holder.

The senior indenture requires certain of our officers to certify, on or before a fixed date in each year in which any senior debt security is outstanding, as to their knowledge of our compliance with all covenants, agreements and conditions under the senior indenture.

Satisfaction and Discharge. We can satisfy and discharge our obligations to holders of any series of senior debt securities if:

 we pay or cause to be paid, as and when due and payable, the principal of and any interest on all senior debt securities of such series outstanding under the senior indenture; or

• all senior debt securities of such series have become due and payable or will become due and payable within one year (or are to be called for redemption within one year) and we deposit in trust a combination of cash and U.S. government or U.S. government agency obligations that will generate enough cash to make interest, principal and any other payments on the debt securities of that series on their various due dates.

Under current U.S. federal income tax law, the deposit and our legal release from the senior debt securities would be treated as a taxable event, and beneficial owners of such debt securities would generally recognize any gain or loss on such senior debt securities. Purchasers of the senior debt securities should consult their own advisers with respect to the tax consequences to them of such deposit and discharge, including the applicability and effect of tax laws other than the U.S. federal income tax law.

Defeasance. Unless the applicable prospectus supplement provides otherwise, the following discussion of legal defeasance and discharge and covenant defeasance will apply to any senior series of senior debt securities issued under the indentures.

Legal Defeasance. We can legally release ourselves from any payment or other obligations on the senior debt securities of any series (called "legal defeasance") if certain conditions are met, including the following:

- We deposit in trust for your benefit and the benefit of all other direct holders of the senior debt securities of the same series a combination of cash and U.S. government or U.S. government agency obligations that will generate enough cash to make interest, principal and any other payments on the senior debt securities of that series on their various due dates.
- There is a change in current U.S. federal income tax law or an IRS ruling that lets us make the above deposit without causing you to be taxed on the senior debt securities any differently than if we did not make the deposit and instead repaid the senior debt securities ourselves when due.
- We deliver to the trustee a legal opinion of our counsel confirming the tax law change or ruling described above.

If we ever did accomplish legal defeasance, as described above, you would have to rely solely on the trust deposit for repayment of the debt securities. You could not look to us for repayment in the event of any shortfall.

Covenant Defeasance. Without any change of current U.S. federal tax law, we can make the same type of deposit described above and be released from some of the covenants in the senior debt securities (called "covenant defeasance"). In that event, you would lose the protection of those covenants but would gain the protection of having money and securities set aside in trust to repay the senior debt securities. In order to achieve covenant defeasance, we must do the following (among other things):

- We must deposit in trust for your benefit and the benefit of all other direct holders of the senior debt securities of the same series a combination of cash and U.S. government or U.S. government agency obligations that will generate enough cash to make interest, principal and any other payments on the senior debt securities of that series on their various due dates.
- We must deliver to the trustee a legal opinion of our counsel confirming that under current U.S. federal income tax law we may make the above deposit without causing you to be taxed on the senior debt securities any differently than if we did not make the deposit and instead repaid the senior debt securities ourselves when due.

If we accomplish covenant defeasance, you can still look to us for repayment of the senior debt securities if there were a shortfall in the trust deposit. In fact, if one of the events of default occurred (such as our bankruptcy) and the debt securities become immediately due and payable, there may be such a shortfall. Depending on the events causing the default, you may not be able to obtain payment of the shortfall.

Modification and Waiver. We and the trustee may amend or supplement the senior indenture or the senior debt securities without the consent of any holder:

- to comply with the requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act;
- to convey, transfer, assign, mortgage or pledge any assets as security for the senior debt securities of one or more series;
- to evidence the succession of a corporation, limited liability company, partnership or trust to us, and the assumption by such successor of our covenants, agreements and obligations under the senior indenture;
- to add to our covenants such new covenants, restrictions, conditions or provisions for the protection of the holders, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default;
- to cure any ambiguity, defect or inconsistency in the senior indenture or in any supplemental indenture or to conform the senior indenture or the senior debt securities to the description of senior debt securities of such series set forth in this prospectus or any applicable prospectus supplement;
- to provide for or add guarantors with respect to the senior debt securities of any series;
- to establish the form or forms or terms of the senior debt securities as permitted by the senior indenture;
- to evidence and provide for the acceptance of appointment under the senior indenture by a successor trustee, or to make such changes as shall be necessary to provide for or facilitate the administration of the trusts in the senior indenture by more than one trustee;
- to add to, delete from or revise the conditions, limitations and restrictions on the authorized amount, terms, purposes of issue, authentication and delivery of
 any series of senior debt securities;
- to make any change to the senior debt securities of any series so long as no senior debt securities of such series are outstanding; or
- to make any change that does not adversely affect the rights of any holder in any material respect.

Other amendments and modifications of the senior indenture or the senior debt securities issued may be made, and our compliance with any provision of the senior indenture with respect to any series of senior debt securities may be waived, with the consent of the holders of a majority of the aggregate principal amount of the outstanding senior debt securities of all series affected by the amendment or modification (voting together as a single class); provided, however, that each affected holder must consent to any modification, amendment or waiver that:

- extends the final maturity of any senior debt securities of such series;
- reduces the principal amount of any senior debt securities of such series;
- reduces the rate or extends the time of payment of interest on any senior debt securities of such series;
- reduces the amount payable upon the redemption of any senior debt securities of such series;
- changes the currency of payment of principal of or interest on any senior debt securities of such series;
- reduces the principal amount of original issue discount securities payable upon acceleration of maturity or the amount provable in bankruptcy;

- waives a default in the payment of principal of or interest on the senior debt securities;
- changes the provisions relating to the waiver of past defaults or changes or impairs the right of holders to receive payment or to institute suit for the enforcement of any payment or conversion of any senior debt securities of such series on or after the due date therefor;
- modifies any of the provisions of these restrictions on amendments and modifications, except to increase any required percentage or to provide that certain
 other provisions cannot be modified or waived without the consent of the holder of each senior debt security of such series affected by the modification; or
- reduces the above-stated percentage of outstanding senior debt securities of such series whose holders must consent to a supplemental indenture or to modify
 or amend or to waive certain provisions of or defaults under the senior indenture.

It shall not be necessary for the holders to approve the particular form of any proposed amendment, supplement or waiver, but it shall be sufficient if the holders' consent approves the substance thereof. After an amendment, supplement or waiver of the senior indenture in accordance with the provisions described in this section becomes effective, the trustee must give to the holders affected thereby certain notice briefly describing the amendment, supplement or waiver. Any failure by the trustee to give such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such amendment, supplemental indenture or waiver.

No Personal Liability of Incorporators, Stockholders, Officers, Directors. The senior indenture provides that no recourse shall be had under any obligation, covenant or agreement of ours in the senior indenture or any supplemental indenture, or in any of the senior debt securities or because of the creation of any indebtedness represented thereby, against any of our incorporators, stockholders, officers or directors, past, present or future, or of any predecessor or successor entity thereof under any law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise. Each holder, by accepting the senior debt securities, waives and releases all such liability.

Concerning the Trustee. The senior indenture provides that, except during the continuance of an event of default, the trustee will not be liable except for the performance of such duties as are specifically set forth in the senior indenture. If an event of default has occurred and is continuing, the trustee will exercise such rights and powers vested in it under the senior indenture and will use the same degree of care and skill in its exercise as a prudent person would exercise under the circumstances in the conduct of such person's own affairs.

The senior indenture and the provisions of the Trust Indenture Act incorporated by reference therein contain limitations on the rights of the trustee thereunder, should it become a creditor of ours or any of our subsidiaries, to obtain payment of claims in certain cases or to realize on certain property received by it in respect of any such claims, as security or otherwise. The trustee is permitted to engage in other transactions, provided that if it acquires any conflicting interest (as defined in the Trust Indenture Act), it must eliminate such conflict or resign.

We may have normal banking relationships with the senior trustee in the ordinary course of business.

Unclaimed Funds. All funds deposited with the trustee or any paying agent for the payment of principal, premium, interest or additional amounts in respect of the senior debt securities that remain unclaimed for two years after the date upon which such principal, premium or interest became due and payable will be repaid to us. Thereafter, any right of any holder of senior debt securities to such funds shall be enforceable only against us, and the trustee and paying agents will have no liability therefor.

Governing Law. The senior indenture and the senior debt securities will be governed by, and construed in accordance with, the internal laws of the State of New York.

Certain Terms of the Subordinated Debt Securities

The following is a summary of the general terms of the subordinated debt securities we may issue under a subordinated indenture, except as otherwise described in a prospectus supplement.

Other than the terms of the subordinated indenture and subordinated debt securities relating to subordination or otherwise as described in the prospectus supplement relating to a particular series of subordinated debt securities, the terms of the subordinated indenture and subordinated debt securities are identical in all material respects to the terms of the senior indenture and senior debt securities.

Additional or different subordination terms may be specified in the prospectus supplement applicable to a particular series.

Subordination. The indebtedness evidenced by the subordinated debt securities is subordinate to the prior payment in full of all of our senior indebtedness, as defined in the subordinated indenture. During the continuance beyond any applicable grace period of any default in the payment of principal, premium, interest or any other payment due on any of our senior indebtedness, we may not make any payment of principal of or interest on the subordinated debt securities (except for certain sinking fund payments). In addition, upon any payment or distribution of our assets upon any dissolution, winding-up, liquidation or reorganization, the payment of the principal of and interest on the subordinated debt securities will be subordinated to the extent provided in the subordinated indenture in right of payment to the prior payment in full of all our senior indebtedness. Because of this subordination, if we dissolve or otherwise liquidate, holders of our subordinated debt securities may receive less, ratably, than holders of our senior indebtedness. The subordination provisions do not prevent the occurrence of an event of default under the subordinated indenture.

The term "senior indebtedness" of a person means with respect to such person the principal of, premium, if any, interest on, and any other payment due pursuant to any of the following, whether outstanding on the date of the subordinated indenture or incurred by that person in the future:

- all of the indebtedness of that person for money borrowed;
- all of the indebtedness of that person evidenced by notes, debentures, bonds or other securities sold by that person for money;
- all of the lease obligations that are capitalized on the books of that person in accordance with generally accepted accounting principles;
- all indebtedness of others of the kinds described in the first two bullet points above and all lease obligations of others of the kind described in the third bullet
 point above that the person, in any manner, assumes or guarantees or that the person in effect guarantees through an agreement to purchase, whether that
 agreement is contingent or otherwise; and
- all renewals, extensions or refundings of indebtedness of the kinds described in the first, second or fourth bullet point above and all renewals or extensions of leases of the kinds described in the third or fourth bullet point above;

unless, in the case of any particular indebtedness, renewal, extension or refunding, the instrument creating or evidencing it or the assumption or guarantee relating to it expressly provides that such indebtedness, renewal, extension or refunding is not superior in right of payment to the subordinated debt securities. Our senior debt securities constitute senior indebtedness for purposes of the subordinated debt indenture.

Description of Warrants

We may issue warrants for the purchase of shares of common stock, debt securities, and/or units from time to time. We may issue warrants independently or together with common stock and/or debt securities, and the warrants may be attached to or separate from those securities. If we issue warrants, they will be evidenced by warrant agreements or warrant certificates issued under one or more warrant agreements, which will be contracts between us and the holders of the warrants or an agent for the holders of the warrants. We encourage you to read the prospectus supplement that relates to any warrants we may offer, as well as the complete warrant agreement or warrant certificate that contain the terms of the warrants. If we issue warrants, the forms of warrant agreements and warrant certificates, as applicable, relating to the warrants will be filed as exhibits to the registration statement that includes this prospectus, or as an exhibit to a filing with the SEC that is incorporated by reference into this prospectus.

Description of Subscription Rights

We may issue rights to purchase our securities. The rights may or may not be transferable by the persons purchasing or receiving the rights. In connection with any rights offering, we may enter into a standby underwriting, standby purchase or other arrangement with one or more underwriters or other persons pursuant to which such underwriters or other persons would purchase any offered securities remaining unsubscribed for after such rights offering. In connection with a rights offering to holders of our capital stock a prospectus supplement will be distributed to such holders on or after the record date for receiving rights in the rights offering set by us.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, forms of the subscription rights, standby underwriting agreement or other agreements, if any. The prospectus supplement relating to any rights that we offer will include specific terms relating to the offering, including, among other matters:

- the date of determining the security holders entitled to the rights distribution;
- the aggregate number of rights issued and the aggregate amount of securities purchasable upon exercise of the rights;
- the exercise price;
- the conditions to completion of the rights offering;
- the date on which the right to exercise the rights will commence and the date on which the rights will expire; and
- any applicable federal income tax considerations.

Each right would entitle the holder of the rights to purchase the principal amount of securities at the exercise price set forth in the applicable prospectus supplement. Rights may be exercised at any time up to the close of business on the expiration date for the rights provided in the applicable prospectus supplement. After the close of business on the expiration date, all unexercised rights will become void.

Holders may exercise rights as described in the applicable prospectus supplement. Upon receipt of payment and the rights certificate properly completed and duly executed at the corporate trust office of the rights agent, if any, or any other office indicated in the prospectus supplement, we will, as soon as practicable, forward the securities purchasable upon exercise of the rights. If less than all of the rights issued in any rights offering are exercised, we may offer any unsubscribed securities directly to persons other than stockholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby underwriting or purchase arrangements, as described in the applicable prospectus supplement.

Description of Units

We may issue units comprised of one or more of the other securities described in this prospectus in any combination from time to time. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. If we issue units, they will be evidenced by unit agreements or unit certificates issued under one or more unit agreements, which will be contracts between us and the holders of the units or an agent for the holders of the units. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date. We encourage you to read the prospectus supplement that relates to any units we may offer, as well as the complete unit agreement or unit certificate that contain the terms of the units. If we issue units, the forms of unit agreements and unit certificates, as applicable, relating to the units will be filed as exhibits to the registration statement that includes this prospectus, or as an exhibit to a filing with the SEC that is incorporated by reference into this prospectus.

PLAN OF DISTRIBUTION

We may sell our securities from time to time in any manner permitted by the Securities Act of 1933, as amended, or the Securities Act, including any one or more of the following ways:

- · through agents;
- to or through underwriters;
- to or through broker-dealers (acting as agent or principal);
- in "at the market" offerings, within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise; and/or
- directly to purchasers, through a specific bidding or auction process or otherwise.

The securities may be sold at a fixed price or prices, which may be changed, at market prices prevailing at the time of sale, at prices relating to the prevailing market prices or at negotiated prices.

Offers to purchase offered securities may be solicited by agents designated by us from time to time. Any agent involved in the offer or sale of the offered securities in respect of which this prospectus is delivered will be named, and any commissions payable by us will be set forth, in the applicable prospectus supplement. Unless otherwise set forth in the applicable prospectus supplement, any agent will be acting on a reasonable best efforts basis for the period of its appointment. Any agent may be deemed to be an underwriter, as that term is defined in the Securities Act, of the offered securities so offered and sold.

We will set forth in a prospectus supplement the terms of the offering of our securities, including:

- the name or names of any agents, underwriters or dealers;
- the purchase price of our securities being offered and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and commissions and other items constituting agents' or underwriters' compensation;
- the public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchanges on which such securities may be listed.

If offered securities are sold to the public by means of an underwritten offering, either through underwriting syndicates represented by managing underwriters or directly by the managing underwriters, we will execute an underwriting agreement with an underwriter or underwriters, and the names of the specific managing underwriter or underwriters, as well as any other underwriters, will be set forth in the applicable prospectus supplement. In addition, the terms of the transaction, including commissions, discounts and any other compensation of the underwriters and dealers, if any, will be set forth in the applicable prospectus supplement, which prospectus supplement will be used by the underwriters to make resales of the offered securities. If underwriters are utilized in the sale of the offered securities, the offered securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including:

transactions on The NASDAQ Capital Market or any other organized market where the securities may be traded;

- in the over-the-counter market;
- in negotiated transactions; or
- under delayed delivery contracts or other contractual commitments.

We may grant to the underwriters options to purchase additional offered securities to cover over-allotments, if any, at the public offering price with additional underwriting discounts or commissions, as may be set forth in the applicable prospectus supplement. If we grant any over-allotment option, the terms of the over-allotment option will be set forth in the applicable prospectus supplement.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may indemnify agents, underwriters and dealers against specified liabilities, including liabilities incurred under the Securities Act, or to contribution by us to payments they may be required to make in respect of such liabilities. Agents, underwriters or dealers, or their respective affiliates, may be customers of, engage in transactions with or perform services for us or our respective affiliates, in the ordinary course of business.

Unless otherwise specified in the applicable prospectus supplement, each class or series of securities will be a new issue with no established trading market, other than our common stock, which is traded on The NASDAQ Capital Market. We may elect to list any other class or series of securities on any exchange and, in the case of our common stock, on any additional exchange. However, unless otherwise specified in the applicable prospectus supplement, we will not be obligated to do so. It is possible that one or more underwriters may make a market in a class or series of securities, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. We cannot give any assurance as to the liquidity of the trading market for any of the offered securities.

Any underwriter may engage in over-allotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934, as amended. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum price. Syndicate-covering or other short-covering transactions involve purchases of the securities, either through exercise of the over-allotment option or in the open market after the distribution is completed, to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

To comply with the securities laws of certain states, if applicable, the securities offered by this prospectus will be offered and sold in those states only through registered or licensed brokers or dealers.

LEGAL MATTERS

The validity of the issuance of the securities offered by this prospectus has been passed upon for us by Greenberg Traurig, LLP, Irvine, California.

EXPERTS

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2021 have been so incorporated in reliance on the report of Armanino LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports and other information with the SEC. You may read and copy any document we file at the SEC's Public Reference Room located at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. Our filings with the SEC also are available from the SEC's internet site at http://www.sec.gov, which contains reports, proxy and information statements, and other information regarding issuers that file electronically.

This prospectus is part of a registration statement that we filed with the SEC. As permitted by SEC rules, this prospectus and any accompanying prospectus supplement that we may file, which form a part of the registration statement, do not contain all of the information that is included in the registration statement. The registration statement contains more information regarding us and our securities, including certain exhibits. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC's website.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC permits us to "incorporate by reference" the information and reports we file with it. This means that we can disclose important information to you by referring to another document. The information that we incorporate by reference is considered to be part of this prospectus, and later information that we file with the SEC automatically updates and supersedes this information. We incorporate by reference the documents listed below, except to the extent information in those documents is different from the information contained in this prospectus, and all future documents filed with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act (other than the portions thereof deemed to be furnished to the SEC) until we terminate the offering of these securities:

- The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2021, which was filed on February 24, 2022, including portions of the Company's Proxy Statement on Schedule 14A, filed on April 25, 2022, to the extent incorporated by reference into such Annual Report on Form 10-K;
- The Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, which was filed on April 28, 2022;
- The Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2022, which was filed on July 21, 2022;
- The Company's Current Reports on Form 8-K filed on <u>January 21, 2022, March 30, 2022, June 13, 2022, July 28, 2022, August 1, 2022, August 5, 2022</u> and <u>October 6, 2022</u> (in each case excluding any information furnished pursuant to Item 2.02 or Item 7.01 of any such Current Report on Form 8-K unless otherwise indicated therein); and
- The description of our common stock in our Form 8-A12B, which was filed on <u>July 24, 2015</u>, and any amendments or reports filed for the purpose of updating this description.

To the extent that any statement in this prospectus is inconsistent with any statement that is incorporated by reference and that was made on or before the date of this prospectus, the statement in this prospectus shall supersede such incorporated statement. The incorporated statement shall not be deemed, except as modified or superseded, to constitute a part of this prospectus or the registration statement. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete and, in each instance, we refer you to the copy of each contract or document filed as an exhibit to our various filings made with the SEC.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Aqua Metals, Inc. Attn: Investor Relations 5370 Kietzke Lane, Suite 201, Reno, Nevada 89511 (775) 446-4418

INDEMNIFICATION OF DIRECTORS AND OFFICERS

The Delaware General Corporation Law provides that corporations may include a provision in their certificate of incorporation relieving directors of monetary liability for breach of their fiduciary duty as directors, provided that such provision shall not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) for unlawful payment of a dividend or unlawful stock purchase or redemption, or (iv) for any transaction from which the director derived an improper personal benefit. Our amended and restated certificate of incorporation provides that directors are not liable to us or our stockholders for monetary damages for breach of their fiduciary duty as directors to the fullest extent permitted by Delaware law. In addition to the foregoing, our amended and restated certificate of incorporation provides that we may indemnify directors and officers to the fullest extent permitted by law and we have entered into indemnification agreements with each of our directors and executive officers.

The above provisions in our amended and restated certificate of incorporation may have the effect of reducing the likelihood of derivative litigation against directors and may discourage or deter stockholders or management from bringing a lawsuit against directors for breach of their fiduciary duty, even though such an action, if successful, might otherwise have benefited us and our stockholders. However, we believe that the foregoing provisions are necessary to attract and retain qualified persons as directors.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

205,213 Shares of Common Stock 928,581 Pre-Funded Warrants to Purchase Shares of Common Stock 928,581 Shares of Common Stock Underlying Pre-Funded Warrants



PROSPECTUS SUPPLEMENT

The Benchmark Company

October 15, 2025