

COOS BAY-NORTH BEND WATER BOARD
P O BOX 539 – 2305 Ocean Boulevard
Coos Bay, Oregon 97420

Minutes
Regular Board Meeting

August 3, 2023
7:00 a.m.

Coos Bay-North Bend Water Board met in open session in the Board Room at the above address, date, and time with Chair Greg Solarz presiding. Other Board members present: Carmen Matthews, Rob Kilmer and Bill Richardson. Board Members absent: None. Water Board staff present: Ivan D. Thomas, General Manager; Matt Whitty, Engineering Manager; Jeff Page, Operations Manager; Rick Abbott, Distribution Supervisor; Jeff Miller, Water Treatment Supervisor; Aimee Hollis, Customer Relations Manager; Jason Mills, Distribution Specialist; and Karen Parker, Administrative Assistant. Board Legal Counsel Melissa Cribbins was present (virtually). Aaron Speakman of The Dyer Partnership was present. Media present: None.

Chair Solarz opened the meeting at 7:00 a.m. and asked Mr. Speakman to lead the Board and assembly in the Pledge of Allegiance.

Chair Solarz asked if there were any corrections or additions to the July 20, 2023, Regular Board meeting minutes. Mr. Kilmer moved the minutes be approved as written. The motion was seconded by Mr. Matthews and passed unanimously.

Chair Solarz asked if there were any public comments and there were none.

Regarding proposed Asterra Satellite Imaging Leak Detection Services, Operations Manager Jeff Page stated the detection and repair of leaks in the distribution system is a key component of a water utility's non-revenue water program. Non-revenue water refers to the volume of water that is lost or unaccounted for in a water distribution system before it reaches the end consumers. This includes both physical losses (real losses) due to leaks, bursts, and other infrastructure issues, as well as commercial losses (apparent losses) caused by unauthorized consumption, meter inaccuracies, and billing errors. Water Board staff works diligently to mitigate both real losses and apparent losses and seeks to enhance efficiencies in all areas.

Pony Creek Water Treatment Plant produces approximately 1.25 billion gallons of water annually and about 10 percent is lost to non-revenue water (125 million gallons per year lost which equates to \$500,000 annually). The national average for non-revenue water is approximately 20 percent. Overall the utility is overall doing well but there is room for improvement.

Asterra is a firm that developed a unique and patented algorithm for leak detection in freshwater distribution networks. Their methods include the use of spectral aerial imaging taken from a satellite-mounted sensor using the L band microwave wavelength to spot leakage in subterranean drinking water networks. Drinking water is detected by looking for the particular spectral signature typical to drinking water. The deliverable products to be received by the Water Board include a detailed interactive map showing areas of interest (leak sites) and customer support to ensure staff is finding and repairing leaks in the most efficient manner. The Portland Water Bureau along with other water utilities in Oregon have been successful partnering with Asterra to more efficiently find leaks and reduce non-revenue water. Advantages of using Asterra's services include providing:

- **Wide Area Coverage:** Satellites can capture images over large areas, enabling comprehensive monitoring of water distribution networks, including remote and inaccessible regions. This ensures that leaks can be identified across an entire utility's service area, even in challenging terrains.
- **Rapid Identification:** Satellite imaging allows for swift identification of leak areas and enables water utilities to respond quickly to mitigate the impact of leaks and reduce water loss.
- **Non-Intrusive Methods:** Traditional leak detection methods often require physical inspections or intrusive installations, which can disrupt water supply and traffic. Satellite imaging is a non-intrusive technique that doesn't interfere with regular operations.
- **Cost-Effectiveness:** Satellite-based leak detection eliminates the need for extensive ground surveys and manual inspections, potentially reducing operational costs for water utilities in the long run.
- **Enhanced Accuracy:** Advanced satellite imaging technologies provide high-resolution images and data analytics, which improve the accuracy of leak detection. This helps pinpoint leak locations precisely, allowing for efficient repairs.
- **Environmental Conservation:** Water leaks not only lead to water wastage but can also damage the surrounding environment. By promptly detecting and fixing leaks, Asterra's services contribute to environmental conservation and sustainability.
- **Data-Driven Decision Making:** The satellite imaging data collected by Asterra can be analyzed and integrated with other utility data. This helps water utilities make informed decisions regarding infrastructure maintenance and improvements.
- **Leak Prevention and Asset Management:** Early detection of leaks can prevent larger infrastructure issues and potential catastrophic failures, thus prolonging the life of water utility assets.

The Water Board's current leak detection efforts include traditional methods such as visual inspections and the usage of acoustic sensors and correlators. The services provided by Asterra will improve the effectiveness of our current work by providing a roadmap for staffs' field investigation efforts. Recent pricing from a leak detection firm solely using traditional methods indicates a cost of approximately \$150,000 to inspect the Water Board's entire service area. Due to the ongoing nature of leak detection work, it makes sense that staff continues in these efforts rather than hire external resources.

No division of Asterra, nor any other company, makes a similar or competing product. As such, the purchase of these services qualifies as a Sole Source Procurement under the Water Board's Permanent Public Contracting Rules section 4.7.2(B). The funds for these services are included in the approved budget for fiscal year 2024.

Mr. Solarz inquired if this is a one-time service. Mr. Page stated it is a one-time service. If we have an area of interest on the map, staff can locate it, repair it and mark the area done on the map. Mr. Solarz also stated he noticed Asterra wants to know where all the valve boxes are so they must show up on their imaging as a potential leak. Mr. Solarz asked how close they pinpoint the area of interest. Mr. Page stated Asterra gives a range of distance as to where the problem is. Having this information will help find a small leak before it becomes a major problem.

Mr. Thomas stated the Water Board's non-revenue water was at 8 percent, and over the last few years it has gradually increased to 10 percent. Staff has looked at a few options, as having a contractor come in to do a ground survey but it is much more timely and expensive. The service provided by Asterra will guide us where we need to go.

After a brief discussion, motion was made by Mr. Matthews authorizing the General Manager to purchase leak detection services provided through Asterra in the amount of \$27,950. The motion was seconded by Mr. Richardson and passed unanimously.

Regarding the proposed Dyer Partnership Engineering Service Contract Extension, Mr. Thomas stated Mr. Whitty would present this agenda item, but wanted to note a typographical error in Paragraph 1 of the Amendment where it states "is hereby extended to June 30, 2022" should read "is hereby extended to June 30, 2026".

Engineering Manager Matt Whitty stated The Dyer Partnership was retained as the utility's engineering consultant for planning and design of prior years' projects since FY 2014. This Agreement for Professional Services was extended to June 30, 2023 by an Amendment to the Agreement dated October 6, 2020. Staff propose to extend their contract for an additional three years, through June 30, 2026. Each project would be scoped and negotiated separately by task order.

Task Orders covered in the prior contract extension included the Water Treatment Contact Time Study, Isthmus and South Slough Cathodic Protection, and Brights Mill Pump Station Replacement.

In the distant past Dyer Partnership designed the South Empire Boulevard project, performed inspection work at Pony Creek Treatment Plant, and also the water main on Ocean Boulevard. Dyer Partnership has performed very well on their projects for the utility.

The current FY 2024 budget includes projects for Master Planning and Hydraulic Modeling which staff will need assistance from Dyer to complete. Final scope and fees are to be negotiated on an annual basis with increases based on mutually agreed upon CPI each year.

Mr. Thomas asked Mr. Speakman if he had additional comments. Mr. Speakman stated they offer all services so if the Water Board needs resources quickly Dyer is available to help. All contracts with the Board so far have been time and materials which have been negotiated and it has been a very productive relationship.

After a brief discussion, motion was made by Mr. Matthews to authorize The Dyer Partnership's contract extension through June 30, 2026 as presented. The motion was seconded by Mr. Kilmer and passed unanimously.

The Board's next regular meeting was set for Thursday, August 17, 2023, at 7:00 a.m.

Updates were given as follows:

- Crow/Clay Architectural Design services for Roof, HVAC, & Security Improvements to Pony Creek Treatment Plant - Crow/Clay is in the process of design, which is about 80 percent complete, and will be soliciting bids soon. Staff inquired about the potential for future solar installation and Crow/Clay is looking into it. Crow/Clay did find an energy trust grant and if we are able to verify what parts of the roof are damaged it is \$2 per square foot return.
- Newmark Avenue Water Main Break – A 12-inch cast iron water main broke and released 450,000 gallons of water. The Water Board crew was on site promptly to repair the main break, and the City of North Bend also responded to help out with traffic control. North Bend responded quickly, and their help was much appreciated. The water main break caused 15 customers to be out of water for about 3 ½ hours. There was significant damage to the street and through the Water Board's on-call contract with Knife River we were able to get it repaired/paved by the end of the next workday. The approximate cost of this was \$36,000.
- Dyer Task Order 26/Chlorine Contact Time Tracer Study – A tracer study was performed. The outcome came out at 58 minutes, whereas the minimum required time is 21 minutes. We have almost double the required contact time. This will allow us to prove we are getting chlorine contact time in the chlorine contact chamber to be able to pump water straight out to Ocean Boulevard. We still have hydraulic work and flushing of the line before it can be put into service.

Mr. Speakman commented that the theoretical study is based on textbook baffling factors of the treatment plant's chlorine contact chambers being the piping. The test was ran twice. The first time the analytical testing was a little off of what the trend was showing on the fluoride, so Dyer asked to review this further. Dyer investigated why the baffling factors were coming in higher than what the textbook is showing. After reviewing, Dyer recognized there are 2 pump stations that the water goes through before it goes out to the distribution system. There is nothing in the textbooks that give a baffling factor of what those pumps do as far as increase your time, but it is known that the more you mix it the better the contact time is.

At 7:27 a.m. Chair Solarz directed they go into executive session for the purposes of discussing potential litigation pursuant to ORS 192.660(2)(h), personnel issues pursuant to ORS 192.660(2)(a) and performance evaluation of General Manager pursuant to ORS 192.660(2)(i). The Board returned to open session at 8:20 a.m.

Chair Solarz stated the Board had conducted a performance review of the General Manager. Mr. Matthews moved they renew General Manager Ivan Thomas' contract for the coming year, amending the current contract authorizing an annual salary increase from \$152,850.62 to \$158,964.64 retroactive to July 1, 2023, and authorize reimbursement of educational loan payments in an amount up to \$940.00 per month for 12 consecutive months. The motion was seconded by Mr. Solarz and passed unanimously.

There being no other business to come before the Board, Chair Solarz adjourned the meeting at 8:22 a.m.

Approved: _____, 2023

By: _____
J. Gregory Solarz, Chair

ATTEST: _____