
LUIZA YORDANOVA
Water Management leader

Yuma, Arizona ♦ 602-320-5093 ♦ Luiza.Yordanova@yahoo.com ♦ [linkedin.com/in/luiza-yordanova-97211717](https://www.linkedin.com/in/luiza-yordanova-97211717)

Water Management Leader

Strategic Quality Control Manager with 20+ years of dual expertise in large-scale industrial operations (mining/cement) and municipal water treatment. Uniquely qualified to lead QC strategy by combining deep operational knowledge of quarry management, raw material processing, and industrial water balance with executive-level experience in capital project delivery (\$190M+) and regulatory compliance. Proven track record of optimizing complex water systems in 24/7 manufacturing environments, reducing fresh water dependency, and managing Acid Mine Drainage (AMD) and tailings-related water challenges. Expert in bridging the gap between technical engineering teams and operational realities to deliver "fit-for-purpose" solutions that enhance production efficiency and sustainability.

CORE COMPETENCIES

- **Mine Water Balance & Strategy:** Industrial water reuse/recycling, zero liquid discharge (ZLD) strategies, and watershed management.
- **Heavy Industry Operations:** Quarry management, drill mapping, raw material analysis (XRF/XRD), and process optimization in cement/mining.
- **Quality Control Operations:** Process Optimization, root-cause-analysis, cost reductions, environmental compliance, and ISO Certification.
- **Regulatory Compliance:** EPA 40 CFR Part 440 (Ore Mining), NPDES permitting, ADEQ Aquifer Protection Permits, and MSHA safety standards.
- **Technical Leadership:** Leading multidisciplinary teams, mentoring engineers, and driving innovation in water treatment technologies (RO, UF, chemical precipitation).

WORK EXPERIENCE

CITY OF YUMA | Yuma, AZ

06/2024 – Present

Water Treatment Plant Manager

Leading water strategy for a major agricultural and industrial hub, managing large-scale treatment operations and capital improvements. State-of-the-art technologies including DAF, Ro/UF, and Mg/Fe-removal PureFlow System.

- **Strategic Water Planning:** Directing long-term water resource management for a region with complex water rights and industrial demands, aligning with focus on securing water supply.
- **Capital Project Delivery:** Overseeing a multi-million dollar CIP portfolio, including the upgrade of treatment facilities to improve efficiency and support industrial growth.
- **Operational Optimization:** Implementing advanced data analytics to optimize water distribution and treatment, resulting in reduced energy consumption and improved system reliability.
- **Stakeholder Engagement:** Collaborating with agricultural and industrial stakeholders to develop sustainable water use strategies, mirroring the complex stakeholder landscape of mining operations.

CITY OF PORT ST. LUCIE | Port St. Lucie, FL

05/2022 - 05/2024

Water Treatment Operations Manager

Managed water operations for a rapidly growing utility, focusing on efficiency, sustainability, and major infrastructure expansion.

- **Infrastructure Expansion:** Led the planning and execution of major water infrastructure projects to support rapid population growth and industrial development.
- **Efficiency Improvements:** Implemented process improvements that increased treatment capacity while reducing chemical usage and operational costs.
- **Regulatory Compliance:** Ensured full compliance with strict environmental regulations, managing complex permitting processes for water withdrawal and discharge.

APACHE JUNCTION WATER DISTRICT | Apache Junction, AZ

11/2020 - 05/2022

Superintendent of Water

Turned around a distressed utility, implementing rigorous operational standards and securing long-term water resources.

- **Strategic Turnaround:** Led a comprehensive reorganization of the district, establishing new operational protocols, employee incentives and financial controls that restored stability and profitability.
- **Innovation & Water Use Optimization:** Introduced and implemented a district-wide smart water meter program, resulting in a 35% reduction in total water usage costs within the first year.
- **Groundwater Management:** Managed groundwater recharge and recovery operations, directly relevant to mining aquifer protection and dewatering strategies.
- **Implementation of ACTIVFLO** compact water clarifiers using microsand for arsenic removal at the 2MGD package water treatment plant.

CITY OF TEMPE | Tempe, AZ

04/2010 - 03/2018

Water Treatment Plant Supervisor

Tempe, AZ

Managed large-scale water treatment operations (50 MGD), achieving national recognition for excellence and innovation.

- **Operational Excellence:** Led the JGM Water Treatment Plant to achieve national EPA/AWWA recognition for superior water quality through rigorous process optimization and maintenance excellence.
- **Innovation:** Piloted and implemented novel water treatment technologies to improve water quality and operational efficiency, demonstrating a proactive approach to technical innovation.
- **Innovation & Technical Leadership:** Championed the implementation and commissioning of several key technology projects, including a SCADA Master Plan Upgrade, an Enhanced Coagulation System, and a new PAC system. These initiatives were critical to improving performance and establishing a framework for proactive operational monitoring.
- **Asset Management:** Implemented a comprehensive asset management program to extend the life of critical infrastructure and optimize capital planning.

HEAVY INDUSTRY & MINING EXPERIENCE (CEMENT SECTOR)

MARTIN MARIETTA MATERIALS | Midlothian, TX

09/2019 - 10/2020

Quality Control & Process Manager

Led quality, shipping, laboratory and process control for the largest cement plant in Texas (2.6M tons/year).

- **Large-Scale Operations:** Managed quality control for a massive industrial facility with 4-stage pre-heaters and 6 finish mills, ensuring 24/7 operational continuity.
- **Lab & Process Management:** Revamped the QC lab with state-of-the-art automation (robotics) and implemented rigorous sampling protocols for raw materials and fuels (coal, tires, waste).
- **Team Leadership:** Mentored and developed a technical team of chemists and technicians, fostering a culture of safety and precision in a high-hazard environment. Managed 1.4MGD industrial water balance.
- Managed quality for a 1,400 acre limestone quarry moving 3,000T/day.

SUWANNEE AMERICAN CEMENT | Sumterville, FL

03/2018 - 09/2019

Quality Control & Process Manager

Managed quality, shipping and quarry operations for a 1.2M ton/year dry kiln plant.

- **Commissioning & Start-up:** Played a key role in the commissioning and optimization of new plant systems, ensuring they met performance guarantees.
- **Cost Reduction:** Improved plant quality metrics by 60%, resulting in \$3.45M/year in savings through rigorous process control and staff training.
- **Quarry Management:** Oversaw raw material extraction and blending strategies to maximize resource utilization and minimize waste. Managed 1.4MGD industrial water balance.
- Managed quality for a 250 acre limestone quarry moving 10,000T/day.

BUZZI UNICEM USA | Oglesby, IL

11/2007 - 08/2009

Quality Control & Process Manager

Managed quality, laboratory, shipping and quarry operations for 1.3M tons/year cement manufacturer.

- **Quarry & Raw Material Management:** Directed quarry operations, including block-model Quarry exploration and raw material testing using Cross-Belt Analyzers and XRF/XRD. Optimized raw mix designs to ensure kiln stability and product quality.
- **Industrial Water Management:** Managed the plant's water balance and compliance, including EPA background field water testing and monitoring of runoff/infiltration to prevent contamination.
- **Process Optimization:** Led a \$1.3M project to eliminate algae growth in process water by installing a hypochlorination system, completing it 15% under budget.
- **Environmental Compliance:** Ensured compliance with EPA regulations regarding leaching water and industrial wastewater discharge, managing a \$250K water sampling program.
- Managed 1.4MGD industrial water balance.
- Managed quality for a 1,200 acre limestone quarry moving 3,000T/day.

ESSROC ITALCEMENTI GROUP | Devnya, Bulgaria

1995 - 2005

Plant Supervisor / Operations Shift Manager | 2002 – 2013

Managed operations for the largest cement plant in Eastern Europe (6 kilns; 1.5M tons/year).

- **Operational Leadership:** Directed all aspects of production, from quarry to shipping, managing a workforce of up to 100 employees in a unionized environment. Managed both the chemical and water quality laboratories, ensuring precise control over process water and effluent quality.
- **Industrial Waste Management:** Accountable for the handling and disposal of hazardous waste and alternative fuels (tires, biological waste), ensuring strict environmental compliance.
- **ISO Certification:** Served on the committee that successfully certified the plant to ISO 9001 (Quality) and ISO 14001 (Environmental) standards.
- Successfully managed water content of slurry to achieve a 25% reduction on grinding equipment maintenance and a fuel savings of 20%.
- Managed 1.4MGD industrial water balance. Managed quality for a 321 acre limestone quarry moving 6,000T/day.

EDUCATION

M.S. Chemical Engineering & Water Technology Prof. Asen Zlatarov University	Bulgaria
M.S. Education Minor in Economics, Varna Economic University	Bulgaria
Cert. - Motors & Reverse Osmosis Systems Nikola Yonkov Vapsarov Naval Academy	Bulgaria

CERTIFICATIONS

Class A Water Treatment	Florida
Grade 4 Water Treatment & Distribution	Arizona
Grade 2 Wastewater	Arizona

TECHNICAL SKILLS

- Analysis: X-Ray Fluorescence (XRF), X-Ray Diffraction (XRD), Mass Spectrometry, Particle Size Analysis (PSA), COSMA, Cross Belt Analyzer.
- Software: SCADA, LIMS, SAP, Hansen, MS Office, SharePoint, Intellex, RAMOS, WaterGEMS.
- Root Cause Analysis; Six Sigma Methodologies.
- Languages: English (Fluent), Bulgarian (Native), Russian (Proficient).

REGULATORY EXPERIENCE

- MSHA, OSHA, CCRL, ASHTO, ASTM, EPA, RCRA, EPCRA, DOT, NDPES, ISO 9001, ISO 14001

AWARDS & PRESENTATIONS

- Best AWWA Presentation**..... FSAWWA Florida Section
- National Directors Award**..... EPA & AWWA Partnership for Safe Water
- Papago Certificate of Appreciation..** City of Tempe, AZ

PROFESSIONAL AFFILIATIONS & LEADERSHIP

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| AWWA Florida Region 8 , Chairperson | Arizona Water Association – Water Treatment Committee , Member |
| Florida Water & Pollution Control Operators Association , Treasurer | Arizona Women Leading Government , Member |
| South East Desalting Association , Member | American Society For Quality , Member |
| American Chemical Society , Chairperson for Technical Division Committees on Biological, Organic, & Physical Chemistry | |

PRESENTATIONS

Operational Challenges of Yuma’s 20 MGD Agua Viva Immersed Membrane WTF

04/2025; AZ Water Association

Testing the Limits of Ceramic Membrane Filtration – Port Saint Lucie Case Study

11/2023; FSAWWA; Won Best Presentation

Chlorine Dioxide System at Apache Junction Water District

06/2021; AZ Water Association Treatment Committee

Turbidity and Pathogen Treatment Protocol Implications

04/2019; International Symposium on Waterborne Pathogens

Case Study of Historic Rainstorm Event at Tempe, AZ Water Treatment Plant: Turbidity and Pathogen Treatment Protocol Implications; 04/2018; AZ Water Association

OTHER CORE COMPETENCIES

STRATEGIC LEADERSHIP & MANAGEMENT	PROJECT & FINANCIAL MANAGEMENT	TECHNICAL EXPERTISE & INNOVATION
Strategic Planning	Project Management	Process Optimization
Leadership	CIP (Capital Improvement Program)	Advanced Water Treatment Systems
Team Building & Leadership	Project Planning	RO & Microfiltration
Change Management	Budgeting	Water Production & Treatment
Operations Management	Financial Analysis	Enhanced Coagulation
Water Resource Management	Contract Management	UV Disinfection

OPERATIONAL EXCELLENCE	REGULATORY & COMPLIANCE	STAKEHOLDER ENGAGEMENT & COMMUNICATION
Water Quality Monitoring	Fed & State Regulatory Compliance	Communication Skills
Performance Tracking	Regulatory Compliance	Collaboration
Continuous Improvement	AWIA Risk & Resilience Assessments (RRA)	Problem-Solving
Root Cause Analysis	Emergency Response Plans (ERP)	
Quality Control	Consumer Confidence Reporting (CCR)	
Predictive Maintenance		