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SUMMARY OF QUALIFICATIONS

Results-oriented executive manager with broad knowledge in the fields of water resources and engineering, and over 30 years professional experience in the areas of:

- Public utility management
- Water policy formation
- Public consensus building
- Stakeholder outreach and communication
- Interagency partnerships
- Infrastructure management
- Strategic planning
- Water supply
- Project management
- Regulatory compliance
- Team-based problem solving
- Technology and innovation
- Sustainability and climate change leadership
- Recycled water
- Water and wastewater engineering
- Sensitive negotiations
- Public works construction
- Delta issues
- Financial management
- Labor relations
- Staff development

RECENT MAJOR ACCOMPLISHMENTS

Director of Engineering and Construction, East Bay Municipal Utility District, 2006-Present

- Leads development and implementation of biennial $1.41B Five-year Capital Improvement Program, working with client departments and the General Manager to cost-effectively address infrastructure needs and other concerns. Developmental steps include facility assessments, master planning, collaborative setting of priorities with client groups, and preparation of the capital budget. Implementation of the capital program in any given year includes completing dozens of complex and diverse multi-disciplinary projects.

- Developed and implemented a staff rotation program to help employees build skills and relationships to enhance their personal satisfaction as well as their job performance.

- Champions sustainable infrastructure. Specific recent actions include developing long-term infrastructure renewal plans for all asset classes, and putting in place asset management practices such as period master plan updates to ensure cost-effective, sustainable rehabilitation cycles.

- With other senior managers, leading formal employee values initiative to define and reinforce workforce values.

- Leads major capital projects from concept to completion. For example, led the $71M San Pablo Dam Seismic Upgrades Project; collaborative, proactive approach with the internal stakeholders, as well as community and several federal, state and local regulatory agencies led to the project being completed early and under budget, winning major industry awards, and being accepted by the community.

- Serves as Chief Dam Safety Engineer for EBMUD.

- Managed a major study of EBMUD's water supply concerns in the San Francisco Delta. The study helped define EBMUD's strategic position on numerous political initiatives, and was the key in EBMUD receiving $45M in Prop 84/1E funds to protect our water supply interests in the Delta region, and continues to guide follow-on infrastructure investments and policy discussions.

- Manages 255 employees comprised of technical and professional staff focused on planning, design and construction of water resources projects. Develops and manages $16M/yr. departmental operating budget and consistently manages to budget.

- Led water demand development element of recent Water Supply Management Plan update, incorporating innovative Land-Use Demand methods and resulting in more accurate long-term water supply projections.

- Provides strategic leadership to the organization in several areas, including revision to the written Strategic Plan and leadership of key strategic initiatives. Recent initiatives include preparation of enhanced pipeline asset management plans, and creation of a geospatial strategic plan for the entire organization. These plans have allowed the organization to move forward with a common purpose and consistent approach.

- Actively partners with contractors for all major jobs to keep projects running smoothly and minimize claims. For example, Folsom South Canal jobs totaling $250M were completed despite significant problems at pipe fabrication facility, allowing in-service data to be met for drought relief.

- Chairs the Water and Environmental Policy Committee of the American Society of Civil Engineers (ASCE) to shape ASCE's California water policy and provide input to state legislators. The committee regularly meets face-to-face with state legislators, and sponsors annual infrastructure symposia to inform elected and appointed officials of important infrastructure issues.

- Leads negotiation of major claims for construction and other matters. Highlights include settling a $13.5M tunnel construction claim for $3.25M after intensive discussions, and successfully defending aggressive claims totaling approximately $6M on other projects, ensuring that ratepayer money is used wisely.

- Collaborates with other agencies to accomplish complex water and wastewater public works projects at least cost and lowest public impact. As one example, for DERWA facilities, helped obtain grant funding and then led implementation of major recycled water pipelines to cost-effectively promote recycled water use. As another example, for the Moraga Road Pipeline project worked with three affected cities, a regulatory resource agency and several concerned neighbors to improve project. The result was a $12.7M savings (cost was $12.3M versus an initial estimate of up to $25M), minimal impact or disruption, no claims, and an enhanced positive relationship with our community.

- Orchestrated drought planning for capital improvements. As part of this effort, identified and prioritized 23 projects to improve drought resilience that can be implemented as conditions evolve, giving our customers drought protection while minimizing cash outlay.

- Represents the District's position in various political arenas. Recently testified to two State Senate committees on infrastructure funding and seismic safety respectively. Routinely provides policy perspective to EBMUD's lobbyist on water resources and public works construction matters.

- Has led design and construction of recycled water facilities such as DERWA pipelines and tank, and East Bayshore recycled pipelines.

- Applies outstanding financial and project management skills to orchestrate high volumes of complex infrastructure construction. Manages variable levels of work, as high as $169M of construction in a single year.

- Well-versed and experienced in dispute prevention and resolution methods including partnering, mediation, arbitration and litigation. Has testified in depositions and court on numerous occasions to protect EBMUD ratepayer interests.

- Personally developed innovative procedures and tools for the entire agency to integrate emergency planning and response; actively collaborating with several other agencies to promote regional readiness.

PRIOR POSITIONS HELD

Position (staff/budget)	Dates/Staff/Budgets	Highlights
Manager of Engineering Services, East Bay Municipal Utility District	Feb 2001 – April 2006 72 staff Approx. $40M annual capital budget responsibility, $9M operating budget	• Managed $65M Claremont Tunnel projects to successful completion by proactive risk management, and leading team to quick resolution of numerous serious obstacles; project recognized internationally. • Formed collaborative relationships with Dept. of Water Resources, reinvigorated dam safety program. • Improved business processes to enhance customer service and increase efficiency. • Member of management negotiation team for union negotiations. • Resolved union concerns over staffing of major dam safety initiatives.
Senior Civil Engineer, East Bay Municipal Utility District	Nov 1993 – Feb 2001 9 staff Approx. $12M annual capital budget responsibility, $1.1M operating budget	• Managed design phase of $200M WC-SRV Improvements Projects including treatment and transmission upgrades. Worked closely with the community to address concerns including construction impacts, chemical safety and recreational impacts. • Managed several projects each in excess of $1M.
Associate Civil Engineer, East Bay Municipal Utility District	May 1990 – Nov 1993 Up to $10M annual capital budget responsibility.	• Lead role to address $150M polybutylene lateral failure problem, including predictive stochastic model. • Developed $10M Camanche Recreational facility master plan. • Managed many projects with staff and consultants. • Established first EBMUD standards for reclaimed water systems. • Designed wastewater conveyance systems. • Created trench spoils program for sustainability, instituted recycling and reuse. Several million dollars saved so far at reduced environmental impact.
Assistant Civil Engineer, East Bay Municipal Utility District	Oct 1987 – May 1990	• Led water treatment process research. • Obtained ozone air quality permit. • Performed many detailed designs of water facilities of all types.
Junior Civil Engineer, East Bay Municipal Utility District	June 1986 – Oct 1987	• Analyzed water treatment regulations. • Optimized water treatment process for disinfection, filtration, and residual processing.
Civil Engineering Trainee, Alameda County Flood Control	June 1984 – June 1986	• Hydrology • Hydraulics • Traffic • Modeling

PROFESSIONAL AFFILIATIONS AND RECOGNITION

- 2013 Outstanding Civil Engineer in the Public Sector in California, awarded by American Society of Civil Engineers (ASCE)
- Member, ASCE. Author of numerous professional papers; speaker at various events including keynote at 2008 Golden Gate Branch meeting and several conferences and symposia. Co-author of new seismic pipeline design manual.
- American Water Works Association (AWWA), member of Board of Trustees. Author of numerous professional papers, presenter at various conferences.
- Several projects honored by ASCE awards at regional, state and-or national level including Claremont Tunnel Seismic Upgrade, San Pablo Dam Seismic Upgrades, Estates Reservoir Replacement.
- Chair of Water and Environmental Policy Committee for ASCE Region 9 (California), which formulates water policy positions for ASCE regarding California legislative matters.
- Member of national Infrastructure Resilience Division of ASCE, currently taking lead role in work to manage cross-sector interdependencies.
- Water Research Foundation, member of international council on seismic waterworks practices, hosts biennial conference. Project Advisory Committee member.
- National Geospatial Advisory Committee member advising federal government on geospatial policy.

RECENT PROFESSIONAL PRESENTATIONS

18 March 2016, “Cross-Sector Interdependencies”, ASCE Infrastructure Symposium, Sacramento

16 November 2015, “Water Infrastructure”, Senate Oversight Hearing, chaired by Senator Fran Pavley at State Capitol

4 November 2015, “Managing a Water Utility in the Face of Supply Uncertainty”, guest lecture at UC Berkeley for Dr. Lynn Ingram’s course on Environmental Science focusing on CA water

15 October 2015, “Have We Mitigated Known Cross-Sector Interdependencies?”, Ninth US/Japanese/Taiwanese Seismic Waterworks Workshop, sponsored by Water Research Foundation

6 March 2015, “Asking the Right Questions About Climate Change”, ASCE Infrastructure Symposium, San Diego

5 November 2014, “Managing a Water Utility in the Face of Supply Uncertainty”, guest lecture at UC Berkeley for Dr. Lynn Ingram

28 October 2014, “Info-Gap Robustness to Manage Uncertainty and Risk in Infrastructure Management”, Infrastructure Management conference, AWWA, Atlanta GA

15 July 2014, “Geospatial Strategic Planning for a Water Utility”, ESRI (GIS) User Conference, San Diego, CA

9 May 2014, “How Geospatial Technology Addresses Water Supply Impact of Climate Change”, Geospatial World Forum, Geneva, Switzerland

3 April 2014, “Rapid Modeling of Seismic Damage for Pre-Earthquake Planning and Post-Earthquake Response”, ASCE SEI Structures Congress, Boston MA

26 February 2014, “Okay, We Sent Our Employees to Training, What Next? Taking Professional Employee Development to the Next Level with Structured Job Rotations”, AWWA/WEF Utility Management Conference, Savannah GA

5 November 2013, “Improving Seismic Reliability of Water Infrastructure Using Info-gap Robustness”, World Bank workshop on Decision Making Under Uncertainty, Washington, DC

22 August 2013, “Improving Seismic Reliability of Water Infrastructure Using Info-gap Robustness”, Eighth US/Japanese/Taiwanese Seismic Waterworks Workshop, sponsored by Water Research Foundation

30 July 2013, “Implementation of GIS at a Water Utility”, GITA webinar, co-presented with EBMUD staff

10 May 2013, “ROI of GIS: Case Study of a Major Water Utility”, Geospatial World Forum, Rotterdam, Netherlands

29 January 2013, “Marconi Software for Emergency Planning and Response”, California Emergency Management Agency State Continuity Planner Workshop

5 June 2012, “Reducing Vulnerability to Water Supply Interruptions”, Public Policy Institute of California, panel discussion

3 May 2012, “Marconi Software for Emergency Planning and Response”, Conference on Building a Disaster-Resilient Bay Area, National Disaster Research Council and Association of Bay Area Governments, Santa Clara, CA

29 March 2012, “Infrastructure Trends”, American Public Works Association Roundtable, San Ramon, CA

22 March 2012, “Robustness Theory: Voodoo Science or Holy Grail?”, Water Research Foundation workshop, Los Angeles, CA

1 February 2012, “Robustness Theory”, AWWA/WEF Utility Management Conference, Miami, Florida (presented by E. Bialek for X. Irias)

18 November 2011, “Marconi Software for Rapid Seismic Modeling”, USGS ShakeCast Workshop

12 October 2011, “Rapid Modeling of Seismic Damage to Water Infrastructure”, Seventh US/Japanese/Taiwanese Seismic Waterworks Workshop, presented in Niigata, Japan, sponsored by Water Research Foundation

26 May 2011, “Marconi: Software for Informed Emergency Response”, Bay Area Automated Mapping Association

27 April 2011, Seismic Safety of Infrastructure and Hospitals, testimony to Senate Select Committee on Seismic Safety at State Capitol at request of Senator Ellen Corbett

12 April 2011, “Incorporating Heuristics Theory Into Uncertainty Modeling and Risk Management”, American Society of Civil Engineers International Conference on Vulnerability and Risk Analysis, Hyattsville, Maryland

12 April 2011, “'Managing Climate Change Uncertainty in Water Supply Planning”, American Society of Civil Engineers International Conference on Vulnerability and Risk Analysis, Hyattsville, Maryland

9 March 2011, “Communicating Infrastructure Needs”, American Society of Civil Engineers Infrastructure Symposium, Sacramento CA

10 February 2011, “Reality Bites: Tips for Improving Your Risk Assessments”, AWWA/WEF Utility Management Conference, Denver, Colorado

27 September 2010, “Infrastructure Long-term Outlook”, Bay Area Water Forum, Oakland, CA

15 Sep 2010, “Marconi Software for Emergency Response”, California Emergency Management Association

9 September 2010, “United States Water System Vulnerabilities and Infrastructure Trends”, presented to international delegation as part of State of California Legislature’s International Visitor Leadership Program, Sacramento, CA

27 April 2010, “Where it Shakes, Burns, and Floods in the MUD: Emergency Management and Spatial Technologies at East Bay Municipal Utility District”, Geospatial Information Technology Association annual conference

26 March 2010, “Open Technology Approaches for Enhancing the Common Operating Picture”, Disaster Management Initiative, Carnegie Mellon University of Silicon Valley

14 October 2009, “Integration of seismic modeling software with emergency response software”, Sixth US/Japanese/Taiwanese Seismic Waterworks Workshop, presented in Taipei, Taiwan, sponsored by Water Research Foundation

February 2009, “Embrace Change not Change Orders: An Owner’s Perspective on Getting Projects Done”, AWWA/WEF Utility Management Conference, New Orleans

February 2009, “Seven Deadly Sins of Project Management”, AWWA/WEF Utility Management Conference, New Orleans

RECENT PROFESSIONAL PUBLICATIONS

2015, “Managing Technological and Economic Uncertainties in Design of Long-term Infrastructure Projects: An Info-gap Approach”, with Y. Ben-Haim (primary) et al, CIRP 25th Design Conference Innovative Product Creation

2015, “Have We Mitigated Known Cross-Sector Interdependencies?”, Water Research Foundation Ninth US/Japanese/Taiwanese Seismic Waterworks Workshop

2015, “Structural Analysis of Buried Steel and Cast Iron Pipelines Subjected to Loading from Liquefaction Induced Differential Settlement”, ASCE Pipelines 2015, with Y. Prashar, A. Fallah, R. McMullin

2014, “How to Successfully Plan and Design a Major Pipeline in a Congested Urban Setting”, ASCE Pipelines 2014, with D. Katzev, R. McMullin, C. Dodge, S. Terentieff

2014, “Pipeline Fragility Assessment Against Liquefaction-induced Differential Settlement in the Cities of Alameda and Oakland, California”, ASCE Pipelines 2014, with Y. Prashar, R. McMullin, M. Flores, D. Khatri

2014, “Utilizing Info-Gap Decision Theory to Improve Pipeline Reliability”, ASCE Pipelines 2014, with D. Cicala

2014, “Interconnection of Large-Diameter Transmission Pipelines”, ASCE Pipelines 2014, with M. McLeod and S. Terentieff

2013, “Asbestos Cement Pipelines – Sampling, Testing, And Condition Assessment”, American Water Works Association Distribution System Symposium (Roland Bueno primary, other co-author Chris Dodge)

2013, “Improving Seismic Reliability of Water Infrastructure Using Info-gap Robustness”, Water Research Foundation Eighth US/Japanese/Taiwanese Seismic Waterworks Workshop (co-author is Denise Cicala)

2013, “Water System Seismic Fragility of Embankment Dams, Tank Reservoirs, and Large Diameter Pipelines”, Water Research Foundation Eighth US/Japanese/Taiwanese Seismic Waterworks Workshop (with co-authors Roberts McMullin, Andrea Chen, Yogesh Prashar)

2012, “Robustness: Strategies for Utility Management in Conditions of Uncertainty”, CA-NV AWWA Source Magazine, Spring 2012 issue, vol 26 No. 2

2012, “Pilot Large Diameter Pipeline Seismic Fragility Assessment”, American Society of Civil Engineers Pipelines Conference, Miami FL (with co-authors Roberts McMullin, Bill Cain and Yogesh Prashar)

2012, “Robustness Theory: Voodoo Science or Holy Grail?” AWWA/WEF Utility Management Conference, Miami, Florida (co-author E. Bialek)

2011, “Rapid Modeling of Seismic Damage to Water Infrastructure”, Water Research Foundation Seventh US/Japanese/Taiwanese Seismic Waterworks Workshop, Niigata, Japan

2011, “Incorporating Heuristics Theory into Uncertainty Modeling and Risk Management”, American Society of Civil Engineers International Conference on Vulnerability and Risk Analysis, Hyattsville, Maryland

2011, “'Managing Climate Change Uncertainty in Water Supply Planning”, American Society of Civil Engineers International Conference on Vulnerability and Risk Analysis, Hyattsville, Maryland

2011, “Reality Bites: Tips for Improving Your Risk Assessments”, AWWA/WEF Utility Management Conference, Denver, Colorado

2010, “Where it Shakes, Burns, and Floods in the MUD: Emergency Management and Spatial Technologies at East Bay Municipal Utility District”, Geospatial Information Technology Association conference, Phoenix, AZ, with E. Bialek

2009, “Integration of seismic modeling software with emergency response software”, Water Research Foundation Sixth US/Japanese/Taiwanese Seismic Waterworks Workshop, Taipei, Taiwan, co-author Dr. Dave Wald of USGS

2009, “Embrace Change not Change Orders: An Owner’s Perspective on Getting Projects Done”, AWWA/WEF Utility Management Conference, New Orleans

2009, “Seven Deadly Sins of Project Management”, AWWA/WEF Utility Management Conference, New Orleans

EDUCATION AND LICENSE

Bachelor of Science, Civil Engineering, graduated *magna cum laude*, University of California, Berkeley

Registered Professional Civil Engineer in California C44782

December 2015, completed Water Distribution Operator course