Steven M. Charo

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1540 Bois D Arc Lane Midlothian, TX.

Cell: (214) 412-8234

Objective

A position in a results-oriented company that seeks an ambitious and career conscious person, where acquired skills and education will be utilized toward continued growth and advancement.

Experience

Waste Resource Management

Director of Operations 2017 - Current

- Worked with sales and operations throughout multiple states to increase revenues, and optimize truck efficiency
- Capital allocations on trucks, trailers and plant process equipment for all locations
- On-site training for drivers for safe and efficient operation of equipment
- Trained personnel on equipment and plant processing to achieve maximum output and compliance
- Participated in P&L reviews to ensure that budgets goals are achchived, developed and implemented programs for optimal equipment utilization, equipment maintenance, labor and material costs.

Southwaste Disposal Interest

General Manager 2009 – 2017

- Responsible for overseeing all aspects of a company's liquid waste collection, transportation, treatment and disposal operations
- Monitoring, optimizing and controlling operating expenses.
- Implementing and enforcing strict safety protocols for handling liquid waste.
- Participated in regular P&L reviews to ensure that budgets are met.

Waste Management, Dallas, TX.

District Manager, 2007 - 2009

- Managed day-to-day operations of the District, and provided daily support to managers in ensuring quality and budget performance.
- Monitored budget and operating metrics while diagnosing and improving processes, procedures, and performance to increase revenue and margin from 7% EBIT to 42% EBIT.
- Executed necessary precautions to ensure safety and compliance with company and OSHA to decrease vehicle to vehicle accidents by 70% YOY, and decreased workers compensation accidents by 90% YOY.
- Participated in regular P&L reviews to ensure that budgets are met; developed and implemented programs for optimal equipment utilization, equipment maintenance, labor and material costs.

Knight Waste Services, Ft. Worth, TX.

Operations Manager, 2003 - 2007

- Managed the day-to-day operations to ensure optimal equipment utilization and adherence to contract. Developed software to track customer service, set the standard for residential customer service in Ft. Worth.
- Interviewing and selection of employees, new hire orientation, safety and driver training procedures, ensured DOT compliance.
- Inventory control, third party repair, and warranty reimbursement.
- Managed P&L to maintain budget, ensure profitability and driver productivity.

Alco Environmental, Mansfield, TX.

Sales Manager, 1999 - 2003

- Direct performance evaluations and training to develop sales programs and incentives.
- Assign territory and review market analyses to determine customer needs, volume potential and price schedules to meet or exceed monthly budgeted goals.
- Work closely with operations to bid special jobs and ensure complete customer satisfaction.
- Maintain good customer relations and represent company at trade association shows.
- Approve budgets, expenditures, and appropriations.

US Liquids, Dallas, TX.

Director of Transportation, 1997 - 1999

- Worked with sales throughout Texas to increase revenues, and with location managers to ensure maximum truck utilization.
- Directly involved in implementation of routing software, driver training materials and DOT compliance education.
- Responsible for 12M dollars in annual revenue, continued to increase EBIT year over year.
- Specifications, budget and procurement of all rolling stock.

 Maintained major multi-state transportation contracts and worked with multiple disposal facilities for the disposal of hazardous and non hazardous solids and liquid waste.

Allwaste Recovery Systems, Dallas, TX.

Operations Manager, 1989 - 1997

- Worked directly with sales department to secure national accounts, and manage transportation and disposal at multiple locations throughout the United States.
- Oversee all aspects of accounts, profiling of waste, and manifesting waste, and scheduling of service. Coordinated with environmental departments to ensure total compliance.
- Directed and coordinated operational activities of transportation equipment department on a local level.
- Inspected transportation equipment, scheduled needed repair or warranty work.
- Coordinated operation and maintenance of storage facilities, and repair facilities.
- Directs recording of expenses and analyzes purchases and repairs to control expenditures.
- Plan and directed safety campaigns, driver training and coordinated equipment, materials, and supplies for operations.
- Negotiated with vendors for trucks, and equipment purchase.

Hi-Way Machinery Company

Heavy Equipment Technician 1974 – 1989

- Field service tech on all types of construction equipment
- Specialize in air over hydraulic repairs
- Final drive repair and maintenance

Education

• JL Long High School, Dallas, TX. 1974

AM TRENCHLESS

Edward Alan Ambler, PE, LEED AP, MS Env. Eng

Edward "*Alan*" Ambler has 24 years of diversified experience in utility operations management, utility planning and engineering design, roadway and drainage design, multi-jurisdictional coordination and construction management. Alan's earlier career efforts brought him from Dubai to Alaska to manage projects such as the World Islands in Dubai to the City of Ketchikan's onsite construction inspection representative for two \$40+ million cruise ship berth construction projects in Alaska. While working for the City of Casselberry, Alan managed execution of utility infrastructure projects that were constructed through the use of multiple contractual mechanisms including design build, construction manager at risk project, direct negotiation, and in-house construction staff, as well as traditional low bid.

Alan has a BS in Civil Engineering, a MS in Environmental Engineering, holds three patents, and led an effort to publish a technical book on pipe bursting for the North American Society for Trenchless Technology. Through his work at AM Trenchless, Alan has become a national leader in trenchless technologies methods, such as pipe bursting. Alan's work with the Alliance for PE Pipe has focused on developing municipal understanding of the use of high density polyethylene pipe for a wide variety of projects, including trenchless technologies, open cut installation, marine applications, temporary bypass and above ground installations. Alan is passionate about continuing education and often presents at conferences on multiple subjects, provides articles to technical journals and discusses utility topics with peers throughout the country. Alan has designed nearly 400,000 linear feet of pipeline projects, assisted in over 100 miles of HDPE projects and endeavors to grow the use of trenchless technologies.

AM Trenchless, Lake Mary, Florida - President / Owner / Principal Engineer, June 2015- Present. Responsible for all operations of the business, including accounting, billing, marketing and reporting requirements, as well as engineering.

- Dominion Energy Chilled Water Above Ground Temporary Bypass Pipeline Analysis – Alan's effort for this project included performing detailed pipeline analysis for approximately 2400 LF of proposed dual 36" chilled water line. The effort included determining potential temperature changes for both the exterior of the pipe and fluid conveyed, thermal expansion/contraction, thrust restraint and potential movement of the above ground pipeline.
- Arizona State University Tempe Utility Plant Chilled Water HDPE Pipeline Analysis – Alan's effort for this project included performing detailed pipeline stress analysis for approximately 4,000 LF of 6", 10", 18" and 20" pre-insulated HDPE chilled water lines. This effort utilized the American Society of Mechanical Engineers B31.1 Power Plant Piping Code to perform detailed stress analysis with the assumed temperature changes of conveyed fluid. Evaluation of ground conditions, pipeline restraint and installation methods were also performed.
- City of Austin, Texas Temporary WWTP Bypass This project involved approximately 30,000 LF of 30" DR11 HDPE to be used for 2.5 years to convey wastewater from various processing applications at a wastewater treatment plant. The project involved above ground applications, buried applications, on structure applications and evaluation of thermal expansion/contraction and Poisson's effect on the above grade applications.
- **City of Phoenix, Arizona Temporary Water Pipeline** This project involved installation of approximately 2500 LF of 8" DR7 HDPE pipeline to convey potable water above ground for approximately 2 years. The above ground pipeline was to be laid in an existing irrigation ditch and evaluation of the thermal expansion/contraction and Poisson's effect were necessary.

Edward Alan Ambler, PE, LEED AP President, Principal Engineer

24 Years of Experience

Education

B.S. Civil Engineering, University of Florida, 2000 M.S. Environmental Engineering, University of Florida, 2014

Registrations/licenses

Professional Engineer, Florida 64697, 2007

Certifications

Leadership in Energy and Environmental Design Accredited Professional

Professional Affiliations

North American Society for Trenchless Technology American Water Works Association Water Environment Federation American Society of Civil Engineers National Association of Sewer Services Companies

Committee Activities

NASTT Board of Directors -2019 to current NASTT Pipe Bursting Center of Excellence, Chairman - 2018 to current NASTT Program Committee, Member, Session Leader, Moderator - 2015 to current AWWA, Chairman, Water Main Rehabilitation Committee -2016 to 2019 AWWA, Polyolefin Committee User Member - 2014 to current Plastics Pipe Institute Municipal Advisory Board, Member -2014 to current International Pipe Bursting Association, Governmental Affairs Committee - 2015 to 2018

Awards / Patents

NASTT Volunteer of the Year NASTT No-Dig Outstanding Paper of the Year Engineering News Record Southeast's Top 20 under 40 US Patent #9,829,143 B2 US Patent #9,890,893 B2 AU Patent #2017202612 B2 *

AM TRENCHLESS

City of Casselberry, Casselberry, Florida - Water Resources Manager, April 2008 - June 2016. Alan was responsible for the day-to-day operations of the water, wastewater and reclaimed water utilities that served 55,000 customers. A list of responsibilities is below as well as projects that represent a sampling of actual projects executed.

- Managed a division of 42 staff members and performed annual reviews for 6 direct report employees
- Created the annual operating and capital budgets for the utility based on historical budgets and projected needs from the capital improvement plan
- Managed development of two utility rate studies, which included significant data processing for all revenue and expenditures for the utility which generated over \$16 million in annual revenue
- · Managed development of 10 year utility master plans and capital improvement plans
- Created and revised utility ordinances, permits, technical manuals, specifications and details
- · Managed development of bid documents and construction of infrastructure projects totaling \$40 million
- Responsible for compliance of the utility system with all regulatory agencies, including the Environmental Protection Agency, Florida Department of Environmental Protection and Occupational Safety and Health Administration
- · Negotiated and enforced contracts with consultants, contractors, and other government agencies
- · Performed extensive public relations with customers, politicians, associations and the general public
- · Represented the city at many events, conferences and meetings, including the 2016 White House Water Summit

A representation of the infrastructure projects Alan developed while at the City of Casselberry is below.

 Casselberry Water Quality Improvement projects This \$10.5 million project involved design and construction management for the largest asbestos cement (AC) pipe bursting project in North America at 35 miles of AC pipe rehabilitation. Alan's role as EOR and project manager allowed him to actively be involved in construction issues and compliance with grant audit procedures. 	Sausalito, Betty Street and Eastbrook II Basin Sewer CIPP Lining Project – This \$1.25 million project involved condition assessment of 40,000 LF of existing gravity sewer system and construction of cured-in-place-pipe liner for the areas recommended. Responsibilities included project planning, condition assessment and project management. Construction was completed in June 2017.
 Bermello, Ajamil and Partners, Orlando, Florida - Projetication City of Ketchikan Berth III Port Expansion Project, Ketchikan, Alaska – This \$40 million port expansion project consisted of the construction of a new berth for cruise ships including many large diameter piles in over 200 feet of sea water. Alan's responsibilities included processing change orders and contractor invoices, extensive coordination with contractors and engineers and other project management duties. 	 The World Islands, Dubai, United Arab Emirates The World Islands, Dubai, United Arab Emirates This innovative and inspiring project involved reclamation of ocean sand and building islands in the shape of the World. Alan's duties included comparing proposed and as-built quantities of earthwork for navigational channels and the islands which involved extensive use of geotechnical, CAD applications, 3D modeling and unique visualization.
 Atkins, Orlando, Florida – Project Engineer, April 2003 I-4 Ultimate Design Utility Coordination, Orange and Seminole Counties, Florida – The project involved widening and reconstruction of 21 miles of a major interstate and all associated interchanges and ramps. Alan served as utility coordinator facilitating communication between FDOT, project managers, project engineers and utility companies. Alan was responsible for gathering existing utility information, which included extensive subsurface utility data, and coordination of all agreements and reimbursement procedures. 	 August 2006. Hurricane Ivan Roadway Reconstruction Relief Efforts, Santa Rosa and Escambia County, Florida – FDOT District 3 released several emergency projects to repair and rebuild many of the roads after Hurricane Ivan. Alan's responsibilities included supporting construction activities on emergency roadway construction projects. Alan processed contractor invoices, supplemental agreements, negotiated unit prices, summarized and coordinated daily project activities and conducted various field activities.

Edward Alan Ambler, PE, LEED AP President, Principal Engineer

AM TRENCHLESS

A representation of Alan's educational workshops, publications and conference proceedings is below.

Educational and Workshop Activities.

April 2022, American Society of Civil Engineers Alliance for PE Pipe Distribution and Collection Webinar March 2022, Trenchless Technology Webinar Series, HDPE and Trenchless Installations, virtual offering January 2022, Alliance for PE Pipe Webinar Series, Designing Your Next HDPE Project, virtual offering December 2021, NASTT No-Dig Pipe Bursting Good Practices Course, virtual offering.

June 2021, NASTT No-Dig Pipe Bursting Good Practices Course, virtual offering.

May 2021, American Society of Civil Engineers Alliance for PE Pipe Successful Installations, virtual offering. October 2021, American Society of Civil Engineers Alliance for PE Pipe Strength of Standards, virtual offering. May 2021, American Society of Civil Engineers Alliance for PE Pipe Successful Installations, virtual offering.

March 2021, Alliance for PE Pipe Webinar Series, Above Ground HDPE Installation, virtual offering.

March 2021, American Society of Civil Engineers Alliance for PE Pipe Spotlight on Innovation, virtual offering.

January 2021, American Society of Civil Engineers Alliance for PE Pipe 301 Webinar, virtual offering.

December 2020, NASTT No-Dig Pipe Bursting Good Practices Course, virtual offering.

March 2019, NASTT No-Dig Pipe Bursting Good Practices Course, Chicago, Illinois.

March 2018, NASTT No-Dig Pipe Bursting Good Practices Course, Palm Springs, California.

October 2017, AWWA Water Infrastructure Conference, Houston, Texas, "Water Main Rehab – How to Build a Water Main Rehabilitation Program"

July 2017, FSAWWA Region IV Workshop, "Water Main Rehabilitation Short Course,"

June 2017, AWWA Annual Conference and Exhibition, Chicago, Illinois, "Managing Water Main Distribution Systems: From Condition Assessments to Rehabilitation Methods, Economics of Failure and Long-Term Planning,"

April 2017, NASTT No-Dig Pipe Bursting Good Practices Course, Washington, D.C.

February 2017, Florida Water Environmental Association 2017 FWEA Collections Seminar, "Pipe Bursting and Swagelining as Techniques for Force Main Rehabilitation."

June 2016, AWWA Annual Conference and Exhibition, "Comprehensive Asbestos Cement Pipe Workshop"

Publications

- Ambler, Edward Alan, Timberlake, M. and Woodcock, M. (2019) Pipe Bursting Good Practices Guidelines, North American Society for Trenchless Technology (NASTT), Third Edition, USA
- Ambler, Edward Alan, PE, "A Path Toward Regulatory Approval: Pipe Bursting Asbestos Cement Pipe With Encapsulation", AWWA Journal, September 2017, Volume 109, Number 9, Page(s) 53-60.
- Southerly, Laney, PE, Edward Alan Ambler, PE, LEED AP, Todd Grafenauer, "The City of Port St. Lucie's Programmatic Approach to asbestos cement pipe bursting," American Public Works Reporter, August 2017, Page(s) 108-112.
- Ambler, Edward Alan, PE, LEED AP, Todd Grafenauer, "Asbestos Cement Pipe Bursting with Encapsulation Technology: City of Boynton Beach Pilot Project," Florida Water Resources Journal, July 2017, Page(s) 56-57.
- Ambler, Edward Alan, PE, "A Summary of Asbestos Cement Pipe and Regulations Governing Handling in the US Part 1 and Part 2", Underground Construction Magazine, October 2015, November 2015.
- Thomas, William Ph.D, PE, Alan Ambler, PE, "Applicability of NESHAP to Rehabilitating Asbestos Cement Pipelines" NASTT Outstanding Technical Papers, Fall, 2014.

Ambler, Edward Alan, PE, "Rehabilitation of Asbestos Cement Pipe Via Pipe Bursting." FES Journal, October, 2013.

Thomas, William, Ph.D, PE, Alan Ambler, PE, "Applicability of National Emissions Standards to Rehabilitate Asbestos-Cement Pipelines." Florida Water Resources Journal, October, 2013.

Thomas, William, Ph.D, PE, Edward Alan Ambler, PE, "Bursting with possibility." WET, November, 2012.

Ambler, Edward Alan, PE, "Pipe bursting of asbestos cement pipe: making it happen." APWA Reporter, August 2012.

Conference Proceedings

- Ambler, Edward Alan, PE, LEED AP, "Case Studies: Bursting Asbestos Cement Pipe Bursting, EncapsulAC." Proceedings of the Underground Construction Technology Conference, New Orleans, Louisiana, January 2018.
- Ambler, Edward Alan, "Moving Forward: Pipe Bursting and the Administrator Approved Alternate for AC Pipe." Proceedings of the North American Society for Trenchless Technology Northeast Chapter, Municipal Outreach Conference, Cooperstown, New York, November 2017.
- Ambler, Edward Alan, PE, "Formal Submittal of 'Administrator Approved Alternate' by Consideration of the Environmental Protection Agency." Proceedings of the AWWA Water Infrastructure Conference, October 2017.
- Ambler, Edward Alan, PE, LEED AP, Collins Orton, "Existing Regulations Relating to Asbestos Cement Pipe and a Path Forward," Proceedings of the CA-NV AWWA Fall Annual Conference 2017, October 26, 2017.
- Allen, Jessie, PE, Edward Alan Ambler, PE, LEED AP, Todd Grafenauer, "Failing to Flawless in a Day: Pre-chlorinated Pipe Bursting Invigorates Arlington Water Utilities Main Replacement Program." Proceedings of the ASCE Pipelines 2017 Conference, Phoenix, Arizona, August 2017.

Verne T. Buehler, P.E. 1524 Maxfield Road, Hartland, MI 48353 Phone: 810-623-3118; email: verne.buehler@gmail.com

Degrees and Licensing:

- Marquette University; MS Environmental Engineering; 2015
- Michigan Technological University; BS Chemical Engineering; 1989
- Registered Professional Engineer PE# 32493-6

Patents:

• U.S. Patent Numbers 6,047,768 and 6,206,091. Processes patents involving pasteurization and heat recovery system.

Current Employment:

CECO Environmental – Duall Division; June 2014 - Present Project Manager & Applications Engineer

- Perform air and water pollution abatement process design and lead technical review meetings and approve project designs to release for fabrication. Coordinate contractor equipment installation and operator training of the treatment system. Also develop project documents, procedures, specifications and operation and maintenance manuals.
- Determine contaminant treatment loadings and calculate emission levels, both water and air, for permit application documents. Projects include Superfund remediation sites, industrial facilities and municipal water and wastewater treatment plants.
- Cultivate business growth via insightful and thorough proposals as well as clear communication with clients on existing project status.

Project Highlights:

• Kenworth Trucking; Chillicothe, Ohio

A ground water recovery and reinjection system was implemented to remediate contaminated solids and groundwater resulting from an underground storage tank release. The remediation system had to fulfill three EPA mandates: (1) provide maximum reinjection of the recovered groundwater; (2) demonstrate phase control via groundwater monitoring and modeling; and (3) obtain maximum contaminant levels (MCLs) for drinking water on the treated groundwater. Fixed film biological treatment was selected for extracted groundwater. Approximately 25% of the effluent form the fluidized bed was filtered and amended with nutrients and utilized Fenton's reagent with reinjection to stimulate in situ bioremediation. The remaining effluent was sent to the publicly owned WWTP.

• Avtex Fibers Superfund Site; Front Royal, VA

Performed final commissioning and trained operators on the multi-stage odor control portion of the overall Superfund project. On site to trouble-shoot auxiliary equipment and fine-tune PLC programing to assure proper actuation of process interlocks allowing treatment objectives to be met: chemical oxidation of sulfide compounds to permit levels.

• Point Comfort, Texas (Formosa Plastics)

Commissioned and started-up 4 MGD treatment plant. Process components included: compressors, fine-bubble diffusers, clarifier mechanism, oxygen generator, oxygen-dissolving chamber, fixed film biological reactor, PLC and corresponding level, pressure and temperature sensors and transmitters. Seeded the activated sludge system and monitored biological growth and acclimation. Conducted hands-on and class room training to operators and resident engineers.

Page 2 – Verne Buehler, P.E.

Employment Experience:

KHS Filling and Packing contract employee through John Galt Staffing, May through August, 2012 Senior Process Engineer

Assisted in the design, layout and construction of turnkey systems. Developed drawings from 65% review through engineering release. Equipment included: empty and full can rinser: liquid filler; seamer, CIP and filler service module skids; tunnel pasteurizer. Performed wet testing on the filler, CIP and filer service module skids.

Jacobs Engineering, November, 2007 – 2008 Process Engineer

- Philosophy and specification development, and coordination with other disciplines (electrical, structural, I&C, architects, etc.).
- Review wastewater treatment plant operation to recommend process modifications for optimization.

BioIonix Inc. 2006 to February, 2007

Application Engineer

- Fabricated bench-scale unit and designed and oversaw fabrication of full-scale unit for treatment verification studies of industrial and municipal processes.
- Procured and installed lab equipment for bench and pilot scale treatability studies

Jones & Attwood, Inc. 2004 – 2005

Project Manager

- Managed orders from receipt through contractor equipment supply, installation, start-up and final commissioning. Prepared operation & maintenance manuals. Trained operators on system operation.
- Conducted equipment & performance audits; Oversaw submission of engineering submittals.

Evoqua Water Technologies (formerly Envirex Products) 1992 to 2003 Project Engineer

• Oversaw site remediation projects for various industrial customers. These customers included but are not limited to: Mobile Corporation, Ashland Oil, Kenworth Trucking, Sinclair Oil, Tyndall Air Force base and Gulf Power. HAZOP review of industrial wastewater treatment plant design.

Process Service Engineer

- On-site for construction supervision, process start-up, troubleshooting and operator training for Ipiranga Oil Refinery's wastewater treatment plant in Brazil and the 4 million gallon per day treatment plant for Formosa Plastics in Point Comfort, Texas.
- System and process verification activities to assure objectives were met: influent/effluent wastewater characteristics, equipment audits and warranty review. PFD and P&ID development

Zimpro Inc. 1989 to 1992

Product Development Engineer

• Responsibilities included: sizing process equipment, generating P&IDs, supervising bench-scale and pilot-scale studies for treatment technology selection.

Papers and Presentations:

- Presented and Published, "Utilizing the Fluidized Bed to Initiate Water Treatment On-Site", at Battelle's Third International In Situ and On-Site Bioreclamation Symposium, San Diego, CA; 1995.
- *"Heat Recovery to Economically Implement Dual Digestion Processes"* was presented at the Central States Water Environment Association Conference in 1998.
- Presented and published, "Planning for the Future: Existing Anaerobic Digestion Facilities Upgraded to Achieve Class A Biosolids", at the national WEF/AWWA Joint Residuals and Biosolids Conference in Baltimore, Maryland in 2003.

Benjamin Camacho



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EDUCATION

B.S., Geography/ Environmental Science, Texas A&M University, 2004

PROFESSIONAL REGISTRATION

TCEQ MSW Class B Operator License

TCEQ LPST Corrective Action Project Manager, CAPM 0000559 (2015)

PROFESSIONAL AFFILIATIONS

Society of American Military Engineers

Texas Association of Environmental Professionals Benjamin Camacho is the Director of Permitting, Compliance and Safety for WRM. He is located in Austin, Texas and has 21 years of work experience. Mr. Camacho's expertise includes regulatory compliance and permitting of municipal solid waste facilities, safety/risk assessments, site investigations, site remediation, remedial system design and build, Resource Conservation and Recovery Act (RCRA) reporting, design and implementation of soil and groundwater investigations, data management and evaluation, the implementation of Phase I and Phase II Environmental Site Assessments (ESAs), the preparation of Storm Water Pollution Prevention Plans (SWPPPs), the preparation of Spill Prevention, Control and Countermeasure (SPCC) Plans, aquifer testing (i.e., slug tests and pump tests), and the development and implementation of remediation process optimization activities.

In addition to his compliance and permitting Background, Ben Camacho has developed and implemented WRM's safety policy and safety standard operating procedures. He oversees the WRM safety program and works with each market to ensure a safe work environment. He works closely with insurance companies (risk assessment programs) and performs routine audits at each market.

Municipal Solid Waste Permit Applications, SouthWaste Disposal, LLC., Sealy, Texas, Hurst Facility, Downstream and San Antonio

Prepared municipal solid waste (MSW) permit applications in accordance with the requirements of Texas Administrative Codes (TAC) 30TAC §332 and 30TAC §332.3(a).

Assessment, Investigation, Remediation Services Contract, Texas Commission on Environmental Quality, Mineral Wool Proposed State Superfund Site, Rogers, Texas

Project Manager for an engineering consulting firm that. Under this employment, the firm was the prime contractor under the Texas Commission on Environmental Quality (TCEQ) Assessment, Investigation, and Remediation Services (AIRS) contract since 2009. Mr. Camacho performed Incremental Sampling Methodology (ISM) activities at the Mineral Wool Insulation Manufacturing Company, Inc. proposed State Superfund Site located in Rogers, Bell County, Texas. The objective of the ISM activities conducted at the Site was to supplement an on-going remedial investigation and to aid in the assessment of ISM as a viable, cost-effective and technically defensible strategy over traditional sampling techniques. Specifically, concentrations of target chemicals of concern (COCs) within ISM decision units were determined and the appropriateness of ISM to characterize impacts to soils was evaluated. The ISM soil sampling scope of wok followed guidelines set forth in the "Interstate Technology & Regulatory Council Incremental Sampling Methodology Team, ISM-1 Incremental Sampling Methodology" guidance document dated February 2012.

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Site Remediation, Pasadena, Texas, Confidential Client

Project manager. Managed activities at a chemical manufacturing facility in accordance with facility's RCRA Permit and Compliance Plan. Activities include preparing Corrective Action Monitoring Reports (CAMRs), Response Action Plan (RAP), and Affected Property Assessment Reports (APARs); conducting O&M of recovery wells and oversight of periodic groundwater sampling events; performing remediation system optimization design and build activities and well acid treatment and development; and implementing enhanced natural attenuation activities. (Project cost: \$1.8 million)

Environmental Compliance, Houston, Texas, Houston Airport Systems

Project manager for a three-year Environmental Support Contract to the Houston Airport System's three Houston airports—Bush, Hobby, and Ellington Field. Assignments under the contract include storm water evaluations, engineering plan reviews, review and updates of SWPPPs and SPCC plans, impacted site investigation and remedial action, remediation system design and build, regulatory support, oversight of sewage package plant closures, and oversight of mold inspection and clearance services. (Project cost: \$1.6 million)

Environmental Site Assessment, Kilgore, Texas, Confidential Client

Project manager. Conducted environmental site investigation for an oilfield saltwater disposal facility, which included cone penetration testing/rapid optical screening tool (CPT/ROST) investigations, installation of passive soil gas probes, and groundwater sampling. Final report included a summary of investigative activities and recommendations for further investigation and remediation. (Project cost: \$150,000)

Compliance and Permitting, Nordheim, Texas, Pyote Reclamation Systems LLC

Project manager. Prepared permit applications to construct, maintain, and use a commercial waste disposal facility, a land-treatment facility, and a reclamation (R-9) facility regulated by the Railroad Commission of Texas (RRC) Statewide Rule 8, Rule (3.8). Performed subsurface investigation activities to identify groundwater as required by the RRC. Conducted a site assessment to facilitate the permit applications, which included a water well review, regulatory agency records and facility documents review, site investigations, and an evaluation to identify the presence of wetland type features located at the site. Conducted regulatory and client coordination to facilitate review and approval of the permit application for these facilities in a timely fashion. Prepared cost estimates and proposals, site investigation work plans, health and safety plans, and site investigation reports.

Permit Application, Disposal Facility, PYOTE Reclamation Services, San Antonio, Texas

Regulatory and compliance project manager for the preparation of a permit application for a 120-acre land treatment and disposal facility for drilling wastes in Texas. Directed project team through the regulatory interpretation of the applicable rules for successful completion of the project. Served as direct liaison with the regulatory agency and negotiated elements of the application with regulators until final permit approval.

Compliance and Permitting, West Texas, Mesquite SWD, Inc.

Project manager. Amended a permit application to construct, maintain, and use a commercial waste disposal facility regulated by the RRC Statewide Rule 8, Rule (3.8). Performed subsurface investigation activities to identify groundwater as required by the RRC. Conducted regulatory and client coordination to facilitate review and approval of the permit application for this facility in a timely fashion. Prepared cost estimates and proposals, site investigation work plans, health and safety plans, and site investigation reports.

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Soil and Groundwater Investigation, Midland, Texas, Confidential Client

Project manager. Assessed impact of chlorinated solvents used at an oilfield service company's compressor manufacturing and repair facility, on the subject site and surrounding properties. Due to release of chlorinated compounds in groundwater off-site, conducted a field receptor survey to identify water use within ½ mile of the facility was and performed water well sampling on water wells at neighboring properties. Wellhead treatment systems were installed at the impacted offsite wells to treat well water to drinking water standards. Submitted an Affected Property Assessment Report to the State agency. (Project cost: \$75,000)

Site Remediation, Hallettsville, Texas, Confidential Client

Project manager for an excavation of TPH- and BTEX-contaminated soil. Developed a proposal and a work plan. Conducted field oversight of excavation activities, which included soil sampling and backfilling. (Project cost: \$70,000)

Site Remediation, La Grange, Texas, Confidential Client

Project manager for a petroleum storage tank (PST) facility in LaGrange, Texas. Project involved waste removal and sampling, cleaning of solid waste management units (SWMUs), and collection of soil and groundwater samples. Conducted well installation and sampling to support a final closure of the inactive units at the site. (Project cost: \$70,000)

Site Investigation, Kendall County, Texas, Confidential Client

Prepared a report to satisfy the requirements set forth in Texas Commission on Environmental Quality (TCEQ) regulatory guidance document RG-366/Texas Risk Reduction Program (TRRP) 2A Section 4.4.3. for a site consisting of an abandoned livestock dip vat located on a ranch in Kendall County, Texas. Performed analytical data validation and developed site-specific background screening levels for arsenic in soils. Conducted a release determination for the purpose of achieving site closure following TRRP guidance.

Environmental Site Assessments, Texas, Confidential Client

Project manager. Conducted environmental site assessments for more than 25 oilfield equipment manufacturing facilities, including aerial photo review, regulatory agency records and facility documents review, site investigations, and an evaluation of past and current property usage and surrounding land usage to identify potential and existing contamination sources. Final reports included a summary of investigative activities and recommendations for further investigation and remediation.

Site Assessment, Midland, Texas, Confidential Client

Project geologist. Performed drilling and oversight of 40-foot and 80-foot nested well screens for plume delineation of impacted groundwater and conducted a receptor survey within ½ mile of the facility with impacted groundwater.

Site Assessment, Odessa, Texas, Confidential Client

Project geologist for site investigation, groundwater well installation, and groundwater sampling for hydrocarbon contamination. Pre-packed well installation for implementation of a dual-phase extraction system for remediation of hydrocarbon contamination.

Site Assessment, Giddings, Texas, Confidential Client

Project geologist. Performed site investigation, groundwater well installation, groundwater sampling, and oversight of characterization and disposal of non-hazardous and hazardous wastes at three saltwater disposal



facilities. Provided oversight of excavation activities of several outfalls and installation of stormwater drainage system for erosion control.

Site Remediation, Houston, Texas, Confidential Client

Voluntary Cleanup Program (VCP) task manager. Managed and provided oversight of excavation and treatment of Benzo(a)pyrene (BaP) in soil.

Site Investigations, Houston, Texas, Confidential Client

Project geologist. Prepared cost estimates and proposals, site investigation work plans, health and safety plans, site investigation reports, and groundwater monitoring reports. Field experience included monitoring well installation and development, direct-push soil sampling, groundwater sampling, soil sampling, georeferencing, CPT/MIP and CPT/ROST investigations, and oversight of a soil gas survey. Helped develop a conceptual site model to evaluate LNAPL impacts at an airport fuel depot. Identified three improperly screened monitor wells that were subsequently plugged and abandoned to mitigate the potential for cross-contamination of aquifers. Conducted a CPT/ROST investigation to conclusively identify, after 10 years of work by previous consultants, the extent and various types of subsurface LNAPLs at the fuel depot so that appropriate remedial technologies could be implemented.

Site Investigations, Stafford, Texas, Texas Department of Transportation

Project geologist. Provided oversight of the installation of 3-inch-diameter, pre-packed, stainless steel wells for implementation of a mobile high-vacuum dual-phase extraction (MHVDPE) system for remediation of hydrocarbon-impacted soil and groundwater. Conducted influent/effluent sampling of the groundwater during the operation of the MHVDPE system. Assisted in the operation of the MHVDPE system. Conducted constant discharge and cyclic discharge (step-drawdown) tests to estimate well yield for the aquifer system at the site. Analyzed the aquifer test data with the use of AquiferTest software.

Site Investigation, Alvin, Texas, Confidential Client

Project geologist. Conducted slug testing and data analysis for the hydrogeologic characterization of a lowyielding groundwater-bearing unit.

Site Assessments, Texas, New Mexico, Louisiana, Oklahoma, Kansas, Colorado, Arkansas, Confidential Clients

Project manager. Completed approximately 60 Phase I, Limited Phase I, and Limited Phase II Environmental Site Assessments and Divestiture Audits at a variety of facilities across the U.S., including oilfield service yards, saltwater disposal wells, large-scale chemical production facilities, mid-stream natural gas compression facilities, an offshore gas production platform, construction equipment rental facilities, lumber and paper mill facilities, and a large drilling tool manufacturing facility. Work conducted includes performing the site visit, performing interviews, and authoring the report for each site under the direct supervision of a senior environmental professional. At several of these sites, soil and/or soil gas sampling was included in the scope of work.

Compliance and Permitting, Texas, New Mexico, Louisiana, Oklahoma, Kansas, Colorado, Arkansas, Confidential Clients

Task manager under the direct supervision of a registered professional engineer for preparation of SPCC plans and SWPPPs for approximately 80 oilfield service sites. These sites included saltwater disposal wells, terminals, truck yards, and maintenance facilities for a national oilfield services company. For each site, also prepared the Notice of Intent to discharge stormwater and made recommendations for site management to minimize releases of non-stormwater to the stormwater runoff.



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Phase I ESA Due Diligence, Various Locations

Task manager and project manager. Conducted Phase I Environmental Site Assessments and Phase II investigations to assess environmental liabilities during acquisitions of oilfield service yards, ready-mix cement plants, saltwater disposal facilities, and three chemical manufacturing facilities. Prepared reports documenting results of record reviews, interviews, and field activities. Prepared cost estimates for site characterization to address soil and/or groundwater contamination, remediation alternatives, and regulatory compliance deficiencies.

Additional Professional Training

ASTM Phase I and Phase II ESA Certification, ASTM International, 2006

Naturally Occurring Radioactive Material Certification (NORM), 2006

X-Ray Fluorescence (XRF) Spectrometers and Analyzers Training, 2008

Basic Plus Safety Training

Transportation Worker Identification Credentials (TWIC) Card

OSHA Hazardous Waste Operations and Emergency Response Training (40-Hour), 2004

OSHA Hazardous Waste Operations and Emergency Response Refresher (8-Hour), Current

OSHA Hazardous Waste Operations and Emergency Response Supervisor (8-Hour), Current

Medical First Aid and CPR Training

PROFILES



Clients Represented

Toyota Nissan Eastman Kodak AT&T Viacom Siemens Frito Lay Lockheed Martin Universal Studios **RR** Donnelley GLP Prologis CalEast First Industrial **Progress Energy CBRE** Investors Northwestern Mutual Gannet Publishing American General Consolidated Tomoka **Clarion Partners** Duke Realty RREEF Cardinal Health

Pro Affiliations / Accreditations

Licensed Florida Real Estate Sales Associate (2005)

Certified Commercial Investment Member (CCIM), 2010

Education

Bachelor of Arts / Legal Studies, University of Central Florida A&T - INDUSTRIAL & LOGISTICS / ORLANDO, FL

Monica Perez Wonus

Senior Vice President, Orlando

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Monica Perez Wonus, CCIM, is a recognized Industrial Real Estate Power Broker with over 19 years of finance and brokerage experience in Central Florida. In 2021 & 2020, Monica was named CBRE's #1 Female Broker in the entire state of Florida over all asset classes! As a partner to David Murphy ("OBJ Dealmaker of the Year 2017") Monica's focus is on Landlord and Tenant Representation. Over the past 36 months, Monica has completed 140 tenant representation transactions totaling 9,700,000 square feet of space, enough to fill 168 football fields!

Since joining CBRE in 2013, Monica has been a tremendous asset to the Industrial Specialty Group, primarily due to her background in financing commercial property nationwide. Having worked for institutions such as GE Capital & Wells Fargo, her knowledge of a company's overall cash-flow cycle is top-of-mind when identifying all critical components to selecting the "best" industrial property and disposition strategy. Prior to joining CBRE, Monica served as a Vice President/ Relationship Manager within the Corporate & Institutional Group at PNC Bank. While at PNC, Monica was charged with developing and managing key commercial banking relationships in the Central Florida area with annual revenues of \$10 to \$50 Million. In this role, Monica had the opportunity to work on several "sexy" transactions, such as financing G-5 Jets for clients.

Business Achievements:

- + 2019 2023 NAIOP Industrial Tenant Representation Broker of the Year
- + 2021 Highest Producing Female Broker in the state of Florida
- + 2020 Highest Producing Female Broker in the state of Florida
- + 2014 CBRE Most Promising Professional of the Year
- + 2015 NAIOP Rookie of the Year
- + 2016-2023 CoStar Power Broker of the Year
- + 2017 Structure Award for the Largest Landlord Representation Transaction

Personal:

Recognized as a Top Hispanic Professional in the 2013 "El Sentinel' publication. Monicalis a proud, firstgeneration Cuban American and is "Living the American Dream" one real estate transaction at a time!

Monica and her husband. Adam, a real estate developer in the community, have two little boys whom they are passionate in exposing early to real estate and keep them interested in their growing real estate portfolio

Monica was introduced to the mentorship of young adults and children 20 years ago through the Junior League of Orlando. It was spending time at the Juvenile Detention Center and Women's shelters where Monica saw the need for kids to have good role models. To this day, young adult mentorship is a passion that Monica and her husband continue to support each year.



EARL LOTT

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ENVIRONMENTAL CONSULTANT // GOVERNMENT AFFAIRS

ORGANIZATIONAL DIRECTION - SHORT & LONG-RANGE STRATEGY DEVELOPMENT - EXECUTIVE LEADERSHIP

Propelling expansion of sustainability performance for clients by analyzing compliance, managing reporting, and driving operational excellence

Water Environment Association **award winner** with 25+ years of experience advancing operational initiatives in the environmental field. Define and execute corporate vision and strategy with a continuous focus on solutions to deliver explosive economical improvements and lower environmental impact, positioning companies for funding prioritization.

Regulatory Oversight = Government Relations = Legislative Affairs = Professional Development = Negotiations Community Outreach = Program Administration = Efficiency Initiatives = Strategic Planning = Consulting

CAREER HIGHLIGHTS

- Added billions of dollars in revenue for the economy after developing and implementing a streamlined permitting process, assisting in the relocation of several new industries to Texas, attracting companies such as Samsung, Caterpillar, Toyota, Steel Dynamics, and more.
- Reduced 50% of permit application deficiencies, having improved processing efficiency, all resulting from the facilitation of stakeholder meetings with the water and waste industry.
- Led a multi-agency initiative with the TCEQ, EPA, and the Texas Water Development Board in an effort to provide much needed funding to small public water systems.
- Secured water deliveries owed to the State of Texas under the 1944 Water Treaty with Mexico, having led successful negotiations between the United States International Boundary and Water Commission and Mexico.
- Saved small, rural communities significant costs after conceptualizing a simple solution allowing the use of aridexempt landfills to dispose of abandoned and nuisance structures. Lobbied this concept and it was enacted into law during the 84th Regular Session of the Texas Legislature.

PROFESSIONAL EXPERIENCE

LOTT GOVERNMENTAL AFFAIRS, LLC. | Leander, TX | Present Founder

Champion clients in the private and public sectors to address environmental issues, ensure absolute compliance, and lobby for change, situating corporations as leaders in environmental responsibility.

- Thought Leader in streamlining the permits process and other authorizations with the Texas Commission on Environmental Quality.
- Steer clients away from possible fines, legal action, or misguided transactions by leveraging extensive knowledge of local, state, and federal environmental regulations.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY | Austin, TX | 1995-2022 Director of Office of Water (2020-2022)

Produced a cross-departmental, synergetic culture among 4 water resources divisions with over 400+ full-time employees by preparing and administering internal policies and procedures, ensuring consistency throughout the divisions.

Managed a \$58M annual operating budget, overseeing and managing all water resources for the state of Texas.

EARL LOTT

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- Assessed proposals and trends impacting water sources and quality, collaborating with stakeholders to conceptualize innovative, solution-producing projects and programs; explored the availability of loans and grants for funding.
- Facilitated the development of rules, policies, and procedures to ensure that water systems are able to provide adequate water during a natural disaster such as Winter Storm Uri.
- Successful implementation of Senate Bill 3 passed during the 87th legislative session requiring water systems to have Emergency Preparedness plans in advance of a natural disaster.
- Led the successful implementation of the federal lead and copper rules requiring water systems to identify and replace all existing lead fixtures and connections.
- Worked with stakeholders to identify streamlining measures aimed at expediting the permitting process.
- Led negotiations between Mexico and the International Boundary and Water Commission to secure water rights in favor of users along the border. Ensured Texas received fair share of the water under the 1944 water treaty with Mexico.

Director of Waste Permits Division (2009-2020)

Managed an **\$11M annual operating budget**, supervising **80+ employees**, all to ensure the safe management, processing, and disposal of solid waste, directing all activity of the state's Waste Permits Division.

- Stewarded a \$10M regional solid waste grant program.
- Issued 500+ authorizations annually as key decision-maker, continually improving the prevailing framework for waste management to increase operational efficiencies.
- Achieved efficiency gains of over 30% after improving operational processes by implementing the Lean Management System (ELMS) and other streamlining measures.
- Protected human health and the environment by developing administrative rules and policies and procedures in collaboration with industry groups, trade organizations, the EPA, and elected officials.
- Advocated for compliance with environmental regulations by applying expertise on solid waste issues as a resource witness to the Texas Legislature.
- Consistently met or exceeded Legislative Budget Board (LBB) performance measure targets.
- Pioneered innovative methods to address the sudden influx of medical waste disposal methods during the Covid-19
 pandemic, partnering with peers to issue temporary authorizations and enforcement discretion requests.
- Gave valuable technical insight to the legislature regarding the complex nature of permitting landfills in Texas, representing the agency in multiple difficult hearings on permitting requirements.

Assistant Deputy Director (2005-2009)

Leveraged a multimillion-dollar annual operating budget to plan for the future and outline necessary improvements, identifying cost-saving initiatives in operational strategies. Coordinated with executive leadership in managing the operations of an office with 800+ technical staff. Assisted in the oversight of permitting operations and procedures for Air, Water, Waste, Low-Level Radioactive Waste, and Remediation.

- Instrumental in collecting over \$2M in delinquent fees and penalties, having developed and implemented an agencywide fee and penalty protocol.
- Reduced agency's backlog of 1,200K permits to under 100, ideating and facilitating a time frame reduction project.
- Appointed to serve on the Governor's Competitiveness Council for Texas, disseminating knowledge to assist in identifying recommendations for the state's long-term economic success.
- Liaised with diverse internal stakeholders and community leaders to determine public needs and strategize solutions, enabling the implementation of an economic improvement plan while serving as Economic Development Coordinator for the TCEQ with the Governor's Office of Economic Development.
- Interpreted and provided technical assistance to businesses, stakeholders, state officials, and the public on complex environmental regulations and policies and procedures.

EDUCATION

CV

Andrew A. Randall, Ph.D., P.E. Graduate Program Director and Professor Civil, Environmental & Construction Engineering Department University of Central Florida February 24, 2025 (407)-823-6429 (work phone) (407)-823-3315 (fax) E-mail : andrew.randall@ucf.edu

PROFESSIONAL HISTORY:

Professor of Engineering; August, 2016, to present. Civil and Environmental Engineering Department, University of Central Florida, Orlando, Florida.

Associate Professor of Engineering; March, 1999 to August, 2016. Civil and Environmental Engineering Department, University of Central Florida, Orlando, Florida.

Assistant Professor of Engineering; May, 1994 to March, 1999. Civil and Environmental Engineering Department, University of Central Florida, Orlando, Florida.

Ph.D. Student; 1990 to 1993. Civil Engineering Department, Auburn University, Auburn, Alabama. Dissertation was on Enhanced Biological Phosphorus Removal advanced wastewater treatment system.

<u>Research Associate</u>; 1987 to 1990. Project Manager for Full Scale Biological Nutrient Removal Retrofits and Industrial Wastewater Treatment Pilot Studies. Civil Engineering Department, Environmental Engineering Section, Virginia Tech, Blacksburg, Virginia.

<u>M.S. Student</u>; 1985 to 1987. Civil Engineering Department, Environmental Engineering Section, Virginia Tech, Blacksburg, Virginia. Including an internship on non-point and point source technologies for nutrient (nitrogen and phosphorus) removal. Thesis was a Biological Nutrient Removal advanced wastewater treatment system.

Sanitary Works Engineer, 1985. Attached to the "Ecuadorian Institute for Sanitary Works" (i.e. small village potable water systems) through the United States Peace Corps, Latacunga, Ecuador.

EDUCATION:	B.S.C.E.	Civil Engineering, Virginia Tech, 1984
	M.S.	Civil (Environmental) Engineering, Virginia Tech, 1987
	Ph.D.	Civil (Environmental) Engineering, Auburn University, 1993

PROFESSIONAL CERTIFICATION:

Professional Engineer, Florida No. 0050839, August 5, 1996

OSHA 24-Hour Hazardous Materials/Waste: Emergency Response Course; Certificate No. 194139-8, Jan. 1997

CONSULTING:

NSW Corporation, DINAMA (National Environment Agency of Uruguay) & ACDE (Christian Association of Businessmen of Uruguay), ConsuTec, Inc., Green Engineering, Judkins, Inc., Industry for the Poor, Inc., Member of BioChem Technology Inc. Advisory Board, City of Lakeland, FL, as subcontractor for Envisors, Inc., Member of Technical Advisory Committee and Consulting for Water Conversion Technologies, Inc., American On-Line Utilities (AOU), In-Pipe Technologies Company, LLC, The City of Titusville, Florida, Asia West, Orange County Utilities/PBS&J, City of Coccoa Beach, Florida, Ferrate Treatment Technologies, Orlando, Florida

PUBLICATIONS & PRESENTATIONS (all supervised, i.e. major professor for, UCF graduate students in bold; all supervised post-doctoral collaborators italicized; committee member for UCF grad students underlined):

Fully Peer Reviewed Journal Articles During Appointment at UCF:

Sultan K. Salamah, Andrew A. Randall, (2020) Optimization of Sludge Fermentation for Volatile Fatty Acids Production, <u>The International Journal of Low-Carbon Technologies</u>, Oxford University Press, Vol 15(1), pages 149-154. <u>https://doi.org/10.1093/ijlct/ctz046</u> IF=1.054

Nogaj, T.M., Rahman, A., Miller, M.W., Jimenez, J.A., Bott, C., Randall, A.A. (2019), Soluble substrate removal determination through intracellular storage in high-rate activated sludge systems using stoichiometric mass balance, <u>New Biotechnology</u>, **52**, 84-93, 25 September 2019. Available on-line 21 May 2019. https://doi.org/10.1016/j.nbt.2019.05.005 IF=3.739

<u>Church</u>, J., Ryu, H., Sadmani, A., Randall, A.A., Santo Domingo, J., and Lee, W.H. (2018) Multiscale investigation of a symbiotic microalgal-integrated fixed film activated sludge (MAIFAS) process for nutrient removal and photo-oxygenation, <u>Bioresource Technology</u> **268**, 128-138 (IF=5.94).

Ghasemi, M., Randall, A.A. (2018) The Effect of Mixing on Fermentation of Primary Solids, Glycerol, and Biodiesel Waste, <u>Water, Science & Technology</u>, 77.5, 1355-1362 DOI: 10.2166/wst.2018.01

<u>Church, J.</u>, Verbyla, M.E., Lee, Woo Hyoung, Randall, Andrew A., Amundsen, T.J., Zastrow, D.J. (2015) Dishwashing water recycling system and related water quality standards for military use, <u>Science of the Total</u> <u>Environment</u>, **529**, 275-284. DOI: 10.1016/j.scitotenv.2015.05.007

Nogaj, T., Randall, A. Jiminez, J., Takacs, I., Bott, C., Miller, M., Murthy, S., Wett, B. (2015) Modelling of Organic Substrate Transformation in the High-Rate Activated Sludge Process, <u>Water, Science & Technology</u>, 71(7), 971-979.

Rueda, J., Randall, A., Davis, C., Franco, C., Yestrebsky, C. (2015) Toxicity Studies of AKGA/Hydrazines Degradation Byproducts and their Compatibility with Sewage Treatment Plant Operations, <u>Environmental</u> Engineering and Science, **32**(2), 153-162.

Randall, A.A. (2012) Contrast of VFA Driven and Inorganic Acid/Base Driven Phosphorus Release and Uptake in EBPR, Water Environment Research, 84(4), 305-312.

Zhao, B., Randall, A.A., Taylor, J.S. (2012) Drinking Water Heterotrophic Plate Count: Monitoring Method Precision, <u>Frensenius Environmental Bulletin</u>, **21**(5a), 1202-1211.

Chang, Y-C, Randall, A.A., Choi, O.Y., Choi, D.B., Cho, H., Kikuchi, S. (2010) The Influence of Disinfection on Bacterial Regrowth in Pilot Distribution System, <u>Korean Journal of Chemical Engineering</u>, 27(6), 1860-1863.

Zhang C., *Chen, Y.*, Randall, A.A., Gu, G. (2008) Anaerobic Metabolic Models for Phosphorus- and Glycogen Accumulating Organisms With Mixed Acetic and Propionic Acids as Carbon Sources, <u>Water Research</u>, **42**, 3745-3756.

Jessen, A., Randall, A., Reinhart, D., Daly, L. (2008) Effectiveness And Kinetics Of Ferrate As A Disinfectant For Ballast Water, <u>Water Environment Research</u>, 80(6), 61-69.

Liu, S., LePuil, M. Taylor, J.S., Randall, A.A. (2007) Nanofiltration & Reverse Osmosis Biostability Relative to Alternative Methods of Water Treatment, <u>Aqua Water Supply and Technology</u>, 56 (1), 25-40.

Punrattanasin, W., Randall, A.A., Randall, C.W. (2006) Aerobic Production of Activated Sludge Polyhydroxyalkanoates from Nutrient Deficient Wastewaters, <u>Water Science & Technology</u>, 54 (8), 1–8. McCue, T.M., Randall, A.A., *Eremektar, G.* (2006) Contrasting the Benefits of Primary Clarification versus Prefermentation in Activated Sludge Biological Nutrient Removal Systems, <u>ASCE Journal of Environmental Engineering</u>, 132(9), 1061-1067.

Taylor, J., Dietz, J., Randall, A., Hong, S. (2005) Impact of RO-Desalted Water on Distribution Water Qualities, Water, Science & Technology, 51 (6-7), 285-291.

Magro, D., Elias, S., Randall, A.A. (2005) Effects Of Reduced Return Activated Sludge Flows And Volume On Anaerobic Zone Performance For A Septic Wastewater Biological Phosphorous Removal System, <u>Water</u> Environment Research, 77 (5), 455-464.

Imran, S., Dietz, J.D., Mutoti, G., Taylor, J.S., Randall, A.A., Cooper, C.D. (2005), Red water release in drinking water distribution systems, Journal of the American Water Works Association, 97 (9), 93-100.

Imran, S., Dietz, J.D., <u>Mutoti, G.</u>, Taylor, J.S., Randall, A.A. (2005). Modified Larson Ratio Incorporating Temperature, Water Age, and Electroneutrality Effects on Red Water Release, <u>ASCE Journal of Environmental</u> <u>Engineering</u>, **131** (11), 1514-1520.

Liu, S., Taylor, J.S., Randall, A.A., Dietz, J.D. (2005) Nitrification modeling in chloraminated distribution systems, Journal of the American Water Works Association, 97 (10), 98-108.

Eremektar, G., Randall, A.A., **Mc Cue, T.** (2004) Effect of Prefermentation on Inert COD Fractions in BNR Systems, Fresenius Environmental Bulletin, **13**(10), 1033-1035.

McCue, T., Naik, R. Zepeda, M., Liu, Y-H, Vasilliev, I., Randall, A.A. (2004) Changes in Anoxic Denitrification Rate Due to Prefermentation of a Septic, Phosphorus Limited Wastewater, <u>Water Environment Research</u>, 76(1), 23-28.

Chen, Y., Randall, A.A. and **McCue, T.** (2004) The Efficiency of Enhanced Biological Phosphorus Removal from Real Wastewater Affected by Different Ratios of Acetic to Propionic Acid, <u>Water Research</u>, **38**, 27-36.

Chang, Y.C., **LePuil, M.**, Biggerstaff, J., Randall, A. A., Shulte, A., Taylor, J.S., (2003) Direct estimation of biofilm density on different pipe material coupons using a specific DNA-probe, <u>Molecular and Cellular Probes</u>, **17**(5), 237-243.

McCue, T., Hoxworth, S., Randall, A.A. (2003) Degradation of Halogenated Aliphatic Compounds Utilizing Sequential Anaerobic/Aerobic Treatments, Water, Science & Technology, 47(10), 79-84.

McCue, T., Shah, R., Vassiliev, I., Liu, Y-H, Eremektar, F.G., Chen, Y., Randall, A.A. (2003) Evaluation of Influent Preferementation as a Unit Process Upon Biological Nutrient Removal, <u>Water, Science & Technology</u>, 47(11), 9-15.

Randall, A.A., *Chen, Y.*, Liu, Y-H, McCue, T.(2003) Polyhydroxyalkanoate Form and Polyphosphate Regulation: Keys to Biological Phosphorus and Glycogen Transformations?, <u>Water, Science & Technology</u>, 47(11), 227-233.

Choi, J-G, Bae, T-H, Kim J-H, Tak, T-M, Randall, A.A. (2002) The behavior of membrane fouling initiation on the crossflow membrane bioreactor system, Journal of Membrane Science, 203(1-2), 103-113.

Hong, S.P., Bae, T.H., Tak, T.M., Hong, S.K., Randall, A. (2002) Fouling Control in Activated Sludge Submerged Hollow Fiber Membrane Bioreactors, <u>Desalination</u>, 143, 219-228.

Randall, A.A., Liu, Y-H (2002) Polyhydroxyalkanoate Form Potentially a Key Aspect of Enhanced Biological Phosphorus Removal, Water Research, 36(14), 3473-3478.

Liu, Y-H, Geiger, C., Randall, A.A. (2002) The Role Of PHA Form In Determining The Response Of Enhanced Biological Phosphorus Removal Biomass To Volatile Fatty Acids <u>Water Environment Research</u>, 74(1), 57-67.

Escobar, I., Randall, A.A., Hong, S.K., Taylor, J.S. (2002) Effect Of Solution Chemistry On Assimilable Organic Carbon Removal By Nanofiltration: Full And Bench Scale Evaluation, <u>Journal of Water Supply: Aqua</u>, **51**, 67-76.

Escobar, I., Randall, A.A., Hong, S.K. (2001) Assimilable Organic Carbon and Biodegradable Organic Carbon Removal By Nanofiltration: Full And Bench Scale Evaluation, <u>Water, Science & Technology: Water Supply</u>, 1(4), 35-42.

Escobar, I., Randall, A.A., Taylor, J.S. (2001) Bacterial Growth in Distribution Systems: Effect of Assimilable Organic Carbon (AOC) and Biodegradable Dissolved Organic Carbon (BDOC), <u>Environmental Science &</u> Technology, **35**(17), 3442-3447.

Escobar, I., Randall, A.A., (2001) Assimilable Organic Carbon (AOC) And Biodegradable Dissolved Organic Carbon (BDOC): Complementary Measurements, <u>Water Research</u>, **35**(18), 121-131.

Escobar, I.C., Randall, A.A. (2001) Ozonation and Distribution System Biostability: Case Study, <u>American Water</u> Works Association Research Journal, 93(10), 77-89.

Hood, C., Randall, A.A. (2001) A Biochemical Hypothesis Explaining the Response of Enhanced Biological Phosphorus Removal Biomass to Organic Substrates, <u>Water Research</u>, **35**(11), 2758-2766.

Escobar, I.C., Randall, A.A. (2000) Sample Storage Impact on the Assimilable Organic Carbon Bioassay, <u>Water</u> <u>Research.</u>, **34**(5), 1680-1686.

Escobar, I.C., Hong, S.K., Randall, A.A. (2000) Removal of Assimilable Organic Carbon and Biodegradable Dissolved Organic Carbon by Reverse Osmosis and Nanofiltration Membranes, <u>Journal of Membrane Science</u>, 175, 1-17.

Ndon, U.J., Randall, A.A., **Khouri, T.Z.** (2000) Reductive Dechlorination of Tetrachloroethylene by Soil Sulfate-Reducing Microbes Under Various Electron Donor Conditions. <u>Journal of Environmental Monitoring and</u> <u>Assessment</u>. Kluwer Publishers, **60**(3), 329-336.

Escobar, I.C., Randall, A.A. (1999) Influence of Nanofiltration on Distribution System Biostability, <u>American Water</u> Works Association Research Journal, **91**(6), 76-89.

Ndon, U.J., Randall, A.A. (1999) Periodic Aerated Treatment and In-Situ Bioremediation Strategies for Polyhalogenated Compounds. <u>Water Research</u>, **33** (11), 2715-2120.

Randall, A.A., **Khouri, T.Z.**, (1998) The Effect of Organic Substrates on Enhanced Biological Phosphorus Removal in Continuous Culture and Batch Experiments, <u>Advances in Environmental Research</u>, **2**(2), 218-231; also published on-line at <u>http://www.sfo.com/~aer/access.cgi/512-98/512-98.html</u>.

Randall, A., Benefield, L.D., Hill, W.E., (1997) Induction of Phosphorus Removal in an Enhanced Biological Phosphorus Removal Bacterial Population, <u>Water Research</u>, **31**(11), 2869-2877.

Randall, A.A., Sullivan, J.M., Dietz, J., Randall, C.W., (1997) Industrial Pretreatment : Trickling Filter Performance and Design, <u>ASCE Journal of Environmental Engineering</u>, 123 (11), 1072-1079.

• Closure in February, 1999 issue p. 204-207.

Randall, A., Benefield, L.D., Hill, W.E., (1997) The Effect of Substrate Chemistry On Enhanced Biological Phosphorus Removal: The Variation in Location And Form Of Intracellular Phosphate Induced by Different Substrates and Observed With ³¹P-NMR, <u>Advances in Environmental Research</u>, 1(1), 58-73; also on line at *http://www.sfo.com/~aer/518-96.html*.

Randall, A.A., Benefield, L.D., Hill, W.E., Nicol, J-P.N., Boman, G.K., Jing, S-R (1997) The Effect of Volatile Fatty Acids On Enhanced Biological Phosphorus Removal and Population Structure In Anaerobic/Aerobic Sequencing Batch Reactors, <u>Water, Science, and Technology</u>, **35**(1), 153-160.

Randall, A., Benefield, L.D., Hill, W.E., (1994) The Effect of Fermentation Products on Enhanced Biological Phosphorus Removal, Polyphosphate Storage, and Microbial Population Dynamics, <u>Water, Science, and Technology</u>, **30** (6), 213-219.

Fully Peer Reviewed Journal Abstracts During Appointment at UCF:

Zhang C., *Chen, Y.*, Randall, A.A., Gu, G. (2008) Comprehensive Anaerobic Metabolic Models for Phosphorusand Glycogen Accumulating Organisms Fed With Mixed Volatile Acids, Journal of Biotechnology, 136S, S658.

Fully Peer Reviewed Project Reports During Appointment at UCF:

Taylor, J.S., Dietz, J.D., Randall, A.A., Norris, C.D., <u>Alshehri, A., Arevalo, J.M., Guan, X., Lintereur, P., MacNevin, D., Stone, E., Vaidya, R., Zhao, B., Glatthorn, S., Shekhar, A.</u> (2008). *Control of Distribution System Water Quality in a Changing Water Quality Environment Using Inhibitors* (AWWARF/Tampa Bay Water Tailored Collaboration Final Report). Published by the American Water Works Research Foundation, Denver, Colorado, Document 91241.

Taylor, J.S., Dietz, J.D., Randall, A.A., Hong, S.K., Norris, C.D., Mulford, L.A., <u>Arevalo, J.M., Imran, S., Le Puil,</u> M., <u>Liu, S., Mutoti, I., Tang, J., Xiao, W., Cullen, C., Heaviside, R., Mehta, A., Patel, M., Vasquez, F., Webb, D.</u> (2005). *Effects of Blending on Distribution System Water Quality* (AWWARF/Tampa Bay Water Tailored Collaboration Final Report). Published by the American Water Works Research Foundation, Denver, Colorado. Document 91065F.

Najm I.N., Boulos L., LeChevallier M., Norton C., Volk, C., Randall A., Escobar I., Kiene L., Campos, C. (2000). *Case Studies of the Impacts of Treatment Changes on Biostability in Full Scale Distribution Systems* (AWWARF RFP # 361 Final Report). Published by the American Water Works Research Foundation., Denver, Colorado. ISBN 1-58321-048-2.

Book Chapters:

Le Puil, M., Chang, Y.C., Randall, A.A., Taylor, J.S. (2005) Effect of Distribution System Materials and Water Quality on HPC and Biofilm Proliferation, in <u>Water Quality in the Distribution System</u>, W.C. Lauer (Ed.), American Water Works Association, Denver, Colorado.

Escobar, I.C., Randall, A.A. (2005) Case Study: Ozonation and Distribution System Biostability, in <u>Water Quality</u> in the Distribution System, W.C. Lauer (Ed.), American Water Works Association, Denver, Colorado.

Taylor, J.S., Dietz, J.J., Hong, S.K., Randall, A.A., Owen, C. (2005), Distribution System Water Quality Following Blending Surface, Ground, and Saline Sources, in <u>Water Quality in the Distribution System</u>, W.C. Lauer (Ed.), American Water Works Association, Denver, Colorado.

Fully Peer Reviewed Conference Papers During Appointment at UCF:

<u>Punrattanasin, W.</u>, Randall, A.A., Randall, C.W. (2006) Aerobic Production of Activated Sludge Polyhydroxyalkanoates from Nutrient Deficient Wastewaters, Proceedings of the IWA 4th World Congress, Beijing, China, Sept 10-14, 2006 (podium presentation, paper in CD-ROM proceedings).

Escobar, L, Hong, S.K., Randall, A.A. (2000) AOC and BDOC removal by nanofiltration: full and bench scale evaluation, Proceedings of the IWA 1st World Congress (formerly the IAWQ), Paris, France, July 3-7, 2000, 213-220 (podium presentation; paper in proceedings).

Invited Papers & Presentations:

Nogaj, T., Randall, A., Jimenez, J., Takacs, I., Bott, C., Miller, M., Murthy, S. (2014) Modelling of Organic Substrate Transformation in the High-Rate Activated Sludge Process: Why Current Models Don't Work and a Recommended Unified Model Approach, Podium Presentation for the "Best of IWA/WEF Wastewater Treatment Modelling Conference" Special Session, represented at of the Water Environment Federation Technical Exposition and Conference (WEFTEC), New Orleans, Louisiana, Sept 28-Oct 1, 2014.

Rueda, J.C., Randall, A.A., Davis, C., Franco, C., Yestrebsky, C.L. (2014) Toxicity Studies of AKGA/Hydrazines Degradation Byproducts and Their Compatibility With Sewage Treatment Plant Operation. JANNAF (Joint Army-Navy-NASA-Air Force) Interagency Propulsion Committee Meeting Proceedings, May 19-22, 2014, Charleston, South Carolina (podium presentation by Yestrebsky).

Randall, A.A. (2009) Biofilms and Biostability in Distribution Systems, Workshop 1A Biostability in Distribution Systems, FSAWWA Conference, Orlando, Florida, Nov 29 to Dec 3 (presentation only).

Randall, A.A. (2008) Sustainable BNR: Process Modifications to Maximize Utilization and Recovery of Process Carbon, Nitrogen, and Phosphorus, FWEA Fall Symposium, Orlando Florida, September 4 and 5, 2008 (presentation and abstract only).

Randall, A.A. (2008) Biological Nitrogen and Phosphorus Removal – Microbiology and Processes, One-Day Seminar: Biological Nutrient Removal, Unit Processes, Design Elements and Operational Changes, Jacksonville, Florida August 13 and August 14 (Two 1 day seminars given back to back for different audiences).

Randall, A.A. (2008) Current Research on BNR Treatment, One-Day Seminar: Biological Nutrient Removal, Unit Processes, Design Elements and Operational Changes, Jacksonville, Florida August 13 and August 14 (Two 1 day seminars given back to back for different audiences).

Randall, A.A. (2007) Wastewater Treatment Technology – A Visit to the Future, National Operator Trainer's Conference, Orlando, Florida, June 10-13, 2007.

Taylor, J.S., Dietz, J.D., Randall, A.A. (2006) Corrosion Control for Integrating Surface, Ground and Saline Sources, FSAWWA Seminar, March 30, 2006.

Randall, A.A. (2006) Carbon Augmentation for Enhanced Biological Phosphorus Removal, Presentation for Water Environment Research Foundation Nutrient Removal Workshop: How Low Can We Go & What is Stopping Us from Going Lower?, Washington, D.C., March 9-11, 2006.

Randall, A.A. (2005) Changes in Biofilm Quantity and Composition for Pilot Distribution Systems and Water Reclamation Membranes, Presentation for Workshop – Biofilm Microbiology: Recent Developments, 2005 Water Quality & Technology Conference, November 6-10, Quebec City, Quebec, Canada (presentation with notebook for attendees containing power point print outs).

Liu, Suibing, Le Puil, Michael, Taylor, James S., Randall, Andrew A. (2005) Finished Water Quality Effects on Distribution System Biostability, AWWA 2005 Annual Conference and Exposition, June 12-16, 2005, San Francisco, California (podium presentation).

Taylor, J.S., Dietz, J.D., Randall, A.A. (2004) Using Water Quality Data to Optimize Corrosion Control Developing Water Quality Based BMPs for Distribution Systems. Presented at WQTC Workshop, San Antonio, Texas, November 14-18, 2004.

Taylor, J.S., Dietz, J.D., Randall, A.A (2004), Disinfection Byproduct Control, Sunday Workshop at the Water Quality Control and Technology Conference, San Antonio, TX, Nov. 14, 2004. *Sponsored by AWWA Organic Contaminants Control Committee*.

Taylor, J.S., Dietz, J.D., Randall, A.A (2004), Impact of Integrating Surface Water into Groundwater Source on Iron and Copper Control. Presented at AWWA Distribution Systems Symposium, Chicago, ILL, Sept. 20-21, 2004.

Randall, A.A. (2004) Biostability, AWWA Research Foundation Technology Transfer Workshop on Controlling Distribution System Water Quality in a Changing Environment, May 13-14, 2004, Tampa, Florida (presentation only).

Randall, A.A. (2004) Phenotype and Phylogenetic Predominance and Competition in Environmental Systems, American Society for Microbiology Florida Branch Meeting, Orlando, Florida, Feb 27th and 28th, 2004 (presentation only).

Taylor, J.S., J. J. Dietz, S. K. Hong, A. A. Randall, C. Owen (2003) Required Treatment and Water Quality Criteria for Distribution System Blending of Treated Surface, Ground and Saline Sources, Presented at AWWARF Technology Transfer Workshop, Columbus, Ohio, October 21, 2003. (presentation only). Taylor, J.S., J. J. Dietz, S. K. Hong, A. A. Randall, C. Owen (2003) Required Treatment and Water Quality Criteria for Distribution System Blending of Treated Surface, Ground and Saline Sources, Proceedings of the AWWA 2003 Annual Conference and Exposition, June 15-19, 2003, Anaheim, California (poster presentation).

Taylor, J.S., J. J. Dietz, S. K. Hong, A. A. Randall, Owen, C. (2003) Distribution System Water Quality Following Blending Surface, Ground and Saline Sources, AWWARF Poster Session, June 18, 2003, AWWA Annual Conference, Anaheim, CA. **3rd Place.**

Taylor, J.S., Dietz, J.J., Hong, S.K., Mulford, L.A., Randall, A.A., Owen, C. (2002) Blending Effects on Distribution Water Quality. Presented at Pinellas County Water Forum, Pinellas, Fla., September 17, 2002.

Randall, A.A. (2002) Effects of Finished Water Quality, Residual, and Distribution System Material on Planktonic and Biofilm Microbial Proliferation, University of Pretoria, Pretoria, South Africa, November 12, 2002 (presentation only).

Taylor, J.S., J. J. Dietz, S. K. Hong, A. A. Randall, Chris Owen (2002) Required Treatment and Water Quality Criteria for Distribution System Blending of Treated Surface, Ground and Saline Sources, AWWARF Technology Transfer Conference, Seattle, WA, August 22, 2002.

Randall, A.A. (2002), Effect of Drinking Water Treatment Processes and Blending on Distribution System Biological Stability, Seminar for the Cooperative Research Centre for Water Quality and Treatment, Salisbury, South Australia, August 6, 2002.

Randall, A. A. (2002) Enhanced Biological Phosphorus Removal for Varying Influent Acetate/Propionate Ratios in a Septic Domestic Wastewater, Proceedings of the 2nd Advanced Wastewater Management Centre (AWMC) Research Showcase, AWMC, University of Queensland, Brisbane, Australia, August 16, 2002 (CD-Rom).

Randall, A.A. (2002) Water Borne Pathogens, 2nd Biannual Water Resources Seminar (sponsored by FSAWWA, FSAWRA, and the UCF College of Engineering), Orlando, Florida. Podium presentation, no paper.

Taylor, J.S., Dietz, J.D., Hong, S.K., Mulford, L.A., Randall, A.A. (2001) Membrane Technology, Drinking Water, Distribution Systems and the 21st Century, <u>Membrane Quarterly</u>, **16**(2), 6-7.

Randall, A.A., Escobar, I. (2001) The Effect of Membrane Filtration on BOM Rejection and Chlorine Demand, Proceedings of the 14th Annual Technical Conference & Expo, American Filtration & Separations Society, May 1-4, 2001, Hyatt Regency, Tampa, Florida (podium presentation, paper in CD-ROM proceedings).

Randall, A.A., **Escobar, L** (2000) Monitoring Changes in Biostability Resulting From Nanofiltration and RO, Proceedings of the Florida Section of AWWA Annual Conference, November 5-9, 2000, Orlando Florida (podium presentation, paper in proceedings).

Randall, A.A., **Escobar, I.** (2000) Changes in Biostability by Nanofiltration, Proceedings AWWA Annual Conference, Denver, Colorado, June 11-15, 2000 (podium presentation, paper in proceedings).

Peer Reviewed (Abstract) Conference Proceedings & Presentations:

Proceedings and Presentations During Appointment at UCF

Sultan K. Salamah, Andrew A. Randall (2020) Optimization of Heterotrophic Denitrification Using Glycerol as a Sustainable External Carbon Substrate, Proceedings of the 4th International Electronic Conference on Water Sciences (ECWS-4), 2020, 48(1), 23 (https://doi.org/10.3390/ECWS-4-06435)

Sultan K. Salamah, Andrew A. Randall (2020) Sustainable Circular Economy Approach to Optimize Biological Nutrient Removal Using Glycerol (Bio-Diesel by-product) as a Carbon Substrate. 6th Water Arabia Conference, Feb 11,12&13, Al-Khobar, Saudi Arabia.

Sultan K. Salamah, Andrew A. Randall, (2018) Optimization of Sludge Fermentation for Volatile Fatty Acids Production, The International Conference on Energy, Water & Environmental Sciences (ICEWES), 2018 November 13 to 15, American University of Ras Al Khaimah (AURAK), United Arab Emirates. Podium/oral presentation.

Randall, A.A., Sultan, S. (2017) Effect of Glycerol and Prefermentation on Nutrient Removal, Florida Water Resources Conference 2017, West Palm Beach, Florida, April 23-26, 2017.

Ghasemi, M., Randall, A.A. (2017) The Effect of External Substrate (Pure Glycerol), SRT, pH and Mixing Intensity on VFA Production in Bench-Scale Prefermenters, Water Environment Federation Residuals and Biosolids Conference 2017, Seattle, Washington, April 8-11, 2017.

Randall, A.A. (2015) Water: Disease, Sanitation, and Sustainability; An Interdisciplinary Honors Course Concerning Both Ancient and Modern Society, Presentation at ASEE-SE Conference, Gainesville, Florida, Apr 12-14, 2015.

Church, J., Lee, W.H., Randall, A.A., Amundsen, T.J., Zastrow, D.J. (2014) Dishwashing Water Recycling System and Related Water Quality Standard for Military Use, Proceedings of the Florida State American Water Works Association Conference, Orlando, Florida, Dec, 2014.

Nogaj, T., Randall, A.A., Jiminez, J.A., Takacs, I., Bott, C.B., Miller, M.W., Murthy, S., Wett, B. (2014) Mathematical Modeling of the High Rate Activated Sludge System: Optimizing the C:N Ratio in the Process Effluent Podium Presentation and Proceedings of the Water Environment Federation Technical Exposition and Conference (WEFTEC), New Orleans, Louisiana, Sept 28-Oct 1, 2014.

Nogaj, T., Randall, A.A., Jiminez, J.A., Takacs, I., Bott, C.B., Miller, M.W., Murthy, S., Wett, B. (2014) Mathematical Modeling of Carbon Removal in the High Rate Activated Sludge System: Importance of Influent Wastewater Fractionation, Proceedings of the Florida Water Resources Conference, Orlando, Florida, April 6-9, 2014.

Nogaj, T., Randall, A., Jimenez, J., Takacs, I., Bott, C., Miller, M., Murthy, S. (2014) Modelling of Organic Substrate Transformation in the High-Rate Activated Sludge Process: Why Current Models Don't Work and a Recommended Unified Model Approach, Podium Presentation and Proceedings of the 4th International Water Association/Water Environment Federation Wastewater Treatment Modelling Seminar, Spa, Belgium, March 30 to April 2, 2014.

Nogaj,T.M., and Randall, A.A., Jimenez, J.A., Takacs, I., Bott, C.B., Miller, M.W. (2013) Mathematical Modeling Of Carbon Removal In The High Rate Activated Sludge System: Model Presentation And Application, Podium Presentation and Proceedings of the Water Environment Federation Technical Exposition and Conference (WEFTEC), Chicago, Illinois, October 6-9, 2013.

Jimenez, J., Bott, C., Miller, M., Murthy, S., Nogaj, T., Randall, A., Rosso, D., Wett, B. (2013) High-Rate Activated Sludge System For Carbon Removal – Pilot Results And Crucial Process Parameters, Alternate Presentation and Proceedings of the Water Environment Federation Technical Exposition and Conference (WEFTEC), Chicago, Illinois, October 6-9, 2013.

Randall, A.A. (2011) Anaerobic Volume/Mass Fraction Requirements for Enhanced Biological Phosphorus Removal, Florida Water Resource Conference, Kissimmee, Florida, USA 4/30-5/4, 2011 (podium presentation, paper in proceedings).

Randall, A., **Zhao**, **B**., Taylor, J. (2010) Evaluation of Corrosion Inhibitors, Residual, Temperature, and Pipe Materials on Bulk and Biofilm Densities, Florida Section American Water Works Association (FSAWWA) Conference, Nov 29 to Dec 2, 2010, Orlando, Florida, USA (podium presentation and paper in proceedings).

Randall, A.A. (2010) Contrast of VFA Driven and Inorganic Acid/Base Driven pH Changes Impacting Phosphorus Transformations in EBPR, Proceedings of the 83rd Annual Water Environment Federation Technical Exhibition and Conference, New Orleans, Louisiana, October 2-6, 2010 (podium presentation and full paper in proceedings).

Zhao, B., Randall, A.A., Taylor, J.S. (2008) Evaluation Of The Impacts Of Corrosion Inhibitors On Bulk And Biofilm Heterotrophic Bacteria, Water Quality Technology Conference, Cincinnati, Ohio, November 16-19, 2008 (podium presentation, paper in proceedings).

Randall, A.A., *Chen, Y.* (2008) The Kinetics of Anaerobic and Aerobic Carbon and Phosphorus Transformations for a Septic Wastewater With Varying Propionate: Acetate Ratios, Proceedings of the 81st Annual Water Environment Federation Technical Exhibition and Conference, Chicago, Illinois, October 18-22, 2008 (poster presentation and full paper in proceedings).

Randall, A.A., *Chen, Y.*, Zhang, C. (2008) The Stoichiometry and Kinetics of Enhanced Biological Phosphorus Removal Driven by Propionate: Acetate Mixtures, Proceedings of the 4th IWA Sequencing Batch Reactor Conference, April 7-10, 2008, Rome, Italy (podium presentation and full paper in proceedings).

Randall, A.A. (2008) Water: Disease, Sanitation, and Sustainability – A Comparison of the Modern and Ancient World, University of Florida Water Institute Symposium, Feb 27-28, Gainesville, Florida.

Vaidya, R, D. McNevin, J.S. Taylor, J.D. Dietz, and A.A. Randall (2007) Metal Release and Electro Noise Correlations in Drinking Water. Presented at World Environmental and Water Resources Congress, Tampa, Fla., May 15-19, 2007.

Randall, A. A., *Chen, Y.* (2007) Biomass Capacity for Enhanced Biological Phosphorus Removal As A Function of VFA Cultivation, WEF/IWA Nutrient Removal, The State of the Art, Specialty Conference, Baltimore, Maryland, March 4-7, 2007.

Vaidya, R, McNevin, D, Taylor, JS, Dietz, JD, Randall, AA (2006) Correlation of Fe, Pb and Cu Corrosion with Electro Noise Parameters, Water Quality Technology Conference, Denver, Colorado, Nov 5-9, 2006.

Bingjie, Z., Randall, A.A., Dietz, J.D., Taylor, J.S. (2006) Quantification of Drinking Water Biostability: Method Precision for Heterotrophic Plate Count, Water Quality Technology Conference, Denver, Nov 5-9, 2006.

Randall, A.A., **Malekjahani, S.** (2006) Effect Of pH On Carbon And Phosphorus Transformations In Biological Phosphorus Removal With High Propionate And Acetate Wastewater, Proceedings of the 79th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC), Dallas, Texas, Oct 21-25, 2006 (podium presentation, paper in proceedings).

Randall, A.A., Williamson, Jr., D.R., Dickerson, J.R. (2006) Biologically Engineered Biofilm Modifications For The Enhancement Of Collection System Transformations And Impacts On BNR Wastewater Treatment, Proceedings of the 79th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC), Dallas, Texas, Oct 21-25, 2006 (poster presentation, paper in proceedings).

Jessen, A., Randall, A., Reinhart, D., Daly, L. (2006) Effectiveness And Kinetics Of Ferrate As A Disinfectant For Ballast Water, Proceedings of the 79th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC), Dallas, Texas, Oct 21-25, 2006 (poster presentation, paper in proceedings).

Randall, A.A., *Chen, Y* (2006) Biomass Capacity for Enhanced Biological Phosphorus Removal as a Function of VFA Cultivation, 106th General Meeting of the American Society for Microbiology, Orlando, Florida, May 21-25, 2006 (poster presentation, abstract in proceedings).

Jessen, A., Randall, A.A., Reinhart, D., Daly, L. (2006) Effectiveness and Kinetics of Ferrate as a Disinfectant for Ballast Water, 14th International Conference on Aquatic Invasive Species, May 14 to 19, 2006, Key Biscayne, Florida. Oral presentation, abstract only proceedings.

Jessen, A., Randall, A.A., Reinhart, D., Daly, L. (2005) Effectiveness and Kinetics of Ferrate as a Disinfectant for Ballast Water, Proceedings of the 2005 FS/AWWA Annual Conference, oral presentation, Orlando, Florida, November 27-Dec 1, 2006 (CD-ROM).

Taylor, J., Dietz, J., Randall, A., Hong, S. (2004) Impact of RO-Desalted Water on Distribution Water Qualities, Proceedings of the IWA International Specialized Conference on Water Environment – Membrane Technology, Seoul, Korea, June 7-10, 2004.

Hong, S., Hyun, S., Randall, A.A., **Kim, E.D.**, Ahn, W., Yim, S., Kim, G., Slifko, T., Scheneeberger, C., Robles, L. (2004) Treatment of Secondary Municipal Wastewater by Submerged Hollow Fiber MF Membranes for Water Reuse: Microbial Rejections and Biofouling, IWA International Specialized Conference on Water Environment-Membrane Technology, Seoul, Korea, June 7-10. (podium presentation; proceeding paper).

Liu, Suibing, Michael Le Puil, A. A. Randall, James S. Taylor. (2004) HPC Populations in Chloraminated Distribution System. Florida Water Resources Conference, 2004, Kissimmee, FL.

Liu, Suibing, James S. Taylor, A. A. Randall, Dietz, J.J. (2004) Nitrification Modeling in Chloraminated Distribution Systems, Proceedings of the American Water Works Association Annual Conference & Exposition, Orlando, Florida, June 13-17, 2004.

Liu, Suibing, Y. Chang, Michael Le Puil, James S. Taylor, A. A. Randall (2003) Resistance and Diffusion Modeling of RO Productivity and Water, Proceedings of the 2003 Membrane Technology Conference, AWWA, March, 2003, Atlanta, GA.

Le Puil, M., *Chang, Y.C.*, Randall, A.A., Owen, C., Taylor, J.S. (2003) Biostability of membrane-treated finished waters in distribution system: study at pilot-scale, Proceedings of the 2003 FS/AWWA Annual Conference, oral presentation, Orlando, Florida, November 16-20, 2003 (CD-ROM).

Eremektar, *G.*, Randall, A.A., **Mc Cue, T.** (2003) Advantages of Prefermentation in BNR Systems', Proceedings of the 12th International Symposium on Environmental Pollution and Its Impact on the Life in the Mediterranean Region, poster presentation, Antalya, Turkey, October 4th to 8th, 2003.

Eremektar, G. Randall, A.A., **McCue**, **T.** (2003) Effect Of Prefermentation On Inert Cod Fractions In BNR Systems, Proceedings of the 12th International Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region, poster presentation, Antalya, Turkey, October 4th to 8th, 2003.

Magro, D., Elias, S., Randall, A.A. (2003) Effects of Reduced RAS Flows and Volume on Anaerobic Zone Performance for a Septic Wastewater Biological Phosphorus Removal System, Proceedings of the Water Environment Federation 76th Annual Conference and Exposition (WEFTEC) 2003, oral presentation, Oct, 2003 Los Angeles, Ca, USA (CD-Rom).

McCue, T., Vassiliev, I., *Eremekdar, G.*, Randall, A.A. (2003) Improved P Removal of COD Limited, Septic, Wastewater via Prefermentation, Proceedings of the Water Environment Federation 76th Annual Conference and Exposition (WEFTEC) 2003, poster presentation, paper in proceedings, Oct, 2003 Los Angeles, Ca, USA (CD-Rom).

Le Puil, M., *Chang, Y.C.*, Randall, A.A., Taylor, J.S. (2003) Effect of Distribution System Materials and Water Quality on HPC and Biofilm Proliferation, Proceedings of the AWWA 2003 Annual Conference and Exposition, podium presentation, June 15-19, 2003, Anaheim, California (podium presentation).

Taylor, J.S., Dietz, J.J., Hong, S.K., Randall, A.A., Owen, C. (2003) Required Treatment and Water Quality Criteria for Distribution System Blending of Treated Surface, Ground and Saline Sources, Proceedings of the AWWA 2003 Annual Conference and Exposition, podium presentation, June 15-19, 2003, Anaheim, California (podium presentation).

Randall, A.A., *Chen, Y.*, **McCue, T.** (2003) The Impact of Propionic Acid on Biological Nutrient Removal in Typical Septic Florida Domestic Wastewaters, Proceedings of the 78th Annual Florida Water Resources Conference, Tampa, Florida, May 5-6, 2003.

Liu, S., *Chang, Y.C.*, **Le Puil, M**., Taylor, J.S., Randall, A.A. (2003) NF & RO Biostability Relative to Alternative Methods of Water Treatment, Proceedings of the Membrane Technology Conference, Atlanta, Georgia, March 2 - 5, 2003 (CD-Rom).

Chang, Y.C., Le Puil, M., Biggerstaff, J., Randall, A.A., Taylor, J.S., Lamb, B.M., Schulte, A., and Brown, P.S. (2002) Direct Estimation Of Biomass On Different Pipe Material Coupons Using A Specific DNA-Probe, Proceedings of the Water Quality Technical Conference, Seattle, WA, November 10-14, 2002 (CD-Rom).

Chen, Y., **Trujillo, M.**, Biggerstaff, J., Ahmed, G., Lamb, B., *Eremekdar, F.G.*, **McCue, T.**, Randall, A.A. (2002) The Effects Of Propionic Versus Acetic Acid Content Of Domestic Sewage On Enhanced Biological Phosphorus Removal, Proceedings Water Environment Federation 75th Annual Conference and Exposition (WEFTEC) 2002, Research Symposium oral presentation, Sept 28 –Oct 2, 2002, Chicago, Illinois, USA (CD-Rom).

McCue, T., Vassiliev, I., *Eremekdar, F.G.*, Randall, A.A. (2002) The Effects Of Prefermentation Upon Biological Nutrient Removal Systems With Septic, COD Limited Influent Wastewater, Poster Symposium of the Water Environment Federation 75th Annual Conference and Exposition (WEFTEC) 2001, Sept 28 –Oct 2, 2002, Chicago, Illinois, USA (poster presentation, no paper). First Place Awards of Excellence, WEFTEC 2002 Poster Symposium, Tuesday, Oct. 1, 2002

McCue, T., Hoxworth, S., Randall, A.A. (2002) Degradation of Halogenated Aliphatic Compounds Utilizing Sequential Anaerobic/Aerobic Treatments, Proceedings of the IWA 3rd World Congress, Australia, April, 2002 (poster presentation, paper in proceedings).

McCue, T., Shah, R., Vassiliev, I., Liu, Y-H, *Eremektar, F.G.*, **Chen, Y.,** Randall, A.A. (2002) Evaluation of Influent Preferementation as a Unit Process Upon Biological Nutrient Removal, Proceedings of the IWA 3rd World Congress, Australia, April, 2002 (podium presentation, paper in proceedings).

Randall, A.A., *Chen, Y.*, **Liu, Y-H, McCue, T**.(2002) Polyhydroxyalkanoate Form and Polyphosphate Regulation: Keys to Biological Phosphorus and Glycogen Transformations?, Proceedings of the IWA 3rd World Congress, Australia, April, 2002 (podium presentation, paper in proceedings).

Punrattanasin, W., Randall, C.W., Randall, A.A. (2002) The Utilization of Activated Sludge Polyhydroxyalkanoates for the Production of Biodegradable Plastics, Proceedings of the IWA 3rd World Congress, Australia, April, 2002 (poster presentation, paper in proceedings).

Sfeir, H.A., Randall, A., Reinhart, D., Clausen, C., Geiger, C. (2001) Long Term Effect of Biotic Reductive Dechlorination on Permeable Treatment Walls, 2001 International Containment & Remediation Technology Conference and Exhibition, 10-13 June 2001, Orlando, Florida (poster presentation).

Escobar L, Randall, A.A., Taylor, J.S., Hong, S. (2001). Effect of Feed Water Quality on Assimilable Organic Carbon: Full and Bench Scale Comparisons, AWWA 2001 Membrane Technology Conference, San Antonio, Texas, March 4 to 7, 2001 (poster presentation; full paper in CD-ROM proceedings).

Liu, Y-H, Geiger, C., Randall, A.A. (2000) Understanding The Response Of Enhanced Biological Phosphorus Removal Biomass To A Range Of Organic Substrates, Proceedings Water Environment Federation 73rd Annual Conference and Exposition (WEFTEC) 2000, Research Symposium oral presentation, October 14-18, 2000, Anaheim, California, USA (CD-Rom).

Randall, Andrew Amis, Naik, Rahul, Zepeda, Mauricio, McCue, Terrence, Liu, Yan-Hua, Vassiliev, Igor (2000), Changes In Anoxic Denitrification Rate Due To Prefermentation Of A Septic, Phosphorus Limited, Wastewater, Proceedings Water Environment Federation 73rd Annual Conference and Exposition (WEFTEC) 2000, Municipal Wastewater Treatment Symposium oral presentation, October 14-18, 2000, Anaheim, California, USA (CD-Rom).

Escobar I., Randall, A. (2000). Influence of Nanofiltration on Distribution System Biostability with a Variable Groundwater, IWA 1st World Congress, Paris, France, July 3-7, 2000 (poster presentation; abstract in CD-ROM).

Escobar, L, , Randall, A.A., Hong, S.K. (2000) Membrane Filtration Effects on Bacterial Regrowth Potential, Proceedings AWWA Annual Conference, Denver, Colorado, June 11-15, 2000 (podium presentation, paper in proceedings).

Escobar, I., Randall, A.A., (2000) The Influence of Ozonation versus Chlorination on AOC and BDOC, Proceedings AWWA Annual Conference, Denver, Colorado, June 11-15, 2000 (podium presentation, paper in proceedings).

Naik, Rahul, Zepeda, Mauricio, McCue, Terrence, Liu, Yan-Hua, Vassiliev, Igor, Randall, Andrew Amis, (2000), Changes In Anoxic Denitrification Rate Due To Prefermentation Of A Septic, Phosphorus Limited, Wastewater, podium presentation, Proceedings of the 75th Florida Water Resources Conference, April, 2000, Tampa, Florida, USA (CD-Rom).

Randall, A.A., Escobar, I.C. (2000) Monitoring Changes in Biostability Resulting from Nanofiltration and RO, podium presentation, Proceedings of the FS/AWWA Annual Conference, Kissimmee, Florida, November 5-9, 2000.

Hoxworth, S., Randall, A.A., **McCue, T.** (2000) Anaerobic/Aerobic Treatment of PCE Using A Single Microbial Consortia, in Bioremediation and Phytoremediation <u>of Chlorinated and Recalcitrant Compounds</u>, (Eds) Godage B. Wickramanayake, Arun R. Gavaskar, Bruce C. Alleman, and Victor S. Magar, Proceedings of The 2nd International Conference on Remediation of Chlorinated and Recalcitrant Compounds (Battelle), Monterey, California, May 22-25, 2000, pp. 323-329 (also presented as a podium presentation at the conference).

Sfeir, H., Randall, A.A., Reinhart, D., Chopra, M. (2000) Biotic Attenuation and Zero-Valent Iron Permeable Barrier Technology, in <u>Chemical Oxidation and Reactive Barriers: Remediation of Chlorinated and Recalcitrant Compounds</u>. (Eds) Godage B. Wickramanayake, Arun R. Gavaskar, and Abraham S.C. Chen, Proceedings of The 2nd International Conference on Remediation of Chlorinated and Recalcitrant Compounds (Battelle), Monterey, California, May 22-25, 2000, pp. 323-329 (also presented as a poster at the conference).

Escobar, I.C., Randall, A.A. (1999) Influence of Ozonation on Distribution System Biostability, Water Quality Technology Conference, Tampa, Florida, October 31-November 3, 1999 (podium presentation, paper in proceedings).

Hood, C., McCue, T., Randall, A.A. (1999) Biochemical Hypotheses To Explain Short and Long Term Behaviour of Enhanced Biological Phosphorus Removal Resulting From Fatty And Amino Acids, Proceedings Water Environment Federation 72nd Annual Conference and Exposition (WEFTEC) 1999, Research Symposium podium presentation, October 9-13, 1999, New Orleans, Louisiana, USA.

Escobar, I., Randall, A. (1999) The Influence of Nanofiltration on Bacterial Regrowth Potential, Proceedings AWWA Annual Conference, Chicago, Illinois, June 20-24, 1999.

Escobar L, Randall, A. (1999). The Influence of Nanofiltration on Distribution System Biostability, AEESP Research Frontiers Conference, State College, PA, August 1-3, 1999 (poster presentation; abstract in proceedings).

Escobar, I.C., Randall, Andrew A. (1998) Sample Storage and Quality Control for Assimilable Organic Carbon Bioassay, Water Quality Technology Conference, San Diego, California, November 1-5, 1998 (poster presentation, paper in proceedings).

Ndon, U.J., Randall, A.A. (1998) In-Situ Bioremediation of Hazardous Compounds Using Sequential Sulfate-Reducing Anaerobic-Aerobic Environments. Proceedings of the 4th International Symposium on Environmental Geotechnology and Global Sustainable Development, Boston, Mass, USA, August 9-13, 1998.

Randall, A.A., **Khouri, T.Z.**, Benefield, L.D., Hill, W.E. (1998) Comparisons of Enhanced Biological Phosphorus Removal Populations Under Ten Different Environmental Conditions, Water Quality International 1998, 19th Biennial Conference of the Association on Water Quality, Vancouver, Canada, June 21-26, 1998 (poster presentation).

Escobar, I.C., Randall, A.A., Marshall, F.E. (1998) Alternative Coagulation Methods in Stormwater Management, Water Quality International 1998, 19th Biennial Conference of the Association on Water Quality, Vancouver, Canada, June 21-26, 1998 (poster presentation; abstract in proceedings).

Escobar, I.C., Randall, A.A. (1998) Case Study of Nanofiltration Influence on Bacterial Regrowth in Drinking water Distribution Systems, Water Quality International 1998, 19th Biennial Conference of the Association on Water Quality, Vancouver, Canada, June 21-26, 1998 (poster presentation; abstract in proceedings).

Randall, A.A., **Hood, C., McCue, T., Papageourgio, F.** (1998) Batch and Continuous Enhanced Biological Phosphorus Removal Experiments, Water Quality International 1998, 19th Biennial Conference of the Association on Water Quality, Vancouver, Canada, June 21-26, 1998 (poster presentation).

Hoxworth, S., McCue, T., Randall, A.A. (1998) Sequential Dechlorination of Chlorinated Aliphatic Hydrocarbons, Water Quality International 1998, 19th Biennial Conference of the Association on Water Quality, Vancouver, Canada, June 21-26, 1998 (poster presentation).

Escobar, I.C., Randall, A.A., Marshall, F.E., (1998) Alternative Coagulation Methods in Stormwater Management, Water Resources and the Urban Environment Proceedings of the 25th Annual Water Resources Planning and Management Conference, American Society of Civil Engineers, Chicago, June7-10, 1998, page 580-585 (podium presentation; paper in proceedings).

Ndon, U.J., Randall, A.A., (1998) Development of Periodic Aerated Anaerobic Batch Systems for Anaerobic-Aerobic Treatment and Bioremediation of Polyhalogenated Compounds, Proceedings of the 1998 Joint Conference on the Environment by the Waste-management Education and Research Consortium (WERC), The Western Region Hazardous Substance Research Center (WRHSRC) and the New Mexico Hazardous Waste Management Society (NMHWMS), Crowne Plaza Pyramid, Albuquerque, New Mexico, March 31-April 1, 1998, Published by WERC Administrative Office, Las Cruces, NM, p. 347-351.

Boulos L., I. Najm, M. LeChevallier, C. Norton, A. Randall, **I. Escobar**, Kiene, L. (1998). Case Studies of Treatment Changes on Biostability in Full-Scale Distribution Systems, AWWA Annual Conference, Dallas, Texas, June 23-26, 1998 (poster presentation).

Escobar I., Randall, A. (1998). Case Studies of the Impacts of Membrane Filtration on Biostability in Full-Scale Distribution Systems, Third Annual EPA STAR Graduate Fellowship Conference, Arlington, VA, June 14-16,1998 (poster presentation; abstract in proceedings).

Randall, A.A., **Khouri, T.Z.**, (1997) Observations From Steady-State and Batch Experiments Concerning the Effect on Enhanced Biological Phosphorus Removal of Volatile Fatty Acids and Glucose, Proceedings 2nd International Conference on Microorganisms in Activated Sludge and Biofilm Processes, University of California at Berkeley, USA, July 21-23, 1997, pp. 311-318, (podium presentation; paper in proceedings).

Ndon, U.J., Randall, A.A. (1997) Bioremediation of Hazardous Compounds in Anaerobic-Aerobic Alternating Environments, <u>In-Situ and On-Site Bioremediation</u>, eds. Bruce C. Alleman and Andrea Leason, Battelle Press, Vol. 5, pp. 77-82. (publication derived from the Proceedings of the Fourth International Symposium on In Situ and On-Site Bioremediation. April 28-May 1, New Orleans, Louisiana).

Onek, T., Warwick, T.P., Randall, A.A., Coffin, J. (1997) A Collaborative Partnership Between Industry for the Poor, Inc., the University of Central Florida, and Brevard Community College For The Monitoring of A Family Based Water Purifier in Haiti, ASCE Florida Section Annual Meeting, Clearwater, Florida, Sept. 18-20, 1997 (podium presentation; paper in proceedings).

Escobar I., Randall, A., Marshall, F. (1997). Alternative Coagulation Methods in Stormwater Management, Proceedings of ASCE Florida/South Florida Section Annual Meeting, Clearwater, Florida, September 18-20, 1997.

Ndon, U., Randall, A. (1996) Single Stage Anaerobic and Aerobic Sequencing Biotransformation and Mineralization of Tetrachloroethylene (PCE) for the Remediation of Contaminated Soils and Groundwater, Proceedings of Emerging Technologies in Hazardous Waste Management VIII, Extended Abstracts for the Special Symposium, Birmingham, Alabama, American Chemical Society: Division of Industrial and Engineering Chemistry, September 9-11, 1996, pp. 648-651.

Randall, A. (1996) Summer Mentorship Program: A Bridge Between Undergraduate and Graduate Studies, AAEE/AEEP Environmental Engineering Education & Practice Conference, University of Maine, August 3-6, 1996 (poster presentation).

Sullivan, M., Randall, A., Krupa, K., (1996) Trickling Filter Comparisons: Performance Models and Design Implications For Industrial Wastewater Treatment, Proceedings of the Florida Water Resources Conference, Inc., Ft. Myers, Florida, May 5-8, 1996, p. 315-320 (paper presentation: *Winner Best Student Paper).

Randall, A.A., Benefield, L.D., Hill, W.E., Nicol, J-P.N., Boman, G.K., Jing, S-R, (1996) The Effect of Volatile Fatty Acids On Enhanced Biological Phosphorus Removal and Population Structure In Anaerobic/Aerobic Sequencing Batch Reactors, Proceedings of the First IAWQ Specialized Conference on Sequencing Batch Reactor Technology, Munich, Germany, March 18-20, pp. 261-270, 1996 (podium presentation; paper in proceedings).

Randall, A., Benefield, L.D., Hill, W.E., (1995) The Effect of Fermentation Products On Enhanced Biological Phosphorus Removal Capacity, Polyphosphate Storage, Bacterial Population Structure, and the Long Term Performance Characteristics Of Anaerobic/Aerobic Sequencing Batch Reactors, Proceedings of the WEF (formerly WPCF) 68th Annual Conference, October 21-25, Miami, Fla., Vol 1, pp. 1-12, 1995 (podium presentation; paper in proceedings).

Randall, A., Krupa, K. (1995) Industrial Pretreatment of a Food Processing Wastewater Using a "Sessil" Media Fixed-Film Pilot Plant, Proceedings of the Florida Water Resources Conference, Inc., Jacksonville, Florida, pp. 45-48, April 2-5, 1995 (podium presentation; paper in proceedings).

Randall, A., Benefield, L.D., Hill, W.E. (1995) The Effect of Fermentation Products On Enhanced Biological Phosphorus Removal In Sequencing Batch Reactors, Proceedings of the Florida Water Resources Conference, Inc., Jacksonville, Florida, pp. 184-188, April 2-5, 1995 (podium presentation; paper in proceedings).

Randall, A., Benefield, L.D., Hill, W.E., (1994) The Effect of Fermentation Products on Enhanced Biological Phosphorus Removal, Polyphosphate Storage, and Microbial Population Dynamics, Proceedings of Water Quality International July 24-29, IAWQ 17th Biennial Conference, Budapest, Hungary, p 91 poster abstracts, 1994 (poster presentation).

Presentations Pre-dating Appointment at UCF

Randall, A., Randall, C.W., Pramanik, A., Shah, A. (1990) Utilization of a "Sessil" Media Tower for the Pretreatment of Synthetic Fiber Manufacturing Wastewater, Proceedings of the Industrial Wastes Symposia, WPCF 63rd Annual Conference, Washington, D.C., p. 153-164, 1990 (podium presentation; paper in proceedings).

Editorial Reviewed/Invited Papers & Reports

Papers & Reports During Appointment at UCF

Wanielista, M., Chang N-B, Randall, A., Chopra, M., Hardin, M., Jones, J., Hood, A., Salamah, S. (2014) Demonstration Bio Media for Ultra-urban Stormwater Treatment, Final Report Florida Department Of Transportation, Project BDK78 977-19.

Randall, A., **Zhao, B.**, Taylor, J. (2011), "Evaluation of Corrosion Inhibitors, Residual, Temperature, and Pipe Materials on Bulk and Biofilm Heterotrophic Plate Count Densities", <u>Florida Water Resources Journal</u>, 63(12), 16-24, December, 2011.

Randall, A.A., **Sullivan, M.**, Dietz, J. (1996) Industrial Pretreatment Using "Sessil^R" Media : Operational and Design Implications, Presented at the Biological Wastewater Treatment Fundamentals and Modeling Symposium sponsored by Virginia Tech and Olver, Inc., Sept. 29-Oct 2, 1996, Roanoke, Virginia (podium presentation; paper in proceedings).

Randall, A.A., "The Effect of Substrate Chemistry On Enhanced Biological Phosphorus Removal, Intracellular Phosphate Form And Location, And The Resulting Population Structure Of Sequencing Batch Reactors Receiving Synthetic Wastewater", Summary of Ph.D. Dissertation, IAWQ BNR newsletter, No. 1, pp. 12-13, April 1996.

Randall, A., Sullivan, M., Krupa, K., "Industrial Pretreatment of a Food Processing Wastewater Using a "Sessil" Media Fixed-Film Pilot Plant: Comparison of Organic Loading Design Models, <u>Florida Water Resources Journal</u>, pp. 25-26, March, 1996.

Randall, A.A., "The Effect of Substrate Chemistry On Enhanced Biological Phosphorus Removal, Intracellular Phosphate Form And Location, And The Resulting Population Structure Of Sequencing Batch Reactors Receiving Synthetic Wastewater", Summary of Ph.D. Dissertation, IAWQ specialist group on Activated Sludge Population Dynamics newsletter, Vol 8 (1), pp. 11-14, September 1995.

Papers & Reports Pre-Dating Appointment at UCF

Randall, A., Randall, C.W., "Available Technology for Nutrient Removal in the Chesapeake Bay Water Shed," Report for the Scientific and Technical Advisory Committee to the Chesapeake Bay Project. CRC Publication No. 126, Oct. 1987.

Courses Written for Florida State University System Continuing Education Division

Randall, A.A. (1999) Environmental Systems (a 3 semester hour college level course for non-engineers)

Technical Reports: Consulting, Internal Publications, Project Final Reports

Randall, A.A., LePuil, M., Taylor, J.S., "Final Report: Biofilm Measurements in the Pinellas County Drinking Water Distribution System", Prepared for Pinellas County Utilities Department, August 21, 2003.

"Pilot Test Summary Report, Project, Phosphorus Removal at the W. Carl Dicks Wastewater Treatment Facility (WWTF)", Prepared for the City of Lakeland, Florida, by Envisors (Steve Elias, P.E., Daniel Magro) and Andrew A. Randall, Ph.D., P.E., July 12, 2002.

Taylor, J.S., Hong, S.K., Randall, A.A., Naser, S., "Investigation of Biological Growth in a Diffusion Controlled Membrane System", Final Project Report for Investigation of Biological Growth in a Diffusion Controlled Membrane System, Submitted to Pepsi, Co., Orlando, Florida, August 15, 1998.

Randall, A., "Golden West Sessil Pilot Study Final Report," Report for the NSW Corporation. Aug. 1990 (technical report).

Randall, A., Randall, C.W., "Pilot Study of Sessil Media For a Cellulose Acetate Manufacturing Plant Wastewater," Report for the NSW Corporation and the Center for Innovative Technology (of Va.). Aug. 1990 (technical report).

Ph.D. Dissertation : "The Effect of Substrate Chemistry On Enhanced Biological Phosphorus Removal, Intracellular Phosphate Form And Location, And The Resulting Population Structure Of Sequencing Batch Reactors Receiving Synthetic Wastewater", Ph.D. Dissertation, Dept. Civ. Eng., Auburn University, Auburn, ALA, UMI No. 9411434, 1993. Larry Benefield, Ph.D., P.E., Major Professor.

M.S. Thesis : "Operational And Exocellular Biopolymer Characteristics Of Sludges Generated From An Air Products And A Conventional Activated Sludge System", M.S. Thesis, Dept. Civ. Eng., Virginia Tech, Blacksburg, Virginia, 1987. John T. Novak, Ph.D., P.E., Major Professor.

EXTERNALLY FUNDED RESEARCH DURING APPOINTMENT AT UCF (italics describe review process):

Approximately \$4,700,000 as PI or Co-PI since appointment at UCF, including funding from the National Science Foundation, AWWARF, and GCHSRC.

Funding history in biological nutrient removal and advanced wastewater treatment

The Graywater Recycling System and Related Water Quality Standard, **Dr. Woo Hyoung Lee, PI**, Dr. Andrew A. Randall, Co-PI, Mainstream Engineering Corporation, 9/1/13 to 3/28/14, **\$41,167**, UCF Project 16-20-8127. *Corporate Funding.*

Use of Biodiesel Waste Glycerin/Methanol for Enhanced Biological Phosphorus Removal and Denitrification in Advanced Wastewater Treatment, sole PI, Grupo Lakas/Sakal, July 1, 2013 to Dec 31, 2015, \$172,030, UCF Project 16-20-8123. *Corporate Funding.*

Mechanistic and Dynamic Computer Modeling of HRSD Pilot System, Dr. Andrew A. Randall, sole PI, Hampton Roads Sanitation District, July 1, 2012 to June 30, 2013, **\$16,683** + \$30,000 GRA match, UCF Project 16-20-8819. *Program manager review of proposal for funding.*

Year Two of Collaboration and Modeling of HRSD Pilot System, Dr. Andrew A. Randall, sole PI, Hampton Roads Sanitation District, July 1, 2013 to June 30, 2014, **\$16,562** + \$30,000 GRA match, UCF Project 16-20-8125. *Program manager review of proposal for funding.*

Wastewater and BNR Process Data for the South Central WWTF of Brevard County, Dr. Andrew Randall sole PI, In-Pipe Technologies Company, LLC, March 5, 2004 to May 1, 2006, \$114,390, UCF Project 162-00-301 Fund # 10071. Account no. 604001. *Non-competitive letter contract.*

Design Basis for Enhanced Biological Phosphorus and Nitrogen Removal Wastewater Treatment Systems, **Dr. Andrew A. Randall, Sole PI, National Science Foundation Award #961644**, August 1, 1997 to July 31, 2000, **\$209,367** + \$ 9167 matching for a total of \$218,534. UCF Account No. 16-20-403. *Full peer/panel review of proposal for funding.*

One Year Renewal of NSF Grant Award #9616144 'Design Basis for Enhanced Biological Phosphorus and Nitrogen Removal Wastewater Treatment Systems', **Dr. Andrew A. Randall, Sole PI, National Science Foundation**, Sept 12, 2000 to July 31, 2003, **\$70,393** + **\$** 15,033 matching for a total of \$93,336. UCF Account No. 16-20-403. *Full peer/panel review of proposal for funding.*

Supplemental funding for pH control equipment for NSF Grant Award #9616144 'Design Basis for Enhanced Biological Phosphorus and Nitrogen Removal Wastewater Treatment Systems', **Dr. Andrew A. Randall, Sole PI, National Science Foundation**, July 12, 2001, **\$9,495**. UCF Account No. 16-20-403. Internal NSF review by NSF program manager for funding.

Funding history in drinking water biofilms and microbial water quality

Control of Distribution System Water Quality Control in a Changing Water Quality Environment Using Inhibitors, **Dr. J.S. Taylor, PI,** Co-PIs: Dr. J.S. Dietz, Dr. Andrew A. Randall, **American Water Works Association Research Foundation with Tampa Bay Water Authority (Tailored Collaboration)**, 8/10/2004 to 8/10/2007, \$1,100,000.00 + \$518,548.00 matching for a total of \$1,618,548.00 UCF Account No. 16-20-8045. *Full peer/panel review of proposal for funding by AWWARF; review by governing board for TBW authority and member governments.*

Biofilm Measurements in the Pinellas County Drinking Water Distribution System, Dr. J.S. Taylor, PI, Co-PI: Dr. Andrew A. Randall, Pinellas County Utilities, 6/8/2003 to 8/23/2003, \$23,000, UCF Account No. 16-20-810. Non-competitive letter contract.

Required Treatment and Water Quality Criteria for Distribution System Blending of Treated Surface, Ground and Saline Sources, **Dr. J.S. Taylor, PI,** Co-PIs: Dr. SK Hong, Dr. J.S. Dietz, Dr. Andrew A. Randall, American **Water Works Association Research Foundation with Tampa Bay Water Authority (Tailored Collaboration)**, 8/10/2000 to 12/15/2003, **\$2,560,181.00** + \$418,494.00 matching for a total of \$2,978,675. UCF Account No. 16-21-845. *Full peer/panel review of proposal for funding by AWWARF; review by governing board for TBW authority and member governments.*

Investigation of Biological Growth in a Diffusion Controlled Membrane System, **Dr. J.S. Taylor, PI**, Co-PIs : Dr. S.K. Hong, Dr. Andrew A. Randall, Dr. S. Naser, **Pepsi Co.**, Phase 1 : January 1 to July 31, 1998, **\$50,000** + \$6610 matching for a total of \$56,610. UCF Account No. 16-21-826. *Scope reviewed internally by company for funding*.

Collaboration on 'Case Studies of the Impacts of Treatment Changes in Full-Scale Distribution Systems' (American Water Works Association Research Foundation RFP 361), Dr. Andrew A. Randall, Sole PI for UCF, collaboration with American Water Works Services Company (Dr. Mark LeChevallier, PI), Lyonnaise des Eaux (Dr. Yves Levi, PI) and Montgomery Watson, Inc., which coordinated the grant (Dr. Issam Najm, PI), Jan 1, 1997 to Jan 1, 2000, \$102,997 + \$ 21,000 matching for a total of \$ 123,997 (this is UCFs portion of the funding only). UCF Account No. 16-21-815. *Full peer/panel review of proposal by AWWARF for funding*.

Funding history in bioremediation of groundwater and soil

The Interaction of Microbial Activity and Zero Valent Iron Permeable Barrier Technology, **Dr. Andrew A. Randall, PI,** Co-PIs: Dr. D. Reinhart, Dr. M. Chopra, **Gulf Coast Hazardous Substances Research Center**, Sept 1, 1997 to August 31, 1998, **\$51,738** + \$14,921 matching for a total of \$66,659. UCF Account No. 16-21-828. *Full peer/panel review for funding*.

The Interaction of Microbial Activity and Zero Valent Iron Permeable Barrier Technology, **Dr. Andrew A. Randall, PI, Co-PIs:** Dr. D. Reinhart, Dr. M. Chopra, **Gulf Coast Hazardous Substances Research Center**, Sept 1, 1998 to August 31, 1999, **\$48,972** + \$15,318 matching for a total of \$64,290. UCF Account No. 16-21-831. *Full peer/panel review of continuation proposal for continuation funding*.

The Interaction of Microbial Activity and Zero Valent Iron Permeable Barrier Technology, **Dr. Andrew A. Randall, PI,** Co-PIs: Dr. D. Reinhart, Dr. M. Chopra, **Gulf Coast Hazardous Substances Research Center**, Sept 1, 1999 to August 31, 2000, **\$50,902** + \$15,649 matching for a total of \$66,551. UCF Account No. 16-21-838. *Full peer/panel review of continuation proposal for continuation funding*.

Sequential Environments For Enhanced Bioremediation Of Chlorinated Aliphatic Hydrocarbons, **Dr. Andrew A. Randall, Sole PI, Gulf Coast Hazardous Substances Research Center**, June 1, 1995 to May 31, 1996, **\$43,715** + \$10,988 matching for a total of \$54,703. UCF Account No. 16-21-803. *Full peer/panel review for funding*.

Sequential Environments For Enhanced Bioremediation Of Chlorinated Aliphatic Hydrocarbons (year two continuation), **Dr. Andrew A. Randall, Sole PI, Gulf Coast Hazardous Substances Research Center,** Sept 1, 1996 to August 31, 1997, **\$44,335** + \$11,138 matching for a total of \$55,473. UCF Account No. 16-21-816. *Full peer/panel review of continuation proposal for continuation funding.*

Sequential Environments For Enhanced Bioremediation Of Chlorinated Aliphatic Hydrocarbons (year three continuation), **Dr. Andrew A. Randall, Sole PI, Gulf Coast Hazardous Substances Research Center**, Sept 1, 1997 to August 31, 1998, **\$49,893** + \$12,594 matching for a total of \$62,487. UCF Account No. 16-21-827. *Full peer/panel review of continuation proposal for continuation funding.*

Other funding history

Demonstration Project for Bio-sorption Activated Media for Ultra-urban Stormwater Treatment, Dr. Martin Wanielista, PI, Dr. Ni-Bin Chang, Dr. Manoj Chopra, Dr. Andrew Randall, all Co-PIs, Florida Department of Transportation, 9/7/12 to 5/5/14. \$277,999. UCF Account No. 16-60-7051. Review within FDOT (state agency).

Ferrate Treatment System Full-Scale Controlled Test, Dr. D. Reinhart, PI, Dr. A.A. Randall, Co-PI, Dr. Linda Walters, Co-PI, Subcontract with Ferrate Treatment Technologies, LLC, via NOAA funding, Dec 1, 2006 to Dec 1, 2008. \$119,906 + \$30,256 internal match for a total of \$150,262. UCF Account No. 16-20-8058. *National competition with peer review*.

Laboratory-Scale Investigation of Ballast Water Treatment Using Ferrate, **Dr. D. Reinhart, PI, D**r. A.A. Randall, Co-PI, Dr. Linda Walters, Co-PI, **Subcontract with Ferrate Treatment Technologies, LLC, via NOAA funding,** Aug 30, 2004 to Aug 30, 2005. **\$144,349** + **\$34,837** internal match for a total of \$179,186. UCF Account No. 16-20-8040. *National competition with peer review.*

Optimization of Ferrate Use for Municipal and Industrial Water and Wastewater Treatment, Dr. D. Reinhart, PI, Dr. A.A. Randall Co-PI, Florida High Tech Corridor Phase IX Industry Matching Research Program, May 4, 2004 to Nov 4, 2005. \$45,000 + \$45,000 industrial match (hard cash) for a total of \$90,000. UCF Account No. 16-20-8-029 Regional competition with peer review.

Commercializing Ferrate (Iron VI) for Use in Municipal and Industrial Water and Wastewater Treatment, Dr. D. Reinhart, PI, Dr. A.A. Randall Co-PI, Ferrate Treatment Technologies, LLC, Jan 9, 2003 to Jan 9, 2006. \$128,500. UCF Account No. 16-20-8-029. *Industrial Funding*.

Mosquito Lagoon Stormwater and Ground Water Management Project, Phase 1: Laboratory and Pilot Study of Settling Enhancers, **Dr. Andrew A. Randall, Sole PI, Cetacean Logic Foundation**, Sept 18, 1995 to Dec. 31, 1996, **\$27,812** + \$6,513 matching for a total of \$34,325. UCF Account No. 16-21-806. *Funding by arrangement with head of foundation*.

INTERNAL FUNDING DURING APPOINTMENT AT UCF:

Undergraduate Research Initiative, \$3200.00, for Shantal Tummings work on Grupo Lakas project, awarded June 4, 2014 for Fall 2014 and Spring 2015

Awarded a Technology Fee Award, \$38,323, for "Environmental Engineering Teaching Laboratory Upgrade, Proposal #: 1314-24 for Spring, 2014, awarded November 25, 2013

Awarded an Honors Interdisciplinary Seminar, Oct, 2007

Awarded Competitive Sabbatical, Academic Year 2002

Lab Equipment in Support of the Drinking Water Membrane Focus Group and Environmental Biotechnology Research at UCF, **Dr. Andrew A. Randall, PI,** Co-PIs: Saleh Naser (Molecular & Microbiology), Jim Taylor, SK Hong, **Presidential Initiative to Fund Major Research Equipment,** \$16,708 award + \$2,000 departmental/college matching = <u>award of \$18,708</u> (plus \$18,500 from grants already funded for purchase of \$37,208 of equipment).

Awarded INTAC travel grant, 1997

Post-Doctoral Collaborators

Dr. S.H. Hyun, Dec '02 to Dec '03, from Korean-Japanese Institute of Science & Technology

Dr. Udeme J. Ndon Aug '95-Aug '96, now a tenured at the California State University, San Jose, California.

Dr. Young-Cheol Chang Dec '00-Aug '03.

Dr. Yinguang Chen, Apr '01-Apr '02.

Dr. Fatmah Gulen Eremekdar, Research Faculty from Istanbul Technical University, Turkey, Sept '01-Sept '02

Visiting Professor Collaborators

Dr. Sandro Lautenschlager from Jan 1, 2014 to Feb 26, 2015; teacher at State University of Maringa, Brazil Dr. Tae-Moon Tak, July '99 – July '00 professor from University of Korea, Seoul.

Other Visiting Collaborators/Scholars

DoHee Kim, Ph.D. student from K.J.I.S.T. (Kwang Ju Institute of Science & Technology in Korea), March '01-Sept '01 Boksoon Kwon, Ph.D. student from K.J.I.S.T. (Kwang Ju Institute of Science & Technology in Korea), Jan '01-Mar '01

GRADUATE STUDENTS ADVISED (COMMITTEE CHAIR)

24 M.S. students graduated, 9 Ph.D. students graduated

Graduated (Thesis/Dissertation unless noted otherwise)

- 1. Fall, 1995, Colleen D.P. Ross, MSEnvEngr (Research Report/Non-thesis)
- 2. Spring 1996, J. Martin Sullivan, MSEnvEngr
- 3. Spring, 1996, Tarek Khouri, MSEnvEngr
- 4. Fall 1996, Isabel Escobar, MSEnvEngr
- 5. Fall 1998, Cathy Rae Hood, MSEnvEngr
- 6. Fall 1998, Fotini Papageorgiou, MSEnvEngr
- 7. Summer 1999, Terrence M. McCue, MSEnvEngr

- 8. Fall 1999, Rahul Naik, MS EnvEngr
- 9. Spring 2001, Yan-Hua Liu, MSEnvEngr
- 10. Fall 2001, Rasesh R. Shah, MSEnvEngr
- 11. Spring 2004, Eung Kim, MSEnvEngr
- 12. Summer 2004, Rodrigo Cruz, MSEnvEngr
- 13. Fall 2004, Daniel Magro, MSEnvEngr
- 14. Fall 2004, Scott Hoxworth, MSEnvEngr
- 15. Spring 2005, Ken Richardson, Jr., MSEnvEngr (Research Report/Non-thesis)
- 16. Spring 2006, Matt Doan (was chaired by SK Hong originally), MSEnvEngr
- 17. Summer 2006, Andrea Jessen, MSEnvEngr
- 18. Fall 2006, Seyed Malekjahani, MSEnvEngr
- 19. Summer 2007, Adham Mukkatash, MSEnvEngr
- 20. Summer 2008, Rachelle Ginart, MSEnvEngr
- 21. Spring 2011, Christy Dykstra, BS Honors Thesis
- 22. Spring 2013, Juan Rueda, MSEnvEngr
- 23. Spring 2014, Sultan Salamah, MSEnvEngr
- 24. Fall 2016, Joeseph Bartlett, MSEnvEngr
- 1. Spring 2000, Isabel Escobar, PhD
- 2. Spring 2003, Hala A. Sfeir, PhD (Co-Chair)
- 3. Summer 2004, Michael LePuil, PhD
- 4. Fall 2006, Terrence McCue, PhD
- 5. Fall 2007, Bingjie Zhao, PhD
- 6. Spring 2015, Tom Nogaj, PhD
- 7. Fall 2015, Marzieh Ghasemi, PhD
- 8. Summer 2017, Sultan Salamah, PhD
- 9. Fall 2019, Andrew Hood, PhD
- 10. Summer 2021, Ruth Speirling, PhD

Post-Candidacy PhD students

Post-Qualifier PhD students

Pre-Qualifier PhD students

Active MS Students

Active BS Honors In The Major (Thesis) Students

UNDERGRADUATE RESEARCHERS

- 1. Isabel Escobar
- 2. Mike Hardin
- 3. Matt Kelly
- 4. Phillip Lintereur
- 5. Lillie Thomas
- 6. Erica Stone
- 7. Natalie Shaber
- 8. Jackie Mobley
- 9. Elizabeth (Devan) Henderson
- 10. Ed Arend
- 11. Frank Fountain
- 12. Danielle Katilan (LEADs)
- 13. Joe Wasco (LEADs)
- 14. Kevin Young

- 15. Greg Pincelli
- 16. Anjoli Martin
- 17. Diane Burberry
- 18. Matthew Walker
- 19. Sandra Feliciano
- 20. John Ketcham
- 21. Arthur Thibert III
- 22. Michala Tracy
- 23. Jena Tancredi
- 24. Shene Snyder
- 25. Allison Jarmon
- 26. Banan Abuhannoud
- 27. Shantal Tummings
- 28. Kristopher Garcia
- 29. Bailey Glover
- 30. Lauren Reynolds
- 31. Drew Hansen
- 32. Elizabeth Groves
- 33. Akil Gray
- 34. Ryan Joslyn

HIGH SCHOOL STUDENTS

Mentored 2 High School Students circa 2000 - 1 on NSF grant project for science fair, 1 through minority summer program

Mentored 1 High School Student (Laylo Muksinova) 2012 & 2013 – on project for science fair Interview on Environmental Engineering Career for High School Student as an English Class Project, April, 2021

COMMITTEE AND DEPARTMENTAL ASSIGNMENTS DURING APPOINTMENT AT UCF:

Chair, Departmental CPE Committee, Jan 2024 to Jan 2025 Judge - Research Week, Spring 2024 (twice) Member, Faculty Senate, Spring, 2021 to Spring 2023 Appeals Committee, Spring 2021 to Summer, 2023 Judge - Graduate Research Forum April 1st, 2021 Judge - Undergraduate Student Scholar Symposium March 30th, 2021 Attended the ODI/SHPE-UCF Diversity Forum – Mental Health & Wellness Confirmation, March, 2021 Attendee of National Merit Finalist Dinner, Spring, 2017 Member, Department Cumulative Progress Evaluation Committee, Spring, 2017 Reviewer for Undergraduate Summer Fellowships, April, 2015 Judge for Showcase of Undergraduate Research Excellence, April, 2015 Mentor for Showcase of Undergraduate Research Excellence, April, 2015 Judge for Graduate Student Research Forum, April, 2013 and March, 2015 CAMP-YES Mentor for Undergraduate Research (NSF grant), Fall, 2014 to present Graduate Program Director (formerly Coordinator), Jan, 2015 to Dec, 2015; Fall, 2016 to August 5th, 2024 Member, College Graduate Program Coordinators Committee, January, 2015 to present Member, University Graduate Policy Committee, Fall, 2014 to c. 2020 Member, Department Curriculum Committee, Oct, 2014 to c. 2021 Reviewer for UCF Undergraduate Research Grants, Aug. 2014 Chair, Environmental Engineering (water) faculty Search Committee, May, 2014 to present Reviewer for the UCF Undergraduate Research Journal, 2018 Reviewer for the UCF Undergraduate Research Journal for the Annual Award for Excellence in Undergraduate Research, 2013 Reviewer of grant proposals for the Office of Undergraduate Research, Nov. 2012 Member, Departmental Assessment Committee, March, 2013 to present Member, University Graduate Academic Integrity Team/Workshops, Apr, 2012 to present

Member, University Master Planning Committee, Jan, 2012 to present Member, TIP Criteria Committee, Jan '12 to Dec. 2014 Member, Environmental Engineering Search Committee, Aug, 2012 to Apr, 2013 Faculty Advisor, UCF Chapter of the Society of Environmental Engineers, Sept, 2011 to Jan, 2012 Member, Departmental AESP Committee, Aug. 2011 to present Member, University Undergraduate Research Council, Aug. 2011 to present Member, College of Engineering & Computer Science TIP Selection Committee, Sept. 2010 to Dec. 2014 Member, CECE Dept, Lecturer Search Committee, Nov. 2009 to May, 2010 Member, CECE Dept. Hydro-Environmental Search Committee, Oct, 2009 to May, 2010 Environmental Engineering Program Coordinator, May, 2009 to August, 2024 Chair, CEE Lab Manager Search Committee, June 2007 to Oct, 2008 Chair, CEE Faculty Awards Committee, Aug 2007 to Dec 2007 Faculty Advisor, UCF Chapter of Engineers Without Borders, March 2007 to December 1, 2008 Member, College Committee to Establish a Pre-Med Degree in COES, March 2007 to 2008 Member, CECS Awards Committee for CEE Dept, Feb 2007 to 2007 Member, UG Curriculum Committee for CEE (Environmental), Sept 2006 to 2008 Member, Outcomes and Assessment Committee, Feb 2005 to present Member, Vision Committee for CEE Dept, Fall, 2006 to Jan, 2007 Member, Water Resources/Water Quality Search Committee, June, 2006 to March, 2007 Member, Environmental Section Strategic Committee, Fall, 2005 Member, Vision Committee for CEE Dept, Fall, 2005 to Spring, 2006 Member, CEE Curriculum Committee, November, 2004 to 2005 Member, Search Committee for Civil & Environmental Engineering Faculty, Aug. 2004 to 2005 Chair, Search Committee for Civil & Environmental Engineering Faculty, July, 2003 to Dec. 2003 Member, CEE Laboratory Committee, Aug 2004 to present Member, CEE Undergraduate (Environmental) Committee, Aug 2004 to c. 2005 Member, University Ad-Hoc Committee on Dissertation Format Requirements, April, 2002 to Sept, 2002 Member, CEE Department Awards Committee, Aug. 2000 to Aug 2002 Member, CEE Department Personnel (tenure) Committee, Aug, 2000 to Aug, 2001 Member, University Search Committee for Vice Provost and Dean of Graduate Studies, Oct, 1999 to July, 2000 Member, College of Engineering External Relations Committee, July, 1995 to c. 1997 Member, CEE Department Strategic Issues Committee, Dec, 1997 to Oct, 1998 Member, CEE Department Graduate Studies Committee, Feb, 1997 to Feb, 1998 Member, CEE Department Recruitment/Flyer Ad-Hoc Committee, Spring, 1998 Coordinator of CEE Department Graduate Student Seminar, Spring, 1997 to Dec, 1999 Member, University Health & Safety Chemical Storage Expansion and Lab Committee, June, 1998 to 2001 (dormant) Member, University Chemical Hygiene Committee, Sept, 1998 to 2001 (dormant) Coordinator of CEE Department Certificate Programs for : Hazardous Waste Site Remediation, and Hazardous Waste Management, Nov. 1998 to c. 2003 (dormant) Member, CEE Department Undergraduate Curricula Committee, Nov, 1998 to Nov, 1999

ADDITIONAL PROFESSIONAL ACTIVITIES DURING APPOINTMENT AT UCF (note for some journals article reviews were 2 to 4 per year listed, with some as high as 4 to 6 articles per year, e.g. Water Research in 2006, WER in '07):

Participant in ASU "State of the Professoriate Study" Survey, Spring, 2025 Research Faculty Panel for INTRO (Introduction to Research and Creative Scholarship Opportunities Mentoring Program), April 7, 2022

Attended Workshop at ASEE-SE "How to Use the Flipped Class to Teach Effectively, April, 2015 Judge for Student Poster Session of ASEE-SE Conference, April, 2015

High School Teacher for a Day, Crooms High School, Sanford, Florida, Nov 13, 2012

Program Committee for WEFTEC, Disinfection and Public Health Symposium, Nov, 2011 to present Invited member of Standard Methods Committee Sept, 2011

- AOC Joint Task Group, Sept, 2011 to present
- Also reviewed multiple sections of microbiological methods 2013, 2014, 2015, 2016, 2017

Reviewer for Polish Journal of Environmental Studies, 2008

Reviewer for Chemosphere, 2004, 2007, 2012

Reviewer for Journal of Chemical Technology & Biotechnology, 2004, 2005, 2006, 2008, 2011

Reviewer for Desalination, 2004, 2005, 2006

Reviewer for Journal of Hazardous Materials 2001

Reviewer for Journal of Chromatography A, 2004

Reviewer for Journal of Environmental Management, 2006, 2022

Reviewer for Chemical Engineering Communications 1997

Reviewer for Chemical Engineering Journal 2007, 2012, 2021

Reviewer for Journal of Environmental Sciences 2009

Reviewer for Advances in Environmental Research 2002

Reviewer for National Research Council COBASE program 2001

Reviewer for IWA 1st World Congress (formerly IAWQ): Paris 2000

Reviewer for IWA 2nd World Congress: Berlin 2001

Review of Montana State Disinfection Courses Manuals for WEF Disinfection Committee, 2010

Reviewer for American Chemical Society of a proposal for a Symposium Series book on Innovative Approaches for the Remediation of Subsurface-Contaminated Hazardous Waste Sites: Bridging Flask and Field Scales, 2004

Reviewer for publisher of <u>Geoenvironmental Engineering</u>: Site Remediation and In-Situ Containment, by Hari Sharma and Krishna Reddy, John Wiley & Sons, April, 2003

Reviewer for publisher of Chemistry for Environmental Engineers, 4th Edition, by Sawyer, McCarty, and Parkin, published by McGraw-Hill, November, 1999

Reviewer for publisher of the Encyclopedia of Environmental Microbiology by Gabriel Bitton, published by John Wiley & Sons, c.August, 2000

External Reviewer for Master's Thesis, Department of Microbiology and Plant Pathology, University of Pretoria, South Africa, March, 2001 and July, 2003

External Reviewer for Introduction to Environmental Engineering by Richard O. Mines and Laura W. Lackey, to be published by Prentice Hall, April, 2008

Presider of Technical Session WEFTEC Conference, 2002, 2001, Co-Presider of Technical Session WEFTEC Conference, 2000; Co-Presider 2 sessions WEFTEC 1998; Co-Presider 1 session WEFTEC 1996

Co-Chair of Microbiology of BNR Session, IAWQ Biennial Conference., Vancouver, Canada, June, 1998 Presentation for Environmental Engineering Graduate Student Seminar at University of Florida, Gainesville, Fall, 1997.

Presentation for Advanced Biological Nutrient Removal Research Symposium at the University of British Columbia, Dept. of Civil Engineering, Vancouver, Canada, June 4, 1997.

Member of Ph.D. Committee, Virginia Tech, Pum Punrattanasin, topic: production of biodegradable plastics (polyhydroxyalkanoates) from wastewater organics, defended 4/13/01.

SCIENTIFIC AND PROFESSIONAL SOCIETIES :

Member, Water Environment Federation (WEF)

Member of National WEFTEC Program Committee, April, 1999 to Oct, 2003 Member of National WEFTEC Disinfection Committee, Oct, 2010 to present Member & Committee member of state affiliate (FWEA)

1. FWEA Research Committee Jan. 1996 to May, 1998

Chair of Research Information Committee, March, 1996 to May, 1998

2. Cent. Fla. FWEA Steering Committee Feb, 1996 to Jan, 1997

Membership Officer, March, 1996 to Jan, 1997

Member, American Water Works Association (AWWA)

Member of Microbial Contaminants Research Committee, June '03 to present

- Recording Secretary for Microbial Contaminants Research Committee, Nov '03 to present

- Co-PI on current AWWA Research Foundation Grant

MCRC liason with Distribution System Research Symposium Committee, Nov '05 to present

FSAWWA Biological Contaminants Committee, Nov '05 to present

- Chair of Distribution System Biofilm & Microbial Quality Workshop Sub-Committee, Mar '06 to present FSAWWA Research Committee, Mar '06 to present

Member, International Water Association (IWA)

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Member of the following IWA Specialist Groups:

- Nutrient Removal Processes from Wastewaters
 - contributor to Nutrient Removal newsletter
- 2. Activated Sludge Population Dynamics
 - contributor to ASPD newsletter
 - presenter at ASPD specialty conference, Munich, March, 1996
 - presenter at ASPD specialty conference, University of Ca., Berkeley, July, 1997
- 3. Biofouling & Biocorrosion
 - Member of steering committee, June, 1998 to June, 2001
- 4. Also member of the following IAWQ specialty groups: Biofilm Processes, Anaerobic Digestion, Appropriate Waste Management Technologies for Developing Countries, Eutrophication

Member, American Society for Microbiology (ASM)

Invited Speaker for Florida Branch of ASM

Member, American Society for Engineering Education (ASEE)

Member, Association of Environmental Engineering & Science Professors (AEESP)

1. AEESP Liason for Water Environment Federation c. 1998

HONORS AND AWARDS (Major Awards Highlighted)

Personal

UCF Teaching Incentive Program Award, April, 2010

UCF CEE Department Excellence in Undergraduate Teaching Award, Jan, 2007

Journal of Environmental Engineer's (ASCE) Editor Award for Service, Oct, 2004

"Outstanding Young Alumni Award" from the Via Department of Civil and Environmental Engineering, Virginia Tech, May, 2002

UCF College of Engineering Research Award (Associate Professor), Feb, 2000

UCF CEE Department Distinguished Researcher, Feb, 1998

UCF INTAC International Travel Grant, June, 1997

Excellence in Faculty Advising, College of Engineering at UCF, Feb, 1997

Department of Education GAANN Fellowship 1991-93

Awarded Fulbright Grant, 1987

PSAT/NMSQ National Merit Semi-Finalist, 1979

All Regional Cross Country, Indoor Track, and Outdoor Track, State of Virginia AA, 1979-1980 Eagle Scout, 1977

For Students Supervised During Appointment at UCF

Third Place, AWWA Annual Conference 2003 Poster Symposium, June, 2003

First Place Awards of Excellence, WEFTEC 2002 Poster Symposium, Tuesday, Oct. 1, 2002

Appointment as tenure track faculty, I. Escobar, University of Toledo, Ph.D. level Chemical & Environmental Engineering program, Toledo, Ohio, July, 2000 - present.

EPA STAR Fellowship, I. Escobar, October, 1997 to present (3 year fellowship).

Best Student Paper, Stormwater, I. Escobar, Florida Water Resources Conference, Orlando, Fla, April 20-23, 1997. Best Student Paper, Wastewater, M. Sullivan, Florida Water Resources Conference, Ft. Myers, Fla, May 5-8, 1996.