

Global Aquatic BioSystems, Inc. Team Members and Consulting Partners

President & Chief Executive Officer: Roz Gatewood has served in leadership roles for Renewable Energy, Life Sciences/Health, Publishing, Emerging Technologies, and RealEstate development companies including a 64 sq. mile Eco Sustainable City that was designated as one of the 16 Climate Positive Developments in the world by the Clinton Climate Initiative. Ms. Gatewood spent over 14 years in Senior management roles foremerging IP Video, e-Commerce, Sensor based and digital healthcare technology and sustainable Food/Energy platforms.

Roz's ability to coalesce diverse entities, seeing technology integration with an ability to bring it to a reality has been the driving force in the supporting the formation of Global Aquatic BioSystems, Inc.,

Ms. Gatewood's business background includes the development of energy independent/renewable energy economic development clusters and creating and implementing Florida's first Sustainable Energy Farms (diverse Biomass Testing with IFAS (University of Florida)). Roz brings a unique perspective that includes a network of technology, strategic partnerships including emerging technology companies, scientific experts, and Business, University and Government relationships.

Ms. Gatewood's experience includes the development of energy independent/renewable energy economic development clusters, creating and implementing Florida's first Sustainable Energy Farms (diverse Biomass Testing with IFAS (University of Florida)). Roz serves as an advisory or on the Board of Directors on several organizations including The Center for Preparedness and Resiliency, KURI (Korean Urban Regeneration Institute, Vet Power Services, Rose Pharmaceuticals, Energy Development Partners, LLC, Aquaterran, LLC, Kenaf Research Farms, Soltair, Inc., Indy Power Systems, Keppe Motor, Great Plains BioSciences , and Global Center for Preparedness and Resilience and has served as Executive Director for a 501 (c.) 3 organization dedicated to providing nutritious food to underserved children in Florida.

Chief Technical Officer: Frank D. Parker: Frank co-developed Global Aquatic BioSystems, Inc.'s program for Biological Abatement of Mosquito Disease Vectors with

Frank Parker is also the Chief Technology Officer (CTO), Co-Founder and Managing Board Member of Global Aquatic BioSystems, Inc. and Great Plains Biosciences Group, LLC, ("GPBG") and a Board Member of the Global Center for Preparedness and Resilience. GPBG is a sustainable agricultural and renewable energy technologies firm conducting environmental studies and developing solutions nationally and internationally.

GPBG which emphasizes sustainable agricultural and renewable energy technologies has developed biological-carbon cycle energy and fuels production, sustainable agricultural programs, public works, power and infrastructure systems. He has over thirty years experience in product and project design, engineering, and management. Frank's practice has focused on environmentally responsible, high efficiency, low emission engineered chemical processes, cogeneration and utilities systems for a variety of manufacturing, hospital and other public organizations, government and military installation central power plant and "smart buildings" applications.

The U.S. Air Force recognized his "RDIUP" modular public works utilities system for forward military base camps with the DoD's Nunn-Perry Award.

He has presented numerous environmental sustainability, efficiency and renewable energy papers, presently holds two U.S. Patents for energy and process control systems, and has

patentable work ongoing in gasification, power and related environmental fields. A major subject area he addresses is the depletion and contamination of freshwater resources and is professionally dedicated to water protection, conservation and reutilization.

Chief Financial Officer: Rod Kreie is a graduate of Southwestern College, Winfield, Kansas and currently serves on their board of trustees. As a CPA, he practiced public accounting for almost 25 years doing tax planning and consulting. He was president of Southwest Bank, Ulysses, KS, and continues to provide consulting services to financial institutions. Mr. Kreie has also been involved in farming and other business ventures.

He was chairman of Grant County Economic Development for over 20 years, president of the Chamber of Commerce, a Ulysses City Councilman, and actively involved in several other local and state boards. He is an active Rotarian and was District Governor for District 5690 in 2007-2008. He is currently the District Foundation Chair and Youth Exchange Officer for his District. Mr. Kreie has been the CEO of Great Plains Bioscience Group, LLC, a sustainable agricultural and renewable energy technologies firm that develops biological-carbon cycle energy and fuels production, sustainable agricultural programs, publicworks, power and infrastructure systems. Rod is also a Board Member of the Global Center for Preparedness and Resilience.

Chief Scientific Officer: Thomas A. Dempster, PhD

Dr. Dempster is Associate Research Professor School of Sustainable Engineering and the Built Environment and Coordinator and an instructor for AzCATT's ATP3 Education and Training Committee, at the Arizona State University, Tempe, AZ.

Tom brings Global Aquatic BioSystems, Inc. the current status of aquatic biomass research and direction.

Areas of Expertise

Teaching: General through graduate biology, general through graduate botany, general through graduate phycology, general microbiology, general mycology

Research: microalgae taxonomy, physiology, large-scale cultivation, production of biofuels and high-value products, and bioremediation of air and water using microalgae

AzCATT's ATP3 Education and Training Committee conducts workshops on:

- Principles and Processes: Algae Culture Maintenance, Production and Downstream Processing
- Microalgal Culture Management and Strain Selection
- Large-Scale Algal Cultivation, Harvesting and Downstream Processing
- Routine Measurement and Biochemical Analysis

Director of Production and Quality Control: DeAnna Hatch, PhD

Dr. Hatch is a disciplined, highly creative and resourceful research professional with strong laboratory and chemical theory expertise and extensive chemical laboratory instrumentation

and Quality Control experience.

Additionally, DeAnna has excellent interpersonal skills, and is highly adept at diplomatically facilitating discussions and team meetings.

Additional areas of expertise include:

Expertise:

- Qualified in clinical study management from protocol development to staffing recruitment
 - Procedures to improve efficiency
 - Implementation of new methods and standard
 - Partnered in creation of pilot plant scale facility;
 - Extensive knowledge of analytical analysis and related instrumentation;
 - Experienced in setting up FDA and USP specifications, and quality assurance testing;
 - Strong working knowledge of sterile procedure requirements;
 - Established and ran human and microorganism cell bioassay
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- Thirty years' chemical laboratory equipment and instrumentation hands-on use, procedures and maintenance;
 - Fifteen years Natural Product and Organic Chemistry theory and practice;
 - Ten years' experience in quality control documentation and compliance;
 - Seven years' grant administration experience - secured over \$8 Million in federal & state grant funds.
 - Seven years' biofuels entrepreneur experience;
 - Seven years' product development and quality control in nutritional supplement industry;
 - Five years' experience with microbial assay work;
 - Five years' algae growth optimizing experience;
 - **Patents: Two US Patent applications**
 - hydroxylapatite recycling;
 - novel statistical template for data analysis.

Director of Resilience and Sustainability: Clifford Bragdon, PhD, P.E. Cliff possesses over 40 years of national and international experience related to environmental science- planning, impact assessment, mitigation, simulation-modelling, conflict-resolution and environmental security, working in over 20 countries.

Dr. Bragdon provided consultative services to the United Nations Development Program (UNDP) supporting 170 countries building resilience to sustain development including lecturing in 12 countries in Africa, Europe, Asia and the Middle East. He has also performed notable work on environmental matters for NATO, Pan American Health Organization (PAHO) and the National Academy of Science. He was selected to be an environmental advisor to two U. S. Presidents, Secretary of State Henry Kissinger, four governors, and several mayors, including U N Ambassador and Mayor Andrew Young, New York Mayor Rudy Giuliani, and Moscow Mayor Yury Luzhkov.

Cliff's expertise in sustainability is renown; Dr. Bragdon has been requested by major National and International organizations to prepared environmental guidelines, reports for and testified to the U.S. Congress, as well as EPA, DOT, HUD, FAA, DOE, DOD, DHS,

NASA and the National Transportation Safety Board (NTSB). He assisted in developing environmental impact assessment standards for the federal government and EPA, where he was retained to provide overall review and recommendations for federally submitted environmental impact studies, in 8 states, which exceeded over 200 reports.

Academically he has been a distinguished Professor, Dean, and Vice President at several nationally recognized universities including Georgia Institute of Technology, Florida Institute of Technology and Emory University. He developed the graduate level environmental planning program at Georgia Tech, including offering short courses to governmental and private firms on conducting environmental impact studies.

Dr. Bragdon is the author of 12 books and related chapters, written over 100 articles, lectured at over 75 universities, participated as invited speaker at over 200 conferences and conducted over \$60 million in environmentally related research. As a legally qualified environmental expert he has successfully testified up to the U. S. Supreme Court.

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Consulting Engineer: Barry Liss, PhD ChE, is a licensed Professional Engineer in Florida with over 39 years professional experience in the technical, financial and management aspects of energy and environmental engineering, including process and project engineering, regulatory compliance, marketing and technical support of air, water & wastewater, odor management, soil and ground water remediation, bio-mass & municipal waste to energy and hazardous waste processing systems; also synthetic fuel technology, coal conversion systems, fluidization engineering and fluid particle systems and alternative energy systems. Most recently, medicinal plant extraction/purification techniques and recombinant medicinal species production.

CURRENT WORK EXPERIENCE

2014-Current Enviro Power Renewable, Inc. – Lead Process Engineering Consultant

Overall process engineering responsibility for integrating water, wastewater and solid waste facility designs for EPR waste-to-energy projects worldwide. Helped secure air permits for two major waste to power projects as minor sources utilizing advanced air pollution control techniques.

2014-Current Creative Environmental Systems, LLC – Managing Member

Development and commercialization of patent pending advanced wastewater treatment systems for municipal and industrial applications.

2011-Current Mobilenergy, LLC – Managing Member

Overall process engineering integration and cost estimation consulting for waste to energy project clients including PRM Energy Systems, Inc., Hitemp Tech Corp, Kearns Waste Science Group, Enviro Power Renewables, Inc. & Enviro Power Management.

2005-Current - Reardon Environmental, Inc.

Technical Marketing Consultant – Provides chemical engineering expertise to quantify reagent usage for company's ISCO based soil and groundwater remediation projects. Also provide marketing networking and regulatory support functions.

CONSULTING EXPERIENCE

Innviron Corporation/EnviroPower Management, Inc. Senior Process Engineering Consultant

Proposal and project management on solid waste management systems design, permitting and planning projects including waste-to-energy, composting, transfer stations, water treatment, wastewater treatment and air emissions control projects, including international tender response preparation. Overall process engineering responsibility for integrating water, wastewater and solid waste facility designs for over a dozen waste-to-energy projects worldwide

Classi Environmental, LLC New Business Development Consultant

Marketing, proposal and project management responsibilities on all areas of energy and environmental engineering consulting including project planning, permitting and management for solid waste

management, waste-to-energy, water treatment, wastewater treatment and air emissions control systems and services. Developed advanced UV-Oxidation, electrocoagulation, chemical precipitation and activated sludge technologies for municipal and industrial wastewater treatment.

Southern Waste Systems *Odor Management Consultant*

Prepared permit application & modifications for SUN RECYCLING 12 - COLLEGE AVENUE MRF Odor Management Plan.

Noyes & Associates, Inc. *Consultant & Independent Representative*

Prepared wastewater project proposals and helped market its patented water and wastewater treatment technologies. Also prepared business plan and supported capital funding efforts. Helped develop program and team to enable small communities to take over water utilities from counties or other larger entities and benefit with new revenues.

Zyme-Tech, Inc

Successfully implemented mal-odor abatement protocols in all waste management applications listed next. Developed formulations and application techniques for bio-enzymatic treatment of mal-odors at landfills, WWTP's, composting and other waste management facilities. Prepared business plan for company expansion.

NYSFC/Private Capital Investors

Technical feasibility and economic evaluation of technological investments and private development of novel energy sources. Performed technical, economic, feasibility and risk analyses for waste management and alternative energy projects. On list of consultants at Office of Energy-Related Inventions at the U. S. D.O.C.

DOE/METC *University of Massachusetts*

Review of the thermodynamic, physical - chemical & detailed design issues for modeling fluid bed coal gasifiers.

Hydrocarbon Research, Inc

Performed analysis of fluidization aspects of a commercial scale dynacracking reactor prototype. U. S. patent coverage was obtained for HRI for this novel reactor configuration. Authored internal reports on dynacracking reactor design, alternative configuration analysis, oxygen injection and state of the art reviews on fluidized packed beds and regimes of fluidization. Developed cold flow test programs.

Systems, Science and Software

Prepared state of the art survey on high temperature fluidization and ash agglomeration which resulted in the identification of a novel approach to the determination of incipient fluidization of sinterable solids. Assisted in population balance model preparation and data analysis related to coal gasifiers.

TRW Energy Sys. Group

Performed fluidization analysis of aspects of ICGG-Cogas Coal Liquefaction/Gasification process.

Consulting Engineer and Project Manager, Moshe Saldinger

Summary:

Engineer and Project Manager with 30 years' experience in the water and wastewater industries providing technical support, project management and business development services globally with diverse international experience in Australia, Israel, India, Jamaica and China.

Key Skills and Experience:

- **General Manager** of a wastewater operation & management company in Kingston, Jamaica.
- **Global Business Development** of water and wastewater treatment projects.
- **Project Manager:** From Tender to Handover including Design Management, Procurement, Construction, Commissioning & Operation of large Water and Wastewater Treatment Projects.
- **O&M Manager:** Setting up an O&M company, managing operation of a 75,000m³/Day WWTP.
- **Technical Consultation:** Water & Wastewater Treatment Project Design and Technical Support.
- **Director of Government/Private Owned Utility.**

Education: Bachelor of Science in Agricultural Engineering (Civil) - Water & Soil, 1981 - 1985
The Technion - Israel Institute of Technology, Haifa, Israel

Career Summary:

Global Business Development, Project Management & Consultation - Sep 2014 - Current, **Israel**
EMT Global Limited. – General Manager - Water & Wastewater, China
General Manager / Project Director - Water & Wastewater 2007 – Sep 2014, **Kingston, Jamaica**
Project Manager, Zenon Israel (part of GE Water) - 2005 - 2007, **Kfar Saba, Israel**
Project Manager / Consultant - 2003 - 2005, **Perth, Australia**
Chief Engineer, Amiad Australia - 1998 – 2002, **Melbourne, Australia**
Water & Irrigation Consultant, Witec International - 1987 – 1990, 1996 – 1998, **Perth, Australia**
Irrigation Business Development Manager, Nagarjuna Palma India - 1995 – 1996, **Hyderabad, India**
Project Manager, Mekorot - Israel Water Company - 1994 – 1995, **Ramla, Israel**
Senior Engineer, Kaufmann Engineering Consultants - 1985 - 1987, 1990 - 1994, **Jerusalem,**

Detailed Experience Record:

Global Business Development & Consultation – Water & Wastewater, Since Sep 2014

EMT Global Limited, Israel

- Global business development, promoting Israeli innovative technologies globally.
- Providing technical support to water & wastewater contractors & consultants.
- Developing water, wastewater & renewable energy projects.

General Manager –Wastewater Operation & Management Company Limited

Ashtrom Building Systems Ltd., Kingston, Jamaica, 2007 - 2014

- Setting up and managing a wastewater operation and maintenance company.
- Developing sustainable operation methodologies including: effluent reuse, solar energy, sludge management and promoting educational environmental centre for wastewater treatment.
- Director in a government owned Wastewater Treatment Utility.

Project Manager / Director – Water & Wastewater

- Project director for design, construction, start-up and commissioning of a US\$50m wastewater treatment project (75,000M³/Day, phase 1 of 3 with total final capacity of 225,000m³/day).
- 10Km/30” main pipeline construction project including valves, water meters and connection to existing facilities, valued at US\$15m.
- Rehabilitation of sewerage network and conveyance system, valued at US\$12m.
- Managing Water & wastewater business development activities in the Caribbean region.

Project Manager - Zenon Systems Ltd. (Part of GE Water), Israel, 2005 - 2007

- Project design management services for water and wastewater treatment projects using Zenon’s MBR technologies.
- Construction of a 3.0ML/Day industrial wastewater treatment plant for Bromine Compounds Ltd, Ramat Hovav, a 1.0ML/day for Teva Tek, Ramat Hovav, Israel
- Design & construction of a 4.0ML/Day municipal wastewater treatment plant at Tel Aviv Airport, Israel.

Freelance Water Consultant, Perth, Australia, 2002 - 2005

- Design Manager for a Thermal Desalination (MSF) plant for BHP Billiton Ravensthorpe Nickel Project, WA for Weir Services Australia (Weir Techna, France)
- Project Manager for the design and construction of 2 wastewater treatment plants for BHP Billiton Ravensthorpe Nickel Project, Western Australia for Weir Services Australia (The Weir PLC Group, UK).
- Project management services for the design, installation and commissioning of Mechanical Vapour Compression (MVC) Desalination plant for VA Tech Australia (WA BAG, Vienna, Austria).
- Managing the design process of various water treatment, filtration and reuse projects for Burns and Roe Worley Ltd, Perth, Western Australia.

Chief Engineer - Amiad Australia Pty. Ltd, Melbourne, Australia, 1998 – 2002

- Heading the water treatment and irrigation design department. Designing water treatment systems for industrial, municipal and mining applications.
- Design management, sales and marketing of approx. 10,000Ha of irrigation projects.
- Acting as centre of expertise in water treatment, filtration and irrigation in an international operation.

Water / Irrigation Consultant - Witec International, Perth & Melbourne, Australia, 1996 – 1998

- Designing water supply and irrigation systems.
- Initiating collaboration and liaison with Israeli irrigation and water treatment equipment suppliers.
- Providing consulting services to irrigation companies, local authorities, engineers and equipment suppliers.

Irrigation Business Development & Technical Manager – Nagarjuna Palma India Limited, Hyderabad, India, 1995 – 1996

- Setting up and marketing of a new Indo-Israeli irrigation joint venture.
- Managing design processes, setting up design department, supervising national marketing and projects sale.
- Technical support and training to engineers, field staff and customers in water treatment, filtration and irrigation systems design and practices.

Other Relevant Work Experience:

- Project Manager - Mekorot - Israel Water Company, Israel, 1994 – 1995
- Senior Design Engineer – Kaufmann Engineering Consultants Pty Ltd, Jerusalem Israel, 1985 - 1987, 1990 – 1994
- Irrigation Consultant, Perth, 1987 - 1990
- Research Officer - Research work for the Institute for Science and Technology Policy, Murdoch University, Western Australia, 1992
Conducting Research into On-Site Water Resource Management
- Jack McIlroy, Archaeological Consultant, Perth, Western Australia, 1987
Archaeological Officer, Field Survey and Data Collection, Excavation and Drafting
- Israel Museum, Department of Antiquities, Jerusalem, Israel, 1979 – 1980
Research Officer, Archaeological Survey of Nabatean settlement in the Negev Desert

Professional Organizations Membership:

Institute of Engineers – Civil, Australia (MIEAust)

Member of the Australian Water Association

Institute of Engineers – Israel

Caribbean Water & Wastewater Association

Published Papers:

SALDINGER, M. "Small Scale Wastewater Treatment Technologies in Australia - A Guide"
The Institute for Science and Technology Policy, Murdoch University, Western Australia

Consulting Engineer and Project Engineer Dr. Ganesh V. Kumar, PhD

Key Assignments: Water & Wastewater Treatment, Waste Recovery

Technology Development:

- Sludge less De-Coloration of Colored Wastewater. (Patent Pending)
- Raw Biogas Upgrading & Bottling
- Super Oxygenation of Drinking Water

Turnkey Implementation:

- Supervisory Project Manager for all CCE-CCE WTE WTP projects
- Designed, supplied and commissioned textile dyeing wastewater treatment plant for textile effluent in Sihanouk Ville, Royal Crowntex Inc (RCI), Cambodia. 1 Million Liters Per Day
- Designed, implemented and commissioned bottled oxygenated water plant. This is the first such plant in Asia based on Asian technology. This plant has built in capability to produce alkaline water (negative ORP) and energy water as well, AENO Fresh, Johor Bahru, Malaysia. 10,000 Bottles/Day
- Designed, supplied & commissioned bottled mineral water plant for Malee Mineral Water, Mersing, Malaysia. 125,000 Bottles/Day
- Designed, supplied & commissioned integrated waste recovery plant including pollution control systems for 5E Resources, Pasir Gudang, Malaysia. Overall 75,000 Liters/Day
- Designed, supplied & commissioned lube oil moisture removal system for SPM Oil Recycling, Ipoh, Malaysia. 10,000 Liters/Day
- Designed & commissioned biological waste water treatment system for MSM Food, Batu Pahat, Malaysia. 30,000 Liters/Day
- Designed & commissioned biological waste water treatment system for Eng Hap Heng Manufacturing, Batu Pahat, Malaysia. 20,000 Liters/Day
- Designed, supplied & commissioned used automotive lube oil re-refining system for Toan Thang Loi Company, HCM, Vietnam. 8,000 Liters/Day
- Designed, supplied & commissioned super oxygenated bottled water plant for Good Health Oxygen, Johor Bahru, Malaysia. 200,000 Bottles/Day
- Designed, implemented and commissioned bottled oxygenated water plant for VSRO Purified System. This plant has built in capability to produce Oxygenated Water & Alkaline water (negative ORP), Johor Bahru, Malaysia. 60,000 Bottles/Day
- Designed & supplied MBR based containerized sewage treatment plant for Water Works Technology, Calgary, Canada. 5 Units of 20,000 Liters/Day.

Design Services:

- Design of Textile dyeing wastewater treatment system for reuse. Tirupur, India. 3 Systems, 10 Million Liters/Day, 5 Million Liters/Day & 4 Million Liters/Day
- Design of 100MGD sewage treatment plant for Hyderabad city for Etimaad Engineering (Private) Limited, Lahore, Pakistan. 100 Million Gallons/Day
- Design review of municipal sewage treatment plant in Yunan, China. 5 Million Liters/Day.
- Design review of commercial building sewage treatment system for Cam Tam Quality Management & Environmental Technology Ltd, HCM, Vietnam
- Design of Anaerobic Digestion (CMART) based treatment plant Palm Oil Mill Effluent for Ladang Rayat, Malaysia. 1.4 Million Liters per Day

Consultant Services:

- Consultant for US Filter to analyze the piping system in their ultra-pure water plant at Chartered Semiconductor Manufacturing, Singapore.
- Consultant to Goodform GRP Pte. Ltd, Singapore for designing and installing the FRP piping from raw water intake to RO building for Hyflux Desalination Plant located at Tuas, Singapore.
- Conceptualized, formulated, and implemented polymer nanofiber based molecular filter project for Defense Science Technology Authority, Singapore through National University of Singapore.

Environmental Consultant: Daniel G. Noyes is the patent holder for # 6315903 /Method for Processing Liquid Waste and inventor of the DMR BioReactor and the following:

- Development of Process Technologies to Treat Hyper-Concentrated Organic Waste Streams (>100,000 mg/l BOD);
- Development of e-Cell technology,
- Development of Fluidized Bed BioReactor,
- Development of One Moving Part Treatment Plant,
- Development of the Kinetic Pump having a Centerless Impeller,
- Development of High Efficiency Process to Entrain Gas into Solution,
- Founded , Ecoloquip Inc.,
- First Small Clarifier Design to Utilize Maintenance Free Enclosed Gearbox,
- Development of Automatic Backwash Filter without Valves or Pumps,
- Assisted in Writing of Standards for the City of Austin Lift Station Design and Odor Control,
- Assisted in Writing Wastewater Treatment Plant Design Criteria for the Texas Natural Resource Conservation Commission ,
- Instructor at the Texas A&M Short School for Treatment Plant Operator Certification

Other Experience:

Downstream Environmental, L.L.C. – President, Founder. Specific application of the DMR BioReactor in the marketing of Non-Hazardous Wastewater Treatment, specifically concentrated grease trap waste, leachate, grit and septage. Projects include a successful 2-year pilot plant operation, which culminated in development of an urban friendly process with a 95% odor reduction and treatment efficiency in excess of 99.999%, allowing for direct discharge into public waterways.

e-Cell Inc. - President, Founder. Developed e-Cell technology from lab unit to commercial scale systems. Created sales and marketing strategies and networks. Full size units used in Grumman Aerospace, Inc., Georgia-Pacific, Inc., the Abbeyville, La. Superfund site, and at the pilot plant system for the Grease Spot, L.L.C.