



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Bristol Landfill Expert Panel Members



Robert C. Bachus, Ph.D., P.E., D.GE
Senior Principal, Geosyntec Consultants
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Robert Bachus is a Senior Principal engineer based in Georgia with more than 30 years of professional experience focused on geotechnical engineering, geoenvironmental engineering, waste by-product characterization, and the permitting and design of waste containment facilities.

Bob is nationally recognized for his expertise in geotechnical site characterization, in situ and laboratory testing, settlement and slope stability analysis, and performance monitoring of geotechnical and earthen structure systems. He has worked extensively on the design and rehabilitation of earth dams, levee structures, and earth retaining systems, with extensive experience on soil and rock strength characterization and slope stability assessment. Bob applied his expertise to not only resolve construction difficulties related to a 250-ft high gold mine tailings dam, but also design issues associated with permanent access roads on levees and dredged material containment dikes. He is a leading authority in the characterization, assessment, and construction of engineered structures in areas underlain by karst geologic features.

**Craig H. Benson, PhD, PE, DGE, BCEE, NAE**

Hamilton Endowed Chair in Engineering

Engineering Systems and Environment

University of Virginia

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Dr. Benson's expertise falls in the discipline referred to as geoenvironmental engineering. This discipline is at the interface of the built and natural environments, and deals with issues in the subsurface or interactions between conditions at the earth's surface and the subsurface. In most cases, the important objective is to protect soil and ground water or to engineer systems that reduce emissions or save energy. Achieving these objectives requires knowledge of the mechanisms controlling energy and mass transfer in the subsurface and development of creative approaches to control the rate at which energy and/or mass is transferred. These principles are applied to controlling contaminant migration in the unsaturated zone and ground water, managing the movement of heat and water in near-surface soils, and assessing energy usage and emissions associated with geological engineering structures at the interface of the earth's surface.

Dr. Benson's research in geoenvironmental engineering fits in three broad classes: design and assessment of environmental containment systems for municipal, hazardous, and radioactive wastes; reuse and recycling of industrial byproducts for sustainable construction applications; and sustainability assessment of geological and civil engineering systems. In each of these areas, he emphasizes a full range of study from basic theory to practice and address energy and mass transfer issues. His research includes fundamental laboratory studies, development of computer models, and practical field demonstration of new technologies. In many cases, his research findings are validated at full-scale in operating facilities or infrastructure in collaboration with industry and/or government agencies.



Eric D. Chiado, P.E.

Vice President, Civil & Environmental Consultants, Inc.
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Mr. Chiado has 33 years of engineering and management experience in designing, permitting, and construction of municipal and industrial waste disposal facilities. He has provided comprehensive design, permitting, and management services to the waste industry to include preparing detailed landfill grading/filling plans and details, analyses and design of landfill liner systems, leachate collection, transmission, storage and pumping systems, gas extraction and destruction/utilization systems, and sediment and stormwater management systems. Mr. Chiado has also prepared numerous closure and post-closure plans for these facilities, to include developing cost estimates for closure, operation, and maintenance of these facilities.



Robert B. Gardner, P.E., BCEE

Senior Vice President/National Expert on Solid Waste Collection and Routing and on Solid Waste Finance and Rate Studies,
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Robert Gardner, PE, BCEE, is a Senior Vice President and leads SCS's nationwide solid waste management practice, including landfill engineering, landfill gas management, solid waste studies, landfill environmental systems, liquids management, operation and maintenance, and construction. He works closely with SCS's national and regional clients. Mr. Gardner is also our National Expert on Solid Waste Collection and Routing.



John T. Novak, Ph.D.

Professor Emeritus

The Charles E. Via, Jr. Department of Civil and Environmental Engineering, College of Engineering
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Novak is a veteran of the civil and environmental engineering field. His research career has focused on the treatment of water, wastewater, municipal solid waste, and hazardous waste. He is a recognized expert in bioflocculation research in wastewater treatment, spanning activated sludge process, anaerobic digestion, dewatering, conveyance, and biosolids storage.



Tony Sperling, P.Eng., Ph.D.

President, Sperling Hansen Associates

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Dr. Sperling, P.Eng., Ph.D., is a landfill design specialist with a Doctorate in Geotechnical Engineering. Over the past eighteen years Tony has managed or participated as the Lead Engineer in more than 750 engineering design, development and closure projects at landfills, as well as hydrogeotechnical investigations, environmental monitoring studies and other solid waste related projects for municipal and private sector clients. Dr. Sperling develops the most appropriate closure design concepts for a site, based on his extensive experience in landfill closure, and coordinates design teams to ensure that project objectives are realized and systems are integrated.

**Timothy D. Stark, Ph.D.**

Professor of Civil & Environmental Engineering
University of Illinois at Urbana-Champaign
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Timothy D. Stark is a Professor of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign with an expertise in Geotechnical Engineering. Dr. Stark has been conducting research on the static and seismic stability of landfills with and without elevated temperatures for the last twenty-five (25) years. His research on the stability of waste containment facilities has led to a better understanding of design values of geosynthetic interface strengths, importance of interim landfill slope conditions, and three-dimensional slope stability analyses for geosynthetic lined slopes. In the last fifteen years he has been studying the causes and effects of elevated temperatures in various types of landfills, possible remedial measures for elevated temperatures, and the long-term durability of geosynthetics subjected to elevated temperatures.

Dr. Stark has received a number of awards for his research, teaching, and service activities including recently: 2022 Cross USA Lecturer from the American Society of Civil Engineers (ASCE); George H. Norman Medal, ASCE, 2019; Technical Editors Award, ASTM, 2018; Best Paper in Geosynthetics International Journal, 2016; 2015 James M. Hoover Lecturers at Iowa State University; R.S. Ladd D18 Standards Development Award, Standard Designation D6467, ASTM, 2014, 2011, 2002; Thomas A. Middlebrooks Award, ASCE, 2013 and 1998; Associate Editor Award, Journal of Geotechnical and Geoenvironmental Engineering, ASCE, 2012; Journal of Legal Affairs and Dispute Resolution in Engineering Scholarly, Paper, ASCE, 2011; Walter L. Huber Research Prize, ASCE, 1999.



Todd Thalhamer, P.E.

President, Hammer Consulting Services

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Todd Thalhamer is a registered civil engineer and a senior waste management engineer for CalRecycle. After nineteen years of service, he has recently retired from El Dorado Hills Fire Department. He received his Bachelor of Science degree in Environmental Resource Engineering from Humboldt State University in 1992. During his thirty years in the waste industry, he has managed many environmental responses, large-scale debris operations, subsurface fires, and hazardous waste removal projects.

Todd has also provided environmental and fire suppression consultation at several large-scale combustion issues at major waste facilities throughout the United States, Canada, and overseas. Todd has performed duties as the Incident Commander/Operations Chief/Disaster Matter Expert for multiple FEMA and California Office of Emergency Services incidents and has supported other international fire responses for the City of Vancouver, Republic of Panama, and the World Bank through Hammer Consulting Services. Todd also provides hazardous waste operations and landfill fire training.



Mark A. Widdowson, Ph.D.

Professor and Department Head

The Charles E. Via, Jr. Department of Civil and Environmental Engineering, College of Engineering, Virginia Tech

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Dr. Widdowson is the co-author and principal investigator of the solute transport code SEAM3D (Sequential Electron Acceptor Model, 3D Transport) and the decision-support tool NAS (Natural Attenuation Software). His research expertise includes mathematical modeling and experimental studies on the fate and transport of contaminants in soil, sediments and groundwater, including chlorinated solvents (PCE, TCE, vinyl chloride); chlorinated compounds (PCBs); petroleum hydrocarbons (benzene, BTEX, MTBE), coal tar and creosote (PAH compounds); inorganics (nitrate, nitrite); metals (arsenic).



Michael G. Williams, CPG

Senior Environmental Advisor / Principal, Senior Consultant,
Golder Associates, Inc.

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Mike Williams is a Principal and senior consultant with 30 (1990 to date) years of experience in environmental services and has a broad range of technical, regulatory, and management experience. He has experience with environmental regulations and programs and has managed contracts for both government and private clients. His technical experience includes geologic/hydrogeologic studies, waste management, site assessments, remediation, wetlands, and regulatory compliance.

Mike is responsible for client care and development; regulatory liaison; proposal research, preparation, and presentation; project budgeting; mine permitting, site investigations for the siting of solid waste landfills; Nature and Extent Studies; Assessment of Corrective Measures studies; Presumptive Remedy evaluations; Risk Assessments; Groundwater and Landfill Gas Corrective Action Plans; environmental monitoring and reporting plans; remedial pilot studies; and Alternate Source Demonstrations. He provides technical oversight and review of deliverables and is responsible for client and regulator relations and adherence to project schedule and budget.



Eddie Wyatt

Senior Project Director, Carlson Environmental Consultants, PC
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Mr. Wyatt is the Senior Director of O&M at Carlson Environmental Consultants, PC (CEC). Mr. Wyatt is currently responsible for managing the Operations and Maintenance group to ensure extraordinary service to our clients. Mr. Wyatt has over sixteen (17) years of experience in landfill gas operations and maintenance at over 75 landfill gas (LFG) collection systems across 10 states. LFG experience includes data management to ensure compliance of Title V and NSPS regulations. Mr. Wyatt has been responsible for a very large elevated temperature landfill on the east coast for 9 years of his career.