

# 3<sup>rd</sup> Annual Sustainability Presentation, August 27th, 2020, ASCE Phoenix Branch

The Phoenix Branch will be hosting a virtual presentation comprised of a series of briefs on sustainable infrastructure and life cycle assessment on Thursday, August 27<sup>th</sup>, from 7:15am-11:35am. Presenters and agenda are listed below. The registration cost is \$5 for ASCE or ISI members and \$10 for non-members. Students may attend free with a valid education e-mail address. Professional Development Hours will also be e-mailed to each attendee. Register [HERE](#).

**Mike Naber, Planning & Engineering Division, Arizona State Land Department, Ph.D., P.E., CSSGB,** ENV SP has 34 years of experience in water resources, environmental, and nuclear engineering. He has been at the ASLD since 2005. His work deals with infrastructure plans, reports, and cost assessments involving drainage, water, wastewater, dry utilities, and streets. His degrees are from Arizona State University and the University of Washington. He has taken several ASCE sustainable infrastructure courses, is a certified ENV SP since 2014, and has been serving as the ASCE Phoenix Branch Sustainability Chair since February 2018.



**Hongyue Jin, Ph.D., University of Arizona (UA),** is an Assistant Professor in the Dept. of Systems & Industrial Engineering. She received her PhD degree in Industrial Engineering from Purdue University in 2018 and joined UA in the same year. Her research focuses on techno-economic analysis, life cycle analysis, and supply chain optimization for sustainability. Her research has been funded by the US Department of Energy through Critical Materials Institute, National Energy Technology Laboratory, and Advanced Research Projects Agency-Energy. She received the Rising Star Award from the American Center for Life Cycle Assessment in 2019.



**Steven Olmsted, Arizona Department of Transportation, NEPA Assignment Manager,** Environmental Planning, Innovative Programs, Major Studies. Mr. Olmsted assists with delivering ADOT's \$1B annual construction program. He currently manages programs for sustainable transportation, resilience, 2-D, 3-D, LiDAR design engineering integration, the USGS water modeling partnership, asset management, and assists FHWA with national State DOT innovation adoption. In addition, Steve has held several finance, budget and resource management positions at ADOT.



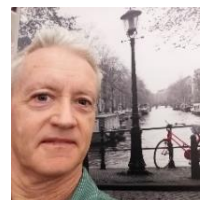
**Mikhail Chester, Arizona State University, Ph.D.,** is an associate professor in the School of Sustainable Engineering and the Built Environment. He has a joint appointment with the School of Sustainability. Previously, he was a post-doctoral researcher at the UC Berkeley and guest researcher at Lawrence National Laboratory. His work spans infrastructure systems including power, water, and transportation. His area of expertise is the energy and environmental assessment of large infrastructure systems. His research has focused on transportation systems and cities, and life cycle and supply chain effects and their human and environmental impacts.



**Tricia Balluff, Office of Environmental Programs, City of Phoenix,** Manager of the water, wildlife, and NEPA programs, and has over 19-years of experience working in ecological research, environmental consulting, and local government environmental compliance and policy. Tricia completed her undergraduate studies at Colorado State University and received her M.S. from Arizona State University with a focus on riparian ecology. Tricia works with city departments and external partners to further green infrastructure in the southwest, to develop local policies related to green infrastructure, and to identify approaches to further the implementation of GI/LID locally.



**Brian Fellows, Streets Dept., City of Phoenix,** Principal Planner has 30 years of experience in the public, private, non-profit, and academic sectors. Eighteen of these years he specialized in multimodal transportation and the built environment. He currently is overseeing the Transportation 2050 Mobility Studies which has the goal of improving mobility and accessibility for people of all ages and abilities. Brian has been a research paper reviewer for the Transportation Research Board, an application reviewer for various bicycle programs, and a member of the Tempe Transportation Commission since 2016 and currently is the chairman. He has a BS in Biology from the University of Arizona, an MBA from Arizona State University, and attended Georgetown University.



**Kailey Eldredge, C&S Companies, Inc.,** LEED AP BD+C, ENV SP is a senior consultant who is passionate about the integration of sustainability into airport processes and projects. She focuses on finding sustainable value-driven solutions for country-wide airport design and construction projects and the development of airport specific integration tools. She has national experience and skills in tailoring sustainability efforts to airports; facilitating integrated design and sustainability charrettes and stakeholder engagements to help airports achieve full and continued implementation; developing sustainable airport frameworks; supporting airport and environmental planning; and administration of LEED and Envision rating systems. She has a BS in Environmental and Sustainability Sciences with a minor in City and Regional Planning from Cornell University.



**Mary Anne Derr, Gannett Fleming, Inc.,** P.E. is a Senior Project Manager and Senior Associate for Gannett Fleming, with 30 years of experience with the firm. Mary Anne received her Bachelor of Science in Civil Engineering from Old Dominion University in Virginia and has extensive experience managing major transportation and transit projects, including three stages of the PHX Sky Train, two sections of the WMATA Subway System, major transportation projects for MTA in Los Angeles and Valley Metro Rail in Phoenix, as well as several notable highway interchange projects for the Pennsylvania Department of Transportation.



## AGENDA

- INTRODUCTORY REMARKS
  - The ASCE Sustainable Infrastructure (SI) Program (Mike Naber) ..... 7:15am – 7:25am
  - What’s New with respect to Sustainable Infrastructure? (Mike Naber) ..... 7:25am – 7:40am
- LIFE CYCLE INFRASTRUCTURE ASSESSMENTS
  - Life Cycle Assessment of Emerging Technologies on Value Recovery from Electronic Waste (Hongyue Jin)..... 7:40am – 8:05am
  - BREAK ..... 8:05am – 8:15am
  - Sustainable Transportation Total System Thinking: ADOT’s Approach (Steve Olmsted) ..... 8:15am – 8:40am
  - Sustainability and Resilience for Complexity (Mike Chester) ..... 8:40am – 9:05am
  - BREAK ..... 9:05am – 9:15am
  - An Overview of a Triple Bottom Line Cost Benefit Analysis of Green Infrastructure/ Low Impact Development in Phoenix (Tricia Balluff) ..... 9:15am – 9:40am
  - Water Resource & Land Development LCIA and Infrastructure (Mike Naber) ..... 9:40am – 10:05am
  - BREAK ..... 10:05am – 10:15am
- SUSTAINABLE INFRASTRUCTURE IMPROVEMENTS
  - The City of Phoenix’s Key Corridors Master Plan: Planning and Engineering Guidance for Safe, Context-Sensitive, Sustainable Streets (Brian Fellows) ..... 10:15am – 10:40am
  - BREAK ..... 10:40am – 10:50am
  - Integrating Sustainability into Airport Projects (Kailey Eldredge) ..... 10:50am – 11:10am
  - PHX Sky Train achieves Envision Gold (Mary Anne Derr) ..... 11:10am – 11:30am
- CLOSING REMARKS (Mike Naber)..... 11:30am – 11:35am

Today’s best engineers and professionals apply sustainability practices and principles to their infrastructure projects. Benefits of sustainable infrastructure over conventional infrastructure are lowering the project life cycle cost; improving social, economic, and environmental conditions onsite and in the community; enhancing your resume for a scope of work; and providing value to the owner of the land development project. This presentation is a series of briefings highlighting sustainable infrastructure improvements and life cycle infrastructure assessments in Arizona. For more information, contact Michael Naber, PHX Branch Sustainability Chair, at [mnaber@azland.gov](mailto:mnaber@azland.gov) or 602-542-0448.