

Profile

Goal. Curate and apply skills to advance the cultural and system changes needed to achieve balance across systems.

Principles. Research and listen to understand issues. Respond thoughtfully and in the language of the discipline at hand. Treat everyone with respect by being responsive, diligent, organized, flexible, kind, and honest. Lead by example.

Service and Publications.

- 2019 – present: Strategic Advisory Committee for the Urban Drawdown Initiative (UDI)
- 2018 – present: Board of Directors, RentLab (software start-up)
- 2018: Primary Author of *Resilience Implications of Energy Storage in Urban Water Systems* (JSDEWES)
- 2018: Primary Author of *Actualizing Water and Energy Systems Integration: What is taking so long?* (JSPG)
- 2018: Contributing Author of *Big Data for Regional Science* (Routledge)
- 2015 - 2017: Board of Directors, Foothills Land Conservancy (land trust)
- 2014 - 2016: Board of Directors, United Way of Greater Knoxville (2012-14: Allocations Committee, 2011: Loaned Executive)
- 2013 - 2014: 40 Under 40 and Local Business Green Achiever (Knoxville Business Journal)
- 2013: U.S. Green Building Council East TN Chapter Advocacy Award
- 2012: Contributor to *Acting as if Tomorrow Matters: Accelerating the Transition to Sustainability* (Environmental Law Institute)
- 2011: Chamber Green Achievement Award: Innovation in Renewable Energy, and AIA Sustainable Design Award Juror
- 2011: Contributing Author of *Sustainability and the US EPA* (National Academy of Science)
- 2009 - 2012: Southeast Sustainability Directors Network Founder and Chair

Memberships.

- Alliance for Water Efficiency, American Society of Agricultural and Biological Engineers, American Water Resources Association

Experience.

Sutherland & Associates

08/2013 – present

Principal

08/2013-present

Provide consulting services that blend economic, social, and environmental balance into soft and hard urban systems:

Current Projects

- Research and Technical Assistance, Natural Resources Defense Council - The American Cities Climate Challenge cities
- Fund Management, the Carbon Neutral Cities Alliance (CNCA) Innovation Fund – Global cities
- Fund Management, the Green Infrastructure Leadership Exchange – North American cities, counties, and utilities
- Fund Management, the Funders Network (TFN) Partners for Places (P4P) – North American foundation members
- Fund Management, the Mobility Fund – North American foundations
- Fund Management, the Urban Sustainability Directors Network (USDN) Innovation Fund – North American local governments

Past Projects

- 2020 Facilitation Tool – Elevate Las Cruces: for the City of Las Cruces
- 2020 Workshop – Water and Energy Considerations in Las Cruces: for the City of Las Cruces
- 2019 Metrics - Evaluation and Database System Design: for the Southeast Sustainability Directors Network
- 2019 Framework - Applied Water and Energy Integration: for the Summit Foundation
- 2019 Convening - American Climate Cities Challenge Partnership Guide: for Bloomberg Philanthropies
- 2018 Evaluation - Framework and Metrics Development: for TFN P4P
- 2018 Concept Development - Game Changer Fund: for CNCA
- 2017 Partner Mapping – Regional Landscape Project: for the National Wildlife Federation (NWF)
- 2017 Framework - City Adaptation Planning: for the Summit Foundation
- 2016 Action Report - Southeast Energy Innovation Workshop: for U.S. DOE with Oak Ridge National Lab
- 2016 Practices Scan - Ecological Design in the Built Environment: for the Kendeda Foundation
- 2016 White Paper - Technology for Energy Extraction from Water Systems: for U.S. DOE with Oak Ridge National Lab
- 2015 Roadmap - Carbon Neutrality: for CNCA with Innovation Network for Communities (INC)
- 2015 Literature Review - Urban Sustainability Strategy: for USDN with INC
- 2015 Practices Scan - Cities and Carbon Emissions Pricing: for the Summit Foundation with INC
- 2015 Field-development Scan - The Civic Technology Landscape: for USDN
- 2015 Network Mapping - Urban Climate Resilience Networks: for Kresge Foundation with INC
- 2015 Network Design - Regional Networks Pilot Project with 8 regions: for USDN
- 2014 Facilitation - Implementation Groups, President's Climate Action Plan: for National Oceanic & Atmos. Assoc. (NOAA)
- 2014 Field-development Research - Urban Water Learning Project: for Surdna Foundation and USDN with INC
- 2014 Field-development Research - Emerging Sustainability Standards for Water Systems: for Walton Foundation with INC
- 2013 Guide - LED Streetlights: for Southeast Michigan Regional Energy Office and USDN
- 2013-15 Coordination: The Southeast Sustainability Director's Network: for Southeastern U.S. cities / counties

City of Knoxville, Tennessee

10/2007 – 08/2013

Director, Office of Sustainability

01/2012-08/2013

- Creatively funded, developed, directed and represented the city's first Sustainability Office:
 - Designed Mayor's Energy Challenge with Pathway Lending: \$10,000,000 in local funding captured
 - Wrote and ranked top 20: \$5,000,000 Bloomberg Mayors Challenge for design of circular urban agriculture system
 - Wrote and won \$400,000 IBM Smart City Challenge for residential energy efficiency in low income housing
 - Wrote and won \$30,000 from TN state environmental department for new stormwater permitting best practice project
 - Obtained \$25,000 from the Energy Foundation for Southeast Sustainability Director's Network support
 - Crafted 90 kW 3rd party solar finance model at city convention center, obtained LEED silver certification
 - Installed 24 public electric vehicle charging stations in partnership with DOE & ORNL
 - Implemented Zipcar car share program in downtown and college campus

Program Manager, Energy & Sustainability

10/2009-12/2011

- Oversaw \$2,212,700 in DOE energy efficiency and renewable energy projects, managed the work of the Mayoral Energy & Sustainability Task Force, developed and obtained approval of new city policies:
 - Created the city's first Energy & Sustainability Work Plan with 6 volunteer working groups
 - Executed a \$19,000,000 13-year guaranteed savings energy performance contract
 - Retrofitted 99 city facilities, generating \$1,100,000 annually in energy savings
 - Trained 146 Contractors in green building best practices and energy code updates
 - Retrofitted 19 middle-income homes for energy efficiency
 - Launched \$270,000 in energy efficiency and renewable energy incentives
 - Implemented single-stream curbside recycling for city residents and local government facilities
 - Founded Southeast Sustainability Director's Network (currently 9 States and 38 city members)
 - Won \$600,000 DOE Rooftop Solar Challenge (permitting focus) in partnership with the University of Tennessee

Project Manager, South Waterfront Development

10/2007-10/2009

- Guided planning, schematic and final design, site investigations, land purchases, remediation, and construction of projects relating to a \$14,000,000 private/public waterfront development effort:
 - Budgeted and managed multiple, simultaneous service contracts, including proposal development, consultant selection, contract negotiation, staff management, review of deliverables, and tracking of project financials, schedules, and outcomes
 - Pursued outside funding at every opportunity: built relationships, competed for, and obtained \$1,497,701 in state and federal funds in 2 years, including a \$400,000 EPA Brownfield grant
 - Coordinated engineers, landscape architects, environmental professionals, regulatory agencies, utilities, and departments to facilitate functional planning, design, and construction project execution
 - Developed annual budget requests, responsible for operating, capitol, and grant expenditures and all legal communications

Tennessee Valley Authority

09/2004 – 09/2007

River Scheduler (River Operations Division, Knoxville, TN)

04/2006-10/2007

- Part of a team working with the U.S. Army Corp of Engineers to route the TN River System:
 - Liaison to federal regulatory agencies and consultant on contracted wetlands performance studies
 - Created matrices and technical documents to track operational performance indicators
 - Consistently exceeded on quarterly performance goals by reliably meeting all daily flow requirements
 - Obtained Federal Sensitive Security Clearance and stayed current on software training

Watershed Specialist (Environmental Policy & Planning: AL and TN)

09/2004-03/2006

- Worked to consolidate individual, industry, and agency efforts to solve local water issues:
 - Wrote USDA 319 grant and obtained \$1,500,000 for the Bullrun Watershed Association
 - Managed riparian construction contracts and budgets and facilitated water use conflict resolutions
 - Determined viability of proposed water and land transactions by balancing multiple uses
 - Completed NEPA, EPA Watershed Management / Wetland Delineation, and EPA Resources Protection Act training

Education – University of Tennessee, Knoxville (UTK)

PhD, Energy Science and Engineering (energy generation from urban water systems dissertation)

UTK 2017

- 2017 Chancellor's Citation for Extraordinary Academic Achievement

M.S., Biosystems Engineering Technology (agricultural streams water quality thesis)

UTK 2004

- 2004 Chancellor's Citation for Extraordinary Professional Promise, national park volunteer

B.A., Environmental Studies Concentration, Forestry Minor (state park seasonal ranger)

UTK 2002