Exponent®
Engineering & Scientific Consulting

Nikki Springer, Ph.D., MBA

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Professional Profile

Dr. Springer has a diverse and cross-functional background in sustainability, environmental regulation, land use planning, ecology, and design, which brings a nuanced understanding of the interplay of corporate strategy, compliance, and environmental sustainability to her research and project work.

Dr. Springer has provided expert guidance on corporate sustainability strategy, stormwater compliance, land use planning, habitat conservation, sustainable landscape management, and ecological design for Fortune 100 companies throughout the United States and for large municipal agencies in New York, Los Angeles, and Shanghai. Her project experience and expertise include the development and implementation of design and maintenance strategies for municipal and corporate sustainability plans, environmental risk and liability assessment, innovative stormwater management, public parks, and environmental compliance across national asset portfolios.

Dr. Springer has evaluated and analyzed comprehensive plans to support large land holding entities such as federal agencies, including the Bureau of Land Management, the National Parks Service, and the Department of Energy, and corporate land portfolios regarding infrastructure planning, habitat conservation, mitigation planning, economic impacts, public acceptance, potential for carbon storage, and aesthetic concerns for the development of renewable energy and nature-based climate solutions.

Dr. Springer applies natural resource economic models, life-cycle assessment methodologies, geo-spatial tools, including ArcGIS, and urban planning concepts and standards to assess land use plans, habitat conservation plans, mitigation frameworks, infrastructure development projections, ecosystem services, and landscape carbon storage potential. She uses a broad knowledge of environmental science, economics, regulation, policy mechanisms, and design-based solutions to develop creative strategies for ecological design and planning and to assess development scenarios, comprehensive mitigation plans, and cumulative impacts at the regional, state, and federal scale.

Academic Credentials & Professional Honors

M.B.A., Business Administration, Yale University, 2018

Ph.D., Forestry and Environmental Studies, Yale University, 2018

M.S., Landscape Architecture, Harvard University, 2008

M.S., Urban Planning, Harvard University, 2008

B.S., Architecture, Massachusetts Institute of Technology (MIT), 2004

Laya W. Wiesner Award, 2004

MIT Women's League Scholar, 2000 - 2004

Academic Appointments

Garvan Chair & Visiting Professor in Landscape Architecture, University of Arkansas, 2010

Prior Experience

Environmental & Sustainability Consultant, MugenKioku Corporation, 2016-2022

Research Consultant, The Wilderness Society, 2016-2020

Staff Writer, Yale Clean Energy Finance Forum, 2015-2018

Graduate Intern, Climate & Energy Group, White House Council on Environmental Quality, Office of the President, 2013

Landscape Designer, Earth Asia Design Group, Shanghai, 2010-2011

Departmental Representative, Sustainable Value Networks, Walmart Home Office, 2009-2010

Facilities Manager, Landscape, Irrigation, and Environmental Services, Walmart Home Office, 2009-2010

Design Manager, Team Lead, Walmart Home Office, 2008-2009

Graduate Rotational Internship Program, Walt Disney Imagineering, 2007-2008, 2010

Junior Design Staff, Michael VanValkenburgh Associates, Landscape Architects, 2005-2006

Professional Affiliations

American Planning Association (APA)

American Society of Landscape Architects – ASLA

ASLA Honor Award, Analysis & Planning Category, 2008

Professional Retail Store Maintenance – PRSM (now Connex), past Sustainability Chair

HAZWOPER Training, 2022

Arthur Carhart Wilderness Management Training, US Forest Service, 2012

EPA Certified Stormwater Professional, 2010

Languages

Spanish

Publications

Daue, A., Springer, N. Key Economic Benefits of Renewable Energy on Public Lands. New Haven, CT: Yale Center for Business and the Environment. May 2020.

Doise, E., Beaudoin, K., Iwata, D., and Springer, N. "Maintain and Sustain: Emphasizing Sustainability in Maintenance Practices." Professional Retail Store Maintenance. July/August 2010, pages 19-20.

Felson, AJ, M Pavao-Zuckerman, T Carter, W Shuster, N Springer, E Stander, O Starry, F Montalto. "Mapping the design process for urban ecology researchers." Bioscience, 63 (11), 2013.

Springer, N. "Tricky Questions on Solar Energy, Part 2." Yale Institute on Social and Policy Studies. 7 July 2016.

Springer, N. "Tricky Questions on Solar Energy." Yale Institute on Social and Policy Studies. 16 December 2015.

Springer, N. The MACAT Library: The Organization Man. London: MACAT International, 2018.

Springer, N. The MACAT Library: The Wisdom of Crowds. London: MACAT International, 2018.

Springer, N. "Creative Ways to Finance Solar and Storage Systems." Yale Clean Energy Finance Forum. 5 March 2018.

Springer, N. The MACAT Library: Silent Spring. London: MACAT International, 2017.

Springer, N. "Companies Explore Creative Ways to Purchase Renewable Energy." Yale Clean Energy Finance Forum. 7 November 2017.

Springer, N. "Solar Energy Industries Association Starts a Financing Advisory Council." Yale Clean Energy Finance Forum. 18 July 2017.

Springer, N. "Engineering Clean Energy Infrastructure Is a Balancing Act." Yale Clean Energy Finance Forum. 27 March 2017.

Steinitz, C. and Werthmann, C., (eds) et al, Reviving the Tajo River, Fundacion +SUMA, 2008.

Presentations

Springer, N. The Second Gold Rush: Utility-Scale Solar on America's Public Lands. Rocky Mountain Land Use Institute, Energy Panel, Annual Conference, Denver, 2018

Felson, A., Kong, J., Springer, N., Staeheli, M., Woltz, T. Transformational Learning: Integrating Ecological Research into Design. American Society of Landscape Architects, National Conference and Exposition, Chicago, 2015.

Springer, N. Regional Mitigation Strategies for Utility Scale Solar Development. Maurice C. Shapiro Environmental Law Symposium: The Role of Planning in Federal Land Management, Washington DC, 2014.

Springer, N. Next Generation Mitigation. Association for Environmental Studies & Sciences (AESS) National Conference, Pittsburgh, 2013.

Springer, N. Regional Mitigation Planning in the Dry Lake Solar Energy Zone (poster). National Planning Conference, American Planning Association, Chicago, 2013.

Springer, N. Regional Mitigation Planning in the Dry Lake Solar Energy Zone (poster). Students as Catalysts for Large Landscape Conservation Conference, Colby College, 2013.

Springer, N. Regional Mitigation Planning in the Dry Lake Solar Energy Zone (poster). Student Conference on Conservation Science, New York, 2012.

Springer, N. To Maintain & Sustain. Garvan Chair Department Lecture, University of Arkansas, Fayetteville, AR. April 2010.

Hicks, M., Moseley, D., Springer, N. Sustainable Landscape Management. Walmart National

Compliance Conference. Bentonville, AR. April 2010.

Project Experience

Dr. Springer has been involved in numerous complex projects and independent research consultations relating to the planning, development, operations, and management of public infrastructure and corporate facility portfolios.

Stormwater, Wastewater, Green Waste, & Facility Maintenance

Negotiated, executed, and managed portfolio-wide corporate maintenance and procurement contracts in excess of $50M.

Provided scientific and management support for the development, execution, and verification of a large municipal water use and stormwater management plan.

Developed stormwater management designs and management strategies for theme parks and large urban waterfront parks in cities throughout mainland China.

Developed, implemented, and monitored green waste strategies across 5,000+ facility sites and devised original key performance indices (KPIs) and reporting metrics for annual corporate sustainability and compliance reporting.

Initiated and obtained stormwater permits and stormwater pollution prevention plans (SWPPPs) for new and existing Fortune 100 industrial facilities.

Permitting, Mitigation, & Environmental Assessment

Developed original geo-spatial data sets of solar energy permitting records on federal land across 11 states to assess market demand, predicted environmental impact, and policy amendments.

Provided expert research support to federal agencies regarding innovative land use resource planning tools and mitigation hierarchies toward comprehensive, national infrastructure development plans.

Developed original economic models for current and historical federal rents, royalties, and revenues from renewable energy generation on federal lands.

Assessed the local and cumulative environmental impacts of proposed high voltage interstate transmission corridors.

Sustainability

Provided scientific guidance on the development of corporate sustainability plans across topics on net-zero emissions, water reduction, waste management, sustainable design, environmental justice, life-cycle assessment, risk mitigation, and user experience.

Developed, implemented, and managed storm water best management practices (BMPs), green waste reduction strategies, and environmental and asset risk assessments across a portfolio of 5,000+ individual facility sites.

Executed portfolio-wide capital improvement programs for "smart" irrigation, drought tolerant landscapes, improved facility safety, waste reduction, and hazardous material storage on a national scale.

Developed and reported on sustainability metrics across internal corporate departments.

Developed and implemented sustainable landscape design guidelines and maintenance protocols across national corporate portfolios.

Developed, led, and implemented process improvement strategies for multiple design teams to improve accuracy, safety, and facility operational sustainability.

Developed, led, and implemented sustainability training and education materials and workshops for national maintenance industry organizations.

Developed campus-wide biodiversity management plans and trained operations and maintenance staff for the protection and augmentation of biodiversity and ecosystem health.

Provided expert consultation on the operations and maintenance of sustainable landscapes to the USGBC in the development of the Sustainable Sites Initiative (SITES).

Additional Education & Training

Post-Doctoral Associate, Climate & Sustainability Consortium, Massachusetts Institute of Technology, 2021

Post-Doctoral Research Fellow, Yale Center for Business & the Environment, 2019-2020

EPA STAR Fellow, 2012-2015

Lincoln Institute for Land Policy, Doctoral Fellow, 2016-2017

Yale Institute for Social & Policy Studies, Doctoral Fellow, 2017-2018

Teaching Fellow, Natural Capital, Yale School of Management, 2014-2018

Teaching Fellow, Land Use & Urban Planning, Yale School of Architecture, 2013-2015

Teaching Fellow, Urban Ecology, Yale School of Forestry & Environmental Studies, 2011-2013

Research Fellow, Yale Office of Sustainability, 2012-2014

MIT Women's League Scholar, 2000-2004

Research Grants

EPA STAR Fellow, 2012-2015

Lincoln Institute for Land Policy, Dissertation Scholar, 2017

Berkley Conservation Scholar, 2012

PEO Scholar, 2015-2018