

[SUN-B03]

URBAN WATERFRONTS

INTEGRATING LANDSCAPE ARCHITECTURE AND ECOLOGY IN AN ERA OF CLIMATE CHANGE

DESCRIPTION

The impacts of climate change are dramatic and everywhere. For city dwellers, they are most tangible and visible within the context of our changing urban water systems. This session will explore, through a series of compelling case studies, the role ecologists can play in helping to design our urban waterfronts for a dynamic new future.

LEARNING OBJECTIVES

- Define the many climate-related challenges we face today – and their impact on our urban water systems.
- Understand how to integrate ecological data and environmental approaches in urban waterfront design.
- Explore how ecology can contribute to design innovation through a series of specific case studies.
- Understand how to measure and describe the tangible benefits - economic, environmental, and social - of an ecologically integrated approach.

PRESENTATION OUTLINE

I. Introduction and Context

- A. American, Urban Waterfronts
 1. Water: the Origin of Cities
 2. The Industrial Waterfront
 3. The Recreational River Renaissance
 4. The Sustainable, Adaptive Waterfront
- B. The “New Normal” of Climate Change
 1. Flood frequency and duration
 2. Drought and water shortages
 3. Temperature variation
 4. Impacts on urban waterfronts
- C. Introduction to Case Studies

II. Celebrating a City’s Hidden Water Resource [South Fork Peachtree Creek Master Plan by Susan Stainback]

- A. The Creek Context
 1. Historical Evolution
 2. The Natural System
 3. The Master Plan
- B. Connect, Restore and Improve Lives
 1. Giving priority to nature within the City
 2. Designing immersive experiences for people
 3. Preserving a natural corridor within an urban setting
 4. Improving water quality

III. Linking Human Health and Water Quality [Des Moines Water Works Park by Kim Chapman]

- A. The Planning Context
 1. The Water Works Site
 2. Competition Context
 3. The Park’s Master Plan
- B. The Circuit
 1. Drinking water infrastructure re-imagined
 2. A recreational amenity for the City
 3. Interpreting a diverse landscape
 4. Improving water quality

IV. Living Bulkheads; Taking a Biomimicry Approach [Green Bulkheads by Keith Bowers]

- A. The Challenge
 1. Armoring riverbanks
 2. Aquatic habitat and water quality
- B. The Solution
 1. Rethinking bulkheads to become life-giving
 2. Turning to biomimicry as a framework
 3. Applying sound science as the foundation
 4. Creating a restoration economy



▲ **GINA FORD, ASLA [MODERATOR]**

Gina is Principal, Landscape Architect and Chair of Sasaki's Urban Studio - an energized and interdisciplinary group of practitioners dedicated to the revitalization of cities through rigorous planning, exceptional design and strong community partnerships. Gina's recent work in this realm includes the Cedar Rapids Flood Recovery Planning, Tom Hanafan River's Edge Park, Chicago Riverwalk and HUD's Rebuild by Design. She also pursues this passion by teaching landscape architecture and urbanism studios, recently at the RISD, the University of Nebraska-Lincoln and Northeastern University.

◀ **KIM CHAPMAN, PH.D.,**

Dr. Chapman has 25 years of experience in ecological research, natural resource planning, land restoration and land management. He has worked as staff ecologist for the Michigan Natural Heritage Program, as Midwest regional ecologist for The Nature Conservancy (TNC), and as science and stewardship director for the Minnesota Chapter of TNC. He has taught conservation biology, environmental studies, botany and vegetation management and authored numerous articles and reports for various publications. Dr. Chapman's past projects have involved land and watershed evaluation, natural resource planning, ecological management and restoration, ecological research, botany, ornithology, Midwestern flora and fauna, grassland and forest ecology, mapping and GIS, vegetation classification, government programs and group process facilitation.



◀ **KEITH BOWERS, FASLA**

For nearly three decades, Keith Bowers has been at the forefront of applied ecology, land conservation and sustainable design. As the Founder and President of Biohabitats and Ecological Restoration and Management, Inc, Mr. Bowers has built a multidisciplinary approach focused on conservation planning, ecological restoration and regenerative design. Mr. Bowers has applied his expertise to more than 600 projects throughout North America. His work has spanned the scale from site-specific ecosystem restoration projects involving wetland, river, woodland and coastal habitat restoration, to regional watershed management and natural resource planning, to the development of comprehensive sustainability programs for communities and campuses throughout the country.



▲ **SUSAN STAINBACK, LLA ASLA**

Susan Stainback is founding Principal of Sylvatica Studio, a leading Landscape Architecture and Ecological Planning firm in Atlanta dedicated to connecting people and nature. Focusing on work at the intersection of ecological planning, social entrepreneurship and design excellence, Sylvatica's work has proved influential, substantially benefitting natural and social environments in Atlanta and the greater Southeast including Fernbank Museum of Natural History and Fernbank Forest planning and design; South Fork Peachtree Creek Restoration Greenway; Zonolite - Nickel Bottom Park Brownfield to Green Floodplain; numerous urban Parks and Preserves as well as Institutional, Civic, commercial plazas and green spaces. Susan holds an MLA from Harvard University and serves on the on Atlanta's Midtown Alliance EcoDistrict Advisory Council, Society for Ecological Restoration International, Southeast Board, and the South Fork Conservancy Board.