

**CURRICULUM VITAE  
GILLIAN T. DAVIES**

BSC Group, Inc.  
33 Waldo Street  
Worcester, MA 01608

Phone: (617) 896-4524  
FAX: (508) 792-4509  
Email: gdavies@bscgroup.com

**EMPLOYMENT EXPERIENCE**

**BSC Group, Inc., Worcester, MA**

*Senior Ecological Scientist/Associate, 2003 – present*

As senior ecological scientist and project manager at BSC Group, provide innovative solutions to clients based on a broad range of experience, and manage junior staff. Have managed and participated in hundreds of natural resource projects. Consulting work encompasses ecosystem-based climate change resiliency and mitigation assessment and planning, state and federal permitting, wetland delineation, impact analysis, wetland restoration/mitigation planning, design and monitoring, expert witness testimony, peer review, and environmental construction/post-construction inspection. Climate-related work includes teaching land trusts to incorporate ecological climate resiliency and carbon protection into land conservation planning, including how to communicate about climate change; conducting ecological restoration and climate resiliency assessment and planning; developing an innovative technique for protecting soil carbon functions and climate resiliency during wetland restoration and creation projects; and conducting climate vulnerability assessment.

A current focus is the relationship between wetlands and climate change. Have spoken and published on this issue (see below), and from 2013-2015 chaired the Local Program Committee for the international Society of Wetland Scientist's 2015 Annual Meeting, *Changing Climate. Changing Wetlands*. Served as Chair of the Inland Wetlands Adaptation Subcommittee to the Natural Resources and Habitat Subcommittee to the Massachusetts Executive Office of Energy & Environmental Affairs Climate Change Adaptation Advisory Committee. In this capacity, worked with other natural resource professionals to craft an advisory document that identified the specific vulnerabilities of inland wetland resources to anticipated changes in Massachusetts climate, and adaptive strategies for managing wetland resources as these changes occur. The findings in this document were incorporated into the Massachusetts Climate Change Adaptation Report (September, 2011) that is intended to guide climate adaptation policy in the Commonwealth of Massachusetts.

**Society of Wetland Scientists – International**

*Executive Board (Immediate Past President, President, President Elect), June 2015 - June 2018*

While serving as 2016-2017 President of the SWS, led a 3,000+ member international (58 countries) scientific Society, directing and developing scientific and policy initiatives, committees, representatives and staff to implement the Strategic Plan in accordance with the Society Mission and Vision. Represented the SWS at the 10<sup>th</sup> INTECOL International Wetlands Conference in Changshu, China, met with the Secretary General of the Ramsar Convention on Wetlands at the SWS Europe Chapter Annual Meeting in Faro, Portugal to further collaborations between the organizations including on climate change and wetlands, established a Memorandum of Cooperation with the Society for Ecological Restoration, convened expert wetland and climate scientists to write and speak on wetlands and climate change (see Publications list), and brought together a group of scientific societies to support the Waters of the United States 2015 Clean Water Rule in early 2017.

As Immediate Past President of Society of Wetland Scientists, served as Society's Representative to Consortium of Aquatic Science Societies and Chaired Waters of the United States *Ad Hoc* Committee. In this capacity, coordinated (with 11 other scientific societies) and co-authored comment letters on US Agency proposed Rules to repeal and replace 2015 Clean Water Rule and related legislative actions. Chaired Governance Structure *Ad Hoc* Committee, Nominations Committee and Bylaws Committee. As President Elect, assisted President and served on a variety of committees.

**Massachusetts Department of Environmental Protection, Wilmington, MA**

*Wetlands & Waterways Circuit Rider, October 1999 - 2003*

As first Circuit Rider in MassDEP Northeast Region, collaborated on developing innovative educational outreach program for close to 100 municipalities, wetlands professionals and general public on wetlands policy, regulations and science. Planned, organized, and taught workshops, provided training and technical assistance, established and maintained watershed-based Conservation Commission networks that met monthly for training and networking. As registered soil scientist, provided MassDEP staff with soils expertise. Reviewed and contributed to MassDEP wetlands policy and training documents.

**Redwing Environmental Consulting, Stow, MA**

*Principal, October 1996 - October 1999*

As sole proprietor, responsible for all aspects of business providing wetlands-related environmental consulting services. Activities included performance of State and Federal wetlands permitting work and monitoring of wetland mitigation site construction activities.

**Boston University Metropolitan College, Department of Urban Affairs and Planning, Boston, MA**

*Lecturer, spring semesters 1997 & 1999*

Developed curriculum for and taught graduate level course surveying current global environmental issues associated with population growth and resource consumption, including climate change, sustainable development, biodiversity, wetlands, water, food, energy, and public health and pesticide use. Organized several guest speakers.

**Epsilon Associates, Inc., Maynard, MA**

*Environmental Scientist, Spring 1997 - Summer 1998*

As sub-consultant, provided wetlands and natural resource services, including fieldwork and preparation of reports, natural resource regulatory analyses, and regulatory permit documents. Reviewed wetlands-related fieldwork and document preparation by junior staff and assisted in their professional education and development.

**Jason M. Cortell and Associates Inc., Waltham, MA**

*Ecologist, August 1991 - October 1996*

Prepared natural resource state and federal permit applications, conducted field work.

**Massachusetts Public Interest Research Group, Boston, MA**

*Citizen Organizer, 1987 - 1988*

Organized lobbying campaigns in support of environmental legislation.

**The Consortium, Phanat Nikom Refugee Camp, Thailand**

*Teacher, 1985 - 1986*

Taught English to refugees (Hmong, Mien, Lao, Khmer) with little or no formal educational background, in preparation for their resettlement in English-speaking countries.

## **GOVERNMENT SERVICE**

MA Department of Transportation Wetland Mitigation Banking Working Group (2018)

MA Executive Office of Energy and Environmental Affairs Natural Resources and Habitat Subcommittee to the Climate Change Adaptation Advisory Committee, Chair, Inland Wetlands Adaptation Subcommittee (2009). Led group to prepare wetlands text for incorporation into MA Climate Change Adaptation Report (September 2011)

MA DEP Wetlands & Waterways Circuit Rider (1999-2003)

Massachusetts DEP, Trainer, Wetland Delineation Training (1995-1996)

Town of Stow Conservation Commission (1992-1994)

## **EDUCATION**

**Yale School of Forestry and Environmental Studies**, New Haven, CT  
1991 *Master of Environmental Studies*, Concentration in ecosystem ecology

**Williams College**, Williamstown, MA  
1985 *Bachelor of Arts, Cum Laude, Dean's List*, Psychology major

**University of Massachusetts**, Amherst, MA  
1995 *Certificate of Completion* in the New England Regional Soil Science Certificate Program

## **PROFESSIONAL REGISTRATIONS**

**Professional Wetland Scientist** (#2181), Society of Wetland Scientists  
**Registered Soil Scientist**, Society of Soil Scientists of Southern New England  
**Certified Wetland Scientist** (#00071), State of New Hampshire  
**Certified Erosion, Sediment, and Storm Water Inspector** (#3229), Envirocert International, Inc.

## **PROFESSIONAL AFFILIATIONS**

**Society of Wetland Scientists** (international): See above  
**Society of Wetland Scientists**, New England Chapter  
*Executive Board (Past President, President, Vice President), March 2013 - June 2018*  
**Association of Massachusetts Wetland Scientists**  
*Past President, President, Vice-President, 2000 - 2005*  
**Society of Soil Scientists of Southern New England**: Member  
**Society for Ecological Restoration**: Member  
**Association of State Wetland Managers**: Member

## **PUBLICATIONS**

Davies GT, Kaplan MG, Spokas M, Toohill M (in review) *Enhancing Wetland Climate Change Resiliency and Carbon Mitigation on Rights-of-Way Projects*. In: Proceedings from Environmental Concerns in Rights-of-Way Management 12<sup>th</sup> International Symposium

Davies GT, Kenny J (2016) *Using and Interpreting IRIS Tubes to Assess Wetland Mitigation Success and Development of Hydric Soils in Created Wetlands: Massachusetts Department of Transportation Case Study in Lincoln, MA*. Poster presentation at National Academies of Sciences, Engineering & Medicine Transportation Research Board 95<sup>th</sup> Annual Meeting, Washington, D.C.

Finlayson CM, Moomaw WR, Davies GT (2017) *The Second Warning to Humanity and Wetlands*. *Wetland Science & Practice* December 2017: 118-121

Finlayson CM, Davies GT, Moomaw WM, Chmura GL, Natali SM, Perry JE, Roulet N, Sutton-Grier AE (2018) *The Second Warning to Humanity – Providing a Context for Wetland Management and Policy*. *Wetlands* doi: 10.1007/s13157-018-1064-z

MACC Buffer Zone Guidebook Working Group (in review) *MACC Buffer Zone Guidebook* (working title). Massachusetts Association of Conservation Commissions. Belmont, MA. Serving as BSC Group Project Manager and lead author assisting MACC in writing a primary source document on science and regulation of wetland buffer zones and riparian areas.

Moomaw WR, Chmura GL, Davies GT, Finlayson CM, Middleton BA, Natali SM, Perry JE, Roulet N, Sutton-Grier AE (2018) *Wetlands In a Changing Climate: Science, Policy and Management*. *Wetlands* 38(2): 183-205. doi: 10.1007/s13157-018-1023-8

Moomaw WR, Davies GT, Finlayson CM (2018) *What the World Needs Now to Fight Climate Change: More Swamps*. *The Conversation* <https://theconversation.com/what-the-world-needs-now-to-fight-climate-change-more-swamps-99198>. Accessed September 13, 2018

Ponzio KJ, Osborne TZ, Davies GT, LePage B, Sundareshwar PV (in review) *Building Resiliency to Climate Change through Wetland Management and Restoration*. In: J.T.A. Verhoeven and S. An (eds.) *Wetlands: Functions, Restoration and Wise Use* (Proceedings from 10<sup>th</sup> INTECOL International Wetlands Conference). Springer, Dordrecht

Contributing author to:

Massachusetts Department of Environmental Protection (2004) *Wetlands Enforcement Manual*

Massachusetts Department of Environmental Protection (2002) *Massachusetts Inland Wetland Replication Guidelines*

## **PRESENTATIONS**

**12<sup>th</sup> International Symposium on Environmental Concerns in Rights-of-Way Management**, Denver, Colorado, co-presenter, “Managing Rights-of-Way Wetland Restoration and Creation to Enhance Climate Resiliency and Carbon Mitigation in a Changing Climate” 2018

**Society of Wetland Scientists Annual Meeting**, Denver, Colorado, presenter, “What’s a Practicing Wetland Scientist to Do? Policy & Management Tools, Strategies and BMPs in Light of Climate Change” 2018

**Society of Wetland Scientists Annual Meeting**, Denver, Colorado, co-presenter, “The Changing US Legal and Policy Framework for Wetland Conservation” 2018

**Massachusetts Association of Conservation Commissions**, Co-presenter, “Tools, Approaches and Science for Incorporating Climate Change in Your Commission’s Work”, 2018

**Wisconsin Wetlands Association**, Lake Geneva, WI, Plenary Speaker, “Resiliency for Wetlands and Communities: Notes from the Field”, 2018

**Society of Wetland Scientists Annual Meeting, San Juan**, Puerto Rico, presenter, “Protecting Soil and Vegetative Structure to Enhance Function in Restored and Created Wetlands” 2017

**Massachusetts Division of Conservation and Recreation Timber Harvester Workshop**, Athol, MA, “Wetlands and Climate Change: A Summary of Current Wetland Scientific Findings”. 2017

**New England Chapter of The Wildlife Society**, Hadley, MA, Presenter, “Current Science on Wetlands and Climate Change: Impacts, Carbon Mitigation and Adaptation. 2016

**Association of State Wetland Managers Hot Topics Webinar Series**, Presenter, “Wetlands and Climate Change: A Summary of Current Wetland Scientific Findings”. 2016

**10th INTECOL International Wetlands Conference**, Changshu, China, Presenter, “The Heightened Value of Wetland Ecosystem Services Under Global Climate Change: Implications for Wetland Management” 2016

**International Wetland Convention**, Taipei, Taiwan, Presenter, “Protecting and Regulating Wetlands in Massachusetts, USA – A First-in-the-Nation Case Study” 2016

**Society of Wetland Scientists Annual Meeting**, Corpus Christi, Texas, Presenter, “Interpreting Indicator of Reduction in Soil (IRIS) Tubes to Assess Functional Success in Created Wetlands: A MassDOT Case Study in Lincoln, MA, 2016

**Society of Wetland Scientists, Rocky Mountain Chapter Annual Meeting**, Golden, Colorado, Presenter, “Current Science on Wetlands and Climate Change Impacts, Carbon Mitigation and Adaptation”, 2016

**Connecticut Land Conservation Conference**, Middletown, CT, Presenter, “Land Conservation as a Strategy for Community Resilience”, 2016

**National Academies of Sciences, Engineering & Medicine Transportation Research Board 95<sup>th</sup> Annual Meeting**, Washington, D.C., Poster Presentation, “Using and Interpreting IRIS Tubes to Assess Wetland Mitigation Success and Development of Hydric Soils in Created Wetlands: Massachusetts Department of Transportation Case Study in Lincoln, MA, 2016

**Chigu Center International Forum on Coastal Wetlands**, Tainan County, Taiwan, Presenter, “Wetlands and Climate Change – Wetlands, Climate Change and the Carbon Cycle”, 2015

**National Taiwan Normal University**, Taipei, Taiwan, Presenter, “Wetlands and Climate Change – Wetlands, Climate Change and the Carbon Cycle”, 2015

**Massachusetts Association of Conservation Commissions**, Presenter,  
“Current Science on Wetlands and Climate Change: Impacts, Carbon Mitigation, and Adaptation”, 2015

**Boston Bar Association**, Co-presenter, “Advising Municipalities and Developers on Climate Change and Adaptation”, 2015

**Massachusetts Association of Conservation Commissions**, Co-presenter, “Wetlands and Climate Change: Their Functions, Roles, and Protecting Your Community’s Resiliency”, 2014

**Massachusetts Association of Conservation Commissions**, Co-presenter, “Hydric Soils: How To Know ‘Em When You See ‘Em”, 2014

**Association of Massachusetts Wetland Scientists**, Co-presenter, “U.S. Field Indicators of Hydric Soils in Massachusetts”, 2012

**Association of Massachusetts Wetland Scientists**, Co-presenter, “Difficult Inland Wetland Delineations”, 2006 and 2007

**Massachusetts Association of Conservation Commissions**, Co-presenter,  
“Soil Science- Field Skills Workshop”, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013

**Massachusetts Association of Conservation Commissions**, Co-presenter,  
“Hydric Soil Workshop: Field Identification, Documentation, and Delineation”, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013

**Association of Massachusetts Wetland Scientists**, Co-presenter, “Hydric Soils as Influenced by Landscapes, Landforms and Associated Wetland Patterns”, 2005

**Salem Sound Coastwatch Speakers Series**, Presenter, “Ambiguity in Dealing with the Wetlands Protection Act” 2004

**Association of Massachusetts Wetland Scientists**, Co-presenter, “Field Indicators for Hydric Soils in New England (Version 3)”, 2004

**University of Massachusetts, Lowell**, guest-lectured a one-evening graduate level class on soils for “Wetland Ecology” course, 2001, 2003

**Massachusetts Association of Conservation Commissions**, Co-presenter, Hydric Soils (Advanced Credit Course), 2001, 2002, 2003, 2004, 2005, 2006, 2007

**Massachusetts Department of Environmental Protection** (while Circuit Rider)  
Co-Editor for revision and development of training modules for the Clearwater Estates Development Simulation Reference Manual and Training Program  
Presenter, Advanced Soils Workshop for DEP Northeast Region wetlands staff, 2000  
Presenter, Hydric Soils Workshops, 1999, 2000  
Co-presenter, Riverfront Protection Act Workshops, 2000, 2003  
Co-presenter, Wetlands Protection Act Orders of Conditions Workshops, 2001  
Co-presenter, Wetlands Protection Act Enforcement Workshops, 2001, 2002  
Co-presenter, Winter Botany Workshops, 2002

**Association of Massachusetts Wetland Scientists**, Co-presenter, “Delineation of Disturbed Soils” 2002

**MassDEP** Co-Presenter/Soils Instructor, Bordering Vegetated Wetlands Delineation Workshops, 1995,  
1996