Table of Contents

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PROJECT TEAM

SECTION I BL COMPANIES
Planning, Landscape Architecture,
Engineering, Survey, Architecture, and
Environmental Services

SECTION II ARTHUR HILLS/STEVE FOREST AND ASSOCIATES
Golf Course Architect

SECTION III HUTTON ASSOCIATES, INC.
Strategic Planning

SECTION IV RANDALL ARENDT
Conservation Planning

SECTION V MICHAEL W. KLEMENS
Herpetology and Ecology

SECTION VI : ENVIRONMENTAL PLANNING SERVICES : Wetlands, Soils, and Biological Sciences

SECTION VII : ENVIRONMENTAL AND TURF SCIENCES : Integrated Turf and Pest Management



BL Companies

Planning, Landscape Architecture, Englneering, Survey, Architecture, and Environmental Services



Firm Overview

Founded in 1986, BL Companies offers a complete range of professional services including architecture, engineering, landscape architecture/planning, traffic and transportation, land surveying, and environmental sciences.

Our mission is to provide seamlessly integrated services that take projects from concept to completion, with quality, cost effective results. We value, and are committed to, the development of expertise in both staff and technology, and we strive to meet clients' needs through creativity, an efficient workflow process, and total quality control.

With five regional offices, we serve public and private businesses throughout the United States. From retailers to municipalities to commercial real estate developers, our clients receive the same exceptional level of expertise and coordination of service from the start of a project to the final product.



Robert A. Landino, PE

CONTINUED

13

Bridgeport Landing, Bridgeport, CT

Principal-in-Charge for \$700 million mixed-use waterfront redevelopment at Steel Point, Bridgeport, CT. Completed to date has been the initial site investigation for the 40 acre development area. Coordinated all disciplines which have included coastal, civil, geotechnical, environmental and traffic engineering services. Subsequent phases of the project will involve all disciplines for the firm.

Downtown Torrington Redevelopment, Torrington, CI

Principal-in-Charge for the Initial feasibility study produced for the redevelopment of 100 acres of the downtown Torrington Connecticut area. BL Companies was responsible for the production of the over all master plan of development and feasibility report submitted to the Connecticut state legislature to initiate state funding. Detalled feasibility analysis included evaluation of critical zoning issues, reviewing existing utilities and infrastructure, initial environmental review and developing a preliminary opinion of total project cost. The firm also provided public communication of each BL product.

Cornfield Subdivision, Derby and Smith Falls Subdivision, Beacon Falls, CT

involved in the planning, design, permitting and construction of several residential developments, including detached single family subdivisions, cluster developments, condominium developments, high rise apartments and urban mixed-use developments. Under his supervision, the firm has designed an 80-lot subdivision in Derby and a 90-lot subdivision in Beacon Falls.

On Call Traffic Engineering Services – Connecticut Department of Transportation

Principal-in-Charge for three-year contract with the Connecticut Department of Transportation.

Work tasks to date have included traffic signal design, pavement marking and signing plans, at grade railroad crossing improvements, study of high accident locations and traffic signal warrant analyses.

Signalization Projects, Various Locations, Statewide, CI

Directed the planning, permitting, design, surveying, and construction of more than 70 signalized intersections throughout Connecticut.

SUMMARY OF QUALIFICATIONS

Robert A. Landino is President and Chief Executive Officer for BL Companies, an *Engineering News-Record* (ENR) Top 500 design firm, with headquarters in Meriden, Connecticut. BL Companies provides comprehensive planning, permitting, design, and construction supervision for public and private assignments throughout the Eastern United States from five regional offices. Mr. Landino cofounded the firm in 1986, and helped create and implement a vision that resulted in consistent growth to its present size of 200 professionals and support staff. On two occasions, *Inc.* Magazine recognized BL Companies as one of the fastest growing privately held companies in the United States, and in both cases, it was distinguished as the only design firm.



Dennis G. Goderre, ASLA, AICP

MANAGER, LANDSCAPE ARCHITECTURE

EDUCATION

Bachelor of Science in Landscape Architecture

University of Connecticut, 1995

Associates Degree in Chemical Engineering

Thames Valley State Technical College, 1992

REGISTRATION

Licensed Landscape Architect: Connecticut, Massachusetts, New York, Rhode Island, Maryland

PROFESSIONAL ORGANIZATIONS

American Institute of Certified Planners

American Society of Landscape Architects

American Planning Association

Connecticut Recreation and Parks Association

Congress of New Urbanism

RELEVANT PROJECT EXPERIENCE

Madison Landing, Madison, CT

Project Landscape Architect for the development of a 42-acre traditional neighborhood design (IND), which includes a 32-acre mix of single family, townhouse and multi-family village style apartments. Involved in the planning and neighborhood layout process for two years. Responsible for all site engineering tasks, which involve grading, drainage, site detailing and traffic.

Meriden City Center Initiative Masterplan, Meriden, CT

Project Landscape Architect for the development of the Meriden City Center Initiative Masterplan, a comprehensive plan for the redevelopment of the downtown Meriden area. Development of the plan required extensive investigation and dialog with City staff and a variety of groups and individuals representing the varying interests of merchants and residents. The master plan of development included redesign of roadway and traffic patterns, review of historic buildings and creation of over 30 acres of commercially developable land. Detailed feasibility analysis included evaluation of critical zoning issues, reviewing existing utilities and infrastructure, and development of a preliminary opinion of total project cost.

Marlborough Golf and Residential Community, Marlborough, CT

Project Manager responsible for Due Diligence, site design, and permitting of a 425-acre golf course and residential community. Assisted in the review and analysis of existing site conditions including topography, wetlands, landform and internal and external views. Provided site design and golf course engineering assistance. Instrumental in permit identification and strategy development. Assisted in permit identification and strategy development. Assisted the direction of community/public relation initiatives.



Arthur Hills/ Steve Forest and Associates

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· Golf Course Architect



Arthur Hills / Steve Forrest and Associates has become well recognized in the world of golf. To date, there are more than 180 of the firm's designs in the United States, Europe and Asia.

The firm's reputation rests on their ability to design courses that are playable yet challenging, while created with an overriding sense of environmental sensitivity. Hills has stated, "We try to build a course that is natural, that relates to the land and doesn't require a tremendous amount of earth moving, always keeping in mind the strategy of the game and the elements that provide beauty in a golf course."

Over the past forty years, Arthur Hills, past president of the American Society of Golf Course Architects (ASGCA), has led the design effort on these golf course communities, private clubs, resorts, and public golf developments. Steve Forrest, Arthur partner of twenty five years, was named a principal in the firm which was newly titled as Arthur Hills / Steve Forrest and Associates in 1999. Senior Design Associates who have been a major part of the success of the firm include Brian Yoder, ASGCA, Drew Rogers, ASGCA, and Chris Wilczynski, ASGCA. Quentin Lutz, Vice President of Global Business Development, Marketing and Media Relations, rounds out the firm's executive committee.

Headquartered in Toledo, Ohio, Arthur Hills / Steve Forrest and Associates has also been called upon to restore or renovate more than 120 courses including renowned clubs like Oakmont, Inverness, and Oakland Hills. The firm was instrumental in guiding Oakmont and Oakland Hills through several renovation improvements in preparation for their respective U.S. Open Championships in 1994 and 1996. In 1999, a major renovation program at Inverness was completed in an effort to position the club to host future major championships and prepare it for the 2003 U.S. Senior Open.

Some of the firm's award-winning new course designs include Longaberger Golf Club (Hanover, OH) which was honored in January 2001 by Golf Digest as America's Best New Upscale Public Course. Bolingbrook Golf Club (Bolingbrook, IL) and Maryland National Golf Club (Middletown, MD) were honored by Golf Magazine as "Top 10 Best New Courses of the Year" in 2003. Bay Harbor Golf Club (Petoskey, MI), Lighthouse Sound (Ocean City, MD), Shepherd's Hollow (Clarkston, MI), Shaker Run Golf Club (Lebanon, OH) and Longaberger Golf Club (Hanover, OH) were all featured in Golf Digest's and Golf Magazine's Top 100 Public Courses in 2002 and 2003 respectively. Quinta da Marinha Oitavos (Cascais, Portugal) was recognized as "The Best New Course in Mainland Europe" by Golf Monthly International. Other Golf Digest Top 100 Designs have included the Tournament Players Club at Eagle Trace (Coral Springs, FL), The Bonita Bay Club (Bonita Bay, FL) and The Golf Club of Georgia (Atlanta, GA).

Recent tournament course designs include Gaillardia Golf & Country Club (Oklahoma City, OK), the site of the Champion's Tour's season ending championship, and Mirasol Golf & Country Club (Palm Beach Gardens, FL) host site of the PGA Tour's Honda Classic. Bighorn Golf Club (Palm Desert, CA) has also been the host of the popular Skins Games and Battle of Bighorn made for television events. In total, thirty four of the firm's designs have hosted PGA Tour, Champions Tour, LPGA Tour, Nationwide Tour, USGA, and PGA of America, NCAA Championship and/or European Tour Event.

Other highly acclaimed new designs which recently opened include: Ironbridge Golf Club (Glenwood Springs, CO), Palencia Golf Club (Jacksonville, FL) The Golf Club at Fiddler's Creek (Naples, FL), , Black Gold Golf Club (Yorba Linda, CA), The Renaissance Club (Fort Myers, FL) and Miami Beach Golf Club (Miami, FL).

In 1995, Collier's Reserve Golf Club (Naples, FL) became the first course in the world to receive Audubon International's "Cooperative Sanctuary Signature" status. Quinta da Marinha Oitavos Golfe (Lisbon, Portugal) became Europe's first Audubon "Gold Signature" golf course when it opened in 2001.

In 1992, Golf Digest honored Arthur Hills by naming The Golf Club of Georgia (Atlanta) and Harbour Pointe Golf Club (Seattle) as the "Best New Private" and "Best New Public" courses of the year. It was the first time a single architect captured both awards in the same year.

Other popular designs include: Hyatt Regency Hill Country Resort (San Antonio, TX), Arthur Hills Course at Palmetto Hall Plantation (Hilton Head Island, SC), Half Moon Bay Golf Links (Half Moon Bay, CA), El Conquistador Resort (Las Croabas, Puerto Rico), The Sanctuary Golf Club (Sanibel Island, FL), Chaska Town Course (Chaska, MN), Stonewall Orchard Golf Club (Graysłake, IL), Arthur Hills Course at Boyne Highlands Resort (Harbor Springs, MI), Camelback Golf Club-Resort Course (Scottsdale, AZ) and the soon to open Hills Golf Club (Gothenburg, Sweden)



Mr. Arthur Hills, ASGCA, Principal

Mr. Hills is the managing and founding principal of Arthur Hills/Steve Forrest and Associates. Mr. Hills received his bachelor of science in agriculture from Michigan State University and his bachelor of landscape architecture from the University of Michigan.

Mr. Hills has been involved with golf course and community development for almost fifty years. He is a past president of the American Society of Golf Course Architects, a Fellow in the American Society of Landscape Architects, and a founding member of the Donald Ross Society.

Mr. Hills is responsible for designing more than 170 new private, resort and upscale public golf courses around the world. In addition, with Mr. Hills the firm has been called upon to refine or renovate more than 120 courses including some of the countries most renowned clubs, often in preparation for major USGA and PGA Championships.

As the firm's chief designer, Mr. Hills personal involvement begins with participation in the development of the golf course routing plan and the generation of design and grading concepts relative to the strategy of the individual holes. Arthur is also very involved with making construction visits, attending promotional events and providing on-going consultation after the course has opened for play.

Please refer to the attached lists for additional details on golf course design awards, tournament course designs, and nationally acclaimed completed renovation projects.

Arthur Hills Principal, ASGCA

Education:

- University of Michigan Bachelor of Landscape Architecture
- Michigan State University Bachelor of Science

Professional Affiliations:

- ASGCA (American Society of Golf Course Architects, past President)
- ASLA (American Society of Landscape Architects: Registered in Florida, Michigan and Ohio)
- Elected into the 1999 ASLA Class of Fellows
- GCSAA (Golf Course Superintendent's Association of America)
- NGF (National Golf Foundation)
- OTF (Ohio Turfgrass Foundation)
- ULI (Urban Land Institute)
- · Donald Ross Society

Responsible for designing more then 180 new private, resort and upscale public golf courses around the world. In addition, the firm has been called upon to refine or renovate more then 120 courses including some of the countries most renowned clubs often in preparation for major USGA and PGA Championships.

Professional Experience:

- Arthur Hills / Steve Forrest and Associates 1966 to Present Golf Course Architecture and Land Planning
- Arthur Hills, Landscape Architect 1960 to 1966 Commercial and Residential Site Planning and Landscape Design
- Hills Landscape Company 1957 to 1960 Commercial and Residential Landscape Contractor
- United States Armed Services 1952 to 1954

As chief designer, Arthur Hills' personal involvement begins with participation in the development of the golf course routing plan and the generation of design and grading concepts relative to the strategy of the individual holes. Arthur is also very involved with making construction visits, attending promotional events and providing on-going consultation after the course has opened for play.



ahilis@arthurhills.com

Christopher M. Wilczynski, ASGCA, ASLA

Active Resume and Representative Project List

Employment

May 1997 to Present – Senior Design Associate, Arthur Hills/Steve Forrest and Associates, Golf Course Architects, Toledo Ohio.

Responsible for all aspects of design development, construction drawings, bidding, construction management, cost estimating, client communications and business development and marketing efforts.

Professional Affiliations

American Society of Golf Course Architects, Associate Member since 2002
American Society of Landscape Architects, Full Member since 1997
Registered Landscape Architect, State of Michigan #001286
United States Golf Association
Michigan Turfgrass Foundation
Urban Land Institute
Michigan State University Alumni Association, Life Member

Education

Michigan State University, Bachelor of Science in Landscape Architecture - 1994

New Projects (completed, in design phase or under construction)

Red Hawk Golf Club

East Tawas, Michigan (18 holes in 1999)

Heritage Eagle Bend

Aurora, Colorado (18 holes in 2000)

Heritage Ranch

Fairview, Texas (18 holes in 2001)

CrossCreek Golf Club

Temecula, California (18 holes in 2001)

Black Gold Golf Club

Yorba Linda, California (18 holes in 2001)

Stoneybrook Golf Club - Heritage Harbour

Bradenton, Florida (18 holes in 2002)

Ironbridge Golf Club

Glenwood Springs, Colorado (18 holes in 2001-2002)

Valagua

Gypsum, Colorado (27 holes within residential community – Design phase)

McKinney Roughs

Bastrop, Texas (18 holes - Design Phase)

Heritage at Todd Creek

Denver, Colorado (18 holes within residential community – Design phase)

Hill Country Golf Club

San Antonio, Texas (Design Phase- 3rd Nine)

Renovations with Master Plans

Army Navy Country Club

Arlington and Fairfax, Virginia (54 hole Master Plan)

The Resort Course at Camelback Golf Club

Paradise Valley, Arizona (18 holes in 2000)

Half Moon Bay-Links Course

Half Moon Bay, California (18 holes in 1999-2000)

Green Gables Country Club

Denver, Colorado (18 holes - Construction phase)

Other Work Involvement

Michigan State University - Forest Akers West and East

East Lansing, Michigan (Multiple Renovations 1997-2001)

Rose Creek Golf Club

Oklahoma City, Oklahoma (Construction Visits)

Note: All listed work completed in cooperation with Arthur Hills while employed by Arthur Hills/Steve Forrest and Associates.

Last updated: May 2003



Historic Courses Renovation Project List

Arthur Hills / Steve Forrest and Associates have completed over 120 golf course renovation programs around the world and often in advance of major professional championships. The following is a representative list of several historic clubs the firm has worked with most recently:

Bayshore Golf Club (Renamed Miami Beach Golf Club) - Miami, Florida

• 1923 Carl Fishers Design

1222

Hosted 1955 PGA Tour Miami Open won by Gary Player

Camelback Golf Club - Scottsdale, Arizona

- 1971 Red Lawrence Design
- Originally built for the J.W. Marriot family (their first resort property)

Congressional Country Club - Bethesda, Maryland

- 1920 Devereux Emmet Design
- Hosted the U.S. Open in 1997
- · Hosted the U.S. Senior Open in 1995

Country Club of North Carolina - Pinehurst, North Carolina

- 1963 Ellis Maples and William Byrd Design
- · Hosted a U.S. Amateur in 1980

Inverness Club - Toledo, Ohio

- 1919 Donald Ross Design
- Hosted the U.S. Open in 1920, 1931, 1957 and 1979
- Hosted the U.S. Men's Amateur in 1973
- Hosted the PGA Championship in 1986 and 1993
- Site of the 2003 U.S. Senior Open

Oakland Hills Country Club - Birmingham, Michigan

- 1917 Donald Ross Design
- Hosted the U.S. Open in 1924, 1937, 1951, 1961, 1985, and 1996
- Hosted the U.S. Senior Open in 1981 and 1991
- Hosted the U.S. Men's Amateur in 2002 and Women's Amateur in 1929
- Hosted the PGA Championship in 1972 and 1979
- Hosted the Western Open in 1922 and Carling World Open in 1961
- Site of the 2004 Ryder Cup

Oakmont Country Club - Oakmont, Pennsylvania

- 1904 Henry C. Fownes Design
- Hosted the U.S. Open in 1927, 1935, 1953, 1962, 1973, 1983 and 1994
- Hosted the U.S. Men's Amateur in 1919, 1925, 1938 and 1969
- Hosted the PGA Championship in 1922, 1951 and 1978

Tournament Courses

The Honda Classic - PGA Tour

Mirasol Golf and Country Club - Palm Beach Gardens, Florida (2003) Tournament Players Club at Eagle Trace - Coral Springs, Florida (1984 - 1996)

Champions Tour Championship

Gaillardia Golf and Country Club – Oklahoma City, Oklahoma (2001-Present)

Farmers Insurance Championship - Champions Tour
Egypt Valley Country Club - Grand Rapids, Michigan (1994 - Present)

Nationwide Senior Championship - Champions Tour
The Golf Club of Georgia - Atlanta, Georgia (1995 – 2000)

Aetna Challenge - Champions Tour
The Club at Pelican Bay - Naples, Florida (1989 - 1992)

GTE Suncoast Classic - Champions Tour
Tampa Palms Golf and Country Club - Tampa, Florida (1988 - 1992)

LPGA Arch Championship
LPGA International -- Legends Course – Daytona Beach, Florida (2000)

PGA European Tour
Quinta da Marinha Oitayos Golfe - Cascais, Portugal (2002)

Shell's Wonderful World of Golf Baillardia Golf and Country Club – Oklahoma City; Oklahoma (2000) Longaberger Golf Club – Nashport; OH (1999) Bay Harbor Golf Club – Petoskey, MI (1998)

Nationwide Tour Shreveport Open Southern Trace Golf Chan 2 Shreveport Louisiana (1994 : Present)

Golf World Collegiate Championships

Arthur Hills Course at Palmetto Hall (Ladies 1987 - Present)

Arthur Hills Course at Palmetto Dunes (Men's 1978 - Present)

The SKINS GAME;; Bighorn Golf Chib Pain Dest 4: Fallfornja (1992 – 1995)

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The Champions CopyClub AL exhapten Rentingey (1993)



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A Tradition of International Distinction

Golf Digest Magazine

"Best New Upscale Public Course" Longaberger Golf Club -- Nashport, Ohio (2000)

"Places to Play Survey - Five Star Award"
Bay Harbor Golf Club -- Petoskey, Michigan (2000)

"Top 100 Public Access Courses"

Bay Harbor Golf Club -- Petoskey, Michigan (2003)

Longaberger Golf Club -- Nashport, Ohio (2003)

Shepherd's Hollow Golf Club -- Clarkston, Michigan (2003)

Shaker Run Golf Club -- Lebanon, Ohio (2003)

"Best New Upscale Public Courses"
Bay Harbor Golf Club -- Petoskey, Michigan (2000)

"Top Ten Best New Upscale Public Courses"

Shepherd's Hollow Golf Club – Clarkston, Michigan (2001)
Half Moon Bay -- Half Moon Bay, California (1998)

"Top Ten Best New Affordable Courses" Red Hawk Run Golf Club – Findlay, Ohio (2000) Chaska Town Course -- Chaska, Minnesota (1998)

"Best New Affordable Course"

Quail Hollow Golf Club - Percy Quin State Park, Mississippi (1997)

"Top Three Best New Resort Courses"
The Thoroughbred at Double JJ Resort - Rothbury, Michigan (1994)

*"Top Ten Best New Private Courses"*The Sanctuary on Sanibel Island - Sanibel Island, Florida (1994)

"The Best New Public Course"
Harbour Pointe Golf Club - Seattle, Washington (1991)

"The Best New Private Course"

The Golf Club of Georgia - Atlanta, Georgia (1991)

"Top 100 Courses"

The Golf Club of Georgia - Atlanta, Georgia (1991)

The Tournament Players Club (TPC) at Eagle Trace (1989)

Bonita Bay - Bonita Springs, Florida (1989)

A Tradition of International Distinction (Continued)

Golf World

"Ranking the game's 25 hottest architects" #2 Arthur Hills (1999)

Links Magazine

933

"America's Best Resorts"

Bay Harbor Golf Club - Petoskey, Michigan (2002)

*"Top Ten Best New Courses"*Black Golf Golf Club – Yorba Linda, California (2002)

Golf Monthly International

"Best New Course in Europe"

Quinta da Marinha Oitavos Golfe – Cascais, Portugal (2002)

*"Best New Course in Carribean"*Wyndham El Conquistador Resort – Los Croabas, Peurto Rico (2003)

Golf Magazine

"Top 100 Best Upscale Public Courses"

Bay Harbor Golf Club – Petoskey, Michigan (2003) Longaberger Golf Club – Nashport, Ohio (2003) Links of Lighthouse Sound – Ocean City, Maryland (2003)

"The Top 10 You Can Play"

Bolingbrook Golf Club – Bolingbrook, Illinois (2003)
Shepherd's Hollow Golf Club – Clarkston, Michigan (2001)
The Links at Lighthouse Sound – Ocean City, Maryland (2001)
Longaberger Golf Club – Nashport, Ohio (2000)
Legacy Ridge Golf Club – Westminster, Colorado (1995)
Dunes West Golf Club – Charleston, South Carolina (1995)
Hyatt Regency Hill Country Resort – San Antonio, Texas (1994)
Arthur Hills Course at Palmetto Hall – Hilton Head, South Carolina (1993)

"Honorable Mention The Top Ten You Can Play"

Maryland National Golf Club - Middletown, Maryland (2003) Black Gold Golf Club - Yorba Linda, California (2001) CrossCreek Golf Club - Temecula, California (2001) Red Hawk Golf Club - East Tawas, Michigan (2000)

"The World Top 100"

The Golf Club of Georgia - Atlanta, Georgia (1994) Tournament Players Club (TPC) at Eagle Trace - Coral Springs, Florida (1990)

A Tradition of International Distinction (Continued)

T & L Golf Magazine

*"2003 Top Ten Best Resort Courses"*Wyndham El Conquistador Resort – Los Croabas, Peurto Rico (2003)
The Ritz-Carlton Half Moon Bay – Half Moon Bay, California (2003)

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GolfWeek Magazine

"2001 America's Best - Top 100 Modern Courses"
Bay Harbor Golf Club - Petoskey, Michigan (2002)
Longaberger Golf Club - Nashport, Ohio (2002)

"Golf Architect of the Year"
In recognition of the design of Bonita Bay Club – Bonita Springs, Florida

"List of the Southeast Top 50 Development Courses"
Bonita Bay - Bonita Springs, Florida
Wyndermere Country Club - Naples, Florida
The Club at Pelican Bay - Naples, Florida
The Landings at Skidaway Island - Savannah, Georgia

Conde Nast Traveler

"2003 Top 50 Best Resort Courses"

Wyndham El Conquistador Resort – Los Croabas, Peurto Rico (2003)

The Ritz-Carlton Half Moon Bay – Half Moon Bay, California (2003)

Bay Harbor Golf Club – Petoskey, Michigan (2002)

NGCOA Golf Business Magazine

"Course of the Year"

Fox Hills Country Club (Golden Fox) – Plymouth, Michigan (2002)

Hutton Associates, Inc.

Strategic Planning





Planning Urban Design Development Strategies

ERNEST W. HUTTON JR., AICP, Assoc AIA

Education

University of Pennsylvania M. Arch 1970, M. City Planning, 1970, B. Arch, 1968 Princeton University B. Arts, 1966

Experience

Mr. Hutton formed Hutton Associates in 1993. In 1980 he was a founding partner of the planning and design firm Buckhurst Fish Hutton Katz. Prior to that he was a senior associate of Llewelyn-Davies International, a London-based planning firm with offices in New York and around the world, after having worked as a senior urban designer for Arlen Realty & Development and the Jonathan Development Corporation. Interwoven with his work on urban design and community planning for a wide variety of clients is expertise in the use of consensus-building and participatory design techniques for creation of economic revitalization, urban development and cultural growth strategies. Recent experience includes a series of comprehensive plans and central area and corridor management strategies that involve innovative partnerships for economic development and tourism, growth impact mitigation, heritage and cultural resource preservation, and design improvements to urban and rural communities.

Mr. Hutton is an Associate of the American Institute of Architects (co-chair of the AIANY Planning/ Urban Design Committee), a Charter Member of both the American Institute of Certified Planners and the American Planning Association, a Fellow of the Institute for Urban Design, a participant in the Mayors' Institute for Civic Design, a sponsor of the national convention of the Congress for New Urbanism, and an Associate of the Urban Land Institute. He has participated on three Regional/ Urban Design Assistance Teams (R/UDATs) for the American Institute of Architects. He has given lectures or participated in design studios at Columbia, Yale, Princeton, Harvard, the University of Minnesota, Pratt Institute and the City University of New York, and served as program chairman for the Institute of Urban Design's "Role of the Arts in Urban Redevelopment" conference at New York's Museum of Modern Art. He was editorial consultant and author of a major case study in the Urban Land Institute publication, Cultural Facilities in Mixed-Use Development, and is profiled in Who's Who in America and Who's Who in the World.

He received an AIANY Citation of Excellence award and a Board of Directors Certificate of Appreciation in 2003 for his outreach work as Co-Chair of New York New Visions (NYNV), a 350 member coalition of planners and designers which he helped found following 9/11, In 2004, Mr. Hutton accepted for NYNV the George Fox Award for Public Outreach from the

NY Building Congress. He was co-editor of *Principles for the Rebuilding of Lower Manhattan* and recently editor of *Evaluation of the Nine Design Proposals* and *Comments on Proposed Design Guidelines* and author of *Evaluation of the Revised Master Plan*, NYNV's professional civic analyses of the plans for the World Trade Center site. From 1989 to 1992 Mr. Hutton served as Board President of American Vaudeville, Inc, a not-for-profit group presenting variety performances in NYC and around the east coast and managing producer of the first "Lucille Ball Comedy Festival" in Jamestown NY (now in its twelfth season). Since 1996 he has also served on the board of the Kentucky-West Virginia Company.

Major projects include:

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- Planning advisory services for The Preserve in southeastern Connecticut, repositioning as a 1000 acre clustered open space community a foreclosed property previously denied approvals as a 300 unit single-family development. Working with BL Companies, landscape architects/ engineers, as well as with environmental consultants, lawyers and market analysts, the team has redefined the project with a wide mix of unit types, from estate homes to attached units in a dense 'New England village,' allowing preservation of over 50% of the site as undisturbed open space plus an environmentally-conscious signature golf course. Planned in conjunction with River Sound Development LLC, the project utilizes strategic land purchases to enhance access and creates a new conservation zoning district to facilitate the development.
- Preparation, with Lardner-Klein Landscape Architects, of a series of ten corridor management plans for the State of Connecticut (the project as a whole won a Year 2000 US DOT national 'Design in Transportation' Award, given once every five years). These plans, focusing on land use/ transportation design, growth management and traffic calming based on public workshops and interaction with 14 individual communities, land trusts and other civic organizations throughout the state, are part of the FHWA Scenic Byways program, coordinating funding for detailed enhancement projects. As a result of the first of these plans, the Route169 corridor was named a 'National Scenic Byway', making it eligible for grants and tourism promotion. Other work included open space preservation, visitor management and traffic calming strategies for the waterfront communities of Branford and Guilford, for a tourism/ casino impacted corridor near Mystic, and for the rural towns of Salisbury, Sharon, Kent, and Roxbury in the northwest Litchfield Hills region.
- Principal in charge of urban design as part of a team preparing the 6.5 mile Hartford CT Riverfront Recapture Plan. In 1997, the substantially created project was recipient of the annual Waterfront Center national award. By building constituencies with workshops and events, major portions of the mutually-agreed plan have now been implemented, including a new \$35 million park and walkway development, realignment of an interstate highway to provide a new deck across the highway to the riverfront, and new river-related office and housing. Recent work includes preparation of a plan update, including a concessions and attractions strategy for the riverfront, including extensive stakeholder involvement, as well as a river-oriented economic development plan for the East Hartford side of the riverfront.
- A series of town-wide and hamlet-focused projects for the Town of Southampton,
 Long Island, including the Hampton Bays Center development plan for an important

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gateway community in Southampton Long Island, a plan for Water Mill Hamlet Center (featuring a creative land swap making possible both private development and expansion of open space),, a plan for the Noyac Road corridor (including proposals for resolving transportation/land use issues), and a recent plan for a new Riverside Hamlet Center (prepared with input from private landowners). These projects, prepared through extensive community 'charrette' processes, include not only strategies for coordinated public, civic and commercial development but also design guidelines and associated zoning regulations. A number of initiatives are now underway in conjunction with recommendations of this work, including improvements to key roadways and a new grocery store/ commercial complex for Hampton Bays. Mr. Hutton, on continuing on-call contract to the Town, has also prepared for Southampton design review procedures, principles and guidelines for the Town as a whole and proposals for new signage controls and incentives. A series of 'Roanoke Vision' comprehensive plans in 1985, 1993 and 2001 for this prominent Virginia city. The initial 1985 project, recipient of an American Planning Association National Planning Award, created a both a citizen-participation-based comprehensive plan and a preservation-oriented zoning ordinance. The project grew out of Mr. Hutton's previous work in creating the "Roanoke Neighborhood Partnership", a unique public/ private community venture now celebrating its 20th year of activity. Roanoke was twice named an "All-American City" by the ICMA as a result of these projects, and the two plans were jointly profiled as one of seven projects selected for the American Planning Association's "50 Years of Planning" exhibit at the National Building Museum. Hutton Associates recently completed 'Vision 2001/2020,' a new comprehensive plan for the city which involved over 1000 citizens in various task force, round table and charrette workshops, putting a special emphasis on new urbanist principles for development in a mature urban environment. Coordination of stakeholder involvement with planning and programming for the Buffalo Inner Harbor waterfront development project. This major public- private downtown initiative was sponsored by the NYS Empire State Development Corporation, the City of Buffalo and associated agencies. Program components identified and coordinated as a result of this work included a variety of cultural attractions (a new Naval Museum and potential Children's/ Science Museum), historical elements (re-creation and interpretation of an historic Erie Canal slip), and supporting small-scale shops, restaurants and themed entertainment facilities. Work was performed in conjunction with Jambhekar-Strauss Architects (now Fox & Fowle Architects), associates of Hutton in the 'Union Square Alliance', a consortium of planners, architects and landscape architects.

Coordination of planning, fundraising and development strategy for the multi-theatre Pittsburgh Cultural District, winner of a US Department of Housing and Urban Development National Merit Award. The district was profiled as one of seven projects selected for the American Planning Association's "50 Years of Planning" exhibit at the National Building Museum. As a result of this plan, the 2800 seat Benedum Center for the Performing Arts was restored to complement the existing 2800-seat Heinz Hall, the 1500-seat Fulton Theatre has been renovated, a fourth new 800-seat theatre has been constructed, a fifth small theatre (formerly an adult cinema) has opened, and major park and streetscape improvements have been accomplished. Arts market studies coordinated by Mr. Hutton established initial audience and user

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feasibility for the district. As a result, construction was completed on the first phase project, the new 34-story CNG Tower office building leveraging the \$17 million Benedum Center renovation, key tourism/ economic development components of Pittsburgh's successful transition from a steel-dominated economy. Work was carried out on behalf of the Howard Heinz Endowment, the Allegheny Conference on Community Development, various landowners, and the Pittsburgh Cultural Trust, a non-profit corporation, now 17 years old, which was initiated by Mr. Hutton.

- In Jamestown NY, creation of a downtown urban design/ cultural district development strategy, which has resulted in the revitalization of a 1300 seat theatre (winner of the 'Best Renovation Award' of the League of Historic American Theatres), rehabilitation of a major loft building for Time-Warner Cable, and establishment of a "million dollar fund" by local foundations as seed money for renovation and public infrastructure. In an associated but independent project, as Chairman of American Vaudeville Inc. Mr Hutton helped set in motion the Lucille Ball Festival (now in its tenth year honoring this famous Jamestown native daughter) and the Luci-Desi Museum of Comedy. The Chautauqua Arts Council, the project client, received the annual NYS Arts Organization Award for initiation and implementation of this work. Most recently Mr. Hutton conducted an updated plan for Downtown West, including new projects such as a twin-sheet skating rink (now in operation), an associated 80-room hotel and restaurant, office space, a downtown visitors center/ resource museum, and a renovated cinemaplex. As part of a tourism development strategy for the city, he also recently completed a plan for creation or expansion of other small museums—including a new and expanded Lucy-Desi Museum and the just-opened Robert Jackson Center for Peace and Justice (honoring the Jamestown-born former Supreme Court Justice and Nuremberg Trial prosecutor),
- An urban design/land use/organizational structure for the Calhoun Street corridor in Charleston SC, a major boulevard linking a new downtown bridge entry, through the USC medical school/hospital complex, the College of Charleston campus, and historic neighborhood districts, to a new tourism center at the SC Aquarium. Follow-up work has included detailed studies for the Historic Charleston Foundation. The project was cited by Mayor Joe Riley to the Mayors' Institute on Civic Design as one of the most successful projects of his administration. The 'Calhoun Street Partnership' established through this work represents local institutional, city and neighborhood interests and acts as a watchdog for corridor development. Recent public, private and civic buildings have been designed with respect to the corridor guidelines, including a City office building and a new public library.
- A downtown development strategy, prepared with Mary Means & Associates, for the medium-sized city of Rutland VT, built on extensive public forums and stakeholder workshops. This plan resulted in a public-private partnership that has enabled extensive downtown retail growth, including a new 60,000 sf supermarket, a 9-plex cinema, and two major "big-box" discount retail stores, including the nation's first urban Wal-Mart, planned to complement rather than compete with adjacent downtown merchants. Seven years later, Hutton and Means prepared an update to the plan, focusing on pedestrian amenities and cultural/commercial facilities to take advantage of further opportunities, including a new AMTRAK line through the city.

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- Preparation, with Economics Research Associates, of a tourism development strategy for the State of West Virginia. The project team coordinated a series of public-private-civic sector advisory panels and analyzed research studies prepared by a variety of agencies or outside contractors. The plan's proposal for a new institution, the "West Virginia Tourism Trust" was proposed for legislative implementation by the Governor in his 'State of the State' address as the vehicle for innovative funding approaches, project packaging and multi-jurisdictional and multi-state partnership initiatives.
- Development strategy and urban design studies for mixed-use development in downtown Charlotte NC, for what has now been constructed as the new 60-story BankAmerica Center office tower and the associated two-theatre North Carolina Blumenthal Center for the Performing Arts. The study also examined, in the larger Uptown Charlotte context, the associated potential for linked convention center/ hotel development. A follow-on contract prepared a now-implemented strategy for development of the Charlotte Arts District in the 16-block warehouse area located immediately north of the above described office and cultural complex, focusing on cultural institutions (the Spirit Square Center for the Arts and Discovery Place science museum), a new library, residential development, and galleries, shops and restaurants; its public-private implementation is now underway.
- Planning, design and implementation work as senior urban designer for the 'new community' of Jonathan MN, winner of a US Department of Housing & Urban Development Award of Merit. The completed first village of this 8000 acre property included a variety of housing types, commercial development, and recreation and cultural centers, knit together by an environmentally-conscious open space plan and pedestrian-oriented 'greenway' system of walks, trails, and lakefront development. The project was sold following the premature death of the developer/landowner. Mr. Hutton then participated in a comprehensive analysis of this and other HUD sponsored community development in order to define lessons learned for future projects.

Randall Arendt

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· Conservation Planning



Randall Arendt

Randall Arendt, a Fellow of the Royal Town Planning Institute, is a nationally known land-use planner, site designer, lecturer and advocate of "conservation planning" through which the environment is protected while economic goals are achieved. . He is widely known as an author of influential professional planning books, including *Rural by Design, Growing Greener*, and *Crossroads, Hamlet, Village, Town*, all of which have impacted both land use policy and detailed design practice throughout the US and especially in New England, the source for many of his design examples.

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Arendt has designed "conservation subdivisions" in 20 states. His designs have been called "twice green" because they succeed both environmentally and economically. His designs have been featured in publications of the American Planning Association, the American Society of Landscape Architects, the National Trust for Historic Preservation and the National Association of Home Builders.

For example, one Michigan community that has implemented conservation design has protected more than 1,000 acres. By respecting natural terrain and designing around existing site features on an 80-lot development in Texas, Arendt cut grading costs by 83 percent.

He has a bachelor of arts degree, magna cum laude, from Wesleyan University. He also has a master of philosophy degree in urban design and regional planning from the University of Edinburgh, Scotland, where he was a St. Andrew's Scholar.

Arendt is a senior conservation advisor at the Natural Lands Trust in Media, Pennsylvania and is the former director of planning and research at the Center for Rural Massachusetts, part of the University of Massachusetts at Amherst. He also served as an adjunct professor in the UMass Amherst Department of Landscape Architecture and Regional Planning.

Michael W. Klemens

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Herpetology and Ecology



Michael W. Klemens

Business:

Metropolitan Conservation Alliance

68 Purchase Street/3rd Floor

Rye, NY 10580

Home:

9 Charlotte Street, Rye, NY 10580

914-967-4103 (phone/fax)

914-925-9175

914-925-9164 (fax)

Birth:

5 November 1951, Sydney, Australia

Citizen:

U.S.A.

Education

Ph.D. (Ecology/Conservation Biology), University of Kent at Canterbury, U.K. 1990. Dissertation: The herpetofauna of southwestern New England.

M.Sc. (Zoology), University of Connecticut. 1978.

Thesis: Variation and distribution of the turtle, Chrysemys picta (Schneider), in Connecticut.

B.Sc. (Education), University of Connecticut. 1975.

Conservation, Research, and Education Posts

Wildlife Conservation Society

Senior Conservationist, July 2002

Director, Metropolitan Conservation Alliance, 1998-present.

Director for Program Development, May 1994-1998.

Research Fellow, 1992-April 30, 1994.

American Museum of Natural History

Research Associate in Herpetology, May 1994-present.

Director, Special Projects, Center for Biodiversity and Conservation, July 1993-April 30, 1994.

Director, Environmental Initiatives, 1990-June 1993.

Senior Scientific Assistant/Scientific Assistant, Herpetology, 1979-1989.

Pace University, School of Law, Land Use Law Center

Course Facilitator, Community Leadership Alliance Training Program, 1998-present.

University of Kent, Durrell Institute of Conservation and Ecology

Visiting Research Fellow, 1990-present

University of Massachusetts, Amherst

Adjunct Assistant Professor, 1996-present.

Columbia University, Center for Environmental Education and Conservation

Research Associate, 1998-present.

"Turtle Conservation: Protecting Endangered Species," 1990 Fall Radio Series, Produced by the Office of Public Affairs, American Museum of Natural History.

Voice of America News Broadcast, New York, February 10, 1990.

- 1989 Spring Radio Series, Produced by the Office of Public Affairs, American Museum of Natural History.
- 1987 Fall Radio Series, Produced by the Office of Public Affairs, American Museum of Natural History.
- "Finding a Turtle in a Haystack," 1985 Spring Radio Series, Produced by the Office of Public Affairs, American Museum of Natural History.
- "Turtle Tales," 1983 Radio Series, Produced by the Office of Public Affairs, American Museum of Natural History.

Land Use and Planning Consultant (1979-present)

Federal Clients

U.S. Fish and Wildlife Service

1999-2000-Contracted to prepare technical draft of Bog Turtle Recovery Plan.

United States Department of Environmental Protection

- 1992-Herpetological Inventory of the Hop-Skungamaug Drainage Basin and Adjacent Areas, Tolland County, CT (Proposed Route 6 Highway Project).
- 1989-The Herpetofauna of the Leonard Pond Wetlands, Agawam, Massachusetts (Proposed Expansion of Route 57).

State and Regional Clients

Connecticut Department of Transportation & Maguire Group, New Britain, Connecticut

2000-Environmental review and mitigation of the proposed Route 66 highway expansion, Middlefield, CT.

Westchester County New York Department of Planning

1993-The Ecological Assessment of the Saxon Woods Golf Course Expansion Proposal.

Massachusetts Division of Fisheries and Wildlife

1991-A Herpetological Survey of the Holyoke Range, Hampshire County, MA.

1984-1990-Wetland Inventories Berkshire County, MA.

1987-Herpetological Inventories: Central Connecticut Lowland of Southern Hampden County, MA.

Municipal Clients

Town of Chester, New York

2000-Sewer main wetland restoration, Sewer District 4-A.

Town of Dover, New York

1999-2000-Provide expert testimony concerning wetlands and wildlife impacts of proposed construction and debris landfill.

Town of Easthampton, NY & Allee, King, Rosen, and Fleming, Inc.

1992-Herpetological Investigation at Culloden Point, Montauk, NY (Arbitration Residential Development with Conservation Open Space Plan).

Town of North Salem, New York

1990-Herpetofaunal Survey of Wetlands L-6 and L-7 with Emphasis on the Bog Turtle (*Clemmys muhlenbergii*) (Ecological Assessment of the Proposed Meadow Lane Farm Subdivision).

1990-Herpetological Survey of Crook Brook Wetlands, Turkey Hill, Town of North Salem, Westchester County, New York with emphasis on the Bog Turtle, *Clemmys muhlenbergii*.

Town of Putnam Valley, New York

1990-Herpetological Inventory of the Horton Hollow Road Wetlands (Study to Assess Impacts of Proposed Conversion from Dirt to Blacktop).

Town of Glastonbury, Connecticut

2000-Provide expert testimony on rattlesnake conservation plan as part of subdivision reviews.

Town of Redding, Connecticut

2000-Review of the Old Stagecoach Estates proposed subdivision.

1998-Environmental review and wetlands restoration Lampitelli Subdivision, Whortleberry Hill Road.

Town of Redding, Connecticut & Robinson and Cole, L. L. P.

1998-1999-Consultant for amendments to inland wetlands and watercourses regulations.

Town of Ridgefield, Connecticut

2000-Biological Inventory of the Proposed Ridgefield Middle School, North Salem Road.

Town of Simsbury, Connecticut & Robinson and Cole, L. L. P.

2000-Environmental review of Meadowood Planned Residential Subdivision.

Town of Wilton, Connecticut

1999-2000-Environmental review of the proposed Avalon Springs II Apartment Complex.

1999-Enionmental review of the Brandon Crossing Subdivision.

Town of Greenwich, Connecticut

1999-Environmental review Treetops Subdivision.

South Brunswick Township, New Jersey

2000-Consult and provide expert testimony in terrestrial ecology, conservation biology, and wetland fragmentation in response to proposed new highway (Route 92).

Private Clients

Children's Museum of the East End

2000-Evironmental review of planned museum and interpretive center Bridghampton, NY.

Friends of Mount Holly

2000-Environmental assessment and road-crossing design, Lesser Subdivision, Mount Holly Road, Bedford, NY.

Ecosystem Strategies, Poughkeepsie, New York

2000-Blanding's Turtle Habitat Assessment, Crofton Mews, Hyde Park, New York.

Bedford Audubon Society

1999-Environmental review on the proposed Byram Lake Water Filtration Plant, Mount Kisco, NY.

Pietrzak & Pfau, Goshen, New York

1999-Bog turtle habitat assessment at the Tai Chai Farm, Warwick, NY (Proposed Southwycke Farms subdivision).

Brooklyn Botanical Garden

1999-Herpetological consultant, Japanese Garden restoration.

Kunhardt Productions, Inc.

1999-Environmental assessment proposed Middle School, Chappaqua, NY.

Trump Organization

1997-Bog turtle habitat assessment and survey, Seven Spring Farm, Westchester County, NY.

John Ciardullo Associates

1995-Modification of Chapel Hills Subdivision, Lewisboro, NY.

J. O. G. Associates

34

1994-A Herpetological Evaluation of the Black Pond Golf Club Application, Bridgehampton Long Island, NY.

Design Properties Ronkonkoma, New York

1994-Slate Pond Subdivision Conservation Plan Southampton, NY.

Inter-Science Southampton, New York

1994-A Herpetological Evaluation of the Roosevelt Land Corporation Property a.k.a. Van Scoy Homestead, Northwest Harbor, Easthampton, NY (Residential Subdivision with Conservation Open Space Plan).

Environmental Planning Services, New Hartford, Connecticut

1993-Herpetological Inventory of the Fawn Builders, Chapel Hills, and Woods at Wuccabuc (a.k.a. Woodsbrooke) Parcels, Lewisboro, Westchester Co., NY.

Allee, King, Rosen, and Fleming, Inc. & Town of Easthampton

1992-Herpetological Investigation at Culloden Point, Montauk, NY (Arbitration Residential Development with Conservation Open Space Plan).

Ron Freeman Associates, Mount Kisco, New York

1991-1992-Environmental assessment and road-crossing design, Ferris Subdivision, Todd Road, Lewisboro, NY.

Northbrook Realty Group

1989-Impact of the Proposed Atlantic Golf Club Development on the Eastern Tiger Salamander (*Ambystoma tigrinum*).

Hudson Riverkeeper Fund, Inc.

1985-Herpetofaunal inventory of Quassaick Creek, Orange County, NY (Analyzing Impacts of Discharge of Aluminum Flocculent Sludge into Creek).

Sotheby's, Inc.

1979-present-Identification of types of turtle shell and other reptilian products used in the manufacture of objects d'art being sold by major auction house. Preparation of expert affidavits concerning objects d'art for U.S. Fish and Wildlife Service and New York Department of Environmental Conservation. On behalf of Sotheby's have worked on preparation for over 100 auction sales including the Dutchess of Windsor's Jewels and the Andy Warhol Estate.

Foundation, NGO, and Government Grant Awards Received

Westchester Community Foundation

2000-Support for the Eastern Westchester Biotic Corridor project, Wildlife Conservation Society, Metropolitan Conservation Alliance Program.

1999-Support for Biodiversity Conservation in the Croton-to-Highlands Corridor project, Wildlife Conservation Society, Metropolitan Conservation Alliance Program.

Surdna Foundation, Inc.

1998-2000-Funding for Wildlife Conservation Society, Metropolitan Conservation Alliance Program.

1997-Funding for Wildlife Conservation Society, NY Metro Program.

Sweet Water Trust

1999-2000-Support for "Wetland Landscapes of the Northeast"

1997-Support for "Inventory, Information, and Research Accomplishments in the Great Swamp," Wildlife Conservation Society, NY Metro Program.

Doris Duke Charitable Foundation

1999-Funding for Wildlife Conservation Society, Metropolitan Conservation Alliance Program.

Les Model Foundation

1997-Wildlife Conservation Society, Tanzania Biodiversity and Training Program.

The Bay Foundation

1995-1997-Support for "Assessment of Amphibian and Reptile Biodiversity in Tanzania's National Parks.

Geoffrey Hughes Foundation

1995-1997-Support for Massachusetts/Connecticut bog turtle ecosystem study.

The Norcross Wildlife Foundation

1995-1997-Funding for the Wildlife Conservation Society, International Programs.

1993-Support for the publication of "Amphibians and Reptiles of Connecticut and Adjacent Regions."

1991-1992-Funding for Turtle Recovery Program, American Museum of Natural History.

United States Department of Agriculture (Forest Service)

1993-Support for "Conservation, Restoration, and Management of Tortoises and Freshwater Turtles-An International Conference."

United States Department of Defense (Legacy Program)

1993-Support for "Conservation, Restoration, and Management of Tortoises and Freshwater Turtles-An International Conference."

National Science Foundation

1993-Support for "Conservation, Restoration, and Management of Tortoises and Freshwater Turtles-An International Conference,"

United State Department of the Interior (Bureau of Land Management)

1993-Support for preparing conference proceedings "Conservation, Restoration, and Management of Tortoises and Freshwater Turtles-An International Conference."

1992-Support for "Conservation, Restoration, and Management of Tortoises and Freshwater Turtles-An International Conference."

Wildlife Conservation International

1992-Field Assessment of the Status and Exploitation of the Pancake Tortoise (Malacochersus tornieri) in Tanzania.

John D. and Catherine MacArthur Foundation

1990-Tropical Rainforests: Can We Regain Paradise Lost? (educational programming grant).

Turtle Recovery Program

Corporate and Individual Support

Acorn Foundation

American Federation of Herpetoculturists

Aquarion Co.

Brystie, Inc.

California Turtle and Tortoise Club

Camden House Publishing

Chelonia Institute

Chicago Zoological Society

Conservation and Research Foundation

Conservation International (2 grant awards)

Desert Tortoise Council (2 grant awards)

Institute for Herpetological Research.

J. P. Morgan & Co

IUCN/SSC Trade Specialist Group

Jersey Wildlife Preservation Trust (2 grant awards)

Knoxville Zoological Gardens

New York Return A Gift to Wildlife (2 grant awards)

New York Turtle and Tortoise Society (3 grant awards)

New York Zoological Society

Norcross Wildlife Foundation (3 grant awards)

Oklahoma City Zoological Park

Peter Scott Fund-IUCN (3 grant awards)

Sabin Conservation Fund (7 grant awards)

Saint Augustine Alligator Farm

Sweet Water Trust (2 grant awards)

Tampa Bay Herpetological Society

Tennessee Aquarium

Tipton and Maglione

US Fish and Wildlife Service

Invited Papers and Presentations

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- Postglacial Hybridization of Ambystoma jeffersonianum and Ambystoma laterale (Amphibia: Caudata) in the northeastern United States. First World Congress of Herpetology, Canterbury, UK (September 11-19, 1989).
- The IUCN Global Action Plan for the Conservation of Tortoises and Freshwater Turtles. New York Turtle and Tortoise Society Fifth Annual Seminar, Fordham University, Bronx, NY (April 28, 1990).
- Think Globally Act Locally: The Importance of Maintaining Local Wildlife Populations. Long Island's Natural Habitat Management Series: Managing and Protecting Long Island's Endangered Species, Suffolk Community College, Long Island, NY (June 8, 1990).
- Implementing the International Union for the Conservation of Nature Tortoise and Freshwater Turtle Action Plan. Symposium on Turtles and Tortoises: Conservation and Captive Husbandry. Chapman College, Orange, CA (August 9-12, 1990).
- IUCN Global Action Plan for the Conservation of Freshwater Turtles and Tortoises and Recommendations on an Upland Habitat Acquisition Program for the Gopher Tortoise Council (panel discussion). Twelfth Annual Meeting of the Gopher Tortoise Council, Brooksville, FL (October 26-28, 1990).
- Tortoises and Freshwater Turtles: An Action Plan for Their Conservation.

 Joint initiative of the American Museum of Natural History and the World Conservation Union Species Survival Commission (IUCN/SSC), Special Members Lecture, American Museum of Natural History, New York, NY (February 6, 1991).
- The IUCN/Tortoise and Freshwater Turtle Specialist Group Conservation Action Plan: Report of the First Year's Progress. 16th Annual Symposium. Desert Tortoise Council. Las Vegas, NV (March 8-11, 1991).
- The IUCN's Tortoise and Freshwater Turtle Conservation Action Plan: Reporting the First Year of Progress. Seminar, Middlebury College, VT (April 4, 1991).
- Turtle Action Plan Initiative (IUCN). Bog Turtle Research Symposium, Moravian College, Lehigh, PA (April 27, 1991).
- Massachusetts and Connecticut Bog Turtle Situations and Projects. Bog Turtle Research Symposium, Moravian College, Lehigh, PA (April 27, 1991).

- Building a Coalition for Conserving Chelonian Biodiversity: The IUCN/SSC Action Plan. 71st Annual Meeting of the American Society of Ichthyologists and Herpetologists, New York, NY (June 15-20, 1991).
- Conservation Status of the Amphibians and Reptiles of Connecticut. 71st Annual Meeting of the American Society of Ichthyologists and Herpetologists, New York, NY (June 15-20, 1991).
- Nonmarine Turtle Decline, Northeast Nongame Technical Committee Meeting, Luray, VA (September 26, 1991).

- Building Conservation Partnerships to Conserve Turtles. 17th Annual Symposium. Desert Tortoise Council, Las Vegas, NV (March 6-9, 1992).
- Tortoise and Fresh Water Turtle Recovery Program. 633rd Meeting of The Kennicott Club, Chicago, IL (April 27, 1992).
- Tortoise and Fresh Water Turtle Recovery Program. Chicago Herpetological Society, Chicago, IL (April 28, 1992).
- Turtles in Crisis-The Problems and Possible Solutions. Brookfield Zoological Society, Brookfield, IL (April 29, 1992).
- Worldwide Turtle and Tortoise Conservation Efforts. University of Minnesota, Conservation Biology Program, Minneapolis, MN (April 30, 1992).
- Worldwide Turtle and Tortoise Conservation Efforts by the Turtle Recovery Program. Minnesota Herpetological Society, Saint Paul, MN (May 1, 1992).
- At Risk-Local Biodiversity. Millbrook Garden Club, Salisbury, CT (October 19, 1992).
- Conservation Efforts: Past Experiences, Future Needs. Symposium on the Status and Conservation of Turtles of the Northeast, Worcester College (March 20, 1993).
- Status and Exploitation of the Pancake Tortoise (Malacochersus tornieri) in Tanzania. Eighteenth Annual Symposium, Desert Tortoise Council, Palm Springs, CA (May 14-16, 1993).
- Baseline Health Parameters of Free-ranging Pancake Tortoises, *Malacochersus tornieri*, in Tanzania. Conservation, Restoration, and Management of Tortoises and Turtles-An International Conference, Purchase, NY (July 11-16, 1993).

- Preserving Local Biodiversity: Lessons from Herpetology. 1993 New York State Conference on the Environment, White Plains, NY (October 23, 1993).
- The Biological Significance of Aquatic Ecosystems. The Future of America's Rivers/A Celebration of the 25th Anniversary of the National Wild and Scenic Rivers Act, Washington, DC (November 5, 1993).
- Conservation Action Planning. World Conservation Monitoring Centre, Cambridge, U.K. (November 9, 1993).

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- The Role of Museums and Systematics in the Biodiversity Crisis. Durrell Institute of Conservation and Ecology, University of Kent, U.K. (November 11, 1993).
- Conservation of Amphibians and Reptiles in the Hudson Valley. Our Own Backyard...The Hudson River and New York Harbor: A Natural History, American Museum of Natural History, New York, NY (February 9, 1994).
- Reptiles and Amphibians of the Metropolitan Region: Threats, Causes, Solutions. Eco Impact Lectures, American Museum of Natural History, New York, NY (February 24, 1994).
- Turtle at the Crossroads. A Symposium on the Status and Conservation of Florida Turtles, Eckerd College, St. Petersburg, FL (April 3, 1994).
- Local Wetlands and Their Associated Uplands: A Conservation Challenge. Wetlands Watch Lecture (Sierra Club), Chappaqua, NY (November 1, 1994).
- From Kilimanjaro to Storm King: International Perspectives on Conserving Local Biodiversity. Environmental Problem Solving in Dutchess County Lecture Series, Vasser College, Poughkeepsie, NY (January 26, 1995).
- Global Conservation in a Changing Environment. Biotechnologies for the Ecological, Evolutionary and Conservation Sciences Earth Day Symposium, University of Florida, Gainsville, FL (April 29, 1995).
- Post-glacial Landscape Ecology of the Long Island Sound Basin: A

 Herpetological Perspective. Jay Heritage Center Annual Meeting, Rye, NY
 (June 7, 1995).
- Urban Growth and Biodiversity: Can They Co-Exist? Lecture for the Westchester Environmental Management Council and Federated Conservationists of Westchester County, Texaco, Inc. (October 27, 1995).

- Keynote Address: Ephemeral Wetlands Ephemeral Protection? Our Hidden Wetlands: A Symposium on Vernal Pools in Connecticut, Wesleyan University, Wesleyan, CT (November 15, 1997).
- The Role of Veterinarians in Monitoring the Health Status of Free-Ranging Chelonians. Association of Reptilian and Amphibian Veterinarians Fifth Annual Conference, Crowne Plaza, Kansas City, MO (September 28, 1998)

- Sustaining Biodiversity in a Changing Landscape. The Colebrook Land Conservancy Annual Meeting, YMCA Camp Jewel, Colebrook, CT (April 8, 1999).
- Conservation of Amphibians and Reptiles in the Northeast. Fifty-fifth Annual Northeast Fish and Wildlife Conference, Holiday Inn, Manchester, NH (April 13, 1999).
- The Big Apple's Biodiversity: Prospects for Survival in the Post-Eisenhowerian Era. Biodiversity and Climate Change: Center for Biodiversity and Conservation Spring Symposium, American Museum of Natural History, New York, NY (May 1, 1999).
- Linking Conservation, Land-Use Regulation, and Science. American Planning Association Symposium, Chicago, IL (September 17-18, 1999)
- Keynote Address: Landscape Conservation: Implications for the Protection and Management of Reptiles and Amphibians. Conservation and Ecology of Turtles of the Mid-Atlantic Region Conference, National Wildlife Visitor Center, Patuxent Research Refuge, Laurel, MD (October 30, 1999).
- Keynote Address: Wetlands and Wildlife: Conservation Issues. Connecticut Association of Wetland Scientists 2000 Annual Meeting, Ramada Plaza Hotel, Meriden, CT (February 17, 2000).
- Conservation of Wetland Landscapes in the NY Metropolitan Region:
 Science, Awareness, Policy, and Practice. Environmental Protection
 Agency, Vernal Pools of the Northeast Conference, University of Rode Island,
 Kingston, RI (April 1, 2000).
- Ecological Effects of Poorly Planned Development. Nature in Fragments: The Legacy of Urban Sprawl, Spring Symposium, American Museum of Natural History, New York, NY (April 13, 2000).
- No Place Like Home The Metropolitan Conservation Alliance. Wildlife Conservation Society Annual Meeting 2000, Lincoln Center, New York, NY (April 17, 2000).

- Sustaining Biodiversity in a Changing Landscape. The Institute of Ecosystems Study and the Conservation Committee of the Millbrook Garden Club Lecture, Millbrook, NY (April 28, 2000).
- Wild New York: Local Conservation Strategies in the Metropolitan Region.
 Wine and Cheese Evenings with Experts, Wild New York Speaking
 Engagement, Central Park Zoo, New York, NY (May 3, 2000).
- Biodiversity at the Rural Suburban Frontier: A U.S. Perspective. The Consultative Group on Biological Diversity 2000 Annual Meeting, The Colony Hotel, Kennebunkport, ME (June 15, 2000).
- Sustaining Biodiversity in a Changing Landscape-Special Multi-Town Meeting. Hosted by the Planning & Zoning Board/Inland Wetland Commission, Ridgefield Town Hall Annex, Ridgefield, CT (June 21, 2000).
- Sustaining Biodiversity in a Changing Landscape. Presentation to the Selectmen and interested public officials in the towns of Granby, East Granby, Simsbury, Avon, Canton, and Farmington Towns, Farmington Valley, CT (September 21, 2000).
- Biodiversity Conservation at the Suburban-Rural Frontier: New Opportunities for Land Trusts. National Land Trust Rally 2000, October 12-22, 2000. Sponsored by the Land Trust Alliance. Portland, OR (October 22, 2000)
- Justice Humans, Nature and Time (panel speaker). Humans, Nature, and Environmental Justice Humans and Nature Consortium, January 15-16, 2001. Sponsored by The Hastings Center. St. Helen Island, SC. (January 16, 2001).
- Strategies for Providing Biodiversity Data to Key Decision-Makers (panel speaker). Status of the States: Innovative State Strategies for Biodiversity Conservation. National Biodiversity Symposium. Sponsored by the Environmental Law Institute, January 17-18, 2001. Washington, DC. (January 18, 2001).
- Sustaining Biodiversity in a Changing Landscape (Keynote Speaker).

 Massachusetts Association of Conservation Commissions 2001 Annual Meeting. Worcester, MA (March 3, 2001).
- Wildlife-Friendly Transportation Planning (panel speaker). 2001 APA National Planning Conference, March 10-14, 2001. Sponsored by the American Planning Association. New Orleans, LA. (March 11, 2001).

- Biodiversity and Agriculture (panel speaker). 2001 APA National Planning Conference, March 10-14, 2001. Sponsored by the American Planning Association. New Orleans, LA. (March 12, 2001).
- Repatriation, Relocation, and Translocation: Real Solutions. 57th Annual Northeast Fish and Wildlife Conference, April 22-25, 2001. Sponsored by the New York State Department of Environmental Conservation. Saratoga Springs, NY (April 24, 2001).
- Stormwater Design and Its Impact on Biodiversity. 2001 Southeast NY Stormwater Conference and Trade Show, June 13-14. Sponsored by the Lower Hudson Coalition of Conservation Districts and Hudson Valley Regional Council. Fishkill, NY (June 13, 2001).
- Sustaining Ecosystems in a Changing Landscape. Orange County Land Trust Dinner. Warwick Center, Warwick, NY (June 14, 2001).
- Wallkill Valley Conservation: Placing Growth in an Ecological Context.
 Informative Slideshow & Public Discussion: Wildlife in the Wallkill Valley How we can learn about and protect it. Sponsored by the Wallkill River
 Task Force Ulster Branch. New Paltz, NY (July 11, 2001).
- Wise Use in the Absence of Wisdom. Property and the Commons: Rights and Responsibilities Humans and Nature Consortium, July 17-18, 2001. Sponsored by The Hastings Center. Chicago, IL. (July 18, 2001).
- The Geological and Ecological Framework of the Wallkill Valley. Wallkill Valley Community Leadership Alliance Training Program. Cold Spring, NY. (October 1, 2001).
- Conservation Stategies Combined with Local Land-Use Planning. Tools for Watershed Management Workshop. Brooklyn, NY. (October 3, 2001).
- The Metropolitan Conservation Alliance: Protecting Wildlife at the Rural/Suburban Frontier. Conservation Medicine in the New York Bioscape: A Research, Education, and Policy Agenda Wildlife Trust, Tarrytown, NY. (October 5, 2001).
- **Biodiversity and Agriculture.** Wallkill Valley Community Leadership Alliance Training Program. Cold Spring, NY. (October 15, 2001).
- Sustaining Ecosystems in a Changing Landscape. Stamford Land Conservation Trust Annual Meeting, Stamford, CT. (October 16, 2001).
- Sustaining Ecosystems in a Changing Landscape. PACE University Seminar, Dr. Josh Schwartz class, Pleasantville, NY. (October 19, 2001).

Klemens, M. W. 1983. Geographic distribution: Thamnophis sirtalis sirtalis. SSAR Herp. Review 14(1):28-29.

Coakley, J. and M. Klemens. 1983. Two generations of captive-hatched leopard tortoises, Geochelone pardalis babcocki. SSAR Herp. Review 14(2):43-44.

Klemens, M. W. and J. L. Warner. 1983. The status of Clemmys muhlenbergii (Schoepff) in Connecticut. SSAR Herp. Review 14(4):124-125.

Klemens, M. W. and P. G. Mirick. 1985. Geographic distribution: Clemmys muhlenbergii. SSAR Herp. Review 16(1):32.

Klemens, M. W. 1985. Survivors in Megalopolis: Reptiles of the Urban Northeast. Discovery 18(1):22-25.

Klemens, M. W., E. Kiviat, and R. E. Schmidt. 1987. Distribution of the northern leopard frog, Rana pipiens, in the lower Hudson and Housatonic river valleys. Northeastern Environmental Science 6(2): 99-101.

Swingland, I. R. and M. W. Klemens (eds.). 1989. The Conservation Biology of Tortoises. Occasional Papers IUCN/SSC 5:1-201.

Klemens, M. W. 1989. The methodology of conservation. In Swingland, I. R. and M. W. Klemens (eds.), The Conservation Biology of Tortoises. Occasional Papers IUCN/SSC 5:1-4.

Klemens, M. W. 1989. (Abstract) Postglacial hybridization of Ambystoma jeffersonianum and Ambystoma laterale (Amphibia: Caudata) in the northeastern U.S.A. In Abstracts: First World Congress of Herpetology, University of Kent, Canterbury, UK.

Klemens, M. W. 1990. Can Ninja turtles help their real cousins? Editorial in Viewpoints/Second Opinion. Newsday (May 18):91.

Klemens, M. W. 1990. Conservation status of the bog turtle in Massachusetts. Tortoises and Turtles [Newslett. of the IUCN Tortoise and Freshwater Turtle Specialist Group] 5:13.

Klemens, M. W. 1990. Tortoise and freshwater specialist group. Species 15:64-65

Klemens, M. W. 1990. Implementing the IUCN/SSC Action Plan for the conservation of tortoises and freshwater turtles. Proceedings of the First International Symposium on Turtles & Tortoises: Conservation and Captive Husbandry, p. 14.

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Environmental Planning Services

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Wetlands, Solls, and Biological Sciences



ENVIRONMENTAL PLANNING SERVICES 89 BELKNAP ROAD WEST HARTFORD, CT 06117 Phone/Fax 860-236-1578

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Environmental Planning Services was formed in 1983 to provide consulting services in the areas of biological, wetland, and soil sciences, environmental impact assessment and mitigation planning to public agencies and private clients; including design professionals, attorneys, site developers, municipalities, and public interest groups. In addition to identification, description, and classification of natural resources, the firm also provides functional evaluation of wetlands and other biological systems, guidelines for mitigation of potential adverse impacts, and permit support through expert testimony and public representation. Services provided revolve around the impact of human activities on terrestrial, wetland, aquatic, and marine resources. The firm specializes in biological and wetland surveys, impact assessment, and mitigation planning. Qualified staff consultants are available in such diverse fields as landscape architecture, computer modeling, and civil engineering.

Michael S. Klein is the founder and principal of Environmental Planning Services. He is a certified Professional Wetland Scientist and a registered Soil Scientist. He has provided environmental consulting services to a wide range of clients throughout the northeast, since 1977. These have included the US EPA, US DOE, US Army Corps of Engineers, FAA, CT DEP, CT DOT, many municipalities, and a variety of private clients. His background in biological and soil sciences includes studies of the impact of development proposals on upland, wetland, estuarine, riverine, and marine ecosystems.

SERVICES

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RESEARCH

Literature review and summary Terrestrial and marine sampling Regulatory review

RESOURCE IDENTIFICATION AND EVALUATION

Wetland delineation (CT and Army Corps)
Rivers and estuaries
Wildlife habitat

Threatened and endangered species surveys Natural resource mapping and interpretation Functional wetland evaluation

RESOURCE MANAGEMENT AND SITE PLANNING

Environmental impact assessments
Wetland mitigation
Sediment and erosion control
Coastal site plan (CAM) applications

REPRESENTATIVE CLIENTS

Spath-Bjorklund Associates

LADA, PC

Swig, Weiler and Arnow

Leonard Jackson and Associates

Hayes-Kaufman Partnership

Planimetrics

Robinson and Cole FIP Corporation

Fuss and O'Neill, Inc. Cohen and Wolf, PC Purcell Associates

F. A. Hesketh and Associates

Town of Colchester, CT

Town of Ellington, CT Town of South Windsor, CT

The Lyman Farm, Inc. National Fairways T & M Builders

HRP, Inc.

Konover Development Corp.

Avonridge, Inc.

ERL, Ltd.

Marin Environmental

Bell Atlantic Mobile NYNEX

Richter and Cegan

CT DOT

Town of East Granby, CT Town of Winchester, CT Town of Groton, CT Town of Westport, CT

City of Groton, CT

Town of East Windsor, CT City of Bridgeport, CT Town of Monroe, CT Town of Avon, CT Town of Westbrook, CT Town of Glastonbury, CT

RESUME

MICHAEL STEPHEN KLEIN, CPWS

POSITION

Principal

TENURE

1983-Present

DUTIES

Prepares site evaluations and impact assessments for EPS projects. Responsibilities include coordinating work of all subcontractors, liaison with regulatory agencies and clients, conducting field surveys, flagging wetland limits, designing mitigation projects, supervising construction, reviewing plans and recommendations for impact minimization. Presents results at public hearings and

agency meetings.

PREVIOUS

EXPERIENCE

Senior Environmental Analyst, MRE, 1978-1983.

Ecologist, COMSIS Corporation, 1977-1978.

EDUCATION

BA, Biology, 1973, University of Connecticut.

MS, Marine Environmental Sciences, 1976

State University of New York at Stony Brook, Stony Brook, NY.

CERTIFICATION Registered Soil Scientist

Certified Professional Wetland Scientist

PROFESSIONAL

AFFILIATIONS

Society of Soil Scientists of Southern New England

Association of Massachusetts Wetland Scientists

Society of Wetland Scientists

Connecticut Association of Wetland Scientists (Charter Member)

PUBLIC SERVICE

33

New Hartford, CT Planning and Zoning Commission Member, 1987-1995

New Hartford Inland Wetlands and Watercourses Commission

Member, 1986-1990 Vice-Chairman, 1990-1993 Chairman, 1993-1995

RESUME

JAMES COWEN, CPWS

POSITION

Field Biologist/Landscape Designer

TENURE

1995-Present

DUTIES

Prepares biological resource evaluations and impact assessment reports for EPS projects. Responsibilities include conducting field surveys, identifying and mapping vegetation and wildlife habitat,

and monitoring mitigation projects. Prepares landscape

restoration plans and preliminary mitigation strategies. Presents

results at public hearings as required.

EDUCATION

M.A., Landscape Design, Conway School of Landscape Design,

Conway, MA, 1995

B.A., Biology, University of California at San Diego, San Diego,

CA (with Honors), 1973

PROFESSIONAL

AFFILIATIONS

Director, Connecticut Botanical Society

American Horticultural Society
American Rhododendron Society
North American Rock Garden Society

Society of Soil Scientists of Southern New England

Society of Wetland Scientists

REGISTRATION

Registered Soil Scientist

Certified Professional Wetland Scientist

RESUME

ERIC RICHARD DAVISON

POSITION

Wildlife Biologist

TENURE

1998-Present

DUTIES

Prepares wildlife, fisheries, and natural resource inventories and impact assessments for BPS projects. Responsibilities include conducting field and literature surveys, identifying fish and wildlife species and sign encountered in the field, and mapping habitat types. Assists in development of habitat loss mitigation

strategies.

EDUCATION

B. S., Wildlife Conservation, University of Massachusetts at

Amherst, 1998

CERTIFICATION Registered Soil Scientist

James Cowen, CPWS Field Biologist/Landscape Designer, Environmental Planning Services

James Cowen, CPWS, is a field biologist for Environmental Planning Services (EPS) in West Hartford, who spent months walking through The Preserve to identify and categorize all the plants and trees, then design plans to protect the most environmentally important.

As a field biologist and landscape designer, Cowen prepares biological resource evaluations and impact assessment reports for EPS projects. He identifies and maps vegetation and wildlife habitats and monitors mitigation projects. He prepares landscape restoration plans and preliminary mitigation strategies.

Cowen joined EPS in 1995, shortly after receiving his master of arts degree in landscape design from the Conway School of Landscape Design in Conway, Mass. He received a bachelor of arts degree in biology in from the University of California at San Diego.

He is a Certified Professional Wetland Scientist as well as a Registered Soil Scientist. He is also a director of the Connecticut Botanical Society and a member of the American Horticultural Society, the American Rhododendron Society, the North American Rock Garden Society, the Society of Soil Scientists of Southern New England and the Society of Wetlands Scientists.

Environmental and Turf Sciences

44

Integrated Turf and Pest Management



STUART Z. COHEN, Ph.D., CGWP

President, Senior Environmental Scientist

EDUCATION

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Ph.D., Physical Organic Chemistry, George Washington University, Washington, DC, 1984. B.A., Chemistry, University of Maryland, Baltimore County, 1975.

At least eleven short courses in habitat preservation/enhancement, chemical carcinogenesis, chemical engineering, golf course drainage, soil microbiology, ground water contamination, and physical organic chemistry. Trained in FIFRA Good Laboratory Practices (with a focus on field studies).

CERTIFICATION

Certified Ground Water Professional #381, National Ground Water Association.
CPR and First Aid Training-Red Cross, 1993 & 1996.
NITON XRF Spectrum Analyzer -- NITON Corporation, 1998 (for heavy metals in solls)

EXPERIENCE

1991 to Present: President, Environmental & Turf Services, Inc., Wheaton, MD.

Responsible for supervising and conducting field and computer risk assessments for pesticides and fertilizers used on golf courses and in agriculture (runoff and leaching); ground water monitoring studies for pesticides; lead and arsenic contamination assessments and best management practices for firing ranges; environmental fate issues under TSCA; environmental site assessments in real estate transactions, including record searches, visual hazard assessments, etc.; and expert testimony.

1994 to 1999: <u>Instructor</u> on environmental management at shooting ranges. (See "Selected Abstracts/Presentation" below).

1986 to 1990: <u>Manager, Ground Water and Environmental Programs</u>, Biospherics Incorporated, Beltsville, MD.

Managed programs to evaluate ground water and environmental contamination by pesticides, lead, and hazardous wastes. Managed environmental programs for golf course environmental impact assessments and for real estate transactions. Programs included study design, vulnerability assessments, risk assessments, placement of monitoring wells, soil gas analysis, unsaturated zone modeling, etc. National Priority List site (Superfund) Project Manager.

1976 to 1986: <u>Chemist and Ground-Water Team Leader</u>, Office of Pesticides and Toxic Substances, Environmental Protection Agency, Washington, DC.

One of EPA's key scientists for the development, implementation, and conduct of pesticides in ground water programs. Responsibilities and functions included: management of \$1.4 million budget; co-chair of the National Well-Water Survey Steering Committee; senior physical scientist on all pesticides in ground water regulatory actions; director of ground water studies by pesticide industry; main interagency and international contact on pesticides in ground water; synthesized interdisciplinary risk assessments for several chemicals over a two-year period; conduct DBCP and EDB ground water risk assessments, which led to bans of all soil uses in 1979 and 1983, respectively; development of biorational pesticides testing guidelines;

assessment of heptachlor in milk in Hawaii; testing guidelines and regulations for new chemicals under TSCA§ 5.

1980 to 1987: <u>Guest Worker</u> in organic chemistry at the Laboratory of Chemistry, NIADDK, National Institutes of Health (NIH), Bethesda, MD. (One year full-time detail during 1981-1982, part-time 1980-1981 and 1982-1987.)

1975 to 1976: <u>Research Technician</u>, The Johns Hopkins University School of Medicine, Department of Immunology, Baltimore, MD. Prostaglandin and antibody radioimmuno-assays.

HONORS & AWARDS

14

EPA Special Achievement Award (cash award) for work in ground water contamination by pesticides, 1985. EPA Bronze Medal for the ethylene dibromide ground water assessment, 1984.

James Buchannan Duke Honor Scholarship, 1972.

MEMBERSHIPS

- ! National Ground Water Association (formerly NWWA): Ground Water Protection and Management Committee, Chairman, 1991-1993; member 1989-1996.
- ! International Union of Pure and Applied Chemistry (IUPAC); Titular (voting) member, Commission on Agrochemicals, 1986-1995 (assoc. member 1985-1990).
- ! American Chemical Society: Environmental Chemistry, Agrochemicals, and Organic Chemistry Divisions; Chemical Society of Washington.

INVITED INTERNATIONAL PROFESSIONAL TRAVEL

<u>Copenhagen (Denmark, 2003)</u>. Invited lecturer to the conference, "Non-Agricultural Use of Pesticides: Environmental Issues and Alternatives."

Vienna (Austria, 1998). Invited lecturer to the IBC conference, "Pesticide Residues in Water".

<u>London (England, 1998)</u>. Invited lecturer to the IBC conference, "Pesticides and Their Impact on the Aquatic Environment."

<u>São Paulo (Brazil, 1996)</u>. Invited lecturer to the IUPAC/GARP Workshop "Pesticide Uses and Environmental Safety in Latin America."

<u>London (England, 1996)</u>. Invited lecturer to the IBC conference, "An Update on the Pesticides in Water Issue." (A followup lecture was presented at Zeneca in Jealott's Hill.)

<u>IUPAC</u>. Members of the Agrochemicals Commission meet in different countries each year to write scientific papers. Following are the meetings in which I have participated; *Lyon, France* (1985); *Barrie, Ontario* (Canada, 1986); *Boston, Massachusetts* (USA, 1987); *Lund, Sweden* (1989); *Hamburg, Germany* (1991); *Bangkok, Thalland* (1992); *Lisbon, Portugal* (1993); *Berkely Springs, West Virginia* (USA, 1994); *Guildford, England* (1995).

<u>Rehovot/Bet Dagan (Israel, 1991)</u>. Two lectures at the Volcani institute: for the Weed Science Society of Israel and the Department of Chemistry of Pesticides and Natural Products.

<u>Hamburg (Germany, 1990)</u>. Workshop discussion leader, Subtopic Co-Organizer, and poster presenter at the Seventh International Congress of Pesticide Chemistry. Lyon (France, 1989). "Impact of Golf Courses on Ground Water Quality: A Focus on Pesticides," for a symposium organized by the INSA (l'Institut International de Gestion et de Genie de l'environment) and l'Institut National des Sciences Appliquees de Lyon.

<u>West Berlin (Germany, 1985)</u>. "Monitoring Ground Water for Pesticides in the U.S.A.," a published symposium sponsored by the Institute of Water, Soil, and Air Hygiene of the Federal Department of Health.

JOURNAL & BOOK PUBLICATIONS

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Durborow, T.E., N.L. Barnes, S.Z. Cohen, G.L. Horst and A.E. Smith; "Calibration and Validation of Runoff and Leaching Models for Turf Pesticides, and Comparison with Monitoring Results," in <u>Fate and Management of Turfgrass Chemicals</u>, ACS Series 743, J.M. Clark and M.P. Kenna, eds., pp. 195-227, American Chemical Society, Washington, D.C., 2000.

Cohen, S.Z., A.J. Svrjcek, T. Durborow, N.L. Barnes. 1999. "Water Quality Impacts by Golf Courses," <u>J. Environ. Qual.</u>, 28(3):798-809.

Cohen, S.Z.; "Environmental Compliance and Liability For Outdoor Shooting Ranges - Potential Problems and Feasible Solutions," <u>Outdoor Range Source Book</u>, National Rifle Association of America, Fairfax, Virginia, 1997.

Cohen, S.Z., L. Lindstrand, N.L. Barnes and T. Durborow; <u>EPA and OSHA Compliance Guide For Small Arms Ranges: A Focus on Lead</u>, Environmental & Turf Services, Inc., Wheaton, Maryland, 1997.

Racke, K.D., M. W. Skidmore, D.J. Hamilton, J.B. Unsworth, J. Miyamoto and S.Z. Cohen; "Pesticide Fate in Tropical Solls," <u>Pure & Applied Chemistry</u>, <u>69(6)</u>:1349-1371, International Union of Pure and Applied Chemistry, 1997.

Cohen, S.Z.; "Pesticides in Ground Water in the United States: Monitoring, Modeling, and Risks from the U.S. Perspective," <u>Journal of Environmental Science and Health, B31(3)</u>, 345-352, 1996.

Cohen, S.Z., R.D. Wauchope, A.W. Klein, C.V. Eadsforth and R. Graney; "Offsite Transport of Pesticides in Water: Mathematical Models of Pesticide Leaching and Runoff," <u>Pure & Applied Chemistry</u>, 67(12), 2109-2148, International Union of Pure and Applied Chemistry, 1995.

Cohen, S.Z., T.E. Durborow, and N.L. Barnes; "Ground Water and Surface Water Risk Assessments for Proposed Golf Courses," in <u>Fate and Significance of Pesticides in Urban Environments</u>, ACS Series 522, K.D. Racke and A.R. Leslie, eds., 214-227, American Chemical Society, Wash. D.C., 1993.

Barnes, N.L., T.E. Durborow, S.Z. Cohen, A.J. Svrjcek, and M.J. O'Connor. 1993. "Conservative Ground Water and Surface Water Risk Assessments for Golf Courses in Vermont," in <u>Proceedings of the Focus Conference on Eastern Regional Ground Water Issues, September 27-29, 1993, Burlington, VT</u>, Ground Water Management Book 16 of the Series, 531-548, National Ground Water Association, Dublin, OH.

Cohen, S.Z., Senita, J.A., and J.A. Green; "A Soil Gas and Ground Water Monitoring Study for a New Nematicide in Florida Citrus, " <u>Ground Water Mon. Rev.</u>, in review.

Cohen, S.Z., S. Nickerson, R. Maxey, A. Dupuy, and J.A. Senita; "A Ground Water Monitoring Study for Pesticides and Nitrates Associated with Golf Courses on Cape Cod," <u>Ground Water Mon. Rev.</u>, 10(1), 160-173, 1990.

Cohen, S.Z.; "Pesticides in Ground Water: An Overview," in <u>Environmental Fate of Pesticides</u>, (Volume 7 in the series "Progress in Pesticide Biochemistry and Toxicology"), D.H. Hutson and T.R. Roberts, eds., 13-25, John Wiley & Sons Ltd., 1990.

Pignatello, J.J., and S.Z. Cohen; "Environmental Fate of Ethylene Dibromide in Soil and Ground Water," Invited paper for Rev. Environ. Contam. Toxicol., 112, 1-47, 1990.

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Lorber, M.N., S.Z. Cohen, and G.D. DeBuchananne; "A National Evaluation of the Leaching Potential of Aldicarb: Part 2. An Evaluation of Ground Water Monitoring Data," <u>Ground Water Mon. Rev.</u>, 10(1), 127-141, 1990.

Lorber, M.N., S.Z. Cohen, S. Noren, and G.D. DeBuchananne; "A National Evaluation of the Leaching Potential of Aldicarb: Part 1. An Integrated Assessment Methodology," <u>Ground Water Mon. Rev.</u>, 9(4), 109-125, 1989.

Aharonson, N., S.Z. Cohen, N. Drescher, T.J. Gish, S. Gorbach, P.C. Kearney, S. Otto, T.R. Roberts, and J.W. Vonk; "Potential Contamination of Ground Water by Pesticides - An International Assessment," <u>Pure and Appl. Chem.</u>, 59(10), 1419-1446, 1987.

Cohen, S.Z., C. Eiden, and M.N. Lorber; "Monitoring Ground Water for Pesticides in the USA," in <u>Evaluation of Pesticides in Ground Water</u>, W.Y. Garner, H.N. Nigg, and R.C. Honeycutt, eds., American Chemical Society, 170-196, Washington, DC, 1986.

Cohen, S.Z., S.M. Creeger, R.F. Carsel, and C.G. Enfield; "Potential for Pesticide Contamination of Ground Water Resulting from Agricultural Use," in <u>Treatment and Disposal of Pesticide Wastes</u>, American Chemical Society Symposium Series 259, R.F. Krueger and J.N. Seiber, eds., 297-325, Washington, D.C., 1984.

Enfleid, C.G., R.F. Carsel, S.Z. Cohen, T. Phan, and D.M. Walter; "Approximating Pollutant Transport to Ground Water," <u>Ground Water</u>, <u>20</u>(6), 711-722, 1982.

Zweig, G., S.Z. Cohen, and F.S. Betz; "EPA Registration Requirements for Blochemical Pesticides, with Special Emphasis on Pheromones," in <u>Insect Suppression with Controlled Release</u>

<u>Pheromone Systems</u>, Vol. I, M. Beroza and A.F. Kydonieus, eds., CRC Press, Boca Raton, FL, 1982.

Haque, R., J. Falco, S.Z. Cohen, C. Riordan; "Role of Transport and Fate Studies in the Exposure, Assessment, and Screening of Toxic Chemicals," in <u>Dynamics, Exposure and Hazard</u>
<u>Assessment of Toxic Chemicals</u>, R. Haque. ed., Ann Arbor Science, Ann Arbor, MI, 1980.

Cohen, S.Z., G. Zweig, M.Law, D. Wright, W.R. Bontoyan; "Analytical Determination of N-nitroso Compounds in Pesticides by the United States Environmental Protection Agency. A Preliminary Study" in <u>Environmental Aspects of N-nitroso Compounds</u>, E.A. Walker, M. Categnaro, L. Griclute, R.E. Lyle, eds., International Agency for Research on Cancer, Lyon, France, 1978.

Adkinson, N.F., T. Barron, S. Powell, and S.Z. Cohen; "Prostaglandin Production by Human Peripheral Blood Cells in Vitro," <u>J. Lab. Clinical Med.</u>, <u>90</u>(6), 1043-1053, 1977.

PROCEEDINGS, GOVERNMENT AND MISCELLANEOUS PUBLICATIONS

"Agricultural Chemical News" (sole author), a scientific news column in the quarterly journal <u>Ground Water Monitoring and Remediation</u>, published by the National Ground Water Association.

Cohen, S.Z. 2000. "Testing Your Outdoor Range – Using the Right Tools", <u>Proceedings</u> of the Fourth National Shooting Range Symposium, June 3-6, 2000, Phoenix, Arizona.

Cohen, S.Z., A. Svrjeck, T. Durborow, and N. L. Barnes. November 1997. "Water Pollution Minimal from Monitored Courses," <u>Golf Course Management</u>, <u>65</u>(11):54-68.

Cohen, S.Z. May 1995. "Agriculture and the Golf Course Industry: An Exploration of Pesticide Use," Golf Course Management, 63(5):96-104.

Cohen, S.Z. and T.E. Durborow. February 1994. "Watershed Findings: Pesticides Test Well," <u>Golf Course News</u>, <u>5</u> (2), pp. 1 and 24-27.

"A Priority Ranking Scheme for Ground Water Contamination Potential," lead author as Chairman of the Ground Water Protection Subcommittee of the National Ground Water Association, October 18, 1993.

Cohen, S.Z. Spring, 1993. "Ground Water Protection and Management Committee Explores Priority Ranking Scheme," an invited editorial that appeared in <u>Briefings</u>, a National Ground Water Association quarterly newsletter.

Cohen, S.Z.; "Ignorance Can Cost You Bliss: ESAs for Private Clubs," <u>Club Director</u> (National Club Association), 9 (4), 9-12, April 1991.

Cohen, S.Z.; "The Cape Cod Study," Golf Course Management, 58(2), 26-44, February 1990.

Gowland, P.A. and S.Z. Cohen; "Dry Cleaners: A Possible Source of Subsurface Contamination," in <u>Ground Water Management: Proceedings of the 1990 Cluster of Conferences</u>, National Water Well Assoc. (currently NGWA), 901-908, Dublin, Ohio, 1990.

Weaver, M.F., S.Z. Cohen, and J.J. Pignatello; "Environmental Chemistry of Ethylene Dibromide," in <u>Proceedings of the Agricultural Impacts on Ground Water - A Conference</u>, National Water Well Association, 169-190, Dublin, Ohio, 1988.

"Alachlor Special Review Technical Support Document," September 1986 and "Notice of Preliminary Determination to Cancel Registrations of Alachlor Products Unless the Terms and Conditions are Modified", coauthor with several other EPA staff of both publications; <u>Federal Register</u> 51(195), 36166-36172, 10/8/86.

.e.;

"DBCP Use on Certain Pineapple Fields on Maui - Implications for Potential Drinking Water Contamination;" S.Z. Cohen, Exposure Assessment Branch TS-769C, Office of Pesticide Programs, EPA, Washington, D.C., March 1985. Task manager of a four-aquifer, soil/ground

water study of four pesticides by the California Department of Food and Agriculture: <u>Pesticide</u> <u>Movement to Ground Water</u>; three related volumes have been published.

Conducted a ground water contamination assessment for EDB, resulting in the Sept., 1983 emergency suspension by EPA: work summarized in the EDB Position Document 4 and the <u>Federal Register</u> 48, 46228-46248, Oct. 11, 1983.

"DBCP In Ground Water in The Southeast;" S.Z. Cohen, Exposure Assessment Branch TS-769C, Office of Pesticide Programs, EPA, Washington, D.C., August 1981.

Project officer of work by G. Carter, J. Ligon, and O. Dickerson (Clemson U.); <u>Study of DBCP</u> <u>Ground Water Contaminant Residue in Soll and Ground Water in South Carolina</u>, March 1981.

Project Officer of EPA Contract 560/12-79-001: Hendry, D.S. and R.A. Kenley; <u>Atmospheric</u> <u>Reaction Products of Organic Compounds</u>, June 1979, EPA.

Coauthor of environmental fate testing guidelines in "Discussion of Premanufacture Testing Policy and Technical Issues; Request for Comment" (EPA), <u>Federal Register</u> <u>44</u>, 16251-16280, January 10, 1979.

<u>PUBLIC TESTIMONY</u> (Partial List - Updates available on request)
Testified before the Montgomery County, Maryland Planning Board and the Board of Appeals four times in 1991 and 1992 on two proposed golf courses.

Testified before an arbitration panel on a leaking UST case in Washington, D.C., 1992.

Deposition given on a leaking UST case before the District Court, City and County of Denver, State of Colorado, Columbia, Maryland, May 26, 1992.

Testified before the Baltimore County Zoning Commission on the potential for lead to migrate from shot and contaminate surface water and ground water; Towson, MD, April 1991. Testified before the City and County Council of Honolulu on environmental risks of golf courses; 1990, 1991.

Expert witness on EDB for the Department of Justice in the United States District Court, Northern District of Florida - Tallahassee Division (three depositions in February 1989 and January 1990).

Testified (invited) on pesticides in ground water before the Senate Committee on Environment and Public Works (Sens. Burdick, Durenberger, et al.); Washington, DC, June 10, 1988.

Testifled on environmental risks and ground water assessment of pesticides before the Vermont Environmental Board pursuant to Vermont Act 250; Williston, Vermont, May 3, 1988.

Testified on EDB in ground water before the Superior Court of the State of Washington, Mt. Vernon, Washington, October 8, 1987.

Deposition given on EDB in ground water before the Superior Court of the State of Washington, Rockville, MD, May 22, 1987.

Testified (invited) on pesticides in ground water before Senator Leahy's Committee on Agriculture, Nutrition, and Forestry; Washington, D.C., April 29, 1987.

Testified on DBCP in ground water in the FIFRA imminent hazard suspension hearing before Administrative Law Judge Harwood; Washington, D.C., August 1979.

Appeared as a speaker or panel member in a total of 16 public hearings, press conferences, briefings of state legislators, and public advisory committee meetings from 1976 to 1986 during tenure at EPA.

SELECTED ABSTRACTS AND POSTER PRESENTATIONS

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S.Z. Cohen, N.L. Barnes, S.S. Reid, and Q. Ma, "Integrated Water Quality Risk Assessment for a Proposed Golf Course Near Salt Lake City: Focus on Pesticides, Phosphorus, and Amphibians", poster presented at the 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC) in Salt Lake City, Utah, November, 2002.

S.Z. Cohen, "Risk Assessments for Golf Course Pesticides: 1. Special Considerations for Modeling", poster presented at 10th IUPAC International Congress on the Chemistry of Crop Protection, Basel, Switzerland, August, 2002.

Reid, S., S.Z. Cohen, J. Julian, S. Julian, J. Ferrigan, and J. Howard, "A Brief Overview of the Poster "Risk Assessments for Golf Course Pesticides: 2. New Methodologies to Estimate Amphibian Toxicity of Turfgrass Chemicals", poster presented at 10th IUPAC International Congress on the Chemistry of Crop Protection, Basel, Switzerland, August, 2002.

Reid, S., J. Julian, S. Julian, J. Ferrigan, S. Cohen, J. Howard, and Q. Ma, "Potential Amphibian Risks in Vernal Pools to Golf Course Chemicals Using PRZM/EXAMS Models: Part 1. Toxicity Assessment", poster presented at SETAC 22nd Annual Meeting, Baltimore, MD, November, 2001.

S. Cohen, Q. Ma, and S. Reid, "Potential Amphibian Risks in Vernal Pools to Golf Course Chemicals Using PRZM/EXAMS Models: Part 2. Exposure Assessment", poster presented at SETAC 22nd Annual Meeting, Baltimore, MD, November, 2001.

Ma, Q.L., S.Z. Cohen, and S.S. Reid, "Watershed/Basin Scale Golf Course Risk Assessments: Model Scenario Development", poster presented at Soil Science Society of America 2001 Annual Meeting, Charlotte, N.C., October, 2001.

Reld, S. and S. Cohen, "A New Tool to Predict Lead Mobility in Shooting Range Soils", poster presented at U.Mass Amherst, 16th Annual International Conference on Contaminated Soils, Sediments and Water, October 2000.

Cohen, S.Z.; "Environmental Assessments," instructor of a two hour segment of the National Rifle Association's five day course, <u>Range Development</u>. This was given 12-15 times in various cities from 1994-1999.

Ross, B., S. Amter, T. Wagner, and S.Z. Cohen; "EPA Ground-Water Regulations: Lessons for HLW," to be presented at the Symposium on Waste Management '94, Tuscon, AZ, March, 1994.

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Cohen, S.Z.; "Potential Impacts of Turf Chemicals on Ground Water," lecture presented before the New England Recertification Seminar, sponsored by Turf Specialty, Inc., at the Wachusett Country Club, Boylston, MA, November 17, 1993.

Cohen, S.Z.; "Environmental Considerations in Golf Course Development," lecture presented at the Public Golf '92 Conference, Chicago, IL, November 2, 1993.

Cohen, S.Z.; Introductory Overview presented as moderator of "Ground Water Quality in the Agricultural Environment: The Nitrate Question," an NGWA 1993 Management Strategy Workshop at the NGWA National Convention, Kansas City, MO -- October 17, 1993.

Cohen, S.Z.; "Risk Assessment in Golf Turf: A Focus on Water Quality Impacts," lecture presented at the Florida Turfgrass Association 1993 Annual Conference and Show, Tampa, FL, September 27, 1993.

Cohen, S.Z.; "Risk Assessment in the Lawn Care Industry: A Focus on Water Quality Impacts," lecture presented at the Florida Turfgrass Association 1993 Annual Conference and Show, Tampa, FL, September 27, 1993.

Cohen, S.Z., T.E. Durborow, and N.L. Barnes; "Ground Water and Surface Water Risk Assessments for Proposed Golf Courses," invited paper before the International Turfgrass Society Quadrennial Meeting, Palm Beach, FL, July 23, 1993.

A total of 5 lectures were delivered at the Ohio Turfgrass Foundation and the Midwest Regional Turf Foundation conferences in 1992 on two topics: water quality and risk assessment issues for golf courses.

Two lectures were presented at the conference sponsored by IUPAC and the Thailand Department of Agriculture. (Assessment and Management of Risks from Pesticide Use in SE Asia): "Bioaccumulation of Crop Residues in the Food Chain - A case study of Heptachlor Epoxide in Milk in Hawaii" and "Modeling Pesticide Transport to Ground Water," November, 1992.

Cohen, S.Z.; "Modeling the Runoff and Leaching of Pesticides Applied to Turfgrass," invited paper before the Agrochemicals Division of the American Chemical Society's 203rd National Meeting, San Francisco, April 1992.

Lecturer in a workshop, "Golf Course Development on Hawaii," sponsored by the Office of State Planning Honolulu, September 16, 1991.

Cohen, S.Z. and T. Durborow; "Ground Water & Surface Water Contamination by Golf Courses: Fact and Fiction," presented at the 201st American Chemical Society National Meeting (Agro 53) Atlanta, April 1991.

Cohen, S.Z.; "The Occurrence of Pesticides in Ground Water in the United States: Extent and Toxicologic Significance," Poster No. 9D-08, presented at the 7th International Congress of Pesticide Chemistry. Hamburg, Federal Republic of Germany, August 5-10, 1990; ISBN No. 3-924763-25-9.

Senita, J.A. and S. Z. Cohen; "A Soil Gas and Ground Water Study for GY-81 in a Florida Citrus Grove," presented at the 1990 Cluster of Conferences, Kansas City, MO; National Water Well Association (currently NGWA); Dublin, Ohio.

Lorber, M.N. S.Z. Cohen, S. Noren, and G.D. Debuchananne; "A National Evaluation of the Leaching Potential of Aldicarb," presented at the 1990 Cluster of Conferences, Kansas City, MO; National Water Well Assoc. (currently NGWA), Dublin, Ohio.

Lecturer for the Executive Enterprises Institute at their Pesticide Registration educational seminars, 1987-1990, Washington, D.C.

Cohen, S.Z.; "The Cape Cod Ground Water Study: Implications for the Future," <u>61st International Golf Course Conference and Show Proceedings</u>, Golf Course Superintendents Assoc., Lawrence, KS, 1990, presented in Orlando, February 1990.

Cohen, S.Z. and J.A. Senita; "Extent of Pesticide Plumes in Ground Water in the U.S.," <u>The Third Chemical Congress of North America</u>; American Chemical Society meeting abstract, AGRO III, Toronto, Ontario, 1988.

Lectures on the impact of golf course pesticides and fertilizers on ground water quality given in 1989 at Anaheim, Pinehurst, NC, and Lyon, France (1989) before various golf course associations and research institutions.

Cohen, S.Z.; "Pesticides in Ground Water from Normal Use - A Focus on Turf," <u>58th International Golf Course Conference and Show Proceedings</u>, Golf Course Superintendents Association of America, Lawrence, KS, 1987.

Jungclaus, G.A. and S.Z. Cohen; "Hydrolysis of Ethylene Dibromide," 191st American Chemical Society National Meeting"[ENVR 6], New York, NY, 1986.

Cohen, S.Z.; "Pesticides in Ground Water," Environmental and Water Issues in the Northeast - Training Seminar, sponsored by the Golf Course Superintendents Association of America, Cape Cod, MA, April 7, 1986.

Cohen, S.Z.; "Monitoring Ground Water for Pesticides in the USA," 189th American Chemical Society National Meeting; PEST 34; Miami Beach, FL, 1985. Similar presentation also made to a European conference in West Berlin, sponsored by the Federal Republic of Germany, Dept. of Health in November 1985.

Cohen, S.Z.; "EDB in the Subsurface Environment - Ground Water and Soil Results," 188th Annual Meeting of the American Chemical Society (Committee on Environmental Improvement), Philadelphia, PA, 1984. Similar presentation at the Fifth Annual Meeting of the Society of Environmental Toxicology & Chemistry, Arlington, CA, 1984.

Cohen, S.Z., S.M. Creeger, R.F. Carsel, and C.G. Enfield; "Potential for Ground Water Contamination by Pesticides Resulting from Agricultural Uses," presented in different forms six times to the 186th national meeting of the American Chemical Society (September 1983; Pest 89) a conference in the Senate Office Building.

Cohen, L.A., S.Z. Cohen, and H. Kimoto; "Photochemical Perfluoroalkylation of Imidazoles," in the abstracts of the 10th International Symposium of Fluorine Chemistry, Vancouver, British Columbia, August 1982.

List of five other abstracts between 1977 and 1981 available on request.