

# Scott Goddard, M. Eng., PWS, CWS

Senior Ecological Engineer and Project Manager

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## EDUCATION

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY Cambridge, MA

#### **Master of Engineering: Water Quality Engineering**

GPA: 4.6/5.0; June, 1997

Classes concentrated on environmental chemistry, chemical/physical/biological interactions in the natural environment, and contaminant movement. Classes included: Aquatic Chemistry, Environmental Organic Chemistry, Environmental Microbiology, Chemical Fate and Transport, and Groundwater Hydrology.

**Master's Thesis** - Investigated the ecological effects (chemical/physical/biological) on an oligotrophic Cape Cod kettle pond caused by the upgradient inflow of carbon-treated groundwater with altered chemical properties.

### MIT SLOAN SCHOOL OF MANAGEMENT Cambridge, MA

Classes in Strategic Management, Consulting, and Marketing Management

### WORCESTER POLYTECHNIC INSTITUTE Worcester, MA

#### **Bachelor of Science: Civil and Environmental Engineering**

GPA: Overall = 3.77/4.0; Major = 4.0/4.0; High Distinction: May, 1996

Advanced classes included: Surveying, Environmental Engineering, Urban & Environmental Planning, Water Treatment, Wastewater Treatment, Hydraulics, Sanitary Engineering Lab, Hydrology, Open Channel Hydraulics, Stream, Lake, & Estuarine Analysis, and Hazardous Waste: Containment, Treatment, & Prevention.

**Undergraduate Thesis** - 3D GROUNDWATER MODELING - Modeled groundwater flow through extraction wells, and examined the effects of heterogeneous hydraulic conductivity on capture zones of Pump and Treat systems. This project was presented a 1<sup>st</sup> place award within department.

**Research Project** - SOLID WASTE MANAGEMENT AND RECYCLING - Comprehensively analyzed the state of recycling in Massachusetts, defined state of the art techniques, and suggested strategies for improvement to the Massachusetts Department of Environmental Protection (DEP). This project was awarded 1<sup>st</sup> place in a regional Earth Day competition.

## EXPERIENCE

2005 - Present

1995 - 2005

### CARR RESEARCH LABORATORY, INC. Natick, MA

Senior Ecological Engineer and Project Manager

Ecological Engineer

- Regularly manage between 30 and 50 projects (size from \$100 to \$250,000)
- Train junior employees

#### **ECOLOGY**

- Vegetation surveys, wildlife surveys, and habitat field studies
- Vernal pool determinations, biological surveys, and certifications
- Rare plant and animal field surveys and habitat studies
- Conservation Permits for Massachusetts Endangered Species Act (MESA)

#### **WETLANDS**

- Wetland resource area delineations and resource management (inland and coastal)
- Design and implement wetland creation and restoration plans
- Cranberry bog management plans
- Lake and pond management (physical, biological, and chemical)
- Water quality studies
- Obtain municipal, state, and federal permits and present projects public hearings

#### **HYDROLOGY & HYDRAULICS**

- Perform complex hydrology calculations for a variety of proposed land use changes
- Floodplain determinations
- Perform groundwater hydrology calculations to predict contaminant flow path
- Design detention basins, infiltration trenches, and other stormwater runoff structures including Best Management Practices (BMPs)
- Sediment transport studies
- Hydraulic analysis of streams and stream channel design
- Water resource management

- Groundwater withdrawal studies
- Surface/ground water monitoring, sampling, and testing. Analysis of chemical data

#### ***GEOLOGY & SOIL SCIENCE***

- Chapter 21E hazardous waste site investigations including collection of soil and water samples
- Sieve analyses
- Permeability and percolation testing

*PROJECT EXAMPLES CAN BE FURNISHED UPON REQUEST*

#### **TECH ENVIRONMENTAL, INC.** Waltham, MA

1994 - 1995

*Junior Scientist*

Assisted engineers and scientists with air quality and noise studies

#### **CERTIFICATIONS**

- E.I.T./F.E. (MA Certificate #16489)
- Certified Soil Evaluator, Massachusetts Department of Environmental Protection (SE #893)
- Certified Wetland Scientist, New Hampshire Joint Board of Licensure (NH Certificate #023)
- Professional Wetland Scientist, Society of Wetland Scientists (PWS #001856)

#### **MEMBERSHIPS**

- American Society of Limnology and Oceanography (ASLO)
- Association of Massachusetts Wetland Scientists (AMWS)
- Massachusetts Association of Conservation Commissioners (MACC)
- New Hampshire Association of Natural Resource Scientists (NHARS)
- Society of Wetland Scientist (SWS)

#### **SPECIAL TRAINING**

- AMWS Annual Meeting: Climate Change in New England: Projections & Policy; November, 2007.
- Workshop on Grasses, NHANRS; July, 2007.
- Winter Botany, AMWS; February, 2007.
- AMWS Annual Meeting: Wildlife Habitat Assessments & the Implementation of the Massachusetts Endangered Species Act; November, 2006.
- Society of Wetland Scientists, Regional Wetland Research Conference; November, 2006.
- Difficult Inland Wetland Delineations, AMWS; October, 2006.
- Negotiating Public Business, AMWS; April, 2006.
- Ethics and Conflict of Interest in Wetland Science, AMWS; March, 2006.
- Getting Back in the Flow: River Restoration Strategies; November, 2005.
- Integrated Restoration of Riverine Wetlands, Streams, Riparian Areas, and Floodplains in Watershed Contexts, Association of State Wetland Managers (ASWM); November 2005.
- New PGP & Buffer Zone Regulations Workshop, AMWS; June, 2005.
- AMWS Annual Meeting: Hot Topics in Massachusetts Wetland Science; November, 2004.
- Natural Heritage & Endangered Species Program Workshop, AMWS; October, 2004.
- Identification of NH Butterflies, UNH; July, 2004.
- Identification of Dragonflies and Damselflies, UNH; June, 2004.
- Federally Defined Resource Classification & Performance Standards, AMWS; April, 2004.
- Appearing as an Expert Witness, AMWS; February, 2004.
- Biodiversity of New England Wetlands: Past Present & Future, AMWS; November, 2003.
- StreamStats Workshop, AMWS and DEP; February, 2003.
- Society of Wetland Scientists, Regional Wetland Research Conference; November, 2002.
- Environmental Adjudicatory Appeals from Start to Finish, Middlesex Conservation District; March, 2002.
- Society of Wetland Scientists, Regional Wetland Research Conference; November, 2001.
- Grass and Sedge Workshop, NHARS; September, 2001.
- Hydric Soils, University of Massachusetts; May, 2001.
- Can Humans and Coastal Landforms Co-Exist? Woods Hole Oceanographic Institute; January, 2001.
- Riparian Mean Annual High Water Delineation, AMWS and DEP; June, 2000.
- On-Site Sewage Disposal Facility Design, University of Massachusetts; May, 2000.
- Wetland Wildlife, Ecology & Regulation, AMWS; March, 2000.
- Vernal Pools of the Northeast, University of Rhode Island; March, 2000.
- Water Sensitive Ecological Planning & Design, Harvard University; February, 2000.
- Segmented Retaining Wall Design Seminar, Versa-Lok; February, 2000.
- Vernal Pool Ecology, AMWS; April, 1999.

- NH Rivers Management & Protection Program Conference; November, 1998.
- Botany of Sedges, AMWS; June, 1998.
- Botany of Grasses, AMWS; June, 1998.
- Amphibian and Reptile Habitats - Development Project Planning, AMWS; March, 1998.
- Turtles of Massachusetts Wetlands, Massachusetts Audubon Society; March, 1998.
- Winter Botany, Massachusetts Audubon Society; January, 1998.
- Difficult to Identify Hydric Soils, Middlesex Conservation District; October, 1997.
- River Protection Act Workshop, AMWS; August, 1997.
- Coastal Zone '97, Coastal Zone Management; July, 1997.
- Practical Approaches for Effective Erosion and Sediment Control, International Erosion Control Association; June, 1997.
- How to Use Bioengineering Techniques for Stabilizing Streambanks & Improving Water Quality, International Erosion Control Association; June, 1997.
- Remediation Today, Direction for Tomorrow, Boston Society of Civil Engineers and Surveyors and American Society of Civil Engineers; February, 1997.