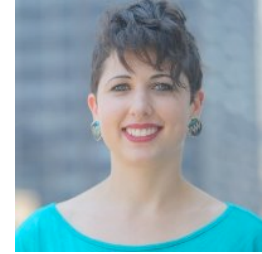


Curriculum Vitae  
**Samantha Cohen**



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**AREAS OF INTEREST**

Biomimicry, ecological infrastructure & green infrastructure.  
Sustainable infrastructure for water, food, waste and energy systems.  
Environmental design and planning.

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**EDUCATION**

<b>Massachusetts Institute of Technology</b> GPA: 4.8/5.0	<b>Cambridge, MA.</b>	<b>June 2017</b>
<b>Candidate for Master of City Planning</b> , concentration in City Design & Development		
<b>Permaculture Design Certificate</b> Held by EcoBlue Media and Andrew Faust.	<b>Barre, VT</b>	<b>August 2015</b>
<b>Massachusetts Institute of Technology</b> GPA: 4.5/5.0	<b>Cambridge, MA.</b>	<b>June 2011</b>
<b>B.S. in Civil &amp; Environmental Engineering</b> , Sustainable Architecture minor, Visual Arts concentration		

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**EMPLOYMENT**

<b>Center for Advanced Urbanism, MIT</b> Researching, designing, prototyping and analyzing urban stormwater wetlands to act as multifunctional urban resiliency infrastructure, combining water quality engineering standards with urban design amenities. Working within the climate + urbanism group, we are attempting to create new templates for adaptation and protective infrastructures within cities.	<b>Cambridge, MA</b>	<b>Jan 2016- present</b>
<b>Blue Planet Environmental</b> Designs and installs water aeration and sterilization technologies for lake remediation, aquaculture, hydroponic greenhouses, and water features. Designed proposals for schools to have hydroponic greenhouses with job training and curriculum in urban agriculture, sustainability, and nutrition.	<b>New York, NY</b>	<b>Jan 2014- Feb 2015</b>
<b>Buro Happold</b> Analyzed watersheds and designed sustainable stormwater management systems. Designed and engineered sustainable infrastructure masterplans in energy, water, solid waste, sewerage, logistics, MEP and stormwater for domestic and international developments. Project manager of two LEED Neighborhood Development certifications. Deputy project manager of Highline and St. Petersburg Pier managing utilities and drainage.	<b>New York, NY</b>	<b>Sep 2011-Mar 2013</b>
<b>Mystical Yoga Farm</b> Private consulting for a small off-the-grid permaculture community. Designed and built new greywater filters, designed rainwater harvesting networks, analyzed and redesigned water distribution and filtration networks. Documented and analyzed current on-site infrastructure networks and recommended future changes.	<b>Guatemala</b>	<b>Apr 2013- Jun 2013</b>
<b>Level Infrastructure</b> Private consulting for a planned off-the-grid community of 1,000 designing a conceptual stage	<b>Brazil</b>	<b>Oct 2012- Feb 2013</b>

water network, including stormwater swales, sand filter design, pump selection, and potable storage, and distribution.

- GZA GeoEnvironmental** **Fairfield, NJ** **Jun 2009-Aug 2009**  
Second Engineer. Analyzed chemical exceedances, proposed areas of remediation, and discussed with NJDEP and clients the course of action. Progressed Phase I and II remediation.
- Chris Blake Architect** **Tenafly, NJ** **Jun 2008-Aug 2008**  
Architectural assistant in design development. Streamlined CAD and SketchUp drawings. Conceptualized dozens of floor plans and elevations. Spoke with 20 clients and addressed their concerns.

## RESEARCH

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- MIT Course Work** **Cambridge, MA** **Sep 2007-present**  
Modeling Urban Energy Flows; Urban Design Seminar & Studios; Ecology; Microeconomics; Chemical Transport in the Environment; Engineering for Sustainability; Planning of Mega-Urban Landscapes; Building Technology; Structures, Soil & Fluid Mechanics laboratory; Environmental Pollution Law; Climate Change & Water; Erosion Control Field Work
- MIT Scholarly Research** **Cambridge, MA** **Sep 2007-Jun 2011**  
Undergraduate thesis on constructed ecosystem design as carbon, nutrient and pollutant sinks; Green infrastructure; What makes “green” architecture; Designed and constructed a 2000 L first flush rainwater catchment system with 2 other students using local materials in Cambodia
- Media Lab @ MIT: Lifelong Kindergarten** **Cambridge, MA** **Jan-May 2008**  
Industrial Designer. Collaborated on and designed the interface and casing of an Urban Exploratory Kit—a cross-sensual device made to display and store non-visual elements of nature otherwise unnoticed in an urban environment.

## PROJECT EXPERIENCE

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- Art of Waste** **Boston, MA** **Apr 2013-present**  
Researching, designing and implementing a low-cost, modular, decentralized wastewater treatment system using plants, fish and microbes for application in developing countries through a \$2100 grant from MIT.
- Mystical Yoga Farm** **Santiago, Guatemala** **Apr 2013- Jun 2013**  
Private water and sustainability consulting for a small off-the-grid permaculture community. Designed and built new greywater filters, designed rainwater harvesting networks, analyzed and redesigned water distribution and filtration networks. Documented and analyzed current infrastructure networks and recommended sustainable changes.
- High Line, Phase 3** **New York, NY** **Aug 2012-Mar 2013**  
Deputy Project Manager coordinating the client team, and BH’s infrastructure, MEP, lighting and structural teams to deliver construction documents for the last phase of the High Line, an abandoned elevated railroad line renovated into an urban park. This included coordinating utilities and street work within the existing area. She also acted as project engineer, assisting in the drainage and grading design of the site. The restoration and redevelopment of this abandoned elevated railroad line has helped this project become an iconic destination in the city.
- Tun Razak Exchange** **Kuala Lumpur, MA** **Jan 2012-Mar 2013**  
Project manager of LEED Neighborhood Development Gold certification; Infrastructure engineer for new 80 acre financial district; Designed on-site stormwater detention and

filtration systems; Analyzed wetland filtration capacity to clean stormwater on-site; Sized on-site wastewater treatment plant; Designed collection of sewerage and redistribution network of treated sewage effluent; Designed municipal waste collection and on-site composting system; Recommended sustainable technologies and applications.

**St. Petersburg Pier** **St. Petersburg, FL** **Jun 2012-Mar 2013**

Deputy Project Manager coordinating a multidisciplinary team including the client and BH's MEP, structural, and infrastructure team in delivering schematic drawings and a basis of design report for a new recreational pier for the City of St. Petersburg. Civil work included designing new overwater bridges, and coordinating existing and new utilities and drainage for a Basis of Design report and conceptual plans for a new urban centerpiece for St. Pete's waterfront: A ¼ mile long recreational pier designed by renowned architect Michael Maltzen. Work includes marine design, roadways and walkways over the water, a public gathering place, and a 70 foot high shell-shaped canopy at the far end of the Pier which will serve as a new focal point for the downtown.

**Undisclosed New IT Tech Campus** **India** **Sep 2012-Dec 2012**

Compiled a BOD document and calculated base loads for potable water consumption, solid waste generation, sewerage, and drainage. Analyzed whether the campus would be able to achieve "zero water" usage by comparing potable and nonpotable demands to rainwater harvesting and on-site retention.

**Undisclosed New City Development** **Punngol, Singapore** **Mar 2012-May 2012**

Designed drainage system, and analyzed how water quality could be improved by using existing barrage systems to move stagnant water, by using pumps to filter water through wetlands, and by draining stormwater through filter beds for an 850-hectare city masterplan development.

**Expanded Fields Sculpture Garden at MASS MoCA** **MA** **Feb-July 2010**

Assistant landscape architect and designer to artist Jane Philbrick. Brainstormed on theory and design, planned construction details, and drew final CAD models to repurpose a one acre Brownfield site using sustainable materials and construction methods for public outdoor space by creating eight permanent sculptures & gardens.

**School Design for a Sustainable Future** **Cambodia** **Sep-Dec 2009**

Engineer and architect in a collaborative, sustainable, design workshop at MIT with 5 other architects and engineers of a new 50,000 square foot campus in Cambodia for the Jay Pritzker Foundation. Synthesized design and technology by integrating energy efficiency, material use, structural systems and occupant comfort into a performance driven design. Focused on sustainability, affordability and quality of design.

## **LABORATORY & FIELD WORK EXPERIENCE**

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**Blue Planet Environmental** **various locations** **Jan 2014- Feb 2015**

As field engineer for the company, I have traveled to various locations to do installs of our patented technology. From golf courses in California installing our OxyIsland, a floating wetland, to aquaculture facilities to aerate the water using our nanobubble generator.

**Travel Research Environmental Experience** **Hawaii** **Jan 2011**

Three weeks of intensive fieldwork to determine the annual sediment budget for the Waiulaula Watershed using GPS, infrared photography, infiltration experiments and soil characterization. Agricultural practices on the island have been damaging coral reefs due to sediment erosion.

**Mechanics of Structures & Soils Lab** **Cambridge, MA** **Sep 2009- Dec 2010**

An intensive class and laboratory on structures and soils. Lab sessions introduced concepts and techniques to measure properties of materials and to understand structural behavior. Concepts covered were groundwater seepage, soil stress, slope stability, and structural behavior and analysis.

**International Development Field Work** **Guatemala, Cambodia Sep 2009-present**  
Various design-build projects for rainwater harvesting systems; a steel frame, rammed earth and masonry kitchen; and a grey-water filtration system.

## **VOLUNTEER WORK & EXTRACURRICULAR**

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**Stormwater Management Projects** Volunteer designer and engineer **Aug 2014-present**  
working with Greenwood Robinson landscape architects to create citizen-led green infrastructure projects in NYC

**Art of Waste** Researching, designing and implementing a low-cost, **Apr 2013-present**  
modular, decentralized wastewater treatment system by hiring local artisans. Constructed wetland and ecosystem based on plants, fish and microbes for application in developing countries through a \$2100 grant from MIT.

**NY Riverkeeper** Volunteer for cleanups and public outreach events. **June 2014-Feb 2015**

**NY Sun Works Greenhouse** Volunteer in P.S. 311's rooftop **Jan 2014-June 2014**  
greenhouse helping elementary school students design and execute science experiments on hydroponics and aquaponics setups.

**North American International Development Director of Buro Happold** **Sep 2011-Mar 2013**  
Managed volunteer development projects, distributed design responsibilities, connected group members to NGOs, and organized company bi-monthly newsletter.

**Kounkuey Design Initiative** Developing sanitation and watershed **Sep 2011-Mar 2013**  
management tools for slums in Kibera, Kenya.

**Jersey Cares Sandy Disaster Relief** Home reconstruction and cleanup **Sep 2012-Oct 2013**

**FXFowle Workshop** Led highschoolers in multidisciplinary design and **Sep 2012-Mar 2013**  
engineering workshop

**MIT Women's Rugby** President (elected), Logistics officer (elected), **Sep 2007-Jan 2011**  
and player

**MIT Dorm Social Chair** Elected to organize events for students; **Sep 2009-June 2010**  
managed annual concert at dorm with \$10,000 budget, coordinated contracts and hired light and sound companies

**Engineers Without Borders** Member of water supply group at MIT **Sep 2008-June 2011**

## **SKILLS**

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**Adobe Suite; Rhinoceros 3D; AutoCAD (2D + 3D); SketchUP; ArcGIS; 3D modeling, rendering & rapid prototyping; Hand Drafting; basic Java; basic MATLAB; Metalworking; Woodworking; Design (structural, mechanical, industrial, conceptual, visual, sculptural, textile); Microsoft Office; Conversational in Spanish**

## **HONORS, AWARDS & PROFESSIONAL MEMBERSHIPS**

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**First Place in Urban Agriculture Design Competition** **Dec 2014**  
Run by agriculture.com and Association of Vertical Farming

<b>NY Riverkeeper.</b> Member	<b>June 2013-present</b>
<b>Association Of Water Technologies.</b> Member	<b>Aug 2011-present</b>
<b>MIT Art Scholar</b>	<b>Nov 2008- present</b>
<b>Council for the Arts, MIT Grant Winner</b>	<b>Mar 2013</b>
Awarded \$2100 to work with local artisans in developing countries to create low-cost, modular, decentralized wastewater treatment systems using plants, fish and microbes	
<b>National Design Triennial at the Cooper Hewitt</b> New York, NY	<b>Mar 2010</b>
Built sustainable, sewage-derived brick vault for the exhibit "Why Design Now?" with 8 other team members.	
<b>Boston Undergraduate Research Symposium Presenter</b>	<b>April 2009</b>
Gauged the efficacy of artificial wetlands in countering global warming and eutrophication.	
<b>3<sup>rd</sup> in Speech at State Level for Academic Decathlon</b>	<b>Feb 2006</b>
<b>Daughters of the American Revolution Good Citizen Award</b>	<b>Dec 2006</b>
<b>Rotary Youth Leadership Scholarship</b>	<b>June 2006</b>

**HOBBIES**

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Environmental justice, music (drums, singing, and electronic), dancing, performance, art, interactive art installations, clothing design, jewelry design, writing, hiking, camping, bike riding, snowboarding and travel (Guatemala, Mexico, Belize, Canada, Indonesia, Cambodia, Germany, Denmark, Sweden, Austria, Croatia, Netherlands, France, Spain, Portugal, England, Wales, and Israel)