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**NEXT WAVE**

PROFILES ON EMERGING YOUNG PROFESSIONALS IN THE LOCAL BUILDING INDUSTRY

Horsley Witten Group, an environmental consulting firm located in Sandwich, is a collaborative group of engineers, scientists, and planners dedicated to doing work that moves their clients to a greater level of sustainability and resilience. Their projects span multiple types of services, from managing stormwater runoff to ecologically-friendly green infrastructure development to community planning and training – all centered around protecting water quality. The pages ahead highlight just a few of their young and rising stars, who are all determined to better our world by first tackling the problems in their own backyard.

BY RACHEL WALMAN

# Mike Demanche

ENVIRONMENTAL SCIENTIST



**CCH:** Tell me about how you first got involved with HW. Is there one aspect that drew you there in the first place?

**MD:** I met Mark Nelson, a principal at Horsley Witten (HW), at an alumni career event held by the geology department during college. I asked him for an internship when I learned that HW was just up the road from where I grew up in Mashpee. During that first summer, I enjoyed being able to jump right in on a variety of different projects at HW. I had great coworkers who made me feel like part of the team.

**CCH:** What is a typical day like for you?

**MD:** I am “in the office” (home office for the last few years,) most of the time, but I am in the field 1-2 days a week. My field work is typically either land surveying or collecting groundwater samples for analysis. One day I might be staking out the location of a proposed stormwater management structure, and the next day I’d be in a river measuring transects for a hydraulic analysis. When I’m in the office, projects might involve providing support for the EPA, which vary from analyses, report writing, or supporting their interactions with the public. Recently I’ve been working with groundwater modeling to understand aspects like contaminant transport, or how discharges to groundwater might affect the flow in nearby rivers.

**CCH:** Is there a project that you are proudest to have been involved in?

**MD:** I’m proud of an investigation we’ve been performing to identify the source of a contaminant plume. The project has involved hundreds of hours of field work (installing dozens of wells, multiple rounds of sampling, streamflow analyses) and then analysis (GIS analyses, modeling, interpreting sample results.) After a multi-year investigation, we have identified the source of the plume and mapped where it is going. This will help our client develop a mitigation plan to contain it. I’m especially proud of this project because it is one of the first big investigations which I’ve been involved in from beginning to end. It makes you realize how much effort goes on behind the scenes to deal with environmental problems. It takes a team of investigators and field workers to answer these questions, and I’m honored to be a part of teams like that at HW.



**CCH:** Can you tell me about any upcoming projects or developments that you are excited for?

**MD:** We are currently working on a stream restoration project for the Quashnet River in Mashpee. Our goal is to restore natural stream

conditions to a former cranberry bog site, which will in turn facilitate fish passage in the area. This project is very special to me, because I grew up playing in the woods surrounding those bogs, and now I get to be involved in bringing the area back to a healthier condition.

**CCH:** What would you tell a younger person who is looking to get involved at HW or is still in college?

**MD:** One of my favorite things about my job is the variety of work I get to be involved in. I would say that strong fundamentals—reading, writing, critical thinking, problem-solving—are very important for someone coming right out of school. You won’t be expected to know all the specifics about a job right away, but you will be expected to learn quickly to rise to the role. Having a broad skillset is great when you’re just starting out, and you can drill down into an area to specialize in once you have some experience in your field of interest.

**CCH:** What is some of the best advice you were given or actions you took to get you where you are today?

**MD:** When I was an undergrad, I took a semester off classes to go backpacking, and I spent 5 months thru hiking the Appalachian Trail. This time gave me the opportunity to think about what I wanted to do, who I wanted to be, and offered a very different perspective on life. When I got back to school after spending so much time outdoors, I changed majors to study geology and focus on the environment. During that first conversation with Mark at an undergrad alumni career event, he had heard about my thru hike—turns out his son went to school with one of my hiking partners. All this to say, I think it’s important to remember that there is no one way to get where you’re going. You never know what an opportunity will lead to down the road. 🏔️

# Eliza Hoffman

DESIGN ENGINEER



**CCH:** *Tell me about how you first got involved with HW. Is there one aspect that drew you there in the first place?*

**EH:** I studied environmental engineering, so when I was looking for my first job after college, I connected with a few people at Horsley Witten (HW) to see what it was like to actually work in environmental engineering. It turned out HW was growing and looking for more people, which worked in my favor. As a new college graduate, I was particularly drawn to the diversity of projects at HW. I wasn't sure exactly what I wanted to do within the field, so having opportunities to work on lots of different types of projects has allowed me to figure out what I do (and don't) want to do in the future. I grew up on a farm in Vermont and felt very connected to and concerned about the natural environment, so I wanted to find a job that reflected that.

**CCH:** *What is a typical day like for you?*

**EH:** A typical day for me is at my desk, but the work varies a great deal. I spend most of my time working on site design, which includes researching a site, analyzing the existing conditions, and repeatedly iterating the proposed design—whether it's a small stormwater project or a multi-acre development. I'll also meet with clients and project managers to review the design at different stages,

and ensure we'll have an end product that everyone is happy with. When I am away from my desk, I'll visit our project sites. I visit sites at the very beginning of the project to assess the site conditions and brainstorm ideas for design, during the design process to confirm details, and during the construction phase to oversee construction and work with the contractors. Some of these sites are as close as my own neighborhood, but fieldwork has also taken me halfway around the world for our work in Saipan, in the Pacific Ocean.

**CCH:** *Is there a project that you are proudest to have been involved in?*

**EH:** Locally, I've worked on a series of projects to improve water quality for an entire watershed by treating and reducing stormwater runoff. These projects start out with a watershed-wide assessment where we work with all towns in the watershed to identify locations where we can have the most impact. Once we've narrowed down the sites, we design stormwater retrofits that will reduce the quantity of stormwater, remove pollutants from stormwater, or both. Several of these projects have been built in Barnstable, and more are coming soon. These projects are valuable because they emphasize the fact that there is no "one way" to improve water quality, nor should it be any one town or one



individual's responsibility. We have to recognize that we need to work collaboratively to make improvements. There is no "silver bullet" to solve issues like water quality.

**CCH:** *Can you tell me about any upcoming projects or developments that you are excited for?*

**EH:** I am working on a project at Paine's Creek Beach in Brewster to stabilize beach access that is eroding. Keeping beaches accessible for everyone is important especially on Cape Cod, and this project will ensure that everyone can continue to enjoy the beach. I'm looking forward to doing this type of project more often, as shoreline stabilization projects like this one will become more and more important as climate change impacts change sea level, storms, and erosion patterns on Cape Cod and around the world.

**CCH:** *What would you tell a younger person who is looking to get involved at HW or is still in college?*

**EH:** Look for a job and company with a wide diversity of projects or types of work. Try to start broad because there's always time to specialize later, and the more you can expose yourself to different types of work, the more options you'll have in the future. This was one of the major appeals of working at HW, and it's allowed me to work on projects that I never could have imagined when I was still in school.

**CCH:** *What is some of the best advice you were given or actions you took to get you where you are today?*

**EH:** My best advice is to reach out to people who are doing the type of job you think you might want to do, and ask what their jobs are like. Most people are happy to tell you about their job and their work! You'll be able to see how what you've learned in school will apply to the real world and whether that type of work is appealing. 🏠

# Jeff Polidor

SURVEY/GIS TECHNICIAN



**CCH:** *Tell me about how you first got involved with HW. Is there one aspect that drew you there in the first place?*

**JP:** I had nontraditional introduction to Horsley Witten (HW). I was playing basketball with my brother at a local outdoor court when someone came up and asked us to play a game of 2v2. I almost said no since we were planning on leaving soon, but decided why not? I was an environmental science student at UMASS Amherst at the time, and it turns out I had been playing with employees from an environmental consulting firm right down the street! I wrote down my email on a receipt, got in contact with a couple people at HW, and the next summer I started as an intern.

**CCH:** *What is a typical day like for you?*

**JP:** I have both field and office days. Most field days I'm out land surveying. Since we do work around Massachusetts and Rhode Island, I start by getting to the office early. I'll load up the work van with gear, and my survey partner and I hit the road. Our work sites can be as little as five minutes away; occasionally it's up to two hours away. Once there, we set up our gear, search for property monuments, then traverse around the site. Sometimes you're chopping your way through woods with a machete or using waders to march through a stream, other times you simply pick up pavement features in parking lots. After collecting spatial data of our work site, we pack it all up and

head back to the office. Office days usually consist of drafting plans from our survey data. I create "Existing Conditions Plans", which engineers use to design their site improvements. These plans can be fun to make—survey data consists of points with descriptions in elevations—so the best way to start these plans is like an adult version of connect the dots.

**CCH:** *Is there a project that you are the proudest to have been involved in?*

**JP:** I've surveyed to aid with affordable housing developments, public park and pathway improvements, Indian Reservation septic designs, and a variety of stormwater management. One project that I am proud to have been involved in is the design and installation of innovative alternative technologies for septic systems in the neighborhood around Shubael Pond in Marstons Mills. I surveyed about 15 properties in the neighborhood and the shoreline of the pond. The larger purpose of the project was to reduce nitrogen loading to groundwater impacting the pond. Residents of Cape Cod know that nitrogen in our ponds is a growing issue, and water quality has been a topic of concern for our larger ponds and local swimming holes. Backed by the EPA, we worked with the USGS, MA DEP, and Barnstable Clean Water Coalition to design these systems, which hopefully will have enough of a positive impact that we implement them in other parts of the Cape. It's too soon to draw conclusions from the project—the systems were recently installed—but the early forecast looks good!

**CCH:** *Can you tell me about any upcoming projects or developments that you are excited for?*

**JP:** Right now, I'd say I'm excited for some work coming up for affordable housing in Rhode Island. I'll be doing a survey for it like any other project, but housing costs have been an issue everywhere in the country, and it's nice to work towards helping

with that problem. Believing in the project you're working on makes any field day easier.

**CCH:** *What would you tell a younger person who is looking to get involved at HW or is still in college?*

**JP:** Keep all doors open. You never know what work you might end up enjoying, or what niche you can fill later in life. I entered college as a computer engineering major before changing to environmental science. I ended up working my way back towards digital-focused work with a variety of map making courses, but it was extremely important for me to be able to pivot and change directions. Most people don't have their life passion determined right away, that's to be expected. I had never considered land surveying until my interview at HW, but I've been enjoying it for years now.

**CCH:** *What is some of the best advice you were given or actions you took to get you where you are today?*

**JP:** There was a period of time when I first started full-time at HW where I became super busy with a few different projects. I was doing great on billable hours, but was consistently staying at the office long into the night. One of my bosses let me know that the work was great, but working so many extra hours wasn't the goal. I took it to heart—work-life balance is important—and sometimes having an efficient 8-hour day is more productive than an exhausted 12-hour day. 🏠



# Janelle Veary

STAFF DESIGNER



**CCH:** *Tell me about how you first got involved with HW. Is there one aspect that drew you there in the first place?*

**JV:** I found out about Horsley Witten (HW) through a family member who works for the Town of Barnstable. What stuck out to me most about HW was the diversity of projects with the common goal of improving the environment and community. I was excited to see that green infrastructure is a major aspect of HW projects. Prior to starting at HW, I was working in stormwater design and developed a passion for green infrastructure and wanted to continue my career in this field. When you grow upon the Cape, you're much more aware of what's going on around you, environmentally. I have a deeper appreciation for nature because of that.

**CCH:** *What is a typical day like for you?*

**JV:** I am in the office most days, working on the site design of my projects, whether it is affordable housing projects, stormwater retrofits, or local park improvements. This includes stormwater modeling, 3D design of the site, and preparing engineering plans and reports for submission to the relevant agencies. Another aspect of my day includes meetings with coworkers, whether

brainstorming design ideas, coordinating projects, or just helping each other improve our skills in the numerous software programs we use. Occasionally, I will be out in the field overseeing construction or investigating sites for stormwater retrofit opportunities.

**CCH:** *Is there a project that you are proudest to have been involved in?*

**JV:** Affordable housing projects are the ones I am most excited to be a part of. A project example is the old Cape Cod Five HQ in Orleans that has been proposed to be converted into affordable housing. This project involves transforming and expanding the existing building and parking lot to accommodate 62 affordable housing units. Being able to utilize existing infrastructure in central locations to serve the community, while incorporating environmentally sensible designs is an aspect of my job that I am proudest to be a part of. Affordable housing is so important to Cape Cod right now with the current housing crisis, and as a born and raised Cape Codder I am very proud to be part of a company that is contributing to the development of year-round affordable housing for the community.

**CCH:** *Can you tell me about any upcoming projects or developments that you are excited for?*

**JV:** One of my upcoming projects is working on stormwater retrofits along a road in an Outer Cape town to improve the water quality of a nearby pond. This involves investigating the existing area and designing green infrastructure to treat the road runoff before it's directed towards the pond. Projects of this nature can be relatively small but have a big impact on the environment as they continue to be implemented around existing water bodies.

**CCH:** *What would you tell a younger person who is looking to get involved at HW or is still in college?*

**JV:** It's OK if you are not sure of the exact type of work you are interested in starting your career in. One of the greatest aspects of HW is the diversity of services we offer. HW employees are encouraged to try a variety of different project types and work in areas that we are most passionate about.



**CCH:** *What is some of the best advice you were given or actions you took to get you where you are today?*

**JV:** My career path has not been as straightforward as others. I first received my bachelor's degree in neuroscience before pursuing an education and career in environmental science/engineering. As you navigate your 20s, your interests are likely to change. I was able to recognize this and have the courage to shift directions until I was able to find a career I am truly passionate about. I think the best advice I can give someone is to not be afraid to change directions, and not be discouraged if you are not as happy in a career as you thought you would be. There is always time to try something new! 🏰