

AWRA Women in Water Resources Interview #3: Jane Rowan



This interview is the third of a six part series, written/conducted by AWRA President Martha Narvaez, celebrating the role of AWRA Women in Water Resources.

Length of Time in the Water Resources Field

Since 1982, 34 years (wow, this ages me)

Current Position

Senior Principal Scientist with Normandeau Associates, Inc.

Positions Held

- Director of Ecological Solutions at The Bioengineering Group
- Senior Associate Scientist at Schnabel Engineering Associates, Inc.
- Wetland Ecologist and NEPA Specialist at US Environmental Protection Agency, Region 3
- Consultant to the Wareham, Massachusetts Conservation Commission
- Research Assistant at SUNY College of Environmental Science and Forestry
- Laboratory Technician, Ocean Spray Cranberries Research and Development Lab

Education

- Master of Science in Environmental Science from SUNY College of Environmental Science and Forestry
- Bachelor of Science in Biology from University of Massachusetts, Dartmouth

Honors and Appointments

- Robinhood Oak Award, Student Leadership at SUNY-ESF
- Fellow Member of the American Water Resources Association

Q&A

How did you get involved in the water resources field? I began with a Biology degree from Southeastern Massachusetts University (now UMASS Dartmouth) and realized the need to obtain a post graduate degree since classic biology/physiology and chemistry coursework qualified me as a laboratory technician, which was not my interest. I applied to a new program at the State University of New York's College of Environmental Science and Forestry at Syracuse University. At this time the wetlands field had just started to open up with the early application of the Clean Water Act. I knew I wanted to work in wetlands and ecology and was invited to interview by Dr. Maurice Alexander, the Head of the Department of Forest Zoology, mostly due to the interest the Fisheries Department professors had in my marine organism physiology background. I was not immediately comfortable with a fisheries focus. The Department Head (Dr. Alexander) who I later realized was a pioneer in the wetlands field in the State of NY, described some of his research and his position on a state board that was developing the State of New York's wetland regulatory program. I then began a work study project with Dr. Alexander characterizing wetlands in Onondaga, NY and selected a multidisciplinary course of study. I was evaluating wetlands using remote

sensing techniques and conducted many aspects of wetlands research associated with hydrology, soils and plant community. I spent my research assistantship graduate work characterizing the unique ecological, chemical and physical aspects of the State's first Unique Area, the Labrador Hollow Unique Area in Onondaga and Cortland County's, NY. I studied water chemistry and the ecology of ponds, wetlands and streams. Terrestrial plants and animals too. I was able to get a broad view of ecosystems and how the physical and chemical environment influenced the numbers and distribution of organisms. I was more attracted to aquatic ecosystems as I saw the importance of them and relatively poor understanding of them at that time.

After graduating I returned home to the Southeastern Coast of Massachusetts. I worked for a local township that was just developing their wetland ordinances. I helped to apply them to the township's significant coastal resources, with over 50 miles of shoreline.

After a few years, I received a phone call from Dr. Alexander (who became my major professor), who told me there was a wetland scientist position open with Region 3 of the USEPA. I applied and got the job. I went to Philadelphia for the job and only planned to stay one year. I ultimately wanted to go back to Massachusetts. (Jane has been living in the Philadelphia area for 32 years). I worked for the Section 404 wetlands group half of the time and the other half of my time was spent working with the NEPA group. I was reviewing Section 404 of the Clean Water Act and Section 9/10 Rivers and Harbors Act permit applications and provided formal USEPA comments to the US Army Corps of Engineers Philadelphia, Norfolk, Pittsburgh, Buffalo, and Baltimore Districts. At that point, I was immersed into water resources science, and regulatory and NEPA compliance policy. I worked on a lot of river dredging projects and initiated the first use of "Advanced Identification of Disposal Sites" for limiting impacts in Northeast PA due to peat mining. I reviewed many dam projects and tried to kill a lot of them through the Section 404(q) and 404(c) process. I actually became known for this and irritated many! I worked to demonstrate the negative and extreme impacts to high quality wetlands and subsequent impact to water resources caused by projects, contrary to the vision of the Clean Water Act. Although we elevated many of these projects, we were not successful in getting them formally denied. At USEPA I was first initiated into the wetland mitigation process and was asked by USACE to provide mitigation conceptual designs for impacts caused by several of the projects they permitted.

I then started having kids. I left USEPA one week before my first child was born. After having children I worked on delineation projects on the side. I had contacts with the U.S. Fish and Wildlife Service and worked with them on permits and mitigation projects. I worked on some of the first restoration projects at USEPA (at this time very few people had tried restoration or creation of wetlands). This work was ground-breaking. I also worked on lake shoreline restoration while I was self-employed.

Following my self-employment I went to work with Schnabel Engineering Associates, Inc. a geotechnical and dam engineering design consultant. I worked on a lot of restoration projects with a lot of smart engineers, and gained a keen understanding of what it takes to design, "spec" and construct a restoration project that will be successful.

And with AWRA? From my graduate school days, my Wildland Hydrology professor and graduate committee member, Dr. Peter Black, introduced me to the American Water Resources Association. Although I knew of the organization, I did not become a member until the early 1990's and attended some AWRA conferences. In the early 2000's Jan Bowers, with the Chester County Water Resources Authority, convinced me to help with the 2001 annual conference held in Philadelphia and then later run for the Board of Directors. I was elected to the Board in 2003, and later became President Elect in 2007.

How has the water resources field changed since you started your career? There are a lot more wetland scientists now than there were. There are also a lot of folks who call themselves wetland scientists and are performing wetland scientist functions, who do not have the educational and technical background that is essential for understanding and adequately achieving protection of wetlands. Very few people in the wetland science field can obtain a Professional Wetland Scientist certification from the Society of Wetland Scientists Professional Certification Program—the measure of a wetland scientist. Though few are qualified to be wetland scientists they are now a dime a dozen. Engineering firms usually did not employ wetland scientists (since they were not really taken seriously) and now most engineering firms have many filled wetland scientist positions. The increased number of wetland scientists does not mean they are good at what they do. A current primary function of a "wetland scientist" is the delineation of jurisdictional boundaries at the wetland, stream or water body edge, which does not require a PE or PWS. I am a PWS (and have been re-certified three times now) because I believe those who perform the work of

wetland scientists need to understand the science and function of a wetland or water, not just the delineation process. The water resources field has changed because a lot more people are trying to play in the ecological arena and this is not necessarily for the better. There was a time no one had a “wetland scientist” on staff. Now everyone has one.

How will the water resources field change in the next few years? From the stand point of large natural water bodies. They were in such bad condition in the 70’s and now with the Clean Water Act many are improved and have clearer water and better diversity and I anticipate their uses are going to change. At the same time, you have closed systems like some impoundments or even large rivers with water treatment plants used for drinking water. This is a plan for disaster. Elements like hormones, and other emerging contaminants, etc. end up in these water bodies. Many of these elements we can’t do anything about. How the field has changed depends on where you look. Some cases get more difficult because with increasing quality and value the water systems now support endangered species (for example the Delaware River now supports two endangered species of sturgeon and has recently been proposed as Critical Habitat for the Atlantic Sturgeon). Water quality regulations result in adherence to water quality standards but they don’t necessarily result in improving the aquatic ecosystem. The ecosystem is very fragile. If you consider a water supply reservoir, managers may adhere to water quality standards, or add chemicals to the water before distributing to their customers—but what kind of ecosystem do you have? The entire ecosystem needs to be addressed. Also, I hope coastal zone and wetland managers will require habitat and biological monitoring after implementing restoration or resiliency schemes to see if their work has really provided value to the larger ecosystem.

Biggest career success? Being a manager at Normandeau Associates. I am so very proud and grateful that I can work with a group of highly intelligent, skilled and dedicated scientists and experts involved in managing many types of resources and habitats, from fisheries, to wetlands to endangered bats.

Biggest lesson learned in your career? Sound science is the basis of everything a consultant in the sciences does. We cannot divert from scientific principles and the scientific method. It is essential to follow scientific protocols, base our recommended actions and standards on scientific principles and not just on expediency or cost. For example, if we are conducting a study, we must plan adequately, follow scientific protocols, obtain buy-in from regulators (presumed scientists), and basically just “do it right” eg—take three replicates and a reference sample—not just one grab sample. In the end, if a scientific study is conducted properly you will be able to rely on the data collected with less of a chance of being challenged or wrong!

Biggest regret? Not getting a PhD.

Share a leadership story? When at Schnabel, one of the best most memorable experiences was that I participated in a yearlong leadership training program. The program was hosted by the American Council of Engineering Companies. It was an intense program; I had to travel to Manhattan for a full-day each month with many homework assignments. Through this experience I learned so much about servant leadership. I could go into great detail but I won’t. What I will say is that I learned about the principles of leadership, specifically the John Maxwell philosophy of leadership. I learned the different styles of leadership and that I don’t want to be in the category of four of the five styles! It became clear to me that the way I want to lead is to empower people around me, base my work relationships on honesty and trust, and to lead by example.

Biggest challenge as a woman in the business? There are still men that won’t listen and don’t take women seriously. I think that because women often verbalize their thoughts, think out loud and sometimes talk too much, men aren’t always ready to listen. When I say something that I want them to respond to they don’t because it may be thought of as another stream of consciousness. Women are willing to be more vulnerable. Women are willing to be more transparent. Men don’t necessarily appreciate it. Other women usually do. Balancing family with work is also a very big challenge. I want to emphasize and recognize though that virtually every opportunity I have had for advancement has been provided to me by men.

One piece of advice you wish someone told you early on in your career? I feel like I got lots of advice. From my father...mostly from my father. He made it clear to me that you should never be ashamed of any work you do. All work is honorable, if it is achieved honorably. Doesn’t matter what level you work at you need to work hard and do your best. That’s been motivating. I’ve done things I didn’t like and that helped me focus on achieving at a higher level to enjoy my working life and not just work for a paycheck. I have a very strong belief that God is not an entity

out there in the distance and remote. God is involved in the world and in the lives of everyone. My father also believed that. He taught those principles. “Whatever may be your task. Work at it heartily from the soul as something done for the Lord and not for people.”

True inspiration? My faith, my family and my love for the natural, unblemished ecosystem.

As mentioned, this is a six-part series on AWRA’s Women in Water. Watch for the fourth interview next month with [AWRA Past President Carol Collier](#).

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