



Richard Anderson (1969-Present)

Research Scientist

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Overview

Dr. Richard Anderson currently serves as a research scientist for the Center for Urban Waters, at the University of Washington, Tacoma. His research interests include developing decision making models and systems thinking approaches to better address watershed management. His current project using decision analysis to help guide protection and restoration of the Puget Sound, Washington USA. His previous research involves integrating values and science to make decisions about restoring oysters in North Carolina, builds an influence diagram model to bring together stakeholder values and ecosystem science to provide insight into decision making about oyster and oyster reef management. Some of his selected publications include:

- Anderson, R. M., B.F. Hobbs, and J.F. Koonce, Modeling effects of forest cover reduction on larval walleye survival in Lake Erie tributary spawning basins, *Ecosystems* no. 9 (2006), pp. 725-730.
- Anderson, R.M., V.I. Koren, and S.M. Reed, Using SSURGO data to improve Sacramento model a priori parameter estimates, *Journal of Hydrology* no. 320 (2006), pp. 103-116.
- Anderson, R.M., and B.F. Hobbs, Using a Bayesian approach to quantify scale compatibility bias, *Management Science*, vol. 48 no. 12 (2002), pp. 1555-1568.
- Anderson, R.M., B.F. Hobbs, J.F. Koonce, and A.B. Locci, Using Decision Analysis to choose Phosphorus targets for Lake Erie, *Environmental Management*, vol. 27 no. 2 (2001), pp. 235-252

Early Life and Education

Richard Anderson describes his growth into an environmental science professional as an evolutionary process. “It was always a latent interest, but emerged in a way I don’t fully understand,” he explains. “I think growing up in Jamaica might have had something to do with it. I have wonderful memories of growing up there...it was very much a tropical paradise. I have always had a love for the outdoors, and was driven by that.”

Anderson began his college career studying engineering. He received his B.S. in engineering mechanics from Johns Hopkins University, and went on to work as a nuclear safety analyst for Westinghouse Electric in Pittsburgh. However, a summer program with the National Oceanic and Atmospheric Administration showed him the different applications his skills could bring to the environmental field. Inspired by the experience, Anderson returned to Johns Hopkins to earn his Ph.D. from the Department of Geography and Environmental Engineering.

Career

Anderson’s doctoral thesis would prove to be a springboard to a number of opportunities in the field. The major paper that developed from his research, applying decision analysis in the Lake Erie ecosystem, earned him recognition from professional colleagues in the group INFORMS (Institute for Operations Research and the Management Sciences). Additional thesis work in watershed hydrology helped him secure a post-doctoral position doing hydrologic modeling research with the National Weather Service. Subsequently, he also spent a year in Washington D.C. at the U. S. Department of Agriculture as an American Academy for the Advancement of Science (AAAS) Science-Policy Fellow, where he was involved in water quality modeling research and had the opportunity to observe the interaction of science and policymaking. Three years after completing his Ph.D., despite having shifted his attention away from academia as an immediate career goal, he was invited to interview for a faculty position at Duke’s Nicholas School for the Environment. This opportunity culminated with a job offer as an assistant professor.

Anderson is still settling into his role as a professor and acknowledges that getting started as an academic is challenging. “The first year is the toughest,” he says, “because you have to get going in terms of teaching, as well as decide where to devote your efforts research-wise, all the while avoiding the tendency to compare yourself to more established researchers.” After two years at Duke, Anderson added advising Ph.D. students to his other tasks of teaching and research.

Because his career is still very new, Anderson says he does not have “sufficient perspective” to reflect on his achievements. He is pleased with the success his dissertation research has earned him, both in terms of professional positioning and opening up opportunities for research collaborations. However, he hopes the defining moments of his career are yet to come. “There will be opportunities for me to get involved in other research contexts that will hopefully lead to significant things,” he says. “One important aspect of what I want to do is get involved in ‘real’ decision-making contexts.” In terms of advising, Anderson cites his undergraduate and Ph.D. advisors as examples of good mentors, both of whom “went beyond the call of duty in many ways, and pushed [him] into opportunities.”

Anderson says that his enjoyment and care for the outdoors, in combination with perseverance, accounts for his decision to stick with a career in the environmental field. “I think that we need to develop ways to

make better decisions for the environment,” he says. “That needs to be the focus of more research—developing systematic, rigorous ways for making environmental decisions.” He notes that there are a variety of ways to get involved in the environmental field, and encourages minorities interested in environmental careers to, first and foremost, know their interests. “There are so many different ways to come at the environment—legal aspects, advocacy, science,” he says. “It’s certainly important to think about what you’re good at and what you enjoy.” He suggests the Internet as one resource to get started looking for internships or summer experiences that give students a taste of the environmental field, and helps bolster their credentials.

Advice to Young Professionals

Whatever aspect of the environmental field they may be interested in, Anderson advises young people to know the science surrounding environmental issues. “Regardless of how you want to get involved, be familiar with the science that’s involved as best you can,” he says. “There’s too much alarmism going on about many popular environmental issues, and not enough understanding of what different scientific opinions and perspectives say, and what the uncertainties are. Even at the most basic level, you have to be familiar with the science.”

For More Information

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This interview was conducted in 2015.