North Carolina defines extraterritorial jurisdictions (ETJs) as areas outside but within 1–3 miles of a municipality. Historically, some African American communities were intentionally zoned into ETJs, in order to legally deny them municipal services, and some communities remain in these exclusionary zones. This project focuses on one such community, located in Wake County, NC. Evidence suggests that this community’s domestic wells are at risk of microbial contamination. I evaluated the net present costs over 30 years of two options for protecting these households from waterborne contaminants: extending municipal water service and installing point-of-use treatment. Costs were compared to health costs of taking no action. The net social costs of extending water service or providing point-of-use treatment are $82,375 and $88,281, respectively. By comparison, health costs of no action are $24,062. Although more costly than no action, I recommend extending water service to ensure community access to clean water.

Committee:

Jackie MacDonald Gibson, Ph.D. (Advisor)
Greg Characklis, Ph.D.
Pete Kolsky, Ph.D.