



Written Statement of

Patricia Butterfield, PhD, RN

Dean and Professor
Washington State University College of Nursing
PO Box 1495
Spokane, WA 99210-1495
509.324.7292

On behalf of the

American Nurses Association
and
the Washington State Nurses Association

“The Clean Water Act after 37 Years: Recommitting to the Protection of the Nation’s Waters”

Before the
Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC

October 15th, 2009

Chairman Oberstar, Subcommittee Chair Johnson, and other distinguished members of the Committee: It is a privilege to appear before you today on behalf of the American Nurses Association and the Washington State Nurses Association to discuss regulatory, transparency, and public trust issues relating to the Clean Water Act. Thank you for your interest in protecting our nation's families and your constituents by protecting our nation's water. Chairwoman Johnson, thank you for bringing your skills and wisdom as a nurse to work in Congress and in support of healthy families and healthy environments.

The ANA is the only full-service professional organization representing the interests of the nation's 2.9 million registered nurses through its constituent member nurses associations--including the Washington State Nurses Association. The ANA advances the nursing profession by fostering high standards of nursing practice, promoting the rights of nurses in the workplace, projecting a positive and realistic view of nursing, and by lobbying the Congress and regulatory agencies on health care issues affecting nurses and the public. The ANA clearly recognizes the fundamental tie between the quality of our environment and the health of the nation, and I am honored to have the opportunity to appear before you today to discuss that link.

As a public health nurse with expertise addressing household environmental health issues, I applaud the efforts of your Committee to protect our nation's most valuable resource; its children. The Clean Water Act addresses the protection of surface waters, coastal areas, streams, and wetlands. As we know surface waters can contaminate drinking water sources in a variety of ways, including agricultural run-off, contamination from domestic livestock, and discharge of mining and industrial waste. Industries emitting airborne pollutants can also

impact water quality through the dispersion of particulates and metals onto the land. In this context, I will discuss our research addressing potable water quality issues in the rural West.

For the past six years our research team has been visiting the homes of young families in rural Montana and Washington State. To date we have collected data characterizing levels of biologic, physical, and chemical contamination in the homes of 441 adults and 399 children under the age of eight. Of the homes we tested, 80% were on private wells; the remainder were on small rural water systems. Our research is funded by the National Institute of Nursing Research at NIH and families are referred to us by nurses working in county public health departments.

Most of our families live out in the country not by choice, but by necessity; they seek the least expensive housing available; a mobile home in a field, an outbuilding converted into a cabin, or a small home poorly equipped for Montana's frigid winters. Although we test homes for multiple contaminants, the most common reason that families sign up for our study is that we conduct a full screen for biologic and chemical contaminants in water. Mothers tell us they want to know whether the water they are giving their children is safe; they cannot afford such testing on their own and seem willing to put up with our research team in order to find out the answers they want. In the context of every type of household environmental health issue, from air quality to food safety, mothers uniformly tell us that their top priority is knowing about their water. Whether they are mixing formula powder with water to make bottles for their toddler, whether they are taking their children swimming at the local lake, or whether they are irrigating their garden using water from the ditch out front, they want to know if the water their children come in contact with is safe.

As you can imagine the testing we conduct yields different results for different families. A significant number of the families we study receive results indicating that their water contains no contaminants above threshold levels. One would logically expect such outcomes; some of the homes in our studies are located in areas considered to be among the most beautiful and remote in our nation. However, even in these areas, we see significant numbers of families, whose homes test positive for one or more water contaminants. Twenty-nine percent of our homes tested positive for at least one water risk. Seventeen percent of homes tested positive for coliforms, 3% tested positive for *E. coli*, 6% of homes exceeded the threshold for arsenic, and 3% exceeded the threshold for nitrates. On rare occasions, we find insecticides, herbicides, and volatile organic compounds in wells located in extremely remote areas. One family we worked with was found to have *E-coli* in their well. In such cases we typically walk the family through a process where they can disinfect their well by adding bleach to it, letting it sit for a day, and then clearing the bleach from the well and plumbing. After the well was disinfected, we retested the water; *E-coli* was detected again. We had the family repeat the process and the same results held. The bottom line was that no matter what water sanitation guidance we gave the family, their well remained contaminated. At this point the choices became more complicated; either install a UV light disinfection system or switch the entire family to bottled water for drinking and cooking. There were simply no other low-cost solutions we could offer to this family.

The tests we conduct don't differentiate between point and non-point source contamination. And for the mother it doesn't make much difference. Whether the upstream source of contamination is from mine waste, a local feedlot, agricultural run-off of fertilizers

and pesticides, or the deposition of sediments into a stream by a careless construction project, it makes little difference to a mother. She only knows that yesterday she thought that giving her child a glass of water from the tap was an act of health; today she is not sure what it means.

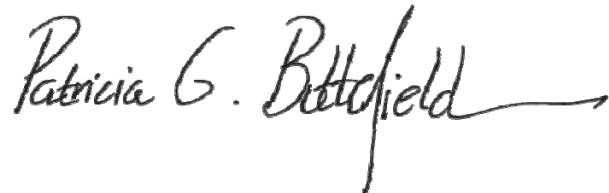
As a public health nurse, I understand the importance of trust between patients and their health providers. Trust is an essential part of any therapeutic relationship and key to the achievement of patients' health goals. We all know that once gained, trust must be maintained through honest and thoughtful communication. Once betrayed, it is almost impossible for trust to be reestablished. In our studies, we talk with parents quite a bit about the results of their water testing. We problem solve with them about the no cost and low cost options; these are generally families who cannot afford a reverse osmosis system or other point-of-use treatment system. One thing we have learned is that families want to know that government employees are looking out on their behalf. They want to know that contaminants that are dumped into their watershed, either intentionally or inadvertently, are being monitored. And they want to know that the persons who are dumping contaminants are being held accountable for their actions. Because when we fail to hold polluters responsible, we shift the costs of sustaining healthy water systems from the polluter to the citizen. When a well becomes contaminated and a family starts to purchase bottled water for their children, that family incurs a very real cost. And the families we study can ill afford such costs. The simple truth is that, despite our recommendations to the contrary, families who find out that their water may be contaminated almost always turn to bottled water. They see it as the only answer they can afford. Even when we recommend simple low-tech solutions to improve their drinking water quality, they rarely have the time, money, or expertise to install a point-of-use system in their home. They

don't understand the difference between a water softener and a water treatment unit. They don't know how to maintain a treatment unit or change the filters so that the unit remains operable. In our study, renters fare much poorer than home owners; regardless of local renters' rights policies, such families are often afraid to share their water test results with their landlord. They fear that they will be evicted for stirring up trouble. What we see is families turning to bottled water each time, increasing their own weekly expenses as well as the nation's cumulative burden of plastic bottles.

As a scientist, as a nurse, and as a citizen I want to know that the EPA and their state designates have the resources to enforce the Clean Water Act. I want to know that the more than 1 million U.S. citizens who are immuno-suppressed and at a real risk of dying if they drink contaminated water are protected. I want to know that the contractor on a highway construction project is taking precautionary action to assure that the stream adjacent to the highway is not poisoned by sediment and diesel. It is important to me to know that intentional polluters, who seek to profit by poisoning our nation's coastal areas, are caught and prosecuted to the full extent of the law. While I am only one person, I can speak for many of my nursing colleagues by stating that we support stronger connections between environmental health personnel and public health departments, so that enhanced enforcement efforts can be coupled with stronger public education efforts. Because in the end, we see too many parents who believe, that no matter how egregious or deliberate the action of polluters are, their voice will not be heard. I thank you for taking action that recommits our government to the goals of the Clean Water Act and provides our agencies with the resources they need to act aggressively and proactively on behalf of the health of our nation's children. Trust can be restored by

committing the requisite resources to ensure protection of our water and our health. Our citizens and your constituents deserve nothing less.

Respectfully submitted,

A handwritten signature in black ink that reads "Patricia G. Butterfield". The signature is written in a cursive style with a long horizontal flourish extending to the right.

Patricia Butterfield