

Report for 2004DE39B: Undergraduate Internship: Assisting Small and Underserved Farmers in Meeting Water Quality Objectives

- Water Resources Research Institute Reports:
 - McIntosh, Dennis, and Alicia Revis, 2005, Assisting Small and Underserved Farmers in Meeting Water Quality Objectives, Delaware Water Resources Center, University of Delaware, Newark, Delaware, 19 Pages.
- Other Publications:
 - Boyd, Amy, ed., Spring 2004, Delaware Water Resources Center WATER NEWS Vol. 4 Issue 2 "Two from Delaware State University Win DWRC 2004 2005 Internships", <http://ag.udel.edu/dwrc/newsletters/Spring2004.pdf>, p. 3 and 5.
 - Revis, Alicia. Poster Presentation October 13, 2004. Assisting Small and Underserved Farmers in Meeting Water Quality Objectives. Fourth Delaware Water Policy Forum, University of Delaware, Newark, Delaware.
 - McIntosh, Dennis, Alicia Revis, and Andrew Lloyd. Poster Presentation February 7-9, 2005. Assisting Small and Underserved Farmers in Meeting Water Quality Objectives. National Integrated Water Quality Program (NIWQP) Conference, San Diego, California.

Report Follows

Undergraduate Internship Project #1 of 9 for FY04

“Assisting Small and Underserved Farmers in Meeting Water Quality Objectives” is the research topic for Alicia Revis’ project, sponsored by the DWRC. Her advisor is Dr. Dennis McIntosh of the Delaware State University (DSU) Department of Agriculture and Natural Resources. Alicia will evaluate farm drinking water samples for possible contaminants, then report results and explain assistance programs available to address any water quality problems identified.

“I am working with a number of people, including extension agents and a microbiologist, and learning the value of patience and persistence in gathering data. I am glad to have this opportunity to rise to the challenge of working in the public arena on water quality issues.” -- Alicia Revis

Abstract:

From years past, there has slowly been a decline in the number of small farms. As a result, these smaller farms become more isolated and consequently, less unaware of their eligibility for government assistance. Another problem facing these farms is a lack of understanding available information on protecting their water resources. Due to limited education and a use of inadequate operational practices these underserved farms may not be well protected from various contaminants that could adversely affect their health and the quality of their farmland.

Different areas across the world (cities, communities, and rural areas) rely on water that is safe, reliable, and healthy for human consumption. According to the EPA (2002), the United States has one of the safest water supplies in the world. However, the statistics do not indicate what is specifically coming out of each individual tap. Although the EPA regulates drinking water, it does not regulate the drinking water from private wells, which is one major reason for conducting this study.

About 15 percent of all Americans have their own source of drinking water. However, unlike public or city drinking water, they do not have professionals testing their water on a regular basis. Checking drinking water regularly is the only way to ensure that the water being supplied through private drinking water systems is safe for human consumption (EPA, 2002).

Ground water is a natural resource found under the earth’s surface. It may naturally contain some impurities and contaminants, without outside sources. These impurities and contaminants can come from many different areas through the waters travels. Water moving through rocks and soil may contain magnesium, calcium, and chlorides. Some water may also contain arsenic, boron, selenium, or radon. Aside from natural contamination, water may also become polluted by human activities (EPA, 2002).

The majority of the United States’ groundwater is safe for human consumption. However, groundwater contamination has been found in all 50 states. This statistic gives

well owners a reason to be vigilant about protecting their water sources. They need to become aware of the potential health risks and test their water regularly to maintain their wells and protect their family's well being (EPA, 2002).

The objective of this project is to assist underserved farmers that may have existing water quality problems. By identifying the location and the demographics of the farms, resources can be located that may provide help protecting water quality within their communities. This project will also build upon existing USDA "Small Farms" programs providing information in community workshops and sharing strategies to meet state/federal water quality compliance requirements.