

2006 Program Summary Montana State University Extension Water Quality

Montana State University Extension Water Quality (MSUEWQ) offered the well test program for the first time in 1989. Most recently the program was offered in the spring of 2006. The 2005-06 programs targeted the top 12 to 15 Montana counties with the highest rate of new well drilling and attracted over 650 participants. The program guides private well owners through the process of testing water quality, provides materials to help interpret test results, and offers insight on ways to help protect drinking water resources. In addition to the baseline bacteria and nitrate testing, the 2006 program incorporated a number of new choices for participants including arsenic testing. The 2006 program also piloted the use of Google Earth for attaching geographic coordinates to the test results for subsequent assessment in a mapping program. The program is offered as a service for Montana well owners to provide affordable well testing services accompanied by test result interpretation, while simultaneously providing a useful water quality data source for managers.

2006 Water Quality Summary

2006 marked the first year of the program where participants had broad choices on which parameters to test for. Over 30 parameters were available. Following is a summary of results for selected parameters.

| Parameter | # Participants Who Tested for this Parameter | Samples Exceeding EPA Drinking Water Goals | Samples Not Meeting Goals but Meeting Standards | Samples Not Meeting Drinking Water Standards |
|-----------------------------|--|--|---|--|
| Arsenic | 73 | 67% | 30% | 3% |
| Bacteria (<i>E. coli</i>) | 273 | 99.6% | goal same as standard | 0.4% |
| Bacteria (total coliforms) | 273 | 86% | goal same as standard | 14% |
| Cadmium | 61 | 100% | goal same as standard | 0% |
| Copper | 49 | 98% | goal same as standard | 2% |
| Lead | 75 | 97.3% | 2.7% | 0% |
| Nitrate | 276 | 99.3% | goal same as standard | 0.7% |
| Selenium | 54 | 100% | goal same as standard | 0% |
| Fluoride | 137 | 99.3% | goal same as standard | 0.7% |

Survey Results

The following are results from 79 mail surveys returned thus far by 2006 program participants.

- More than 97% of participants stated they would participate in the program again.
- More than 60% of participants started a well file with materials from the program (most others already had a well file)
- Of participants with a positive bacteria result, 14% retested, 28% disinfected, and 14% attempted to source the contamination.
- More than 98% of participants indicated a better understanding of the importance of regular well testing due to the program.
- More than 97% of participants indicated a better ability to monitor their drinking water quality due to the program.
- More than 87% of participants indicated a better ability to understand maintenance and upkeep needs of their private well due to the program.

The Future of the Program

The primary goal of the 2006 program was to pilot the offering of a wide range of parameter choices, to pilot the use of Google Earth for geographically identifying water quality results, and to streamline the process for handling results and managing water quality data. The goal of the 2007 program will be to incorporate the changes based on surveys and experience in 2006 and extend the program to a larger audience over a broader portion of the state.