

## Case Study: City of Bayard Wellhead Protection Plan

The city of Bayard, population of 1247, is located in Morrill County of western Nebraska. I first met with the Bayard city clerk and water operator in April 2004 to offer assistance in developing a wellhead protection plan. And now, a year later, the city has concluded the formulation of their wellhead protection plan by conducting an official public hearing. Don't let my choice of words fool you... although I said, "Bayard has concluded the formulation of their wellhead protection plan" the real work is just beginning as they jump head long into the actual implementation of their plan. In other words, the fun is just beginning. The fact that it took Bayard a year to get to this point is typical for most communities. It can easily take this amount of time to develop a detailed and hopefully effective wellhead protection plan. Bayard's situation was perhaps more complicated than most because the water system had received an administrative order for high nitrates. On the flip side, Bayard's situation was greatly improved by the fact that they applied for and received a Source Water Protection Grant from the Nebraska Department of Environmental Quality. This grant provided the city with over \$12,000 dollars to use towards developing and implementing a local wellhead protection plan. More information about this funding opportunity is available online at [www.deq.state.ne.us](http://www.deq.state.ne.us). Look for a link on the homepage under the heading *Grant Funds Available for Source Water Protection Projects*. The deadline to apply for this years funding is July 6, 2005.

Here is a summary of the activities that Bayard has undertaken as part of their wellhead protection efforts.

A citizen committee was formed. The committee consists of the mayor, clerk, and two city council members. It is the committee's responsibility to coordinate and implement the overall wellhead protection plan.

The Bayard FFA chapter performed a contaminant source inventory (CSI). The FFA students interviewed numerous residents and business owners as they carried out a field investigation to determine what types of potential contaminants were present in the wellhead protection area. The students filled out a CSI form and took GPS coordinates of contaminant locations. The GPS units and a laptop computer were purchased for the FFA with funds from the above-mentioned Source Water grant. The FFA will also carry out a nitrate-sampling program for area drinking and irrigation wells and results will be provided to the well owner. The nitrate test kit was also purchased through the Source Water grant.

With a great deal of assistance from the North Platte NRD, the city sponsored a training session for farm owners and operators within the wellhead protection area. The purpose of the meeting was to provide nutrient management information and education. The city is also providing cost share to area farmers to install irrigation flow meters, to perform deep soil sampling for nitrogen residual, and to provide home study courses on soils and irrigation management. The cost share was made possible through the Source Water grant.

The city is conducting an educational campaign targeting water system customers by mailing lawn fertilizer and pollution prevention information with monthly water bills. Additional information will appear in the local newspaper on a regular basis during the spring and summer months.

While this is not a very detailed list, it should give the reader a good idea of Bayard's overall approach to wellhead protection: provide education, information and incentives to change the practices that are most likely contributing to the local nitrate problem. An appreciable reduction in nitrates might not be seen for quite some time, however, it is important to remember that it took many years for this problem to materialize and it could take just as long to remedy. Thanks for your time, and don't hesitate to contact Nebraska Rural Water to assist you with your own wellhead protection plan.