

**SOURCE WATER ASSESSMENT  
EXECUTIVE SUMMARY  
FOR  
North End Water Users**

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**June 30, 2004**

**PROJECT: 424-001**

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**ASSESSMENT COMPLETED BY: TRIHYDRO CORPORATION**

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## **SOURCE WATER ASSESSMENT SUMMARY FOR North End Water Users**

### **PWS Source Water Assessment Summary**

The North End Water Users is a community public water supply system located in Park County. The system serves 375 people through 205 service connections year-round. The system is supplied by three wells that draw water from the Willwood or Fort Union formations. Facilities also include storage tanks, gas chlorination systems and the interconnecting transmission system. Produced water is piped directly to the distribution system and then to three storage tanks. The water sources scored medium with respect to the combined integrity and aquifer sensitivity ratings. North End Water Users scored high with respect to land use susceptibility and low for point source susceptibility.

### **Delineation Methods**

This water system is a community system that draws water from a porous sandstone formation. A previous delineation was completed and approved for this system.

For this aspect of the project, TriHydro obtained and reviewed a previously completed source water area delineation. These delineations have been completed for a variety of systems around the state by the Wyoming Geological Survey, the Wyoming Association of Rural Water Systems, the Wyoming Water Development Commission, the U.S. EPA, and consulting firms. The delineation was completed by a Professional Engineer licensed in the State of Wyoming and was directly incorporated into this source water assessment.

### **Groundwater Sources**

Northend Water Users draws water from the Willwood or Fort Union formations. Recharge to the formation originates as infiltrating precipitation and surface water from the surrounding drainage basin, and reaches the well through porous media flow. Groundwater flow within the Willwood or Fort Union formations is generally from west to east. Additional information on these wells is included on the attached Well Information Sheets. As shown on the enclosed source water area delineation map, contaminant zones 2 and 3 are similar to a previous delineation completed by Weston Engineering.

### **Integrity Summary**

North End Water Users utilize three shallow wells, approximately 55 feet deep, to supply water. The wells were constructed prior to 1983 when less stringent construction standards were required by the State of Wyoming. However, records show that the wells were all properly sealed to protect from surface infiltration of potential contaminants and flooding around the wellhead. As shown on the Integrity Summary Table, the North End Water Users #1, #2 and #3 wells received a score of 4 due to their well completion dates and long conveyance structure lengths.

## **Water Source Sensitivity Summary**

As shown on the Source Sensitivity Summary Table, the wells each received a sensitivity score of 10. The wells received the score for two reasons. First, the wells are relatively shallow and draw water through porous media flow from an unconfined alluvial aquifer that is known to be vulnerable to contamination. The second reason is that there is documented chemical detections in the groundwater.

## **Water System Susceptibility Rating**

Susceptibility is defined as the potential for a public water supply to draw contaminated water at concentrations that would pose a threat or concern to human health. In general, the North End Water Users scored high for land use susceptibility because much of the land surrounding the water sources is irrigated cropland. The overall point source contaminant susceptibility rating is low due to the lack of contamination sources present within the delineated zones.

A review of your PWS's routine water analysis results revealed that one or more chemicals that are considered contaminants in drinking water were detected at some time within the last five years. Chemical detections have a large impact on your PWS's sensitivity score because it may indicate that there is a pathway for contaminants to reach the water supply. However, it is likely that these chemicals are present only in small amounts and are not a danger to your health. Some of these chemicals may also occur naturally in water.

For more information about which chemicals were detected, please contact the PWS for a copy of the most recent Consumer Confidence Report or water analysis results. Chemical detections at levels that are a concern to human health are reported on the EPA's website: [http://www.epa.gov/enviro/html/sdwis/sdwis\\_query.html](http://www.epa.gov/enviro/html/sdwis/sdwis_query.html). To see if your PWS has exceeded the federal primary or secondary drinking water standards, just click on the State of Wyoming and then type in the name of your PWS. Consumer Confidence Reports are prepared by the PWS on a yearly basis. The reports should include information about any chemicals found in the water, even those found at very low levels. Please contact Kim Parker at DEQ, 307-777-7781, or WARWS for assistance. You may also contact EPA to find out what contaminants were detected. You may have to fill out a Freedom of Information Act request to obtain the water test results for your PWS. Please call EPA's Safe Drinking Water Hotline at 1-800-426-4791.

**POINT SUSCEPTIBILITY SUMMARY TABLE  
FOR North End Water Users  
Point Source Susceptibility Summary**

It may appear from the results of this point source susceptibility summary table that your system has too many PSOCs influencing the final ratings. In some cases, a specific PSOC falls within a specific contaminant inventory zone shared by multiple wells or intakes. When this is the case, that PSOC will be scored for each intake. For example, an underground storage tank may appear within a contaminant inventory zone shared by four different wells. This would cause that single storage tank to be entered into the table four times, or once for each well or intake.

Point Source Type	Low	Medium	High
None Identified	N/A	N/A	N/A

- \* Illustrates the number of PSOCs in a particular rating class for all water sources
- \* N/A - Not Applicable