

**SOURCE WATER ASSESSMENT
EXECUTIVE SUMMARY
FOR
School District 6 (Wapiti)**

June 30, 2004

PROJECT: 424-001

ASSESSMENT COMPLETED BY: TRIHYDRO CORPORATION

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SOURCE WATER ASSESSMENT SUMMARY FOR School District 6 (Wapiti)

PWS Source Water Assessment Summary

The Wapiti Elementary School Water System is a non-transient, non-community groundwater supply, located west of Cody. The system serves a resident population of 30 students and five staff for nine months of the year and operated the year round to provide water for other activities. Facilities include a hydropneumatic tank and the distribution system. The water source scored a medium with respect to the combined integrity and aquifer sensitivity ratings. The school district scored medium with respect to land use susceptibility and low for point source susceptibility. The system also scored high transportation susceptibility.

Delineation Methods

This water system is a non-transient non-community system that draws water from a porous sedimentary formation. Calculated fixed radius (CFR) methods were implemented to estimate the 2-year and 5-year time of travel radii for the groundwater flow system. The CFR used well information from the sanitary survey and aquifer parameters were assumed from similar type deposits.

The calculated fixed radius (CFR) method is appropriately used when groundwater flow to the well can be characterized as porous. This process was implemented for small communities that derive water from deeper, confined aquifers, or for non-community water systems. A factor of safety (FS) of 1.5 was applied to all systems where portions of the data were suspect. At the ground surface, the radius can be used to delineate an area around the well to be used for wellhead protection. The radius is the distance from the well to a point from which groundwater (and contaminants) can reach the well over a specified time period. Input data requirements are limited, consisting of the pumping rate, open area (screened interval) of the well, porosity of the aquifer, and the selected time of travel (two years and five years).

Groundwater Sources

School District 6 (Wapiti) draws water from landslide deposits. Recharge to the formation comes from the North Fork Shoshone River drainage, and reaches the well through porous media flow. Groundwater flow within the formation is generally from southwest to northeast. Additional information on this well is included on the attached Well Information Sheet. As shown on the enclosed source water area delineation map, contaminant inventory zones 2 and 3 were delineated using CFR methods. Zone 2 has a calculated radius of 635 feet. Zone 3 has a calculated radius of 1,004 feet.

Integrity Summary

School District uses one well that is approximately 70 feet deep to supply water to the municipal system. The well was constructed between 1983 and 1993 when moderately stringent construction standards were required by the State of Wyoming. Records show that the well was properly sealed from surface infiltration of potential contaminants and flooding around the wellhead. However, the well lacks adequate protection of the vicinity around the wellhead from contaminant sources. Therefore, as shown on the Integrity Summary Table, the Wapiti School #1 well received a score of 4.

Water Source Sensitivity Summary

As shown on the Source Sensitivity Summary Table, the well received a sensitivity score of 10. The well received the score for two reasons. First, the well is relatively shallow and draws water through porous media flow from an unconfined aquifer that is known to be vulnerable to contamination. The second reason is that there are 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, School District 6 (Wapiti) scores medium for land use susceptibility because much of the land surrounding the water sources is irrigated croplands. The overall point source contaminant susceptibility rating is low due to the lack of contamination sources being present within the delineated zones. The well received a high transportation corridor susceptibility for nearby state highways. Susceptibility ratings for each type of potential contaminant source are summarized on the attached susceptibility tables.

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. 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 School District 6 (Wapiti)
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