

**SOURCE WATER ASSESSMENT
EXECUTIVE SUMMARY
FOR
Wyoming Downs Horse Racing**

June 30, 2004

PROJECT: 424-001

ASSESSMENT COMPLETED BY: TRIHYDRO CORPORATION

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SOURCE WATER ASSESSMENT SUMMARY FOR Wyoming Downs Horse Racing

PWS Source Water Assessment Summary

Wyoming Downs water system is a non-community groundwater supply located north of Evanston. The system serves a working population of 150 and 75,000 horse racing fans, during the season, through 50 service connections and two wells. Facilities include a standpipe storage tank and the distribution system. The water sources scored medium with respect to the combined integrity and aquifer sensitivity ratings. Wyoming Downs Horse Racing scored high with respect to land use susceptibility and low for point source contaminant susceptibility.

Delineation Methods

This water system is a 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 was calculated using well information in the sanitary survey and SEO database, and aquifer parameters used in the calculation were assumed from those of similar type deposits.

Calculated fixed radius (CFR) is an appropriate method to use when groundwater flow to the well, spring or tunnel 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 where groundwater (and contaminant) can reach the well over a specified time period. Input data requirements are limited, consisting of the pumping rate, open (screened interval) of the well, porosity of the aquifer, and the selected time of travel (2 years and 5 years).

Groundwater Sources

Wyoming Downs Horse Racing draws water from the sedimentary units within the Knight Formation. Recharge to the wells occurs in the outcrops of the Knight Formation and generally flows to the wells under artesian conditions 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 inventory zones 2 and 3 were delineated for both wells using CFR methods. Well #1 had a Zone 2 calculated radius of 1,295 feet and a Zone 3 calculated radius of 2,048 feet. Well #2 had a Zone 2 calculated radius of 515 feet and a Zone 3 calculated radius of 814 feet.

Integrity Summary

Wyoming Downs Horse Racing uses two wells, approximately 250 feet deep, to supply water to the facility. These wells were constructed between 1983 and 1993 when moderately stringent construction standards were required by the State of Wyoming. Records show that the wells may not be properly sealed to protect from surface infiltration of potential contaminants and wellhead access may be unrestricted. As shown on the Integrity Summary Table, the wells received scores of 9 primarily due to the lack of surface seals, unrestricted access and the well completion dates.

Water Source Sensitivity Summary

As shown on the Source Sensitivity Summary Table, the wells received sensitivity scores of 6. The wells received scores of 1 for aquifer sensitivity because they draw water from a confined aquifer through porous media flow. The wells also received scores of 5 for chemical sensitivity due to 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, Wyoming Downs Horse Racing scored high for land use susceptibility because much of the land surrounding the wells is irrigated cropland. Due to the lack of contamination sources present within the delineated zones, the overall point source contaminant susceptibility rating is low.

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 Wyoming Downs Horse Racing
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