

WYOMING WATER ASSESSMENT AND PROTECTION PROGRAM (SWAP)



SOURCE WATER ASSESSMENT PROGRAM EXECUTIVE SUMMARY

Source Water Assessment Prepared For:
Peacock Rentals

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SOURCE WATER ASSESSMENT SUMMARY FOR Peacock Rentals

PWS Source Water Assessment Summary

The Peacock Rentals water system is classified as a community groundwater supply and is located on Riverton's south city limit. The water facility provides untreated groundwater year round to the mobile home court's resident population of 95 people through 53 service connections. Source water is obtained from a well completed in the Wind River Formation. Water pumped from the well flows directly to the distribution system. An 80 gallon pressure tank is used for storage and maintains system pressure. No water treatment or disinfection is provided.

Peacock Rentals scores high for land use susceptibility because much of the land surrounding the water source is urban. In addition, the well also received medium to high susceptibility ratings due to the presence of several point source contaminants that lie within the source water area.

Delineation Methods

Peacock Rentals is a community water system that obtains its source water from a porous sandstone formation. WhAEM methods were used to delineate the two and five year source water areas based on information obtained from the sanitary survey and Wyoming Water Research Institute report.

EPA's Wellhead Analytic Element Model, or WhAEM model was used for community water systems that derive their sources from alluvial or shallow bedrock aquifers. The WhAEM model uses well and limited hydrogeologic data to estimate time-of-travel capture zones in relatively simple hydrogeologic settings for either confined or unconfined aquifers. For the source water assessment, the WhAEM model was used to develop two year and five year groundwater capture zones. Due to this methodology, the delineated source water areas may be larger than the true capture zones for each well. However, use of this method typically results in source water protection areas that can be used to more reliably protect the water supply.

Groundwater Sources

This water system is located immediately south of Riverton and obtains groundwater for its community supply from one well that is completed to a depth of 180 feet. This well obtains water from sufficiently saturated sandstone beds of the Wind River Formation. Recharge to the Wind River Formation occurs through the direct infiltration of precipitation on outcrops. Groundwater flows through these sandstone beds to the well through porous media flow. Additional information on this well is available on the enclosed Well Information Sheet.

As shown on the attached source water area maps, contaminant inventory zones for the well encompass areas immediately adjacent to the well. Zones 2 and 3 are generally centered on the well. The shape and size of the source water area is directly related to well pumping rates, aquifer transmissivities, and groundwater flow directions.

Integrity Summary

Peacock Rentals uses one well to supply water to its community system. The well, Gaines #2, was constructed prior to 1983, when less stringent construction standards were required by the State of Wyoming. Available records indicated the well was properly sealed to protect against surface infiltration of potential contaminants. As shown on the Integrity Summary Table, the well received an integrity score of 4. This score reflects the well's completion date and the fact it is reportedly susceptible to flooding.

Water Source Sensitivity Summary

Peacock Rentals obtains its source water from an unconfined aquifer. As shown on the Source Sensitivity Summary Table, the well received a sensitivity score of 10.

This well received the maximum sensitivity score for two reasons. The first reason is that the unconfined aquifer is known to be vulnerable to contamination in this area. The second reason is that laboratory analysis of water samples from the mobile home court within the last five years detected several contaminants that are listed on EPA's primary and secondary drinking water standards. These include nitrate, sodium, sulfate, and gross alpha among others. Despite detection, these contaminants were detected at concentrations below the EPA's maximum contaminant levels.

Water System Susceptibility Rating

Susceptibility is defined as the potential for a public water supply to draw water contaminated at concentrations that would pose a threat or concern to human health. Peacock Rentals scores high for land use susceptibility because much of the land surrounding the water source is urban. The presence of a wastewater discharge and voluntary cleanup within Zone 2 resulted in a high point source contaminant susceptibility for the well. An underground storage tank and wastewater discharge point resulted in a medium score for Zone 3. 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 Peacock Rentals
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
Wastewater Discharge	N/A	1	1
Voluntary Cleanup	N/A	N/A	1
Underground Tank	N/A	1	N/A

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