

WYOMING WATER ASSESSMENT AND PROTECTION PROGRAM (SWAP)



SOURCE WATER ASSESSMENT PROGRAM EXECUTIVE SUMMARY

Source Water Assessment Prepared For:
Mountain View Acres

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SOURCE WATER ASSESSMENT SUMMARY FOR Mountain View Acres

PWS Source Water Assessment Summary

The Mountain View Acres Subdivision water system is classified as a community groundwater supply. The Subdivision is located immediately west of Riverton's city limit. The water facility provides untreated groundwater to the subdivision resident population of 165 through 55 service connections year round. Source water for this subdivision is obtained from two wells that are completed in the Wind River Formation. Water pumped from the wells flows directly to the distribution system. Galvanized steel pressure tanks provide storage and maintain system pressure. Mountain View Acres #2 well is used to supply the south end of the development while Mountain View Acres #1 well supplies the north end. There is an isolation valve, which is normally closed, in the distribution system separating north from south well systems. No water treatment or disinfection is provided.

The Mountain View Acres Subdivision water system scores low for land use susceptibility. The overall point source contaminant and land use susceptibility ratings are low due to the lack of contamination sources being present within the delineated zones.

Delineation Methods

The Mountain View Acres subdivision has 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 Wyoming SEO, the sanitary survey, and a Wyoming Water Development Commission report completed for the City of Riverton.

EPA's Wellhead Analytic Element Model or WhAEM method 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

The Subdivision is located on the western margin of Riverton and obtains groundwater for its water supply from two wells that are completed to depths ranging from 455 to 575 feet. These wells obtain 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 wells under confined artesian conditions through porous media. Additional information of each of these two wells is available on the enclosed Well Information Sheet.

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

Integrity Summary

The Mountain View Acres Subdivision water system is classified as a community groundwater supply. The wells Mountain View Acres #1 and #2 were constructed before 1983 when stringent construction standards were not required by the State of Wyoming. Records show that these wells were properly sealed to prevent surface infiltration of potential contaminants and flooding around the wellhead. As shown on the Integrity Summary Table, both wells scored 3, due to its well completion date.

Water Source Sensitivity Summary

The Mountain View Acres Subdivision water system obtains source water for this subdivision from two wells that are completed in the Wind River Formation. As shown on the Source Sensitivity Summary Table, the wells received a score of 6.

These wells received a score of 6 for two reasons. The first reason is that water from both wells is obtained from a confined aquifer which is known to be insensitive to contamination. The second reason is that laboratory analysis of water from both wells within the last five years detected a few contaminants that are listed on EPA's primary and secondary drinking water standards. These include nitrate, sulfate, fluoride, alpha particles, beta particles and sodium. Despite detection, these contaminants were generally 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. The Mountain View Acres Subdivision water system scores low for land use susceptibility. The overall point source contaminant and land use susceptibility ratings are low due to the lack of contamination sources being present within the delineated zones. 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 Mountain View Acres
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