

**SOURCE WATER ASSESSMENT  
EXECUTIVE SUMMARY  
FOR  
Yellow Creek Ests MHP**

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**PROJECT: 424-001**

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**ASSESSMENT COMPLETED BY: TRIHYDRO CORPORATION**

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## **SOURCE WATER ASSESSMENT SUMMARY FOR Yellow Creek Ests MHP**

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

Yellow Creek Estates Mobile Home Park is a community groundwater system located in Uinta County. The system serves 100 people through 35 active service connections year-round. Facilities include two wells that draw water from the Wasatch Formation, two 80,000 gallon water storage tanks, and the interconnecting transmission system. Water from the wells is combined at a well house and transmitted to two storage tanks and no treatment or disinfection is provided. The water sources scored medium with respect to the combined integrity and aquifer sensitivity ratings. The mobile home park scored high with respect to land use susceptibility and scored low for point source susceptibility.

### **Delineation Methods**

This water system is a community system that draws water from a porous sedimentary formation. Groundwater modeling methods were implemented to estimate the 2-year and 5-year time of travel capture zones for the groundwater flow system. The model used well information in the SEO database and aquifer parameters used in the model were similar to those reported by the Water Resources Research Institute Study of groundwater in the Green River Basin.

U.S. 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 Yellow Creek Estate Mobile Home Park draws water from the sandstone units within the Wasatch Formation. Recharge to these wells occurs in the outcrops of the Wasatch Formation through porous media flow under semi-artesian conditions generally from southeast to northwest. Additional information on these wells 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 WhAEM methods for both wells. Zones 2 and 3 represent 2-year and 5-year groundwater travel times, respectively. The capture zones extend southeast from both wellheads.

## **Integrity Summary**

Yellow Creek Estates Mobile Home Park uses two wells. Well #1 is approximately 260 feet deep. Well #2 is approximately 120 feet deep. The wells were constructed prior to 1983 when less stringent construction standards were required by the State of Wyoming. Records show that both wells have been properly sealed to protect against surface infiltration of potential contaminants and flooding around the wellhead. The Yellow Creek Estates #1 well lacks adequate flood protection. Both wells also have a long conveyance structure length. Therefore, as shown on the Integrity Summary Table, the #1 and #2 wells received a score of 7 and 6, respectively.

## **Water Source Sensitivity Summary**

The Yellow Creek Estate Mobile Home Park supplies water from two wells that draw water from sedimentary units within the Wasatch Formation. As shown on the Source Sensitivity Summary Table, both wells received a sensitivity score of 6. The wells both received the score of 1 for aquifer sensitivity due to being located at relatively deep depths and drawing water from a confined aquifer through porous media flow. Both wells received a score 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. The high score for land use susceptibility is attributed to mining permits that overlap Zone 3. The presence of a sol/haz waste site within Zone 3 of Yellow Creek Estates #1 and in Zone 2 of Yellow Creek Estates #2 results in medium and high point source contaminant susceptibility ratings, respectively. 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](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 Yellow Creek Ests MHP  
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 |
|--------------------|-----|--------|------|
| Sol/Haz Waste Site | N/A | 1      | 1    |

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