

# WYOMING WATER ASSESSMENT AND PROTECTION PROGRAM (SWAP)



## SOURCE WATER ASSESSMENT PROGRAM EXECUTIVE SUMMARY

Source Water Assessment Prepared For:  
Fremont Co Youth Camp

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## **SOURCE WATER ASSESSMENT SUMMARY FOR Fremont Co Youth Camp**

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

The Fremont County Youth Camp Water System is classified as a transient non-community groundwater supply. This wilderness camp is located on Forest Service land approximately 20 miles west of Lander on Sinks Canyon Road. The facility is operated from June 1 to the end of August. In season, potable water is supplied to approximately 150 camp participants through 3 main service connections. Source water for this facility is obtained from a spring that emerges from granitic rocks of the Louis Lake Pluton in the Wind River Mountains. The spring is only used during summer months, and is diverted to a creek during the off season. Water collected from the spring is diverted to a 2,500-gallon plastic storage tank that is fitted with a chlorine injection system. From storage, water is provided to distribution on demand, with system pressure maintained by gravity.

In general, the Fremont County Youth Camp Water System scores high for land use susceptibility because much of the land surrounding the water source is forest. The overall point source contaminant susceptibility rating is low due to the lack of contamination sources being present within the delineated zones.

### **Delineation Methods**

The Fremont County Youth Camp is a non-community water system that obtains its water supply from a spring. Hydrogeologic mapping techniques were consequently used to identify the source water area.

Hydrogeologic mapping techniques use surface observations in combination with subsurface geologic and hydrogeologic data to identify aquifer boundaries and areas that contribute water to the aquifer. These techniques were used when a PWS's source was derived from a spring, fractured bedrock, or from a limestone or dolomite aquifer. Conduit flow aquifers have extremely variable flow patterns and rates, making the calculation of time of travel difficult. In some instances, only one contaminant inventory zone was identified beyond Zone 1 due to the inherent difficulty in attempting to assign a particular time of travel to a given area. Because of this issue, aquifer vulnerability mapping techniques were also used as part of the hydrogeologic mapping effort to identify and delineate vulnerable areas. These areas (faults, fractures, exposed bedrock, etc.) are anticipated to be more susceptible to the rapid infiltration of contaminants released at the ground surface.

### **Groundwater Sources**

The Camp's spring is located in the headwaters of Townsend Creek in the Wind River Mountains. Recharge for the spring originates as infiltrating precipitation on Precambrian rock outcrops to the west on the eastern side of the divide and flows southeastward to the spring through fracture flow conditions. Additional information on this spring is included on the enclosed Spring Information Sheet.

As shown on the attached source water area map, contaminant inventory zones for the spring were developed to encompass those areas most likely to contribute water to the spring. Zone 2 includes the area between Sawmill Creek on the east, and the western and southern edges of the Roaring Fork Creek drainage. Zone 3 includes drainages west of Zone 2. Water from these drainages may be diverted eastward toward the spring by two faults that cross cut the granitic rocks.

### **Integrity Summary**

The Fremont County Youth Camp Water System obtains source water for its facility from Townsend Creek Spring. As shown on the Integrity Summary Table, the spring received an integrity score of 8. This score reflects records that indicate the spring was developed before 1983 when less stringent construction standards were required. It is also based on the reports that the collection box or spring diversion is insufficiently screened to prevent the introduction of contaminants. Points were also added on because the collection box is reportedly not inspected regularly.

### **Water Source Sensitivity Summary**

The Fremont County Youth Camp draws its water supply from Townsend Creek Spring. As shown on the Source Sensitivity Summary Table, the Camp's spring source received a sensitivity score of 10.

The spring received the maximum sensitivity score for two reasons. The first reason is because it obtains water from a spring. The second reason is that laboratory analysis of water samples from the Camp within the last five years detected nitrate, which is listed on EPA's primary and secondary drinking water standards. Despite detection, this contaminant was 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. In general, the Fremont County Youth Camp Water System scores high for land use susceptibility because much of the land surrounding the water sources is forest. 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 Fremont Co Youth Camp  
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