

WYOMING WATER ASSESSMENT AND PROTECTION PROGRAM (SWAP)



SOURCE WATER ASSESSMENT PROGRAM EXECUTIVE SUMMARY

Source Water Assessment Prepared For:
Encampment Water

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SOURCE WATER ASSESSMENT SUMMARY FOR Encampment Water

PWS Source Water Assessment Summary

The Encampment water treatment facility is classified as a community surface water supply, and is located approximately 18 miles south of Saratoga on Wyoming Highway 130. The facility has a capacity to serve a resident population of 490 through 295 connections year round. Encampment obtains its source water from the North Fork of the Encampment River and diverts this water to the treatment plant.

Encampment's water treatment facility is conventional. Inside the treatment plant, one low head pump is utilized to transfer the water from the presedimentation pond to the two parallel trains. Each train, rated at 175 gal/min and equipped with coagulation, flocculation, and sedimentation, is comprised of an upflow clarifier and a multi-media filter. A static mixer is placed ahead of the upflow clarifiers. Alum and soda ash are injected before the static mixer. Filtered water is stored in a 20,000 gallon clearwell and a 40,000 gallons contact tank. From the contact tank the water goes to an elevated 500,000-gallon steel storage tank and then to the distribution system. For disinfection, gas chlorine is injected at the clearwell.

In general, Encampment received high susceptibility scores for land use because most of Zone 2 is forested land. While forests are not an immediate threat, the resulting ash and debris that typically washes into the drainage following a forest fire can be problematic. The overall point source contaminant and transportation corridor susceptibility ratings are low due to the lack of contamination sources within the delineated zones.

Delineation Methods

The Town of Encampment maintains a community system that receives its entire supply from a surface water source. For this aspect of the project, Lidstone obtained and reviewed a previously completed source water area delineation. Weston Engineering completed this assessment in 1997 as part of the Encampment Level II Water Supply Project for the Wyoming Water Development Commission. Because the previous delineation had not identified contaminant inventory Zones 1 and 2, Lidstone amended the delineation for the Town using surface water methods in accordance with SWAP guidelines.

Surface Water Sources

Encampment obtains all of its municipal water from its intake on the North Fork of the Encampment River which is located approximately one mile southwest of Town along the river. The intake structure consists of a grated concrete diversion structure. Additional information on this source is included on the enclosed Surface Water Information Sheet.

As shown on the enclosed delineation maps, the source water area includes the North Fork of the Encampment River. Zone 2 extends 15 river miles upstream from the intake and includes a 1,000 foot buffer on both banks of the river and perennial tributaries. Zone 3 includes the remaining watershed upstream from the intake.

Integrity Summary

The Town of Encampment uses surface water from the North Fork of the Encampment River. The intake was constructed between 1983 and 1993, when more stringent construction standards were required by the State of Wyoming. Records also indicated that while the area around the intake is protected, the intake is not screened to protect against the infiltration of potential contaminants. As shown on the Integrity Summary Table, Encampment's intake received an integrity score of 8. This value was due to the fact that the available data indicate the intake is not screened, that the intake was completed between 1983 and 1993, that the conveyance structure length is over one mile, and that the area around the intake is unprotected.

Water Source Sensitivity Summary

Encampment maintains one surface water source, the North Fork of the Encampment River. As shown on the Source Sensitivity Summary Table, the Town's intake received a sensitivity score of 10.

The intake received the maximum sensitivity score for two reasons. The first reason is because it obtains water from a surface water source. The second reason is that laboratory analysis of water samples from the Town within the last five years detected several contaminants that are listed on EPA's primary and secondary drinking water standards. These include fluoride and sulfate among others. 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. In general, Encampment received high susceptibility scores for land use because most of Zone 2 is forested land. While forests are not an immediate threat, the resulting ash and debris that typically washes into the drainage following a forest fire can be problematic. The overall point source contaminant and transportation corridor susceptibility ratings are low due to the general lack of contamination sources within the delineated zones. Weston reported that the watershed was susceptible to potential contamination resulting from various ongoing or future activities including logging, livestock grazing, mining, and recreational land use. 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 Encampment Water
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