

WYOMING WATER ASSESSMENT AND PROTECTION PROGRAM (SWAP)



SOURCE WATER ASSESSMENT PROGRAM EXECUTIVE SUMMARY

Source Water Assessment Prepared For:
Saratoga

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SOURCE WATER ASSESSMENT SUMMARY FOR Saratoga

PWS Source Water Assessment Summary

The Town of Saratoga maintains a community water system that serves a population of approximately 2,000 through 900 service connections, including one consecutive system Old Baldy. Saratoga obtains its source water from the North Platte River. The water is pre-treated with aluminum sulfate and soda ash for coagulation and pH control. The water is then directed through diatomaceous earth filters before being treated with ozone for taste/odor control and disinfection. The water is then further disinfected using chlorine gas. The system consists of two clearwells that store 122,000 gallons, a single 1,000,000 gallon storage tank, and the distribution network.

In general, Saratoga received high susceptibility ratings for land use, transportation corridor, and point source contaminants. The high land use susceptibility rating resulted from the fact that Zones 1 and 2 are highly urbanized or used for irrigated cropland. The water source received a high transportation corridor susceptibility due to the railroad that runs along the North Platte River through Zone 2. The high point source susceptibility rating was the result of one solid hazardous waste site that is located in Zone 2.

Delineation Methods

The Town of Saratoga water system is a community system that receives its entire supply from a surface water source. For that reason, Lidstone delineated the source water area for the Town using surface water methods.

Surface Water Sources

Saratoga obtains all of its municipal water from its intake on the North Platte River. The diversion structure consists of primary and secondary intakes. The primary intake consists of two 12 inch diameter perforated pipes that are buried about four feet below the river bed in rock and river gravels. A direct intake is located at the river's edge and three feet above the primary intake. This secondary intake, which is not often needed, consists of a 12 inch diameter pipe which takes water directly from the river into an intake facility that 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 drainage basin of the North Platte 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 all perennial tributaries. Zone 3 includes the remaining watershed upstream from the intake, but terminates at the Stateline in accordance with the delineation procedures set forth in DEQ's SWAP guidance document.

Integrity Summary

The Town of Saratoga maintains a community water system. The intake was constructed before 1983, when less stringent construction standards were required by the State of Wyoming. Records indicate that the area around the intake is unrestricted. As shown on the Integrity Summary Table, the Town of Saratoga intake received an integrity score of 8. This value directly reflects the fact that the intake was constructed prior to 1983, the intake structure is not screened and that the area around the intake is unprotected.

Water Source Sensitivity Summary

The Town of Saratoga maintains a community water system that obtains its source water from the North Platte River. As shown on the Source Sensitivity Summary Table, the 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 system within the last five years detected several contaminants that are listed on EPA's primary and secondary drinking water standards. These include nitrate, nitrite, fluoride, barium, and sulfate among others. 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. In general, Saratoga received high susceptibility ratings for land use, transportation corridor, and point source contaminants. The high land use susceptibility rating resulted from the fact that Zones 1 and 2 are highly urbanized or used for irrigated cropland. The water source received a high transportation corridor susceptibility due to the railroad that runs along the North Platte River through Zone 2. The high point source susceptibility rating was the result of one solid hazardous waste site that is located in Zone 2. While only one of these sites was scored, there are numerous other sites in close proximity to the intake that are located just beyond Zone 2. These sites should be more closely scrutinized during the source water protection planning phase of SWAP. 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 Saratoga
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	N/A	1

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