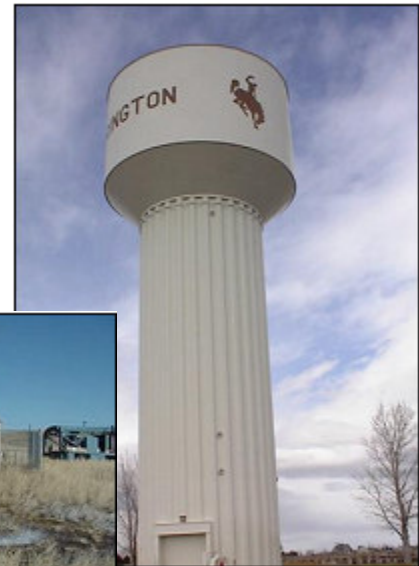


WYOMING WATER ASSESSMENT AND PROTECTION PROGRAM (SWAP)



SOURCE WATER ASSESSMENT PROGRAM EXECUTIVE SUMMARY

Source Water Assessment Prepared For:
Saint Stevens Indian Mission Inc.

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SOURCE WATER ASSESSMENT SUMMARY FOR Saint Stevens Indian Mission Inc.

PWS Source Water Assessment Summary

The Saint Stephen's Indian Mission water system is classified as a non-transient non-community groundwater supply. The facility is located four miles southwest of the City of Riverton on Wyoming Highway 137 next to the St. Stephen's Indian School. Water is provided to an average population of 87 during the school year, and to ten residents year round through 13 service connections. Source water is obtained from two wells that are completed in the Wind River Formation on opposite ends of the distribution system. The primary well pumps water to a 5,000-gallon, horizontal, galvanized-steel storage tank. Distribution pumps transport the water from storage to the distribution system. Water from the secondary water source is pumped directly into the distribution system. The system pressure is maintained by a hydropneumatic tank which is housed along with the storage tank and distribution pumps.

In general, the St. Stephen's Indian Mission, Inc. water sources rated high for land use and potential point source susceptibility. The high rating is a result of forest surrounding the wells and the presence of a water treatment lagoon. The St. Stephen's Indian Mission, Inc. should also be aware of a sulfuric acid plant point source that is located approximately 0.5 miles outside the source water areas of the wells.

Delineation Methods

Because the St. Stephen's Indian Mission is classified as a non-transient non-community groundwater system and obtains water from a porous sandstone aquifer, Lidstone delineated the source water area for this system using calculated fixed radius (CFR) methods. This method was used to estimate the two and five year time of travel radii for the groundwater system based on data obtained from the Wyoming SEO, the PWS sanitary survey, and the SWAP guidance document.

Calculated fixed radius (CFR) is an appropriate method to use when groundwater flow to the well, spring or tunnel can be characterized as porous. This process was implemented for small communities that derive water from deeper, confined aquifers, or for non-community water systems. A factor of safety (FS) of 1.5 was applied to all systems where portions of the data were suspect. At the ground surface, the radius can be used to delineate an area around the well to be used for wellhead protection. The radius is the distance from the well to a point where groundwater (and contaminant) can reach the well over a specified time period. Input data requirements are limited, consisting of the pumping rate, open (screened interval) of the well, porosity of the aquifer, and the selected time of travel (2 years and 5 years).

Groundwater Sources

The Mission obtains its source water from two wells that are completed in Wind River Formation to depths ranging from 500 to 515 feet. Recharge to the Wind River Formation occurs through the direct infiltration of precipitation. Groundwater reaches the wells through porous media flow. Additional information on these two wells is included on the attached Well Information

Sheet.

As shown on the enclosed source water area maps, the contaminant inventory zones for these wells are centered around the wellheads. Zone 2s for the wells extend 1,156 feet radially from the wellheads, while Zone 3s extend 1,828 feet.

Integrity Summary

The Saint Stevens Indian Mission uses two wells to supply water to the non-transient non-community system. The wells, #2 Car Gardge and Bus Garage, were completed before 1983 when less stringent construction standards were required by the State of Wyoming. Records show the wells were not properly sealed to protect against surface infiltration of potential contaminants and are also missing an annular seal. As shown on the Integrity Summary Table, the wells received a score of 9, which is a direct reflection of the well completion dates, and missing wellhead seal. A point was added to #2 Car Gardge because the area around the wellhead was unrestricted.

Water Source Sensitivity Summary

The Saint Stevens Indian Mission obtains its water from two wells, completed in the confined Wind River Formation. As shown on the Source Sensitivity Summary Table, the wells received a sensitivity score of 6.

These wells received a sensitivity score of 6 for two reasons. First, the porous confined aquifer is less vulnerable to contamination. The second reason is that laboratory analysis of water samples from the Mission within the last five years detected a few contaminants that are listed on EPA's primary and secondary drinking water standards. With the exception of nitrate, all other contaminants were 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, St. Stephen's Indian Mission, Inc. water wells score high for landuse susceptibility because much of the land surrounding the water sources is forested. The presence of a wastewater treatment lagoon within Zone 2 resulted in high point source contaminant susceptibility for both the #2 Car Gardge and Bus Garage wells. 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 Saint Stevens Indian Mission Inc.
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
Wastewater Discharge	N/A	N/A	2

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