

**SOURCE WATER ASSESSMENT  
EXECUTIVE SUMMARY  
FOR  
Osmond Pipeline Co**

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**June 30, 2004**

**PROJECT: 424-001**

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**ASSESSMENT COMPLETED BY: TRIHYDRO CORPORATION**

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## **SOURCE WATER ASSESSMENT SUMMARY FOR Osmond Pipeline Co**

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

The Osmond Pipeline Company is a community groundwater system located in Lincoln County. The system serves 250 people through 67 service connections year-round. The system is supplied by one spring, with additional facilities including an 11 thousand gallon concrete collection box and the interconnecting transmission system. The water source scored high with respect to the combined integrity and sensitivity ratings. The Osmond Pipeline Company scored high for land use susceptibility and low for point source contaminant susceptibility.

### **Delineation Methods**

This water system draws water from a spring. Hydrogeologic mapping methods were implemented to estimate the 2-year and 5-year time of travel zones for the groundwater flow system.

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 Osmond Pipeline Company draws water from one spring. The spring draws water from the Nugget Sandstone Formation. Recharge to the spring originates as infiltrating precipitation and surface water from the surrounding drainage basin, and reaches the spring through porous flow. Additional information on this spring is included on the attached Spring Information Sheet. As shown on the enclosed source water area delineation map, contaminant inventory zones 2 and 3 are delineated by hydrogeologic mapping methods. Zone 2 is a 1000 foot buffer around Dry Creek extending from the spring to its perennial reaches. Zone 3 terminates on the north, east and south at the surface drainage divide into the spring and the west boundary terminates at the edge of the Nugget Sandstone contact.

## **Integrity Summary**

The Osmond Pipeline Company supplies water from one spring. As shown on the Integrity Summary Table, the spring received an integrity score of 11. The spring received the score because it was constructed before 1983, when less stringent construction standards were required by the State of Wyoming. Records indicate that the area around the spring is unrestricted and the intake is not screened or inspected regularly to protect against the infiltration of potential contaminants.

## **Water Source Sensitivity Summary**

As shown on the Source Sensitivity Summary Table, the spring received a sensitivity score of 10. The spring received the score for two reasons. The first reason is that springs are more vulnerable to contamination due to unpredictable flow pathways and their proximity to the ground surface. The second reason is there are 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. In general, the Osmond Pipeline Company scores high for land use susceptibility because much of the land surrounding the water sources is forested. Forested areas were included to evaluate the potential risks of increased runoff and water quality problems following forest fires. Due to the lack of contamination sources being present within the delineated zones, the overall point source contaminant susceptibility rating is low.

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 Osmond Pipeline Co  
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