

Glossary

Aquifer: Saturated rock or sediment that is permeable enough to transmit significant quantities of water to wells or springs.

Best Management Practices (BMPs): Practices and operating procedures, which aid in the prevention or reduction of pollution load. They are designed to facilitate voluntary compliance through education.

Buried valley aquifer: An aquifer formed during glacial events by the scouring and subsequent filling of a preexisting bedrock valley with water-bearing sediments.

Capture zone: The portion of an aquifer that contributes water to a well. Also referred to as the *zone of contribution*.

Chain of custody: Signed documentation that details the handling of a sample from the time it is collected to the time it is analyzed.

City Elevation Datum: The City of Spokane vertical datum was used for this project and its reference elevation is 16.92 feet higher than NGVD29.

Conceptual model: A working understanding of the interrelationships of the physical system (for example, geology, hydrology, hydraulic parameters) that influence the rate and volume of groundwater flow in the aquifer. This theoretical interpretation of the physical system forms the basis for development of a numerical model.

Confining low-permeability layer: A layer or zone of generally low permeability that underlies or overlies more permeable aquifer material and retards the vertical movement of groundwater.

Contaminant source inventory: An inventory conducted within a wellhead protection area, with the purpose of identifying past, present, and proposed activities that *may* present a threat to the groundwater.

Contaminant source: Activity, entity, or point from where contamination originates.

Discharge: The volume of water in a stream or an aquifer that flows past a specific point of a cross sectional plane in a given period of time.

Ground water: Subsurface water found in the zone of saturation.

Groundwater divide: A boundary on a potentiometric surface across which negligible horizontal groundwater movement occurs.

Groundwater, confined: Water within an aquifer that is under greater-than-atmospheric pressure because of an overlying layer with low hydraulic conductivity.

Groundwater, unconfined: Water within an aquifer that has a water table and is not pressurized above the atmospheric pressure

Group A Public Water System is a water system in Washington state which meets the federal definition of a public water system. This is a water system with ten or more connections, or which serves an average of twenty-five or more persons per day for sixty or more days within a calendar year. It is defined and referenced under WAC 246-290-020.

Hazardous waste: Any waste (garbage; refuse; sludge from a waste or water supply treatment plant or air pollution control facility; or other discarded material, including solid, liquid, semisolid, or hazardous gas) containing material resulting from industrial, commercial, mining, or agricultural operations or from community activities that because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause or significantly contribute to an increase in mortality or in serious irreversible or incapacitating reversible illness or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. The term hazardous waste does not include some materials that are specifically exempted from the classification.

Hydraulic conductivity: A measure of the ease with which an aquifer transmits water.

Hydraulic gradient: The change in head (groundwater elevation) divided by the change in distance in a given direction.

Immiscible: Term for contaminants that will not dissolve in or mix with water.

Leakage (streambed): The rate of flow from a stream into an aquifer through the streambed.

Maximum contaminant level (MCL): The highest concentration of a solute permissible in a public water supply, as specified in the National Primary Drinking Water Standards.

Method detection limit: The lowest limit at which an analytical laboratory using the prescribed method of analysis can accurately discern the presence and concentration of a constituent of concern in a soil or water sample.

MicroFem: The company's proprietary name for finite element numerical computer program used to develop three-dimensional groundwater flow models and groundwater capture zones.

Miscible: Term for contaminants that will dissolve in or mix with water.

National Geodetic Vertical Datum of 1929 (NGVD29): A datum maintained by the U.S. Coast and Geodetic Survey; replaces *mean sea level*.

North American Datum of 1927 (NAD27): The horizontal datum developed by the U.S. Coast and Geodetic Survey. Note: this horizontal projection datum was used throughout the project for horizontal control.

Numerical model: A mathematical model (typically solved with a computer) that represents an approximation of a field situation. Numerical models use discrete hydrogeologic variables over the modeled area, enabling the simulation of heterogeneous conditions.

Policy Coordinating Committee: The members represent local planning and policy-making agencies. The goal of the PCC is to review the results of the CWC and the citizen's survey performed by KXLY Research and convert this information into written policies governing

wellhead protection areas. Upon completion, these policies will be presented to governing agencies to be implemented.

Porosity: A measure of the amount of void space in a volume of geologic materials. The void portion of an aquifer is the space in which water is stored and through which ground-water flows.

Potential contaminant source: Activity, entity, or point that uses materials and or chemicals that when utilized incorrectly could contaminate the groundwater. (drinking water).

Potentiometric surface: In confined or semi-confined aquifers, the imaginary surface representing the confined pressure (hydrostatic head) throughout all or part of the aquifer.

Purveyor: Means an agency, subdivision of the state, municipal corporation, firm, company, mutual or cooperative association, institution, partnership, or person or other entity owning or operating a public water system. Purveyor also means the authorized agents of such entities.

Recharge area: The area in which water reaches the zone of saturation by surface infiltration.

Recharge: The addition of water to the aquifer system.

Remedial investigation: A field investigation that attempts to define the nature and extent of contamination in an area so those feasible alternatives for contaminant containment/cleanup can be evaluated.

Retardation factor: A factor that describes how quickly a dissolved contaminant in the saturated zone moves relative to the groundwater velocity. For most contaminants, the retardation factor is greater than one, indicating that the dissolved contaminant has a lower velocity than the groundwater.

Saturated zone: The zone below the water table in which most of the pore spaces are occupied by water.

Sensitivity analysis: A qualitative analysis of the impact of changing numeric values used in the groundwater simulation model to determine its relative affects on the delineated capture zones determined by the groundwater flow model.

Solid waste: Unwanted residual solid or semisolid material that results from industrial, commercial, agricultural, or community operations (including earth or material from construction, mining, or demolition operations); other waste materials that would normally be included in demolition debris; non-toxic fly ash; spent non-toxic foundry sand; and other substances that are not harmful or inimical to public health. Solid waste includes, but is not limited to, garbage, tires, combustible and non-combustible materials, street dirt, and debris. It does not include any material that is an infectious waste or hazardous waste.

Special Wellhead Protection Area (SWHPA): A wellhead protection area defined by the Washington State Department of Health as “where the use of travel time-based criteria may not be appropriate”.

Spokane Aquifer: a portion of the Rathdrum Prairie/Spokane Valley Aquifer.

Transmissivity: The product of hydraulic conductivity multiplied by the aquifer's saturated thickness; a measure of an aquifer's ability to yield or provide water.

Unsaturated zone: The zone between the land surface and the water table in which the majority of the pore spaces are occupied by air. Also called the *vadose zone*.

Volatile organic compound: An organic compound that is characterized by being relatively mobile in groundwater and that readily evaporates in its pure state.

Water table: The groundwater surface in an unconfined aquifer and the point at which groundwater occurs at atmospheric pressure.

Wellhead protection area (WHPA): The surface or subsurface area delineated around a wellhead, supplying a public water system, and is proposed for protection from possible sources/causes of groundwater contamination.

Wellhead: The physical structure, facility, or device at the land surface from or through which ground water flows or is pumped from water-bearing formations.

Zone of Saturation: That part of the earth's crust beneath the regional water table in which all voids, large and small, are filled with water under pressure greater than atmospheric.