
Biennial Well Sampling Project

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Biennial Well Sampling Project The Columbia Basin Ground Water Management Area (GWMA) has committed itself to regular well sampling on a biennial basis for the purpose of monitoring nitrate levels in groundwater. In the fall of 1998, GWMA partners sampled 574 wells in Adams, Franklin and Grant Counties. Probably the second largest mass sampling event ever conducted in Washington State, this data gathering effort was a model of the cooperative nature of GWMA accomplishments. Sampling technicians and coordinators from local conservation districts and health districts, with training from GWMA consultant Kennedy/Jenks Associates, followed a sampling scheme designed by the U.S. Geological Survey. Samples were tested (for nitrate only) by the Department of Ecology's Manchester laboratory. Well sampling was voluntary, yet participation by well owners exceeded expectations, demonstrating the public support that exists for the GWMA ground water characterization efforts. For GWMA research, the three-county area has been divided into 17 Community Producer Groups (CPGs) based on soil type, irrigation systems, natural border and community relationships. The "blue-dot" map displays the preliminary summary of the results, along with the 17 CPGs. The data, summarized by CPGs, reveals nitrate levels ranging from barely detectable to above the federal standard for drinking water — 10 milligrams per liter — set by the U.S. Environmental Protection Agency. Areas where 30 percent of nitrate samples tested over 10 mg/L include irrigated farming areas around Basin City, Pasco, Warden, Black Sands and Royal Slope, as well as some of the dry-land farming and range land areas of eastern Adams County. Equally as interesting are the areas that recorded a relatively small percent of wells above the standard, such as Quincy, Connell and Moses Lake. The sampling project gives the big picture. However, more in-depth evaluation was needed to reveal influences on water quality such as seasonal factors, multiple water sources, and well maintenance and construction. The next step in the GWMA characterization process was the investigation of why nitrate was higher in certain CPG areas. That analysis was performed by the environmental consulting firm Kennedy/Jenks, hired to work with the U.S. Geological Survey to conduct hydrogeological characterization and draft a monitoring plan for the GWMA. In the fall of 2000, the GWMA reaffirmed its commitment to monitor nitrate in groundwater. The second well-sampling event took place in the three-county area in the fall of 2000.