



**Webster Nursery Groundwater Monitoring and Monitoring Program Development, Tumwater, WA;** *Washington State Department of Natural Resources*

White Shield provided post-remedial action groundwater monitoring services at a former pesticide warehouse located at the DNR Webster Nursery in Tumwater, Washington. The nursery covers approximately 270 acres but the area of concern, a former pesticide storage building, is approximately 1/3 acre in size in the southeast corner of the nursery. A floor drain system at the former pesticide warehouse directed any spills or wash water to a concrete underground storage tank outside the building. In 1982, DNR upgraded the concrete underground storage tank with a metal underground storage tank. The metal underground storage tank was removed in July 1996, and about 70 cubic yards of pesticide-contaminated soils were removed and disposed of. Four groundwater-monitoring wells were installed in August 1996. Several pesticides, some of which were above cleanup standards, were detected in three of the four monitoring wells. In 1998, DNR entered into an Agreed Order with the Department of Ecology to perform a Remedial Investigation/Feasibility Study (RI/FS) at the site. Additional wells were installed during this investigation. Following the RI/FS, a Corrective Action Plan was developed to monitor six monitoring wells at the site on a semi-annual basis.



White Shield performed semi-annual groundwater monitoring at the six wells. Low levels of heptachlor epoxide remained in one of the wells and White Shield worked with DNR and Ecology to develop an easy cost effective method for removing the contamination. Options included the addition of sugar to the wells to stimulate microbiological activity and naturally attenuate the remaining pesticide. In addition, White Shield reviewed the hydrogeologic conditions at the site and developed a site wide-groundwater monitoring program for DNR to voluntarily implement to make sure that current activities at the site are not impacting the regional groundwater. The program involved sampling one new well and eight existing wells throughout the site which are not associated with the warehouse remedial action. White Shield oversaw the installation the new well which is down gradient of an infiltration pond that collects run-off from a large greenhouse at the site.

