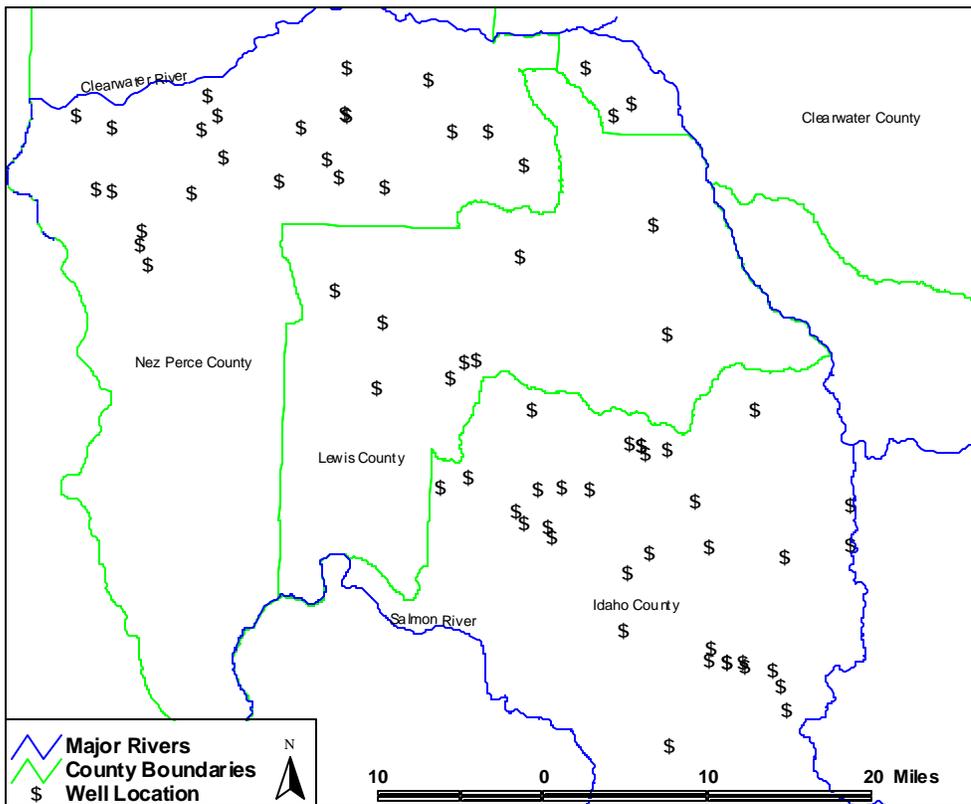
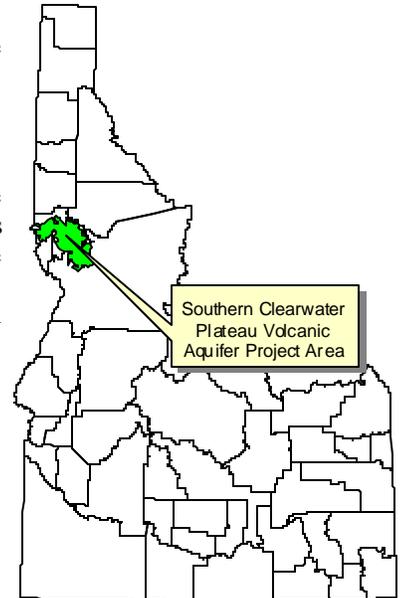


Idaho State Department of Agriculture Southern Clearwater Plateau Volcanic Aquifer Pesticide Detections and Idaho's Pesticide Management Plan

Jessica Atlakson

This fact sheet summarizes pesticide detections in the ground water found by the Idaho State Department of Agriculture (ISDA) in the Southern Clearwater Plateau volcanic aquifer. The monitoring project is located in Nez Perce, Lewis, Idaho, and Clearwater Counties (refer to map on right). ISDA began sampling this project in 2001.

The study area is located on the eastern edge of the Columbia River Basalts, known as the Clearwater Embayment. The Clearwater Embayment was created between six to 17.5 million years ago by the layering of numerous high volume individual flows of basalt (Hagan, 2003). The basement rocks include Permian to Triassic sedimentary and volcanic rocks and Cretaceous granite of the Idaho Batholith (Hagan, 2003). The basalt forms the most productive aquifer in the Southern Clearwater Plateau, with small alluvial valley aquifers providing some water. The ISDA study focused on wells that are screened in the basalt aquifers.



The Idaho State Department of Agriculture (ISDA) is the lead agency in developing the *Idaho Pesticide Management Plan (PMP) for Ground Water Protection*. ISDA has the authority to implement pesticide programs through a cooperative working agreement with the Environmental Protection Agency (EPA), Idaho state laws and rules. The Idaho PMP outlines processes to protect ground water from pesticides and defines pesticide detections based on the concentration of the detection compared to a reference point. A reference point refers to health based concentrations. Idaho has adopted the Environmental Protection Agency's Maximum Contaminant Levels (MCLs) in the Idaho Ground Water Quality Rule (1997). Where no MCL exists, the ISDA uses EPA Health Advisories Levels (HAL) first if they exist, and then an EPA Reference Dose (RfD) number.

The map above shows ISDA well sampling locations of the Southern Clearwater Plateau Volcanic Aquifer regional project. ISDA has sampled approximately 70 wells on a yearly basis since 2001 for various constituents including pesticides and nitrate.

Before using any pesticide,



READ, AND FOLLOW THE LABEL!

The PMP categorizes detection levels into the following levels:

- Level 1:** Detection above the detection limit to less than 20% of Reference Point.
- Level 2:** Detection at 20% to less than 50% of Reference Point.
- Level 3:** Detection at 50% to less than 100% of Reference Point.
- Level 4:** Detection equal to or greater than 100% of Reference Point.

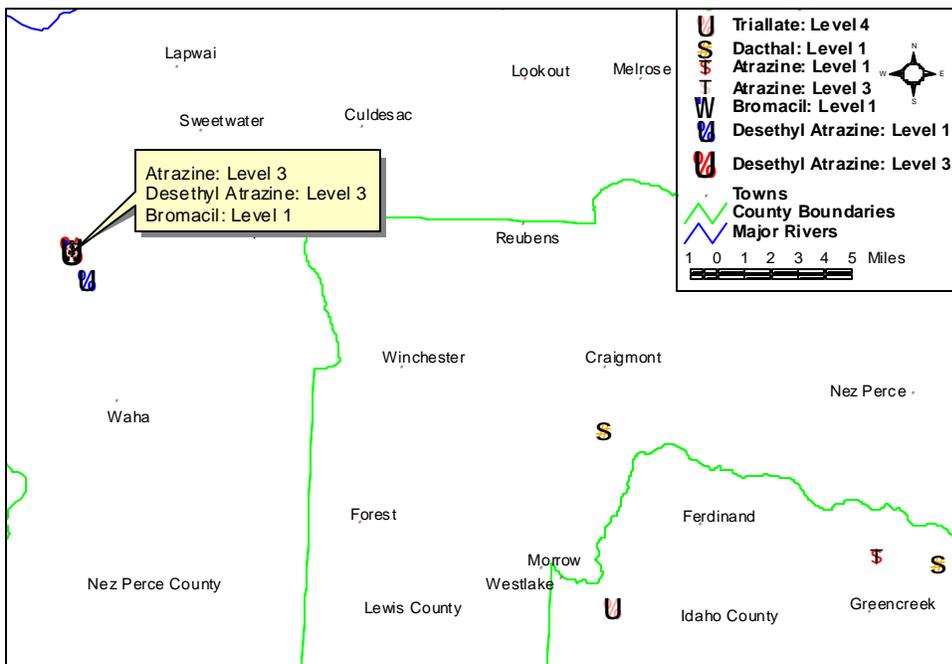


Southern Clearwater Plateau Volcanic Aquifer Pesticide Detections and Idaho's Pesticide Management Plan

2001 ISDA Pesticide Detections

The map to the right shows the six wells out of the 72 wells sampled in 2001 that tested positive for pesticides. Atrazine and desethyl atrazine were detected in one well in Nez Perce County at the PMP level 3 concentration. Atrazine was detected in one other well in Nez Perce County at the PMP level 1 concentration; and desethyl atrazine was detected in one well in Idaho County at the PMP level 1 concentration. Bromacil was detected in one well at the PMP Level 1 concentration, and dacthal (DCPA) was detected in two wells at the PMP Level 1 concentration. Triallate was detected at the PMP level 4 concentration in one well in Idaho County.

The triallate detected exceeded the EPA Food Quality Protection Act Drinking Water Level of Concern value of 0.45 µg/L. The well with the high detection of triallate was redrilled in another location to reach non-contaminated ground water with assistance from the pesticide registrant and ISDA. For the PMP Level 3 detections of atrazine and desethyl atrazine, ISDA will consider establishing an area of pesticide restriction through rule making, in addition to monitoring and evaluation.

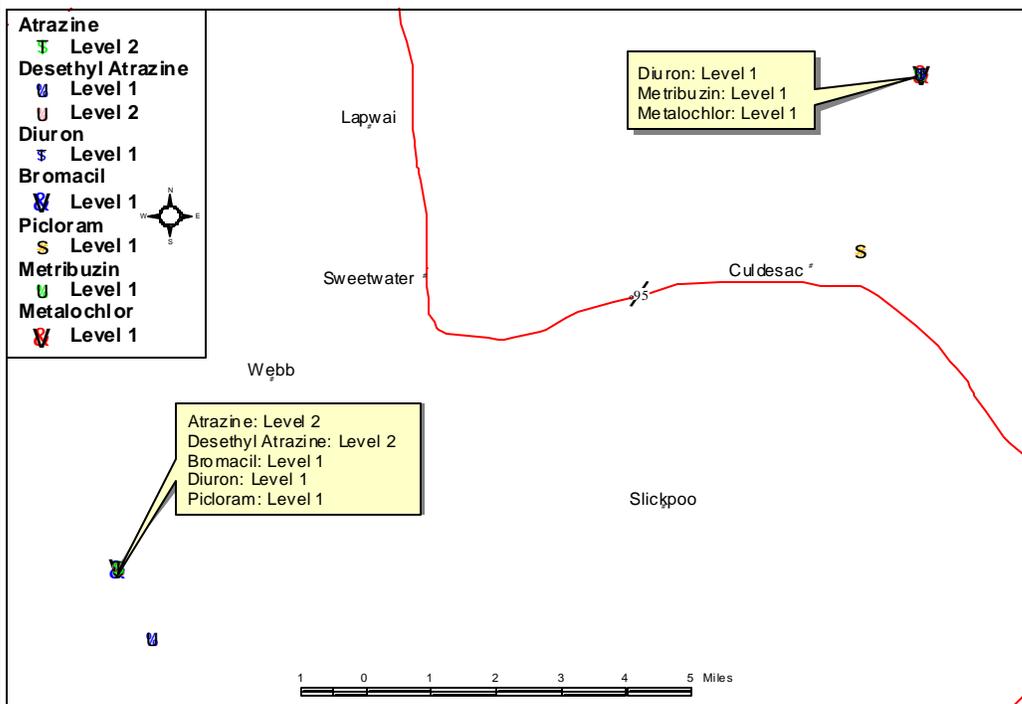


It is important for applicators to follow the pesticide label and for ISDA to continue to work with applicators to protect ground water.

2004 ISDA Pesticide Detections

Four wells out of the 70 sampled in 2004 had positive pesticide detections as shown on the map to the left. All wells with positive detections were located in Nez Perce County. One well contained atrazine and desethyl atrazine at the PMP level 2 concentration. The well also contained bromacil, diuron, and picloram at the PMP level 1 concentration. Another well contained PMP level 1 concentrations of diuron, metribuzin, and metalochlor. One well contained picloram at the PMP level 1 concentration, and one well contained desethyl atrazine at the PMP level 1 concentration.

ISDA will notify and educate well owners, assess historical data, and educate pesticide applicators for PMP Level 1 detections. For the PMP Level 2 detections, ISDA will consider establishing an area of pesticide concern through rule making. ISDA will also develop a monitoring plan and determine likely sources, encourage voluntary best management practices (BMPs), potentially develop a chemical specific PMP through rule making, and conduct chemical use inspections.



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R Hagan, E., 2003. Ground Water Quality
E Clearwater Plateau Hydrogeologic Subarea,
F 1990-2002. Idaho Department of Water Re-
E sources Water Information Bulletin No. 50,
R Part 6.
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