

Regional Ground Water Pesticide Detections 2008 Sampling Results

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Pesticides and Ground Water Monitoring Overview

The Idaho State Department of Agriculture (ISDA) is the lead agency in developing the *Idaho Pesticide Management Plan (PMP) for Ground Water Protection* and the ISDA Rules Governing Pesticide Management Plans For Ground Water Protection. ISDA has the authority to implement pesticide ground water programs through a cooperative working agreement with the Environmental Protection Agency (EPA). ISDA conducts ground water testing related to pesticides to fulfill Idaho Laws and Rules and EPA requirements under the Federal Insecticide, Fungicide, and Rodenticide (FIFRA) Act.

Regional Monitoring

The ISDA regional monitoring projects are located in areas where there is a moderate to high concern that ground water quality is susceptible to degradation from agricultural practices, including pesticides. Domestic wells are randomly selected and sampled on a set schedule. ISDA Standard Operating Procedures (SOPs) and protocols are followed.

2008 ISDA Pesticide Detections

A total of 109 wells were tested for various pesticides in four regional project areas in 2008, as part of annual regional monitoring efforts. Three regional projects had pesticide testing completed for all wells in the project (730, 740 and 890). Two regional projects (865 and 950) had partial pesticide testing completed. The partial pesticide testing involved sampling one well in both projects with historic, elevated pesticide concentrations. Table 1 presents the regional projects tested for pesticides in 2008, the number of wells sampled, and the type of pesticide analysis performed.

Table 1. Summary of pesticide projects, number of wells sampled and analytical methods.

Project Number and Name	Number of Wells Sampled	Analysis (EPA Method)
730: Minidoka County Shallow Aquifer	42	507, 508, 515.2, 632
740: Minidoka County Deep Aquifer	45	507, 508, 515.2, 632
865: Grand View and Bruneau Aquifer	1	507, 508, 515.2, 632
890: Hammett/Glenns Ferry Aquifer	20	507, 508, 515.2, 632
950: Clearwater Plateau Aquifer	1	507, 508, 515.2, 632

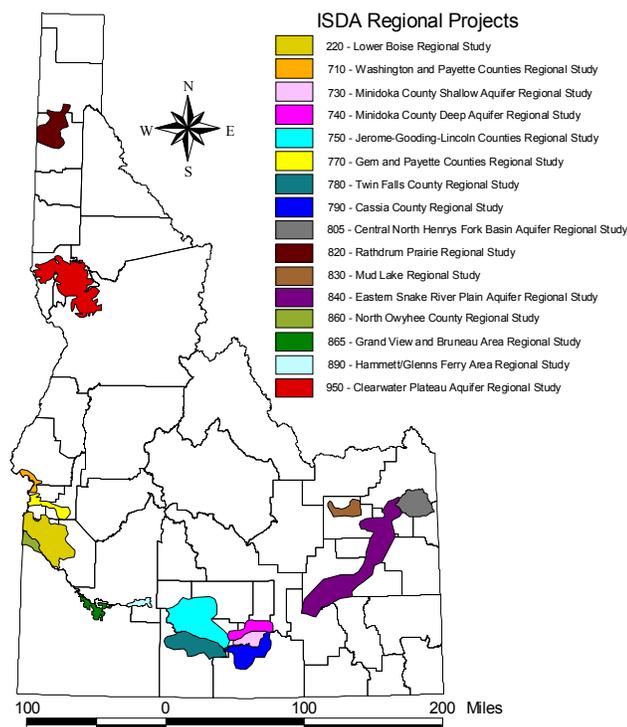


Figure 1. The map above displays locations of ISDA regional pesticide ground water monitoring projects.

Before using any pesticide,



READ, AND FOLLOW THE LABEL!

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There were 32 positive pesticide detections in 21 wells during the 2008 regional project pesticide sampling, as seen on Table 2. Thirteen different types of pesticides were detected (including two metabolites) (Table 2). All detections were below EPA health based standards (Table 2). Some detections may warrant additional sampling following the response process outlined in the ISDA Rules Governing Pesticide Management Plans For Ground Water Protection. If detections are greater than 20 percent of a health based standard or reference point, then ISDA will conduct additional monitoring associated with the detection. The only detection at twenty percent or greater was the Triallate detection in Lewis county near Greencreek. ISDA will continue to follow-up with this detection to determine the cause, extent of contamination and the trends over time. ISDA will continue to work to educate well owners, applicators, and the pesticide industry related to findings of the monitoring program.

Table 2. Summary of pesticide detections from ISDA regional project areas in 2008.

Pesticide	Number of Detections	Range (µg/L)	Mean (µg/L)	Median (µg/L)	Reference Point (µg/L)	County with Detection
Atrazine	9	0.03 - 0.19	0.069	0.04	3 (MCL)	Elmore (1) Minidoka (8)
Bentazon	1	0.22	—	—	200 (HAL)	Minidoka (1)
Bromacil	1	0.08	—	—	90 (HAL)	Minidoka
Deisopropyl Atrazine	1	0.08	—	—	—	Minidoka
Desethyl Atrazine	9	0.03 - 0.24	0.063	0.04	—	Elmore (1) Minidoka (8)
Dicamba	1	0.28	—	—	4000 (HAL)	Owyhee
Dinoseb	1	0.77	—	—	7 (MCL)	Owyhee
Diuron	3	0.07 - 0.11	0.09	0.09	21 (RfD)	Minidoka (3)
Hexazinone	2	0.06 - 0.07	0.065	0.065	400 (HAL)	Minidoka (2)
Metribuzin	1	0.05	—	—	200 (HAL)	Minidoka
Prometon	1	0.22	—	—	100 (HAL)	Minidoka
Simazine	1	0.13	—	—	4 (MCL)	Minidoka
Triallate	1	0.61	—	—	0.45 (FQPA DWLOC)	Lewis

¹ MCL – EPA Maximum Contaminant Level.

² HAL – EPA Lifetime Health Advisory Level.

³ Breakdown product of Atrazine. No reference point available, MCL for Atrazine of 3 mg/L is used.

⁴ RfD – EPA Reference Dose.

⁵ FQPA DWLOC – Food Quality Protection Act Drinking Water Level of Concern.