

Idaho State Department of Agriculture  
**Southern Washington and Northern Payette Counties**  
**Aquifers Pesticide Detections**  
**and Idaho's Pesticide Management Plan**

ISDA Fact Sheet 1, 2009

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This fact sheet summarizes pesticide detections in the ground water found by the Idaho State Department of Agriculture (ISDA) in southern Washington and northern Payette Counties. The project area is located in the area north of Payette, west of the Snake River and east of the rolling hills near Payette and Weiser (Figure 1). ISDA began sampling this project in 1996.

The project area is within the western Snake River Plain, which is a basin filled with sedimentary and volcanic rocks. The sedimentary rocks make up the major portion of the shallow aquifer in the project area. The shallow aquifer is composed of mainly fluvial unconsolidated to poorly consolidated clay, silt, sand, volcanic ash, diatomite, freshwater limestone and conglomerates (Newton, 1991). A thick layer of blue clay underlies the shallow aquifer in the project area, which separates the shallow alluvial aquifer from the deeper sedimentary aquifer (Newton, 1991).

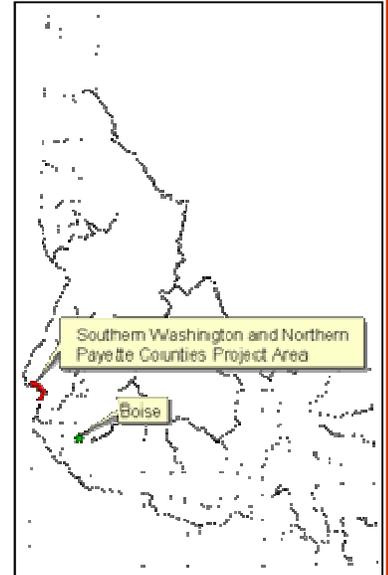


Figure 1. Location of project.

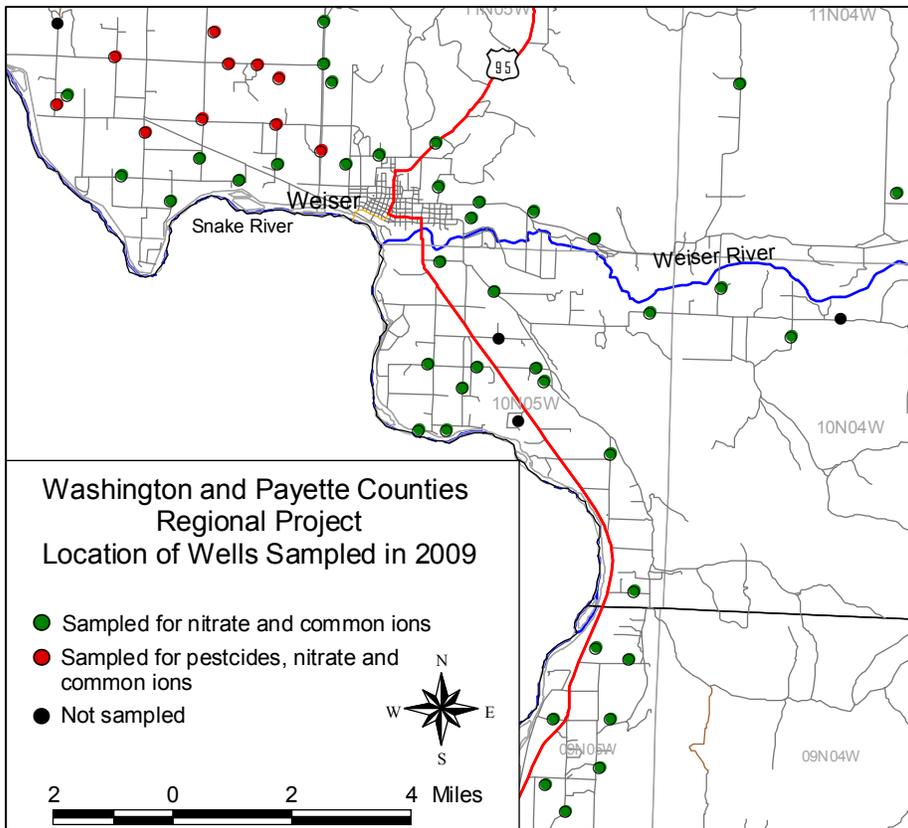


Figure 2 shows ISDA well sampling locations. ISDA has sampled approximately 54 wells on a yearly basis since 1996 for various constituents including pesticides and nitrate. The wells in green were sampled for nitrate, chloride, sulfate, bromide, and fluoride in 2009. The wells in red were sampled for pesticides along with nitrate, chloride, sulfate, bromide, and fluoride.

Before using any pesticide,



**READ, AND FOLLOW THE LABEL!**

Figure 2. Location of wells within the project area.

**Idaho Pesticide Management Plan (PMP)**

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 department 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. The 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 will use EPA Health Advisories Levels (HAL) first if they exist, and then an EPA Reference Dose (RfD) number.

**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 greater than 100% of Reference Point.



# Southern Washington and Northern Payette Counties Pesticide Detections and Idaho's Pesticide Management Plan

## 2007 ISDA Pesticide Detections

Figure 3 shows the 2007 pesticide detections for the Southern Washington and Northern Payette County Regional Project. A total of 52 wells were sampled for pesticides; 21 wells had one or more pesticides detected within the ground water. Desethyl atrazine, a breakdown product of the pesticide atrazine, was detected in 18 wells. Atrazine was detected in ten wells; dacthal was detected in three wells; hexazinone was detected in two wells; and deisopropyl atrazine (a breakdown product of atrazine) and tebuthiuron were each detected in one well. All detections were below any health standards set by the EPA or the state of Idaho and were within the Level 1 category established by the Idaho PMP Rule.

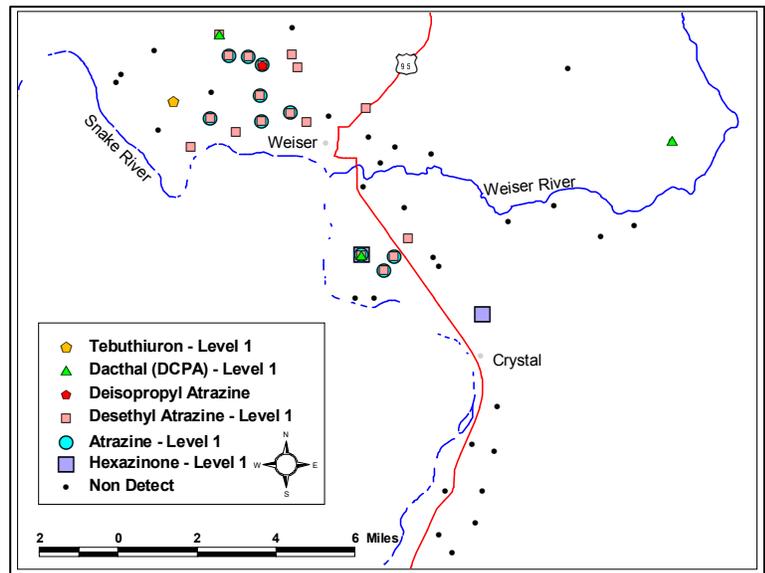


Figure 3. Location of 2007 Discretionary detections.

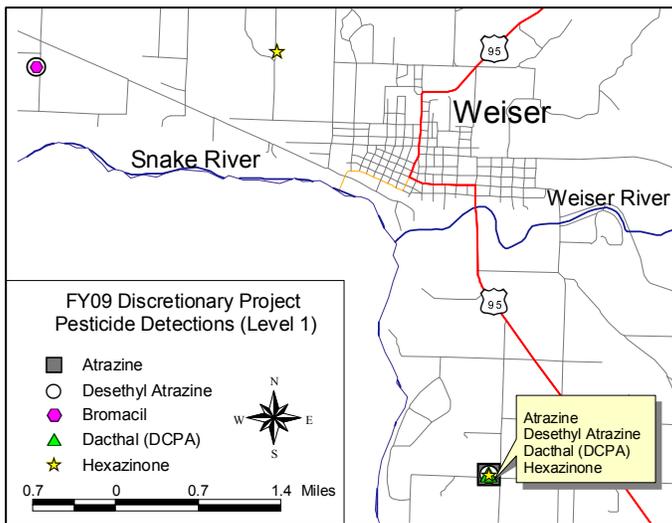


Figure 4. Location of 2008 Discretionary detections.

## 2008 ISDA Pesticide Detections

In November 2008, three wells in the Southern Washington and Northern Payette Counties Regional Project were sampled for pesticides. Figure 4 shows pesticide detections from the November 2008 sampling. Desethyl Atrazine, a breakdown product of the pesticide Atrazine, was detected in two wells. Dacthal (DCPA) was detected in one well, and Bromacil was detected in one well. Hexazinone was detected in two wells. One well had four pesticide detections. All detections were below any health standards set by the EPA or the state of Idaho, and were within the Level 1 category established by the Idaho PMP.

## 2009 ISDA Pesticide Detections

In late April and early May 2009, ten wells west of Weiser were sampled for pesticides. The area is locally known as Weiser Flat where wells are mostly very shallow. Aldicarb Sulfone was detected in two wells and with follow up later were found to be nondetect in both wells (Figure 5). Atrazine was detected in two wells (Figure 5). Desethyl Atrazine was detected in one well and Deisopropyl Atrazine was detected in another well (Figure 5). One of the original Aldicarb Sulfone detections was above the health standard as set by the EPA and the state of Idaho. Sampling in August resulted in both wells being nondetect for Aldicarb Sulfone.

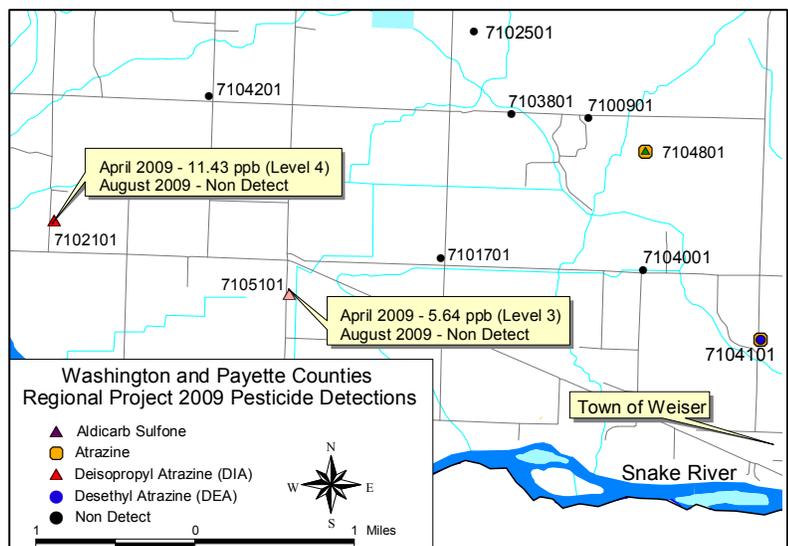


Figure 5. Location of 2009 Weiser Flat testing and detections.

### CONTACT

### STAFF

### REFERENCE

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Newton, G. D., 1991. Geohydrology of the regional aquifer system, western Snake River Plain, southwestern Idaho: U.S. Geological Survey Professional Paper 1408-G, 52 p.