

Idaho State Department of Agriculture  
**Grand View and Bruneau Aquifer Regional Project**  
**Pesticide Detections**  
**and Idaho's Pesticide Management Plan**

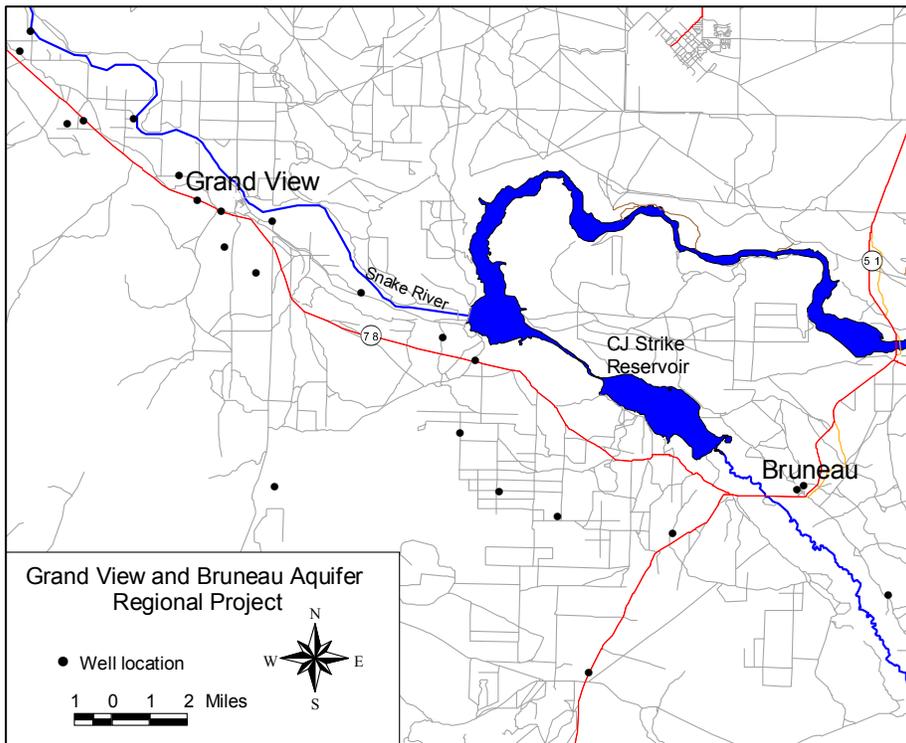
ISDA Fact Sheet 4, 2009

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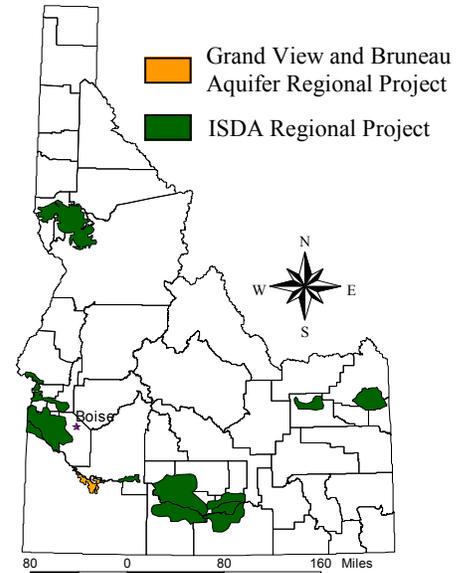
December 2009

This fact sheet summarizes pesticide detections in the ground water found by the Idaho State Department of Agriculture (ISDA) in northeastern Owyhee County, near Grand View and Bruneau, Idaho. The monitoring project is located in the southwestern Idaho, south of Mountain Home (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 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 2.** Location of wells sampled by ISDA.



**Figure 1.** Location of project.

Figure 2 shows ISDA well sampling locations within the project area. This project was previously a part of the Owyhee Regional project which began in 1999. Thirty seven wells were sampled as a part of the original project. In 2006, the project area was split up in two areas separating the northwest portion and the southeast portion of the project. Twenty three wells have been sampled for pesticides and nitrate in the area since 2006 as part of the Grand View and Bruneau Aquifer study. Testing for pesticides only began in July 2009.

Before using any pesticide,



**READ, AND FOLLOW THE LABEL!**

**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.



# Grand View and Bruneau Aquifer Regional Project Pesticide Detections and Idaho's Pesticide Management Plan

## 2006 ISDA Pesticide Detections

Figure 3 shows the 2006 pesticide detections for the Grand View and Bruneau Aquifer Regional Project. A total of 23 wells were sampled for pesticides in 2006. Nine wells had one or more pesticides detections. Desethyl atrazine, a breakdown product of the pesticide atrazine, was detected in seven wells. Atrazine was detected in four wells; bromoxynil, metribuzin, bromacil, dacthal, dicamba, and dinoseb were each detected in one well. All detections were below any health standards set by the EPA or the state of Idaho. All the detections were within the Level 1 category, except the Level 2 Dicamba detection of 43 ppb.

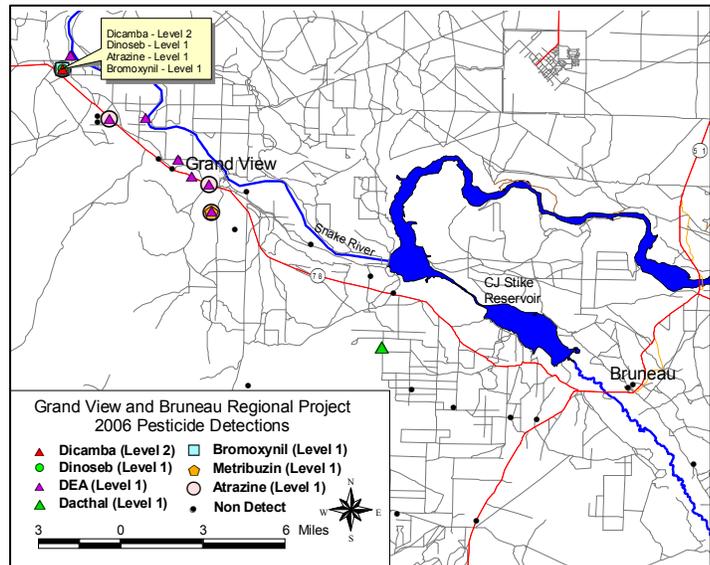


Figure 3. Location of 2006 pesticide sampling.

## 2007 and 2008 ISDA Pesticide Detections

In 2007, as a followup to the 2006 dinoseb detection, one well in the area was sampled in May and September for pesticides. It was sampled again in May 2008 (Figure 4). Pesticides detected in 2007 included Dinoseb, Dicamba, Atrazine, and Atrazine Desethyl. The highest Dinoseb detection was 15 ppb in May 2007, which was greater than the EPA Maximum Contaminant Level (MCL) of 7 ppb. In May 2008 the Dinoseb detection was at 0.77 ppb (Figure 4). The well was non detect for Dinoseb in 2009 (Figure 5). All other 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.

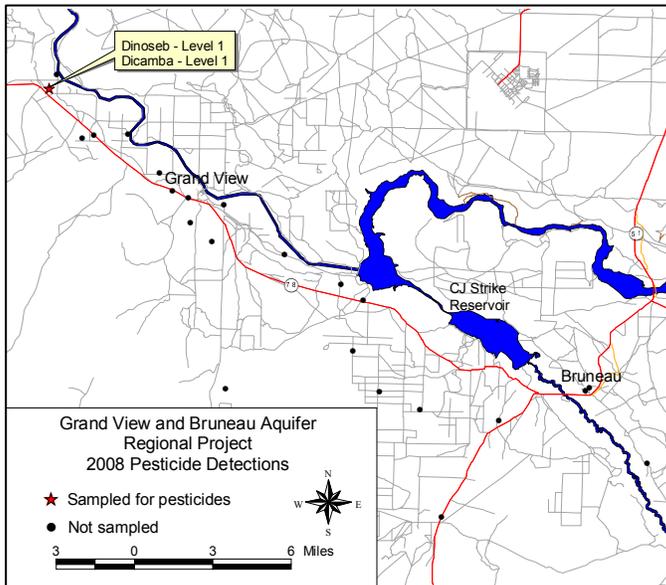


Figure 4. Location of 2008 pesticide detections.

## 2009 ISDA Pesticide Detections

In 2009, 19 wells were sampled, and eight wells in the Grand View and Bruneau project area were found to have pesticide detections. Atrazine and Desethyl Atrazine were each detected seven times in seven different wells. One well had a detection of desethyl atrazine only. All detections were below the health standards set by the EPA or the state of Idaho, and were within the Level 1 category established by the Idaho PMP.

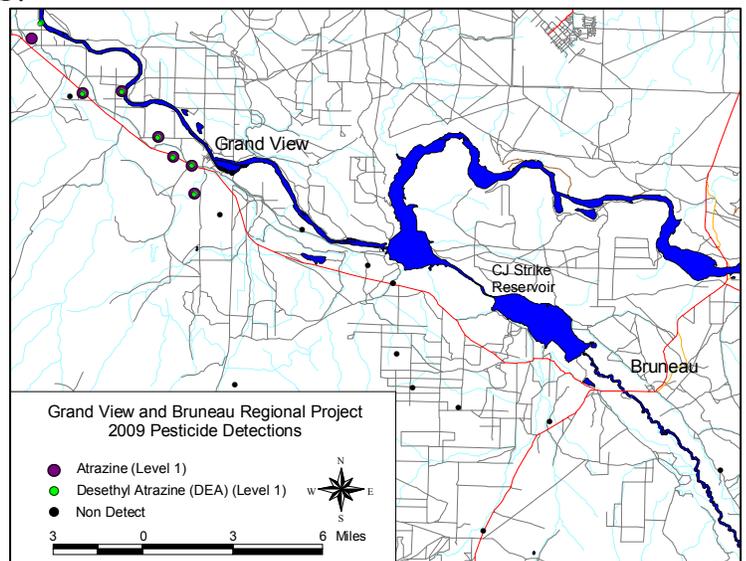


Figure 5. Location of 2009 detections.

### 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.