

# Northern Owyhee County Aquifers Pesticide Detections and Idaho's Pesticide Management Plan

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The Idaho State Department of Agriculture (ISDA) Northern Owyhee County Aquifers monitoring project is located south of the Snake River (Figure 1). The sampling locations are displayed in Figure 2. ISDA began sampling this project in 1999. The study area is bordered by the Snake River and the Owyhee mountains.

Ground water used for domestic purposes in the project area originates from two sources: (1) a shallow system of coarse grained sands and gravels, and (2) a deeper confined system of black sand under a thick blue clay layer (Carlson et al., 2001). Well driller reports indicate the shallow aquifer to be approximately 50 feet below the ground surface and the deeper aquifer to be located at varying depths, generally less than 300 feet. The shallow aquifer is composed of alluvial deposits, mainly sand and gravel, with local interbedded clay layers. The shallow subsurface alluvial deposits are vulnerable to leaching of contaminants.

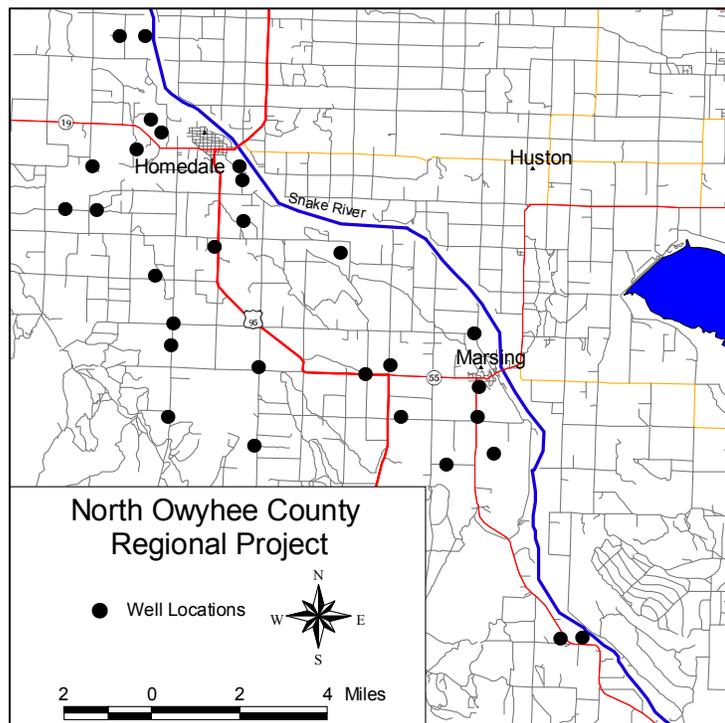


Figure 2. Location of wells within the project area.

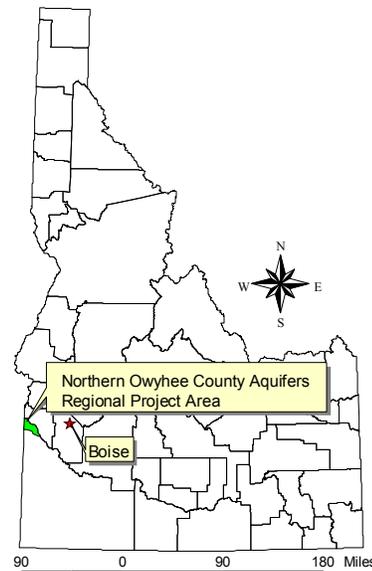


Figure 1. Location of project.

The ISDA well sampling locations of the Northern Owyhee County Aquifers regional project are displayed in Figure 2. The project originally consisted of sampling wells near Homedale, Marsing, Grand View, and Bruneau. ISDA has sampled approximately 37 wells on a yearly basis since 1999 for various constituents including pesticides. In 2006 the project area was split up into two areas separating the northwest portion and the southeast portion of the project. A separate project was developed near Grand View and Bruneau. This report provides an update of the 31 wells sampled near Homedale and Marsing since 2006. Every well was analyzed for pesticides in 2007 and 2 wells were sampled in 2009.

## 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.



# Northern Owyhee County Aquifers Pesticide Detections and Idaho's Pesticide Management Plan

## 2007 ISDA Pesticide Detections

In 2007, 24 wells were tested for pesticides (Figure 3). Dacthal (DCPA) was detected in eight wells. Seven of the Dacthal (DCPA) detections were in the PMP Level 1 category, and one detection was in the PMP Level 2 category. One well had a Level 1 detection of Picloram. All pesticides detected had concentrations less than health standards set by the EPA or the state of Idaho.

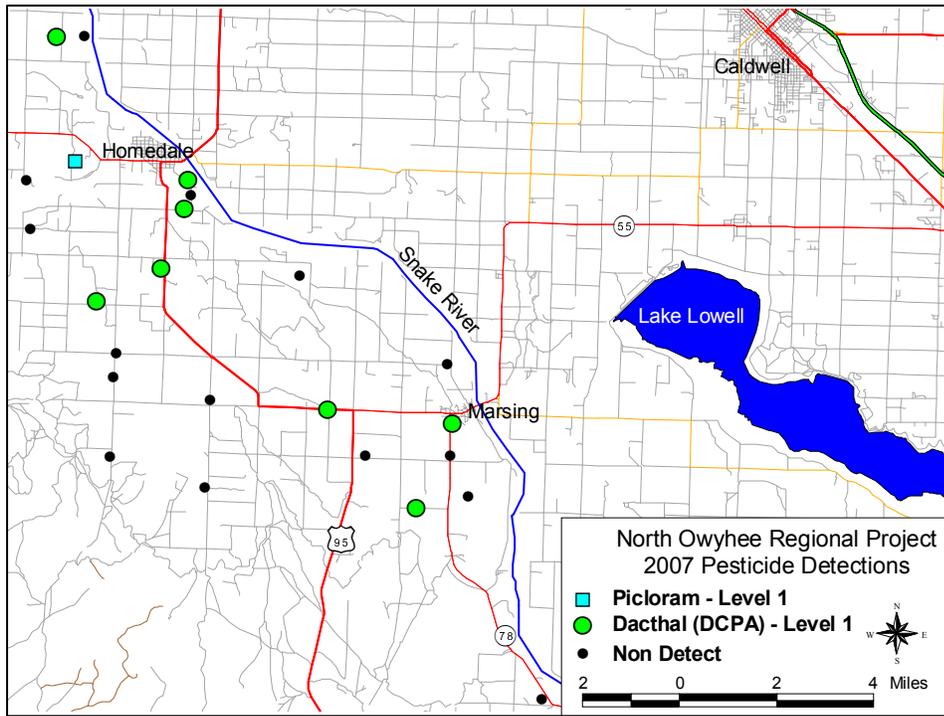


Figure 3. Location of 2007 pesticide detections.

Before using any pesticide,



**READ, AND FOLLOW THE LABEL!**

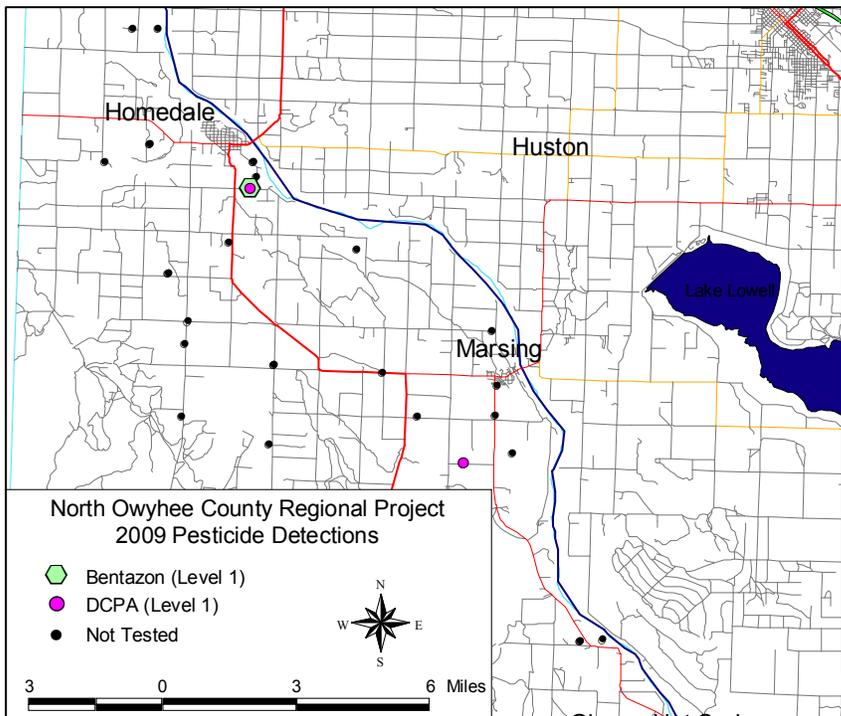


Figure 4. Location of 2009 pesticide detections.

## 2009 ISDA Pesticide Detections

In 2009 followup sampling, two wells were tested for pesticides (Figure 4). Dacthal (DCPA) was detected in two wells. The Dacthal (DCPA) detections were in the PMP Level 1 category. One well had a Level 1 detection of Bentazon. All pesticides detected had concentrations less than health standards set by the EPA or the state of Idaho.

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

Before using any pesticide,



**READ, AND FOLLOW THE LABEL!**

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