

Final Draft

Idaho's Pesticide Water Quality Update, Idaho State Department of Agriculture (ISDA), Gary Bahr, Scientist 4

The Idaho State Department of Agriculture (ISDA) water program has been evaluating pesticide residues in ground and surface water throughout Idaho. The program goal is to protect water quality while ensuring that pesticide products continue to be registered and used properly. The ground water monitoring occurs throughout most agricultural and major populated aquifers in the state. The surface water monitoring has been conducted in south central, southwest, and north central Idaho.

Surface water projects in 2014 were located in a mixture of agricultural and urban areas in southwest Idaho. These projects were located in Weiser Flat tributaries to the Snake River west of Weiser, Indian Creek near Caldwell and Nampa, Lower Boise River Fifteen Mile Creek Tributaries in Ada and Canyon Counties, Lake Lowell tributaries in Canyon County, and Snake River Tributaries in Canyon, Payette, and Washington Counties. Sampling occurred every two weeks from April to September. The following table provides a summary of the 2014 surface water results.

Surface Water Project 2014	Pesticide of Concern (POC) (> 50% of an Aquatic Benchmark)	Frequent Detections (> 10% of time)
Weiser Flat Tributaries	Chlorpyrifos, Metolachlor	2,4-D, Bromoxynil, Dicamba, Diuron, Metolachlor, Pendimethalin
Indian Creek	Chlorpyrifos	2,4-D, Bromacil, Bromoxynil, Desethyl Atrazine, Diuron, Hexazinone, Metolachlor, Pendimethalin, Terbacil
Fifteen Mile Creek Tributaries	Chlorpyrifos	2,4-D, Bromoxynil, Chlorpyrifos, Desethyl Atrazine, Diuron, Hexazinone, Metolachlor, Pendimethalin, Terbacil
Lake Lowell Tributaries	Chlorpyrifos, Dichlorvos, Dimethoate, Linuron, Malathion, Metolachlor	2,4-D, Atrazine, Bromacil, Bromoxynil, Chlorpyrifos, Diuron, Ethalfluralin, Metolachlor, Pendimethalin, Terbacil
Snake River Tributaries	Chlorpyrifos, Permethrin	2,4-D, Dacthal, Desethyl Atrazine, Hexazinone, Metolachlor, Pendimethalin

The results from the 2014 sampling have indicated that there are certain pesticides that are detected frequently and some that are found at levels that are considered to be Pesticides of Concern (POCs). Pesticides found at greater than 50% of an aquatic benchmark are considered to be POCs. These pesticides are items that can be of extra focus for applicators and for the implementation of education and Best Management Practices (BMPs).

A total of over two hundred ground water domestic wells were sampled in over twenty project areas throughout Idaho in 2014. There were 274 detections of twenty two pesticide active ingredients and breakdown products. The leading pesticides detected were Atrazine, Dacthal, Desethyl Atrazine, Bromacil, Metribuzin, Hexazinone, and Simazine. The 2014 ground water detections that are POCs are Atrazine, Dacthal, and

Triallate. These detections were found to be greater than 20% of a reference point for drinking water.

It is imperative that applicators follow labels and precautions to insure that pesticides do not contaminate ground or surface waters within the State of Idaho. Some steps to reduce the risk of pesticides entering ground or surface water are as follows:

- Read and follow pesticide labels for use, storage, disposal, and environmental hazards.
- Prevent drift to sensitive surface water areas.
- Avoid windy conditions to limit drift.
- Prevent applications to impervious surfaces.
- Be aware of vulnerable urban application locations.
- Prevent over-irrigation and runoff from urban sites after application.
- Delay application when the soil is saturated or wet weather is expected.
- Use precision applications where appropriate.
- Use integrated pest management strategies.
- Consider setbacks or buffers zones if appropriate.
- Mix, load and dispose of pesticides properly.
- Clean up spills immediately using proper spill kits and lawful disposal.
- Take precautions near wellheads and prevent back siphoning into the well.
- Triple rinse and dispose of empty containers through the ISDA Container Recycling Operations (CROP) program.

For further information on this program you may contact Gary Bahr, Ground Water Program at 208-332-8597 or Kirk Campbell, Surface Water Program at 208-332-8598. Thank you for your cooperation and work to protect water quality in Idaho.