

# PSPP MONITORING SUMMARY

## Pesticide Results: Ashley Creek Upstream of Kalispell WTP

Samples Collected 4/21/2025-11/17/2025

Results Compiled 4/10/2026





# MONITORING SUMMARY

**Margarite Juarez Thomas, City of Kalispell**

Samples Collected 4/21/2025–11/17/2025

Report Compiled 4/10/2026

## Pesticide Results

### Near Gauging Station at Ashley Creek Upstream of Kalispell WTP

#### Introduction

Dear Margarite,

We have reviewed the data for the Ashley Creek site near Airport Road, located upstream of the Kalispell Wastewater Treatment Plant.

This site tested positive for nine pesticide analytes (each at least once): 2,4-D, Bentazon, Diuron, Imazapyr, MCPA, MCPP, Metolachlor, ESA, Prometon, and Tebuthiuron. The most frequently detected analytes at this site were Bentazon, Imazapyr, and Prometon.

Please review the glossary on the following page for helpful definitions and answers to FAQs to assist you in interpreting this summary. Additionally, on the final pages of this document, you will find detailed narratives about each of the analytes detected at this site.

Please do not hesitate to contact us if you have any further questions, concerns, or if you need assistance with this summary.

Thanks,

The PSPP Team



MT PSPP [Website](#)

#### **Paige Weigand**

Big Sky Watershed Corps Member  
[paige.weigand@flbs.umt.edu](mailto:paige.weigand@flbs.umt.edu)

#### **Janelle Groff**

Research Coordinator  
[janelle.groff@flbs.umt.edu](mailto:janelle.groff@flbs.umt.edu)

#### **Dr. Rachel Malison**

Principal Investigator  
[rachel.malison@flbs.umt.edu](mailto:rachel.malison@flbs.umt.edu)



# MONITORING SUMMARY

Margarite Juarez Thomas, City of Kalispell

Samples Collected 4/21/2025–11/17/2025

Report Compiled 4/10/2026

## Pesticide Results

### Glossary/FAQ

#### Near Gauging Station at Ashley Creek Upstream of Kalispell WTP

#### What is MT PSPP?

- The **Montana Pesticide Stewardship Partnership Program** (MT PSPP) is a collaborative network in Western Montana working to reduce pesticide pollution in our waters through sustainable best practices. MT PSPP supports water quality monitoring, community education and engagement, and activities to improve water quality. Our partners (residents, local experts, government agencies, watershed groups, tribal nations, producers, and more) are working together towards the goal of having a lasting impact on the health of the upper Columbia River Basin, recognizing that protecting the headwaters will have a continued positive effect downstream.

#### What is a pesticide?

- The EPA defines a **pesticide**, under pesticide law, to be any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. A “pesticide” is an umbrella term that can include herbicides, insecticides, rodenticides, fungicides, and more. Contrary to popular thought, the term “pesticide” is not exclusive to insect pests– it encompasses all of the “-cides”.

#### What is an analyte?

- An **analyte** is either a chemical pesticide compound or a degradate of a pesticide compound. MT PSPP lab partners test each water sample for up to 102 analytes, though there are potentially many more pesticide analytes in our waterways.

#### What is the difference between a pesticide “detect” and a “Q”?

You will find that pesticide data in this report are represented by the following terms: “numeric detects” and “Qs”.

A “numeric detect” and a “Q” are both considered “detects” in that a particular analyte *was detected* in the water sample. However, the difference between the two is that a “numeric detect” is accompanied by a reported numeric concentration, and a Q is not. The reason a “Q” is not accompanied by a reported concentration is that the lab detected that particular analyte at a low enough concentration that they don’t possess the statistical confidence to report a specific number. That threshold is different for every lab/analyte, and this concept is defined as the “lower reporting limit”. In short, although a “Q” is not numerically specific in the same way as a “detect”, it is still evidence that an analyte was present in that particular waterbody at the time of collection. For that reason, this summary combines numeric detections and Qs to report “total pesticide detects” (Table 1).

# MONITORING SUMMARY

**Margarite Juarez Thomas, City of Kalispell**

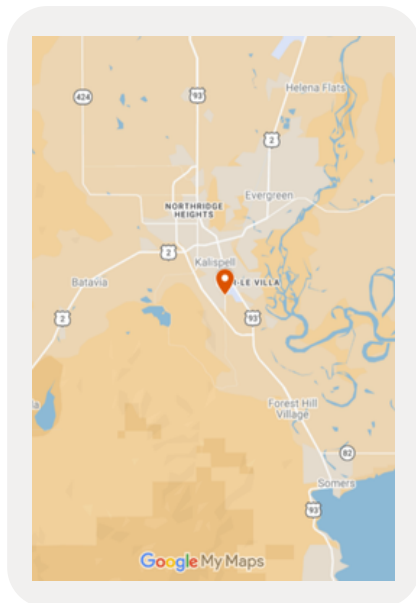
Samples Collected 4/21/2025–11/17/2025

Report Compiled 4/10/2026

## Pesticide Results

### Site Map and Overview

#### Near Gauging Station at Ashley Creek Upstream of Kalispell WTP



Between 4/21/25 and 11/17/25, the PSPP team collected 14 water samples upstream of the Kalispell Wastewater Treatment Plant. The samples were taken at the same location each time—Ashley Creek near Airport Road. The samples were then shipped to our lab partners and tested for the presence of up to 102 various pesticide analytes.

Localized upstream land use is mixed; predominantly high-density housing, recreational parks and fields, and some agriculture.

**Table 1: Overview**

| Total Number of Samples Collected | Date Range of Sampling Efforts | Total Pesticide Detects* | Numeric Detects | Qs** | Percent Detections*** |
|-----------------------------------|--------------------------------|--------------------------|-----------------|------|-----------------------|
| 14                                | 4/21/2025–11/17/2025           | <b>67</b>                | 25              | 42   | <b>4.69%</b>          |

\*67 total detections = 42 numeric pesticide detects + 25 Qs

\*\*Please see Page 3 for the definition of a Q result

\*\*\*67 total detections that occurred ÷ 1428 potential detections (14 sampling events x 102 analytes) = 4.69%

# MONITORING SUMMARY

Margarite Juarez Thomas, City of Kalispell

Samples Collected 4/21/2025–11/17/2025

Report Compiled 4/10/2026

## Pesticide Results

Near Gauging Station at Ashley Creek Upstream  
of Kalispell WTP

**Table 2: Detected Results by  
Sample Date**

| Detected Analyte Name | Sample Date |          |           |          |           |           |           |           |           |          |           |            |           |            |
|-----------------------|-------------|----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|------------|-----------|------------|
|                       | 4/21/2025   | 5/7/2025 | 5/16/2025 | 6/2/2025 | 6/16/2025 | 6/30/2025 | 7/28/2025 | 8/11/2025 | 8/25/2025 | 9/8/2025 | 9/23/2025 | 10/13/2025 | 11/3/2025 | 11/17/2025 |
| 2,4-D                 |             | Q        | Q         |          |           |           |           | Q         | Q         | ✓        | Q         | ✓          |           | Q          |
| Bentazon              | Q           | ✓        | ✓         | ✓        | ✓         | ✓         |           | ✓         | ✓         | ✓        | ✓         | ✓          | ✓         | ✓          |
| Diuron                |             |          | Q         |          |           | Q         |           | Q         |           |          |           | Q          |           | Q          |
| Imazapyr              | ✓           | Q        | ✓         | ✓        | ✓         | ✓         |           | ✓         | ✓         | ✓        | ✓         | ✓          | ✓         | ✓          |
| MCPA                  |             |          |           |          |           |           |           |           |           | ✓        |           | Q          | Q         |            |
| MCPP                  |             |          |           |          |           |           |           |           |           | Q        |           |            |           |            |
| Metolachlor<br>ESA    |             |          |           |          |           |           |           |           |           |          |           |            |           | Q          |
| Prometon              |             | Q        | ✓         | ✓        | ✓         | ✓         |           | ✓         | ✓         | ✓        | ✓         | ✓          | ✓         | ✓          |
| Tebuthiuron           |             |          |           |          | Q         | Q         |           | ✓         | Q         | ✓        | ✓         | ✓          | Q         | Q          |

# MONITORING SUMMARY

**Margarite Juarez Thomas, City of Kalispell**

Samples Collected 4/21/2025–11/17/2025

Report Compiled 4/10/2026

## Pesticide Results

**Near Gauging Station at Ashley Creek Upstream  
of Kalispell WTP**

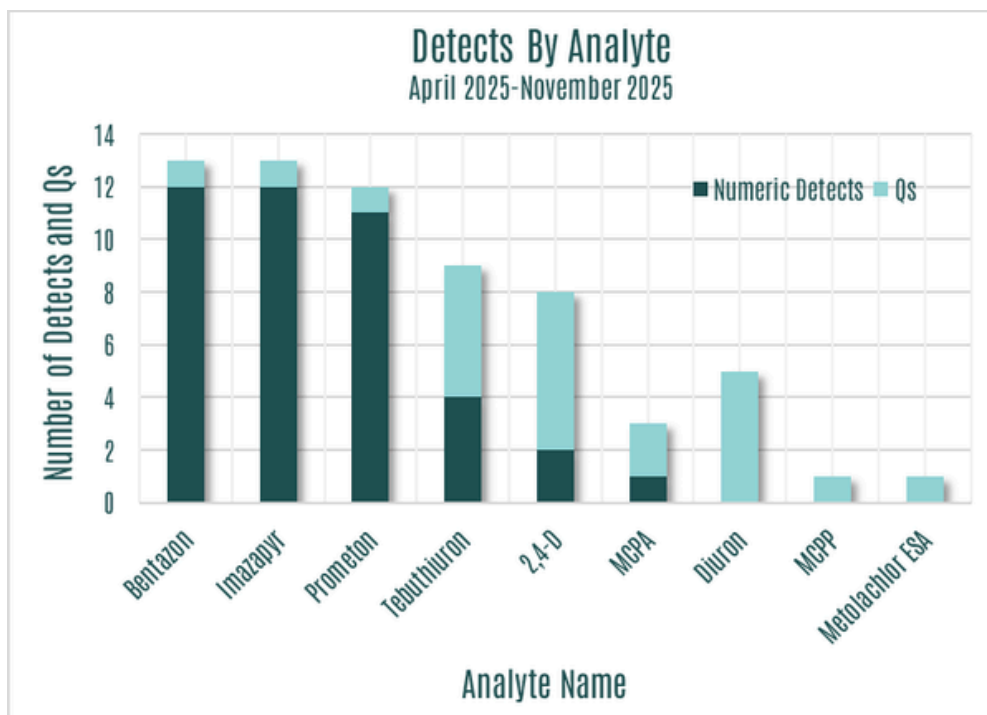
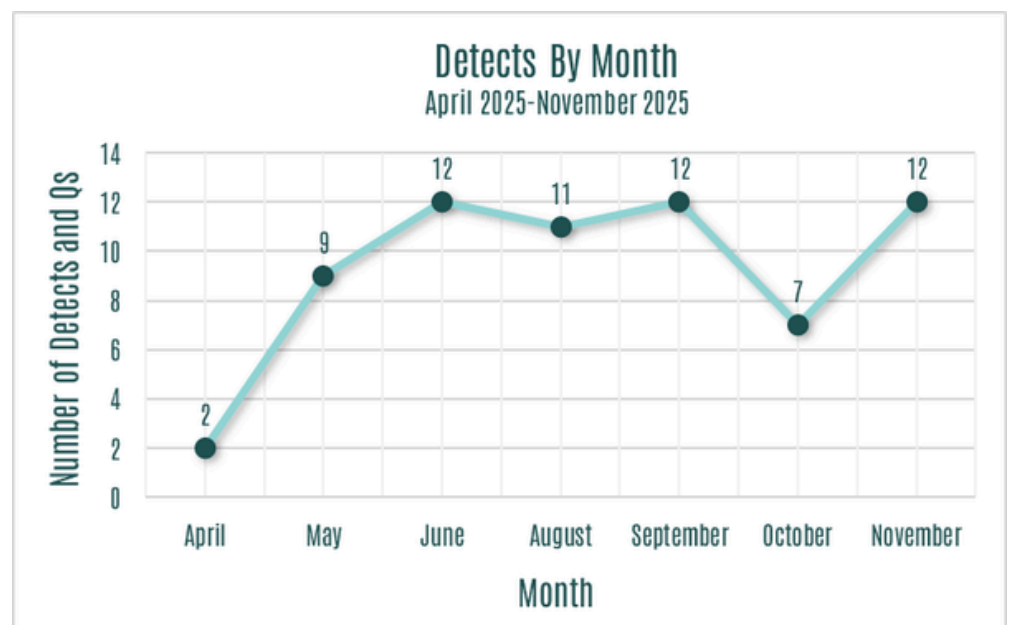


**Figure 1: Detects By Analyte**

This graph displays the number of detections (dark teal) and Qs (light blue) for all sampling efforts, grouped by analyte. The most frequently detected analytes were Bentazon, Imazapyr, and Prometon across all sampling events.

**Figure 2: Detects By Month**

This graph displays the number of detections and Qs for all sampling efforts, grouped by month. June, September, and November had the most frequent detections across all months, with twelve detections each.





# MONITORING SUMMARY

Margarite Juarez Thomas, City of Kalispell

Samples Collected 4/21/2025–11/17/2025

Report Compiled 4/10/2026

## Pesticide Results

### Analyte Narratives

#### Near Gauging Station at Ashley Creek Upstream of Kalispell WTP

*The following pesticide analyte narratives have been prepared in partnership with the Montana Department of Agriculture Groundwater Protection Program:*

#### **2,4-D**

2,4-D is a selective systemic herbicide with a wide variety of uses, which include ornamental lawns and turf, right-of-ways, range and pasture, forest management areas, and several crops, including corn and small grains. 2,4-DB, 2,4-DP, MCPA, and MCPP are variants of 2,4-D. It is highly soluble in water, non-volatile, and has a low potential to leach to groundwater based on its chemical properties. It is non-persistent in soil but may persist in aquatic systems under certain conditions.

#### **Bentazon**

Bentazon is a contact herbicide that is used for post-emergence control of annual weeds in several crops, and can also be used in non-crop areas. Crop sites include beans, peas, sorghum, and corn, and non-crop sites include ornamentals and turf, rights-of-way, and roadsides. Bentazon is stable in water but tends to break down in soils. It is highly soluble in water and moderately mobile in soils.

#### **Diuron**

Diuron is a pre-emergence residual herbicide. Most Diuron products are registered for use in non-crop areas, but some can also be used in alfalfa, wheat, and other crops. Diuron is moderately leachable, moderately persistent in soils, and very persistent in water.

#### **Imazapyr**

Imazapyr is a non-selective herbicide that is absorbed through foliage and readily translocated in plants. It is registered for use in a variety of non-crop application sites, including right-of-way, range and pasture, paved areas, roadsides, fencerows, petroleum tank farms, some conifer forest sites, and some water treatment for limited vegetation. Imazapyr is likely to degrade moderately fast in soils, but can be persistent in water and is very water-soluble.



# MONITORING SUMMARY

Margarite Juarez Thomas, City of Kalispell

Samples Collected 4/21/2025–11/17/2025

Report Compiled 4/10/2026

## Pesticide Results

### Analyte Narratives

#### Near Gauging Station at Ashley Creek Upstream of Kalispell WTP

*The following pesticide analyte narratives have been prepared in partnership with the Montana Department of Agriculture Groundwater Protection Program:*

#### **MCPA**

MCPA is a selective systemic herbicide that can be translocated in plants. It can be used in a variety of application sites such as wheat, barley, oats, rye, residential turf, sod farms, golf courses, pasture-rangeland, and non-cropland rights-of-way. Crop use sites include small grains, alfalfa, and flax. MCPA is highly soluble and leachable, and tends to be very persistent in water.

#### **MCPP**

MCPP is a post-emergence herbicide used to control broadleaf weeds. It is registered for use in several non-crop areas, including ornamental lawn and turf, rights-of-way, roadsides, fencerows, playgrounds, drainage ditch banks, and specific grasses. MCPP is very soluble, and though it is not persistent in soil and has little potential for particle-bound transport with moderate leaching potential, it can be very persistent in water.

#### **Metolachlor ESA**

Metolachlor is a selective herbicide that inhibits seed germination and mitosis. Metolachlor can be used on ornamental turf and some containerized plants, but is commonly used in crops such as corn, sorghum, and some beans and peas. Metolachlor ESA (ethane sulfonic acid) and OA (oxanilic acid) tend to be very leachable in soil and more persistent than its parent compound.

#### **Prometon**

Prometon is a non-selective systemic herbicide absorbed by foliage and roots. It is labeled for non-crop uses only, including rights-of-way, fencerows, sidewalks, playgrounds, and parking areas. Prometon is a persistent compound in the environment and can move readily in water in runoff or leach through soil. It is a methoxytriazine substance and is chemically related to triazine herbicides such as atrazine and simazine.



# MONITORING SUMMARY

Margarite Juarez Thomas, City of Kalispell

Samples Collected 4/21/2025–11/17/2025

Report Compiled 4/10/2026

## Pesticide Results

### Analyte Narratives

#### Near Gauging Station at Ashley Creek Upstream of Kalispell WTP

*The following pesticide analyte narratives have been prepared in partnership with the Montana Department of Agriculture Groundwater Protection Program:*

#### **Tebuthiuron**

Tebuthiuron is a systemic, low-selectivity herbicide that is absorbed by roots and translocated in plants. Tebuthiuron can be used on several non-crop sites, including rights-of-way, fencerows, range and pasture, utilities, railroad bed and ballast, and industrial sites. Tebuthiuron is persistent in soil and water, very water soluble, and can be leached readily through soil.