Middle Deschutes Pesticide Stewardship Partnership Strategic Plan Overview

July 2023

Sampling Locations and Schedule

Samples are collected March through June, and September through October each year in the following drainages: the Culver Drain, Campbell Creek, Rattlesnake Canyon, Frog Springs, and Mud Springs Creek.

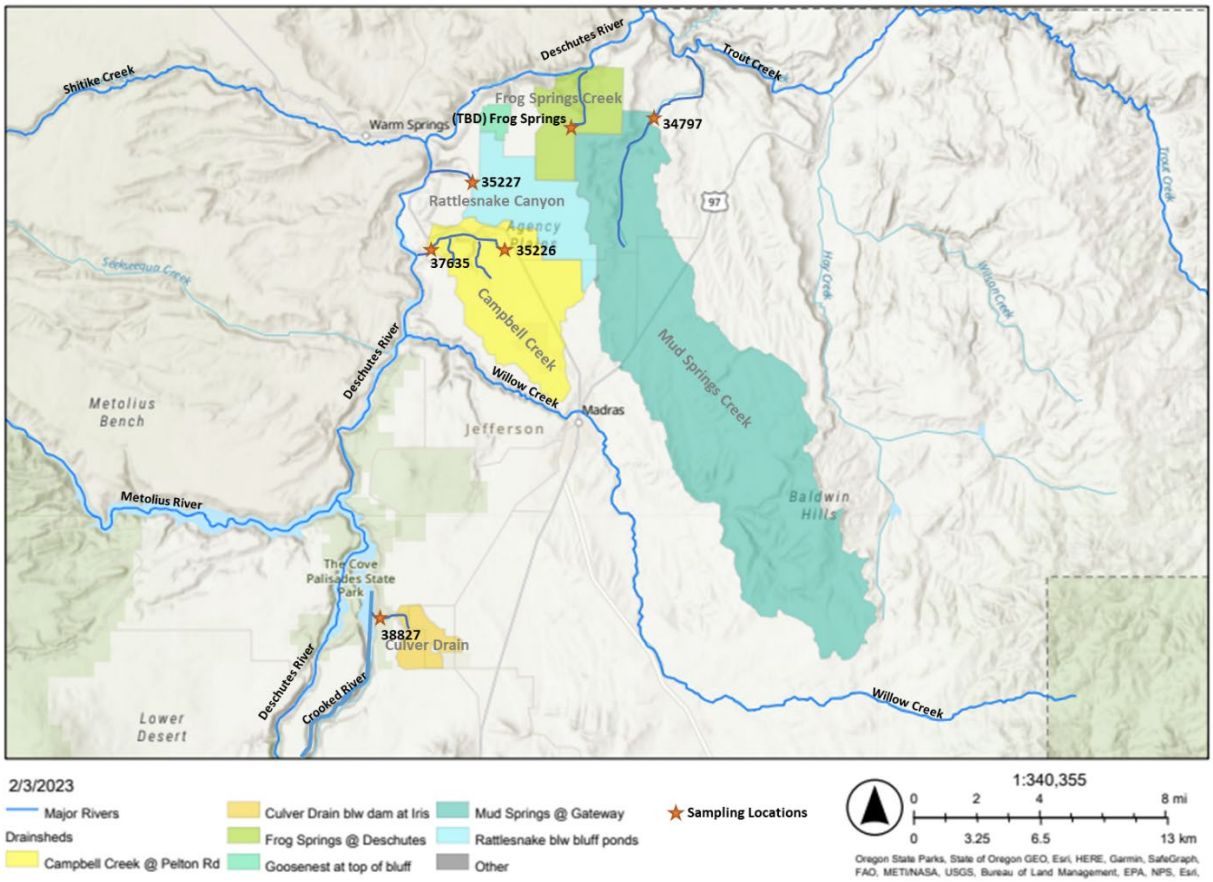

Figure 1. Sampling locations by DEQ ID of Mud Springs Creek, Campbell Creek, Frog Springs, Rattlesnake Canyon, and Culver Drain

Table 1. MDPSP Sampling Location Descriptions and Sampling Scheme

Drainage	Location	DEQ Sample ID	Every Year vs. Every Other Year
Campbell Creek	At Hwy 26 and Columbia	35226	Every Year (March-June, September-October)
Campbell Creek	At Mouth to Deschutes River	37635	Every Year (March-June, September-October)
Mud Springs	At Gateway	34797	Every Other Year- trade off with Frog Springs (March-June, September-October)
Culver Drain	At Crooked River Campground	38827	Every Year (March-June, September-October)
Frog Springs	At Juniper Road	TBD	Every Other Year- trade off with Mud Springs (March-June, September-October)
Rattlesnake Canyon	At Rim, post irrigation pond	35227	Every Year (March-June, September-October)

Detected Pesticides of High Priority

Detected pesticides with high frequency or high concentration are listed in Table 2. Pesticides of Interest (POI) are detected frequently but at levels well below aquatic life benchmarks. Pesticides of Concern (POC) are detected frequently and at concentrations approaching or exceeding aquatic life benchmarks. And Local Problem Pesticides (LPP) are frequently detected at concentrations far exceeding aquatic life benchmarks.

Table 2. MDPSP Pesticides of Interest, Pesticides of Concern, Local Problem Pesticides

MDPSP Pesticides of Interest (POI)	MDPSP Pesticides of Concern (POC)	MDPSP Local Problem Pesticides (LPP)
Glyphosate RS)-AMPA (Aminomethyl phosphonic acid) Azoxystrobin Prometryn Propiconazole 2,4-D Terbacil Dicamba Metribuzin Prometon Sulfometuron methyl Chlorthal monoacid and diacid degradates DEET Pendimethalin Bromacil Chlorthal-dimethyl Hexazinone Metsulfuron-methyl 2,4-DB Acephate Methomyl	Dimethoate Oxyfluorfen Dimethenamid Metolachlor	Imidacloprid Linuron Diuron

Table 3. MDPSP POC, LPP by Trade Name and Major Use.

	Type H=Herbicide I=Insecticide	Trade name	Major use
Dimethenamid	H	Outlook	Grass seed
Dimethoate	I	Various generics	Grass seed, alfalfa
Diuron	H	Karmex, Direx, generics	Bluegrass seed, Associated Lands (fence row/ farmyard/ stack yard/ rights-of-way)
Imidacloprid	I	Merit, Admire, generics	Vegetable crop
Linuron	H	Lorex, Lines	Carrot seed
Oxyfluorfen	H	Goal, Galigan, generics	Carrot and bluegrass seed
Prometryn	H	Caparol	Carrot seed

Outreach and Detection Goals

Communication and outreach goals have been set to reach measurable decreases in detected pesticides.

Table 4. MDPSP Communication Goals, Strategies, and Metrics

Goals for Communication and Outreach		
Goal 1: Work with and between sector groups to increase knowledge of barriers to implementation of best management practices		
	Strategy 1: Produce targeted campaigns to present best management practices and pest management strategies.	
		Metric 1: Reach out to 3 local chemical companies to make contact and develop relationship.
	Strategy 2: Connect with the community through technical staff of chemical and seed companies, particularly agronomists and sales representatives, to increase the breadth and credibility of the Middle Deschutes PSP to the growers.	
		Metric 2: Meet with technical field staff from 2 companies to develop material, repeat as needed across the 5 years to maintain relevancy.
Goal 2: Develop communication material to increase understanding of Middle Deschutes PSP objectives and Integrative Pest Management		
	Strategy 1: Connect with chemical companies to work with technical staff to develop mutual knowledge on barriers, alternatives, and best management practices unique to the area.	
		Metric 1: Provide one news article and two newsletters per year, totaling 15 articles reaching 1,000 people per year. And develop material for best management practices for 6 target groups based on crops grown (bluegrass seed, carrot seed, and hay), irrigation practice applied (sprinkler, and furrow irrigation), or pesticide used (those listed as High Pesticides of Concern).
Goal 3: Develop a unifying campaign to reduce pesticides in the waterways		
	Strategy 1: Establish formalized partnership initiative (a shared vision) onto which partners can sign (non-profits, businesses, municipalities, private landowners, etc)	
		Metric 1: Sign 10 entities onto the formalized partnership initiative (a shared vision). Provide annual updates to formal partners through an annual meeting.
	Strategy 2: Develop new relationships with additional organizations, businesses, municipalities, and other potential partners as they arise.	
		Metric 2: Reach out to one new agency per quarter by attending an event, meeting, or connecting directly. Totaling 20 new relationship with local partners.
	Strategy 3: Work with partners to prioritize key outreach events to increase community awareness of Middle Deschutes PSP and its work.	
		Metric 3: Host, attend, table, or speak at 3 events per year. Totaling 15 events over the next 5 years.

Table 5. MDPSP Pesticide Goals for 2028

Goals for Measured Pesticide Concentrations Complete by December 31, 2028	
Goal 1: ***All measured Pesticides of Concern in 2028 (measured between January 1, 2028 and December 31, 2028) are below aquatic life benchmarks.***	
	Mid-Goal: Reduce the max aquatic life ratio (as of 2022) by 50% by the December 31, 2026. *Imidacloprid had the highest ALR of 12 in 2022. By 2026, it will not exceed 6 ALR and will continue to remain below 6 ALR through December 31, 2028*
Goal 2: ***Reduce detection frequency by 25% of the four highest detected pesticides of 2023 by December 31, 2028. Measured by comparing the detection frequency of the 2023 sampling year (based on the 2020-2022 data set) to the detection frequency of the 2029 sampling year (based on the 2026-2028 data set)*** *AMPA had a detection frequency of 73% in 2023, will be reduced to or below 48% by 2028.* *Glyphosate had a detection frequency of 51% in 2023, will be reduced to or below 26% in 2028.* *Diuron had a detection frequency of 53% in 2023, will be reduced to or below 28% by 2028.* *Linuron had a detection frequency of 43% in 2023, will be reduced to or below 18% by 2028.*	
Goal 3: ***Reduce the number of High Pesticides of Concerns by 4 by December 31, 2028. Measured by comparing the total number of High Pesticides of Concern in 2023 (2020-2022 data set), to the total number of High Pesticides of Concern in 2029 (2026-2028 data set)***	