

Ahtanum Creek

APRIL 2024

Summary of 2022 Surface Water Monitoring Program Results



Ahtanum Creek drains into the Yakima River just south of Union Gap, Washington. This creek provides spawning habitat for many species of endangered salmon and trout. Staff frequently observed juvenile fish of unknown species at the site.

In 2022, Washington State Department of Agriculture (WSDA) monitored 17 sites in Washington. Ahtanum Creek was one of three monitoring sites located in Yakima County.

Samples were analyzed at the Manchester Environmental Lab, Port Orchard, Wash.

WSDA compares detected pesticide concentrations to WSDA assessment criteria, which are half of state and federal water quality criteria. Each pesticide has its own assessment criteria, based on its toxicity to aquatic animals, insects, and plants.

Site information:

Years sampled: 2021 – present

Fish habitat: Spring Chinook and coho salmon; bull, rainbow, and summer steelhead trout
(SalmonScape: apps.wdfw.wa.gov/salmonscape)

Sampling dates:
13 weeks; March 28 – September 12

Water testing:

Samples were tested for 150 current and legacy chemicals (53 herbicides, 48 insecticides, 21 fungicides, 19 pesticide degradates, 5 legacy chemicals, 1 antimicrobial, 1 insect repellent, 1 synergist, and 1 wood preservative).



Washington
State Department of
Agriculture

NATURAL RESOURCES AND AGRICULTURAL SCIENCES

Results:

- There were 26 unique chemicals detected with a total of 52 detections in Ahtanum Creek. Of these, six detections were above WSDA assessment criteria.
- When multiple pesticides are detected simultaneously, the harmful effects can combine; multiple pesticides were detected every week Ahtanum Creek was sampled. Between 1 and 14 pesticides were detected at each sampling visit.
- WSDA identifies some pesticides as Pesticides of Concern (POC) when they have been detected above WSDA's assessment criteria and above established detection frequencies.

Watershed-specific POC detected in Ahtanum Creek:

ICONS FOR ENVIRONMENTAL HAZARDS LISTED ON PESTICIDE LABELS



Chlorpyrifos - Insecticide



- Common trade names:** Lorsban, Pilot, Vesper
- Example uses within watershed:** golf course, ornamental, silviculture, turf
- As of early 2022, chlorpyrifos has been banned for use on food and feed commodities. It can still be applied to registered non-food commodities.
- A streamside no-spray buffer zone is required in Washington for chlorpyrifos to protect threatened and endangered Pacific salmon and steelhead.
- This chemical was also a POC in nine other monitored watersheds.

gamma-Cyhalothrin - Insecticide



- Common trade names:** Declare, Scion
- Example uses within watershed:** alfalfa, corn, orchard, pasture, wheat
- This chemical was also detected in six other monitored watersheds and a POC in all of them.

Products listed are for descriptive purposes only and do not imply endorsement by the author or the Department of Agriculture.

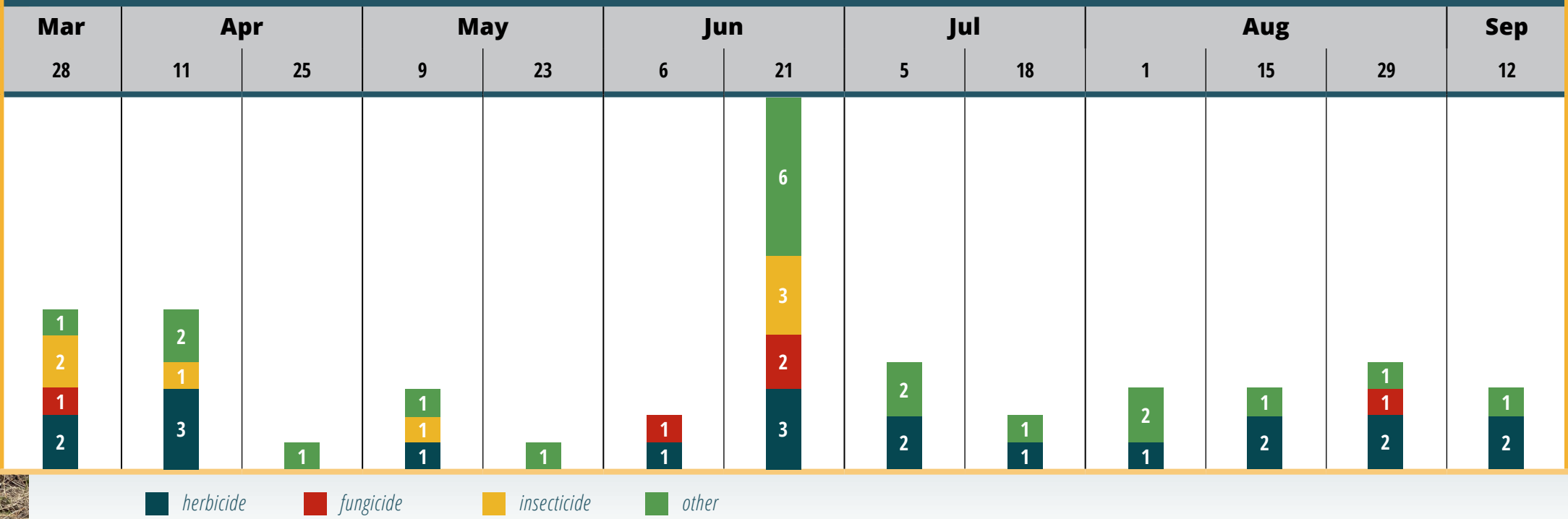
The calendar at right shows the concentration in µg/L and date sampled of each watershed POC detected. This calendar does not include all the pesticides WSDA found during the growing season. Detected concentrations that exceed WSDA's assessment criteria have a higher potential to cause harm to aquatic ecosystems.

[* I: Insecticide]
exceeds assessment criteria

Watershed Pesticide of Concern Detected and its Corresponding Sampling Dates and Concentrations

Month		Mar	Apr			May		Jun		Jul		Aug			Sep
Day of the Month	Use*	28	11	25	9	23	6	21	5	18	1	15	29	12	
gamma-Cyhalothrin	I							0.001							
Suspended sediment concentration (mg/L)		19	9	14	53	18	156	34	14	6	5	4	5	2	
Streamflow (cubic ft/sec)		86.8	71.3	83.2	149	95.9	231	104	44.4	33.7	13.5	17.8	18.6	17.2	
Precipitation (total in/week)		0.00	0.03	0.32	0.47	0.01	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Total Number of Detections per Sampling Event by Pesticide Category



Recommendations:

Make use of natural protections

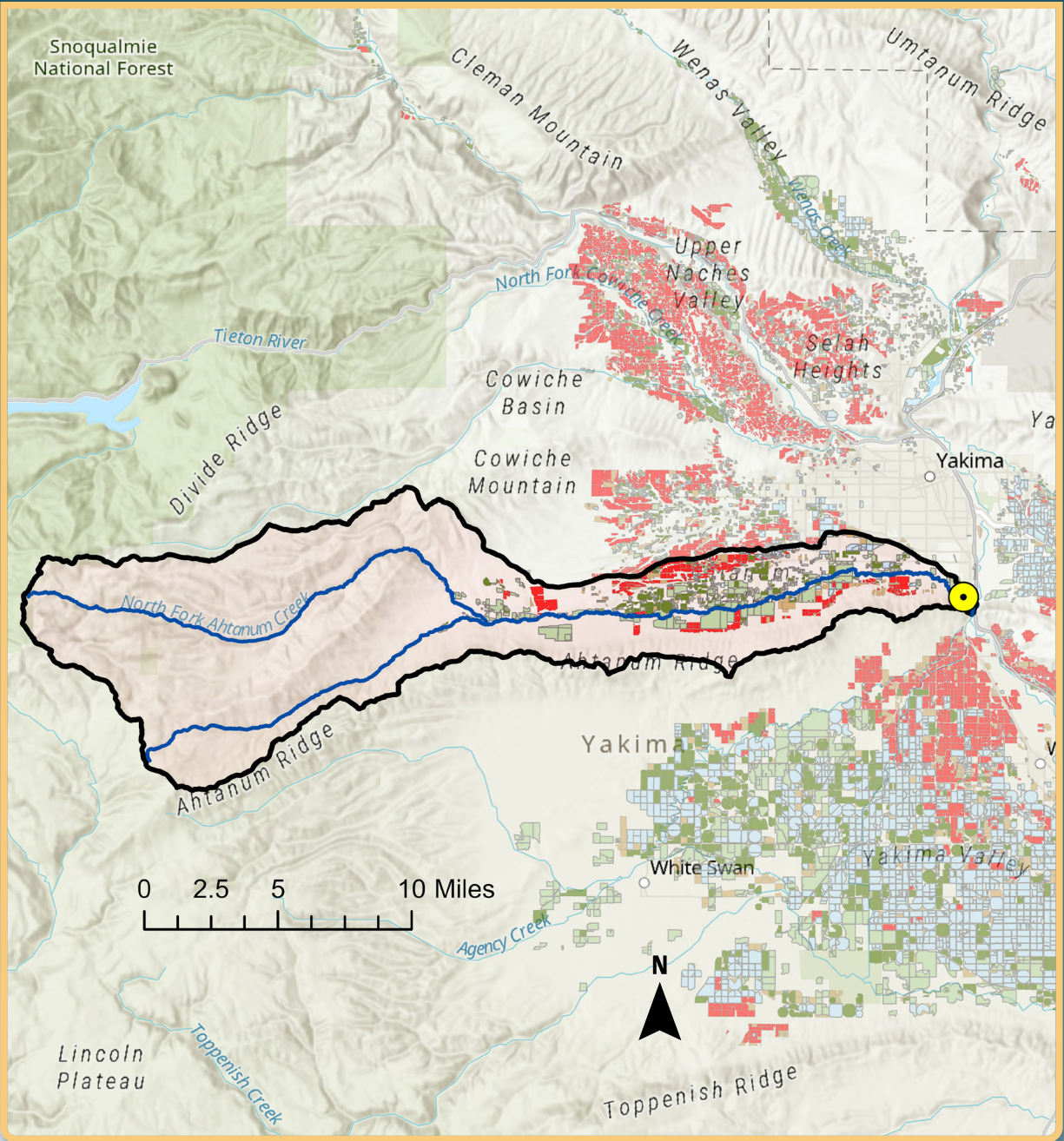
- Use buffers, filter strips, sediment basins, ground cover, and setbacks.
- Maintain vegetation along creeks and take care during spring time applications before vegetation along streams leaves out.

Be informed

- Read and follow pesticide label directions.
- Check the weather forecast to reduce the chances of drift or runoff.
- Review WSDA's Pesticides of Concern and choose less-toxic pesticides when possible.

Care for your equipment and products

- Calibrate, maintain, and inspect application equipment.
- Properly dispose of all unneeded pesticides. Visit agr.wa.gov/wastepesticide to learn about waste pesticide collection events.



Ahtanum Creek crop groupings | acres

 Hay / Silage	1,853
 Orchard	2,852
 Fallow	941
 Pasture	4,923
 Other	344

- Sampling Location
- Ahtanum Creek
- Ahtanum Watershed

Total Agriculture	10,913 acres
Non-Agriculture	98,327 acres
Watershed Total	109,240 acres

To view mapped crop groups at the field scale, download the WSDA Agricultural Land Use data or view the interactive web map here:
<https://agr.wa.gov/departments/land-and-water/natural-resources/agricultural-land-use>