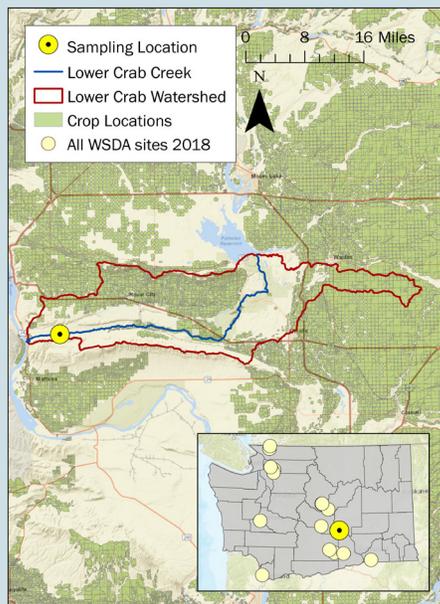


Lower Crab Creek

Summary of 2018 Surface Water Monitoring Program Results | November 2019



The Washington State Department of Agriculture (WSDA) routinely monitors surface water throughout the state for the presence of pesticides. The monitoring is done between March and September, the typical season for pesticide use, and includes checking general water quality conditions and streamflow. State and federal agencies use this data to evaluate water quality and make exposure assessments for pesticides registered for use in Washington State. In 2018, WSDA monitored 16 sites in Washington, one of them in Grant County.



Natural Resources Assessment Section

Watershed and site information

Sampling history: 2017 - present

Watershed area: 256,700 acres (~401 square miles)

Area in agricultural use: 110,300 acres (~43% of total watershed acreage)

Main crops: Wheat, alfalfa hay, apples, field corn, and pasture

Fish habitat: Summer steelhead and fall Chinook salmon
(SalmonScape: apps.wdfw.wa.gov/salmonscape/)

Sampling dates: 14 sampling visits, March 20 – Sept. 17, once every 2 weeks

Water testing:

- WSDA tested for 144 current and legacy chemicals (50 insecticides, 54 herbicides, 20 fungicides, 15 pesticide degradates, 2 synergists, 1 antimicrobial, 1 insect repellent, and 1 wood preservative).
- Samples were analyzed at Manchester Environmental Lab, Port Orchard, Washington.
- 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.
- WSDA identifies Pesticides of Concern (POCs) as current-use pesticides that have been found somewhere in the state above WSDA's assessment criteria in recent years.

Notes:

- Fish were observed frequently at this sampling location.

Results and Conclusions

- There were 254 total pesticide detections in Lower Crab Creek from 5 different use categories: 22 types of herbicides, 6 fungicides, 6 insecticides, 4 degradates, and 1 insect repellent. This substantial increase from 2017 is largely due to new equipment at the lab and does not necessarily reflect an increase in pesticide use.
- Of the total pesticide detections, none exceeded WSDA's assessment criteria.
- The POCs chlorpyrifos, diuron, and metolachlor were detected.
- When multiple pesticides are detected simultaneously, the environmental effects can combine; multiple pesticides were detected every week Lower Crab Creek was tested. Between 12 and 22 pesticides were detected at each sampling visit.

Recommendations

- **Make use of natural protections**
 - Use buffers, filter strips, sediment basins, ground cover, and setbacks.
 - Maintain vegetation along the creek and take care during spring applications before vegetation along streams leafs out.
- **Be informed**
 - Read and follow pesticide label directions, and be familiar with active ingredients.
 - Plan applications using the weather forecast to reduce the chances of drift or runoff.
 - Review WSDA's POCs and choose less-toxic pesticides when possible.
- **Care for your equipment and products**
 - Calibrate, maintain, and inspect application equipment regularly.
 - Properly dispose of all unneeded pesticides. Visit agr.wa.gov/wastepesticide to learn about waste pesticide collection events.

