Stemlit Creek drains into the Columbia River just south of Wenatchee, Washington. It has been documented by the Washington State Department of Fish and Wildlife that the inlet of Stemilt Creek contains rearing salmon. Staff frequently observed juvenile Chinook salmon as well as very small fish of an unknown species at the site.

Results:

- There were 16 unique chemicals detected with a total of 46 detections in Stemilt Creek. No detections were above WSDA assessment criteria.

- When multiple pesticides are detected simultaneously, the harmful effects can combine; multiple pesticides were detected every week Stemilt Creek was sampled. Between 2 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 POCs detected in Stemlit Creek:

Chlorpyrifos
- Common trade names: Lorsban, Pilot, Vesper
- Example uses within watershed: orchard
- Chlorpyrifos is banned in California, New York, Hawaii, Maryland and the European Union.
- A streamside no-spray buffer zone is required in Washington for chlorpyrifos to protect threatened and endangered Pacific salmon and steelhead.
- Detected at 14 sites in 2020. A watershed POC at six of them.

Malathion
- Common trade names: Malathion, Fyfanon
- Example uses within watershed: orchard
- A streamside no-spray buffer zone is required in Washington for malathion to protect threatened and endangered Pacific salmon and steelhead.
- Detected at 10 sites in 2020. A watershed POC at eight of them.
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 leafs 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.

The calendar at right shows the concentration in µg/L and date sampled of each watershed POC. 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. None of the chlorpyrifos or malathion detections exceeded WSDA assessment criteria in 2020, however, they are still considered watershed POCs because of their exceeding detections in recent years at this site.

The graph at right shows the total number of detections per sampling visit in each pesticide category. The category ‘other’ includes degradates and additional pesticide-related chemicals. Note that the number of detections between categories cannot be directly compared due to the different number of chemicals in each category and variability in analysis methods used.

The graph at right shows the total number of detections per sampling visit in each pesticide category. The category ‘other’ includes degradates and additional pesticide-related chemicals. Note that the number of detections between categories cannot be directly compared due to the different number of chemicals in each category and variability in analysis methods used.

<table>
<thead>
<tr>
<th>Month</th>
<th>Day of the Month</th>
<th>Mar</th>
<th>Jun</th>
<th>Jul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorpyrifos</td>
<td>I</td>
<td>0.003</td>
<td></td>
<td>0.015</td>
</tr>
<tr>
<td>Malathion</td>
<td>I</td>
<td>0.003</td>
<td>0.014</td>
<td>0.020</td>
</tr>
<tr>
<td>Total suspended solids (mg/L)</td>
<td>2</td>
<td>18</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Streamflow (cubic ft/sec)</td>
<td>3.1</td>
<td>3.9</td>
<td>0.1</td>
<td>0.3</td>
</tr>
<tr>
<td>Precipitation (total in/week)</td>
<td>0.37</td>
<td>0.16</td>
<td>0.00</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Please see agr.wa.gov/AgScience for more information.

[ * I: Insecticide ]

below assessment criteria
Stemlit Creek crop groupings | acres

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>117</td>
</tr>
<tr>
<td>Orchard</td>
<td>1.828</td>
</tr>
</tbody>
</table>

Total Agriculture 1,945 acres

Watershed Total 21,193 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