DDT was widely used in orchard production until it was banned in the U.S. in 1972. It is still detected in the Stemilt Creek watershed due to the pesticide’s strong soil binding abilities, combined with soil erosion into the adjacent stream. Staff collected samples at Stemilt Creek only during early spring due to historically few pesticide detections during the late spring, summer and fall.

Results:

- There were 63 detections in Stemilt Creek.
  - Of these, 13 were above WSDA assessment criteria. Over 90% (12 detections) of exceeding detections were from DDT and its degradates.
  - When multiple pesticides are detected simultaneously, the environmental effects can combine; multiple pesticides were detected every week Stemilt Creek was tested. Between three to 10 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 certain detection frequencies.

Watershed-specific POCs detected in Stemilt Creek:

<table>
<thead>
<tr>
<th>Pesticide</th>
<th>Common trade names</th>
<th>Example uses within watershed</th>
<th>Detection frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorpyrifos</td>
<td>Lorsban, Pilot, Vesper</td>
<td>orchard</td>
<td>10 sites in 2019. A watershed POC at six of them.</td>
</tr>
<tr>
<td>Diazinon</td>
<td>Diazinon</td>
<td>orchard</td>
<td>9 sites in 2019. A watershed POC at two of them.</td>
</tr>
<tr>
<td>Malathion</td>
<td>Malathion, Fyfanon</td>
<td>orchard</td>
<td>10 sites in 2019. A watershed POC at seven of them.</td>
</tr>
</tbody>
</table>

Products listed are for descriptive purposes only and do not imply endorsement by the author or the Department of Agriculture.
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. The "–" identifies a sample that could not be analyzed. 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, diazinon, or malathion detections at this site exceeded WSDA assessment criteria in 2019, however, they are still considered watershed POCs because of their exceeding detections in recent years.

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.

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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