There were 199 detections in Naneum Creek. Of these, one imidacloprid detection was above WSDA assessment criteria.

When multiple pesticides are detected simultaneously, the environmental effects can combine; multiple pesticides were detected every week Naneum Creek was tested. Between four to 22 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.

Statewide POCs detected in Naneum Creek:

- **Chlorpyrifos**
  - **Common trade names:** Lorsban, Pilot, Vesper
  - **Example uses within watershed:** alfalfa, timothy hay, sunflower, wheat
  - 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 10 sites in 2019. A watershed-specific POC at six of them.

- **Imidacloprid**
  - **Common trade names:** Admire Pro, Gaucho, Merit
  - **Example uses within watershed:** oat, sunflower, wheat, outside buildings, residential
  - Detected at 11 sites in 2019. A watershed POC at nine of them.

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 springtime 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.

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The calendar at right shows the concentration in µg/L and date sampled of each statewide 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.

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 table below shows the total number of detections per sampling event by pesticide category.

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### Statewide Pesticides of Concern Detected and Their Corresponding Sampling Date and Concentration

<table>
<thead>
<tr>
<th>Month</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day of the Month</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use*</td>
<td>2</td>
<td>16</td>
<td>30</td>
<td>14</td>
<td>29</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pesticide</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorpyrifos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.003</td>
</tr>
<tr>
<td>Imidacloprid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.017</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total suspended solids (mg/L)</td>
<td>22</td>
<td>22</td>
<td>21</td>
<td>35</td>
<td>32</td>
<td>19</td>
</tr>
<tr>
<td>Streamflow (cubic ft/sec)</td>
<td>70.5</td>
<td>86.6</td>
<td>65.7</td>
<td>101.6</td>
<td>138.7</td>
<td>60.4</td>
</tr>
<tr>
<td>Precipitation (total in/week)</td>
<td>0</td>
<td>0.06</td>
<td>0</td>
<td>0</td>
<td>0.19</td>
<td>0</td>
</tr>
</tbody>
</table>

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[ * I: Insecticide ]

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

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Washington State Department of Agriculture
NATURAL RESOURCES ASSESSMENT SECTION

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NANEUM CREEK | SUMMARY OF 2019 SURFACE WATER MONITORING PROGRAM RESULTS | 3
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