

Water Monitoring for the Neonicotinoid Insecticides in Saskatchewan

Canola Industry Meeting
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Background

- The Pest Management Regulatory Agency has announced a special review for neonicotinoid insecticides
Imiacloprid, clothianidin and thiamethoxam
- The Pest Management Regulatory Agency's re-evaluation decision is to phase out most uses of neonicotinoid insecticides in the next three to five years.

Background

- PMRA has indicated that, prior to their final decision, they will accept any new submissions (including ancillary data) from water monitoring programs for neonicotinoids.

Background

- The review for Imidacloprid was completed in 2017.
- On July 20, 2018 PMRA announced they will accept 2018 water monitoring data for Imidacloprid
- Water monitoring for thiamethoxam and clothianidin has recent been completed .

Examples of aquatic invertebrates that PMRA is Concerned about:

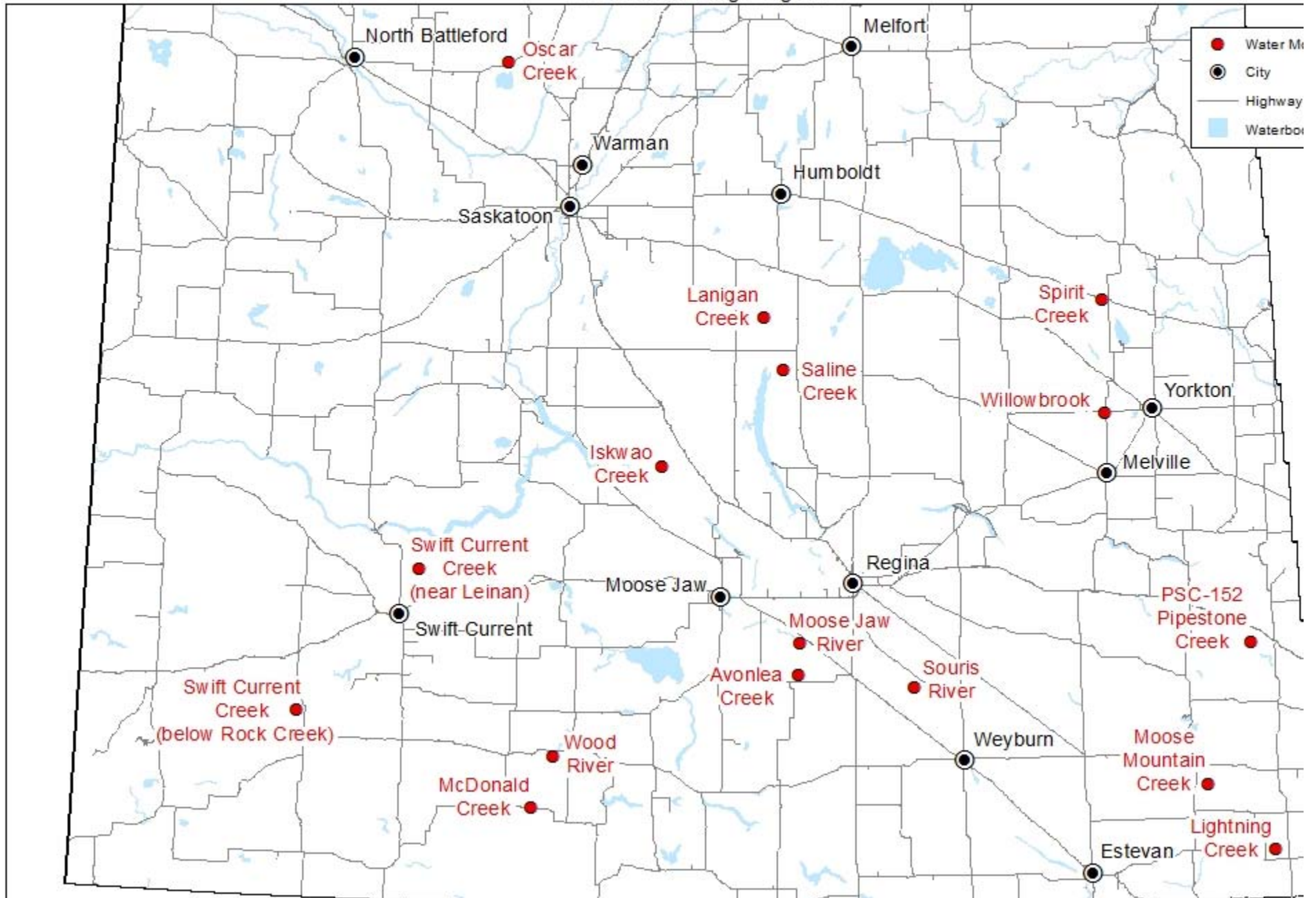
- Insects (midge larvae, mayflies, stoneflies, caddisflies, dragonflies, diving beetles)
- Crustaceans (water fleas, crayfish, amphipods [side swimmers/scuds], isopods [sow bugs], marine shrimp)
- Molluscs (aquatic snails, mussels/clams, oysters)
- Annelids (aquatic worms)

What are we doing

- The Ministry partnered with the Water Security Agency to develop and implement a water monitoring program of Neonicotinoids.
- The Neonicotinoid Water Monitoring Program is using the Water Security Agency's Baseline Environmental Monitoring of Lower Order Saskatchewan Streams (BEMLOSS) sites
- 2 sites were added on an Ad Hoc basis to capture the influence of a significant rain fall event.

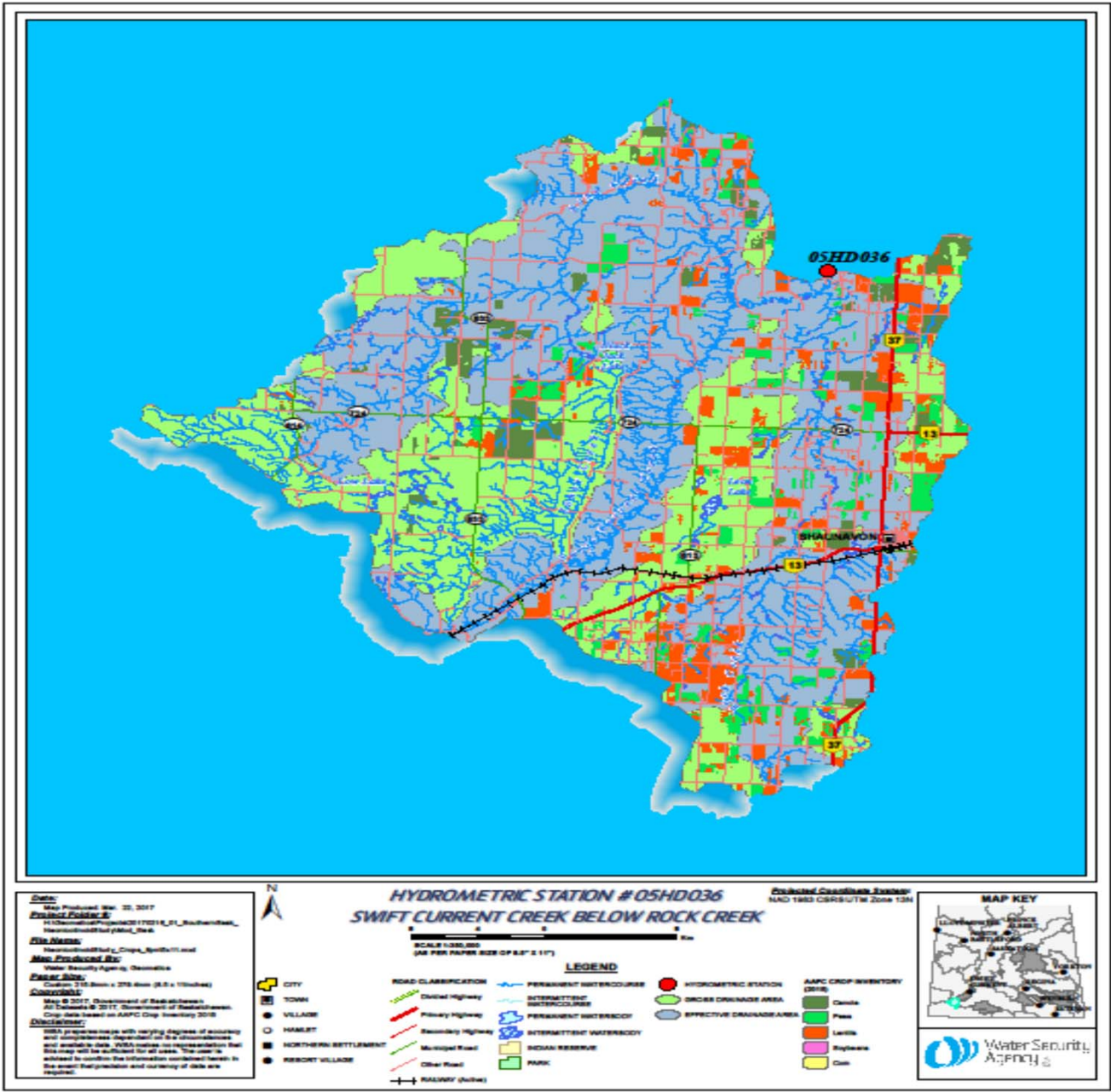
Neonicotinoid Water Monitoring Sites

2017 Monitoring Program









Results

General observations :

- 17 sites were selected for water monitoring. They included the BEMLOSS sites and two ad hoc sites.
- 160 samples (including 21 duplicate samples) were collected from these sites and analyzed at the AAFC lab in Lethbridge Alberta for the presence of the entire suite of neonicotinoid pesticides.
- 2 sites had no detections for neonicotinoids.
- 76 samples (47.5%) were returned with no detections for any of the neonicotinoids

Results

- 15 of the 17 sites returned samples that contained thiamethoxam
 - 81 (51%) of the samples showed a detection for thiamethoxam
 - No samples were at or above the chronic threshold value of 300 ppt.
 - 5 of those samples were duplicate samples for internal QA/QC measures.
 - No samples came back above the acute threshold
 - The five highest concentrations detected among all streams were: 118, 49, 46, 42, and 39 ng/L (ppt).

Results

- 13 of the 17 sites returned samples that contained clothianidin
 - 34 (21%) of the samples showed a detection for clothianidin
 - 10 samples were above the chronic threshold of 20 ppt
 - Two sites had successive samples where the chronic threshold was exceeded however those samples were only a week a part to capture the influence of a rain fall event and they had returned to normal levels for the next monitoring period (two weeks)
 - 3 of those samples were duplicate samples for internal QA/QC measures.
 - No samples came back above the acute threshold
 - The five highest concentrations detected among all streams were: 110, 60, 47, 39 and 38 ng/L (ppt).

Results

- 6 of the 17 sites returned samples for imidacloprid.
 - 3 of those samples were duplicate samples for internal QA/QC measures

Results

The Government of Saskatchewan believes the PMRA should reconsider its proposed re-evaluation decision and continue the registration for thiamethoxam and clothianidin.

Results

- The Saskatchewan Beekeepers Development Commission has issued the following statement

“The Saskatchewan Beekeepers Development Commission is concerned that upon removal of neonicotinoid seed treatments on Canola, farmers will need to use more toxic insecticides to control pests.”

Results

A regional registration of neonicotinoids in western Canada.

Supported by the data collected by the four western provinces.

Questions???

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