Neonic Imidacloprid in Connecticut Rivers

Results from two US Geological Survey projects

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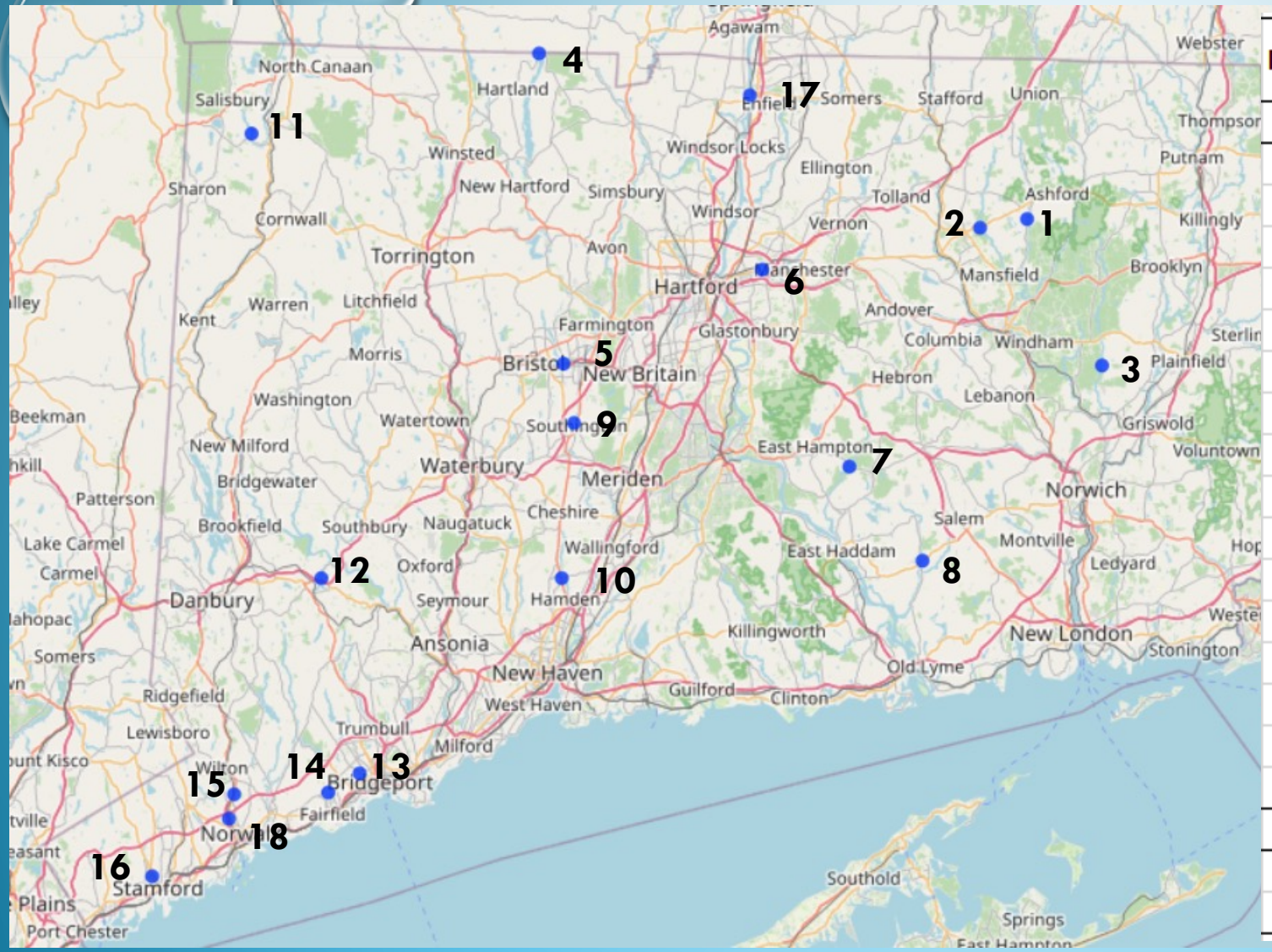

Map ID	USGS ID	USGS Station Name
Northeast Stream Quality Assessment Project		
1	01121000	MOUNT HOPE RIVER NEAR WARRENVILLE, CT
2	01121330	FENTON RIVER AT MANSFIELD, CT
3	01123000	LITTLE RIVER NEAR HANOVER, CT
4	01187300	HUBBARD RIVER NEAR WEST HARTLAND, CT
5	01189000	PEQUABUCK R AT FORESTVILLE, CT.
6	01192500	HOCKANUM RIVER NEAR EAST HARTFORD, CT
7	01193500	SALMON RIVER NEAR EAST HAMPTON, CT
8	01194000	EIGHTMILE RIVER AT NORTH PLAIN, CT
9	01195490	QUINNIPIAC RIVER AT SOUTHINGTON, CT
10	01196620	MILL RIVER NEAR HAMDEN, CT
11	01199050	SALMON CREEK AT LIME ROCK, CT
12	01203510	POOTATUCK RIVER AT SANDY HOOK, CT
13	01208869	Rooster River near Fairfield, CT
14	01208925	MILL RIVER NEAR FAIRFIELD, CT
15	01209700	NORWALK RIVER AT SOUTH WILTON, CT
16	01209901	RIPPOWAM RIVER AT STAMFORD, CT.
National Water Quality Network		
17	01184000	CT RIVER AT THOMPSONVILLE, CT
18	01209710	NORWALK RIVER AT WINNIPAUK, CT

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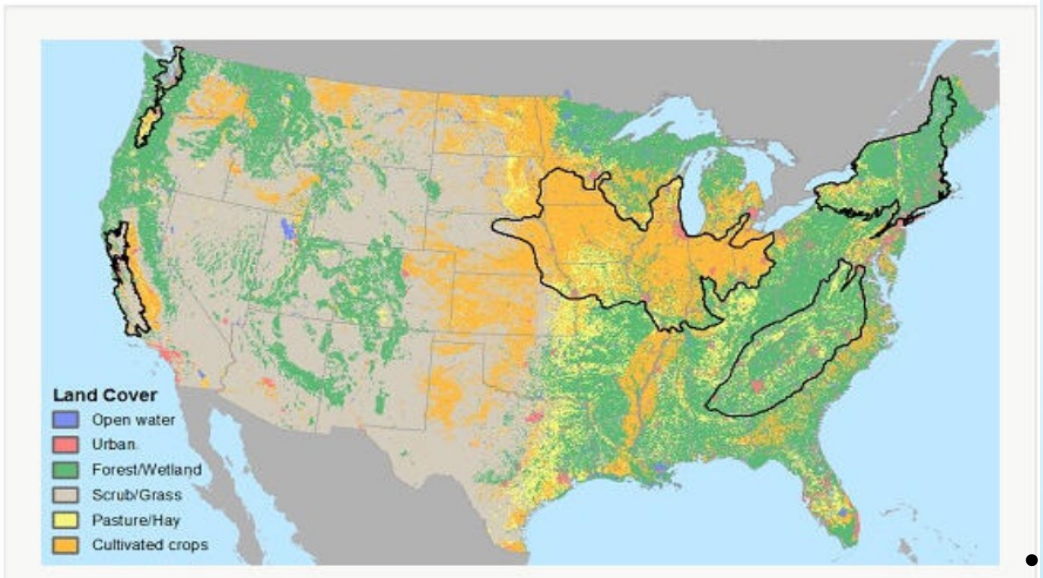
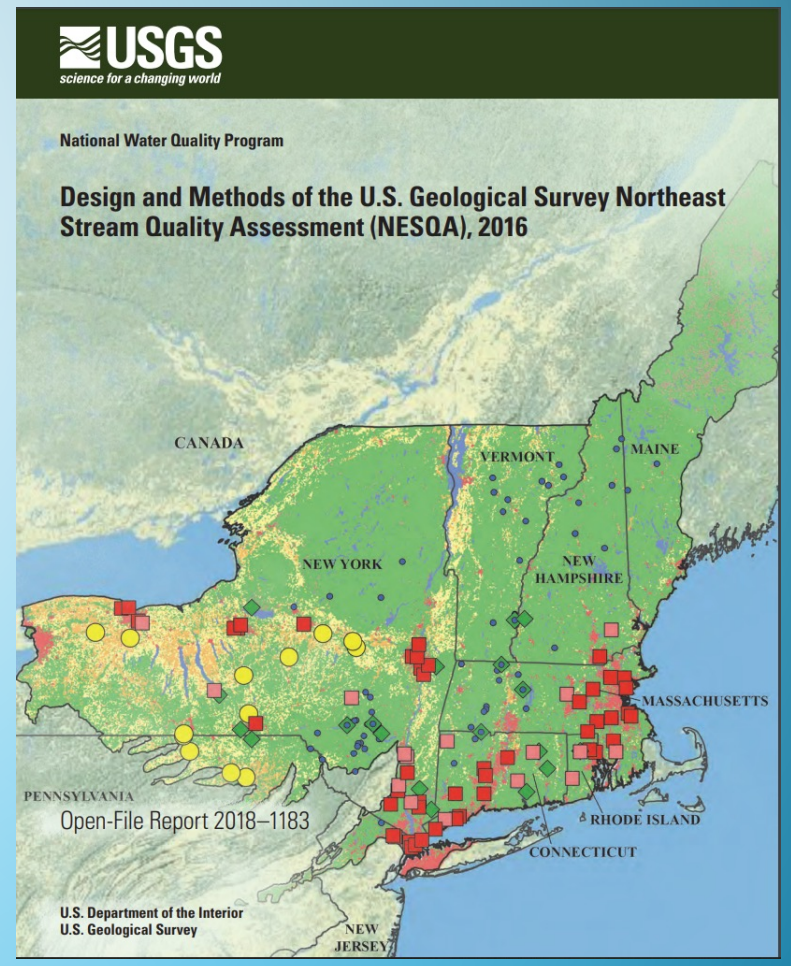


REGIONAL STREAM QUALITY ASSESSMENT (RSQA)

The goals of the RSQA are to characterize multiple water-quality factors that are stressors to aquatic life (contaminants, nutrients, sediment, and streamflow alteration) and to develop a better understanding of the relation of these stressors to ecological conditions in streams throughout the region.

NORTHEAST STREAM QUALITY ASSESSMENT (NESQA)

- Field effort conducted during June – August, 2016
  - 4-9 weeks of discrete water collection
- 95 site locations
  - 16 in CT



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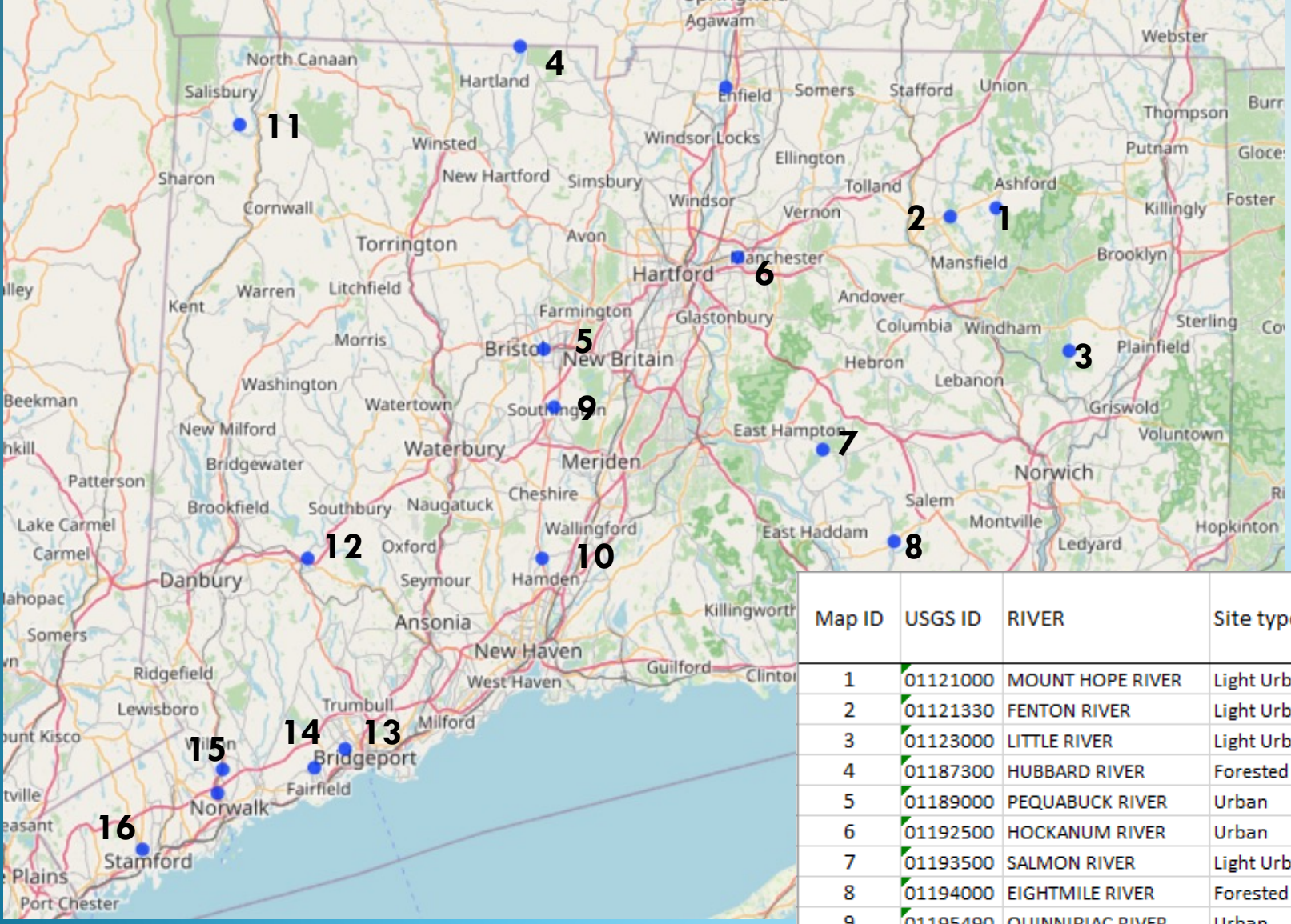

Imidacloprid Results, NESQA, (June – August, 2016)

Map ID	USGS ID	RIVER	Site type	# of pesticide samples collected	# of samples with imidacloprid detections	Concentration, in nanogram per Liter		
						MIN	MAX	MEDIAN
1	01121000	MOUNT HOPE RIVER	Light Urban	1	0	< MDL	< MDL	< MDL
2	01121330	FENTON RIVER	Light Urban	4	0	< MDL	< MDL	< MDL
3	01123000	LITTLE RIVER	Light Urban	1	0	< MDL	< MDL	< MDL
4	01187300	HUBBARD RIVER	Forested	4	0	< MDL	< MDL	< MDL
5	01189000	PEQUABUCK RIVER	Urban	9	9	35.2	175	60.1
6	01192500	HOCKANUM RIVER	Urban	9	9	27.8	85.9	41.6
7	01193500	SALMON RIVER	Light Urban	4	0	< MDL	< MDL	< MDL
8	01194000	EIGHTMILE RIVER	Forested	1	0	< MDL	< MDL	< MDL
9	01195490	QUINNIPIAC RIVER	Urban	9	8	10.5	56.3	31.0
10	01196620	MILL RIVER, HAMDEN	Urban	9	8	12.2	120	24.8
11	01199050	SALMON CREEK	Light Urban	4	0	< MDL	< MDL	< MDL
12	01203510	POOTATUCK RIVER	Urban	9	5	14.9	42.5	15.3
13	01208869	ROOSTER RIVER	Urban	9	9	22.7	567	122
14	01208925	MILL RIVER, FAIRFIELD	Urban	9	9	13.9	245	17.0
15	01209700	NORWALK RIVER	Light Urban	9	6	17.4	109	36.7
16	01209901	RIPPOWAM RIVER	Urban	9	7	16.0	270	47.6

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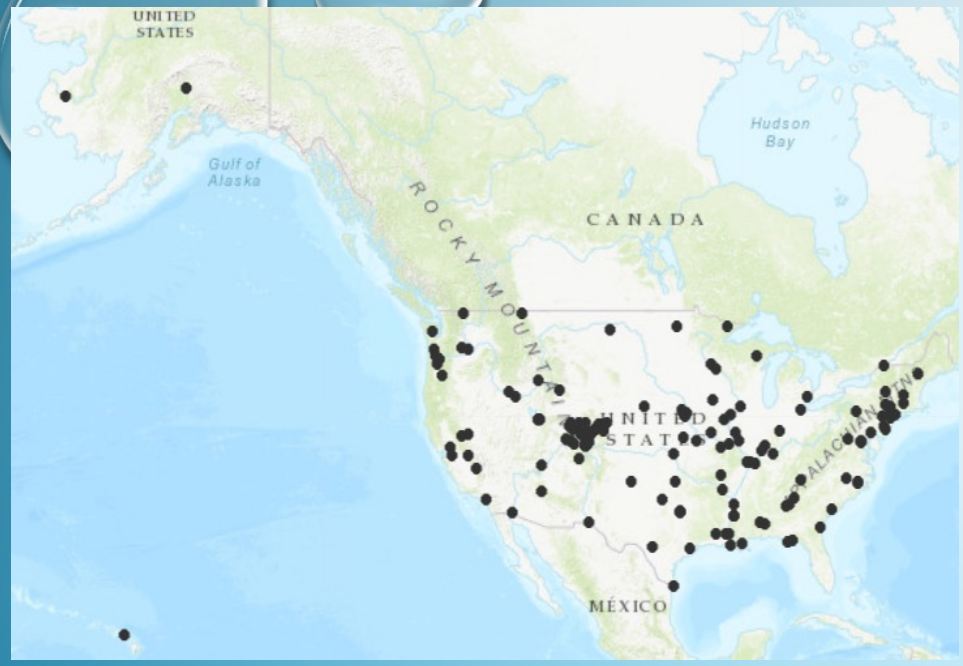

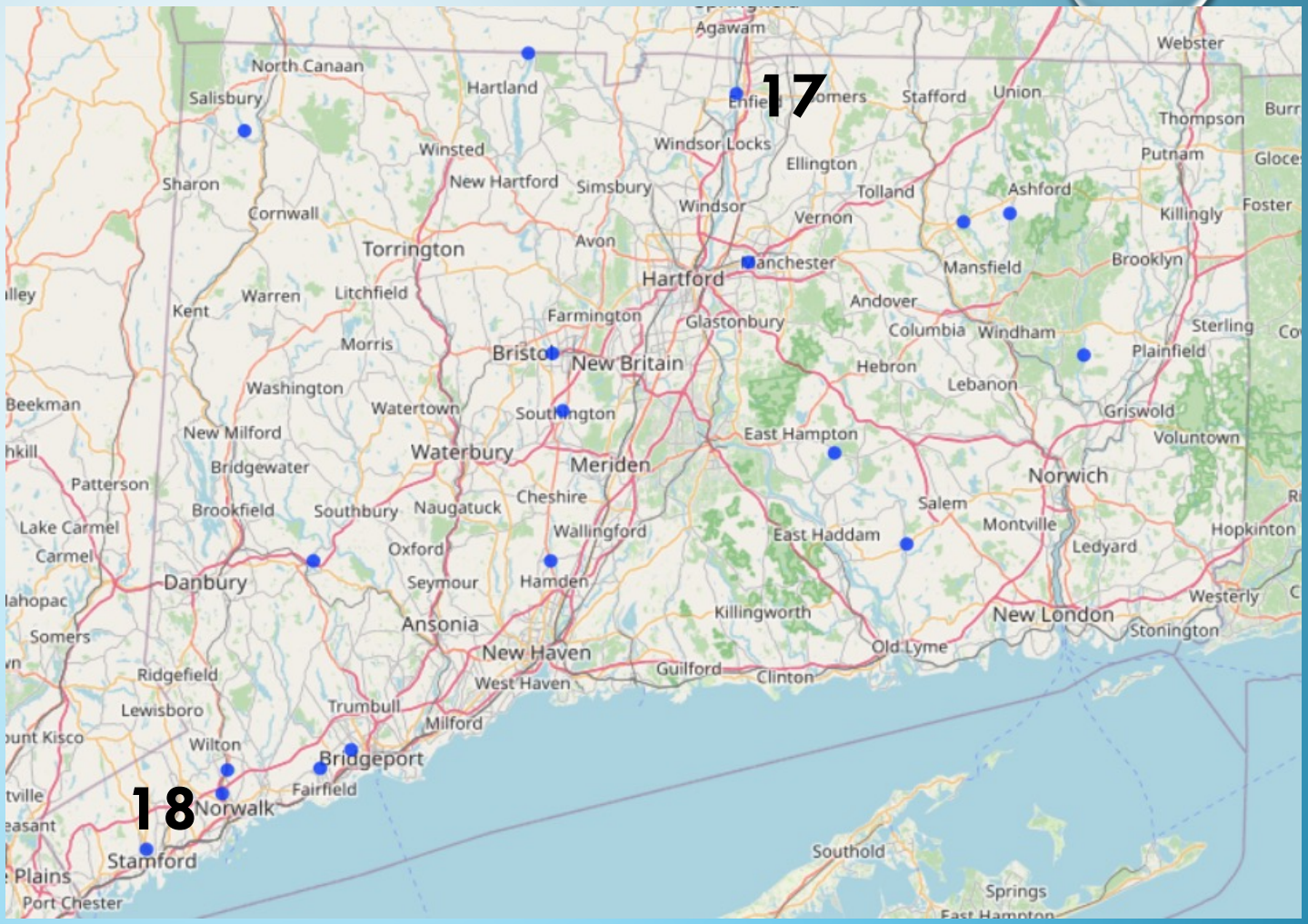

NATIONAL WATER QUALITY NETWORK (NWQN)

Network Established in Water Year 2013

- **110 locations in the United States**
- **4 in New England**
- **2 in CT**

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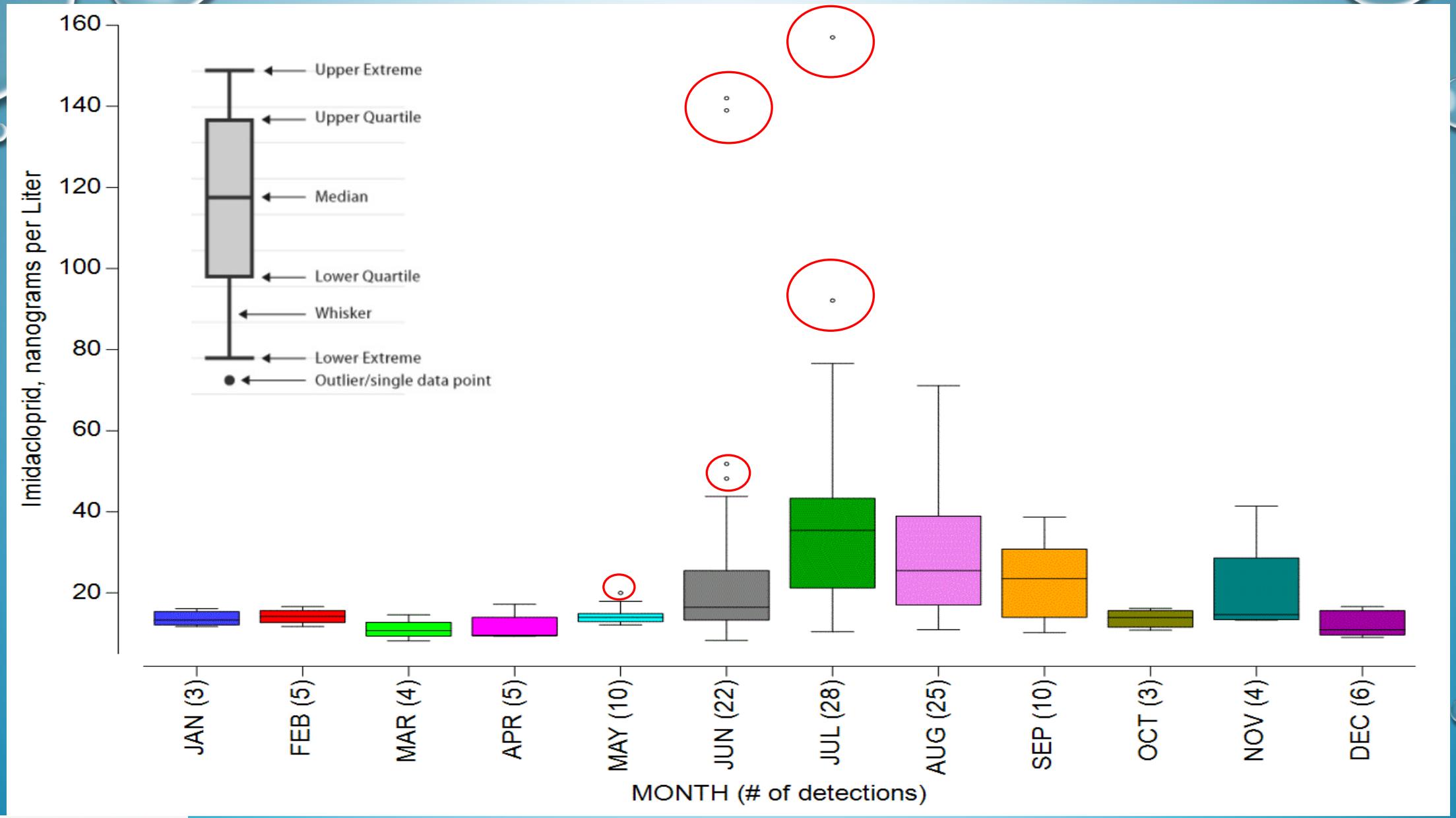
Imidacloprid Results, NWQN, WYs 2013 – 2022

Map ID	USGS ID	USGS Station Name	# of pesticide samples collected	# of samples with imidacloprid detections	Concentration, in nanogram per Liter		
					MIN	MAX	MEDIAN
17	01184000	CT RIVER AT THOMPSONVILLE, CT	175	24	8.13	42.5	16.2
18	01209710	NORWALK RIVER AT WINNIPAUK, CT	229	145	8.18	157	16.7



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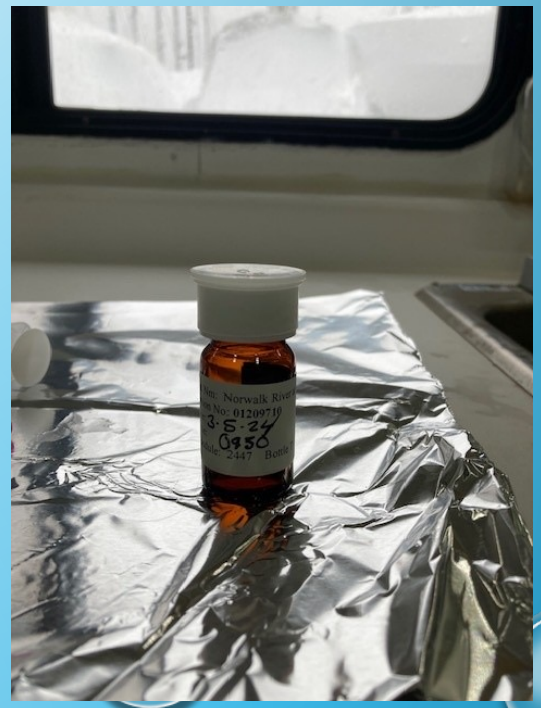
Norwalk River, Imidacloprid Concentrations, WYs 2013 - 2022

In Summary

- The short-term, intensive NESQA effort provided a snapshot of results at many sites in Connecticut.

- The long-term NWQN effort allows the opportunity to perform seasonal and trend analysis.

- USGS data are publicly available through the National Water Quality Monitoring Council Water Quality Portal



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