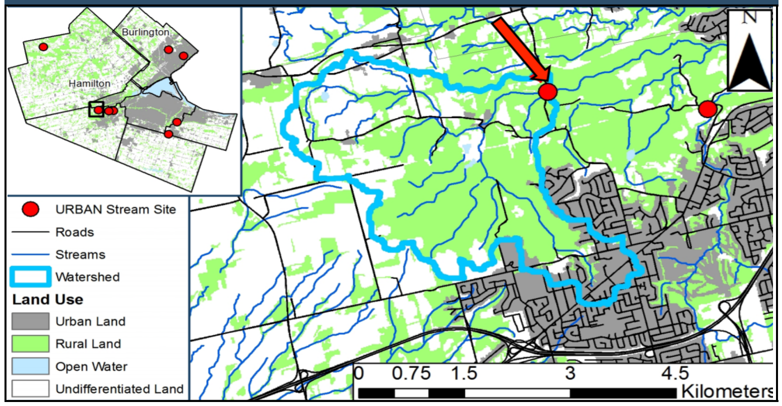
# Report Card: Sulphur Springs

## Site Information

| | |
|---|---|
| Stream | Sulphur Creek |
| Land Management | Hamilton Conservation Authority (HCA) |
| URBAN Monitoring | Sampled May 2010-2014, 2017 |
| Urban Land Use | 11.84% in watershed |
| Road Density | 38.71 m/ha in watershed |
| Ecological Importance | Area of natural and scientific interest; Dundas Valley Conservation Area |

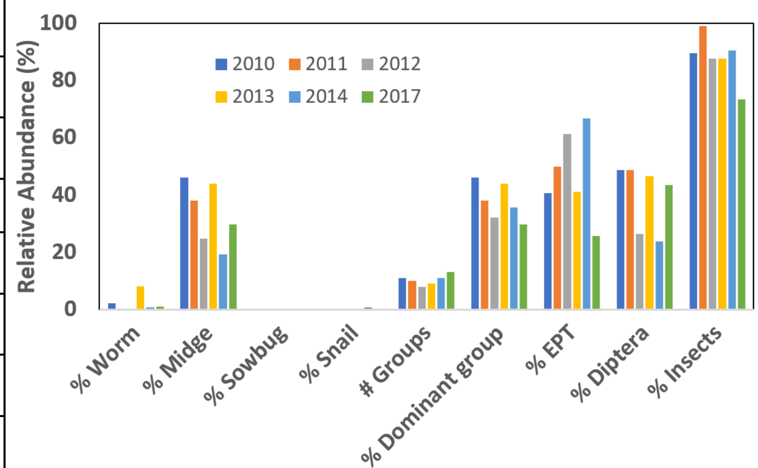
## Site Map




## Results

### Stream Benthic Invertebrates

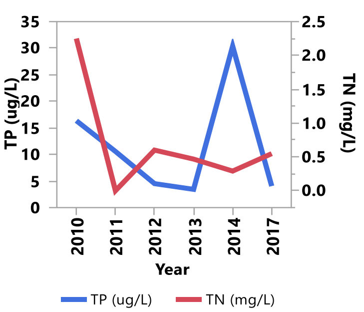
| Indicator | Score | | | | | |
|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2017 |
| Total Abundance | 325 | 281 | 227 | 73 | 135 | 202 |
| Species Richness | 11 | 10 | 8 | 9 | 11 | 13 |
| % EPT | 40.6 | 49.8 | 61.3 | 41.1 | 66.67 | 25.74 |
| % Worms & Midges | 48.3 | 38.1 | 24.7 | 52.1 | 20 | 30.69 |
| HBI | 5.51 | 4.99 | 4.19 | 4.93 | 3.75 | 5.09 |

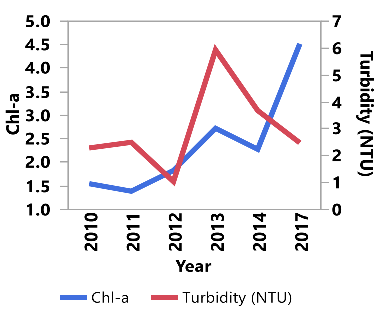


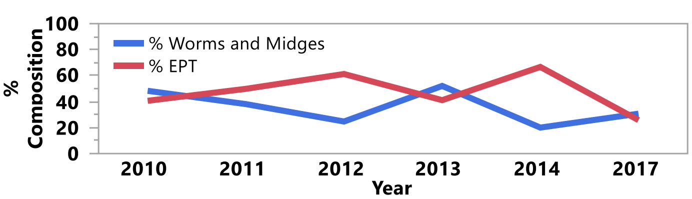

### Water Quality

| Parameter | Score | | | | | |
|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2017 |
| Total Phosphorus (ug/L) | 16.35 | 10.57 | 4.51 | 3.44 | 30.36 | 4.05 |
| Total Nitrogen (mg/L) | 2.25 | 0 | 0.6 | 0.47 | 0.29 | 0.55 |
| Conductivity (mS/cm$^3$) | 692 | 480 | 519 | 615 | 665 | 680 |

| Parameter | Score | | | | | |
|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2017 |
| Chlorophyll-α (ug/L) | 1.55 | 1.39 | 1.83 | 2.73 | 2.28 | 5.37 |
| Turbidity (NTU) | 2.29 | 2.5 | 1.04 | 5.93 | 3.68 | 2.48 |
| pH | 8.61 | 8.23 | 8.12 | 8.00 | — | 8.03 |




## Site Summary

- Nitrogen levels have remained relatively stable since 2012, as have phosphorus levels with the exception of the spike in 2014
- A noticeable increase in chlorophyll has occurred, suggesting increased productivity from increased agricultural runoff
- Conductivity reflects low road density (low input of road salts)
- Benthic community appears reasonably healthy with moderate proportions of dipteran species and midges, and considerable numbers of pollution-intolerant EPT taxa
- Overall, water quality parameters and benthic community indicate that Sulphur Creek is healthier than most urban streams

**Overall Status 2017: Unimpaired**