

2016 FIELD REPORT

TORONTO'S URBAN PONDS



Dr Paul Frost

Dear Citizen Science Leaders, Thank you for making 2015 very successful for FreshWater Watch in the Greater Toronto Area.

Over the past year, we made great progress in sampling of urban ponds and held several events for new and continuing Citizen Science Leaders (CSLs). It is exciting to see the program grow and we deeply appreciate your continued participation in FreshWater Watch.

We held two training sessions in summer at York University. During both sessions, we were joined by a York limnologist and, as always, we had thought-provoking conversations about urban water bodies. Over the years, we have enjoyed these events and thank all of you for interest and efforts.

Toronto CSLs collected 65 water quality samples in 2015 which exceeds numbers collected in the previous two years.

We have now sampled 123 times in 22 ponds. This is a

significant achievement we hope to build on in the coming year.

In March, we held a CSL reunion at the York Street HSBC office and reviewed FreshWater Watch locally and globally.

We also had a 'meet the scientist' event with two CSLs, Monique Bright and Moazzam Sayeed, in August. We sampled three ponds and discussed how local conditions affect water quality in stormwater ponds.

We plan several more of these events for 2016 and would like to hear from you if you are interested in participating.

This year two of our more active citizen scientists moved away. We'll miss them but hope they're able to sample new locations in Vancouver and Hong Kong.

Thank you for all of your contributions and efforts in making this project a success.

Your sincerely,

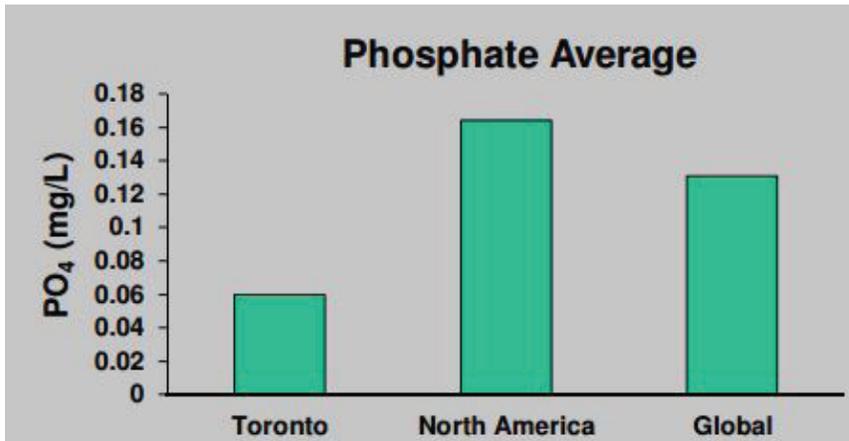
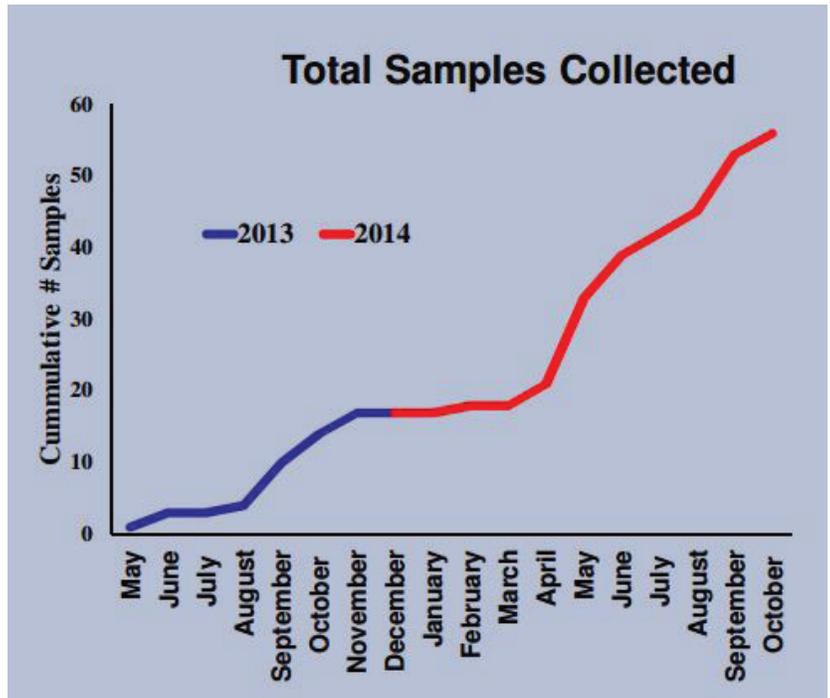
Dr. Paul Frost and Andrew Scott

FreshWater Watch Scientists

HIGHLIGHTS

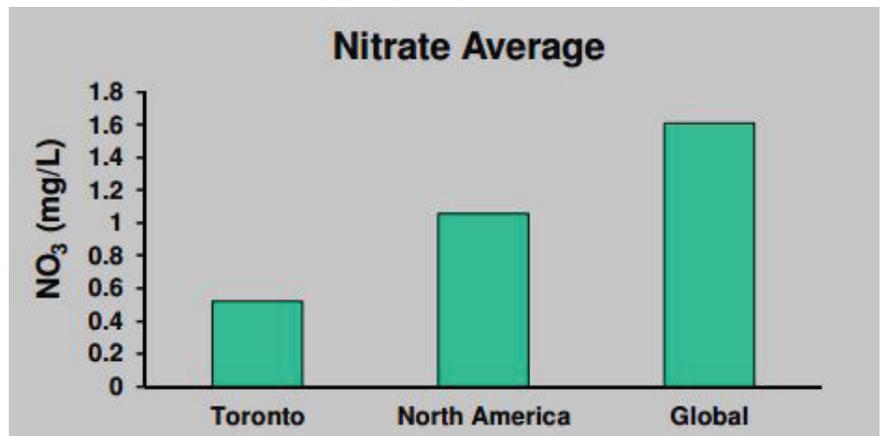
One of our FreshWater Watch ponds had total phosphorus levels over 10 times higher than we would have expected. We are currently working to contact the appropriate conservation authority to see if they are aware of this problem.

Your water quality collections in Toronto are going from strength to strength, we encourage you to continue testing, we cannot do this without you



The average phosphate concentrations dropped this year from 0.06 mg/L to 0.054 mg/L.

The average nitrate concentration dropped from 0.52 mg/L to 0.425 mg/L.



ACKNOWLEDGEMENTS

Special thanks go to Diana Eddowes and Steven Loiselle for their great contributions to this project.

GLOBAL OUTCOMES



Prof. Steven Loisel,
University of Sienna
Research Manager,
Global Freshwater
Research,
Earthwatch

Dear FreshWater Watchers,

Thanks to your great contributions, we have reached 13,000 water quality datasets collected from more than 2,000 waterbodies across the globe. As this research gathers momentum I strongly encourage you to continue your efforts and refresh your skills on the FreshWater Watch website if you need a reminder.

Your data are opening up new insights on freshwater ecosystems. You are helping researchers, water agencies, and planners better identify healthy waterbodies to be conserved and the degree of degradation that requires mitigation.

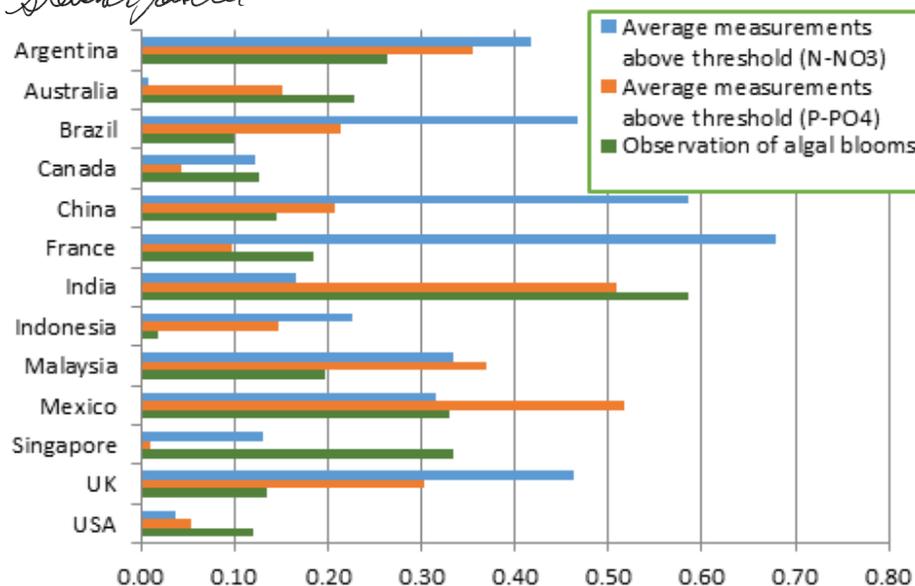
Thanks to your measurements, Earthwatch and our partners are identifying drivers to degradation of these fundamental environments. By using commonly agreed on thresholds for eutrophication — 1mg of nitrates per litre and 0.1mg phosphate per litre — your measurements show that, on average, 36% of the nitrate measurements exceed the threshold, and 27% exceed the phosphate threshold.

These same measurements also hint that there is an important correlation between elevated phosphate concentrations and the increased occurrence of algal blooms. This builds a 2015 study that was published based on data from 13 FreshWater Watch cities.

As more and more people are joining FreshWater Watch, the programme is being used as an example of private, public and NGO organisations working together to improve the environment on which we all depend

Thank you all and make sure you stay in touch and keep testing!

Steven Loisel



email freshwaterwatch@earthwatch.org.uk

www.thewaterhub.org/freshwaterwatch



Join our forums and upload your blogs at freshwaterwatch.thewaterhub.org/discuss