

LIISA TOOSE

CONSULTANT

LIISA TOOSE ENVIRONMENTAL RESEARCH

Phone: (705) 957-8876
liisa.toose@gmail.com

86851 Perth Road 178
Wroxeter, ON N0G 2X0

EDUCATION

- MSc** Trent University, Watershed Ecosystems Program May 2005
Thesis: "A geographically explicit global mass balance model of chemical fate"
Advisor: Don Mackay
- HBSc** Trent University, Geography May 2001

RESEARCH EXPERIENCE

ARC Arnot Research and Consulting, Inc., Ontario, Canada 2010 to current
Position, Research Associate

- CEFIC-LRI
 - ECO44 – A toxicokinetic mammalian modelling framework for B assessment
 - ARC.3: Development of the Bioaccumulation Assessment Tool (BAT ver.1.0) to aid in the bioaccumulation assessment of organic chemicals
- Co-development and coding of RAIDAR-IOC model
- Co-development and testing of RAIDAR-ICE model

DMER, Ltd, Ontario, Canada 2004 to 2015
Position

- ExxonMobil
 - Development of ADVOCATE model framework
- Northern Contaminants Program - Aboriginal Affairs and Northern Development Canada (AANDC)
 - Distant Residence Time – using the BETR-World model to address spatially-explicit transport of contaminants to the Arctic.

Trent University – CEMC, Peterborough, Ontario 2001 to 2007

- Modelling PFOA – sorption to atmospheric aerosols and multi-species modelling techniques
- Modelling the fate of agricultural pesticides – development of the AGRO field to pond bioaccumulation model.

Journal Publications

Toose, L., Warren, C., Mackay, D., Parkerton, T., Letinski, D., Manning, R., Connelly, M., Rohde, A., Fritz, B., Hoffmann, W.C. 2015. Assessing the fate of an aromatic hydrocarbon fluid in agricultural spray applications using the three-stage ADVOCATE model framework. *Journal of Agricultural and Food Chemistry* 63(31), 6866-6875

As Liisa Reid:

Gouin T, Armitage JM, Cousins IT, Muir DC, Ng CA, Reid L, Tao S. 2013. Influence of global climate change on chemical fate and bioaccumulation: the role of multimedia models. *Environ Toxicol Chem.* 32(1):20-31.

Arnot JA, Armitage JM, McCarty LS, Wania F, Cousins I, Toose-Reid L. 2011. Toward a consistent evaluative framework for POP risk characterization. *Environ. Sci. Technol.* 45, 97-103.

Webster E, Ellis DA, Reid LK. 2010. Modeling the environmental fate of perfluorooctanoic acid and perfluorooctanoate: An investigation of the role of individual species partitioning. *Environ. Toxicol. Chem.* 29(7): 1466 – 1475.

Arnot JA, McCarty LS, Armitage J, Toose-Reid L, Wania F, Cousins I. 2009. An evaluation of hexabromocyclododecane (HBCD) for persistent organic pollutant (POP) properties and the potential for adverse effects in the environment. Technical Report for European Brominated Flame Retardant Industry Panel (EBFRIP).

Mackay D, Reid LK. 2008. Local and distant residence times of contaminants in multi-compartment models. Part I: A review of the theoretical basis. *Environ. Poll.* 156: 1196-1203.

Reid LK, Mackay D. 2008. Local and distant residence times of contaminants in multi-compartment models. Part II: Application to assessing environmental mobility and long-range atmospheric transport. *Environ. Poll.* 156: 1182-1189.

McMurdo C.J, Ellis DA, Webster E, Butler J, Christensen RD, Reid LK. 2008. Aerosol Enrichment of the Surfactant PFO and Mediation of the Water - Air Transport of Gaseous PFOA. *Environ. Sci. Technol.* 42 (11), 3969–3974.

Ethier A, Mackay D, Toose-Reid L, Lean D, O'Discoll N, Scheuhammer A. 2008. The Development and Application of a Mass Balance Model for Total Mercury in a Remote Lake using Multi-species Multiplier Method. *Appl. Geochem.* 23: 467-481.

As Liisa Toose:

Toose LK, Mackay D. 2004. Adaptation of fugacity models to treat speciating chemicals. *Environ. Sci. Technol.* 38: 4619-4626.

Toose L, Woodfine DG, MacLeod M, Mackay D, Gouin J. 2004. BETR-World: A geographically explicit model of chemical fate: Application to transport of a-HCH to the Arctic. *Environ. Poll.* 128: 223-240.

PRESENTATIONS

Poster Presentations

Toose, L., Armitage, J., Foster, K., Embry, M., Hughes, L., Arnot, J. "The Bioaccumulation Assessment Tool (BAT): A quantitative weight of evidence approach for bioaccumulation assessment" SETAC Europe, May 13-17, 2018

Arnot J, Toose L, Armitage J, Gouin T, Falls A, Bonnell M. 2017. Case study applications of the RAIDAR model for chemical risk assessment. 254 th American Chemical Society National Meeting; Exposition, August 20-24, Washington, DC

Arnot J, Armitage J, Foster KL, Toose L, Embry M. 2017. The bioaccumulation assessment tool: An organizational framework for bioaccumulation assessment. SETAC Europe Meeting, May 7-11, Brussels, BE.

Arnot J, Armitage J, Foster KL, Toose L, 2016. The bioaccumulation assessment tool: An organizational framework for bioaccumulation assessment. SETAC North America Annual Meeting, November 6-10, Orlando, FL.

Arnot JA, Falls A, Armitage JM, Gouin T, Toose L, Bonnell M;. Applying the RAIDAR model and the chemical activity approach for ecological risk assessment: A case study for select organic flame retardants. 2016. SETAC Conference, May 22-26, Nantes, France.

Arnot JA, Armitage JM, Gouin T, Toose L, Bonnell M, Hughes D, Romano M, Wania F, Mackay D. 2014. Exploring the exposure and hazard potential of ionogenic organic chemicals released to the environment. SETAC Conference, November 9-13, Vancouver, BC.

Arnot JA, Mackay D, Toose-Reid L, Macleod M. 2005. Modelling the long range transport of contaminants to the arctic: a contribution to international negotiations on POPs. Northern Contaminants Program Results Workshop, September 27-29, Victoria, BC.

Arnot JA, Mackay D, Toose-Reid L, Ponce-Hernandez R. 2005. Towards a BETR-Africa: fate and risk assessment of persistent organic pollutants originating in Africa at local, regional and global scales. Dioxin Conference, August 21-26, Toronto, ON.

Toose, L., D. Woodfine, M. MacLeod and D. Mackay (2002). The integration of global and local scale geographically explicit modelling of Toxaphene transport to the Laurentian Great Lakes. IAGLR, Chicago, IL

Platform Presentations

Toose, L., Arnot, J., Armitage, J., Foster, K., Embry, M. "The Bioaccumulation Assessment Tool (BAT)" SETAC NA, November 12-16, 2018

Workshops

"The Application of Emerging Tools for Bioaccumulation Assessment: Integration of Biotransformation", Rome, Italy May 13 2018.

"Mass Balance Models for Assessing Chemical Fate and Exposure" SETAC-Laurentian 17th AGM, Peterborough, ON June 22, 2012

PROFESSIONAL AFFILIATIONS

SETAC-North America, 2012-Present

PROFESSIONAL SERVICE

Peer-Reviewed Articles for:

- Environmental Science and Technology
- Environmental Pollution

COMPUTER SKILLS

Programming: Visual Basic for Applications (VBA); "R"

Applications: Microsoft Excel, Word, Access